CITY OF MIDLAND, TEXAS
AGENDA FOR CITY COUNCIL MEETING
October 24, 2023 - 10:00 AM
300 North Loraine
Midland, Texas
Council Chamber - City Hall

A quorum of the City Council intends to be physically present at the aforementioned location.

The City Council may discuss, consider, and take action on any item listed on this agenda.

OPENING ITEMS

1. Invocation – Pastor Darin Wood, First Baptist Church of Midland

2. Pledge of Allegiance

PRESENTATIONS

3. Presentation of special events, organizations, individuals, periods of time, or reports, including, but not limited to:

    3a. Presentation of Proclamation for “Michael Crain Day”

    3b. Presentation of Proclamation for “Municipal Court Week”

    3c. Presentation of Proclamation for “World Polio Day”

    3d. Presentation from Budget Manager Alyssa Coppens regarding the 5-year forecast for fixed costs.

    3e. Presentation from the Midland Skatepark Association.

CONSENT AGENDA

4. MOTION APPROVING THE FOLLOWING MINUTES:

    4a. WORK SESSION OF OCTOBER 10, 2023

    4b. REGULAR SESSION OF OCTOBER 10, 2023

5. 2023-144 – RESOLUTION AUTHORIZING THE SOLE-SOURCE PURCHASE OF A FITNESS COURT FOR DENNIS THE MENACE PARK FROM NATIONAL

FITNESS CAMPAIGN LP FOR A TOTAL COST OF $105,000.00 **(DISTRICT 2) (GENERAL SERVICES)**

6. 2023-145 – RESOLUTION AUTHORIZING PURCHASE OF A WIRTGEN W 120 XTI COLD MILLING MACHINE FROM KIRBY-SMITH MACHINERY, INC., THROUGH BUYBOARD FOR A TOTAL COST OF $502,269.45 **(DISTRICT: NONE) (GENERAL SERVICES)**

7. 2023-146 – RESOLUTION APPROVING THE PURCHASE OF A JOHN DEERE 410 P-TIER BACKHOE LOADER FROM YELLOWHOUSE MACHINERY CO. THROUGH SOURCEWELL FOR A TOTAL COST OF $168,197.66 **(DISTRICT: NONE) (GENERAL SERVICES)**

8. 2023-147 – RESOLUTION AUTHORIZING PURCHASE OF A TEREX EVOQUIP COBRA 230R IMPACT CRUSHER FROM POWERSCREEN TEXAS, INC., THROUGH BUYBOARD FOR A TOTAL COST OF $591,533.00 **(DISTRICT: NONE) (GENERAL SERVICES)**

9. 2023-148 – RESOLUTION APPROVING THE PURCHASE OF SIXTY (60) BUNKER COATS AND SIXTY (60) BUNKER PANTS FROM DOOLEY TACKABERRY, INC., TROUGH BUYBOARD AT A TOTAL COST OF $276,445.20 **(DISTRICT: NONE) (GENERAL SERVICES)**

10. 2023-149 – RESOLUTION APPROVING THE PURCHASE OF AN AMBULANCE AND ASSOCIATED EQUIPMENT FROM STERLING MCCALL FORD THROUGH THE HOUSTON-GALVESTON AREA COUNCIL AT A TOTAL COST OF $362,276.00 **(DISTRICT: NONE) (GENERAL SERVICES)**

11. 2023-150 – RESOLUTION APPROVING THE PURCHASE OF A SPARTAN METRO PUMPER FROM METRO FIRE APPARATUS SPECIALISTS, INC., THROUGH THE HOUSTON-GALVESTON AREA COUNCIL FOR A TOTAL COST OF $1,448,347.00 **(DISTRICT: NONE) (GENERAL SERVICES)**

12. 2023-151 – RESOLUTION APPROVING THE PURCHASE OF ONE HUNDRED THIRTY (130) 2024 YAMAHA ELECTRIC GOLF CARTS FROM YAMAHA GOLF CAR COMPANY THROUGH BUYBOARD AT A TOTAL COST OF $559,000.00; AND AUTHORIZING THE TRADE-IN OF ONE HUNDRED THIRTY (130) CITY-OWNED YAMAHA DRIVE 2 GOLF CARTS **(DISTRICT 2) (GENERAL SERVICES)**

13. 2023-152 – RESOLUTION AUTHORIZING THE PURCHASE OF 130,000 POUNDS OF SODIUM PERMANGANATE - 20% SOLUTION NEEDED FOR THE TREATMENT OF DRINKING WATER FOR FISCAL YEAR 2024 FROM UNIVAR SOLUTIONS USA INC. FOR A TOTAL COST OF $223,600.00; AND RESCINDING THE PORTIONS OF RESOLUTION 2023-116 IN CONFLICT WITH THIS RESOLUTION **(DISTRICT: NONE) (GENERAL SERVICES)**

14. 124-2023 – MOTION APPROVING PLANS AND SPECIFICATIONS FOR THE

CONSTRUCTION OF A NEW LIFT STATION AT THE I-20 WILDLIFE PRESERVE FOR THE WALL STREET SEWER DIVERSION, SAID PLANS AND SPECIFICATIONS BEING ON FILE IN THE CITY SECRETARY'S OFFICE REFERENCED BY THE NUMBER AND DATE OF THIS MOTION, AND AUTHORIZING THE CITY MANAGER OR THE CITY MANAGER'S DESIGNEE TO ADVERTISE FOR COMPETITIVE BIDS FOR SAID PROJECT PURSUANT TO THE STATUTES OF THE STATE OF TEXAS FOR ACCOMPLISHING THE WORK SET FORTH IN SAID PLANS AND SPECIFICATIONS **(DISTRICT: ALL) (GENERAL SERVICES)**

15. 125-2023 – MOTION APPROVING AN ECONOMIC DEVELOPMENT AGREEMENT BETWEEN THE MIDLAND DEVELOPMENT CORPORATION AND MOTRAN ALLIANCE, INC. **(DISTRICT: ALL) (CITY MANAGER)**

16. 126-2023 – MOTION APPROVING AN ECONOMIC DEVELOPMENT AGREEMENT BETWEEN THE MIDLAND DEVELOPMENT CORPORATION AND KLJ ENGINEERING, LLC **(DISTRICT: ALL) (CITY MANAGER)**

17. 127-2023 – MOTION AUTHORIZING THE CITY MANAGER TO NEGOTIATE AND EXECUTE AN AGREEMENT WITH SPECIAL OLYMPICS TEXAS, INC., TO HOST FALL CLASSIC EVENTS IN THE CITY OF MIDLAND BEGINNING IN OCTOBER 2024; PROVIDED, HOWEVER, THAT SAID AGREEMENT SHALL NOT BECOME EFFECTIVE UNTIL APPROVED BY THE CITY COUNCIL **(DISTRICT: ALL) (COMMUNITY SERVICES)**

18. 2023-153 – RESOLUTION AUTHORIZING THE EXECUTION OF COMMUNITY DEVELOPMENT BLOCK GRANT CONTRACTS WITH CASA DE AMIGOS OF MIDLAND, TEXAS, INCORPORATED, THE SALVATION ARMY OF MIDLAND, THE MIDLAND COUNTY HOSPITAL DISTRICT, SENIOR LIFE MIDLAND, INC., MISSION HEALTH CARE, INC., HELLINGHAUSEN HOPE, INC., THRIVING UNITED, INC., AND CHURCH ON WHEELS, INC.; AUTHORIZING THE FUNDING OF COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAMS FOR A TOTAL COST OF $1,268,782.00; AND APPROPRIATING AND ALLOCATING FUNDS **(DISTRICT: ALL) (DEVELOPMENT SERVICES)**

19. 128-2023 – MOTION APPROVING WITH STAFF'S RECOMMENDED CONDITIONS A PROPOSED PRELIMINARY PLAT OF PIONEER NATURAL RESOURCES USA ADDITION, BEING A PLAT OF AN 87.55-ACRE TRACT OF LAND OUT OF SECTIONS 33 AND 40, BLOCK 38, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS (GENERALLY LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF NORTH COUNTY ROAD 1140 AND EAST STATE HIGHWAY 80) **(DISTRICT: NONE) (DEVELOPMENT SERVICES)**

20. 129-2023 – MOTION APPROVING WITH STAFF'S RECOMMENDED CONDITIONS A PROPOSED PRELIMINARY PLAT OF YMCA ADDITION, SECTION 1, BEING A PLAT OF A 25.195-ACRE TRACT OF LAND OUT OF SECTIONS 23 AND 24, BLOCK 40, T-1-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY

LOCATED ON THE SOUTHEAST CORNER OF THE INTERSECTION OF GOLDEN GATE DRIVE AND MOCKINGBIRD LANE) **(DISTRICT 4) (DEVELOPMENT SERVICES)**

21. 2023-154 – RESOLUTION ESTABLISHING A POLICY LIMITING ELIGIBILITY FOR SERVICE ON CITY BOARDS AND COMMISSIONS WITH FINAL DECISION-MAKING AUTHORITY **(LEGAL)**

22. 2023-155 – RESOLUTION ACCEPTING A GRANT IN THE AMOUNT OF $52,686.00 FROM THE FISCAL YEAR 2023 EDWARD BYRNE MEMORIAL JUSTICE ASSISTANCE GRANT PROGRAM PROVIDED BY THE OFFICE OF JUSTICE PROGRAMS FOR THE UNITED STATES DEPARTMENT OF JUSTICE; SAID GRANT FUNDS SHALL BE USED TO PURCHASE FLOCK LICENSE PLATE CAMERAS FOR THE POLICE DEPARTMENT; AND APPROPRIATING SAID GRANT FUNDS **(DISTRICT: ALL) (POLICE)**

SECOND READINGS

23. 10445 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITHOUT TERM FOR A 54.008-ACRE TRACT OF LAND OUT OF SECTION 42, BLOCK 40, T-1-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED APPROXIMATELY 1,550 FEET SOUTH OF STATE HIGHWAY 191, AND APPROXIMATELY 1,725 FEET EAST OF FARM-TO-MARKET ROAD 1788), WHICH IS PRESENTLY ZONED RR, REGIONAL RETAIL DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR AN INSTITUTION FOR THE CARE OF ALCOHOLIC, PSYCHIATRIC, OR NARCOTIC PATIENTS; MAKING SAID DESIGNATION SUBJECT TO CERTAIN CONDITIONS AND RESTRICTIONS CONTAINED HEREIN; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION **(DISTRICT 4) (DEVELOPMENT SERVICES)** (FIRST READING HELD ON OCTOBER 10, 2023)

24. 10446 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOT 55, BLOCK 8, 349 RANCH ESTATES, CITY AND COUNTY OF MIDLAND, TEXAS, FROM PD, PLANNED DEVELOPMENT DISTRICT FOR HOUSING DEVELOPMENT TO SF-1, SINGLE-FAMILY DWELLING DISTRICT (GENERALLY LOCATED EAST OF TEJAS, APPROXIMATELY 175 FEET WEST OF SIOUX COURT); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION **(DISTRICT 1) (DEVELOPMENT SERVICES)** (FIRST READING HELD ON OCTOBER 10, 2023)

25. 10447 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOTS 2 AND 3, LLANO ESTACADO ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM CE, COUNTRY ESTATE DISTRICT TO RR, REGIONAL RETAIL DISTRICT (GENERALLY LOCATED ON THE NORTH SIDE OF BRIARWOOD AVENUE, APPROXIMATELY 340 FEET WEST OF AVALON DRIVE);

CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION **(DISTRICT 3) (DEVELOPMENT SERVICES)** (FIRST READING HELD ON OCTOBER 10, 2023)

PUBLIC HEARINGS

The City Council will hold public hearings on the following items:

26. 10448 – AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS, PURSUANT TO CHAPTER 311 OF THE TEXAS TAX CODE, CREATING TAX INCREMENT FINANCING REINVESTMENT ZONE NUMBER TWO, CITY OF MIDLAND, TEXAS **(DISTRICT: 2 & 3) (COMMUNITY SERVICES)**

27. 10449 – AN ORDINANCE VACATING AND ABANDONING A 0.138-ACRE PORTION OF ALLEY RIGHT-OF-WAY, LOCATED WITHIN BLOCK 127, SOUTHERN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED SOUTH OF EAST KENTUCKY AVENUE, APPROXIMATELY 100 FEET WEST OF SOUTH LAMESA ROAD); ADOPTING THE APPRAISAL BY THE ASSISTANT CITY MANAGER OF $12,000.00; RETAINING A NONEXCLUSIVE UTILITY EASEMENT; AND ORDERING RECORDATION BY THE CITY SECRETARY **(DISTRICT 2) (DEVELOPMENT SERVICES)**

28. 10450 – AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR LOTS 1 THROUGH 6 AND A 0.138-ACRE TRACT OF LAND, BLOCK 127, SOUTHERN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF SOUTH LAMESA ROAD AND EAST KENTUCKY AVENUE), BY PERMITTING A METAL SCREENING FENCE IN LIEU OF A MASONRY SCREENING WALL; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); ORDERING RECORDATION BY THE CITY SECRETARY IN THE DEED RECORDS OF MIDLAND COUNTY, TEXAS; AND ORDERING PUBLICATION **(DISTRICT 2) (DEVELOPMENT SERVICES)**

29. 10451 – AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR LOT 2, BLOCK 3, MELODY ACRES, SECTION 4, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE NORTH SIDE OF TANFORAN AVENUE, APPROXIMATELY 200 FEET EAST OF ORIOLE DRIVE), BY PERMITTING A REDUCED MINIMUM LOT AREA; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); ORDERING RECORDATION BY THE CITY SECRETARY IN THE DEED RECORDS OF MIDLAND COUNTY, TEXAS; AND ORDERING PUBLICATION **(DISTRICT 4) (DEVELOPMENT SERVICES)** (DEFERRED FROM SEPTEMBER 26, 2023)

30. 10452 – AN ORDINANCE VACATING AND ABANDONING A 0.42-ACRE PORTION OF NORTH N STREET RIGHT-OF WAY AND A 0.13-ACRE PORTION OF ALLEY RIGHT-OF-WAY, EACH LOCATED ADJACENT TO OR WITHIN BLOCK 11, HIGHLAND PARK

ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED NORTH OF THE INTERSECTION OF NORTH N STREET AND WEST ILLINOIS AVENUE); ADOPTING THE APPRAISAL BY THE ASSISTANT CITY MANAGER OF $75,592.00; RETAINING A NONEXCLUSIVE UTILITY EASEMENT; AND ORDERING RECORDATION BY THE CITY SECRETARY **(DISTRICT 3) (DEVELOPMENT SERVICES)**

MISCELLANEOUS

31. 10453 – AN ORDINANCE AMENDING TITLE XI, "PLANNING AND DEVELOPMENT" OF THE CITY CODE OF MIDLAND, TEXAS, BY ADDING CHAPTER 1A, "CENTENNIAL ENTERTAINMENT OVERLAY DISTRICT" SO AS TO ESTABLISH AN OVERLAY ZONING DISTRICT; ESTABLISHING PROVISIONS RELATED TO LAND USE AND DEVELOPMENT WITHIN SAID OVERLAY ZONING DISTRICT; AMENDING THE ZONING MAP; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); ESTABLISHING AN EFFECTIVE DATE OF DECEMBER 1, 2023; AND ORDERING PUBLICATION **(DISTRICT: ALL) (DEVELOPMENT SERVICES)**

32. MOTION MAKING APPOINTMENTS TO VARIOUS BOARDS AND COMMISSIONS **(DISTRICT: ALL) (CITY SECRETARY'S OFFICE)**

PUBLIC COMMENT

33. Receive public comments where individuals may address the City Council on City related issues and projects not on the present agenda. Any deliberation of or decision by the City Council regarding the item being discussed shall be limited to a motion to place the item on the agenda for a subsequent meeting. (Please limit comments to three minutes or less.)

EXECUTIVE SESSION

34. Pursuant to Texas Government Code § 551.101, the City Council will hold an Executive Session, which is closed to the public, to discuss the following matters as permitted under the following sections of the Texas Government Code:

    a. Section 551.087, Deliberate Economic Development Negotiations

    a.1. Discuss business prospects that the City seeks to have locate, stay, or expand in or near the City of Midland,
    Texas, and discuss possible incentives.

Respectfully Submitted,

Tommy Gonzalez
City Manager

MEETING ASSISTANCE INFORMATION: The Midland City Hall and Council Chamber are wheelchair accessible. If you need special assistance to participate in this meeting, please contact the City Secretary's Office at (432) 685-7430. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting.

MIDLAND CITY COUNCIL
COUNCIL WORK SESSION
MINUTES
October 10, 2023

The City Council convened in a work session in the Basement Conference Room, City Hall, Midland, Texas, at 9:15 AM, October 10, 2023.

Council Members present:	Amy Stretcher Burkes, Robin Poole, Lori Blong, Scott Dufford, Jack Ladd, John Norman
Council Members absent:	Dan Corrales
Staff members present:	City Manager Tommy Gonzalez, City Attorney John Ohnemiller, Deputy City Manager Morris Williams Jr., Assistant City Manager Tina Jauz, Assistant City Manager Jose Ortiz

The meeting was called to order at 9:18 a.m.

The following matter(s), and any matter listed on the agenda for this meeting, may be discussed by the City Council:

1. Receive a report from Assistant City Manager Jose Ortiz on the possible establishment of a Downtown Tax Increment Reinvestment Zone (TIRZ)

   David Pettit and Natalie Moore with Economic Development LLC., provided a detailed history of the TIRZ Tax Increment Reinvestment Zone and the TIRZ Creation process. Mr. Pettit and Ms. Moore also spoke on the benefits and purpose(s) of the TIRZ and answered questions from Council.

   Engineering Services Director Gabe McClelland provided a detailed overview of concepts and ideas related to TIRZ.

   Development Projections, projected tax revenue, projected annual tax revenue and proposed project cost were discussed. Public utilities, parking, transit, street and intersection improvements were also discussed along with the economic and administrative cost associated with these improvements.

All the business at hand having been completed, the meeting adjourned at 10:02 a.m.

DRAFT

PASSED AND APPROVED October 24, 2023.

Lori Blong, Mayor

ATTEST:

Marcia Bentley-German
City Governance Officer /City Secretary

DRAFT

MIDLAND CITY COUNCIL
MINUTES
October 10, 2023

The City Council convened in regular session in the Council Chamber, City Hall, Midland, Texas, at 10:00 a.m., October 10, 2023.

Council Members present:	Amy Stretcher Burkes, Dan Corrales, Robin Poole, Lori Blong, Scott Dufford, Jack Ladd, John Norman
Council Members absent:	None
Staff members present:	City Manager Tommy Gonzalez, City Attorney John Ohnemiller, Deputy City Manager Morris Williams Jr., Assistant City Manager Tina Jauz, Assistant City Manager Jose Ortiz

The meeting was called to order at 10:06 a.m.

OPENING ITEMS

1. Invocation – Pastor Keith Graves, Hope Community Church

2. Pledge of Allegiance

PRESENTATIONS

3. Presentation of special events, organizations, individuals, or periods of time including, but not limited to:

   3a. Presentation of Proclamation for "High Sky Children's Ranch 60th Anniversary Day"

   3b. Presentation from Managing Director of Public Safety Charles Blumenauer regarding the City of Midland Animal Services Division.

   Managing Director/Fire Chief Chuck Blumenaur gave a brief overview of changes happening in the Animal Services Department. Chief Blumenaur reported on Enhancing Animal Welfare and where the future of Animal Services is heading for the City of Midland. A/C and heating in vehicles was discussed, hiring a new Veterinarian and having staff take development classes through Humane Educators of Texas.

DRAFT

City Manager Tommy Gonzalez reported they are aggressively seeking to hire a Veterinarian.

3c. Presentation from Director of Finance Christy Weakland regarding Budget and Fixed Costs.

Finance Director Christy Weakland gave a brief overview of the FY 2024 budget breakdown by reporting on fixed cost versus one-time, what affects fixed cost such as inflation, supply chain and growth and reported on the General Fund. Ms. Weakland provided a breakdown of Fixed Cost and reviewed Personnel increases and answered questions from Council.

Mayor Blong reported briefly on the status of the Fireman's pension fund.

CONSENT AGENDA

4. MOTION APPROVING THE FOLLOWING MINUTES:

   4a. WORK SESSION OF SEPTEMBER 26,2023

   4b. REGULAR SESSION OF SEPTEMBER 26,2023

5. 2023-131 – RESOLUTION NOMINATING ROBERT MCNAUGHTON FOR THE MIDLAND CENTRAL APPRAISAL DISTRICT BOARD OF DIRECTORS; AND DIRECTING THE CITY MANAGER TO DELIVER A COPY OF THIS RESOLUTION TO THE MIDLAND CENTRAL APPRAISAL DISTRICT **(DISTRICT: NONE) (FINANCE)**

6. 2023-132 – RESOLUTION AUTHORIZING THE EXECUTION OF AN AGREEMENT WITH GEOGRAPHIC INFORMATION SERVICES, INC., D/B/A AXIM GEOSPATIAL, LLC, FOR ARCGIS IMPLEMENTATION SERVICES THROUGH THE TEXAS DEPARTMENT OF INFORMATION RESOURCES FOR A COST OF $345,400.00 **(DISTRICT: NONE) (GENERAL SERVICES)**

7. 2023-133 – RESOLUTION APPROVING THE PURCHASE OF A CATERPILLAR 836 WHEEL DOZER COMPACTOR FROM WARREN POWER & MACHINERY, INC., THROUGH SOURCEWELL FOR A TOTAL COST OF $1,498,340.00 **(DISTRICT: NONE) (GENERAL SERVICES)**

8. 2023-134 – RESOLUTION AUTHORIZING PURCHASE OF AN ASPHALT PAVER FROM BEE EQUIPMENT SALES, LTD., THROUGH BUYBOARD FOR A TOTAL COST OF $267,749.33 **(DISTRICT: NONE) (GENERAL SERVICES)**

9. 2023-135 – RESOLUTION APPROVING THE PURCHASE OF A 114SD SEWER JET VAC TRUCK AND ASSOCIATED COMPONENTS FROM HOUSTON FREIGHTLINER INC. THROUGH THE HOUSTON-GALVESTON AREA COUNCIL FOR A TOTAL COST OF $552,119.49 **(DISTRICT: NONE) (GENERAL SERVICES)**

DRAFT

10. 2023-136 – RESOLUTION AUTHORIZING PURCHASE OF TWO (2) CHEVROLET TAHOES FROM CALDWELL AUTOMOTIVE PARTNERS, LTD., THROUGH BUYBOARD FOR A TOTAL COST OF $140,924.00 **(DISTRICT: NONE) (GENERAL SERVICES)**

11. 2023-137 – RESOLUTION AUTHORIZING PURCHASE OF A REELMASTER 5510-D FAIRWAY MOWER, A WORKMAN DHX-2WD GOLF CART, A GREENMASTER TRIFLEX MOWER, A SAND PRO 5040 TRAP RAKE, A RIDING SAND PRO, A PROCORE AERATOR, AND A PROCORE AERIFIER FROM PROFESSIONAL TURF PRODUCTS, L.P., THROUGH BUYBOARD FOR A TOTAL COST OF $359,615.20 **(DISTRICT: NONE) (GENERAL SERVICES)**

15. 2023-138 – RESOLUTION AMENDING THE CITY OF MIDLAND PERSONNEL POLICIES SO AS TO REVISE THE DEFINITION OF "DEPARTMENT MANAGERS"; AND PROVIDING AN EFFECTIVE DATE OF OCTOBER 11, 2023 **(DISTRICT: NONE) (ADMINISTRATIVE SERVICES)**

16. 2023-139 – RESOLUTION APPROVING THE SELECTION OF GARVER, H.W. LOCHNER, INC., MAVERICK CIVIL & SURVEY, LLC, PARKHILL, SMITH & COOPER, INC., DBA PARKHILL, TRANSYSTEMS CORPORATION DBA TRANSYSTEMS CORPORATION CONSULTANTS, AND WESTWOOD PROFESSIONAL SERVICES, INC., AS RESPECTIVE FIRST CHOICES FOR THE PERFORMANCE OF ON-CALL ARCHITECTURAL AND ENGINEERING CONSULTING SERVICES FOR VARIOUS PROJECTS AT THE MIDLAND INTERNATIONAL AIR & SPACE PORT AND MIDLAND AIRPARK OVER THE NEXT THREE (3) YEARS; AND PROVIDING THAT ANY AGREEMENT EXCEEDING $100,000.00 SHALL NOT BECOME EFFECTIVE UNTIL APPROVED BY THE CITY COUNCIL **(DISTRICT 4) (GENERAL SERVICES)**

17. 2023-140 – RESOLUTION AUTHORIZING THE EXECUTION OF A TAX ABATEMENT AGREEMENT WITH LS BRENTWAY LLC AS AUTHORIZED BY CHAPTER 312 OF THE TEXAS TAX CODE (THE "AGREEMENT") REGARDING LOTS 22, 23 AND 24, BLOCK 65, ORIGINAL TOWN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (THE "PROPERTY"); SAID PROPERTY BEING LOCATED WITHIN TAX ABATEMENT REINVESTMENT ZONE NUMBER 2023-02 (THE "REINVESTMENT ZONE"); SAID REINVESTMENT ZONE BEING LOCATED ON THE WEST SIDE OF SOUTH LORAINE STREET, APPROXIMATELY 130 FEET NORTH OF WEST MISSOURI AVENUE; THE OWNER OF THE PROPERTY BEING LS BRENTWAY LLC; THE APPLICANT FOR TAX ABATEMENT BEING LS BRENTWAY LLC; THE IMPROVEMENTS INCLUDED IN THE AGREEMENT BEING GENERALLY DESCRIBED AS A SIX-STORY HOTEL WITH APPROXIMATELY 80 GUEST ROOMS AND ASSOCIATED AND APPURTENANT FACILITIES; THE ESTIMATED COST OF SAID IMPROVEMENTS BEING NOT LESS THAN $15,000,000.00; AND DIRECTING THE CITY MANAGER TO DELIVER A WRITTEN NOTICE OF THE CITY'S INTENTION TO ENTER INTO THE AGREEMENT, OR ENSURE THAT SUCH A NOTICE HAS BEEN DELIVERED, TO THE PRESIDING OFFICER OF THE GOVERNING BODY OF EACH APPROPRIATE TAXING UNIT AT LEAST SEVEN DAYS PRIOR TO THE EXECUTION OF THE AGREEMENT **(DISTRICT 2) (CITY MANAGER)**

DRAFT

18. 2023-141 – RESOLUTION AUTHORIZING THE EXECUTION OF A DEVELOPMENT AGREEMENT BETWEEN THE CITY OF MIDLAND AND LS BRENTWAY LLC REGARDING THE DEVELOPMENT OF CERTAIN REAL PROPERTY DESCRIBED AS LOTS 22, 23, AND 24, BLOCK 65, ORIGINAL TOWN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS **(DISTRICT 2) (CITY MANAGER)**

19. 120-2023 – MOTION APPROVING WITH STAFF'S RECOMMENDED CONDITIONS A PROPOSED PRELIMINARY PLAT OF CLAYDESTA PLAZA NORTH, SECTION 6, BEING A REPLAT OF THE REMAINDER OF LOT 1, BLOCK 14, CLAYDESTA PLAZA, SECTION 2, LOT 2B, BLOCK 14, CLAYDESTA PLAZA, SECTION 14, AND A 47.74-ACRE TRACT OF LAND, LOCATED IN SECTION 14, BLOCK 39, T-1-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED WEST OF NORTH BIG SPRING STREET, APPROXIMATELY 300 FEET NORTH OF VETERANS AIRPARK LANE) **(DISTRICT 3) (DEVELOPMENT SERVICES)**

20. 121-2023 – MOTION APPROVING WITH STAFF'S RECOMMENDED CONDITIONS A PROPOSED PRELIMINARY PLAT OF PERMIAN BASIN BEHAVIORAL HEALTH CENTER, SECTION 1, BEING A 50.31-ACRE TRACT OF LAND OUT OF SECTION 42, BLOCK 40, T-1-S, T&P RR CO. SURVEY, COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED APPROXIMATELY 1,550 FEET SOUTH OF STATE HIGHWAY 191, AND APPROXIMATELY 1,725 FEET EAST OF NORTH FARM-TO-MARKET ROAD 1788) **(DISTRICT: NONE) (DEVELOPMENT SERVICES)**

21. 122-2023 – MOTION APPROVING WITH STAFF'S RECOMMENDED CONDITIONS A PROPOSED PRELIMINARY PLAT OF CARROLLWOOD ADDITION, SECTION 2, BEING A 31.58-ACRE TRACT OF LAND OUT OF SECTION 24, BLOCK 40, T-2-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS (GENERALLY LOCATED ON THE EAST SIDE OF ANTELOPE TRAIL, APPROXIMATELY 2,790 FEET NORTH OF WEST COUNTY ROAD 140) (**DISTRICT: NONE) (DEVELOPMENT SERVICES)**

Robin Poole moved to approve Consent Agenda item(s) 4-21, excluding item(s) 12, 13, & 14; seconded by Amy Stretcher Burkes.

The motion passed by the following vote:
AYE: Stretcher Burkes, Corrales, Poole, Blong, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

The following item(s) were pulled from consent agenda and considered individually.

12. 117-2023 – MOTION AUTHORIZING THE EXECUTION OF A SECOND AMENDMENT TO THE WATER FACILITIES OPERATION AND MAINTENANCE CONTRACT BETWEEN THE CITY OF MIDLAND AND PSC WATER OPERATING COMPANY REGARDING THE OPERATION AND MAINTENANCE OF CERTAIN WATER FACILITIES LOCATED AT T-BAR RANCH (DISTRICT: NONE) (GENERAL SERVICES)

DRAFT

Managing Director/Utilities Director Carl Craigo gave a brief overview of the item noting they would like to go month to month to give time to get the RFP out since the original deadline was missed.

Robin Poole moved to approve Motion No. 117-2023; seconded by Dan Corrales.

The motion passed by the following vote:
AYE: Stretcher Burkes, Corrales, Poole, Blong, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

13. 118-2023 – MOTION APPROVING PLANS AND SPECIFICATIONS FOR THE STATE HIGHWAY 158 AND SINCLAIR AVENUE INTERSECTION IMPROVEMENT PROJECT, SAID PLANS AND SPECIFICATIONS BEING ON FILE IN THE CITY SECRETARY'S OFFICE REFERENCED BY THE NUMBER AND DATE OF THIS MOTION, AND AUTHORIZING THE CITY MANAGER OR THE CITY MANAGER'S DESIGNEE TO ADVERTISE FOR COMPETITIVE BIDS FOR SAID PROJECT PURSUANT TO THE STATUTES OF THE STATE OF TEXAS FOR ACCOMPLISHING THE WORK SET FORTH IN SAID PLANS AND SPECIFICATIONS **(DISTRICT 4) (GENERAL SERVICES)**

Engineering Director Gabriel McClelland gave a brief overview of the item noting they are seeking permission to bid.

Dan Corrales moved to approve Motion No. 118-2023; seconded by Amy Stretcher Burkes.

The motion passed by the following vote:
AYE: Stretcher Burkes, Corrales, Poole, Blong, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

14. 119-2023 – MOTION REJECTING THE SOLE PROPOSAL RECEIVED FOR CERTAIN AIRPORT PASSENGER SERVICES AT MIDLAND INTERNATIONAL AIR & SPACE PORT AND MIDLAND AIRPARK **(DISTRICT: NONE) (GENERAL SERVICES)**

Deputy Director of Airports Aaron Easton gave a brief overview of the item noting the sole source bid was cost prohibitive so they will look for other solutions. Mr. Easton provided examples of why the bid was cost prohibitive.

John Norman moved to approve Motion No. 119-2023; seconded by Robin Poole.

The motion passed by the following vote:
AYE: Stretcher Burkes, Corrales, Poole, Blong, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

DRAFT

SECOND READINGS

22. 10442 – AN ORDINANCE EXTENDING THE BOUNDARIES OF THE CITY OF MIDLAND, TEXAS, BY ADDING THERETO A CERTAIN AREA ADJOINING THE PRESENT CITY LIMITS, BEING A 54.008-ACRE TRACT OF LAND OUT OF SECTION 42, BLOCK 40, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS (GENERALLY LOCATED APPROXIMATELY 1,550 FEET SOUTH OF STATE HIGHWAY 191, AND APPROXIMATELY 1,725 FEET EAST OF FARM-TO-MARKET ROAD 1788); ORDERING PUBLICATION; AND ORDERING RECORDATION BY THE CITY SECRETARY **(DISTRICT: NONE) (DEVELOPMENT SERVICES)** (FIRST READING HELD SEPTEMBER 26, 2023)

Chief Deputy City Secretary Vanessa Magallanes read the caption of Ordinance No. 10442.

Jack Ladd moved to approve the second and final reading of Ordinance No. 10442; seconded by Dan Corrales.

The motion passed by the following vote:
AYE: Stretcher Burkes, Corrales, Poole, Blong, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

23. 10443 – AN ORDINANCE ESTABLISHING THE INITIAL ZONING CLASSIFICATION OF THE AREA INDICATED AS BEING A 54.008-ACRE TRACT OF LAND OUT OF SECTION 42, BLOCK 40, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS, AS AN RR, REGIONAL RETAIL DISTRICT; SAID TRACT BEING GENERALLY LOCATED APPROXIMATELY 1,550 FEET SOUTH OF STATE HIGHWAY 191, AND APPROXIMATELY 1,725 FEET EAST OF FARM-TO-MARKET ROAD 1788; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION **(DISTRICT: NONE) (DEVELOPMENT SERVICES)** (FIRST READING HELD SEPTEMBER 26, 2023)

Chief Deputy City Secretary Vanessa Magallanes read the caption of Ordinance No. 10443.

Dan Corrales moved to approve the second and final reading of Ordinance No. 10443; seconded by Amy Stretcher Burkes.

The motion passed by the following vote:
AYE: Stretcher Burkes, Corrales, Poole, Blong, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

24. 10444 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE TRINITY TOWERS MANOR, SECTIONS 1, 2 AND 3, AND

DRAFT

ARBOR PARK, SECTION 6, CITY AND COUNTY OF MIDLAND, TEXAS, FROM PD, PLANNED DEVELOPMENT DISTRICT FOR A HOUSING DEVELOPMENT, IN PART, AND MF-16, MULTIPLE-FAMILY DWELLING DISTRICT, IN PART, TO PD, PLANNED DEVELOPMENT DISTRICT FOR A HOUSING DEVELOPMENT (GENERALLY LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF LOOP 250 AND SUNSHINE PARKWAY); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION **(DISTRICT 4) (DEVELOPMENT SERVICES)** (FIRST READING HELD SEPTEMBER 26, 2023)

Chief Deputy City Secretary Vanessa Magallanes read the caption of Ordinance No. 10444.

Jack Ladd moved to approve the second and final reading of Ordinance No. 10444; seconded by Robin Poole.

The motion passed by the following vote:
AYE: Stretcher Burkes, Corrales, Poole, Blong, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

PUBLIC HEARINGS

The City Council will hold public hearings on the following items:

25. 123-2023 – THE PROPOSED GRANTING OF OIL AND GAS WELL PERMITS TO PERMIAN DEEP ROCK OIL CO., LLC ("OPERATOR") FOR THE DRILLING OF THE FOLLOWING OIL AND GAS WELLS: CK 105 MIPA ALLOC UNIT H105WA; KNIGHT 140 MIPA UNIT H140LS; KNIGHT 140 MIPA UNIT H140MS; KNIGHT 140 MIPA UNIT H140WB; KNIGHT 145 MIPA UNIT H145WA; KNIGHT 150 MIPA UNIT H150LS; KNIGHT 150 MIPA UNIT H150SS; KNIGHT 150 MIPA UNIT H150WB; KNIGHT 155 MIPA UNIT H155WA; KNIGHT 160 MIPA UNIT H160LS; KNIGHT 160 MIPA UNIT H160MS; AND KNIGHT 160 MIPA UNIT H160WB; SAID WELLS BEING GENERALLY LOCATED BETWEEN 768 FEET AND 1,022 FEET EAST OF NORTH A STREET EXTENSION AND BETWEEN 1,817 FEET AND 2,067 FEET SOUTH OF WEST LOOP 250 NORTH; PUBLIC HEARING ONLY **(DISTRICT 3) (DEVELOPMENT SERVICES)**

Mayor Blong opened the public hearing at 10:46 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

THIS WAS A PUBLIC HEARING ONLY. NO ACTION TAKEN.

26. 10445 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITHOUT TERM FOR A 54.008-ACRE TRACT OF LAND OUT OF SECTION 42, BLOCK 40, T-1-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED APPROXIMATELY 1,550 FEET SOUTH OF STATE HIGHWAY 191, AND

DRAFT

APPROXIMATELY 1,725 FEET EAST OF FARM-TO-MARKET ROAD 1788), WHICH IS PRESENTLY ZONED RR, REGIONAL RETAIL DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR AN INSTITUTION FOR THE CARE OF ALCOHOLIC, PSYCHIATRIC, OR NARCOTIC PATIENTS; MAKING SAID DESIGNATION SUBJECT TO CERTAIN CONDITIONS AND RESTRICTIONS CONTAINED HEREIN; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION **(DISTRICT 4) (DEVELOPMENT SERVICES)**

Chief Deputy City Secretary Vanessa Magallanes read the caption of Ordinance No. 10445.

Interim Development Services Director Rolandrea Russell reported the Specific Use Designation (SUD) is for the Permian Basin Behavioral Health Institution. The Zoning Ordinance requires an SUD.

Mayor Blong opened the public hearing at 10:47 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

Jack Ladd moved to approve the first of two readings of Ordinance No. 10445; seconded by John Norman.

The motion passed by the following vote:
AYE: Stretcher Burkes, Corrales, Poole, Blong, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

27. 10446 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOT 55, BLOCK 8, 349 RANCH ESTATES, CITY AND COUNTY OF MIDLAND, TEXAS, FROM PD, PLANNED DEVELOPMENT DISTRICT FOR HOUSING DEVELOPMENT TO SF-1, SINGLE-FAMILY DWELLING DISTRICT (GENERALLY LOCATED EAST OF TEJAS, APPROXIMATELY 175 FEET WEST OF SIOUX COURT); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION **(DISTRICT 1) (DEVELOPMENT SERVICES)**

Chief Deputy City Secretary Vanessa Magallanes read the caption of Ordinance No. 10446.

Mayor Blong opened the public hearing at 10:48 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

Jack Ladd moved to approve the first of two readings of Ordinance No. 10446; seconded by John Norman.

The motion passed by the following vote:

DRAFT

AYE: Stretcher Burkes, Corrales, Poole, Blong, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

28. 2023-142 – RESOLUTION AUTHORIZING THE TEMPORARY USE OF LAND FOR A VENDOR MARKET ON LOT 1A, BLOCK 3, CRESTGATE ADDITION, SECTION 33, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF CRESTFIELD STREET AND WEST LOOP 250 NORTH) SUBJECT TO CERTAIN SPECIAL CONDITIONS AND RESTRICTIONS **(DISTRICT 1) (DEVELOPMENT SERVICES)**

Mayor Blong opened the public hearing at 10:49 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

Jack Ladd moved to approve Resolution No. 2023-142; seconded by Robin Poole.

The motion passed by the following vote:
AYE: Stretcher Burkes, Corrales, Poole, Blong, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

29. 2023-143 – RESOLUTION AUTHORIZING THE TEMPORARY USE OF LAND FOR A PARTY ON LOT 1A, BLOCK 2, GATEWAY PLAZA ADDITION, SECTION 3, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF LIBERTY DRIVE AND WEST BUSINESS INTERSTATE 20) SUBJECT TO CERTAIN SPECIAL CONDITIONS AND RESTRICTIONS **(DISTRICT 4) (DEVELOPMENT SERVICES)**

Mayor Blong opened the public hearing at 10:50 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

Jack Ladd moved to approve Resolution No. 2023-143; seconded by Dan Corrales.

The motion passed by the following vote:
AYE: Stretcher Burkes, Corrales, Poole, Blong, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

30. 10447 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOTS 2 AND 3, LLANO ESTACADO ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM CE, COUNTRY ESTATE DISTRICT TO RR, REGIONAL RETAIL DISTRICT (GENERALLY LOCATED ON THE NORTH SIDE OF BRIARWOOD AVENUE, APPROXIMATELY 340 FEET WEST OF AVALON DRIVE); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION **(DISTRICT 3)**

DRAFT

(DEVELOPMENT SERVICES)

Chief Deputy City Secretary Vanessa Magallanes read the caption of Ordinance No. 10447.

Interim Development Services Director Rolandrea Russell gave a brief overview of the item noting this request is for a zone change from country estate to regional retail. Staff has received some letters of objections.

City Manager Tommy Gonzalez spoke on knowing what type of development is wanted in the city and the importance of having a plan.

John Burkholder, 6406 Mockingbird Lane, spoke against this item due to the traffic and speed limit. Mr. Burkholder would like the Council to push to another time for development to provide time to make some changes such as expanding roads.

Armando Aranda, 4706 Aster Ave., spoke against a Dollar General store coming to this location due to the possibility of an increase in crime.

Ben Barrier, Austin, spoke in favor of this item and stated that Dollar General is not the current owner of this location. Mr. Barrier also reported that stores do not bring in crime; locations do.

Mayor Blong opened the public hearing at 11:00 a.m. There being no one else wishing to speak, the public hearing was closed at 11:10 a.m.

John Norman moved to approve the first of two readings of Ordinance No. 10447; seconded by Jack Ladd.

The motion passed by the following vote:
AYE: Poole, Blong, Dufford, Ladd, Norman
NAY: Stretcher Burkes, Corrales
ABSTAIN: None
ABSENT: None

PUBLIC COMMENT

31. Receive public comments where individuals may address the City Council on City related issues and projects not on the present agenda. Any deliberation of or decision by the City Council regarding the item being discussed shall be limited to a motion to place the item on the agenda for a subsequent meeting. (Please limit comments to three minutes or less.)

    Shirley Howard, 406 Magnolia, spoke on serving on more than one Board or Commission at a time, delays on appointments and timelines on them.

All the business at hand having been completed, the meeting adjourned at 11:19 a.m.

DRAFT

PASSED AND APPROVED October 24, 2023.

Lori Blong, Mayor

ATTEST:

Marcia Bentley-German
City Governance Officer/City Secretary

DRAFT

City Council Meeting

Item Number: 5

Meeting Date: October 10, 2023

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: RESOLUTION AUTHORIZING THE SOLE-SOURCE PURCHASE OF A FITNESS COURT FOR DENNIS THE MENACE PARK FROM NATIONAL FITNESS CAMPAIGN LP FOR A TOTAL COST OF $105,000.00 (DISTRICT 2) (GENERAL SERVICES)

Purpose:

Resolution approving the sole source purchase with National Fitness Campaign LP. for a fitness court for Dennis the Menace Park for a total cost of $105,000.00.

Recommended City Council Action:

Approve

Fiscal Impact:

Funding is available in the Fitness Court at Dennis the Menace Project (900442-097).

Discussion:

Staff recommends approving the sole source purchase of a fitness court for Dennis the Menace Park. The base cost is $155,000.00; however, after the NFC State Sponsor Grant through National Fitness Campaign LP of $50,000.00 is deducted from the total, the cost to purchase the fitness court only will be $105,000.00. The purchase for installation will come at a later date. The estimated delivery time for the fitness court is 120 days. According to Texas Local Government Code 252.022 (a)(7)(A), competitive bidding requirements do not apply to items that are available from only one source because of patents, copyrights, secret processes, or natural monopolies. Please see the attached memo from Cristina Burns, Community Services Director, for additional information.

Therefore, please consider a resolution approving the sole source purchase with National

Fitness Campaign LP. of San Francisco, California for a fitness court for Dennis the Menace Park for a total cost of $105,000.00 for the Community Services Department.

Tina Daugherty

City Manager's Office

Parks Division
Interoffice Memorandum

Date: October 11, 2023
To: Jose Ortiz, Assistant City Manager
From: Cristina O. Burns, Community Services Director
Subject: Purchase of Fitness Court for Dennis the Menace Park

In March 2023, $209,000 was appropriated towards the fitness court project at Dennis the Menace Park to include the purchase and installation of the fitness court, including a shade structure, and custom artwork for the fitness court.

The next step in the project is to purchase the fitness court, which is $105,000. This is the cost for the purchase of the fitness court only; the purchase of installation will come at a later date.

Funding for this project is already appropriated to Project 900442-097 Fitness Court at Dennis the Menace. An additional $104,000 is also set aside in the project for additional work related to the project, including the installation, the purchase and installation of a shade structure, and custom artwork.

RESOLUTION NO. _____

RESOLUTION AUTHORIZING THE SOLE-SOURCE PURCHASE OF A FITNESS COURT FOR DENNIS THE MENACE PARK FROM NATIONAL FITNESS CAMPAIGN LP FOR A TOTAL COST OF $105,000.00

WHEREAS, the City of Midland seeks to purchase a Fitness Court to be installed at Dennis the Menace Park, and said Fitness Court is only available for purchase through a sole-source provider; and

WHEREAS, the sole-source provider of said Fitness Court, National Fitness Campaign LP, submitted a total quote of $105,000.00, as shown on the document attached hereto as Exhibit A and incorporated herein for all purposes; and

WHEREAS, said Fitness Court is available only from National Fitness Campaign LP; and

WHEREAS, the City Council finds the price proposed for said Fitness Court to be fair and reasonable; and

WHEREAS, the City Council finds it to be in the public interest to authorize the purchase of a Fitness Court from National Fitness Campaign LP;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the City Manager is hereby authorized and directed to purchase a Fitness Court from National Fitness Campaign LP, for a total cost of $105,000.00.

SECTION TWO. That the City Comptroller is hereby authorized and directed to pay National Fitness Campaign LP $105,000.00 from funds available in the Fitness Court at Dennis the Menace Project (900442-097) upon receipt of proper invoices or statements approved by the City Manager.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2023, by

the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

RECOMMENDED AND APPROVED:

_____
Tommy Gonzalez, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

QUOTE

National Fitness Campaign LP
For all questions regarding this quote, contact: info@nfchq.com

Created Date	7/19/2023
Expiration Date	10/6/2023
Quote Number	00000798
Bill To Name	Midland, TX
Bill To	300 N. Loraine Midland, TX 79702

Description	Quantity	Total Price
2023 - Fitness Court® and National Campaign Resources (Shipping Included)	1.00	$155,000.00
NFC State Sponsor Grant	1.00	($50,000.00)

Tax %	0.0000%
Grand Total	$105,000.00

Terms

1. PAYMENT TERMS
Purchaser will pay Seller 100% of the Purchase Price upon receipt of delivery. Purchaser is responsible for payment of shipping costs, including packing, insurance, and freight. These payment terms will apply unless both parties have agreed to other approved payment terms
2. TAX EXEMPTION
This quoted total is based upon Purchaser's tax-exempt status, for which verifying documentation must be provided to the Seller. If the Purchaser is not tax-exempt, sales tax will be applied before Purchase Price is considered final or binding.
3. STANDARD WARRANTY AND TERMS
NFC standard warranty and terms apply. See nationalfitnesscampaign.com/warranty for details.
4. PURCHASER OBLIGATIONS / TERMS AND CONDITIONS
Purchaser acknowledges upon receipt of the Fitness Court that they are responsible for the following items concerning the purchase of the Fitness Court which includes Design, Activation, and Campaign Resources:

- Purchaser is responsible for providing storage of the Fitness Court with insured protection, including liability, theft, or damage.
- A safe and environmentally controlled storage environment is required to store the tile adhesive. Store tile adhesive at temperatures between 50°F (10°C) and 100°F (38°C).
- NFC is not responsible for damage after receipt of goods by the Purchaser.
- Purchaser is responsible for (under a separate agreement) providing installation of the concrete slab footing, applicable ADA Access, Pour In Place or Tile Flooring installation, and Fitness Court installation per the NFC Installation Manual, adhesive manufacturers recommendations, and local safety, permitting, building, and planning code requirements.
- Assembly Completion Certificate submission to NFC is required within 15 days of Fitness Court Installation.
- A safe and environmentally controlled storage environment is required to store digital print graphics.
- NFC shall not be responsible for work performed by others.
- Purchaser to provide all on-site maintenance, safety, and security.
- Purchaser shall not allow any use of Fitness Court until all Graphics are installed.
- Purchaser understands that the use of exercise equipment incurs risks that are voluntarily entered into. Terms of Use of the Fitness Court by the public located at the purchaser's site shall be governed by the Purchaser in addition to the NFC minimum guidelines.
- Purchaser must maintain graphics and posted safety rules and regulations.
- Purchaser shall be responsible for site selection and all inherent risks associated with the choice of site selection, including risk to the general public.
- Purchaser acknowledges that all sponsors providing funding for the Fitness Court shall not be held liable for any risk associated with the installation of or use of the Fitness Court.
- Purchaser acknowledges that all product defects shall be covered by the contract manufacturer of the Fitness Court and all defects related to the installation of the Fitness Court shall be covered by the installer hired by the purchaser.
- Purchaser accepts risks and requirements as outlined in the approved Grant Funding Application as applicable.
- If the Purchaser is not the legal Land Owner, then they are required to ensure that the Land Owner is aware of and willing to abide by all Obligations / Terms and Conditions. Otherwise, they shall be responsible for these obligations, including Terms of Use. The same obligations and liabilities shall exist if the Fitness Court, which includes Design, Activation, and Campaign Resources, is sold, acquired, assumed, transferred, or gifted to another party. The new party must be aware of and willing to abide by all Obligations / Terms and Conditions herein or they will retain responsibility.

5. PURCHASER ACKNOWLEDGMENTS
Purchaser acknowledges and accepts upon receipt of Fitness Court all terms and conditions as described above, including Payment Terms, Terms of Tax Exempt Status, NFC Standard Warranty & Terms, Warranty Disclaimers, and Purchaser Obligations.

QUOTE

National Fitness Campaign LP
For all questions regarding this quote, contact: info@nfchq.com

Created Date	7/19/2023
Expiration Date	10/6/2023
Quote Number	00000798
Bill To Name	Midland, TX
Bill To	300 N. Loraine Midland, TX 79702

Registered Office: PO Box 2367, San Francisco, CA, 94126, USA.

QUOTE

National Fitness Campaign LP
For all questions regarding this quote, contact: info@nfchq.com

Created Date	7/19/2023
Expiration Date	10/6/2023
Quote Number	00000798
Bill To Name	Midland, TX
Bill To	300 N. Loraine Midland, TX 79702

Description	Quantity	Total Price
2023 - Fitness Court® and National Campaign Resources (Shipping Included)	1.00	$155,000.00
NFC State Sponsor Grant	1.00	($50,000.00)

Tax %	0.0000%
Grand Total	$105,000.00

Terms

1. PAYMENT TERMS
Purchaser will pay Seller 100% of the Purchase Price upon receipt of delivery. Purchaser is responsible for payment of shipping costs, including packing, insurance, and freight. These payment terms will apply unless both parties have agreed to other approved payment terms
2. TAX EXEMPTION
This quoted total is based upon Purchaser's tax-exempt status, for which verifying documentation must be provided to the Seller. If the Purchaser is not tax-exempt, sales tax will be applied before Purchase Price is considered final or binding.
3. STANDARD WARRANTY AND TERMS
NFC standard warranty and terms apply. See nationalfitnesscampaign.com/warranty for details.
4. PURCHASER OBLIGATIONS / TERMS AND CONDITIONS
Purchaser acknowledges upon receipt of the Fitness Court that they are responsible for the following items concerning the purchase of the Fitness Court which includes Design, Activation, and Campaign Resources:

- Purchaser is responsible for providing storage of the Fitness Court with insured protection, including liability, theft, or damage.
- A safe and environmentally controlled storage environment is required to store the tile adhesive. Store tile adhesive at temperatures between 50°F (10°C) and 100°F (38°C).
- NFC is not responsible for damage after receipt of goods by the Purchaser.
- Purchaser is responsible for (under a separate agreement) providing installation of the concrete slab footing, applicable ADA Access, Pour In Place or Tile Flooring installation, and Fitness Court installation per the NFC Installation Manual, adhesive manufacturers recommendations, and local safety, permitting, building, and planning code requirements.
- Assembly Completion Certificate submission to NFC is required within 15 days of Fitness Court Installation.
- A safe and environmentally controlled storage environment is required to store digital print graphics.
- NFC shall not be responsible for work performed by others.
- Purchaser to provide all on-site maintenance, safety, and security.
- Purchaser shall not allow any use of Fitness Court until all Graphics are installed.
- Purchaser understands that the use of exercise equipment incurs risks that are voluntarily entered into. Terms of Use of the Fitness Court by the public located at the purchaser's site shall be governed by the Purchaser in addition to the NFC minimum guidelines.
- Purchaser must maintain graphics and posted safety rules and regulations.
- Purchaser shall be responsible for site selection and all inherent risks associated with the choice of site selection, including risk to the general public.
- Purchaser acknowledges that all sponsors providing funding for the Fitness Court shall not be held liable for any risk associated with the installation of or use of the Fitness Court.
- Purchaser acknowledges that all product defects shall be covered by the contract manufacturer of the Fitness Court and all defects related to the installation of the Fitness Court shall be covered by the installer hired by the purchaser.
- Purchaser accepts risks and requirements as outlined in the approved Grant Funding Application as applicable.
- If the Purchaser is not the legal Land Owner, then they are required to ensure that the Land Owner is aware of and willing to abide by all Obligations / Terms and Conditions. Otherwise, they shall be responsible for these obligations, including Terms of Use. The same obligations and liabilities shall exist if the Fitness Court, which includes Design, Activation, and Campaign Resources, is sold, acquired, assumed, transferred, or gifted to another party. The new party must be aware of and willing to abide by all Obligations / Terms and Conditions herein or they will retain responsibility.

5. PURCHASER ACKNOWLEDGMENTS
Purchaser acknowledges and accepts upon receipt of Fitness Court all terms and conditions as described above, including Payment Terms, Terms of Tax Exempt Status, NFC Standard Warranty & Terms, Warranty Disclaimers, and Purchaser Obligations.

QUOTE

National Fitness Campaign LP
For all questions regarding this quote, contact: info@nfchq.com

Created Date	7/19/2023
Expiration Date	10/6/2023
Quote Number	00000798
Bill To Name	Midland, TX
Bill To	300 N. Loraine Midland, TX 79702

Registered Office: PO Box 2367, San Francisco, CA, 94126, USA.

National Fitness Campaign LP | PO Box 2367, San Francisco CA 94126 | info@nfchq.com

August 22, 2022

To Whom it May Concern,

National Fitness Campaign LP is a consulting firm that partners with public and private organizations to impact quality of life through changing the built environment and community wellness practices. The NFC initiative provides design and planning services, a trademarked outdoor infrastructure product, the Fitness Court®, an integrated digital ecosystem, the Fitness Court® mobile app and engagement wall, and integrated public art wall to approved cities, schools, and organizations that apply to receive an NFC partnership and bring the program to their selected site location.

This program is highly specialized, and NFC is the only organization in the world that delivers these elements either individually, or as part of an integrated program. For the reasons listed below, the trademark ownership of the system and infrastructure, and the integrated nature of the initiative including services, products, tools and grant funding, it is approved as a sole source across the United States.

A competitive analysis has been conducted by hundreds of cities and institutions across the country, who have concluded that the products and services have no equal. This group includes cities like Sacramento California and Las Vegas Nevada, and institutions such as Stanford University and The University of Colorado at Boulder, where the Fitness Court® and associated tools and services were successfully sole sourced, evidenced by public documentation and approvals which have been documented widely. Further, the Fitness Court® is trademarked and owned by National Fitness Campaign.

While the integrated nature of the products and services is grounds for sole source by most national standards, there are three primary differentiators that validate the sole source justification of the Fitness Court® and national campaign resources, which are described below. In addition to the below descriptions of these three primary items, an appendix is provided as an attachment to this document that provides graphic aids and further detailed information regarding the differentiation of this program and its associated products and services.

1. ***Patented Fitness Court® System***

    A. Fitness Court® is trademarked and owned by National Fitness Campaign LP.
        a. As such, this product cannot be procured from any other organization. Any organization seeking to fund and install a Fitness Court® must do so through National Fitness Campaign LP.
            i. *See Appendix for Trademark Document from the United States Patent and Trademark Office*

    B. The Fitness Court® and each element is manufactured only by National Fitness Campaign LP. It is impossible to not only procure the elements as a system, but individually. Every aspect of the Fitness Court®, including the functional design of all equipment, structural engineering, elements are the property of National Fitness Campaign LP. The individual elements are each named and registered with a unique design and serial number. Because the design of the elements is owned by National Fitness Campaign LP and not licensed to any other organization or distributor, it is not possible to procure them anywhere else.

    C. The Fitness Court® is available only in a single configuration, shown in the

appendix materials. The system includes over 118 unique elements. There is absolutely no variation in the layout of the elements. Elements can not be added or removed. Spacing cannot be altered. Like many integrated products, Individual elements can not be procured separately.

D. The Fitness Court® has a patented training envelope that accommodates more users per square foot than any other system in the world. The Fitness Court® is a comprehensive outdoor circuit training system, laid out in 32'x32' of space, for a total of 1024 sq ft of training area. NFC's patented design is able to support 28 simultaneous users on 30 integrated bodyweight training components, derived from the previously stated 118 elements. This configuration is impossible to re-create in only 1024 square feet without NFC's patented equipment and components due to specific requirements set forth by other manufacturers.

E. Public Art Mural and Digital Engagement Wall
    a. Each Fitness Court® is designed as a one-of-a-kind work of art that includes a 32'x5.5' public art mural. The mural is an integral component of the Fitness Court design, and makes each Fitness Court® a one-of-a-kind public art installation.
    b. Further, the mural can be periodically re-designed and introduced, to create a rotating art mural.
        i. NFC provides integrated consulting and design services to assist in this process.
    c. Digital Engagement Wall
        i. On the opposite side of the mural wall, the Fitness Court includes a custom digital engagement wall.
            1. This wall provides digital QR codes and embedded, proprietary information regarding the use of the Fitness Court® and Fitness Court App.
            2. This information is unavailable from any other organization because it is the IP of National Fitness Campaign LP.
            3. Tracking Fitness Court® usage wouldn't be possible without the built in GPS tracking features available on the Fitness Court® digital engagement wall.
    d. NFC is unaware of any other outdoor fitness element that provides an integrated art mural of any kind.
    e. Further, NFC has an in-house art studio that designs, produces, and creates the art and custom graphics that are integrated into each Fitness Court.
        i. This scope of services for design and production of commercial grade, anti-graffiti laminate vinyl specific to the Fitness Court® is not provided by any other organization as an integrated service.

2. Fitness Court® App and Digital Tracking System

a. Each Fitness Court® is supported by a mobile app called the Fitness Court® App. All IP, including the app itself are owned by National Fitness Campaign LP. The training resources, world-class workout programs, challenges and data analytics features are only available for Fitness Court® users and site partners.
b. No other outdoor fitness equipment provides a mobile app with the following four categories of functionality:

c. Mobile App Primary Features
    1. Mark Lauren Training Series
        a. Mark Lauren is a US Special Operations Trainer and Bestselling Author. He has developed 18 proprietary workout programs specifically for the Fitness Court® system. They are only available on the Fitness Court® App. Mark Lauren has no other programs for outdoor fitness equipment available.
    2. Fitness Court® App Live Challenge Feature
        a. This is a proprietary feature that allows a user to score a 7 station circuit on the Fitness Court® using their mobile device. This feature is not available for any other outdoor fitness product of any kind.
    3. Annual Data Analytics Reporting
        a. Each site partner who builds a Fitness Court® receives an annual data report tracking usage on their Fitness Court®.
        b. To NFC's knowledge, no other manufacturer of any type of outdoor exercise component provides regular, annual report of key usage metrics using digital, GPS based systems.
            i. The Report is provided by NFC, and includes annual demographic data, user age ranges, Fitness Court app downloads and other important information.
            ii. This information is generated by NFC's proprietary GPS based data analytics services for each Fitness Court® in America.
        c. See appendix for sample annual user data report.
d. See appendix for additional information regarding the Fitness Court® App.

3. National Grant Funding

a. National Fitness Campaign LP builds and maintains a National Grant Fund, supported each year by sponsors and partners of the campaign. This funding takes tremendous effort to build, and it is provided by National Fitness Campaign and partners and sponsors to support the mission of making wellness infrastructure free and accessible across America in partnership with leading cities, schools and organizations.

b. For 2023, National Campaign sponsors include:
i. The Keith Haring Fitness Court® Signature Series Collection
ii. Engineered Installation Solutions
iii. Regupol America
iv. USA Shade and Fabric Structures
v. Badger Sport

c. To procure a Fitness Court®, an organization must complete a formal application and be approved for funding and participation. Each partner organization that succeeds in submitting a successful application is eligible to receive a Grant Award which is deducted from the funds required for the NFC program from sponsors of the National Fitness Campaign.

d. This funding is administered in the preferred method of receipt for each partner organization. Methods include a credit on final invoices for remaining funding, and direct grant disbursements provided by National Fitness Campaign.

e. This funding is available for a limited number of partners in each state on an annual basis, and is awarded based on merit of application from a qualified site partner, including the requirement for the Fitness Court to build in a publicly accessible location.

f. For more information, see: https://nationalfitnesscampaign.com/grants

No other vendor, distributor or organization makes these materials available for procurement by any city, school, or organization. They must be acquired from National Fitness Campaign LP. If you have further questions regarding this sole source letter or require additional information, please contact us per the information provided on this letterhead.

Sincerely,

Mitch Menaged, *Founder and Director*
National Fitness Campaign LP

National Grant Funding

National Fitness Campaign is a quality of life consulting firm builds and maintains a National Grant Fund, supported each year by sponsors and partners of the campaign. This funding takes tremendous effort to build, and it is provided by National Fitness Campaign and its sponsors to support the mission of making wellness infrastructure free and accessible across America in partnership with leading cities, schools and organizations. Distributions from this Grant Fund are provided directly to cities, schools, and organizations who qualify for, and are approved to become, campaign partners.

For the 2023 Campaign, National Campaign sponsors include:

1. The Keith Haring Fitness Court® Signature Series Collection in partnership with Artestar and the Keith Haring Foundation
2. Engineered Installation Solutions
3. Regupol America
4. USA Shade and Fabric Structures
5. Badger Sport

Additional state and regional sponsors are now joining the campaign, as well as state recreation agencies and other partners. Sponsor funding and grant distribution varies per state and location, based on participating partners and the presence of campaign sponsors and partners within that region. Funding distributions can vary annually based on these factors, and the overall size of NFC's National Grant Fund.

Participating as a partner in the National Fitness Campaign

To become a partner in the NFC program and bring a Fitness Court® and associated services to a location, an organization must engage in a qualification and feasibility process, and be approved to complete a formal application and be approved for funding and participation.

NFC's feasibility and qualification process is led by consultants that assist eligible cities and schools in determining if they are qualified for participation. Limited funding exists on an annual basis for partners to participate based on NFC grant maximums established for America and each of the fifty states.

Each partner organization that succeeds in submitting a successful application and is approved by the NFC Grant Committee is eligible to receive a Grant Award which is deducted from the funds required for the NFC program from sponsors of the National Fitness Campaign.

This funding is administered in the preferred method of receipt for each partner organization. Methods include a credit on final invoices for remaining funding, and direct grant disbursements provided by National Fitness Campaign.

For more information, see: https://nationalfitnesscampaign.com/grants

United States of America
United States Patent and Trademark Office

THE FITNESS COURT

Reg. No. 4,307,958

Registered Mar. 26, 2013

Int. Cl.: 41

SERVICE MARK

PRINCIPAL REGISTER

MITCH MENAGED (UNITED STATES INDIVIDUAL)
1740 KEARNY STREET
SAN FRANCISCO, CA 94133

FOR: PROVIDING OUTDOOR FACILITIES FOR RECREATION ACTIVITIES AND BODY BUILDING, IN CLASS 41 (U.S. CLS. 100, 101 AND 107).

FIRST USE 0-0-1979; IN COMMERCE 0-0-1979.

THE MARK CONSISTS OF STANDARD CHARACTERS WITHOUT CLAIM TO ANY PARTICULAR FONT, STYLE, SIZE, OR COLOR.

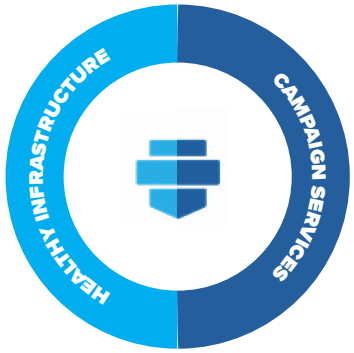
SEC. 2(F).

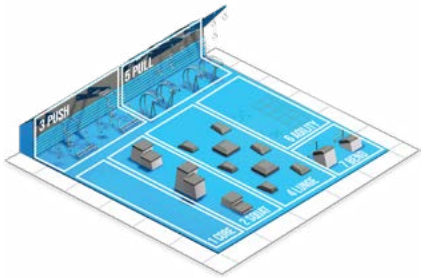
SER. NO. 85-600,534, FILED 4-17-2012.

KIMBERLY FRYE, EXAMINING ATTORNEY

Acting Director of the United States Patent and Trademark Office

CAMPAIGN SUMMARY





FITNESS COURT

21st Century Healthy Infrastructure

National Fitness Campaign's Fitness Court is the centerpiece to its holistic health and wellness initiative. The Fitness Court is an outdoor bodyweight circuit training center with functional fitness DNA. The best-in-class system provides a full-body workout to adults of all ability levels. With 7 functional fitness zones, the Fitness Court can be used in thousands of ways. The Fitness Court is the world's best outdoor gym!

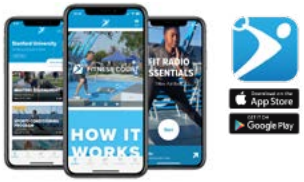
7 Minutes 7 Movements

Strategic Planning Studies

Strategic Planning & Feasibility Study, Site Design Consulting

Campaign Funding Support

Sponsor Strategy, Best Practices, National Installation Team Support



Fitness Court App

Free digital App Delivering Programing, Workouts & Content

Ambassador Training

NFC Fitness Court Ambassador Training ACE Certified *(America Council of Exercise)*

Launch & Public Relations

Featured Stories Highlighted through Press and Local Media

FITNESS SEASON

Annual Fitness Season

Spring/Summer/Fall national & local training, classes & challenges series

SPRING

WORLD-CLASS TRAINING

World-class training videos will available on the Fitness Court App.

SUMMER

WORLD-CLASS TRAINING

World-class training videos will available on the Fitness Court App.

FALL

CHALLENGE SERIES

The Fitness Season culminates with local, regional and national challenges for residents.

WORLD CLASS MATERIALS & SYSTEM

FITNESS COURT

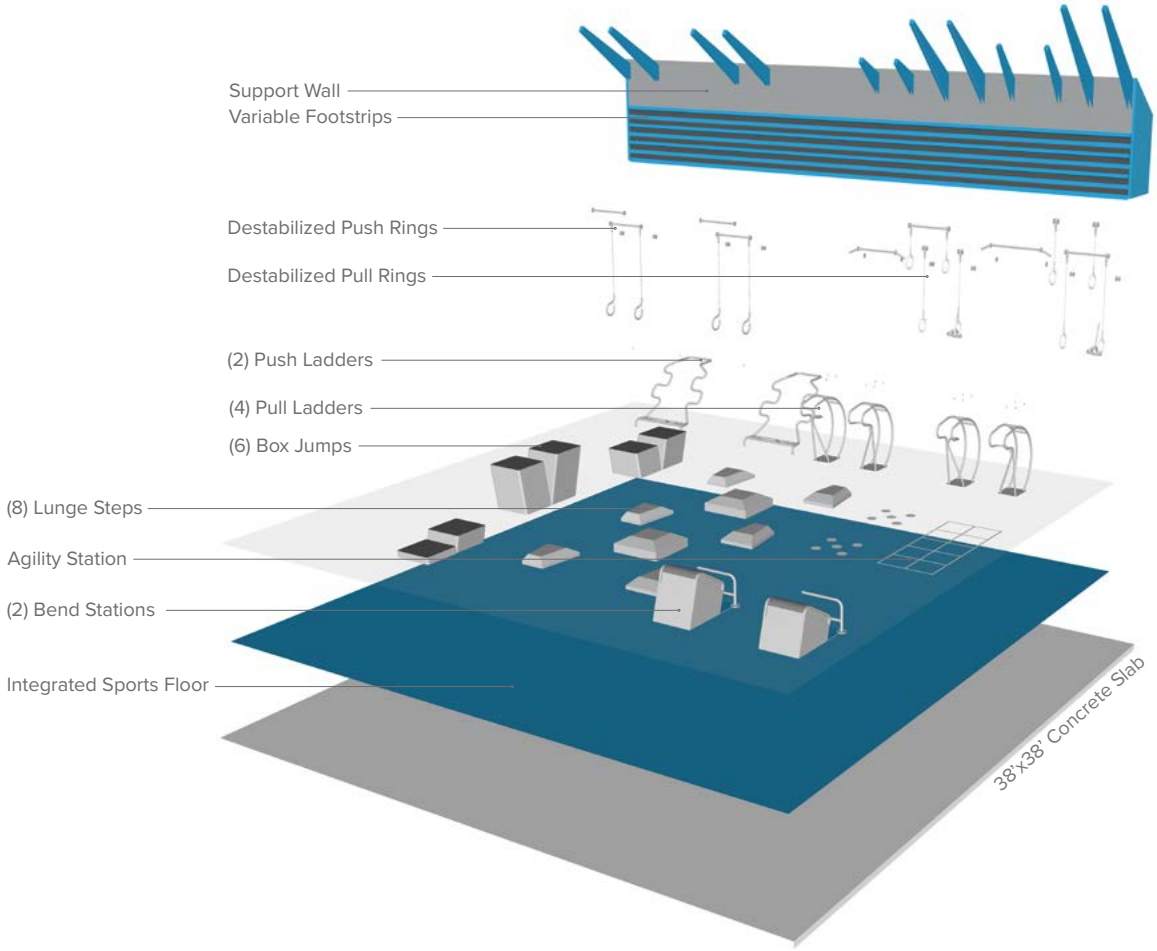
Made & Manufactured in the USA

Designed by NFC in California.

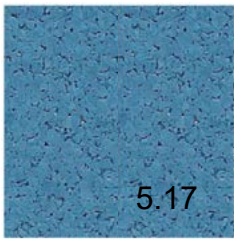
High Quality
Dual-layer powder-coating carbon steel

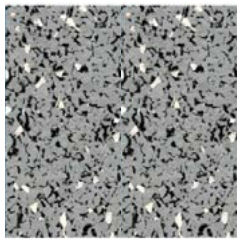
Durable Materials
Tamper-resistant, galvanized & stainless steel bolts and fittings.

Best In Class
Anti-graffiti laminate vinyl decals



Each Fitness Court® includes an integrated sports floor made from durable 2'x2' tiles which adhere directly to the concrete slab. Available in our standard NFC Blue or Gray to match any custom design.


Top (Blue Option)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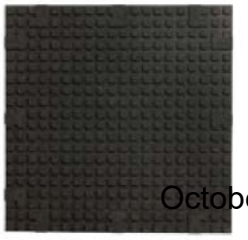
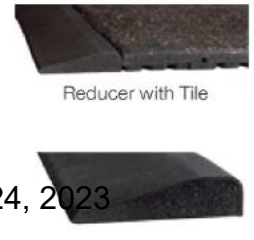

Bottom



NFC 2022 CAMPAIGN SPECIFICATIONS

PROGRAM SUMMARY

2023 PROGRAM SUMMARY: ***All items and services below are delivered to approved partners as part of the 2023 Campaign.***

HEALTHY INFRASTRUCTURE

FITNESS COURT®

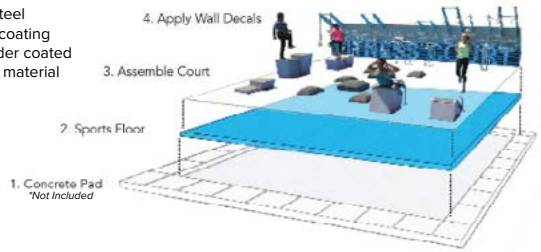
Fitness Court® Description:
32'x35' outdoor bodyweight circuit training system with the following components:
- Seven station circuit training system providing full-body workout modules
- Fitness Court body-weight training wall - 32'W x 2'D x 6' H with custom graphics
- Thirty pieces of body-weight fitness elements for simultaneous use by 28 users at one time. Fitness Elements anchored and grouped within seven stations.
- Bolts, attachments and anchors required for installation

Fitness Court Surface - Tile Surface Specifications
- Outdoor Sports Floor Size: 1,024 SF (32'x32')
- Color: NFC Blue
- Thickness: 1" Tiles
- ADA Border Included

Fitness Court Specifications:
- All structural components are made from high-grade carbon steel
- Structural components receive high-grade duel layer powder coating
- All cladding (skins) made from high-grade aluminum and powder coated
- Graphics and signage printed with anti-graffiti over-lamination material
- Manufactured in the United States
- Resilient to heavy, repeated daily use
- Over 30 individual pieces of equipment
- Powder-Coated Structural Components
- Galvanized fittings and bolts - *included*
- Stainless steel cables
- Full installation guide provided
- Warranty through NFC

Warranty + Maintenance
- Made for all climates
- Almost no moving parts (only cables)
- Equipment is anchor bolted into concrete
- Replacement parts available through NFC
- No requirement for disassembly in winter
- Maintenance guide, including touch-up paint & necessary tooling included

See Official Warranty for Full Coverage Detail



HEALTHY INFRASTRUCTURE DESIGN SERVICES

Strategic Planning & Feasibility Study
- City-wide impact analysis and master plan integration plan
- Site Design and Visibility Analysis

Custom Fitness Court Design Services & Construction & Installation Support
- Customized Fitness Court powder-coating and decal design - no two Fitness Courts are the same!
- stamped and certified design plans, concrete slab drawings, and contractor management are provided by the NFC Activation Team. With all ready-to-build plans included, most installations require less than 90 days to complete from ground-breaking to launch.
- NFC National Installation Partner Access - EIS (contracted separately)

GRANT FUNDING, CONSENSUS BUILDING, SPONSOR SUPPORT

NFC Grant Funding Qualification
- Access to qualify for NFC's Grant Funding through NFC's national partners to support seeding the program.

Consensus Building Consulting
- NFC has industry experts in project management, and from conception through execution, they will collaborate on an average of 2 intensive monthly planning calls to drive success.

Sponsor Strategy Consulting Support
- Up to 10 custom renderings provided by NFC Design Team to support outreach to local sponsors and partners. Up to 5 custom slide presentations provided for in-person meetings and internal stakeholder consensus-building.

CAMPAIGN SERVICES

FITNESS COURT® APP

The Fitness Court App
Free mobile app for iOS / Android teaches proper use, routines and challenges to all users

- **Classes:** schedule, run and track attendance using the Fitness Court App back-end scheduling tool, providing live class management through the OnSched platform. Training and basic setup provided by NFC within 30 days of launch event.
- **Learn:** video guides deliver workouts, and teach the basics for beginners on the Fitness Court. New content released quarterly, and updated by NFC National Training Team.
- **Train:** individual audio guides. New content released quarterly, updated by NFC National Training Team.
- **Challenge:** competitive tracking allows users to participate in timed, scored challenges, with an option to submit their scores to a national Leaderboard. Acts as a regional and national event qualification tool.

CERTIFIED AMBASSADOR TRAINING

Programming and Training Tools
Fitness Court Ambassadors build and sustain a healthy culture around the Fitness Court ecosystem

- **Learn:** education modules provided by the NFC Training Team are eligible for a range of industry certifications, are offered both in-person and remote, and provide a range of class templates, coaching tips and more to qualified Ambassadors. Partnership includes program vouchers for up to 12 individual Ambassadors per Fitness Court, individually eligible for up to 3 continuing education credits (CECs), approved through the American Council on Exercise (ACE).
- **Train:** classes, clinics and challenges become the building blocks of a Fitness Season, led by Ambassadors, that engage all ages and fitness levels. These guided workout options expand the user community and increase long-term usage and adoption.
- **Share:** continuous online and print storytelling, engagement and social connection further build out a healthy culture on each Fitness Court. Up to five local Ambassadors are eligible to attend an in-person regional training event of their choice in 2023. **Regional training schedule provided May 2023*

MEDIA, PRESS, & PROMOTIONS

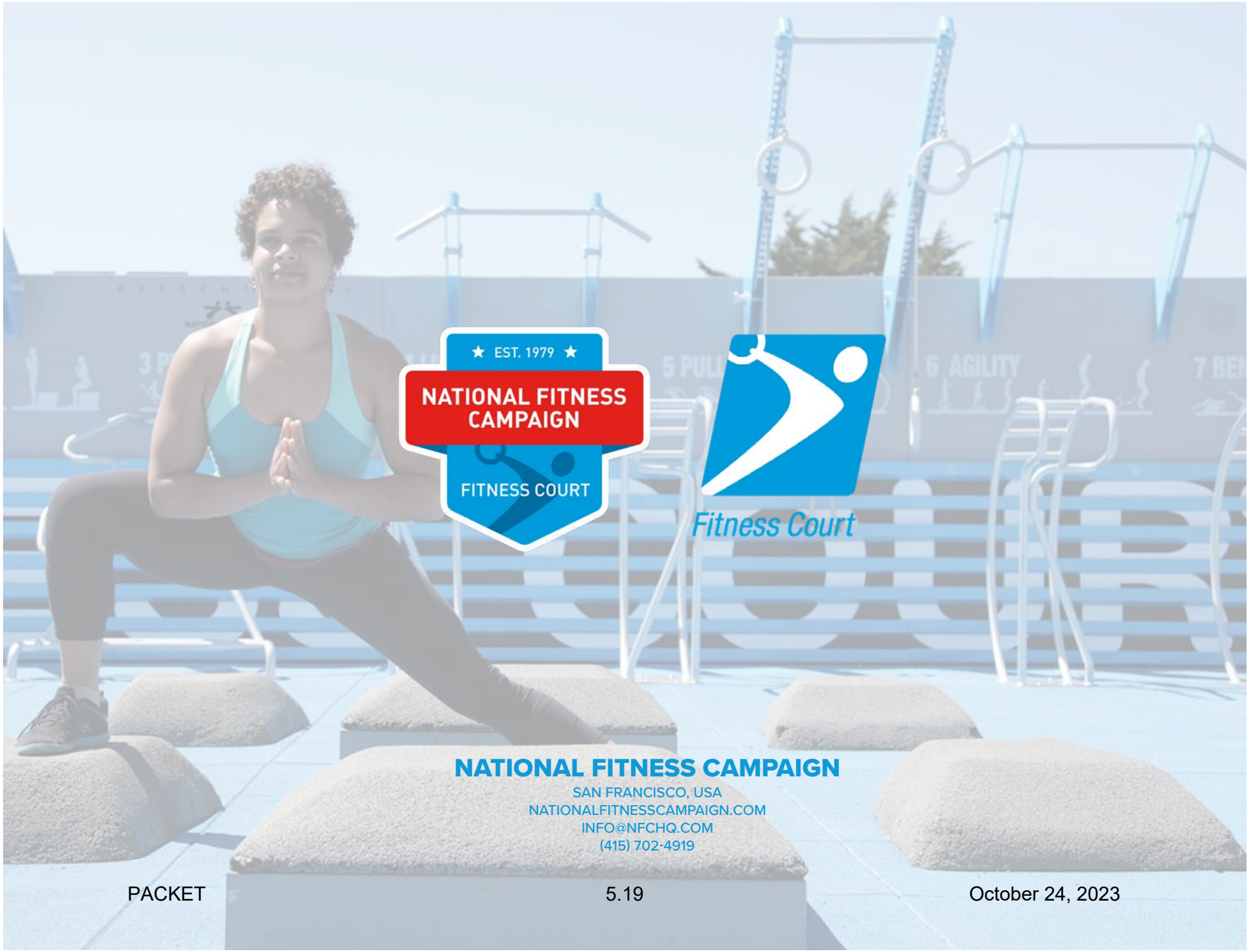
Promotions and Marketing Package
Media support and community engagement materials excite users and strengthen program adoption

- **Custom Grant Announcement Kit:** promote the development of the program in your community with NFC support through traditional and social media channels - including a custom Press Release, site rendering, and outreach planning tools.
- **Launch Event Promotions Toolkit:** announce the launch of the Fitness Court on traditional media channels with a separate customized press release, outreach support and uniquely branded assets for social media.
- **NFC Website Feature Story:** NFC-hosted custom storytelling showcases the partnership and program development in your community.
- **Fitness Court Gear:** minimum $750 credit towards the official NFC gear store - gear and giveaways (provided in part by national Campaign sponsor, Badger Sport®) nurture Ambassador relationships, honor stakeholders and excite event attendees, to amplify launch activities.
- **Opening Day Launch Support:** NFC provides event management templates, guidance for launch event planning, and custom promotional materials (flyers, media assets).

FITNESS SEASON 2023

Annual Activation Series: 2023 Fitness Season
Bring the Latest Events & Programs to Your Fitness Court® this Year!

- Spring 2023 : 18 new workout routines & video tutorials introduced to the Fitness Court App, featuring pro trainer, Mark Lauren.
- Summer 2023: Classes and Clinics support ongoing programming for group exercise and app-based class
- Fall 2023: Challenge series builds competition & strengthens community. Marks the success of year's activation program for all users.
- Healthy Infrastructure Awards: annual recognition program highlighting exceptional partners and leaders nationwide, winners receive custom awards, decals and press support to announce



NATIONAL FITNESS CAMPAIGN
SAN FRANCISCO, USA
NATIONALFITNESSCAMPAIGN.COM
INFO@NFCHQ.COM
(415) 702-4919

FITNESS COURT™

SCHEMATIC DESIGN SET

NATIONAL FITNESS CAMPAIGN

PACKET

5.20

October 24, 2023

NOT FOR CONSTRUCTION

NATIONAL FITNESS CAMPAIGN

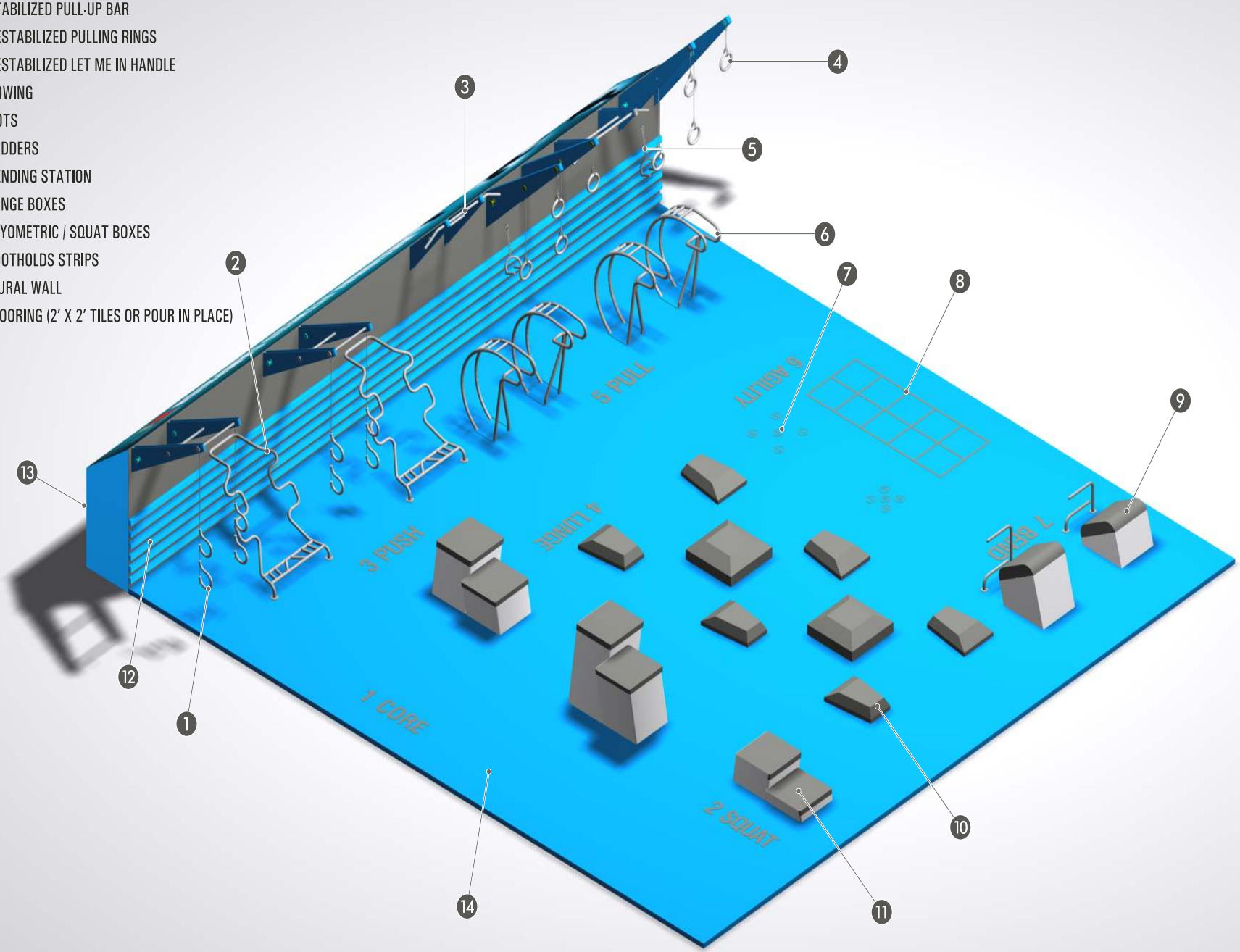
DATE

DESIGN NUMBER
565382

ARCHIVE NUMBER

SHEET
FC 01

1. DESTABILIZED PUSHING RINGS
2. STABILIZED FREEFORM PUSHING BARS
3. STABILIZED PULL-UP BAR
4. DESTABILIZED PULLING RINGS
5. DESTABILIZED LET ME IN HANDLE
6. ROWING
7. DOTS
8. LADDERS
9. BENDING STATION
10. LUNGE BOXES
11. PLYOMETRIC / SQUAT BOXES
12. FOOTHOLDS STRIPS
13. MURAL WALL
14. FLOORING (2' X 2' TILES OR POUR IN PLACE)



NATIONAL FITNESS CAMPAIGN

PACKET 5.21

Body Weight Fitness

October 24, 2023

NOT FOR CONSTRUCTION

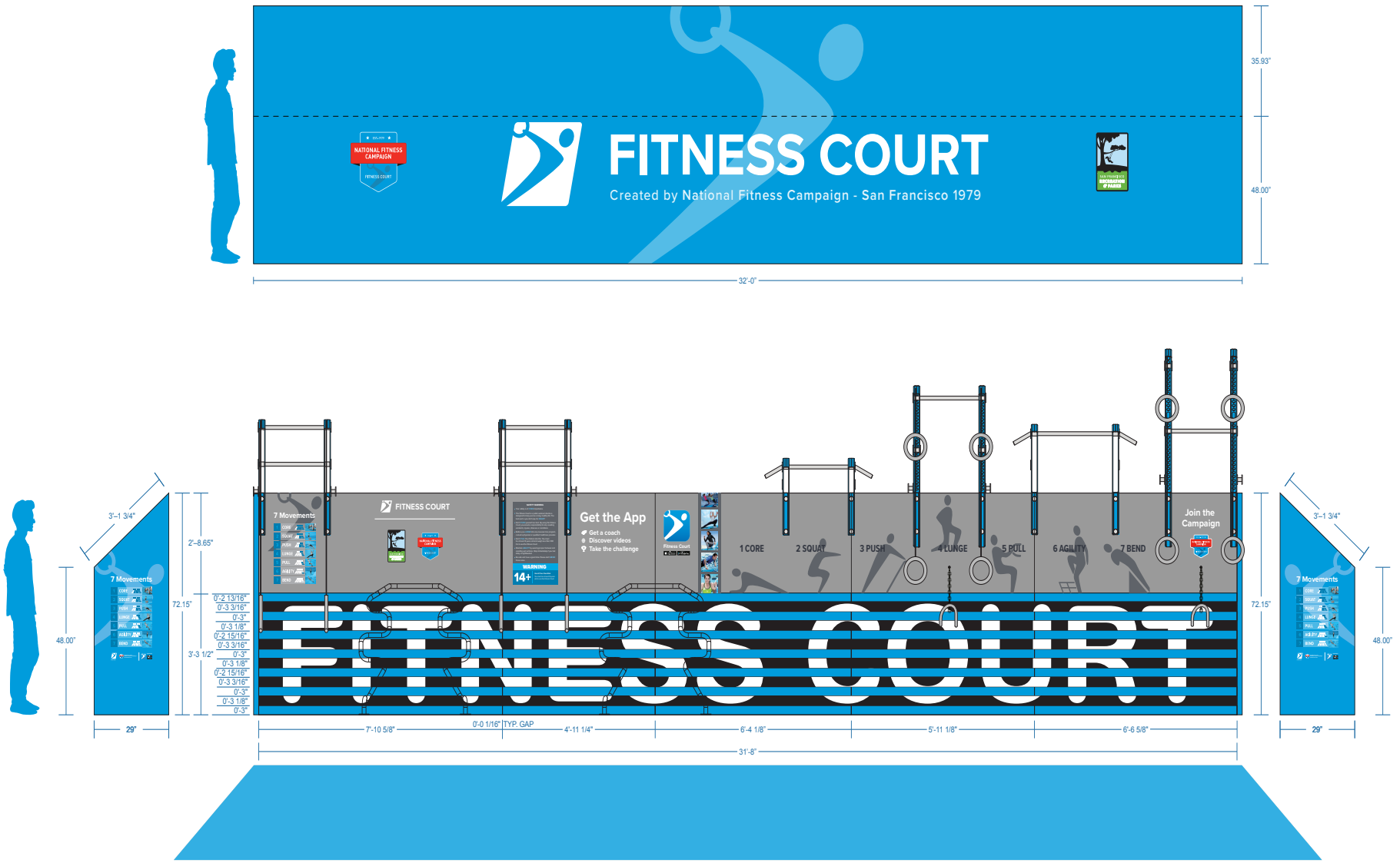
NATIONAL FITNESS CAMPAIGN

DATE 06.30.17

DESIGN NUMBER 565382

ARCHIVE NUMBER

SHEET FC 02



NOTE: Sponsor Recognition shown for reference only. For Custom Decals, additional fee applies.

NFC FITNESS COURT SCHEMATIC ELEVATIONS

October 24, 2023

NOT FOR CONSTRUCTION

NATIONAL FITNESS CAMPAIGN

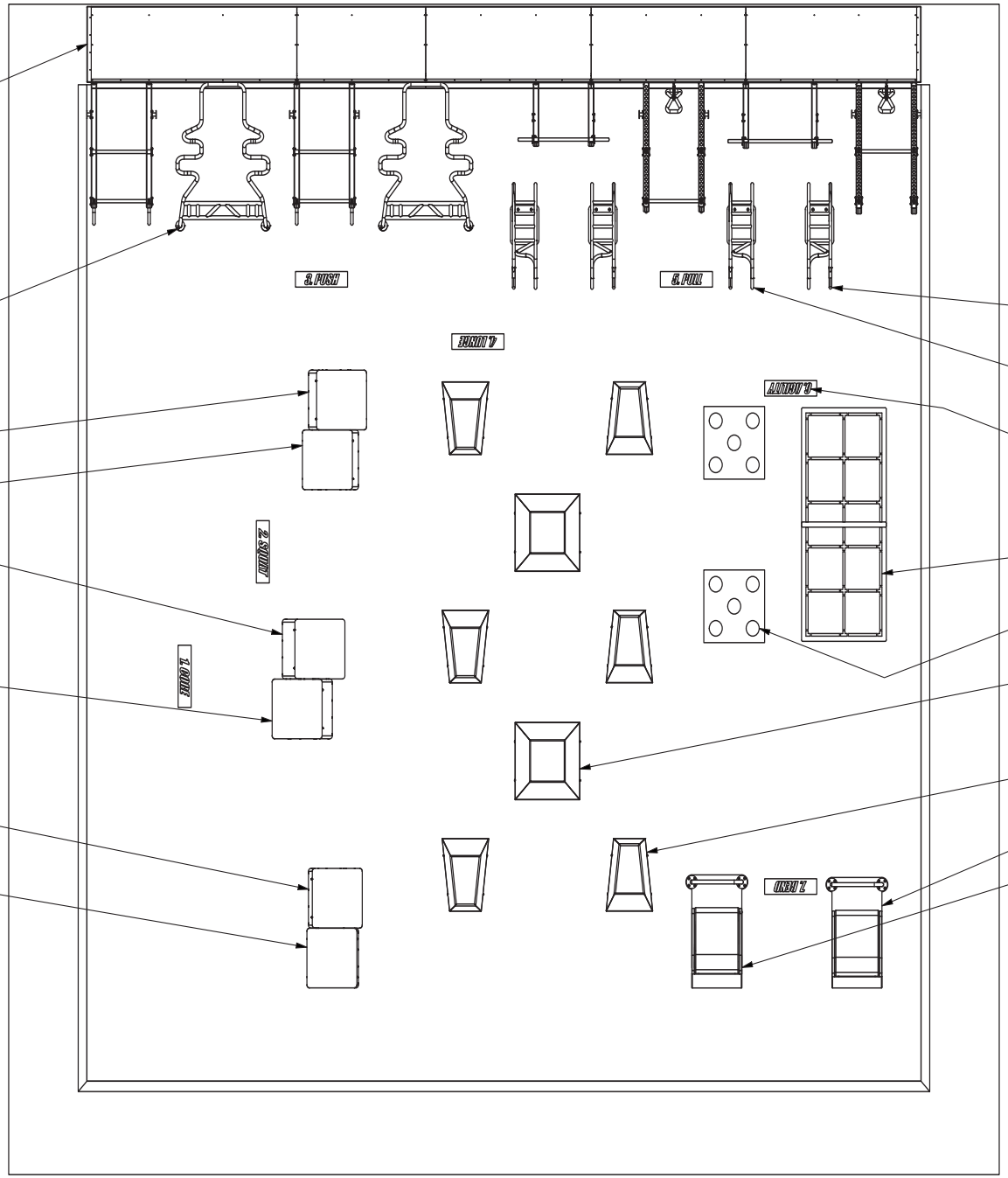
DATE 06.30.17

DESIGN NUMBER 565382

ARCHIVE NUMBER

SHEET FC 03

EQUIPMENT AND FLOOR MARKING LAYOUT



NATIONAL FITNESS CAMPAIGN

DATE 06.30.17

DESIGN NUMBER 565382

ARCHIVE NUMBER

SHEET FC 04

THIS DOCUMENT IS PROPERTY OF NFC (THE NATIONAL FITNESS CAMPAIGN). THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION AND MAY ONLY BE USED BY PERMISSION FROM NFC AND FOR THE PURPOSES AUTHORIZED BY NFC. DISCLOSURE, DUPLICATION, MODIFICATION, OR OTHER USE OF THIS DOCUMENT IS NOT PERMITTED WITHOUT THE PRIOR WRITTEN PERMISSION OF NFC.

NOT FOR CONSTRUCTION

City Council Meeting

Item Number: 6

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: RESOLUTION AUTHORIZING PURCHASE OF A WIRTGEN W 120 XTI COLD MILLING MACHINE FROM KIRBY-SMITH MACHINERY, INC., THROUGH BUYBOARD FOR A TOTAL COST OF $502,269.45 (DISTRICT: NONE) (GENERAL SERVICES)

Purpose:

Resolution for the purchase of one (1) Cold Planer Machine from Kirby-Smith Machinery, Inc. through Buyboard contract #687-22 for a total cost of $502,269.45 for the Transportation Division for the Garage Division.

Recommended City Council Action:

Approve

Fiscal Impact:

Funding is available in the Garage Fund 2024 operating budget.

Discussion:

Staff is recommending the purchase of one (1) Cold Planer Machine from Kirby-Smith Machinery, Inc. through Buyboard contract #687-22. We are members of this cooperative and Subchapter F, Section 271.102 of the Local Government Code provides that a local government may participate in a cooperative purchasing program and that purchasing goods or services under Subchapter F satisfies any state law requiring the local government to seek competitive bids for those purchases. The budgeted amount is $645,895.00. This will be a replacement to the fleet. Please see attached memo from Manuel Salinas, Garage Superintendent, for additional information.

Therefore, please consider a resolution approving the purchase of one (1) Cold Planer Machine

from Kirby-Smith Machinery, Inc. of Oklahoma City, Oklahoma through Buyboard contract #687-22 for a total cost of $502,269.45.

Morris Williams Jr.

City Manager's Office

Fleet Services Division

INTEROFFICE MEMORANDUM

TO: Regina Stephenson

FROM: Manuel Eloy Salinas

SUBJECT: Buy Board Contract #687-22 Cold Planer Machine

DATE: 9/27/2023

Fleet Services is requesting the purchase of (1) one Cold Planer Machine. This unit will be a replacement for a unit that is no longer serviceable and has gone beyond its serviceable life. The budgeted amount for FY2024 for (1) one Cold Planer Machine is $645, 895. The purchasing amount of $502,269.45 is being offered through BuyBoard Contract # 687-22 for (1) one WIRTGEN W120XTI 2022 model Cold Planer Machine from Kirby Smith Machinery Inc.

Sincerely,

Manuel Eloy Salinas

City of Midland Superintendent

RESOLUTION NO. _____

RESOLUTION AUTHORIZING PURCHASE OF A WIRTGEN W 120 XTI COLD MILLING MACHINE FROM KIRBY-SMITH MACHINERY, INC., THROUGH BUYBOARD FOR A TOTAL COST OF $502,269.45

WHEREAS, Buyboard is a cooperative purchasing agency with which the City participates with on purchases through a cooperative purchasing program in accordance with TEX. LOC. GOV'T CODE § 271.102; and

WHEREAS, Kirby-Smith Machinery, Inc., submitted a total cost of $502,269.45 for the purchase of a Wirtgen W 120 XTi Cold Milling Machine through Buyboard as shown on the quote attached hereto as Exhibit A, which is incorporated herein for all purposes; and

WHEREAS, the City Council finds the price proposed for the purchase of a Wirtgen W 120 XTi Cold Milling Machine to be fair and reasonable; and

WHEREAS, the City Council finds it to be in the public interest to authorize the purchase of a Wirtgen W 120 XTi Cold Milling Machine from Kirby-Smith Machinery, Inc., through Buyboard;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the City Manager is hereby authorized and directed to purchase of a Wirtgen W 120 XTi Cold Milling Machine from Kirby-Smith Machinery, Inc., through Buyboard for a total cost of $502,269.45.

SECTION TWO. That the City Comptroller is hereby authorized and directed to pay Kirby-Smith Machinery, Inc., $502,269.45 for said Wirtgen W 120 XTi Cold Milling Machine from funds available in the Garage Fund 2024 operating budget upon receipt of proper invoices or statements approved by the City Manager.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2023, by

the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

RECOMMENDED AND APPROVED:

_____
Tommy Gonzalez, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

9/26/2023
Quote #: swhitley-1294

Jesse Zamora
CITY OF MIDLAND
Po Box 1152
Midland, TX 79702

Dear Jesse Zamora:

We are pleased to quote the following for your consideration:
WIRTGEN W120XTI 2022 model w/ 27 hours, Unit # WR22002, S/N 1810.1489.

The following Factory and Dealer Options are included in the package:

- **WIRTGEN W120XTI 2022, WIRTGEN W120XTI COLD MILLING MACHINE**
- **Cold milling machine W 120 XTi**
- **Country of operation United States**
- **4 driven track units**
- **Milling drum housing FB1200 (3 ft 11 in)**
- **Milling drum FB1200 3ft 11in HT22 LA15 w/115 PICKS**
- **Standard operator's seat**
- **Machine with hydraulic standard coupling**
- **Discharge conveyor, 26 ft 9 in / 8,150 mm long, 2**
- **Standard film coating in RAL 9001 (cream)**
- **Technical documentation - North America**
- **WITOS FleetView (MF3, 4G) ? professional**
- **Halogen / LED lighting system including rotating b**
- **Active floating position for the side plates, left**
- **Spare part and application documentation English**

Additional Details:

Sales Price:	**$502,269.45**
Sub Total:	**$502,269.45**
Total Price:	**$502,269.45**

Subject to all applicable taxes. If taxes listed above, Total Price is Sales plus applicable taxes

To be purchased through BuyBoard. Contract #687-22

We believe the equipment as quoted will exceed your expectations. On behalf of Kirby-Smith Machinery, Inc., thank you for the opportunity to quote you this package.

Sincerely,

Shelby Whitley
Governmental Territory Manager
Kirby-Smith Machinery, Inc.
Phone: 432-333-7000

KIRBY SMITH MACHINERY, INC.

Cell: 432-241-2915
Email: swhitley@kirby-smith.com

9/26/2023
Quote #: swhitley-1294

Jesse Zamora
CITY OF MIDLAND
Po Box 1152
Midland, TX 79702

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The following Factory and Dealer Options are included in the package:

- **WIRTGEN W120XTI 2022, WIRTGEN W120XTI COLD MILLING MACHINE**
- **Cold milling machine W 120 XTi**
- **Country of operation United States**
- **4 driven track units**
- **Milling drum housing FB1200 (3 ft 11 in)**
- **Milling drum FB1200 3ft 11in HT22 LA15 w/115 PICKS**
- **Standard operator's seat**
- **Machine with hydraulic standard coupling**
- **Discharge conveyor, 26 ft 9 in / 8,150 mm long, 2**
- **Standard film coating in RAL 9001 (cream)**
- **Technical documentation - North America**
- **WITOS FleetView (MF3, 4G) ? professional**
- **Halogen / LED lighting system including rotating b**
- **Active floating position for the side plates, left**
- **Spare part and application documentation English**

Additional Details:

Sales Price:	**$502,269.45**
Sub Total:	**$502,269.45**
Total Price:	**$502,269.45**

Subject to all applicable taxes. If taxes listed above, Total Price is Sales plus applicable taxes

To be purchased through BuyBoard. Contract #687-22

We believe the equipment as quoted will exceed your expectations. On behalf of Kirby-Smith Machinery, Inc., thank you for the opportunity to quote you this package.

Sincerely,

Shelby Whitley
Governmental Territory Manager
Kirby-Smith Machinery, Inc.
Phone: 432-333-7000

Cell: 432-241-2915
Email: swhitley@kirby-smith.com

City Council Meeting

Item Number: 7

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: RESOLUTION APPROVING THE PURCHASE OF A JOHN DEERE 410 P-TIER BACKHOE LOADER FROM YELLOWHOUSE MACHINERY CO. THROUGH SOURCEWELL FOR A TOTAL COST OF $168,197.66 (DISTRICT: NONE) (GENERAL SERVICES)

Purpose:

Resolution for the purchase of one (1) Backhoe Loader from Yellowhouse Machinery Co. through Sourcewell contract #032119 for a total cost of $168,197.66 for the Water & Wastewater for the Garage Division.

Recommended City Council Action:

Approve

Fiscal Impact:

Funding is available in the Garage Fund 2024 operating budget.

Discussion:

Staff is recommending the purchase of one (1) Backhoe Loader from Yellowhouse Machinery Co. through Sourcewell contract #032119. We are members of this cooperative and Subchapter F, Section 271.102 of the Local Government Code provides that a local government may participate in a cooperative purchasing program and that purchasing goods or services under Subchapter F satisfies any state law requiring the local government to seek competitive bids for those purchases. The budget for this purchase is $170,000.00. This will be a replacement to the fleet. Please see attached memo from Manuel Salinas, Garage Superintendent, for additional information.

Therefore, please consider a resolution approving the purchase of one (1) Backhoe Loader from

Yellowhouse Machinery Co. of Midland, Texas through Sourcewell contract #032119 for a total cost of $168,197.66.

Morris Williams Jr.

City Manager's Office

Fleet Services Division

INTEROFFICE MEMORANDUM

TO: Regina Stephenson

FROM: Manuel Eloy Salinas

SUBJECT: Sourcewell Contract #032119 Backhoe Loader

DATE: 10/2/2023

Fleet Services is requesting the purchase of (1) one Backhoe Loader. This new unit will be a replacement for an obsolete unit that we are no longer able to acquire any replacement parts because they are no longer available. The budgeted amount for FY2024 is $170,000 for the purchase of (1) one Backhoe Loader. The purchase amount of $168,197.66 is being offered through Sourcewell Contract #032119 by Yellowhouse Machinery CO. for (1) one John Deere 410 P-Tier Backhoe Loader.

Sincerely,

Manuel Eloy Salinas

City of Midland Superintendent

RESOLUTION NO. _____

RESOLUTION APPROVING THE PURCHASE OF A JOHN DEERE 410 P-TIER BACKHOE LOADER FROM YELLOWHOUSE MACHINERY CO. THROUGH SOURCEWELL FOR A TOTAL COST OF $168,197.66

WHEREAS, Sourcewell is a cooperative purchasing agency with which the City participates with on purchases through a cooperative purchasing program in accordance with TEX. LOC. GOV'T CODE § 271.102; and

WHEREAS, Yellowhouse Machinery Co. has submitted a total proposed cost to the City of $168,197.66 for the purchase of a John Deere 410 P-Tier backhoe loader through Sourcewell, as shown on the quote attached hereto as Exhibit A and incorporated herein for all purposes; and

WHEREAS, the City Council finds the price proposed by Yellowhouse Machinery Co. for said John Deere 410 P-Tier backhoe loader to be fair and reasonable; and

WHEREAS, the City Council finds it to be in the public interest to purchase a John Deere 410 P-Tier backhoe loader from Yellowhouse Machinery Co. through Sourcewell;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the City Manager is hereby authorized and directed to purchase a John Deere 410 P-Tier backhoe loader from Yellowhouse Machinery Co. through Sourcewell for a total cost of $168,197.66.

SECTION TWO. That the City Comptroller is hereby authorized and directed to pay Yellowhouse Machinery Co. for said John Deere 410 P-Tier backhoe loader from funds available in the Garage Fund 2024 operating budget upon receipt of proper invoices or statements approved by the City Manager.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2023, by

the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

RECOMMENDED AND APPROVED:

_____
Tommy Gonzalez, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

JOHN DEERE

YELLOWHOUSE MACHINERY CO.

Quote Summary

Prepared For:
CITY OF MIDLAND
1701 E. ORCHARD BLDG. 6
MIDLAND, TX 79701
Business: 432-685-7451

Prepared By:
ERIC SCHIEL
Yellowhouse Machinery Co.
12230 W Highway 191
Midland, TX 79707
Phone: 432-580-3337
Mobile: 432-288-4494
erics@yhmc.com

SOURCEWELL CONTRACT NO. - 032119

Quote Id: 28389640
Created On: 14 March 2023
Last Modified On: 29 September 2023
Expiration Date: 21 March 2023

Equipment Summary	Selling Price		Qty		Extended
JOHN DEERE 410 P-Tier Backhoe Loader	$ 164,997.66	X	1	=	$ 164,997.66
John Deere Extended Warranty-60MO/5000HR FULL	$ 3,200.00	X	1	=	$ 3,200.00
Sub Total					**$ 168,197.66**
Equipment Total					**$ 168,197.66**

Quote Summary	
Equipment Total	$ 168,197.66
SubTotal	$ 168,197.66
Total	$ 168,197.66
Down Payment	(0.00)
Rental Applied	(0.00)
Balance Due	**$ 168,197.66**

Salesperson : X _____

Accepted By : X _____

JOHN DEERE

YELLOWHOUSE MACHINERY CO.

Selling Equipment

Quote Id: 28389640 **Customer:** CITY OF MIDLAND

JOHN DEERE 410 P-Tier Backhoe Loader

Hours:
Stock Number:

Code	Description	Qty
17E0T	410 P-tier Backhoe Loader	1
	Standard Options - Per Unit	
183E	JDLink™	1
0202	United States	1
0259	English	1
0351	Translated Text Labels	1
1003	Cab	1
3009	Autoshift Transmission - Mechanical Front Wheel Drive (MFWD) with Limited Slip Differential	1
4006	John Deere 4.5L - FT4/Stage IV	1
5250	Galaxy 21L-24 12PR Rear & 12.5/80-18 10PR Front	1
6154	Dual Maintenance Free Batteries With Disconnect, Jump Post, and Engine Block Heater	1
6577	1250 lb. (567 kg.) Front Counterweight	1
6752	Extendible Dipperstick	1
7001	Auxiliary Hydraulics with One Way Flow (Hammer)	1
7028	Pilot Controls, Two Lever, with Pattern Selection	1
7038	Loader Coupler, Two-Function Hydraulics, Single Lever	1
7702	Deere Standard Quick Coupler - Less Thumb	1
7808	24 in. (610 mm.) Wide, Severe-Duty, 7.5 cu. ft. (0.21 cu. m.) Bucket	1
7864	92 in. (2.34 m.) Wide, 1.5 cu. yd. (1.15 cu. m.) Long-Lip Coupler Bucket	1
8062	Backhoe Boom Protection Plate	1
8075	Diagnostic Oil Sampling Ports	1
8096	Premium Mirror Option - Exterior Rear View Mirrors (2) and Front View Mirror (1)	1
8109	Sun Visor	1
8115	MFWD Driveshaft Guard	1
8126	Heavy-Duty Grille Frame	1
8131	Heavy-Duty Stabilizer Pads	1

JOHN DEERE

YELLOWHOUSE MACHINERY CO.

Selling Equipment

Quote Id: 28389640 **Customer:** CITY OF MIDLAND

8142	LED Light Package	1
8183	Radio, Bosch Premium Package	1
8207	Seat, Cloth Air-Suspension	1
8213	Chrome Exhaust Extension	1
8226	Strobe Light with Magnetic Mount	1
	Dealer Attachments	
AT393180	Environmental Drain Kit	1
BYT11568	Pre-Cleaner, Engine Air Intake	1
BYT11589	Fluid Sampling Ports	1
	Service Agreements	
	John Deere Extended Warranty - 60MO/5000HR FULL	

JOHN DEERE Extended Warranty

Extended Warranty Proposal

JOHN DEERE 410 P-Tier Backhoe Loader
Date : September 29, 2023

Machine/Use Information		**Plan Description**	**Price**	
Manufacturer	JOHN DEERE	Application	Deductible	
Equipment Type	410 P-TIER BACKHOE LOADER	Coverage	List	$ 3,200.00
Model	410 P-TIER BACKHOE LOADER	Total Months		
Country	US	Total Hours		

Extended Warranty is available only through authorized John Deere Dealers for John Deere Products,and may be purchased at any time before the product's Standard Warranty,or Extended Warranty expires.

Extended Warranty Proposal Prepared for:

Customer Name - Please Print

Customer Signature

I have been offered this extended warranty and

☑ I ACCEPT the Extended Warranty

☐ I DECLINE the Extended Warranty

If declined, I fully understand that any equipment listed above is not covered for customer expenses due to component failures beyond the original basic warranty period provided by John Deere.

Note : This is **not** a contract. For specific Extended Warranty coverage terms and conditions, please refer to the actual Extended Warranty contract for more information and the terms, conditions and limitations of the agreement.

What Extended Warranty is :
The Extended Warranty Program is for the reimbursement on parts and labor for covered components that fail due to faulty material or original workmanship that occur beyond the John Deere Basic Warranty coverage period. The agreement is between Deere & Company and the owners of select John Deere Construction and Forestry equipment, who purchase the Extended Warranty Plans for the desired coverage as indicated in this proposal.

What Extended Warranty is not :
Extended Warranty is not insurance. It also does not cover routine maintainance or high wear items,or insurance-related risks/perils such as collision, overturn, vandalism, wind, fire, hail, etc. It does not cover loss of income during or after an equipment failure. See the actual product-specific Extended Warranty agreement for a complete listing of covered components, and limitations and conditions under the program.

Features/Benefits:

- Extended Warranty includes the following features and benefits under the program :
- Pays for parts and labor costs incurred on failed covered components (less any applicable deductibles),
- Does not require pre-approval before repairs are made by the authorized John Deere dealership,
- Payments are reimbursed directly to the dealership with no prepayment required by the contract holder.

JOHN DEERE

YELLOWHOUSE MACHINERY CO.

Quote Summary

Prepared For:

CITY OF MIDLAND
1701 E. ORCHARD BLDG. 6
MIDLAND, TX 79701
Business: 432-685-7451

Prepared By:

ERIC SCHIEL
Yellowhouse Machinery Co.
12230 W Highway 191
Midland, TX 79707
Phone: 432-580-3337
Mobile: 432-288-4494
erics@yhmc.com

SOURCEWELL CONTRACT NO. - 032119

Quote Id: 28389640
Created On: 14 March 2023
Last Modified On: 29 September 2023
Expiration Date: 21 March 2023

Equipment Summary	Selling Price		Qty		Extended
JOHN DEERE 410 P-Tier Backhoe Loader	$ 164,997.66	X	1	=	$ 164,997.66
John Deere Extended Warranty-60MO/5000HR FULL	$ 3,200.00	X	1	=	$ 3,200.00
Sub Total					**$ 168,197.66**
Equipment Total					**$ 168,197.66**

Quote Summary	
Equipment Total	$ 168,197.66
SubTotal	$ 168,197.66
Total	$ 168,197.66
Down Payment	(0.00)
Rental Applied	(0.00)
Balance Due	**$ 168,197.66**

Salesperson : X _____

Accepted By : X _____

JOHN DEERE

YELLOWHOUSE MACHINERY CO.

Selling Equipment

Quote Id: 28389640 **Customer:** CITY OF MIDLAND

JOHN DEERE 410 P-Tier Backhoe Loader

Hours:
Stock Number:

Code	Description	Qty
17E0T	410 P-tier Backhoe Loader	1
	Standard Options - Per Unit	
183E	JDLink™	1
0202	United States	1
0259	English	1
0351	Translated Text Labels	1
1003	Cab	1
3009	Autoshift Transmission - Mechanical Front Wheel Drive (MFWD) with Limited Slip Differential	1
4006	John Deere 4.5L - FT4/Stage IV	1
5250	Galaxy 21L-24 12PR Rear & 12.5/80-18 10PR Front	1
6154	Dual Maintenance Free Batteries With Disconnect, Jump Post, and Engine Block Heater	1
6577	1250 lb. (567 kg.) Front Counterweight	1
6752	Extendible Dipperstick	1
7001	Auxiliary Hydraulics with One Way Flow (Hammer)	1
7028	Pilot Controls, Two Lever, with Pattern Selection	1
7038	Loader Coupler, Two-Function Hydraulics, Single Lever	1
7702	Deere Standard Quick Coupler - Less Thumb	1
7808	24 in. (610 mm.) Wide, Severe-Duty, 7.5 cu. ft. (0.21 cu. m.) Bucket	1
7864	92 in. (2.34 m.) Wide, 1.5 cu. yd. (1.15 cu. m.) Long-Lip Coupler Bucket	1
8062	Backhoe Boom Protection Plate	1
8075	Diagnostic Oil Sampling Ports	1
8096	Premium Mirror Option - Exterior Rear View Mirrors (2) and Front View Mirror (1)	1
8109	Sun Visor	1
8115	MFWD Driveshaft Guard	1
8126	Heavy-Duty Grille Frame	1
8131	Heavy-Duty Stabilizer Pads	1

JOHN DEERE

YELLOWHOUSE MACHINERY CO.

Selling Equipment

Quote Id: 28389640 **Customer:** CITY OF MIDLAND

8142	LED Light Package	1
8183	Radio, Bosch Premium Package	1
8207	Seat, Cloth Air-Suspension	1
8213	Chrome Exhaust Extension	1
8226	Strobe Light with Magnetic Mount	1
	Dealer Attachments	
AT393180	Environmental Drain Kit	1
BYT11568	Pre-Cleaner, Engine Air Intake	1
BYT11589	Fluid Sampling Ports	1
	Service Agreements	
	John Deere Extended Warranty - 60MO/5000HR FULL	

JOHN DEERE Extended Warranty

Extended Warranty Proposal

JOHN DEERE 410 P-Tier Backhoe Loader

Date : September 29, 2023

Machine/Use Information		**Plan Description**	**Price**	
Manufacturer	JOHN DEERE	Application	Deductible	
Equipment Type	410 P-TIER BACKHOE LOADER	Coverage	List	$ 3,200.00
Model	410 P-TIER BACKHOE LOADER	Total Months		
Country	US	Total Hours		

Extended Warranty is available only through authorized John Deere Dealers for John Deere Products,and may be purchased at any time before the product's Standard Warranty,or Extended Warranty expires.

Extended Warranty Proposal Prepared for:

Customer Name - Please Print

Customer Signature

I have been offered this extended warranty and

☑ I ACCEPT the Extended Warranty

☐ I DECLINE the Extended Warranty

If declined, I fully understand that any equipment listed above is not covered for customer expenses due to component failures beyond the original basic warranty period provided by John Deere.

Note : This is **not** a contract. For specific Extended Warranty coverage terms and conditions, please refer to the actual Extended Warranty contract for more information and the terms, conditions and limitations of the agreement.

What Extended Warranty is :

The Extended Warranty Program is for the reimbursement on parts and labor for covered components that fail due to faulty material or original workmanship that occur beyond the John Deere Basic Warranty coverage period. The agreement is between Deere & Company and the owners of select John Deere Construction and Forestry equipment, who purchase the Extended Warranty Plans for the desired coverage as indicated in this proposal.

What Extended Warranty is not :

Extended Warranty is not insurance. It also does not cover routine maintainance or high wear items,or insurance-related risks/perils such as collision, overturn, vandalism, wind, fire, hail, etc. It does not cover loss of income during or after an equipment failure. See the actual product-specific Extended Warranty agreement for a complete listing of covered components, and limitations and conditions under the program.

Features/Benefits:

- Extended Warranty includes the following features and benefits under the program :
- Pays for parts and labor costs incurred on failed covered components (less any applicable deductibles),
- Does not require pre-approval before repairs are made by the authorized John Deere dealership,
- Payments are reimbursed directly to the dealership with no prepayment required by the contract holder.

City Council Meeting

Item Number: 8

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: RESOLUTION AUTHORIZING PURCHASE OF A TEREX EVOQUIP COBRA 230R IMPACT CRUSHER FROM POWERSCREEN TEXAS, INC., THROUGH BUYBOARD FOR A TOTAL COST OF $591,533.00 (DISTRICT: NONE) (GENERAL SERVICES)

Purpose:

Resolution for the purchase of one (1) Impact Crusher from Powerscreen Texas, Inc. through Buyboard contract #685-22 for a total cost of $591,533.00 for the Transportation Division for the Garage Division.

Recommended City Council Action:

Approve

Fiscal Impact:

Funding is available in the Garage Fund 2024 operating budget.

Discussion:

Staff is recommending the purchase of one (1) Impact Crusher from Powerscreen Texas, Inc. through Buyboard contract #685-22. We are members of this cooperative and Subchapter F, Section 271.102 of the Local Government Code provides that a local government may participate in a cooperative purchasing program and that purchasing goods or services under Subchapter F satisfies any state law requiring the local government to seek competitive bids for those purchases. The budgeted amount for this purchase is $674,850.00. This will be a replacement to the fleet. Please see attached memo from Manuel Salinas, Garage Superintendent, for additional information.

Therefore, please consider a resolution approving the purchase of one (1) Impact Crusher from

Powerscreen Texas, Inc. of La Grande, Texas through Buyboard contract #685-22 for a total cost of $591,533.00.

Morris Williams Jr.

City Manager's Office

Fleet Services Division

INTEROFFICE MEMORANDUM

TO: Regina Stephenson

FROM: Manuel Eloy Salinas

SUBJECT: Buy Board Contract #685-22

DATE: 10/4/2023

Fleet Services is requesting for the purchase of (1) one Impact Crusher. This new unit will be a replacement for an obsolete unit that we are no longer able to acquire any replacement parts because they are no longer available. The budgeted amount for FY2024 is $674,850 for the purchase of (1) one Impact Crusher. The purchasing amount of $591,533.00 is being offered through Buy Board contract #685-22 by Powerscreen Texas, Inc. for (1) one Terex Evoquip Cobra 230R.

Sincerely,

Manuel Eloy Salinas

City of Midland Superintendent

RESOLUTION NO. _____

RESOLUTION AUTHORIZING PURCHASE OF A TEREX EVOQUIP COBRA 230R IMPACT CRUSHER FROM POWERSCREEN TEXAS, INC., THROUGH BUYBOARD FOR A TOTAL COST OF $591,533.00

WHEREAS, Buyboard is a cooperative purchasing agency with which the City participates with on purchases through a cooperative purchasing program in accordance with TEX. LOC. GOV'T CODE § 271.102; and

WHEREAS, Powerscreen Texas, Inc., submitted a total cost to the City of $591,533.00 for the purchase of a Terex Evoquip Cobra 230R impact crusher through Buyboard as shown on the quote attached hereto as Exhibit A, which is incorporated herein for all purposes; and

WHEREAS, the City Council finds the price proposed for the purchase of a Terex Evoquip Cobra 230R impact crusher to be fair and reasonable; and

WHEREAS, the City Council finds it to be in the public interest to authorize the purchase of a Terex Evoquip Cobra 230R impact crusher from Powerscreen Texas, Inc., through Buyboard;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the City Manager is hereby authorized and directed to purchase of a Terex Evoquip Cobra 230R impact crusher from Powerscreen Texas, Inc., through Buyboard for a total cost of $591,533.00.

SECTION TWO. That the City Comptroller is hereby authorized and directed to pay Powerscreen Texas, Inc., $591,533.00 for said impact crusher from funds available in the Garage Fund 2024 operating budget upon receipt of proper invoices or statements approved by the City Manager.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the

City of Midland at a regular meeting on the _____ day of _____, A.D., 2023, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

RECOMMENDED AND APPROVED:

_____
Tommy Gonzalez, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

POWERSCREEN TEXAS, INC.

September 26, 2023

City of Midland
Attn: Jesse (Email: jzamora@midlandtexas.gov)

On behalf of Powerscreen Texas, Inc., I would like to thank you for the opportunity to provide you with the following crusher price and service option for your equipment purchase consideration. Pricing is as follows:

One New Terex Evoquip Cobra 230R **$591,533.00**
Transport: Delivered to Texas site at no additional charge with straight purchase only

Non published option:
2 Year Engine Service Package **$ 38,750.00**
(Based on Volvo Engine, approx. 20 hours per week use,
Includes filters, oil, travel/mileage and labor)

Sale prices are subject to Texas/County Sales Tax (6.75%), and sale prices also subjected to Texas' Diesel Fuel Surcharge (1.5%), unless Sales tax exempt and certification as such is provided for our file prior to the delivery/invoicing.

General specifications are attached. Pricing is valid for 15 days and equipment is subject to availability. After your review, please call me with any questions.

Again, thank you for the opportunity as your continued business will be greatly appreciated.

Best regards,
Stephen Devane
Sales Representative
Cell: (469) 859-4400
Email: stephen@powerscreentx.com
POWERSCREEN TEXAS, INC.
BUYBOARD CONTRACT NO: 685-22

EVOQUIP®
A TEREX BRAND

P.O. BOX 658, LA GRANGE, TX 78945 – PHONE: 979-968-6428, FAX: 979-968-6693

POWERSCREEN TEXAS, INC.

September 26, 2023

City of Midland
Attn: Jesse (Email: jzamora@midlandtexas.gov)

On behalf of Powerscreen Texas, Inc., I would like to thank you for the opportunity to provide you with the following crusher price and service option for your equipment purchase consideration. Pricing is as follows:

One New Terex Evoquip Cobra 230R **$591,533.00**
Transport: Delivered to Texas site at no additional charge with straight purchase only

Non published option:
2 Year Engine Service Package **$ 38,750.00**
(Based on Volvo Engine, approx. 20 hours per week use,
Includes filters, oil, travel/mileage and labor)

Sale prices are subject to Texas/County Sales Tax (6.75%), and sale prices also subjected to Texas' Diesel Fuel Surcharge (1.5%), unless Sales tax exempt and certification as such is provided for our file prior to the delivery/invoicing.

General specifications are attached. Pricing is valid for 15 days and equipment is subject to availability. After your review, please call me with any questions.

Again, thank you for the opportunity as your continued business will be greatly appreciated.

Best regards,
Stephen Devane
Sales Representative
Cell: (469) 859-4400
Email: stephen@powerscreentx.com
POWERSCREEN TEXAS, INC.
BUYBOARD CONTRACT NO: 685-22

EVOQUIP®
A TEREX BRAND

P.O. BOX 658, LA GRANGE, TX 78945 – PHONE: 979-968-6428, FAX: 979-968-6693

City Council Meeting

Item Number: 9

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: RESOLUTION APPROVING THE PURCHASE OF SIXTY (60) BUNKER COATS AND SIXTY (60) BUNKER PANTS FROM DOOLEY TACKABERRY, INC., TROUGH BUYBOARD AT A TOTAL COST OF $276,445.20 (DISTRICT: NONE) (GENERAL SERVICES)

Purpose:

Resolution approving the purchase of sixty (60) Bunker Coats and sixty (60) Bunker Pants from Dooley Tackaberry, Inc. through Buyboard contract 698-23 for a cost of $276,445.20.

Recommended City Council Action:

Approve

Fiscal Impact:

Funds are available in the General Fund FY24 Operating Budget.

Discussion:

Staff recommends purchasing sixty (60) Bunker Coats and sixty (60) Bunker Pants from Dooley Tackaberry, Inc. through Buyboard contract 698-23. We are members of this cooperative and Subchapter F, Section 271.102 of the Local Government Code provides that a local government may participate in a cooperative purchasing program and that purchasing goods or services under Subchapter F satisfies any state law requiring the local government to seek competitive bids for those purchases. This purchase is a budgeted yearly purchase of personal protective equipment in accordance with NFPA 1851. Please see the attached memo from Fire Chief Blumenauer, for additional information.

Therefore, please consider a resolution approving the purchase of sixty (60) Bunker Coats and sixty (60) Bunker Pants from Dooley Tackaberry, Inc. of Deer Park, Texas through Buyboard for

a cost of $276,445.20.

Morris Williams Jr.

City Manager's Office

MIDLAND Fire Department

Interoffice Memorandum

Date: **10/10/2023**

To: **Regina Stephenson**

From: **Fire Chief Charles Blumenauer**

Subject: **2024 Personal Protective Equipment (PPE) purchase**

We are in the process of our yearly purchase of PPE in accordance with NFPA 1851: Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting.

The Texas Commission on Fire Protection requires fire departments to complete a risk assessment before the purchase of any new PPE. The Midland Fire Department completed this assessment as required. Through this assessment, we have found that our current Inno-Tex PPE specs meet our needs for structural firefighting.

This purchase was budgeted for this year to replace worn gear and to outfit new employees for this coming year.

Charles Blumenauer

Fire Chief

RESOLUTION NO. _____

RESOLUTION APPROVING THE PURCHASE OF SIXTY (60) BUNKER COATS AND SIXTY (60) BUNKER PANTS FROM DOOLEY TACKABERRY, INC., TROUGH BUYBOARD AT A TOTAL COST OF $276,445.20

WHEREAS, Buyboard is a cooperative purchasing agency with which the City participates with on purchases through a cooperative purchasing program in accordance with TEX. LOC. GOV'T CODE § 271.102; and

WHEREAS, Dooley Tackaberry, Inc., submitted a total proposed cost to the City of $276,445.20 for the purchase of sixty (60) bunker coats and sixty (60) bunker pants through Buyboard, as shown on the quote attached hereto as Exhibit "A", which is incorporated herein for all purposes; and

WHEREAS, the Council finds the price proposed by Dooley Tackaberry, Inc., through Buyboard for sixty (60) bunker coats and sixty (60) bunker pants to be fair and reasonable; and

WHEREAS, the City Council finds it to be in the public interest to purchase sixty (60) bunker coats and sixty (60) bunker pants through Buyboard;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the City Manager is hereby authorized and directed to purchase sixty (60) bunker coats and sixty (60) bunker pants from Dooley Tackaberry, Inc., through Buyboard for a total cost of $276,445.20.

SECTION TWO. That the City Comptroller is hereby authorized and directed to pay Dooley Tackaberry, Inc., for sixty (60) bunker coats and sixty (60) bunker pants from funds available in the General Fund FY24 Operating Budget upon proper receipt of invoices or statements approved by the City Manager.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the

City of Midland at a regular meeting on the _____ day of _____, A.D., 2023, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

RECOMMENDED AND APPROVED:

_____
Tommy Gonzalez, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

DOOLEY TACKABERRY
PROTECTING LIFE. GUARDING INVESTMENTS.™

Houston Corporate Headquarters
1515 W. 13th Street
Deer Park TX 77536 USA
Phone: 281.479.9700
Toll Free: 800.833.0247

QUOTATION

Page: 1 of 1
Date: 9/28/2023
Our Reference: 1093674
Your Reference:
Reference Desc.
Sales Person: Jason Billings
Estimator: Natasha Perez
Email: nperez@safetyfire.com
Revision: 0

Quote To: 064204

MIDLAND FIRE DEPARTMENT
P.O. BOX 1152
MIDLAND TX 79702
USA

Ship To:

MIDLAND FIRE DEPARTMENT
1500 W. WALL
MIDLAND TX 79701

Jamie Jewett

ITEM	QTY	PART NUMBER AND DESCRIPTION	ORIGIN	ECCN	SCHEDULE B	UNIT PRICE	UOM	Extension
1	60	INNOENERGY-C-064204-R00 Bunker Coat, Energy Series, Per Midland Fire Department Specifications (see attached): **Lead Time** Back-order TBD				2,796.20	EA	167,772.00
2	60	INNOENERGY-P-064204-R00 Bunker Pant, Energy Series, Per Midland Fire Department Specifications (see attached): **Lead Time** Back-order TBD				1,811.22	PR	108,673.20
3	1	BUYBOARD-FEE Buyboard Contracts Valid 2023 - 2026 Contract # 698-23698-23 (Public Safety and Firehouse Supplies and Equipment) - Innotex 32% Off List **Lead Time** 1 Day ARO				0.00	EA	0.00

Terms: Net 30
Shipping Terms: Ex-works - Factory
Prices Firm: 10/12/2023
Ship Via: Best Way
Freight Terms: Prepay and Add

QUOTE TOTAL USD
276,445.20

Stock items can only be canceled prior to shipment. Non-stock items are subject to manufacturer's cancellation policy. Fees will apply. Custom "made to order" items cannot be canceled or returned. Acceptable methods of payment: Check, ACH, Wire Transfer, Credit Card. All Credit Card payments are subject to a 3% convenience fee.

QuotFormBLH42

City Council Meeting

Item Number: 10

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: RESOLUTION APPROVING THE PURCHASE OF AN AMBULANCE AND ASSOCIATED EQUIPMENT FROM STERLING McCALL FORD THROUGH THE HOUSTON-GALVESTON AREA COUNCIL AT A TOTAL COST OF $362,276.00 (DISTRICT: NONE) (GENERAL SERVICES)

Purpose:

Resolution for the purchase of one (1) ambulance from Sterling McCall Ford through the Houston-Galveston Area Council (H-GAC) contract #AM10-20 for a total cost of $362,276.00.

Recommended City Council Action:

Approve

Fiscal Impact:

Funding is available in the Garage Fund 2024 operating budget.

Discussion:

Staff recommends purchasing this ambulance from Sterling McCall Ford through the Houston-Galveston Area Council (H-GAC) for a total cost of $362,276.00. We are members of the H-GAC cooperative and Subchapter F, Section 271.102 of the Local Government Code provides that a local government may participate in a cooperative purchasing program and that purchasing goods or services under Subchapter F satisfies any state law requiring the local government to seek competitive bids for those purchases. The budget for this equipment for fiscal year 2024 is $480,000.00. Please refer to the memos from Manuel Salinas, Garage Superintendent and Fire Chief Blumenauer, for further discussion concerning this purchase.

Therefore, please consider a resolution approving the purchase of one (1) ambulance from Sterling McCall Ford of Houston, Texas through H-GAC for a total cost of $362,276.00.

Morris Williams Jr.

City Manager's Office

Fleet Services Division

INTEROFFICE MEMORANDUM

TO: Regina Stephenson

FROM: Manuel Eloy Salinas

SUBJECT: H-GAC Contract # AM10-20 for an Ambulance

DATE: 10/10/2023

Fleet Services is requesting the purchase of (1) one Ambulance. This unit will be a replacement for a unit that has reached the end of its useful serviceable life. Budgeted amount for FY2024 is $480,000 for (1) one Ambulance. The purchasing amount of $362,276 is being offered for (1) one ambulance through H-GAC contract # AM10-20 by Sterling McCall Ford.

Sincerely,

Manuel Eloy Salinas

City of Midland Superintendent

MIDLAND Fire Department

Interoffice Memorandum

Date: **10/10/2023**

To: **Regina Stephenson**

From: **Fire Chief Charles Blumenauer**

Subject: **2024 Ambulance Purchase**

Midland Fire Department's ambulance fleet is of vital importance for the care of the Citizens of Midland. The Midland Fire Department operates seven front-line EMS units but will be expanding to eight front-line on January 2, 2024. This will lower our reserve fleet from five units to four that are operational within a moment's notice when demand for service increases. With the rise in population, there has been a significant increase in run volume. The department's run volume continues to grow which puts a stress on our units. This purchase of this new unit will replace our oldest unit, which has the most maintenance costs.

This purchase was budgeted for this year.

Charles Blumenauer

Fire Chief

RESOLUTION NO. _____

RESOLUTION APPROVING THE PURCHASE OF AN AMBULANCE AND ASSOCIATED EQUIPMENT FROM STERLING McCALL FORD THROUGH THE HOUSTON-GALVESTON AREA COUNCIL AT A TOTAL COST OF $362,276.00

WHEREAS, the Houston-Galveston Area Council ("*H-GAC*") is a cooperative purchasing agency with which the City participates with on purchases through a cooperative purchasing program in accordance with TEX. LOC. GOV'T CODE § 271.102; and

WHEREAS, Sterling McCall Ford has submitted a total proposed cost to the City of $362,276.00 for the purchase of an ambulance and associated equipment through H-GAC, as shown on the quote attached hereto as Exhibit A and incorporated herein for all purposes; and

WHEREAS, the Council finds the price proposed by Sterling McCall Ford through H-GAC for said ambulance and associated equipment to be fair and reasonable; and

WHEREAS, the City Council finds it to be in the public interest to purchase said ambulance and associated equipment from Sterling McCall Ford through H-GAC for a total cost of $362,276.00;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the City Manager is hereby authorized and directed to purchase an ambulance and associated equipment from Sterling McCall Ford through H-GAC for a total cost of $362,276.00.

SECTION TWO. That the City Comptroller is hereby authorized and directed to pay Sterling McCall Ford for said ambulance and associated equipment from funds available in the Garage Fund 2024 operating budget upon receipt of proper invoices or statements approved by the City Manager.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the

City of Midland at a regular meeting on the _____ day of _____, A.D., 2023, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

RECOMMENDED AND APPROVED:

_____
Tommy Gonzalez, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

HGACBuy	CONTRACT PRICING WORKSHEET For MOTOR VEHICLES Only	Contract No.:	AM10-20	Date Prepared:	10/03/2023

This Worksheet is prepared by Contractor and given to End User. If a PO is issued, both documents MUST be faxed to H-GAC @ 713-993-4548. Therefore please type or print legibly.

Buying Agency:	Midland Fire Department	Contractor:	Sterling McCall Ford 3441 HGAC
Contact Person:	Charles Blumenauer	Prepared By:	Pablo Cantu
Phone:		Phone:	(281) 588-5007
Fax:		Fax:	(281) 588-5150
Email:	cblumenauer@midlandtexas.gov	Email:	pcantu@sterlingmccallford.com

Product Code:	AM20HD05	Description:	Type I 12' on Ford F-350 Gas 4x2 Reg Cab

A. Product Item Base Unit Price Per Contractor's H-GAC Contract: **$210,732.00**

B. Published Options - Itemize below - Attach additional sheet(s) if necessary - Include Option Code in description if applicable.
(Note: Published Options are options which were submitted and priced in Contractor's bid.)

	Description	Cost		Description	Cost
1090	Chassis // Tire Chains // Onspot Tire Chains	$3,500.00	1204	Module // Shorepower // Single 30 Kussmaul	$500.00
1091	Chassis // Valve Extenders // Valve Extenders	$250.00	1205	Module // Side Scene // Spectra SPA 260	$2,750.00
1078	Chassis // Running Boards // ArcRite Running Board v	$1,250.00	1208	Module // Tint // Limo Tint on Entry Doors	$350.00
1070	Chassis // Mud Flaps // Chassis Mud Flaps	$500.00	1167	Module // Hold-Open // Gas Hold-Opens on Co	$1,000.00
1031	Chassis // Air Horn System // Dual 10" & 12" Air Hor	$1,250.00	1048	Chassis // Console // MDT Plate - with Swivel	$500.00
1032	Chassis // Air Horn System // Fast RecoveryCompress	$1,500.00	1058	Chassis // Flashlights // 2 Survivor Flashlights	$750.00
1035	Chassis // Air Horn System // Operated with Truck Ho	$150.00	1050	Chassis // Console // Single Map Holder with C	$350.00
1052	Chassis // Exhaust System	$1,000.00	1061	Chassis // Glove Box // 3 High Glove Box Hold	$250.00
1192	Module // PowerSource // Onan	$10,000.00	1082	Chassis // Security // Anti-theft System	$750.00
1183	Module // Paint // Non White 12'	$2,250.00	1197	Module // Safe // Medvault w/ Wifi	$3,000.00
1185	Module // Paint // SuperTherm Coating on Roof for 12	$1,250.00	1101	Module // Action Wall // (2) Dual USB	$250.00
1128	Module // Conspicuity // Conspicuity on the Rear of th	$1,750.00	1196	Module // Restraint // 6pt Harness (each) (inclu	$500.00
1144	Module // Exterior // Striping and lettering // Pricing //	$3,500.00		**Subtotal From Additional Sheet(s):**	$77,894.00
1178	Module // Opticom // GPS Opticom	$6,000.00		**Subtotal B:**	$122,994.00

C. Unpublished Options - Itemize below / attach additional sheet(s) if necessary.
(Note: Unpublished options are items which were not submitted and priced in Contractor's bid.)

Description	Cost	Description	Cost
Furnish and install radio equipment	$11,550.00	Furnish and install 30" Paratech Haligan Pro Bar, (2) Streamlight flashlights, RIDGID brand 24" heavy duty bolt cutters	$2,500.00
Furnish and install Cradlepoint IBR1700	$3,250.00	Furnish and install Havis docking station and tilt/swivel motion device on MDT plate	$2,500.00
Furnish and install ethernet cables and GPS antenna	$375.00	Furnish and install Panorama Sharkee dual band WiFi and cellular antenna	$1,050.00
Furnish and install Knox KeySecure Series 5 with 60 degree bracket	$2,600.00	**Subtotal From Additional Sheet(s):**	$0.00
Furnish and install brushed stainless steel panels in lieu of diamond plate at all exterior locations	$1,725.00	**Subtotal C:**	$25,550.00

Check: Total cost of Unpublished Options (C) cannot exceed 25% of the total of the Base Unit Price plus Published Options (A+B).	**For this transaction the percentage is:**	8%

D. Total Cost Before Any Applicable Trade-In / Other Allowances / Discounts (A+B+C)

Quantity Ordered:	1	**X Subtotal of A + B + C:**	$359,276.00	=	**Subtotal D:**	$359,276.00

E. H-GAC Order Processing Charge (Amount Per Current Policy)	**Subtotal E:**	$1,000.00

F. Trade-Ins / Special Discounts / Other Allowances / Freight / Installation / Miscellaneous Charges

Description	Cost	Description	Cost
Customer Provided Items Processing Fee	$1,000.00		
Placards (x4)	$1,000.00	**Subtotal From Additional Sheet(s):**	$0.00

				Subtotal F:	$2,000.00
Delivery Date:			**G. Total Purchase Price (D+E+F):**		$362,276.00

CONTINUATION SHEET (page 2)			**Contract No.:**	**AM10-20**	**Date Prepared:**	10/03/23

B. Published Options - List below (continuation from page 1)
(Note: Published Options are options which were submitted and priced in Contractor's bid.)

	Description	Cost		Description	Cost
1196	Module // Restraint // 6pt Harness (each) (includes stru	$500.00	1199	Module // SCBA // (2) SC-50-H-6-SF SCBA br	$1,000.00
1196	Module // Restraint // 6pt Harness (each) (includes stru	$500.00	1012	General // All products listed in the current Tec	$4,500.00
1100	Module // Acrylic // 22 Pocket Acrylic Holder	$750.00	1011	General // All products listed in the current Stry	$66,744.00
1109	Module // Cabinets // Double Squad Bench Cabinet	$750.00	1120	Module // Compartment // Compartment w/ Div	$250.00
1159	Module // Glovebox/Handrail // Glovebox/Handrail Co	$350.00			
1209	Module // Trash Can // Large Black Trash Can	$200.00			
1165	Module // Headknocker // Rear Wall Headknocker with	$500.00			
1114	Module // Captain's Chair // Captain's Chair with Child	$750.00			
1022	General // Interior compartment/cabinet modification (	$500.00			
1177	Module // O2 Compartment // O2 changing wrench wi	$100.00			
1121	Module // Compartments // Flat bars on Rear Storage	$250.00			
1043	Chassis // Console // Armrest	$250.00		**Subtotal B (page 2):**	$77,894.00

HGACBuy	CONTRACT PRICING WORKSHEET For MOTOR VEHICLES Only	Contract No.:	AM10-20	Date Prepared:	10/03/2023

This Worksheet is prepared by Contractor and given to End User. If a PO is issued, both documents MUST be faxed to H-GAC @ 713-993-4548. Therefore please type or print legibly.

Buying Agency:	Midland Fire Department	Contractor:	Sterling McCall Ford 3441 HGAC
Contact Person:	Charles Blumenauer	Prepared By:	Pablo Cantu
Phone:		Phone:	(281) 588-5007
Fax:		Fax:	(281) 588-5150
Email:	cblumenauer@midlandtexas.gov	Email:	pcantu@sterlingmccallford.com

Product Code:	AM20HD05	Description:	Type I 12' on Ford F-350 Gas 4x2 Reg Cab

A. Product Item Base Unit Price Per Contractor's H-GAC Contract: **$210,732.00**

B. Published Options - Itemize below - Attach additional sheet(s) if necessary - Include Option Code in description if applicable.
(Note: Published Options are options which were submitted and priced in Contractor's bid.)

	Description	Cost		Description	Cost
1090	Chassis // Tire Chains // Onspot Tire Chains	$3,500.00	1204	Module // Shorepower // Single 30 Kussmaul	$500.00
1091	Chassis // Valve Extenders // Valve Extenders	$250.00	1205	Module // Side Scene // Spectra SPA 260	$2,750.00
1078	Chassis // Running Boards // ArcRite Running Board v	$1,250.00	1208	Module // Tint // Limo Tint on Entry Doors	$350.00
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1031	Chassis // Air Horn System // Dual 10" & 12" Air Hor	$1,250.00	1048	Chassis // Console // MDT Plate - with Swivel	$500.00
1032	Chassis // Air Horn System // Fast RecoveryCompress	$1,500.00	1058	Chassis // Flashlights // 2 Survivor Flashlights	$750.00
1035	Chassis // Air Horn System // Operated with Truck Ho	$150.00	1050	Chassis // Console // Single Map Holder with C	$350.00
1052	Chassis // Exhaust System	$1,000.00	1061	Chassis // Glove Box // 3 High Glove Box Hold	$250.00
1192	Module // PowerSource // Onan	$10,000.00	1082	Chassis // Security // Anti-theft System	$750.00
1183	Module // Paint // Non White 12'	$2,250.00	1197	Module // Safe // Medvault w/ Wifi	$3,000.00
1185	Module // Paint // SuperTherm Coating on Roof for 12	$1,250.00	1101	Module // Action Wall // (2) Dual USB	$250.00
1128	Module // Conspicuity // Conspicuity on the Rear of th	$1,750.00	1196	Module // Restraint // 6pt Harness (each) (inclu	$500.00
1144	Module // Exterior // Striping and lettering // Pricing //	$3,500.00		**Subtotal From Additional Sheet(s):**	$77,894.00
1178	Module // Opticom // GPS Opticom	$6,000.00		**Subtotal B:**	$122,994.00

C. Unpublished Options - Itemize below / attach additional sheet(s) if necessary.
(Note: Unpublished options are items which were not submitted and priced in Contractor's bid.)

Description	Cost	Description	Cost
Furnish and install radio equipment	$11,550.00	Furnish and install 30" Paratech Haligan Pro Bar, (2) Streamlight flashlights, RIDGID brand 24" heavy duty bolt cutters	$2,500.00
Furnish and install Cradlepoint IBR1700	$3,250.00	Furnish and install Havis docking station and tilt/swivel motion device on MDT plate	$2,500.00
Furnish and install ethernet cables and GPS antenna	$375.00	Furnish and install Panorama Sharkee dual band WiFi and cellular antenna	$1,050.00
Furnish and install Knox KeySecure Series 5 with 60 degree bracket	$2,600.00	**Subtotal From Additional Sheet(s):**	$0.00
Furnish and install brushed stainless steel panels in lieu of diamond plate at all exterior locations	$1,725.00	**Subtotal C:**	$25,550.00

Check: Total cost of Unpublished Options (C) cannot exceed 25% of the total of the Base Unit Price plus Published Options (A+B).	**For this transaction the percentage is:**	8%

D. Total Cost Before Any Applicable Trade-In / Other Allowances / Discounts (A+B+C)

Quantity Ordered:	1	**X Subtotal of A + B + C:**	$359,276.00	=	**Subtotal D:**	$359,276.00

E. H-GAC Order Processing Charge (Amount Per Current Policy)	**Subtotal E:**	$1,000.00

F. Trade-Ins / Special Discounts / Other Allowances / Freight / Installation / Miscellaneous Charges

Description	Cost	Description	Cost
Customer Provided Items Processing Fee	$1,000.00		
Placards (x4)	$1,000.00	**Subtotal From Additional Sheet(s):**	$0.00

				Subtotal F:	$2,000.00
Delivery Date:			**G. Total Purchase Price (D+E+F):**		$362,276.00

CONTINUATION SHEET (page 2)			**Contract No.:**	**AM10-20**	**Date Prepared:**	10/03/23

B. Published Options - List below (continuation from page 1)
(Note: Published Options are options which were submitted and priced in Contractor's bid.)

	Description	Cost		Description	Cost
1196	Module // Restraint // 6pt Harness (each) (includes stru	$500.00	1199	Module // SCBA // (2) SC-50-H-6-SF SCBA br	$1,000.00
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1159	Module // Glovebox/Handrail // Glovebox/Handrail Co	$350.00			
1209	Module // Trash Can // Large Black Trash Can	$200.00			
1165	Module // Headknocker // Rear Wall Headknocker with	$500.00			
1114	Module // Captain's Chair // Captain's Chair with Child	$750.00			
1022	General // Interior compartment/cabinet modification (	$500.00			
1177	Module // O2 Compartment // O2 changing wrench wi	$100.00			
1121	Module // Compartments // Flat bars on Rear Storage	$250.00			
1043	Chassis // Console // Armrest	$250.00		**Subtotal B (page 2):**	$77,894.00

City Council Meeting

Item Number: 11

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: RESOLUTION APPROVING THE PURCHASE OF A SPARTAN METRO PUMPER FROM METRO FIRE APPARATUS SPECIALISTS, INC., THROUGH THE HOUSTON-GALVESTON AREA COUNCIL FOR A TOTAL COST OF $1,448,347.00 (DISTRICT: NONE) (GENERAL SERVICES)

Purpose:

Resolution for the purchase of one (1) Spartan Metro pumper from Metro Fire Apparatus Specialists, Inc. through Houston-Galveston Area Council (H-GAC) contract #FS12-19 for a total cost of $1,448,347.00.

Recommended City Council Action:

Approve

Fiscal Impact:

Funding is available in the Garage Fund 2024 operating budget.

Discussion:

Staff is recommending the purchase of one (1) Spartan Metro pumper for the Fire Department. The pumper is available on the Houston-Galveston Area Council (H-GAC) contract #FS12-19. We are members of this cooperative and Subchapter F, Section 271.102 of the Local Government Code provides that a local government may participate in a cooperative purchasing program and that purchasing goods or services under Subchapter F satisfies any state law requiring the local government to seek competitive bids for those purchases. The budget for this equipment for fiscal year 2024 is $1,245,000.00. This pumper is a replacement for a unit that has gone beyond its serviceable life. Please see the attached memos from Manuel Salinas, Garage Superintendent and Charles Blumenauer, Fire Chief, for additional information.

Therefore, please consider a resolution approving the purchase of one (1) Spartan Metro pumper from Metro Fire Apparatus Specialists, Inc. of Houston, Texas through Houston-Galveston Area Council (H-GAC) contract #FS12-19 for a total cost of $1,448,347.00.

Morris Williams Jr.

City Manager's Office

Fleet Services Division

INTEROFFICE MEMORANDUM

TO: Regina Stephenson

FROM: Manuel Eloy Salinas

SUBJECT: H-GAC Contract #FS12-19 for a Spartan Metro Star

DATE: 10/10/2023

Fleet Services is requesting the purchase of (1) one Spartan Metro Pumper. This unit will be a replacement for a unit that has gone beyond its serviceable life. Budgeted amount for FY2024 is $1,245,000 for (1) one Spartan Metro Star Pumper. Purchasing amount of $1,448,347 is being offered for (1) one Spartan Metro Pumper through H-GAC contract #FS12-19 by Metro Fire Apparatus Specialists, Inc.

Sincerely,

Manuel Eloy Salinas

City of Midland Superintendent

Interoffice Memorandum

Date: **10/10/2023**

To: **Regina Stephenson**

From: **Fire Chief Charles Blumenauer**

Subject: **2024 Fire Engine Purchase**

Midland Fire Department's purchase of a new Fire Engine is crucial to the Department's goals in providing the best quality and reliability of service for the Citizens of Midland. This purchase of new Spartan pumper will continue the department's plan of standardizing the fleet with equipment that is easier to service.

Charles Blumenauer

Fire Chief

RESOLUTION NO. _____

RESOLUTION APPROVING THE PURCHASE OF A SPARTAN METRO PUMPER FROM METRO FIRE APPARATUS SPECIALISTS, INC., THROUGH THE HOUSTON-GALVESTON AREA COUNCIL FOR A TOTAL COST OF $1,448,347.00

WHEREAS, the Houston-Galveston Area Council ("*H-GAC*") is a cooperative purchasing agency with which the City participates with on purchases through a cooperative purchasing program in accordance with TEX. LOC. GOV'T CODE § 271.102; and

WHEREAS, Metro Fire Apparatus Specialists, Inc., has submitted a total proposed cost to the City of $1,448,347.00 for the purchase of a Spartan Metro pumper through H-GAC, as shown on the quote attached hereto as Exhibit A and incorporated herein for all purposes; and

WHEREAS, the Council finds the price proposed by Metro Fire Apparatus Specialists, Inc., through H-GAC for a Spartan Metro pumper to be fair and reasonable; and

WHEREAS, the City Council finds it to be in the public interest to purchase a Spartan Metro pumper from Metro Fire Apparatus Specialists, Inc., through H-GAC for a total cost of $1,448,347.00;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the City Manager is hereby authorized and directed to purchase a Spartan Metro pumper from Metro Fire Apparatus Specialists, Inc., for a total cost of $1,448,347.00.

SECTION TWO. That the City Comptroller is hereby authorized and directed to pay Metro Fire Apparatus Specialists, Inc., for said Spartan Metro pumper from funds available in the Garage Fund 2024 operating budget upon receipt of proper invoices or statements approved by the City Manager.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the

City of Midland at a regular meeting on the _____ day of _____, A.D., 2023, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

RECOMMENDED AND APPROVED:

_____
Tommy Gonzalez, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

Contract Pricing Worksheets

Rev 02-05-07

NOTE: Purchase Orders are not valid unless a copy of the completed worksheet and the customer's order are faxed to HGACBuy at: 713-993-4548

This Workbook contains three versions of HGACBuy's Contract Pricing Worksheet. One is for Standard Equipment / Services, one is for Catalog or Price Sheet type purchases, and the third is for Motor Vehicles only. See tabs at bottom to select appropriate Worksheet.

Please contact H-GAC staff about use of the worksheets if you have any questions.

HGACBuy	CONTRACT PRICING WORKSHEET For MOTOR VEHICLES Only	Contract No.:	FS12-19	Date Prepared:	10/9/2023

This Worksheet is prepared by Contractor and given to End User. If a PO is issued, both documents MUST be faxed to H-GAC @ 713-993-4548. Therefore please type or print legibly.

Buying Agency:	City of Midland (Fire Department)	**Contractor:**	Metro Fire Apparatus Specialists, Inc.
Contact Person:	Brian McGary	**Prepared By:**	Brian Russell
Phone:	432-685-7436	**Phone:**	713-475-2411
Fax:		**Fax:**	713-475-2428
Email:	bmcgary@midlandtexas.gov	**Email:**	brussell@mfas.com

Product Code:	EEC09	**Description:**	Pumper, Midship, 1250 GPM, Aluminum Body, Spartan Metro Star, 4-Door, Tilt Cab, Single Axle

A. Product Item Base Unit Price Per Contractor's H-GAC Contract: $505,558

B. Published Options - Itemize below - Attach additional sheet(s) if necessary - Include Option Code in description if applicable. (Note: Published Options are options which were submitted and priced in Contractor's bid.)

Description	Cost	Description	Cost
Total from Published Options Page	$660,446		
		Subtotal B:	$660,446

C. Unpublished Options - Itemize below / attach additional sheet(s) if necessary.
(Note: Unpublished options are items which were not submitted and priced in Contractor's bid.)

Description	Cost	Description	Cost
Total from Unpublished Options Page	$281,343		
		Subtotal C:	$281,343

Check: Total cost of Unpublished Options (C) cannot exceed 25% of the total of the Base Unit Price plus Published Options (A+B).	**For this transaction the percentage is:**	24%

D. Total Cost Before Any Applicable Trade-In / Other Allowances / Discounts (A+B+C)

Quantity Ordered:	1	**X Subtotal of A + B + C:**	$1,447,347	=	**Subtotal D:**	$1,447,347

E. H-GAC Order Processing Charge (Amount Per Current Policy)	**Subtotal E:**	$1,000

F. Trade-Ins / Other Allowances / Special Discounts / Freight / Installation

Description	Cost	Description	Cost
		Subtotal F:	$0

Delivery Date:	March 2025	**G. Total Purchase Price (D+E+F):**	$1,448,347

HGACBuy THE SMART PURCHASING SOLUTION

PUBLISHED OPTIONS

Description	Cost	Description	Cost
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15 - Paint Cab Interior Line-X	$14,909	18 - Change cab entry doors to barrier clear	$905
21 - Cab LH/RH Short EMS Compt w/ Exterior Access (2)	$9,662	27 - Add Multiplex Control Screen (2)	$5,204
28 - Cab and Body to be Multiplexed	$2,396	31 - Add Blue Sea Fuse Panel (3)	$2,023
33 - Upgrade Engine from 380HP to 400HP	$9,979	36 - Upgrade Engine from 400HP to 505HP w/4000 Allison	$53,040
41 - Add Engine Brake	$3,480	47 - Add Exhaust Removal System Adapter	$1,566
48 - Upgrade Transmission from 3000 EVS to 4000 EVS	$15,163	53 - PTO Clearance Hump in Cab	$7,417
57 - Upgrade Fuel Tank to 68 Gallon	$504	63 - Upgrade Front Tires, Wheels Suspension to IFS 24,000#	$25,603
64 - Upgrade Rear Tires, Wheels Suspension up to 27,000#	$3,096	72 - Change front wheels to aluminum	$962
73 - Change rear wheels to aluminum	$2,107	74 - Upgrade to Michelin tires	$3,240
82 - Auto Lube System	$5,911	83 - Disc Brakes w/ Single Rear Axle	$1,835
86 - Additional Air Reservoir	$658	87 - Add Air Inlet	$570
89 - Upgrade to painted frame rails	$3,386	92 - Extend Bumper to 21"	$2,558
95 - Upgrade Bumper to Severe Duty	$3,184	103 - Bumper Hose Well	$1,638
105 - Q2 Siren	$3,118	107 - Fire Bell	$4,385
111 - Manual Cab Tilt Pump	$478	112 - Power Windows	$3,143
118 - Upgraded Cab Floor Insulation	$5,627	124 - Upgrade Cab Interior to Metal	$4,536
125 - Dash Slide-Out	$870	128 - Deluxe Engine Tunnel Console	$3,583
131 - Step Trim Kickplate - Basic	$637	137 - Add Cab Interior Mid Compartment	$4,795
139 - Change Seat to Air Ride	$940	142 - Add IMMI Smart Dock SCBA Bracket to Seat (3)	$2,700
146 - Expanded Seat Riser	$2,550	147 - Exterior Door Handles to Chrome	$1,195
152 - Auxiliary Access Mirrors	$654	154 - Cab Rear Corner Trim	$780
162 - Upgrade Battery Boxes to SST	$2,702	167 - Upgrade Alternator to 360 A	$1,276
172 - Battery Charger	$1,667	174 - Auto Eject Inlet - 30 A	$1,068
175 - Upgrade Headlights to LED	$1,872	180 - Additional Cab Interior Dome Lamp (2)	$1,250
192 - LED Stick Water Gauges - Pair	$1,775	198 - Upgrade Light Bar	$3,517
201 - Custom Air Horn Activations	$210	203 - Back-Up Camera System	$1,440
204 - Add Side Camera to Back-Up Camera System	$480	207 - Auxiliary Speedometer	$708
208 - Weatherband Radio	$1,170	258 - Radio Intercom System	$10,680
270 - 1750 GPM Midship IPO 1250 Midship	$9,713	279 - Change Primer to Trident Air Primer	$1,074
283 - Walkway Tool Compartments	$3,450	284 - Running Board Hose Well (2)	$1,200
287 - Smart Pump Compartment Panel (2)	$6,180	289 - Pump Compartment Labels Mechanically Fastened	$1,679
292 - Master Gauges	$1,910	294 - Dunnage Area above Pump Compartment	$2,083
297 - Mechanical Seals	$804	300 - Compressed Air Foam System - Waterous	$113,660
312 - Dual Foam Tank Refill System - Foam Pro	$6,264	319 - Auto Tank Fill System w/ Water Thief to Steamers	$7,114
320 - Master Intake Valve - Mechanical (2)	$11,640	322 - Thermal Relief Valve	$1,633
325 - Pump Anodes - Two	$822	340 - Change to Speedlays - Two (2)	$3,562
341 - Additional Speedlay	$2,507	345 - Front Bumper Discharge	$3,703
353 - Booster Reel	$7,156	357 - Change to top control pump house with walkway	$13,440
376 - Increase Compartment Height by 5"	$16,158	377 - Special Body Configuration	$25,318
379 - Upgrade Body to Star series	$43,430	387 - Compartment Interior Coating	$7,176
390 - Roll-Up Door Guard (7)	$1,764	391 - Roll-Up Door Strap (6)	$612
397 - Smart Tailboard w/ Slide-Out Step	$4,895	398 - Single Axle Smart Storage	$13,094
403 - Ladder Storage, Thru Tank, Inside Rear Compartment	$6,428	409 - Rear Intermediate Step	$1,070
416 - Increase the hose bed wall height	$1,169	419 - LED Lighting on Hose Bed Cover	$1,534
422 - Reinforced Hose Bed Divider (2)	$3,089	446 - Half Depth Shelf (5)	$2,310
449 - Roll-Out Tray - Medium Duty (2)	$3,480	450 - Roll-Out Tray - Heavy Duty (3)	$8,640
455 - Pull-Out Toolboard - Heavy Duty (2)	$4,536	457 - PAC Wall Toolbard Added to Pull Toolboard (2)	$2,136
458 - PAC Wall Toolboard (5)	$6,720	670 - Directional Light - LED	$2,832
676 - Additional Upper/Lower Zones BD Warn Lts - Four (2)	$3,840	678 - Additional M6 Warning Light - Pair (2)	$2,688
682 - Brow Scene Light - LED	$3,263	686 - Side Cab/Body Recessed Lights - LED (3)	$19,962
747 - Ladder - Model 17 Little Giant	$786		
		Subtotal B:	$660,446

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Pump to be de-rated to 1500 GPM	-$254	Upgrade discharge gauges to FRC Insight Ultimate (11)	$24,051
Air supply lines to have compression fittings	$1,892	Add a welded steel plate bumper reinforcement	$702
Center dash switch panel inserts to be painted aluminum	$915	Bostrom Zip Clean Durawear Plus seat covers	$4,487
Foam system supplying the CAF system is a FoamPro 3012	$29,132	Shoreline outlet in cab	$984
Foam system to have second foam tank	$8,713		
Make ready and equipment list per "Dealer Supplied" list	$210,178		

DEALER SUPPLIED - Page 1

Ordered	Item Number	Description
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3	AUS-AH 7600-22	22" HEAVY DUTY SLIDE
3	BEA-HLN9073	HANG UP CLIP FOR MIC
1	BEC-AX240	2.5 GALLON WATER EXTINGUISHER
1	BEC-AX332	20# CO2 EXTINGUISHER
1	BEC-AX411	20# ABC EXTINGUISHER
1	BUL-QXTBUNDLE-RED	BULLARD QXT IMAGER
1	BUL-XTETT	THERMAL THROTTLE FOR
1	BUL-XTRETRACT	XT RETRACTABLE STRAP
1	BUL-XTZOOM	XT SERIES 2X/4X DIGITAL ZOOM
1	CDC-36 RDR 72	CHAIN FOR RESCUE SAW ONLY
1	CDC-MS-462-RES 20	20" RESCUE SAW FOR FIRE DEPTS
1	CTL-120PP	51" PINCH POINT CROWBAR
1	CTL-C60P36	FIBERGLASS HANDLE PICKHEAD AXE
1	CTL-PR800FG	FIBERGLASS HANDLE 8# SLEDGE
1	CTL-PR80MFG	FIBERGLASS HANDLE 8# MAUL
4	CUP-JUMBO HOLDER - 1	TWO TIERED DUAL JUMBO
1	DNS-NETTING	EMS NETTING, STRAPPING DESIGN
1	FHU-EKS-12	ELEVATOR KEY SET
1	FHU-K-TOOL	K-TOOL COMPLETE
2	FHU-LS-8	LOCK SLOT 8 AXE
1	FHU-OTK-16	OFFICERS TOOL KIT
2	FHU-PB-30	PRO BAR 30"
1	FHU-RH-4	NEW YORK ROOF HOOK 4'
1	FHU-RH-6	NEW YORK ROOF HOOK 6'
1	FHU-RH-8	NEW YORK ROOF HOOK 8'
1	FHU-RH-8-D	NEW YORK ROOF HOOK 8'
1	FHU-TRH-6	TRASH HOOK 6' WITH D HANDLE
4	FIRECOM-520-0676-00	HANGER HOOK HEADSET BULK
1	FP-3430-0705	FOAM PICK UP TUBE - KIT
2	GOS-CVS10-03X18	SALVAGE COVER 10 OZ. RED VINYL
2	GOS-CVS10-12X12	SALVAGE COVER 10 OZ. RED VINYL
2	GOS-CVS10-12X18	SALVAGE COVER 10 OZ. RED VINYL
1	HAR-HHR-2	TWO MAN HOSE ROLLER
2	HAR-HSSW-401	(4) STANDARD SPANNER
1	HASBRA-HB228-5	5" HOSE CLAMP SCREW TYPE
1	HASBRA-HB228A	4-5" HOSE CLAMP MOUNT ONLY
2	JOT-425-6368	OS MBV FACEPLATE
16	KEY-DP17-1000-RED-50-ARN	COMBAT READY 1.75" X 50'
8	KEY-DP25-1000-WHT-50-ARN	COMBAT READY 2.5" X 50'
13	KEY-DP30-800-ECO-YLW-50-ARN	ECO-10 - 3" X 50'
10	KEY-RC50-450-YLW-100-STZ	PRO FLOW LDH 5" STZ X 100'
1	KEY-RC50-450-YLW-25-STZ	PRO FLOW LDH 5" STZ X 25'
1	KEY-RC50-450-YLW-50-STZ	PRO FLOW LDH 5" STZ X 50'
1	KNO-KSM-200K1	KNOX BOX
1	KOC-37R151-H52	1.5" F NH RL RIGID X 1" M NH
1	KOC-37R15G-H52	1.5" F NH RL RIGID X M GHT
1	LEA-TN835-Y	8#TNT TOOL 13 LB. 8.5LB HEAD
2	MET-HYDRANT/SPANNER SET	ONE ADJUSTABLE HYDRANT WRENCH
7	MET-MISC-EQUIPMENT	CUSTOM ALUMINUM L MOUNTING
1	MET-MISC-EQUIPMENT	FP PIGTAIL
1	MET-MISC-EQUIPMENT	INSTALLATION OF EXHAUST
1	MET-MISC-EQUIPMENT	CUSTOM ALUMINUM RADIO BRACKET
1	MET-MISC-EQUIPMENT	CUSTOM ALUMINUM BLITZFIRE
1	MET-MISC-EQUIPMENT	RIGID 24" ALUMINUM
1	MET-MISC-EQUIPMENT	OPTICOM INSTALL
1	MET-MISC-EQUIPMENT	OPTICOM GTT GPS 11060
1	MET-MISC-EQUIPMENT	DOCK
1	MET-MISC-EQUIPMENT	CRADLE POINT AND ANTENNA
1	MET-MISC-EQUIPMENT	LOOSE EQUIPMENT
1	MET-MISC-EQUIPMENT	MOTOROLA RADIO EQUIPMENT

DEALER SUPPLIED - Page 2

Ordered	Item Number	Description
1	MET-MR-BODY RADIO INSTALL	INSTALL CUSTOMER SUPPLIED
1	MET-MR-CABINET REAR WALL*	CUSTOM ALUMINUM EMS MODULE
2	MET-MR-CONSOLE LARGE	CUSTOM LARGE ENGINE TUNNEL
2	MET-MR-CROSSLAY FLAP	D&S RED VINYL CROSSLAY COVER.
1	MET-MR-DAVID CLARK 5 CREW	5-CREW DAVID CLARK INTERCOM
2	MET-MR-FH HOLDER	CUSTOM ALUMINIUM HOSE HOLDER.
1	MET-MR-FLASHLIGHTS	INSTALL FLASHLIGHTS IN CAB
2	MET-MR-GLOVE BOX	INDIVIDUAL EMS GLOVE BOX
1	MET-MR-HOSE BED COVER	D&S VINYL HOSE BED COVER.
1	MET-MR-HOSE ROLLER MOUNT	3/16" ALUMINUM CUSTOM
1	MET-MR-HOUSTON MONITOR PKG	1250 GPM HURRICANE MONITOR PKG
1	MET-MR-KNOX BOX INSTALL	INSTALL CUSTOMER SUPPLIED
1	MET-MR-MDT INSTALL	INSTALL CUSTOMER SUPPLIED
2	MET-MR-POST MOUNT	CUSTOM POLY SOFT SUCTION
1	MET-MR-RADIO INSTALL	INSTALL CUSTOMER SUPPLIED
1	MET-MR-SAW MOUNT	INSTALLATION OF SAWS
3	MET-MR-TALON BRACKET	INSTALL TALON BRACKET IN CAB,
4	MET-SET UP	TFT-FTGF34A1F
1	NUP-10025	DEAD BLOW HAMMER (10025)
1	NUP-35002	D-HANDLE REPLACEMENT KIT
1	NUP-39024	EPOXY GLUE
1	NUP-69703	30" BOLT CUTTER (69703)
1	PAC-1007	UNIVERSAL MOUNT
1	PAC-1009	TOOL MOUNT / HANGER
1	PAC-1070	JUMBO LOK
1	PAC-7016-100	TRACKLOC PACK
1	RAM-XHMEG	FUSE HOLDER FOR AMG FUSES
2	RBF-HOV-200	HOSE VISE 200
4	SEN-25PT-F	2.5" MOUNT POST
4	SEN-25PT-M	2.5" MOUNT POST
2	SEN-SH1	SINGLE STORZ MOUNT
1	SL-22074	AC POWER PLUG FOR
1	SL-22083	POWER SUPPLY FOR
1	SL-45670	PORTABLE SCENE LIGHT
1	SMC-0231-BB1-001	WELL NUT - RUBBER
2	SMC-PROGRAM CHANGE	VMUX COMPUTER PROGRAM CHANGE
1	SPC-QL48Z15C	1.5" QUIC-LOC MOUNTING PLATE
6	SPC-QL48Z25C	2.5" QUIC-LOC MOUNTING PLATE
2	SPC-RMP4906AC	2.5" NH SCREW PLATE
1	SVI-V20-BL-12-AC-SP	SVI 20" PPV FAN,
2	TFT-A01ST	BLIND CAP 5" STORZ W/ LANYARD
2	TFT-AA1HST-NR	5" STORZ X 4.5" F NH
1	TFT-AA1ST-NJ	5" STORZ X 2.5" F NH
1	TFT-AA2ST-NJ	5" STORZ X 2.5" M NH
2	TFT-AA5NJ-NF	2.5" F NH X 1.5" M NH
2	TFT-AA6NF-NF	1.5" M NH X 1.5" M NH
2	TFT-AA6NJ-NJ	2.5" M NH X 2.5" M NH
2	TFT-AA7NF-NF	1.5" F NH X 1.5" F NH
2	TFT-AA7NJ-NJ	2.5" F NH X 2.5" F NH
2	TFT-AJ1ST-NX	DETENT ELBOW 5" STRZ X 6" FN
2	TFT-AY5NJ-NJ	2.5" GATED WYE
3	TFT-AYSNJ-NF	2.5" FORESTRY GATED WYE
2	TFT-B-BGH	1" NH ULTIMATIC NOZZLE W/ GRIP
3	TFT-HDL-2VPGI	2.5" NH DUAL-FORCE WITH GRIP
8	TFT-HM792-FTKIT	FOLDING PISTOL GRIP - FLIP TIP
1	TFT-XX-B	BLITZFIRE STORAGE BRACKET
1	TFT-XXC-53-HENH1	BLITZFIRE OSC COMBINATION PKG
1	TNT-EBFCC-28-18V	COMBI-TOOL, STORM SURGE GEN 3
1	WEH-GMM-2	GLAS-MASTER COMPLETE
2	WES-1011B	BLUESEA 12V POWER OUTLET
2	WES-1016B	BLUESEA 12V USB POWER OUTLET

DEALER SUPPLIED - Page 3

Ordered	Item Number	Description
1	WES-298040	40AMP MEGAFUSE
1	ZIA-1010PM3	COLLISION RESTRAINT STRAP
8	ZIA-CPFL000003	QUIC-STRAP 2" FOOTMAN LOOP
2	ZIA-HS	SEAT HARDWARE FOR ULL
1	ZIA-UH-6-30-3-SFPHS	SCBA WALKAWAY BRACKET
1	ZIA-UMFS-0711	7" UTILITY STRAP
1	ZIA-UMFS-0911	9" UTILITY STRAP
3	ZIA-UMVS-1116-11	VARIABLE STRAP
1	ZIA-UMVS-1625-11	VARIABLE STRAP

Contract Pricing Worksheets

Rev 02-05-07

NOTE: Purchase Orders are not valid unless a copy of the completed worksheet and the customer's order are faxed to HGACBuy at: 713-993-4548

This Workbook contains three versions of HGACBuy's Contract Pricing Worksheet. One is for Standard Equipment / Services, one is for Catalog or Price Sheet type purchases, and the third is for Motor Vehicles only. See tabs at bottom to select appropriate Worksheet.

Please contact H-GAC staff about use of the worksheets if you have any questions.

HGACBuy	CONTRACT PRICING WORKSHEET For MOTOR VEHICLES Only	Contract No.:	FS12-19	Date Prepared:	10/9/2023

This Worksheet is prepared by Contractor and given to End User. If a PO is issued, both documents MUST be faxed to H-GAC @ 713-993-4548. Therefore please type or print legibly.

Buying Agency:	City of Midland (Fire Department)	**Contractor:**	Metro Fire Apparatus Specialists, Inc.
Contact Person:	Brian McGary	**Prepared By:**	Brian Russell
Phone:	432-685-7436	**Phone:**	713-475-2411
Fax:		**Fax:**	713-475-2428
Email:	bmcgary@midlandtexas.gov	**Email:**	brussell@mfas.com

Product Code:	EEC09	**Description:**	Pumper, Midship, 1250 GPM, Aluminum Body, Spartan Metro Star, 4-Door, Tilt Cab, Single Axle

A. Product Item Base Unit Price Per Contractor's H-GAC Contract: $505,558

B. Published Options - Itemize below - Attach additional sheet(s) if necessary - Include Option Code in description if applicable. (Note: Published Options are options which were submitted and priced in Contractor's bid.)

Description	Cost	Description	Cost
Total from Published Options Page	$660,446		
		Subtotal B:	$660,446

C. Unpublished Options - Itemize below / attach additional sheet(s) if necessary.
(Note: Unpublished options are items which were not submitted and priced in Contractor's bid.)

Description	Cost	Description	Cost
Total from Unpublished Options Page	$281,343		
		Subtotal C:	$281,343

Check: Total cost of Unpublished Options (C) cannot exceed 25% of the total of the Base Unit Price plus Published Options (A+B).	**For this transaction the percentage is:**	24%

D. Total Cost Before Any Applicable Trade-In / Other Allowances / Discounts (A+B+C)

Quantity Ordered:	1	**X Subtotal of A + B + C:**	$1,447,347	=	**Subtotal D:**	$1,447,347

E. H-GAC Order Processing Charge (Amount Per Current Policy)	**Subtotal E:**	$1,000

F. Trade-Ins / Other Allowances / Special Discounts / Freight / Installation

Description	Cost	Description	Cost
		Subtotal F:	$0

Delivery Date:	March 2025	**G. Total Purchase Price (D+E+F):**	$1,448,347

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1	BEC-AX332	20# CO2 EXTINGUISHER
1	BEC-AX411	20# ABC EXTINGUISHER
1	BUL-QXTBUNDLE-RED	BULLARD QXT IMAGER
1	BUL-XTETT	THERMAL THROTTLE FOR
1	BUL-XTRETRACT	XT RETRACTABLE STRAP
1	BUL-XTZOOM	XT SERIES 2X/4X DIGITAL ZOOM
1	CDC-36 RDR 72	CHAIN FOR RESCUE SAW ONLY
1	CDC-MS-462-RES 20	20" RESCUE SAW FOR FIRE DEPTS
1	CTL-120PP	51" PINCH POINT CROWBAR
1	CTL-C60P36	FIBERGLASS HANDLE PICKHEAD AXE
1	CTL-PR800FG	FIBERGLASS HANDLE 8# SLEDGE
1	CTL-PR80MFG	FIBERGLASS HANDLE 8# MAUL
4	CUP-JUMBO HOLDER - 1	TWO TIERED DUAL JUMBO
1	DNS-NETTING	EMS NETTING, STRAPPING DESIGN
1	FHU-EKS-12	ELEVATOR KEY SET
1	FHU-K-TOOL	K-TOOL COMPLETE
2	FHU-LS-8	LOCK SLOT 8 AXE
1	FHU-OTK-16	OFFICERS TOOL KIT
2	FHU-PB-30	PRO BAR 30"
1	FHU-RH-4	NEW YORK ROOF HOOK 4'
1	FHU-RH-6	NEW YORK ROOF HOOK 6'
1	FHU-RH-8	NEW YORK ROOF HOOK 8'
1	FHU-RH-8-D	NEW YORK ROOF HOOK 8'
1	FHU-TRH-6	TRASH HOOK 6' WITH D HANDLE
4	FIRECOM-520-0676-00	HANGER HOOK HEADSET BULK
1	FP-3430-0705	FOAM PICK UP TUBE - KIT
2	GOS-CVS10-03X18	SALVAGE COVER 10 OZ. RED VINYL
2	GOS-CVS10-12X12	SALVAGE COVER 10 OZ. RED VINYL
2	GOS-CVS10-12X18	SALVAGE COVER 10 OZ. RED VINYL
1	HAR-HHR-2	TWO MAN HOSE ROLLER
2	HAR-HSSW-401	(4) STANDARD SPANNER
1	HASBRA-HB228-5	5" HOSE CLAMP SCREW TYPE
1	HASBRA-HB228A	4-5" HOSE CLAMP MOUNT ONLY
2	JOT-425-6368	OS MBV FACEPLATE
16	KEY-DP17-1000-RED-50-ARN	COMBAT READY 1.75" X 50'
8	KEY-DP25-1000-WHT-50-ARN	COMBAT READY 2.5" X 50'
13	KEY-DP30-800-ECO-YLW-50-ARN	ECO-10 - 3" X 50'
10	KEY-RC50-450-YLW-100-STZ	PRO FLOW LDH 5" STZ X 100'
1	KEY-RC50-450-YLW-25-STZ	PRO FLOW LDH 5" STZ X 25'
1	KEY-RC50-450-YLW-50-STZ	PRO FLOW LDH 5" STZ X 50'
1	KNO-KSM-200K1	KNOX BOX
1	KOC-37R151-H52	1.5" F NH RL RIGID X 1" M NH
1	KOC-37R15G-H52	1.5" F NH RL RIGID X M GHT
1	LEA-TN835-Y	8#TNT TOOL 13 LB. 8.5LB HEAD
2	MET-HYDRANT/SPANNER SET	ONE ADJUSTABLE HYDRANT WRENCH
7	MET-MISC-EQUIPMENT	CUSTOM ALUMINUM L MOUNTING
1	MET-MISC-EQUIPMENT	FP PIGTAIL
1	MET-MISC-EQUIPMENT	INSTALLATION OF EXHAUST
1	MET-MISC-EQUIPMENT	CUSTOM ALUMINUM RADIO BRACKET
1	MET-MISC-EQUIPMENT	CUSTOM ALUMINUM BLITZFIRE
1	MET-MISC-EQUIPMENT	RIGID 24" ALUMINUM
1	MET-MISC-EQUIPMENT	OPTICOM INSTALL
1	MET-MISC-EQUIPMENT	OPTICOM GTT GPS 11060
1	MET-MISC-EQUIPMENT	DOCK
1	MET-MISC-EQUIPMENT	CRADLE POINT AND ANTENNA
1	MET-MISC-EQUIPMENT	LOOSE EQUIPMENT
1	MET-MISC-EQUIPMENT	MOTOROLA RADIO EQUIPMENT

DEALER SUPPLIED - Page 2

Ordered	Item Number	Description
1	MET-MR-BODY RADIO INSTALL	INSTALL CUSTOMER SUPPLIED
1	MET-MR-CABINET REAR WALL*	CUSTOM ALUMINUM EMS MODULE
2	MET-MR-CONSOLE LARGE	CUSTOM LARGE ENGINE TUNNEL
2	MET-MR-CROSSLAY FLAP	D&S RED VINYL CROSSLAY COVER.
1	MET-MR-DAVID CLARK 5 CREW	5-CREW DAVID CLARK INTERCOM
2	MET-MR-FH HOLDER	CUSTOM ALUMINIUM HOSE HOLDER.
1	MET-MR-FLASHLIGHTS	INSTALL FLASHLIGHTS IN CAB
2	MET-MR-GLOVE BOX	INDIVIDUAL EMS GLOVE BOX
1	MET-MR-HOSE BED COVER	D&S VINYL HOSE BED COVER.
1	MET-MR-HOSE ROLLER MOUNT	3/16" ALUMINUM CUSTOM
1	MET-MR-HOUSTON MONITOR PKG	1250 GPM HURRICANE MONITOR PKG
1	MET-MR-KNOX BOX INSTALL	INSTALL CUSTOMER SUPPLIED
1	MET-MR-MDT INSTALL	INSTALL CUSTOMER SUPPLIED
2	MET-MR-POST MOUNT	CUSTOM POLY SOFT SUCTION
1	MET-MR-RADIO INSTALL	INSTALL CUSTOMER SUPPLIED
1	MET-MR-SAW MOUNT	INSTALLATION OF SAWS
3	MET-MR-TALON BRACKET	INSTALL TALON BRACKET IN CAB,
4	MET-SET UP	TFT-FTGF34A1F
1	NUP-10025	DEAD BLOW HAMMER (10025)
1	NUP-35002	D-HANDLE REPLACEMENT KIT
1	NUP-39024	EPOXY GLUE
1	NUP-69703	30" BOLT CUTTER (69703)
1	PAC-1007	UNIVERSAL MOUNT
1	PAC-1009	TOOL MOUNT / HANGER
1	PAC-1070	JUMBO LOK
1	PAC-7016-100	TRACKLOC PACK
1	RAM-XHMEG	FUSE HOLDER FOR AMG FUSES
2	RBF-HOV-200	HOSE VISE 200
4	SEN-25PT-F	2.5" MOUNT POST
4	SEN-25PT-M	2.5" MOUNT POST
2	SEN-SH1	SINGLE STORZ MOUNT
1	SL-22074	AC POWER PLUG FOR
1	SL-22083	POWER SUPPLY FOR
1	SL-45670	PORTABLE SCENE LIGHT
1	SMC-0231-BB1-001	WELL NUT - RUBBER
2	SMC-PROGRAM CHANGE	VMUX COMPUTER PROGRAM CHANGE
1	SPC-QL48Z15C	1.5" QUIC-LOC MOUNTING PLATE
6	SPC-QL48Z25C	2.5" QUIC-LOC MOUNTING PLATE
2	SPC-RMP4906AC	2.5" NH SCREW PLATE
1	SVI-V20-BL-12-AC-SP	SVI 20" PPV FAN,
2	TFT-A01ST	BLIND CAP 5" STORZ W/ LANYARD
2	TFT-AA1HST-NR	5" STORZ X 4.5" F NH
1	TFT-AA1ST-NJ	5" STORZ X 2.5" F NH
1	TFT-AA2ST-NJ	5" STORZ X 2.5" M NH
2	TFT-AA5NJ-NF	2.5" F NH X 1.5" M NH
2	TFT-AA6NF-NF	1.5" M NH X 1.5" M NH
2	TFT-AA6NJ-NJ	2.5" M NH X 2.5" M NH
2	TFT-AA7NF-NF	1.5" F NH X 1.5" F NH
2	TFT-AA7NJ-NJ	2.5" F NH X 2.5" F NH
2	TFT-AJ1ST-NX	DETENT ELBOW 5" STRZ X 6" FN
2	TFT-AY5NJ-NJ	2.5" GATED WYE
3	TFT-AYSNJ-NF	2.5" FORESTRY GATED WYE
2	TFT-B-BGH	1" NH ULTIMATIC NOZZLE W/ GRIP
3	TFT-HDL-2VPGI	2.5" NH DUAL-FORCE WITH GRIP
8	TFT-HM792-FTKIT	FOLDING PISTOL GRIP - FLIP TIP
1	TFT-XX-B	BLITZFIRE STORAGE BRACKET
1	TFT-XXC-53-HENH1	BLITZFIRE OSC COMBINATION PKG
1	TNT-EBFCC-28-18V	COMBI-TOOL, STORM SURGE GEN 3
1	WEH-GMM-2	GLAS-MASTER COMPLETE
2	WES-1011B	BLUESEA 12V POWER OUTLET
2	WES-1016B	BLUESEA 12V USB POWER OUTLET

DEALER SUPPLIED - Page 3

Ordered	Item Number	Description
1	WES-298040	40AMP MEGAFUSE
1	ZIA-1010PM3	COLLISION RESTRAINT STRAP
8	ZIA-CPFL000003	QUIC-STRAP 2" FOOTMAN LOOP
2	ZIA-HS	SEAT HARDWARE FOR ULL
1	ZIA-UH-6-30-3-SFPHS	SCBA WALKAWAY BRACKET
1	ZIA-UMFS-0711	7" UTILITY STRAP
1	ZIA-UMFS-0911	9" UTILITY STRAP
3	ZIA-UMVS-1116-11	VARIABLE STRAP
1	ZIA-UMVS-1625-11	VARIABLE STRAP

City Council Meeting

Item Number: 12

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: RESOLUTION APPROVING THE PURCHASE OF ONE HUNDRED THIRTY (130) 2024 YAMAHA ELECTRIC GOLF CARTS FROM YAMAHA GOLF CAR COMPANY THROUGH BUYBOARD AT A TOTAL COST OF $559,000.00; AND AUTHORIZING THE TRADE-IN OF ONE HUNDRED THIRTY (130) CITY-OWNED YAMAHA DRIVE 2 GOLF CARTS (DISTRICT 2) (GENERAL SERVICES)

Purpose:

Resolution approving the purchase of one hundred thirty (130) 2024 Yamaha electric golf carts from Yamaha Golf Car Company through Buyboard contract 706-23 for a net cost of $559,000.00 for the General Services Department.

Recommended City Council Action:

Approve

Fiscal Impact:

Funding is available in the Garage Fund 2024 operating budget.

Discussion:

These golf carts are a budgeted replacement. The replacement of the current golf carts at 36 months will insure that the City will not have the expense of installing new batteries and there will be no warranty lapse. The current 2021 Yamaha Drive 2 golf carts that will be traded-in were purchased on a 36 month buyback guarantee. Yamaha Golf Car Company is also including a Yamaha UMAX Two EFI Gas Utility Car at no charge. The 2024 Yamaha Drive 2 golf carts are available through Buyboard contract #706-23. We are members of this cooperative and Subchapter F, Section 271.102 of the Local Government Code provides that purchasing goods or services under Subchapter F satisfies any state law requiring the local government to seek

competitive bids for those purchases.

Therefore, please consider approval of a resolution authorizing the purchase of one hundred thirty (130) 2024 Yamaha electric golf carts from Yamaha Golf Car Company through Buyboard contract 706-23 for a net cost of $559,000.00.

Morris Williams Jr.

City Manager's Office

Fleet Services Division

INTEROFFICE MEMORANDUM

TO: Regina Stephenson

FROM: Manuel Eloy Salinas

SUBJECT: Buy Board #601-20 for 130 2024 AC Electric Golf Cars

DATE: 10/9/2023

Fleet Service is requesting the purchase of (130) Electric Golf Cars. They will be replacing a fleet that is worn out and has gone beyond their useful service life. Budgeted amount for FY2024 is $560,00 for (130) Electric Golf Cars. Purchasing amount will be $559,000.00 for (130) 2024 AC Electric Golf Cars. The Purchasing amount is the total amount after the trade in value of $1,900.00 (per car) has been added for a trade in value of $247,000.00 then subtracted from the total new fleet price of $806,000.00.

Sincerely,

Manuel Eloy Salinas

City of Midland Superintendent

RESOLUTION NO. _____

RESOLUTION APPROVING THE PURCHASE OF ONE HUNDRED THIRTY (130) 2024 YAMAHA ELECTRIC GOLF CARTS FROM YAMAHA GOLF CAR COMPANY THROUGH BUYBOARD AT A TOTAL COST OF $559,000.00; AND AUTHORIZING THE TRADE-IN OF ONE HUNDRED THIRTY (130) CITY-OWNED YAMAHA DRIVE 2 GOLF CARTS

WHEREAS, Buyboard is a cooperative purchasing agency with which the City participates with on purchases through a cooperative purchasing program in accordance with TEX. LOC. GOV'T CODE § 271.102; and

WHEREAS, Yamaha Golf Car Company has submitted a total proposed cost of $559,000.00 for the purchase of one hundred thirty (130) 2024 Yamaha electric golf carts through Buyboard, contingent upon the trade-in of one hundred thirty (130) City-owned Yamaha Drive 2 golf carts, as shown on the proposal attached hereto as Exhibit A and incorporated herein for all purposes; and

WHEREAS, the Council finds the price proposed by Yamaha Golf Car Company for one hundred thirty (130) 2024 Yamaha electric golf carts to be fair and reasonable; and

WHEREAS, the City Council finds it to be in the public interest to purchase one hundred thirty (130) 2024 Yamaha electric golf carts from Yamaha Golf Car Company, and to trade in one hundred thirty (130) City-owned Yamaha Drive 2 golf carts through Buyboard;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the City Manager is hereby authorized and directed to purchase one hundred thirty (130) 2024 Yamaha electric golf carts, through Buyboard, at a total cost of $559,000.00, and to trade in one hundred thirty (130) City-owned Yamaha Drive 2 golf carts to Yamaha Golf Car Company to effectuate said purchase.

SECTION TWO. That the City Comptroller is hereby authorized and directed to pay Yamaha Golf Car Company for said golf carts from funds available in the Garage Fund 2024

operating budget upon receipt of proper invoices or statements approved by the City Manager.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2023, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

RECOMMENDED AND APPROVED:

_____
Tommy Gonzalez, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

Yamaha Golf Car Proposal

Prepared for:

HOGAN PARK

GOLF COURSE

(Buy-Board # 706-23)

Presented By

Yamaha Sales Representative

David Stewart

North Texas District Sales Manager

October 12, 2023

Exhibit A

PROPOSAL

Prepared For

Hogan Park Golf Club

October 12, 2023

2024 ~ Yamaha Drive2 "AC" Electric Golf Car

The 2024 Yamaha 48-volt Electric Yamaha Drive Golf Cars equipped with a 4.4 horsepower motor that is high quality, highly efficient and whisper quiet. The 2024 Yamaha Drive features an automotive ladder style, HybriCore Chassis consisting of a 100% robotically welded steel frame that is protected by an 18-step paint process and a polypropylene structural floor that makes it 2.5 times stronger than our previous model yet is also 20 % lighter. The 2024 Yamaha Drive Golf Car is not only built for durability, but also comfort. The Drive features the largest and most comfortable contoured seat, the largest sweater basket, largest bag well and largest canopy top in the industry. With the largest area of entry and egress, automotive style dash and fully independent Tru-Trak II front suspension the Yamaha Drive has been designed to meet all your customer's needs.

Standard "Electric Car" Features

* 48 Volt Electric "AC" Motor with 3.7 horsepower
* Reliable "Trojan 8 volt T875" Batteries
* Yamaha Built Electric Battery Charger
* De-Ionizer & Fill Hose for Watering System
* Yamaha Built Motor Control Unit
* 5 MPH Crash Rated – Matching Bumpers
* Fully Independent Front Suspension
* Maintenance-Free Rack and Pinion Steering
* Perma-Lubed Sealed Ball Bearings
* Clima-Guard Top with Dual Rain Gutters
* Sentry Wraparound Protection
* Trojan Hydro-Link Battery Water System
* Rear Drum Brakes
* Automotive Style Dash with 4 Drink Holders
* Largest Most Comfortable Seat in the Industry
* Largest Vinyl-Coated Sweater Basket
* Thermoplastic Olefin Body
* Coil Springs Over Hydraulic Shock Absorbers

Accessories Added Per Car

* Wheel Covers
* Information Holders (2 per car)
* Clear Split Windshield
* Battery De-Ionizer
* Fleet Numbers (3 per car)
* Dual Sand Bottles
* USB Ports (Driver and Passenger Side)
* Water Fill Hose

*** Additional accessories available upon request ***

PROPOSAL

Prepared For

Hogan Park Golf Club

October 12, 2023

2024 Fleet Car Color Choices

Glacier White

Metallic Evergreen

Additional Color Options

SOLID COLORS

** Glacier White
** Sunstone Beige

METALLIC COLORS

** Evergreen
** Pearl White
** Carbon Grey
** Bluestone Blue
** Moonstone Silver

*** Price is quoted as solid color option ***

*** Metallic Colors add $100.00 per car ***

PROPOSAL

Prepared For

Hogan Park Golf Club

October 12, 2023

Yamaha "UMAX One" "EFI Gas" Utility Car

Standard Equipped UMAX One Utility Car

* Yamaha built 402cc gas engine with 14.25 hp
* Luxurious Bucket Seats
* Most fuel-efficient gas engine in the industry
* 20" Wheels
* 2" Receiver
* Head Lights
* Impact Resistant Front Windshield
* Rack & Pinion Steering
* Front Hood Storage Area
* Black Top

Accessories Included

* Sun Top
* Front Picker Adapter
* USB Ports
* Hinged Clear Windshield

PROPOSAL

Prepared For

Hogan Park Golf Club

October 12, 2023

Pricing Options

Current Fleet ~ Yamaha Electric Car (130 Cars)

Hogan Park Golf Course currently has a fleet of 130 – 2021 Yamaha Electric AC Golf Cars. Yamaha Golf Car Company has offered in the prior agreement to purchase these cars back from Hogan Park Golf Course for $1600.00 per car for a total of $208,000.00. With current market conditions, Yamaha Golf Car would like to increase that trade value from $1,600.00 per car to $1,900.00 per car for a total of $247,000.00. Yamaha Golf Car Company will use this amount as a trade variance to lower the cost of the new fleet of 2024 Yamaha AC Golf Cars. All cars must be in running condition with normal wear and tear and all chargers in working condition on the day Yamaha Golf Car will take possession.

Yamaha Electric ~ New Fleet Pricing Options

2024 AC Electric Car (130 Cars)		**Per Car Price**	**Total Fleet Price**
❖ Trojan 875 Lead Acid Battery Option • (4 year or 25,000 Amp Hour Warranty)	~	$ 6,200.00 (per car)	$ 806,000.00
❖ Trade In Pricing (Listed above)	~	$ 1,900.00 (per car)	$ 247,000.00
❖ Total Purchase Price	~	$ 4,300.00 (per car)	$ 559,000.00

** Prices above are quoted using standard color options & Buy–Board Pricing thru Yamaha Golf Cars **

2021 UMAX One EFI Gas Utility Car (1 Car)

❖ Yamaha Golf Car Company would like to offer Hogan Park Golf Course this UMAX utility car at NO CHARGE

Yamaha Guaranteed Buy-Back

❖ Yamaha Golf Car will guarantee to purchase the fleet of 2024 Cars back from Hogan Park after 36 months for the following values listed below provided all the cars are running with all the accessories and parts as delivered, all chargers are functioning properly. Normal wear and tear accepted.

- 2024 AC Cars with Trojan 875 Batteries - $ 1,900.00 per car ~ $ 247,000.00

** Prices above are quoted using standard color options & Buy–Board Pricing thru Yamaha Golf Cars **

PROPOSAL

Prepared For

Hogan Park Golf Club

October 12, 2023

Yamaha Fleet Car Warranty

Yamaha Golf-Car Company hereby warrants that any new Yamaha DRIVE^2 Gas or DRIVE^2 Electric golf car purchased from Yamaha, or an Authorized Dealer or Distributor in the United States will be free from defects in material and workmanship for FOUR years from date of purchase, subject to the stated limitations. DURING THE PERIOD OF WARRANTY, any authorized Yamaha golf car service technician, dealer, or distributor will, free of charge, repair or replace, at Yamaha's option, any part adjudged defective by Yamaha due to faulty workmanship or material from the factory. Parts used in warranty repairs will be warranted for the balance of the vehicle's warranty period. All parts replaced under warranty become property of Yamaha Golf-Car Company.

Common Parts	
Frame	Limited Lifetime to Original Owner
Transaxle	4 Years
Pedals	3 Years
Brakes (excluding shoes / pads)	4 Years
Electrical wires, switches, and relays	3 Years
Suspension / Steering components	4 Years
Seats	2 Years
Sun Top	4 Years
Bumpers / Body Parts	3 Years
Floor Mats	2 Years
Scorecard Holders	2 Years
Bag Carrier	3 Years
Common Accessories	
Windshield	3 Years
Sand Bottle / Sand Bottle / Cooler	3 Years
Information Holder / Bag Cover	3 Years

Electric Car (DC or AC motor) Specific	
Battery - Trojan ' T875 ' with HydroLink Watering System	4 Years or 25,000 amp-hours whichever comes first *Detailed condition on the next page
Electric Motor	4 Years
Motor Controller / Charger	4 Years
Charger Cord	4 Years
Charger Receptacle	4 Years
Throttle Position Sensor	2 Years
GAS Car (QuieTech and Carb) specific	
Exhaust / Intake / Generator	4 Years
Gas Engine	4 Years
Throttle Cables / Controls	3 Years
Battery	1 Years
Clutch (excluding drive belt)	4 Years
All Remaining Parts	1 Years

EXCLUSIONS from this Warranty shall include any failures caused by:

- Abnormal strain, neglect, or abuse, including lack of proper maintenance, and use contrary to the Owner's/Operator's Manual instructions.
- Accident or collision damage.
- Installation of parts or accessories that are not original equipment.
- Fading, rust, or deterioration due to exposure or ordinary wear and tear.
- Modifications or alterations that affect the car's condition, operation, performance, or durability, or which makes the car serve a purpose other than use as a two-person, golf course vehicle.
- Damage due to improper transportation.
- Acts of God, i.e. lightning, hail damage, flooding, fire, etc.

This Limited Warranty does not cover any parts replaced due to normal wear or routine maintenance, including oil and air filter elements, brake shoes, tire wear, spark plugs, starter and clutch drive belts. Any charges incurred in transporting a golf car or charger to and from an authorized Yamaha golf car dealer for service or in performing field service are also excluded from this warranty. Gasoline powered golf car starting batteries on vehicles equipped with a golf course GPS device, or any other device with a parasitic current draw, unless the vehicle is equipped from the factory with an optional deep cycle starting battery, are also excluded from this warranty.

THE CUSTOMER'S RESPONSIBILITY under this warranty shall be to operate and maintain the golf car and charger as specified in the appropriate Owner's/Operator's Manual, and give notice to an authorized Yamaha golf car dealer of any and all apparent defects within ten (10) days after discovery, and make the vehicle or charger available at that time for inspection and repairs by the dealer's authorized representative.

I HAVE READ AND AGREE TO THE ABOVE CONDITIONS SET FORTH IN THIS WARRANTY: _____
Initial

PROPOSAL

Prepared For

Hogan Park Golf Club

October 12, 2023

Yamaha Utility Car Warranty

Yamaha Golf-Car Company hereby warrants that any new Yamaha utility vehicle or any multi passenger cars or specialty vehicles purchased from Yamaha, or an Authorized Dealer or Distributor in the United States will be free from defects in material and workmanship for TWO years from date of purchase, subject to the stated limitations. DURING THE PERIOD OF WARRANTY, any authorized Yamaha golf car service technician, dealer, or distributor will, free of charge, repair or replace, at Yamaha's option, any part adjudged defective by Yamaha due to faulty workmanship or material from the factory. Parts used in warranty repairs will be warranted for the balance of the vehicle's warranty period. All parts replaced under warranty become property of Yamaha Golf-Car Company.

Common Parts	
Frame	2 Years
Transaxle	2 Years
Pedals	2 Years
Brakes (excluding shoes / pads)	2 Years
Electrical wires, switches, and relays	2 Years
Suspension / Steering components	2 Years
Seats	2 Years
Sun Top	2 Years
Bumpers / Body Parts	2 Years
Floor Mats	2 Years
Scorecard Holders	2 Years
Bag Carrier	2 Years
Common Accessories	
Windshield	3 Years
Head Light	2 Years
Tail Light	2 Years

Electric Car Specific	
Battery - Trojan ' T875 ' <u>without</u> HydroLink Watering System	4 Years or 23,500 amp-hours whichever comes first *Detailed condition on the next page
Electric Motor	2 Years
Motor Controller / Charger	2 Years
Charger Cord	2 Years
Charger Receptacle	2 Years
Throttle Position Sensor	2 Years
GAS Car specific	
Exhaust / Intake / Generator	2 Years
Gas Engine	2 Years
Throttle Cables / Controls	2 Years
Battery	1 Years
Clutch (excluding drive belt)	2 Years
All Remaining Parts	1 years

EXCLUSIONS from this Warranty shall include any failures caused by:

- Abnormal strain, neglect, or abuse, including lack of proper maintenance, and use contrary to the Owner's/Operator's Manual instructions.
- Accident or collision damage.
- Installation of parts or accessories that are not original equipment.
- Fading, rust, or deterioration due to exposure or ordinary wear and tear.
- Modifications or alterations that affect the car's condition, operation, performance, or durability, or which makes the car serve a purpose other than use as a two-person, golf course vehicle.
- Damage due to improper transportation.
- Acts of God, i.e. lightning, hail damage, flooding, fire, etc.

This Limited Warranty does not cover any parts replaced due to normal wear or routine maintenance, including oil and air filter elements, brake shoes, tire wear, spark plugs, starter and clutch drive belts. Any charges incurred in transporting a golf car or charger to and from an authorized Yamaha golf car dealer for service or in performing field service are also excluded from this warranty. Gasoline powered golf car starting batteries on vehicles equipped with a golf course GPS device, or any other device with a parasitic current draw, unless the vehicle is equipped from the factory with an optional deep cycle starting battery, are also excluded from this warranty.

THE CUSTOMER'S RESPONSIBILITY under this warranty shall be to operate and maintain the golf car and charger as specified in the appropriate Owner's/Operator's Manual, and give notice to an authorized Yamaha golf car dealer of any and all apparent defects within ten (10) days after discovery, and make the vehicle or charger available at that time for inspection and repairs by the dealer's authorized representative.

I HAVE READ AND AGREE TO THE ABOVE CONDITIONS SET FORTH IN THIS WARRANTY: _____
Initial

PROPOSAL

Prepared For

Hogan Park Golf Club

October 12, 2023

Additional Information

Fleet Service: Yamaha Golf Car Company's Authorized Dealer Service will complete all warranty service on your new Yamaha Golf Car. I'm sure you will enjoy the benefits of having this service along with the Authorized Dealers professionalism during course visits.

Fleet Maintenance: In consideration of our mutual goal for outstanding fleet performance, Hogan Park Golf Course agrees to the following:

- To keep cars clean, rotate usage and repair flats
- Maintain batteries, Perform Tune-up at proper time for gas cars
- Have proper cars available for service technicians on scheduled visits
- Provide technician a list of cars requiring unscheduled maintenance
- Report any damage due to vandalism within 24 hours

Pricing Quoted: The proceeding quotation does not include any applicable taxes or insurance and is subject to the final approval of Yamaha Golf Car Company and Yamaha Commercial Customer Finance; additional documentation to follow. All prices listed above are subject to change without notice. Interest rates are subject to change. Final interest rates shall be provided within thirty (30) days of new lease start date. This quotation is good for 7 days and is subject to change beyond that date. Furthermore, this proposal constitutes the entire understanding and agreement between the parties, whether oral or in writing. Neither party has made any further representations or promises to the other party with respect to the subject matter of this agreement, except as set forth in this agreement. This agreement supersedes any previous agreements made between parties and is confidential in nature.

Fleet Set Up: Yamaha Golf Car Company will provide all labor for new car set up which will include tops and all accessories for all fleet cars.

Insurance: It is the responsibility of Hogan Park Golf Course to provide the proper insurance for the new fleet of Yamaha Golf Cars.

The above quotation is subject to credit and management approval of Yamaha and is valid for 7 days.
If the proposal is acceptable under the above terms, please sign, date and return to
Yamaha District Sales Manager
David Stewart by email listed below:
Email ~ david_stewart@yamaha-motor.com

Accepted By: _____ _____ *Date:* _____
Hogan Park Golf Course ~ Signature *Hogan Park Golf Course ~ Print*

Accepted By: ***David Stewart*** ***Craig Sanford*** *Date:* ***10-12-23***
Yamaha District Sales Manager *Yamaha Regional Manager*

BuyBoard Vendor Contract Information Summary

Vendor	Yamaha Golf-Car Company
Contact	Amy Austin
Phone	(770) 420-6084
Email	amy_austin@yamaha-motor.com
Vendor Website	www.yamahagolfcar.com
TIN	58-2227420
Address Line 1	1000 GA Hwy 34 E.
Vendor City	Newnan
Vendor Zip	30265
Vendor State	GA
Vendor Country	USA
Delivery Days	10
Freight Terms	FOB Destination
Payment Terms	Yamaha Golf Car has purch
Shipping Terms	Freight prepaid by vendor and added to invoice
Ship Via	Company Truck
Designated Dealer	No
EDGAR Received	Yes
Service-disabled Veteran Owned	No
Minority Owned	No
Women Owned	No
National	No
No Foreign Terrorist Orgs	Yes
No Israel Boycott	Yes
MWBE	No
ESCs	All Texas Regions
States	All States
Contract Name	Grounds Maintenance Equipment, Parts, and Supplies
Contract No.	706-23
Effective	06/01/2023
Expiration	05/31/2026
Accepts RFQs	Yes

Yamaha Golf Car Proposal

Prepared for:

HOGAN PARK

GOLF COURSE

(Buy-Board # 706-23)

Presented By

Yamaha Sales Representative

David Stewart

North Texas District Sales Manager

October 12, 2023

PROPOSAL

Prepared For

Hogan Park Golf Club

October 12, 2023

2024 ~ Yamaha Drive2
"AC" Electric Golf Car

The 2024 Yamaha 48-volt Electric Yamaha Drive Golf Cars equipped with a 4.4 horsepower motor that is high quality, highly efficient and whisper quiet. The 2024 Yamaha Drive features an automotive ladder style, HybriCore Chassis consisting of a 100% robotically welded steel frame that is protected by an 18-step paint process and a polypropylene structural floor that makes it 2.5 times stronger than our previous model yet is also 20 % lighter. The 2024 Yamaha Drive Golf Car is not only built for durability, but also comfort. The Drive features the largest and most comfortable contoured seat, the largest sweater basket, largest bag well and largest canopy top in the industry. With the largest area of entry and egress, automotive style dash and fully independent Tru-Trak II front suspension the Yamaha Drive has been designed to meet all your customer's needs.

Standard "Electric Car" Features

* 48 Volt Electric "AC" Motor with 3.7 horsepower
* Reliable "Trojan 8 volt T875" Batteries
* Yamaha Built Electric Battery Charger
* De-Ionizer & Fill Hose for Watering System
* Yamaha Built Motor Control Unit
* 5 MPH Crash Rated – Matching Bumpers
* Fully Independent Front Suspension
* Maintenance-Free Rack and Pinion Steering
* Perma-Lubed Sealed Ball Bearings
* Clima-Guard Top with Dual Rain Gutters
* Sentry Wraparound Protection
* Trojan Hydro-Link Battery Water System
* Rear Drum Brakes
* Automotive Style Dash with 4 Drink Holders
* Largest Most Comfortable Seat in the Industry
* Largest Vinyl-Coated Sweater Basket
* Thermoplastic Olefin Body
* Coil Springs Over Hydraulic Shock Absorbers

Accessories Added Per Car

* Wheel Covers
* Information Holders (2 per car)
* Clear Split Windshield
* Battery De-Ionizer
* Fleet Numbers (3 per car)
* Dual Sand Bottles
* USB Ports (Driver and Passenger Side)
* Water Fill Hose

*** Additional accessories available upon request ***

PROPOSAL

Prepared For

Hogan Park Golf Club

October 12, 2023

2024 Fleet Car Color Choices

Glacier White

Metallic Evergreen

Additional Color Options

SOLID COLORS

** Glacier White
** Sunstone Beige

METALLIC COLORS

** Evergreen
** Pearl White
** Carbon Grey
** Bluestone Blue
** Moonstone Silver

*** Price is quoted as solid color option ***

*** Metallic Colors add $100.00 per car ***

PROPOSAL

Prepared For

Hogan Park Golf Club

October 12, 2023

Yamaha "UMAX One" "EFI Gas" Utility Car

Standard Equipped UMAX One Utility Car

* Yamaha built 402cc gas engine with 14.25 hp
* Luxurious Bucket Seats
* Most fuel-efficient gas engine in the industry
* 20" Wheels
* 2" Receiver
* Head Lights
* Impact Resistant Front Windshield
* Rack & Pinion Steering
* Front Hood Storage Area
* Black Top

Accessories Included

* Sun Top
* Front Picker Adapter
* USB Ports
* Hinged Clear Windshield

PROPOSAL

Prepared For

Hogan Park Golf Club

October 12, 2023

Pricing Options

Current Fleet ~ Yamaha Electric Car (130 Cars)

Hogan Park Golf Course currently has a fleet of 130 – 2021 Yamaha Electric AC Golf Cars. Yamaha Golf Car Company has offered in the prior agreement to purchase these cars back from Hogan Park Golf Course for $1600.00 per car for a total of $208,000.00. With current market conditions, Yamaha Golf Car would like to increase that trade value from $1,600.00 per car to $1,900.00 per car for a total of $247,000.00. Yamaha Golf Car Company will use this amount as a trade variance to lower the cost of the new fleet of 2024 Yamaha AC Golf Cars. All cars must be in running condition with normal wear and tear and all chargers in working condition on the day Yamaha Golf Car will take possession.

Yamaha Electric ~ New Fleet Pricing Options

2024 AC Electric Car (130 Cars)		Per Car Price	Total Fleet Price
❖ Trojan 875 Lead Acid Battery Option • (4 year or 25,000 Amp Hour Warranty)	~	$ 6,200.00 (per car)	$ 806,000.00
❖ Trade In Pricing (Listed above)	~	$ 1,900.00 (per car)	$ 247,000.00
❖ Total Purchase Price	~	$ 4,300.00 (per car)	$ 559,000.00

** Prices above are quoted using standard color options & Buy–Board Pricing thru Yamaha Golf Cars **

2021 UMAX One EFI Gas Utility Car (1 Car)

❖ Yamaha Golf Car Company would like to offer Hogan Park Golf Course this UMAX utility car at NO CHARGE

Yamaha Guaranteed Buy-Back

❖ Yamaha Golf Car will guarantee to purchase the fleet of 2024 Cars back from Hogan Park after 36 months for the following values listed below provided all the cars are running with all the accessories and parts as delivered, all chargers are functioning properly. Normal wear and tear accepted.

- 2024 AC Cars with Trojan 875 Batteries - $ 1,900.00 per car ~ $ 247,000.00

** Prices above are quoted using standard color options & Buy–Board Pricing thru Yamaha Golf Cars **

PROPOSAL

Prepared For

Hogan Park Golf Club

October 12, 2023

Yamaha Fleet Car Warranty

Yamaha Golf-Car Company hereby warrants that any new Yamaha DRIVE^2 Gas or DRIVE^2 Electric golf car purchased from Yamaha, or an Authorized Dealer or Distributor in the United States will be free from defects in material and workmanship for FOUR years from date of purchase, subject to the stated limitations. DURING THE PERIOD OF WARRANTY, any authorized Yamaha golf car service technician, dealer, or distributor will, free of charge, repair or replace, at Yamaha's option, any part adjudged defective by Yamaha due to faulty workmanship or material from the factory. Parts used in warranty repairs will be warranted for the balance of the vehicle's warranty period. All parts replaced under warranty become property of Yamaha Golf-Car Company.

Common Parts	
Frame	Limited Lifetime to Original Owner
Transaxle	4 Years
Pedals	3 Years
Brakes (excluding shoes / pads)	4 Years
Electrical wires, switches, and relays	3 Years
Suspension / Steering components	4 Years
Seats	2 Years
Sun Top	4 Years
Bumpers / Body Parts	3 Years
Floor Mats	2 Years
Scorecard Holders	2 Years
Bag Carrier	3 Years
Common Accessories	
Windshield	3 Years
Sand Bottle / Sand Bottle / Cooler	3 Years
Information Holder / Bag Cover	3 Years

Electric Car (DC or AC motor) Specific	
Battery - Trojan ' T875 ' with HydroLink Watering System	4 Years or 25,000 amp-hours whichever comes first *Detailed condition on the next page
Electric Motor	4 Years
Motor Controller / Charger	4 Years
Charger Cord	4 Years
Charger Receptacle	4 Years
Throttle Position Sensor	2 Years
GAS Car (QuieTech and Carb) specific	
Exhaust / Intake / Generator	4 Years
Gas Engine	4 Years
Throttle Cables / Controls	3 Years
Battery	1 Years
Clutch (excluding drive belt)	4 Years
All Remaining Parts	1 Years

EXCLUSIONS from this Warranty shall include any failures caused by:

- Abnormal strain, neglect, or abuse, including lack of proper maintenance, and use contrary to the Owner's/Operator's Manual instructions.
- Accident or collision damage.
- Installation of parts or accessories that are not original equipment.
- Fading, rust, or deterioration due to exposure or ordinary wear and tear.
- Modifications or alterations that affect the car's condition, operation, performance, or durability, or which makes the car serve a purpose other than use as a two-person, golf course vehicle.
- Damage due to improper transportation.
- Acts of God, i.e. lightning, hail damage, flooding, fire, etc.

This Limited Warranty does not cover any parts replaced due to normal wear or routine maintenance, including oil and air filter elements, brake shoes, tire wear, spark plugs, starter and clutch drive belts. Any charges incurred in transporting a golf car or charger to and from an authorized Yamaha golf car dealer for service or in performing field service are also excluded from this warranty. Gasoline powered golf car starting batteries on vehicles equipped with a golf course GPS device, or any other device with a parasitic current draw, unless the vehicle is equipped from the factory with an optional deep cycle starting battery, are also excluded from this warranty.

THE CUSTOMER'S RESPONSIBILITY under this warranty shall be to operate and maintain the golf car and charger as specified in the appropriate Owner's/Operator's Manual, and give notice to an authorized Yamaha golf car dealer of any and all apparent defects within ten (10) days after discovery, and make the vehicle or charger available at that time for inspection and repairs by the dealer's authorized representative.

I HAVE READ AND AGREE TO THE ABOVE CONDITIONS SET FORTH IN THIS WARRANTY: _____
Initial

PROPOSAL

Prepared For

Hogan Park Golf Club

October 12, 2023

Yamaha Utility Car Warranty

Yamaha Golf-Car Company hereby warrants that any new Yamaha utility vehicle or any multi passenger cars or specialty vehicles purchased from Yamaha, or an Authorized Dealer or Distributor in the United States will be free from defects in material and workmanship for TWO years from date of purchase, subject to the stated limitations. DURING THE PERIOD OF WARRANTY, any authorized Yamaha golf car service technician, dealer, or distributor will, free of charge, repair or replace, at Yamaha's option, any part adjudged defective by Yamaha due to faulty workmanship or material from the factory. Parts used in warranty repairs will be warranted for the balance of the vehicle's warranty period. All parts replaced under warranty become property of Yamaha Golf-Car Company.

Common Parts	
Frame	2 Years
Transaxle	2 Years
Pedals	2 Years
Brakes (excluding shoes / pads)	2 Years
Electrical wires, switches, and relays	2 Years
Suspension / Steering components	2 Years
Seats	2 Years
Sun Top	2 Years
Bumpers / Body Parts	2 Years
Floor Mats	2 Years
Scorecard Holders	2 Years
Bag Carrier	2 Years
Common Accessories	
Windshield	3 Years
Head Light	2 Years
Tail Light	2 Years

Electric Car Specific	
Battery - Trojan ' T875 ' <u>without</u> HydroLink Watering System	4 Years or 23,500 amp-hours whichever comes first *Detailed condition on the next page
Electric Motor	2 Years
Motor Controller / Charger	2 Years
Charger Cord	2 Years
Charger Receptacle	2 Years
Throttle Position Sensor	2 Years
GAS Car specific	
Exhaust / Intake / Generator	2 Years
Gas Engine	2 Years
Throttle Cables / Controls	2 Years
Battery	1 Years
Clutch (excluding drive belt)	2 Years
All Remaining Parts	1 years

EXCLUSIONS from this Warranty shall include any failures caused by:

- Abnormal strain, neglect, or abuse, including lack of proper maintenance, and use contrary to the Owner's/Operator's Manual instructions.
- Accident or collision damage.
- Installation of parts or accessories that are not original equipment.
- Fading, rust, or deterioration due to exposure or ordinary wear and tear.
- Modifications or alterations that affect the car's condition, operation, performance, or durability, or which makes the car serve a purpose other than use as a two-person, golf course vehicle.
- Damage due to improper transportation.
- Acts of God, i.e. lightning, hail damage, flooding, fire, etc.

This Limited Warranty does not cover any parts replaced due to normal wear or routine maintenance, including oil and air filter elements, brake shoes, tire wear, spark plugs, starter and clutch drive belts. Any charges incurred in transporting a golf car or charger to and from an authorized Yamaha golf car dealer for service or in performing field service are also excluded from this warranty. Gasoline powered golf car starting batteries on vehicles equipped with a golf course GPS device, or any other device with a parasitic current draw, unless the vehicle is equipped from the factory with an optional deep cycle starting battery, are also excluded from this warranty.

THE CUSTOMER'S RESPONSIBILITY under this warranty shall be to operate and maintain the golf car and charger as specified in the appropriate Owner's/Operator's Manual, and give notice to an authorized Yamaha golf car dealer of any and all apparent defects within ten (10) days after discovery, and make the vehicle or charger available at that time for inspection and repairs by the dealer's authorized representative.

I HAVE READ AND AGREE TO THE ABOVE CONDITIONS SET FORTH IN THIS WARRANTY: _____
Initial

PROPOSAL

Prepared For

Hogan Park Golf Club

October 12, 2023

Additional Information

Fleet Service: Yamaha Golf Car Company's Authorized Dealer Service will complete all warranty service on your new Yamaha Golf Car. I'm sure you will enjoy the benefits of having this service along with the Authorized Dealers professionalism during course visits.

Fleet Maintenance: In consideration of our mutual goal for outstanding fleet performance, Hogan Park Golf Course agrees to the following:

- To keep cars clean, rotate usage and repair flats
- Maintain batteries, Perform Tune-up at proper time for gas cars
- Have proper cars available for service technicians on scheduled visits
- Provide technician a list of cars requiring unscheduled maintenance
- Report any damage due to vandalism within 24 hours

Pricing Quoted: The proceeding quotation does not include any applicable taxes or insurance and is subject to the final approval of Yamaha Golf Car Company and Yamaha Commercial Customer Finance; additional documentation to follow. All prices listed above are subject to change without notice. Interest rates are subject to change. Final interest rates shall be provided within thirty (30) days of new lease start date. This quotation is good for 7 days and is subject to change beyond that date. Furthermore, this proposal constitutes the entire understanding and agreement between the parties, whether oral or in writing. Neither party has made any further representations or promises to the other party with respect to the subject matter of this agreement, except as set forth in this agreement. This agreement supersedes any previous agreements made between parties and is confidential in nature.

Fleet Set Up: Yamaha Golf Car Company will provide all labor for new car set up which will include tops and all accessories for all fleet cars.

Insurance: It is the responsibility of Hogan Park Golf Course to provide the proper insurance for the new fleet of Yamaha Golf Cars.

The above quotation is subject to credit and management approval of Yamaha and is valid for 7 days.
If the proposal is acceptable under the above terms, please sign, date and return to
Yamaha District Sales Manager
David Stewart by email listed below:
Email ~ david_stewart@yamaha-motor.com

Accepted By: _____ _____ *Date:* _____
Hogan Park Golf Course ~ Signature *Hogan Park Golf Course ~ Print*

Accepted By: ***David Stewart*** ***Craig Sanford*** *Date:* ***10-12-23***
Yamaha District Sales Manager *Yamaha Regional Manager*

City Council Meeting

Item Number: 13

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: **RESOLUTION AUTHORIZING THE PURCHASE OF 130,000 POUNDS OF SODIUM PERMANGANATE - 20% SOLUTION NEEDED FOR THE TREATMENT OF DRINKING WATER FOR FISCAL YEAR 2024 FROM UNIVAR SOLUTIONS USA INC. FOR A TOTAL COST OF $223,600.00; AND RESCINDING THE PORTIONS OF RESOLUTION 2023-116 IN CONFLICT WITH THIS RESOLUTION (DISTRICT: NONE) (GENERAL SERVICES)**

Purpose:

Resolution authorizing the purchase of 130,000 pounds of sodium permanganate – 20% solution needed for the treatment of drinking water for fiscal year 2024 from Univar Inc. for a total cost of $223,600.00; and rescinding parts of Resolution 2023-116 in conflict with such authorizations set forth herein.

Recommended City Council Action:

Approve

Fiscal Impact:

Funding is available in the FY2024 Water and Sewer operating budget

Discussion:

Resolution 2023-116 authorized the annual supply of solutions for the treatment of drinking water for Fiscal Year 2024. The apparent lower bidder Chemrite Inc., is not able to meet supply chain specifications. Second lowest bidder is not able to meet specification requirements. Staff recommends awarding the purchase to Univar Inc. Please see the attached memo from Raymond Saddler, Water Purification Plant Superintendent, for more information.

Therefore, please consider a resolution authorizing the purchase of 130,000 pounds of sodium permanganate – 20% solution needed for the treatment of drinking water for fiscal year 2024 from Univar Inc. for a total cost of $223,600.00; and rescinding parts of Resolution 2023-116 in conflict with such authorizations set forth herein.

Morris Williams Jr.

City Manager's Office

INTEROFFICE MEMORANDUM

TO: Regina Stephenson, Director of General Services

FROM: Raymond Saddler, Water Purification Plant Superintendent

SUBJECT: Drinking water treatment chemicals for FY2024

DATE: August 21, 2023

The recommendation for the drinking water treatment chemicals this year are as follows:

Item 10 for sodium permanganate should be awarded to the competent bidder, **Univar Inc. Univar is not the low bidder however the low bidder (Chemrite Inc) is not able to meet Supply Chain Specs for this chemical and the 2nd lowest bidder (Shannon Chemical Co) has not been able or has been unwilling to meet contract deliveries in past awarded bids**

RESOLUTION NO. _____

RESOLUTION AUTHORIZING THE PURCHASE OF 130,000 POUNDS OF SODIUM PERMANGANATE - 20% SOLUTION NEEDED FOR THE TREATMENT OF DRINKING WATER FOR FISCAL YEAR 2024 FROM UNIVAR SOLUTIONS USA INC. FOR A TOTAL COST OF $223,600.00; AND RESCINDING THE PORTIONS OF RESOLUTION 2023-116 IN CONFLICT WITH THIS RESOLUTION

WHEREAS, the City Manager approved the specifications and authorized the advertisement for bids for 130,000 pounds of sodium permanganate - 20% for the treatment of drinking water for fiscal year 2024; and

WHEREAS, Bid No. 24000001 was opened on August 16, 2023 with the lowest responsible bidder being Univar Solutions USA Inc.; and

WHEREAS, the Council finds the price proposed by the Univar Solutions USA Inc. as shown above to be fair and reasonable; and

WHEREAS, the City Council finds it to be in the public interest to authorize the purchase of said sodium permanganate - 20% for the treatment of the City's drinking water from Univar Solutions USA Inc.; and

WHEREAS, the City Council finds it to be in the public interest to rescind the portions of Resolution 2023-116 in conflict with this Resolution;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the City Manager is hereby authorized and directed to purchase chemicals for the treatment of the City's drinking water from Univar Solutions USA Inc. for a total cost of $223,600.00.

SECTION TWO. That all portions of Resolution 2023-116 in conflict with this Resolution are hereby rescinded.

SECTION THREE. That funds shall be available in the FY2024 Water and Sewer operating budget.

SECTION FOUR. That upon receipt of proper invoice or statement approved by the

City Manager, the City Comptroller is hereby authorized and directed to pay for said sodium permanganate - 20% for the treatment of the City's drinking water out of funds available in the FY2024 Water and Sewer operating budget.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2023, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

RECOMMENDED AND APPROVED:

_____
Tommy Gonzalez, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

City of Midland - Bid Tabulation

BID # 24000001
Annual Supply of Chemicals for Water Purification
OPENED August 16, 2023

ITEM	QTY	DESCRIPTION	Carbon Activated Corporation 2250 S. Central Avenue Compton, Ca 90220 310-885-4555		Chemrite, Inc. 5202 Belle Wood Court, Ste 104 Buford, GA 30518 770-271-5576		Univar Solutions USA Inc 14601 S 50th St Phoenix, Az 85044 602-469-4351		Chameleon Industries Inc. P.O. Box 853027 Mesquite, TX 75185 972-880-1493		Polydyne Inc. 1 Chemical Plant Road Riceboro, GA 31323 800-848-7659		Shannon Chemical Corporation P.O. Box 376 Malvern, PA 19355 610-363-9090	
			COST EA.	TOTAL	COST EA.	TOTAL	COST EA.	TOTAL	COST EA.	TOTAL	COST EA.	TOTAL	COST EA.	TOTAL
1	722,000	Chlorine-City of Midland Water Purification Plant & T-Bar Chlorination Station	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
	lbs													
2	10	150 lb cylinders of Chlorine - Airport Wellfield	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
	ea													
3	400,000	Liquid Ammonium Sulfate - Water Purification Plant & T-Bar Chlorination Station	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	$1.858	$743,200.00	NO BID	NO BID	NO BID	NO BID
	gals													
4	2,000	Aluminum Sulfate - Water Purification Plant	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	$495.00	$990,000.00	NO BID	NO BID	NO BID	NO BID
	tons													
5	20,000	Polymer - Water Purification Plant	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	$8.100	$162,000.00	$7.3610	$147,220.00	NO BID	NO BID
	gals										gal			
											Clarifloc C-338			
6	5,000	Polymer for dewatering - Water Purification Plant	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	$17.028	$85,140.00	NO BID	NO BID
	gals										gal			
											Clarifloc C-6240			
7	25	Powdered Activated Carbon	$2,600.00	$65,000.00	$3,060.00	$76,500.00	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
	tons				$1.53	per pound								
8	5,000	Liquid Copper Sulfate 25%	NO BID	NO BID	$13.49	$67,450.00	NO BID	NO BID	$19.00	$95,000.00	NO BID	NO BID	$11.27	$56,350.00
	gals													
9	5,000	Potassium Permanganate	NO BID	NO BID	$2.64	$13,200.00	$2.51	$12,550.00	NO BID	NO BID	NO BID	NO BID	$2.44	$12,200.00
	lbs													
10	130,000	Sodium Permanganate - 20% Solution	NO BID	NO BID	$1.53	$198,900.00	$1.72	$223,600.00	NO BID	NO BID	NO BID	NO BID	$1.57	$204,100.00
	lbs													
11	20,300	25% Sodium Hydroxide	NO BID	NO BID	NO BID	NO BID	$1.42	$288,260.00	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
	gals													
		TOTALS:		$65,000.00		$356,050.00		$524,410.00		$1,990,200.00		$232,360.00		$272,650.00

Bidding Summary:

29 **Bid requests were issued.**

11 **Bids listed above**

3 **NO BIDS were received.**

15 **Bidders did not respond.**

City of Midland - Bid Tabulation

BID # 24000001
Annual Supply of Chemicals for Water Purification
OPENED August 16, 2023

ITEM	QTY	DESCRIPTION	DPC Industries, Inc. No. 8 Place Industrial Drive Drawer 158 Sweetwater, TX 79556 325-236-6633		Chemtrade Chemicals US LLC 90 East Halsey Road, Suite 200 Parsippany, NJ 07054 800-441-2659		Pencco, Inc. PO Box 600 San Felipe, Tx 77473 979-885-0005		Gasochem International LLC 9509 Pemberton Crescent Dr Houston, Tx 77025 713-837-6116		TR International Trading 22817 102nd Place West Edmonds, Wa 98020 206-505-3500	
			COST EA.	TOTAL	COST EA.	TOTAL	COST EA.	TOTAL	COST EA.	TOTAL	COST EA.	TOTAL
1	722,000	Chlorine-City of Midland Water Purification Plant & T-Bar Chlorination Station	$1.2145	$876,869.00	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
	lbs											
2	10	150 lb cylinders of Chlorine - Airport Wellfield	$290.00	$2,900.00	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
	ea											
3	400,000	Liquid Ammonium Sulfate - Water Purification Plant & T-Bar Chlorination Station	NO BID	NO BID	$2.45	$980,000.00	$2.67	$1,068,000.00	NO BID	NO BID	$2.59	$1,036,000.00
	gals											
4	2,000	Aluminum Sulfate - Water Purification Plant	NO BID	NO BID	$643.00	$1,286,000.00	$771.13	$1,542,260.00	$391.00	$782,000.00	NO BID	NO BID
	tons											
5	20,000	Polymer - Water Purification Plant	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
	gals											
6	5,000	Polymer for dewatering - Water Purification Plant	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
	gals											
7	25	Powdered Activated Carbon	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
	tons											
8	5,000	Liquid Copper Sulfate 25%	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	$10.95	$54,750.00
	gals											
9	5,000	Potassium Permanganate	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
	lbs											
10	130,000	Sodium Permanganate - 20% Solution	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
	lbs											
11	20,300	25% Sodium Hydroxide	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
	gals											
		TOTALS:		$879,769.00		$2,266,000.00		$2,610,260.00		$782,000.00		$1,090,750.00

Bidding Summary:

29 **Bid requests were issued.**

11 **Bids listed above**

3 **NO BIDS were received.**

15 **Bidders did not respond.**

City Council Meeting

Item Number: 14

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: **Motion approving plans and specifications for the construction of a new lift station at the I-20 Wildlife Preserve for the Wall Street Sewer Diversion, said plans and specifications being on file in the City Secretary's office referenced by the number and date of this motion, and authorizing the City Manager or the City Manager's designee to advertise for competitive bids for said project pursuant to the statutes of the State of Texas for accomplishing the work set forth in said plans and specifications. (DISTRICT: ALL) (GENERAL SERVICES)**

Purpose:

Motion approving plans and specifications for the construction of a new lift station at the I-20 Wildlife Preserve for the Wall Street Sewer Diversion, said plans and specifications being on file in the City Secretary's office referenced by the number and date of this motion, and authorizing the City Manager or the City Manager's designee to advertise for competitive bids for said project pursuant to the statutes of the State of Texas for accomplishing the work set forth in said plans and specifications.

Recommended City Council Action:

Approve

Fiscal Impact:

No funding is required.

Discussion:

Please consider approving a motion authorizing the City Manager or the City Manager's designee to advertise a request for bids for the construction of a new lift station at the I-20 Wildlife Preserve for the Wall Street Sewer Diversion. The construction of a new lift station at the I-20

Wildlife Preserve for the Wall Street Sewer Diversion consists of the of the construction of a lift station off South Midland Dr, just south of its intersection with West Industrial Ave, as well as 935 linear feet of a 10” HDPE force main and 3,075 linear feet of 15” PVC gravity line. Please see the attached memo from Carl Craigo, Utilities Director, for more information.

Morris Williams Jr.

City Manager’s Office

INTEROFFICE MEMORANDUM

TO: Erika Martinez, Purchasing Manager

FROM: Carl Craigo, P.E., Utilities Director

SUBJECT: Consider a Resolution Approving the Request for Bids, Authorizing Advertisement for Bids for the construction of a new lift station at the I-20 Wildlife Preserve for the Wall Street Sewer Diversion.

DATE: October 24, 2023

The Utilities Department is requesting approval of a resolution approving plans and specifications and authorizing advertisement for bids for the construction of a new lift station at the I-20 Wildlife Preserve to divert wastewater from the Wall St sewer collection system. The collection system at the Wall St and Midland Dr. intersection is past its design capacity, the wastewater is prone to overflow at the intersection causing sewer to flow out of the manholes along Wall St. This project consists of the construction of a lift station off South Midland Dr, just south of its intersection with West Industrial Ave, as well as 935 linear feet of a 10" HDPE force main and 3,075 linear feet of 15" PVC gravity line.

Freese and Nichols, Inc was selected under our on-call services agreement (Resolution 2020-091) to design the lift station, prepare plans and specifications, and provide construction and post-construction services. A pre-bid conference will be held for interested contractors. After review of the bids/bidders, a resolution for approval for bid award will be brought to Council for approval to move forward with the work.

MIDLAND
Feel the Energy!

CONTRACT DOCUMENTS
FOR CONSTRUCTION OF
Wall Street Sewer Diversion
MDD22466

FREESE AND NICHOLS

Issued for Bid

October 2023

00 01 07 DESIGN PROFESSIONAL SEALS

	Specification Sections Sealed
 FREESE AND NICHOLS, INC. TEXAS REGISTERED ENGINEERING FIRM F-2144	DIV 00 DIV 01 DIV 02 DIV 03 DIV 09 DIV 31 DIV 32 DIV 33 DIV 44
TEXAS REGISTERED ENGINEERING FIRM F-2144	

END OF SECTION

City of Midland, Texas

Electrical Technical Specifications
(Division 26)
for Construction of
Wall Street Sewer Diversion
Midland, Texas

January 2023

BAIRD GILROY & DIXON
ELECTRICAL ENGINEERS

TBPE Registration No. 16575

Baird Gilroy & Dixon, LLC
9711 S. Mason Rd. Ste 125 #326
Richmond, Texas 77407
(281) 529-5005

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END SECTION

DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

00 11 16 INVITATION TO BID

ARTICLE 1 – GENERAL NOTICE

1.01 The City of Midland (Owner) is requesting Bids for the construction of the following Project:

Wall Street Sewer Diversion
Project Identification No. MDD22466

1.02 Description of the Work

A. Install a 15-inch gravity sewer pipeline, two pump lift station, 10-inch force main and 15-inch pipeline along Wall Street, Industrial Avenue and Midland Drive. Work to include electrical and instrumentation upgrades, sewer connections and by-pass pumping.

1.03 The Project is to be substantially complete and ready for operation within 240 days of the Selected Contractor receiving the Notice to Proceed. The Project is to be complete and eligible for final payment 30 days after the date for Substantial Completion.

ARTICLE 2 – EXAMINATION AND PURCHASE OF DOCUMENTS

2.01 Advertisement and bidding information for the Project can be found at the following procurement website:

http://construction.freese.com

2.02 Prospective Offerors must register with the procurement website as a plan holder, even if the Contract Documents are obtained from a plan room or other site. All official notifications, Addenda, and other documents will be offered only through the procurement website.

2.03 The Contract Documents may be downloaded from the procurement website by prospective Offerors registered as plan holders. Offerors are responsible for ensuring that a complete set of documents are used in the preparation of their Bids. The documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download does not confer a license or grant permission or authorization for any other use. Authorization to download documents includes the right for Offerors to print documents for their sole use, provided they pay all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.

2.04 The procurement website will be updated periodically with Addenda, lists of interested parties, reports, or other information relevant to submitting a Bid for the Project.

2.05 Printed copies of the Contract Documents, Technical Data, and other information may be examined free of charge at the following address:

City of Midland
300 North Loraine, 3rd Floor
Midland, Texas 79701
Hours Available for Viewing: 8 a.m. to 5 p.m.

ARTICLE 3 – QUESTIONS REGARDING BIDDING PROCESS OR SOLICITATION DOCUMENTS

3.01 Questions are to be submitted using the question and answer process on the procurement website. Responses to questions posted on the procurement website will be posted for the

benefit of all Offerors. A response will be posted for questions submitted until 12:00 p.m. CST on Friday, November 10, 2023.

3.02 A response to a question posted on the procurement website that requires modification of the Contract Documents will be made by Addenda. Modifications to the Contract Documents prior to the award of the Contract can only be made by Addenda. Only answers in Addenda posted on the procurement website will be binding. Oral and other interpretations or clarifications will be without legal effect.

ARTICLE 4 – BID SECURITY

4.01 Offerors must submit an acceptable Bid Security with their Bids as a guarantee that the Successful Offeror will enter into a contract for the Project with the Owner, executing the required payment and performance bonds, within 15 days of Notice of Award of the Contract. The Bid Security must be in the form of a bid bond made payable to the City of Midland in the amount of five (5) percent of the proposed Contract Price. Reference the City of Midland Front-End Documents for bonding requirements and forms, as well as the Contract and required insurance.

ARTICLE 5 – DELIVERY OF BIDS

5.01 Sealed Bids must be delivered to the Owner at the address below no later than 2:00 p.m. CST on Wednesday, November 15, 2023, to be accepted. The Bids will be publicly opened and read aloud at this time and place including the names of the Offerors and their Bids. Bids received after this time will be returned unopened. Address Bids to the Owner as follows:

The City of Midland
Marcia Bentley-German – City Secretary
Attn: Bid – Wall Street Sewer Diversion
300 North Loraine, 3rd Floor
Midland, Texas 79701

ARTICLE 6 – AWARD OF CONTRACT

6.01 It is the intent of the Owner to award this Contract to the lowest responsible Offeror. The Owner reserves the right to adopt the most advantageous interpretation of the Bids submitted in the case of ambiguity or lack of clearness in stating bid prices, to reject any or all Bids, and/or waive formalities. Bids will remain subject to acceptance and may not be withdrawn within 90 days from the date on which Bids are opened.

ARTICLE 7 – OTHER CONTRACT REQUIREMENTS

7.01 Selected Contractor will be required to pay the prevailing wage rates established for this Project in accordance with the Contract Documents and Tex. Gov't Code Chapter 2258.

7.02 Performance and payment bonds will be required for this Project.

END OF SECTION

00 21 13 INSTRUCTIONS TO OFFERORS

ARTICLE 1 – DEFINED TERMS

1.01 The terms used in these Instructions to Offerors have the meanings assigned to them in the General Conditions and Supplementary Conditions.

ARTICLE 2 – RECEIPT OF BIDS

2.01 Refer to Section 00 11 16 "Invitation to Bid" for information on receipt of Bids.

ARTICLE 3 – COPIES OF CONTRACT DOCUMENTS

3.01 Use complete sets of Contract Documents in preparing Bids. Offeror assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete sets of Contract Documents.

3.02 Owner makes copies of Contract Documents available for the sole purpose of obtaining Bids for completion of the Project and does not confer a license or grant permission or authorization for any other use.

ARTICLE 4 – QUALIFICATIONS STATEMENT

4.01 Submit information as required in Section 00 45 13 "Qualifications Statement" within 5 days of the date Bids are due if requested to do so by the Owner.

ARTICLE 5 – EXAMINATION OF THE CONTRACT DOCUMENTS AND THE SITE

5.01 Examine the Contract Documents, the Site, and other information readily available before submitting a Bid.

A. Examine the Contract Documents and supplemental data:

1. Carefully study the Contract Documents.
2. Carefully study supplemental information, including Technical Data, record drawings from previous projects, available utility maps, reports, and studies referenced or made available to the Offeror.
3. Promptly notify the Design Professional of all conflicts, errors, ambiguities, or discrepancies that the Offeror discovers in the Contract Documents, Addenda, and supplemental information.
4. Determine that the Contract Documents, Addenda, and supplemental data are generally sufficient to indicate and convey understanding of all terms and conditions for completion of Work to the degree necessary to prepare a Bid for the Project.
5. Make observations and investigations, correlate knowledge and observations with the requirements of the Contract Documents, and consider these in preparation of a Bid for the Project.

B. Become familiar with all federal, state, and local Laws and Regulations that may affect cost, progress, or the completion of Work.

C. The Offeror may request a Site visit. Visit the Site to become familiar with any general, local, or Site conditions that may affect the cost, progress, or performance of the Work in any manner. Coordinate access to private property through the Owner.

D. Subsurface exploration using a backhoe, drilling rig, or other equipment can be done prior to receiving a notice to proceed, provided the following procedures are followed:

1. Contact the following individual to coordinate the details for the subsurface exploration:

   Carl Craigo
   City of Midland
   ccraigo@midlandtexas.gov
   432-685-7261

2. Backfill excavation with material acceptable to the Owner and process backfill to prevent future settling.

3. Pay all costs for soils investigation including the cost for excavation, backfill, access, and testing.

E. The submission of a Bid will constitute an incontrovertible representation by the Offeror that the Offeror has complied with every requirement of this Article, and that without exception the Bid is premised on the following:

1. Work will be completed in accordance with the Contract Documents for the Contract Price within the Contract Times;

2. Offeror has given the Design Professional written notice of all conflicts, errors, ambiguities, and discrepancies that the Offeror has discovered in the Contract Documents, Addenda, and the related supplemental data;

3. Written resolutions provided by the Design Professional are acceptable to the Offeror; and

4. Contract Documents, Addenda, and the related supplemental data are generally sufficient to indicate and convey understanding of all terms and conditions for completion of Work.

ARTICLE 6 – INTERPRETATIONS AND ALTERNATE BIDS

6.01 Submit all questions about the meaning or intent of the Contract Documents, Addenda, and the related supplemental data to the Design Professional using the procurement website as indicated in Section 00 11 16 "Invitation to Bid."

6.02 Submit any offer of alternate terms and conditions or offer of Work not in strict compliance with the Contract Documents to the Design Professional or Construction Manager no later than 10 days after the date Project is advertised. Construction Manager and Design Professional will issue Addenda as appropriate if any of the proposed changes to the Contract Documents are accepted. A Bid submitted with clarifications or taking exceptions to the Contract Documents, except as modified by Addenda, will be considered non-responsive.

6.03 Offeror may submit a separate and additional Bid if the Offeror includes exceptions or the Offeror wishes to make a Bid that is not in accordance with the terms and conditions of the

Contract Documents, or for Work that is not in strict compliance with the Contract Documents. Describe the intent and substance of the changes in the additional Bid in adequate detail so they are clearly understood. Alternate Bids will not be considered in the evaluation of the Bids. Upon selection of the Bid of the lowest responsible Offeror, and after the award of the Contract, the Engineer may issue a Request for a Change Proposal if Owner chooses to accept any Bid alternates.

6.04 Addenda may be issued to clarify, correct, or change the Contract Documents, Addenda, or the related supplemental data as deemed advisable by the Owner or Designer.

ARTICLE 7 – BID SECURITY

7.01 Offerors must submit an acceptable bid bond as Bid Security with their Bids as required by Section 00 11 16 "Invitation to Bid." The acceptable bid bond must be issued by a surety legally authorized to do business in Texas and meet the requirements of the General Conditions.

ARTICLE 8 – CONTRACT TIMES

8.01 The Project must be substantially complete no later 240 days from receiving the Notice to Proceed in accordance with Section 00 11 16 "Invitation to Bid." Final Completion is to be reached within 30 days of the date for Substantial Completion. Liquidated damages as defined in the Contract will start to accrue after the days for Final Completion are exceeded.

ARTICLE 9 – LIQUIDATED DAMAGES, RETAINAGE, AND INTEREST

9.01 Provisions for liquidated damages and the payment of retainage and interest are set forth in the Contract Documents.

ARTICLE 10 – PREPARATION OF THE BID FORM

10.01 The Bid Form is included with the Contract Documents and is also available at the procurement website. Complete all blanks on the Bid Form by typing or printing in ink. Indicate prices for each item or alternate shown in the Bid Form.

10.02 The unit price governs if a conflict exists between the extended amount derived by multiplying the unit price by the stated quantity of units and the extended amount shown in the Bid Form.

10.03 Execute the Bid Form as indicated in the document and include evidence of authority to sign.

10.04 Acknowledge receipt of all Addenda by filling in the number and date of each Addendum. Provide a signature as indicated to verify that the Addenda were received. A Bid that does not acknowledge the receipt of all Addenda may be considered non-responsive.

10.05 Provide the name, address, and telephone number of the individual to be contacted for any communications regarding the Bid in the Bid Form.

10.06 Provide evidence of the Offeror's authority and qualification to do business in Texas or agree to obtain such qualification prior to award of the Contract. Failure to obtain this qualification will render the Bid non-responsive and Offeror will forfeit its Bid Security.

ARTICLE 11 – CONFIDENTIALITY OF BID INFORMATION

11.01 The Owner is a governmental body subject to the limitation of Tex. Gov't Code Chapter 552 and has limited obligations with regard to protecting confidential information submitted by Offerors. Bids will be opened in a manner that avoids disclosure of trade secrets and confidential information to competing Offerors and keeps the Bids from the public until a contract is awarded. The Owner will protect trade secrets and confidential information to the extent allowed by Laws and Regulations.

11.02 Clearly indicate which specific documents are considered to be trade secrets or confidential information by stamping or watermarking all such documents with the word "confidential" prominently on each page or sheet or on the cover of bound documents. Place "confidential" stamps or watermarks so that they do not obscure any of the required information on the document, either in the original or in a way that would obscure any of the required information in a photocopy of the document. Submit all confidential information in a different binder so this confidential material is separate for the rest of the Bid.

11.03 The Owner, upon receiving an application or other request for the disclosure of confidential information, will promptly notify Offeror of the request as required by Section 552.305 and request a ruling by the Texas Attorney General as to whether any such information may be released.

11.04 Offeror acknowledges and agrees that it will be solely responsible for submitting any arguments, authorities, or other information to the Attorney General of Texas regarding release of the information marked as confidential as provided by Section 552.305(b) and that if disclosure is required, the Owner has no liability for releasing this information and Offeror will not be entitled to exercise any remedy for a disclosure made pursuant to the Chapter 552.

11.05 The obligations of the Owner as recipient with respect to confidential information under the terms of this Contract are subject to the following exceptions:

A. If confidential information becomes a part of the public domain through publication or otherwise but through no fault of the Owner;

B. Owner can demonstrate through suitable documentation that the confidential information was already in the Owner's possession or otherwise publicly available prior to the date of disclosure hereunder;

C. The confidential information is subsequently disclosed to the Owner by a third party who has a lawful right to disclose such information; or

D. The Owner is required to disclose the confidential information by court order or by applicable law.

11.06 If the Owner is requested or becomes legally compelled (by oral questions, interrogatories, requests for information or documents, subpoena, civil or criminal investigative demand, public information requests, including requests under Chapter 552, or similar process) or is required by a regulatory body to make any disclosure that is prohibited or otherwise constrained by this Contract, the Owner will provide Offeror with prompt notice of this request so that it may seek an appropriate protective order or other appropriate remedy.

ARTICLE 12 – DELIVERY OF BIDS

12.01 Complete and deliver the Bid Form along with all required documents identified in the Bid Form.

12.02 Submit the Bid no later than the date and time prescribed and at the place indicated in Section 00 11 16 "Invitation to Bid." Enclose the Bid in an opaque sealed envelope plainly marked with the Project name and the name and address of the Offeror, along with the Bid Security and other required documents. Enclose the sealed envelope containing the Bid in a separate envelope plainly marked on the outside with the notation "BID ENCLOSED" if the Bid is sent by mail or other delivery system. Address the outer envelope to the mailing address shown in Section 00 11 16 "Invitation to Bid." Offeror assumes full responsibility for ensuring that the Bid arrives at the prescribed location before the prescribed time.

ARTICLE 13 – MODIFICATION OR WITHDRAWAL OF BIDS

13.01 Modify or withdraw a Bid using a document executed in the same manner that a Bid must be executed. Deliver the document to the place where Bids are to be submitted prior to the date and time for the opening of Bids.

13.02 An Offeror may withdraw its Bid within 24 hours after Bids are opened if the Offeror files a signed written notice with the Owner and promptly thereafter demonstrates to the reasonable satisfaction of the Owner that there was a material and substantial mistake in the preparation of its Bid. The Bid Security will be returned if it is clearly demonstrated to the Owner that there was a material and substantial mistake in its Bid. An Offeror that requests to withdraw its Bid under these conditions may be disqualified from responding to a reissued Invitation to Bid for the Work to be furnished under these Contract Documents.

ARTICLE 14 – OPENING OF BIDS

14.01 Bids will be opened at the time and place indicated in Section 00 11 16 "Invitation to Bid." The Owner will publicly acknowledge receipt of Bids received in time to be considered and then open and read aloud the names of the Offerors and the amount bid as required by applicable Laws and Regulations.

ARTICLE 15 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

15.01 All Bids will remain subject to acceptance for the number of days specified in Section 00 11 16 "Invitation to Bid." The Owner may, at its sole discretion, release any Bid and return the Bid Security prior to the end of this period.

ARTICLE 16 – EVALUATION OF BIDS

16.01 The Owner will consider the proposed Contract Price and Contract Times and the qualifications of the Offerors to determine the lowest responsible Offeror.

16.02 Owner will consider earlier completion dates in selecting the Contractor for the Project. The value of this early completion will be determined by calculating the number of days between the Offeror's proposed completion dates and the Owner's completion dates indicated in Section 00 11 16 "Invitation to Bid." This number of days will be multiplied by the Liquidated Damages amounts indicated in the Contract to determine the value of early completion. This

value for early completion will be used to adjust the Contract Price when evaluating the proposed Contract Price. The calculation is solely for the evaluation of Bids and does not alter the Contract Price from the amounts included in the Bid.

16.03 Owner may conduct such investigations as it deems necessary to establish the responsibility, qualifications, and financial ability of consultants, individuals, or entities proposed to furnish parts of the Work in accordance with the Contract Documents.

16.04 Each Offeror agrees to waive any claim it has or may have against the members of the OPT and their respective employees, arising out of or in connection with the administration, evaluation, or recommendation of any Bid.

16.05 Notwithstanding any other provision of the Contract Documents, it is stipulated and agreed that by accepting a Bid, the Owner has not and does not waive its sovereign immunity from suit and/or liability.

ARTICLE 17 – AWARD OF CONTRACT

17.01 Owner reserves the right to reject any and all Bids, including non-conforming, non-responsive, or conditional Bids. The Owner may also reject the Bid of any Offeror if the Owner believes that it would not be in the best interest of the Owner to make an award to that Offeror. The Owner reserves the right to waive all formalities.

17.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered, except as additional Bids in accordance with Article 7. Reasonable grounds for believing that any Offeror has an interest in more than one Bid for the Work will be cause for disqualification of that Offeror and the rejection of all Bids in which that Offeror has an interest.

17.03 The Contract will be awarded to the lowest responsible Offeror if a contract is to be awarded.

17.04 Owner may consider the following in evaluating the Bids and awarding the Contract:

A. Offeror's qualifications and ability to demonstrate current capability to complete the Project in conformance with the requirements of the Contract Documents.

B. Compliance of the Bids with requirements of the Contract Documents.

C. Alternates and unit prices if requested in the bid forms.

D. The amount bid.

E. Proposed date of completion and the ability to meet intermediate Milestones that may have been established for the Project.

ARTICLE 18 – BONDS AND INSURANCE

18.01 The General Conditions set forth the Owner's requirements as to bonds and insurance. When the Successful Offeror delivers the executed Contract to the Owner, it must be accompanied by the performance and payment bonds and required evidence of insurance.

18.02 Provide performance and payment bonds for this Project that fully comply with the provisions of Tex. Gov't Code Chapter 2253. Administration of these bonds will conform to Chapter 2253 and the provisions of the Contract Documents.

ARTICLE 19 – SIGNING OF THE CONTRACT

19.01 The Notice of Award to the Successful Offeror will be accompanied by the required number of unsigned counterparts of the Contract with the other Contract Documents. The Successful Offeror must sign and deliver the required number of counterparts of the Contract and attached documents to the Owner within 15 days. The Owner will deliver two fully signed counterparts to the Successful Offeror within 10 days after receiving the signed documents from the Successful Offeror.

ARTICLE 20 – SALES AND USE TAXES

20.01 The Owner generally qualifies as a tax-exempt agency as defined by the statutes of the State of Texas and is usually not subject to any local or state sales or use taxes, however certain items such as rented equipment may be taxable even though Owner is a tax-exempt agency. Offerors assume responsibility for including any applicable sales taxes in their Bids and for complying with all applicable statutes and rulings of the State of Texas Comptroller.

20.02 It is the Owner's intent to have this Contract qualifies as a "separated contract." In order for this Contract to qualify:

A. Obtain a sales tax permit from the State of Texas Comptroller if awarded this Contract.

B. Identify the dollar value of materials exempt from the sales tax. This information must be reported in Section 00 45 04 "State Sales Tax Requirements." Bids that do not include the information requested in this Section may be considered non-responsive.

ARTICLE 21 – WAGE RATES

21.01 This Contract is subject to Tex. Gov't Code Chapter 2258 concerning payment of prevailing wage rates. Requirements for paying the prevailing wage rates are discussed in Section 00 73 43 "Wage Rate Requirements." A schedule listing the minimum wage rates for various classifications of laborers which have been established by the Owner for this Project are included in "Exhibit D – Building Wage Rates rev 01-06-2023." Offerors will be required to pay at least the minimum wages shown on this list and comply with all applicable federal, state, and local Laws and Regulations related to the payment of prevailing wage rates.

ARTICLE 22 – PROHIBITED CONTRACTS

22.01 Owner may not enter into contracts with companies that are engaged in business with Iran, Sudan, or a company known to have contracts with or provide suppliers or services to a foreign terrorist organization in accordance with Tex. Gov't Code Chapter 2252 or a company boycotting Israel in accordance with Tex. Gov't Code Chapter 2271.

END OF SECTION

00 41 13 BID FORM

ARTICLE 1 – BID RECIPIENT

1.01 Offeror submits this Bid to:

The City of Midland
City Secretary's Office
300 North Loraine, 3rd Floor
Midland, Texas 79701
Attention: Marcia Bentley-German
Wall Street Sewer Diversion

ARTICLE 2 – OFFEROR'S ACKNOWLEDGMENTS

2.01 Offeror proposes and agrees, if this Bid is accepted, to enter into a Contract with the Owner on the form included in the Contract Documents and to perform all Work specified or indicated in Contract Documents for the Contract Price indicated in this Bid or as modified by Contract Amendment. Offeror agrees to complete the Work within the Contract Times established in the Contract Documents or as modified by Contract Amendment and comply with all other terms and conditions of the Contract Documents.

2.02 Offeror accepts all of the terms and conditions of Section 00 11 16 "Invitation to Bid" and Section 00 21 13 "Instructions to Offerors."

2.03 Offeror accepts the provisions of the Contract as to liquidated damages in the event of its failure to complete Work in accordance with the schedule set forth in the Contract Documents.

2.04 Offeror acknowledges receipt of the following Addenda:

Addendum No.	Addendum Date	Signature Acknowledging Receipt

ARTICLE 3 – OFFEROR'S REPRESENTATIONS

3.01 Offeror has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

3.02 Offeror has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

3.03 Offeror is familiar with Laws and Regulations that may affect cost, progress, and performance of the Work.

3.04 Offeror has carefully studied the following Site-related reports and drawings as identified in the Supplementary Conditions:

A. Drawings of physical conditions relating to existing surface or subsurface structures at the Site;

B. Underground Facilities referenced in reports and drawings;

C. Reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site; and

D. Technical Data related to each of these reports and drawings.

3.05 Offeror has considered the:

A. Information known to the Offeror;

B. Information commonly known to contractors doing business in the locality of the Site;

C. Information and observations obtained from visits to the Site; and

D. The Contract Documents.

3.06 Offeror has considered the items identified in this Article with respect to the effect of such information, observations, and documents on:

A. The cost, progress, and performance of the Work;

B. The means, methods, techniques, sequences, and procedures of construction to be employed by Offeror; and

C. Offeror's safety precautions and programs.

3.07 Offeror agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents based on the information and observations referred to in the preceding paragraphs.

3.08 Offeror is aware of the general nature of Work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

3.09 Offeror has correlated the information known to the Offeror, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.

3.10 Offeror has given the Design Professional written notice of all conflicts, errors, ambiguities, or discrepancies that the Offeror has discovered in the Contract Documents, and the written resolution provided by the Design Professional is acceptable to the Offeror.

3.11 The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

3.12 Offeror's submittal of a Bid constitutes an incontrovertible representation that, without exception, all prices in the Contract Documents are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 4 – BASIS OF OFFER

4.01 Offeror will complete the Work in accordance with the Contract Documents at the unit prices shown in the attached in Section 00 41 16 "Bid Form Exhibit A":

A. Extended amounts have been computed in accordance with the General Conditions.

B. Offeror acknowledges that the estimated quantities are not guaranteed, and final payment for all unit price items will be based on actual quantities provided, measured as provided in the Contract Documents.

C. Unit prices will be used to compute the actual Bid price.

ARTICLE 5 – TIME OF COMPLETION

5.01 Offeror agrees that the Work will be Substantially Complete and will be completed and ready for final payment in accordance with the General Conditions within the number of calendar days indicated in Section 00 41 16 "Bid Form Exhibit A."

ARTICLE 6 – ATTACHMENTS TO THIS BID

6.01 The following documents are attached to and made a condition of this Bid:

A. Section 00 41 16 "Bid Form Exhibit A."

B. City of Midland Standard - "Bid Bond."

C. City of Midland Standard - "Local Preference Affidavit."

D. Conflict of Interest Questionnaire.

ARTICLE 7 – VENUE

7.01 Offeror agrees that venue will lie exclusively in Midland County, Texas for any legal action.

ARTICLE 8 – BID DELIVERY

8.01 This Bid is offered by:

Offeror: _____
(typed or printed name of organization)

Signature: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed

Address for giving notices:

_____

_____

_____

Phone: _____ Email: _____

(Attach evidence of authority to sign if Offeror is a corporation, partnership, or a joint venture.)

END OF SECTION

00 41 16 Bid Form Exhibit A

Project:	Wall Street Sewer Diversion		Project No.:
Owner:	The City of Midland		
Design Professional:	Freese and Nichols, Inc.		MDD22466
Offeror:			

Base Bid

Item No.	Item Description	Unit	Estimated Quantity	Unit Price	Extended Amount
Items in Base Bid (excluding Allowances) per Section 01 29 01 "Measurement and Basis for Payment"					
1	Performance, Payment Bonds, and Allowance for Insurance (2.5%)	1	LS		
2	Mobilization and Demobilization (2.5%)	1	LS		
3	Storm Water Pollution Prevention Plan and Control	1	LS		
4	Site Preparation, Clearning and Grading	1	LS		
5	Lift Station (Pumps, Wet Well, Valve Vault, Discharge By-Pass, Piping, Valves, Supports and All Appurtenances)	1	LS		
6	Aerator at Lift Station	1	LS		
7	Concrete Driveway/Pavement	416	SY		
8	8' Chain-Link Fence w/ Doubleswing Gate and Manway Gate	56	LF		
9	8' Wood Panel Fence with CMU Columns	177	LF		
10	Lift Station Site Restoration	1	LS		
11	Operation and Maintenance Manuals	1	LS		
12	Temporary Bypass Pumping - Wall Street	1	LS		
13	Temporary Bypass Pumping - I-20 Frontage Road	1	LS		
14	42" Steel Casing by Other Than Open Cut	300	LF		
15	15" PVC Gravity Line (SDR-26 ASTM D3034) by Other Than Open Cut	300	LF		
16	15" PVC Gravity Line (SDR-26 ASTM D3034) by Open Cut	2,695	LF		
17	10" HDPE Force Main (DR-11 ASTM D3350) by Open Cut	935	LF		
18	Permanent Asphalt Pavement Repair	2,730	SY		
19	Concrete Pavement Repair	106	SY		
20	Trench Safety System	3,630	LF		
21	4' Fiberglass Manhole	8	EA		
22	4' Fiberglass Drop-Manhole	1	EA		
23	4' Fiberglass Dog House-Manhole	1	EA		
24	Polymer Concrete Sanitary Sewer Manhole	1	EA		
25	4' Fiberglass Manhole Extra Vertical Feet	47	VF		
26	Electrical Service Equipment & Transfer Switch	1	LS		
27	Pump Control Panel	1	LS		
28	Instrumentation	1	LS		
29	Conduit, Conductors, & Terminal Boxes	1	LS		
30	Area Lighting	1	LS		
A	**Total Base Bid Items Amount (Sum of Extended Amounts for each Base Bid Line Item)**				$ -
B	**Add (+) or Deduct (-) (See Note 1)**				
C	**Total Adjusted Base Bid Amount (A plus B)**				$ -
Allowances in Base Bid per Section 01 23 10 "Alternates and Allowances"					
D	**Total Allowance Amount (Sum of Extended Amounts for Each Allowance Line Item)**				
E	**Total Base Bid with Allowances (Sum of C and D)**				-

Contract Time

L	Offeror agrees to reach Substantial Completion in		days
M	Offeror agrees to reach Final Completion in		days

Notes	
1	Provision is made for Offeror to include an addition or deduction in the Bid to reflect any last minute adjustments in price. The addition or deduction, if made, will be applied proportionately to Items 14 to 17.

BID SUBMITTED BY:

Offeror: _____

Signature: _____

Printed Name: _____

Title: _____

Date: _____

00 45 04 STATE SALES TAX REQUIREMENTS

Comply with all applicable sales, excise, and use tax requirements of the Texas Tax Code. The Offeror hereby certifies that the Contract Price is divided as follows:

Tax exempt products, materials, and services (See Notes 1 and 2) $ _____

Taxable products, materials, and services (See Note 3) $ _____

Total (See Note 4) $ _____

Offeror: _____
(typed or printed name of organization)

Signature: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed

Business Address:

_____

_____

_____

Phone: _____ Email: _____

(Attach evidence of authority to sign if Offeror is a corporation, partnership, or a joint venture.)

Notes:

1. Exempt products and materials are those items purchased for the Project which are physically incorporated into the facilities constructed for the Owner or are necessary and essential for the performance of the Work and are completely consumed at the Site. For purposes of this definition, products and materials are completely consumed if after being used once for its intended purpose it is used up or destroyed. Products and materials rented or leased for use in the performance of the Work cannot be completely consumed for the purposes of this definition.
2. Exempt services are those services performed at the Site where the Contract expressly requires the specific service to be provided or purchased by the person performing the Work or the service is integral to the performance of the Work.
3. Products, materials, and services are not tax exempt if they are used by the Contractor but are not physically incorporated into the Owner's facilities or are not consumed by construction as defined above. Machinery or equipment and its accessories and repair and replacement parts used in the performance of the Work are not exempt.
4. The total sum of the amount for tax exempt and taxable products, materials, and services must equal the Contract Price.

END OF SECTION

00 45 13 QUALIFICATIONS STATEMENT

ARTICLE 1 – REQUIREMENTS FOR THE QUALIFICATIONS STATEMENT

1.01 The Qualifications Statement must be submitted by the apparent low Offeror within 5 calendar days of the bid opening and include the information as described in this Section as a minimum. Failure to submit the required information in the Qualifications Statement may result in Owner considering the Bid non-responsive and may result in rejection of the Bid by Owner. Offerors may be required to provide supplemental information if requested by Owner to clarify, enhance, or supplement the information provided in the Qualifications Statement.

1.02 Offeror must provide the information requested in this Qualifications Statement using the forms attached to this Section. The information requested in these forms must be provided completely and in detail. Information that cannot be totally incorporated in the forms may be included as an appendix to the form. This appendix must be clearly referenced by appendix number on the form, and the appended material must include the appendix number on every sheet of the appendix. The appendix must include only the information that responds to the question or item number to which the appended information applies.

1.03 Offeror may provide supplemental information to the Qualifications Statement such as organizational brochures or other marketing information to help demonstrate their qualifications to Owner. This information may not be submitted as a substitute for the information specifically requested in this Section. The reference must include the specific paragraph or section that applies to that question or item if this information is included as an appendix to the information requested in Article 2.

ARTICLE 2 – INSTRUCTIONS FOR PREPARING THE QUALIFICATIONS STATEMENT

2.01 Offeror's Organization and General Information:

A. Provide general information about the Offeror's organization using copies of Table 1. Provide the same information for each joint venture partner if the Offeror is a joint venture.

B. Provide information regarding the operational structure of the Offeror's organization, including a list of officers, the limits of authority for these individuals with regards to the proposed Project, documentation of authority to execute documents, and a copy of organizations' certificate of authorization to conduct business in the state the Project is located in. If the Project is located in a state that licenses contractors, Offeror must also provide documentation showing that the organization is licensed as a general contractor in that state, including any applicable classifications and limitations.

C. Financial Management:

1. Provide the Offeror's most recent audited financial statement and the most recent financial statement if the most recent audited financial statement is more than 2 years old.

2. Provide the Offeror's financial summary information in Table 1, including the financial indicators from the Offeror's most recent financial statement using the formulas below:

   Current Ratio: Current Assets ÷ Current Liabilities

   Quick Ratio: (Cash and Cash Equivalents + Accounts Receivable + Short Term Investments) ÷ Current Liabilities

3. Describe the resources that are available to Offeror to provide adequate cash flow for the Project if the Offeror's Current Ratio or Quick Ratio are less than 1.0.

D. Safety:

1. Provide a narrative not to exceed four pages describing the Offeror's success in implementing an effective project site safety program. Provide a narrative describing the Offeror's safety program and a statement regarding the organization's commitment to safety. Do not provide copies of safety manuals or programs.

2. Provide Experience Modification Ratio (EMR) and Total Recordable Frequency Rate (TRFR) history for the last 3 years for Offeror and any proposed subcontractors that will provide Work valued at 25 percent or more of the Contract Price. Provide this information in Table 1.

   a. Offeror's EMR is a computation by the insurance industry that compares a company's annual losses in workers' compensation insurance claims against its policy premiums over a three-year period, excluding the current year.

   b. Offeror's TRFR is a calculation of a firm's total number of OSHA-recordable injuries and illnesses over a given period (usually a year), divided by the total number of personnel-hours worked.

E. Claims Experience and Litigation History: Provide a list of all claims or litigation involving owners on other construction projects that have been active over the last 5 years or that are currently unresolved. Include this information in Table 1. Provide a narrative describing the issues being contested and when it is anticipated that the disputes will be resolved. Claims are to include only those items which have progressed through the change management process for the project and are being disputed by Offeror or the project owner.

F. Past Experience with the Owner: Provide a list of projects that have been completed with Owner over the last 5 years. Include this information in Table 1. Provide a narrative not to exceed two pages describing how this experience will impact the performance of Offeror on this Project.

2.02 Project Experience:

A. Provide a list of projects completed by Offeror in the last 5 years using copies of Table 2.

B. Provide detailed descriptions of projects which demonstrate the experience of the Offeror's team with construction of similar projects. Experience must include, as a minimum, the satisfactory completion of at least five similar projects within the last 5 years. Offerors not

meeting the requirement for similar projects may be disqualified as being non-responsive. Similar projects must include:

1. Gravity sewer and sewer force main installation.
2. Bored pipeline crossings, including underneath railroads and highways.
3. Lift station installation.

C. Provide a narrative not to exceed two pages for each project describing up to five specific projects that qualify as similar projects. Projects selected must demonstrate the capabilities of Offeror.

2.03 Experience and Qualifications of Proposed Key Personnel:

A. Provide a narrative not to exceed four pages describing the Offeror's project management structure and the qualifications of the project management team for this Project. Include an organization chart showing the relationship between Offeror and key subcontractors and suppliers.

B. Provide information on the key personnel proposed for this Project on Tables 3 through 7. Key personnel include the project manager, project superintendent, safety manager, and quality control manager. Offeror may provide information on an alternate individual if it is not able to commit to one individual for the Project at the time the Bid is submitted. Qualifications of these individuals will be considered in evaluating the Offeror's qualifications. Offeror must commit to providing the services of the proposed key personnel or alternate for the life of the Project as a condition of qualification. Failure to provide the proposed key personnel may result in the disqualification of Offeror and will provide the basis for termination of the Contract at the discretion of Owner.

C. Include a list of the current project assignments for each of the individuals proposed, the anticipated completion date for these assignments, and the percentage of the time they will have available to devote to this Project. The project superintendent must be dedicated to the Project full time for the duration of the Project. If any other key personnel are not devoted solely to the Project, indicate how time is to be divided between the Project and other assignments. Specifically address how and when individuals currently on other assignments will transition to the Project.

D. Provide resumes not exceeding two pages for each individual proposed for the key personnel positions and their alternates. Resumes must describe the qualifications of the individual and include the following as a minimum: technical experience, managerial experience, education and formal training, primary language, and a work history which describes project experience, including the roles and responsibilities for each assignment. Additional information highlighting the experience which makes them the best candidate for the assignment should also be included. Focus on projects on which individuals proposed have had significant involvement in the last 5 years and which demonstrate experience with similar projects.

E. Identify individuals that will fill one or more of these key roles and describe their ability to handle multiple responsibilities. Provide a written narrative describing the percentage of the time that will be devoted to each role and the qualifications to fulfill each role if an individual is to fulfill more than one of the key personnel roles.

F. Provide a tabulation of the projects on which the key personnel have been personally involved using copies of Table 7. This tabulation is to include the name and a current telephone number for references for each of these project assignments.

G. Provide a narrative not to exceed two pages for each project the proposed individuals have worked on that qualify as similar projects. Specifically identify the role and responsibilities of the individual on these similar projects. Projects selected must demonstrate the capabilities of the proposed key personnel.

H. Provide a narrative not to exceed ten pages to describe the overall performance of the individuals on these projects. This narrative may include references to letters of recommendation, project awards, and other references to demonstrate experience in constructing a project which meets the project owner's expectations for a quality project constructed on time and within budget.

2.04 Offeror's Ability to Complete Projects within the Contract Price and Contract Times:

A. Provide a tabulation of budget performance on projects completed by Offeror within the last 5 years using copies of Table 8 to demonstrate the ability of the Offeror to complete projects for the Contract Price. Notes may be added to each line item to describe circumstances for change orders beyond the control of Offeror.

B. Provide a tabulation of all projects completed by Offeror within the last 5 years on Table 9 to demonstrate performance in completing projects on time. Notes may be added to the tabulations to indicate the reasons for not meeting original contract completion dates.

ARTICLE 3 – BID REQUIREMENTS

3.01 Provide the Qualifications Statement using the referenced tables and narrative descriptions as described in this Section. Pages are to be 8-1/2 x 11, with a minimum font size of 10. Provide a tab to separate materials responding to each of the rating categories listed in Article 2.

3.02 Additional information may be included in appendices attached to the Bid. Each appendix must reference the section of the criteria it is in reference to.

3.03 Provide one printed copy of the Bid at the time and place set forth in Section 00 11 16 "Invitation to Bid." Provide a digital copy of the Bid in Portable Document Format (pdf) on a CD. This digital copy is to include all information required to evaluate the Bid.

ARTICLE 4 – FORMS

4.01 The following tables are attached to this Section:

Table	Description
1	General Information
2	Current Projects and Project Completed within the last 5 Years
3	Proposed Project Managers
4	Proposed Project Superintendents
5	Proposed Project Safety Managers
6	Proposed Project Quality Control Managers
7	Project Information for Key Personnel
8	Demonstration of Budget Performance

Table	Description
9	Demonstration of On-Time Performance

ARTICLE 5 – CERTIFICATION

5.01 By submitting this Qualifications Statement and related information, Offeror certifies that it has read this Qualifications Statement and that the Offeror's responses are true and correct and contain no material misrepresentations, and that the individual signing below is authorized to make this certification on behalf of the Offeror's organization.

Offeror: _____
(typed or printed name of organization)

Signature: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed

Attest: _____
(individual's signature)

Designated Representative:

Name: _____

Title: _____

Address for giving notices:

_____

_____

_____

Phone: _____ Email: _____

(Attach evidence of authority to sign if Offeror is a corporation, partnership, or a joint venture.)

Table 1 - General Information

Organization			
Legal Name of Business			
Form of Business Entity: ☐ Joint Venture ☐ Corporation ☐ General Partnership ☐ Limited Partnership			
Date Business was formed		State under which Business was formed	
Is this Business authorized to operate in the Project location: ☐ Yes ☐ No ☐ Pending			
Is this Business licensed as a general contractor in the Project location: ☐ Yes ☐ No ☐ Pending ☐ N/A			
List of companies, firms, or organizations that own any part of this Business.			
Name of company, firm, or organization.			Percent ownership
Principal Office			
Primary contact		Main telephone number	
Email address		Website address	
Business address of principal office			
Regional Office			
Primary contact		Main telephone number	
Email address		Website address	
Business address of regional office			

Business History		
List of names that this Business currently has or anticipates operating under over the history of the Business, including the names of related companies presently doing business.		
Names of organization	From date	To date

Indicators of Organization Size	
Average number of current full-time employees	
Average estimate of revenue for the current year	

Table 1 - General Information Cont'd

Previous Contracting Experience			
Years of experience in projects similar to the proposed Project:			
As a general contractor		As a joint venture partner	
Has this organization or a participating or predecessor organization ever been disqualified as a bidder by any local, state, or federal agency within the last 5 years? ☐ Yes* ☐ No			
Has this organization or a participating or predecessor organization ever been barred from contracting by any local, state, or federal agency within the last 5 years? ☐ Yes* ☐ No			
Has this organization or a participating or predecessor organization been released from a bid or proposal in the past 5 years? ☐ Yes* ☐ No			
Has this organization or a participating or predecessor organization ever defaulted on a project or failed to complete any contract awarded to it? ☐ Yes* ☐ No			
Has this organization or a participating or predecessor organization ever refused to construct or refused to provide materials defined in the contract documents or in a change order? ☐ Yes* ☐ No			
Is this organization or a participating or predecessor organization currently involved in any litigation or contemplating litigation? ☐ Yes* ☐ No			
Provide full details in a separate attachment for each statement above with a "yes" response above.			

Previous History with Owner		
List projects that have been completed with the Owner over the last 5 years. If more than 5 projects, list only the most recent.		
	Project Name	Year
1		
2		
3		
4		
5		

Previous Claims History and Litigation Experience		
List all claims or litigation involving owners on other construction projects that have been active over the last 5 years or that are currently unresolved.		
	Description of Claim or Litigation	Status
1		
2		
3		
4		
5		

Table 1 - General Information Cont'd

Surety			
Surety Name			
Mailing address (principal place of business):		Physical address (principal place of business):	
Telephone (main number)		Telephone (claims notices)	
Name of Local Agent for Surety			
Telephone		Email	
Surety is a corporation organized and existing under the laws of the state of			
Is surety authorized to provide surety bonds in the Project location? ☐ Yes ☐ No			
Is surety listed in the U.S. Department of the Treasury's Listing of Approved Sureties (Department Circular 570 "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies")? ☐ Yes ☐ No			
Insurance			
Name of Insurance Provider			
Provider is a corporation organized and existing under the laws of the state of			
Is Provider licensed or authorized to issue insurance policies in the Project location?		☐ Yes ☐ No	
Does Provider have an A.M. Best Rating of A-VIII or Better?		☐ Yes ☐ No	
Mailing Address (principal place of business)			
Physical Address (principal place of business)			
Telephone (main number)			
Telephone (for notice of claims)			
Local Agent for Provider			
Address for Local Agent			
Telephone for Local Agent			
Construction Site Safety Experience			
Provide Offeror's Experience Modification Ratio (EMR) and Total Recordable Frequency Rate (TRFR) for the last 3 years and the EMR and TRFR history for the last 3 years of any proposed Subcontractor that will provide Work valued at 25% or more of the Contract Price.			

Year	Offeror		Subcontractor		Subcontractor		Subcontractor	
	EMR	TRFR	EMR	TRFR	EMR	TRFR	EMR	TRFR
1								
2								
3								

Table 1 - General Information Cont'd

Financial Summary Information for Offeror	
Date of Offeror's most current financial statement	
Date of Offeror's most current audited financial statement	
Financial indicators from the most current financial statement:	
Offeror's Current Ratio = Current Assets ÷ Current Liabilities	
Offeror's Quick Ratio = (Cash and Cash Equivalents + Accounts Receivable + Short Term Investments) ÷ Current Liabilities	
Describe the resources that are available to the Offeror to provide adequate cash flow for the Project if Offeror's Current Ratio or Quick Ratio are less than 1.0:	

Disadvantaged Business Certifications		
Name of Certification	Certifying Agency	Certification Date
☐ Disadvantage Business Enterprise		
☐ Minority Business Enterprise		
☐ Woman Business Enterprise		
☐ Disabled Veteran Owned Business		
☐ Historically Underutilized Business		
☐ Small Business Enterprise		
☐ Other		
☐ None		

Table 2 - Current Projects and Project Completed within the last 5 Years

Name of Organization					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project Completed		
Key Project Personnel	Project Manager	Project Superintendent		Safety Manager	Quality Control Manager
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project Completed		
Key Project Personnel	Project Manager	Project Superintendent		Safety Manager	Quality Control Manager
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project Completed		
Key Project Personnel	Project Manager	Project Superintendent		Safety Manager	Quality Control Manager
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Table 3 - Proposed Project Managers

Name of Organization			
Primary Candidate			
Name of individual			
Years of experience as project manager			
Years of experience with this organization			
Number of similar projects as project manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Role on project		Role on project	
Alternate Candidate			
Name of individual			
Years of experience as project manager			
Years of experience with this organization			
Number of similar projects as project manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Role on project		Role on project	

Table 4 - Proposed Project Superintendents

Name of Organization			
Primary Candidate			
Name of individual			
Years of experience as project superintendent			
Years of experience with this organization			
Number of similar projects as project superintendent			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Role on project		Role on project	
Alternate Candidate			
Name of individual			
Years of experience as project superintendent			
Years of experience with this organization			
Number of similar projects as project superintendent			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Role on project		Role on project	

Table 5 - Proposed Project Safety Managers

Name of Organization			
Primary Candidate			
Name of individual			
Years of experience as project safety manager			
Years of experience with this organization			
Number of similar projects as project safety manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Role on project		Role on project	
Alternate Candidate			
Name of individual			
Years of experience as project safety manager			
Years of experience with this organization			
Number of similar projects as project safety manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Role on project		Role on project	

Table 6 - Proposed Project Quality Control Managers

Name of Organization			
Primary Candidate			
Name of individual			
Years of experience as quality control manager			
Years of experience with this organization			
Number of similar projects as quality control manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Role on project		Role on project	
Alternate Candidate			
Name of individual			
Years of experience as quality control manager			
Years of experience with this organization			
Number of similar projects as quality control manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Role on project		Role on project	

Table 7 - Project Information for Key Personnel

Name of Organization					
Provide information on all projects completed by the Organization within the last 5 years.					
Project Owner		Project Name			
General Description of Project					
Project Budget and Schedule Performance					
Budget History	Amount	% of Bid Amount	Schedule Performance	Date	Days
Original Contract Price			Notice to Proceed		
Change Orders			Contract Substantial Completion Date at Notice to Proceed		
Owner Enhancements			Contract Final Completion Date at Notice to Proceed		
Unforeseen Conditions			Change Order Authorized Substantial Completion Date		
Design Issues			Change Order Authorized Final Completion Date		
Total			Actual / Estimated Substantial Completion Date		
Final Cost			Actual / Estimated Final Completion Date		

Key Project Personnel				
	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager
Name				
Percentage of time devoted to the project				
Percentage of time proposed for this Project				
Did Individual start and complete the project?				
If not, who started or completed the project in their place?				
Reason for change?				

Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					
Surety					

Issues / disputes resolved or pending resolution by arbitration, litigation or dispute review boards							
Number of issues resolved		Total amount involved in resolved issues		Number of issues pending		Total amount involved in issues pending	

Table 8 - Demonstration of Budget Performance

Name of Offeror							
Provide information on all projects completed by the Offeror within the last 5 years.							
Owner Name	Project Description	Original Contract Price	Value of Change Orders			Total Change Orders	Percent of Changes to Original Contract Price
			Owner Enhancements	Unforeseen Conditions	Design Issues		
Notes:							
Notes:							
Notes:							
Notes:							
Notes:							
Notes:							
Notes:							
Notes:							
Notes:							
Notes:							
Notes:							
Notes:							

Table 9 - Demonstration of On-Time Performance

Name of Organization							
Provide information on all projects completed by the Organization within the last 5 years.							
Owner Name	Project Description	Original Contract Date for Substantial Completion	Original Contract Date for Final Completion	Amended Contract Date for Substantial Completion	Amended Contract Date for Final Completion	Actual Contract Date for Substantial Completion	Actual Contract Date for Final Completion
Notes:							
Notes:							
Notes:							
Notes:							
Notes:							
Notes:							
Notes:							
Notes:							
Notes:							
Notes:							
Notes:							
Notes:							

END OF SECTION

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By

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GUIDELINES FOR USE OF EJCDC® C-700, STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

1.0 PURPOSE AND INTENDED USE OF THE DOCUMENT

EJCDC® C-700, Standard General Conditions of the Construction Contract (2018), is the foundation document for the EJCDC Construction Series. The General Conditions define the basic rights, responsibilities, risk allocations, and contractual relationship of the Owner and Contractor, and establish how the Contract is to be administered.

2.0 OTHER DOCUMENTS

EJCDC documents are intended to be used as a system and changes in one EJCDC document may require a corresponding change in other documents. Other EJCDC documents may also serve as a reference to provide insight or guidance for the preparation of this document.

These General Conditions have been prepared for use with either EJCDC® C-520, Agreement Between Owner and Contractor for Construction Contract (Stipulated Price), or EJCDC® C-525, Agreement Between Owner and Contractor for Construction Contract (Cost-Plus-Fee) (2018 Editions). The provisions of the General Conditions and the Agreement are interrelated, and a change in one may necessitate a change in the other.

To prepare supplementary conditions that are coordinated with the General Conditions, use EJCDC® C-800, Supplementary Conditions of the Construction Contract (2018).

The full EJCDC Construction series of documents is discussed in the EJCDC® C-001, Commentary on the 2018 EJCDC Construction Documents (2018).

3.0 ORGANIZATION OF INFORMATION

All parties involved in a construction project benefit significantly from a standardized approach in the location of subject matter throughout the documents. Experience confirms the danger of addressing the same subject matter in more than one location; doing so frequently leads to confusion and unanticipated legal consequences. Careful attention should be given to the guidance provided in EJCDC® N-122/AIA® A521, Uniform Location of Subject Matter (2012 Edition) when preparing documents. EJCDC® N-122/AIA® A521 is available at no charge from the EJCDC website, www.ejcdc.org, and from the websites of EJCDC's sponsoring organizations.

If CSI MasterFormat™ is used for organizing the Project Manual, consult CSI MasterFormat™ for the appropriate document number (e.g., under 00 11 00, Advertisements and Invitations), and accordingly number the document and its pages.

4.0 EDITING THIS DOCUMENT

Remove these Guidelines for Use. Some users may also prefer to remove the two cover pages.

Although it is permissible to revise the Standard EJCDC Text of C-700 (the content beginning at page 1 and continuing to the end), it is common practice to leave the Standard EJCDC Text of C-700 intact and unaltered, with modifications and supplementation of C-700's provisions set forth in EJCDC® C-800, Supplementary Conditions of the Construction Contract (2018). If the Standard Text itself is revised, the

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user must comply with the terms of the License Agreement, Paragraph 4.0, Document-Specific Provisions, concerning the tracking or highlighting of revisions. The following is a summary of the relevant License Agreement provisions:

1. The term "Standard EJCDC Text" for C-700 refers to all text prepared by EJCDC in the main body of the document. Document covers, logos, footers, instructions, or copyright notices are not Standard EJCDC Text for this purpose.
2. During the drafting or negotiating process for C-700, it is important that the two contracting parties are both aware of any changes that have been made to the Standard EJCDC Text. Thus, if a draft or version of C-700 purports to be or appears to be an EJCDC document, the user must plainly show all changes to the Standard EJCDC Text, using "Track Changes" (redline/strikeout), highlighting, or other means of clearly indicating additions and deletions.
3. If C-700 has been revised or altered and is subsequently presented to third parties (such as potential bidders, grant agencies, lenders, or sureties) as an EJCDC document, then the changes to the Standard EJCDC Text must be shown, or the third parties must receive access to a version that shows the changes.
4. Once the document is ready to be finalized (and if applicable executed by the contracting parties), it is no longer necessary to continue to show changes to the Standard EJCDC Text. The user may produce a final version of the document in a format in which all changes are accepted, and the document at that point does not need to include any "Track Changes," redline/strikeout, highlighting, or other indication of additions and deletions to the Standard EJCDC Text.

5.0 LICENSE AGREEMENT

This document is subject to the terms and conditions of the **License Agreement, 2018 EJCDC® Construction Series Documents**. A copy of the License Agreement was furnished at the time of purchase of this document, and is available for review at www.ejcdc.org and the websites of EJCDC's sponsoring organizations.

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.

3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

5. *Bidder*—An individual or entity that submits a Bid to Owner.

6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.

8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.

9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

10. *Claim*

a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

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requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.

c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.

d. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.

13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.

14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.

15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.

17. *Cost of the Work*—See Paragraph 13.01 for definition.

18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.

20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.

21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

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recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.

23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.

24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.

    a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.

    b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.

    c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.

25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.

28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.

29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.

30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.

32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

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33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.

34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.

36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.

39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.

41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

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43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.

44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.

45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.

46. *Technical Data*

    a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.

    b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.

    c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.

47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

48. *Unit Price Work*—Work to be paid for on the basis of unit prices.

49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

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1.02 *Terminology*

A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives*: The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.

C. *Day*: The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*: The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

1. does not conform to the Contract Documents;
2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
3. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
2. The word "install," when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
3. The words "perform" or "provide," when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

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F. *Contract Price or Contract Times*: References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.

G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).

B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.

C. *Evidence of Owner's Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

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into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.

B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.

C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

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ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.

C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.

D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.

E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

G. Nothing in the Contract Documents creates:

1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or

2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

A. *Standards Specifications, Codes, Laws and Regulations*

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

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inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements*: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents*: If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

   a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or

   b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

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B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

A. Contractor and its Subcontractors and Suppliers shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

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established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.

B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.

B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;

2. Abnormal weather conditions;

3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and

4. Acts of war or terrorism.

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D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:

1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.

2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.

3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.

E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:

1. The circumstances that form the basis for the requested adjustment;

2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;

3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;

4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and

5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.

G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

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B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

B. *Removal of Debris During Performance of the Work*: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.

C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

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and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading of Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;

2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and

3. Technical Data contained in such reports and drawings.

B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;

3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or

4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

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5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
2. is of such a nature as to require a change in the Drawings or Specifications;
3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review*: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

E. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

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Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;

b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or

c. Contractor failed to give the written notice required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:

1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;

2. complying with applicable state and local utility damage prevention Laws and Regulations;

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3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;

4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

B. *Notice by Contractor*: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.

C. *Engineer's Review*: Engineer will:

1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;

2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;

3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and

4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. *Owner's Statement to Contractor Regarding Underground Facility*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

F. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

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or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;

b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and

c. Contractor gave the notice required in Paragraph 5.05.B.

2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;

2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

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of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.

H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

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conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.

B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.

C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

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Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.

E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.

G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.

H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.

B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.

D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

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Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.

F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.

G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

H. Contractor shall require:

1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and

2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.

I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.

J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.

K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

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L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.

M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.

N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

A. *Required Insurance*: Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.

B. *General Provisions*: The policies of insurance required by this Paragraph 6.03 as supplemented must:

1. include at least the specific coverages required;

2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;

3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;

4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and

5. include all necessary endorsements to support the stated requirements.

C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:

1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;

2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;

3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

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4. not seek contribution from insurance maintained by the additional insured; and

5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.

C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.

D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.

E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

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Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.

1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.

C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.

D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

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6.06 *Receipt and Application of Property Insurance Proceeds*

A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

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B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.

C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.

B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

A. *Contractor's Request; Governing Criteria*: Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that the proposed item:

1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

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2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

3) has a proven record of performance and availability of responsive service; and

4) is not objectionable to Owner.

b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.

C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.

E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 *Substitutes*

A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

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3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:

   a. will certify that the proposed substitute item will:

      1) perform adequately the functions and achieve the results called for by the general design;

      2) be similar in substance to the item specified; and

      3) be suited to the same use as the item specified.

   b. will state:

      1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;

      2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

      3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.

   c. will identify:

      1) all variations of the proposed substitute item from the item specified; and

      2) available engineering, sales, maintenance, repair, and replacement services.

   d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

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E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.

B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.

C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.

D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.

F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.

G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

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H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.

J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.

K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.

L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

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7.09 *Permits*

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.

C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

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7.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.

B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.

C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.

F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

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I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).

J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:

a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determine and verify:

1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;

2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;

c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

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3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. *Shop Drawings*

a. Contractor shall submit the number of copies required in the Specifications.

b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

2. *Samples*

a. Contractor shall submit the number of Samples required in the Specifications.

b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Engineer's Review of Shop Drawings and Samples*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.

3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

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document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.

6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. *Resubmittal Procedures for Shop Drawings and Samples*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.

2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. *Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:

   a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.

   b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.

   c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

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d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.

2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03. 2.04, and 2.05.

F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.

B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:

1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and

2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.

C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:

1. Observations by Engineer;

2. Recommendation by Engineer or payment by Owner of any progress or final payment;

3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. Use or occupancy of the Work or any part thereof by Owner;

5. Any review and approval of a Shop Drawing or Sample submittal;

6. The issuance of a notice of acceptability by Engineer;

7. The end of the correction period established in Paragraph 15.08;

8. Any inspection, test, or approval by others; or

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9. Any correction of defective Work by Owner.

E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.

B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 *Delegation of Professional Design Services*

A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.

B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

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D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:

1. Checking for conformance with the requirements of this Paragraph 7.19;
2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.

F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.

G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.

D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

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E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. An itemization of the specific matters to be covered by such authority and responsibility; and

3. The extent of such authority and responsibilities.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

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B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.

2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.

C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

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9.05 *Lands and Easements; Reports, Tests, and Drawings*

A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.

C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.

B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

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ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.

B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

A. Engineer has the authority to reject Work in accordance with Article 14.

B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.

C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.

D. Engineer's authority as to changes in the Work is set forth in Article 11.

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E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

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ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.

B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders covering:

1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;

2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and

4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.

B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

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B. If Owner has issued a Work Change Directive and:

1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.

2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.

B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.

B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.

C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.

B. An adjustment in the Contract Price will be determined as follows:

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1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).

C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:
   1. A mutually acceptable fixed fee; or
   2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
      a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
      b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
      c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
      d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
      e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
      f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

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11.08 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

A. *Purpose and Content*: Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. *Change Proposal Procedures*

1. *Submittal*: Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.

2. *Supporting Data*: The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.

    a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.

    b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

    The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review*: Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.

4. *Engineer's Full Review and Action on the Change Proposal*: Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

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Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.

C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 *Claims*

A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:

1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;

2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;

3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and

4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.

B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

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and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. *Mediation*

1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.

2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.

E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.

F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:

1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

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2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.

5. Other costs consisting of the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

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consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.

2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.

3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

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g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

2. The cost of purchasing, renting, or furnishing small tools and hand tools.

3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

6. Expenses incurred in preparing and advancing Claims.

7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:

a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.

b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:

1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.

2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.

2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

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Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances*: Contractor agrees that:

1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.

C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

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thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

   a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

   b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

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D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
3. by manufacturers of equipment furnished under the Contract Documents;
4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.

B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

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losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.

C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

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or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

A. *Basis for Progress Payments*: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. *Applications for Payments*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

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establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

   a. the Work has progressed to the point indicated;

   b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and

   c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

   a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or

   b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

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4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

   a. to supervise, direct, or control the Work;

   b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;

   c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;

   d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or

   e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.

6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:

   a. the Work is defective, requiring correction or replacement;

   b. the Contract Price has been reduced by Change Orders;

   c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

   d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

   e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:

   a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

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b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

c. Contractor has failed to provide and maintain required bonds or insurance;

d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;

e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;

f. The Work is defective, requiring correction or replacement;

g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

h. The Contract Price has been reduced by Change Orders;

i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;

j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;

k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or

l. Other items entitle Owner to a set-off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

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submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

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significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.

2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.

2. The final Application for Payment must be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents;

   b. consent of the surety, if any, to final payment;

   c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

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d. a list of all duly pending Change Proposals and Claims; and

e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Final Application and Recommendation of Payment*: If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Notice of Acceptability*: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.

D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.

E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

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appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. correct the defective repairs to the Site or such adjacent areas;
2. correct such defective Work;
3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.

B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.

C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.

D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

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F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
4. Contractor's repeated disregard of the authority of Owner or Engineer.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:

1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

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attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.

B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

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provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

A. *Disputes Subject to Final Resolution*: The following disputed matters are subject to final resolution under the provisions of this article:

1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.

B. *Final Resolution of Disputes*: For any dispute subject to resolution under this article, Owner or Contractor may:

1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
2. agree with the other party to submit the dispute to another dispute resolution process; or
3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:

1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

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18.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

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00 73 00 SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement Section 00 72 00 "General Conditions." The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below.

The paragraph numbers used in the Supplementary Conditions correspond to the General Condition paragraphs they modify with the prefix "SC" added—for example, "Paragraph SC-4.05." modifies General Conditions Paragraph 4.05.

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

SC-1.01 Defined Terms

A. Supplement Paragraph 1.01.A by inserting the following defined terms as numbered items in their proper alphabetical positions:

1. *Bid Security*—The financial security provided by Offeror at the time the Bid is submitted and held by Owner until the Contract is executed and the evidence of insurance and bonds required by the Contract Documents are provided.
2. *Construction Manager*—The individual or entity named as the Construction Manager in the Contract Documents and the consultants, subconsultants, individuals, or entities directly or indirectly employed or retained by them to provide construction management as advisor services to the Owner.
3. *Contract Amendment*—A document issued on or after the Effective Date of the Contract and signed by Owner and Contractor which:
    a. Authorizes new phases of the Work and establishes the Contract Price, Contract Times, or terms and conditions of the Contract for the new phase of Work; or
    b. Modifies the terms and conditions of the Contract, but does not make changes in the Work.
4. *Contractor's Team*—Contractor, Subcontractors, Suppliers, and individuals or entities directly or indirectly employed or retained by Contractor, Subcontractors, or Suppliers to perform part of the Work, or anyone for whose acts they may be liable.
5. *Defective*—When applied to Work, refers to Work that is unsatisfactory, faulty, or deficient in that it:
    a. Does not conform to the Contract Documents;
    b. Does not meet the requirements of applicable inspections, reference standards, tests, or approvals referred to in the Contract Documents; or
    c. Has been damaged prior to Construction Manager's recommendation of final payment unless responsibility for the protection of the Work has been assumed by Owner at Substantial Completion in accordance with Paragraphs 15.03 or 15.04.

6. *Design Professional*—The entity named as the Engineer in the Contract Documents and the subconsultants, individuals, or entities directly or indirectly employed or retained by Design Professional to provide design or other technical services to the Owner. Design Professional has responsibility for design and technical issues related to the Contract Documents. The Design Professional consists of:

    a. Freese and Nichols, Inc. – 1500 Broadway St # 1150, Lubbock, TX 79401

7. *Final Completion*—The point where the Work is complete in accordance with the Contract Documents, items and documents required by the Contract Documents have been accepted by the Owner and the Project is ready for Final Payment.

8. *Indemnified Costs*—All costs, losses, judgments, and damages resulting from claims or demands against Owner's Indemnitees. These costs include fees for design professionals, attorneys, and other professionals and any legal, court, arbitration, or other dispute resolution costs.

9. *Manufacturer*—The individual or entity that designs, casts, fabricates, manufactures, assembles, tests, and provides materials or equipment to be incorporated in the Work.

10. *Modification*—Change made to the Contract Documents by Contract Amendment, Change Order, Field Order, or Work Change Directive.

11. *Offeror*—An individual or entity that submits a Bid or Proposal to Owner. When used in the Bidding Documents, Proposal Documents, or Contract Documents, the term Bidder has the same meaning as the term Offeror.

12. *Owner's Budget*—The amount budgeted by the Owner for the construction of the Project.

13. *Owner's Indemnitees*—Each member of the OPT and their officers, directors, members, partners, employees, agents, consultants, and subcontractors.

14. *Owner's Project Team (OPT)*—The Owner, Design Professional, Construction Manager, and the other entities identified in the Supplementary Conditions and the consultants, subconsultants, individuals or entities directly or indirectly employed or retained by them to provide services to the Owner. The OPT consists of the following organizations:

    a. City of Midland – 300 N. Loraine Midland, TX 79701

    b.

    c. Freese and Nichols, Inc. – 1500 Broadway St # 1150, Lubbock, TX 79401

15. *Project Construction Manager (PCM)*—The authorized representative of the OPT assigned to assist the Construction Manager at the Site. The term Project Construction Manager includes assistants and field staff of the Construction Manager.

16. *Project Management Information System (PMIS)*—The online project management system that will be used by OPT and Contractor to submit and share documentation and other related communications and information for this Project.

17. *Schedule of Anticipated Payments*—A detailed tabulation, prepared and maintained by Contractor, showing the anticipated amount of each Application for Payment and the month in which they will be submitted.

18. Schedule of Documents—A detailed tabulation, prepared and maintained by Contractor, of each required document submittal and the time requirements for review and approval of each submittal. When used in the Bidding Requirements, Proposal Requirements, or Contract Documents, the term Schedule of Submittals has the same meaning as the term Schedule of Documents.

19. *Set-off*–A reduction in payment due to Contractor under Article 15.

SC-1.02 Terminology

A. Supplement Paragraph 1.02 by adding the following paragraphs:

"H. The terms "includes" and "including" are used as terms of enlargement and not of limitation or exclusive enumeration, and use of these terms does not create a presumption that components not expressed are excluded. The terms "consist of" or "consisting of" limits the interpretation to only those items specifically listed."

"I. It is understood that the cost of providing Work is included in the Contract Price and no additional compensation is to be paid by Owner unless specifically stated otherwise in the Contract Documents. Expressions like "at no additional cost to Owner," "at Contractor's expense," or similar words mean that the Contractor is to include the cost of this Work in their Contract Price and perform or provide specified Work without an increase in the Contract Price."

"J. Written documents are required where reference is made to notices, reports, approvals, consents, statements, instructions, opinions, or other types of documentation or communications required by the Contract Documents. Approval and consent documents must be received by Contractor prior to the action or decision for which approval or consent is given. These may be made in printed or electronic format through the OPT's Project Management Information System or other electronic media as required by the Contract Documents or approved by the Construction Manager."

"K. Giving notice as required by the Contract Documents may be by printed or electronic media using a method that requires acknowledgment of the receipt of that notice."

ARTICLE 2—PRELIMINARY MATTERS

SC-2.01 Delivery of Performance and Payment Bonds; Evidence of Insurance

A. Delete Paragraph 2.01.B in its entirety and insert the following in its place:

"B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver copies of the insurance policies (including all endorsements, and identification of applicable self-insured retentions and deductibles) required to be provided by Contractor in this Contract. Contractor may redact any confidential premium or pricing information contained in any policy or endorsement furnished under this provision."

B. Delete Paragraph 2.01.C in its entirety.

SC-2.02 Copies of Documents

A. Delete Paragraph 2.02.A in its entirety and insert the following in its place:

"A. Owner shall furnish to Contractor five (5) printed copies of the Contract Documents (including one fully signed counterpart of the Contract), and one copy in electronic portable document format (PDF).

SC-2.06 Electronic Submittals

A. Delete Paragraphs 2.06.B and 2.06.C in their entirety and insert the following in their place:

"B. Electronic Documents Protocol: The parties shall conform to the provisions in Section 01 30 00 "Contract Administration" for exchange of electronic transmittals.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

SC-3.01 Intent

A. Delete Paragraph 3.01.A in its entirety and insert the following in its place:

"A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all. The Drawings and Specifications do not indicate or describe all of the Work required to complete the Project. Additional details required for the correct installation of selected products are to be provided by the Contractor and coordinated with the Engineer. Provide any work, materials, or equipment required for a complete and functional system even if they are not detailed or specified.

1. The Contract requirements described in the General Conditions, Supplementary Conditions, and General Requirements apply to each and all Sections of the Specifications unless specifically noted otherwise.

2. Organization of Contract Documents is not intended to control or to lessen the responsibility of the Contractor when dividing Work among Subcontractors, or to establish the extent of Work to be performed by any trade, Subcontractor, or Supplier. Specifications or details do not need to be indicated or specified in each specification or drawing. Items shown in the Contract Documents are applicable regardless of location in the Contract Documents.

3. Standard paragraph titles and other identifications of subject matter in the Specifications are intended to aid in locating and recognizing various requirements of the Specifications. Titles do not define, limit, or otherwise restrict specification text."

B. Supplement Paragraph 3.01.D by adding the following sentence:

"The Contract Documents comprise the entire Agreement between Owner and Contractor and may be modified only by Field Order, Change Order, Contract Amendment, or Work Change Directive."

C. Supplement Paragraphs 3.01 by adding the following paragraphs:

"H. Where compliance with two or more standards is specified and they establish different or conflicting requirements for minimum quantities or quality levels, Contractor shall comply with the most stringent requirements unless the Contract Documents indicate otherwise.

1. Quantity or quality level shown or indicated shall be the minimum to be provided or performed in every instance.

2. Actual installation shall comply exactly with minimum quality indicated or may exceed that minimum within reasonable limits.

3. In complying with these requirements, indicated numeric values are minimum or maximum values, as noted, or appropriate for context of requirements.

4. Refer instances of uncertainty to the Engineer for a decision before proceeding."

"I. Provide materials and equipment comparable in quality to similar materials and equipment incorporated in the Project or as required to meet the minimum requirements of the application if the materials and equipment are shown in the Drawings but are not included in the Specifications."

SC-3.02 Reference Standards

A. Supplement Paragraph 3.02.A by adding the following subparagraph:

"3. Comply with applicable construction industry standards as if bound or copied directly into the Contract Documents regardless of lack of reference in the Contract Documents. Apply provisions of the Contract Documents where Contract Documents include more stringent requirements than the referenced standards.

a. Standards referenced directly in the Contract Documents take precedence over standards that are not referenced but recognized in the construction industry as applicable.

b. Comply with standards not referenced but recognized in the construction industry as applicable for performance of the Work except as otherwise limited by the Contract Documents. Engineer will determine whether codes or standards are applicable to the performance of the Work.

c. Make copies of reference standards available as requested by Engineer or Owner."

SC-3.03 Reporting and Resolving Discrepancies

A. Delete Paragraph 3.03.A.3 in its entirety and insert the following in its place:

"3. In the event of a conflict in the Drawings, Specifications, or other portions of the Contract Documents which were not reported prior to the bidding of the Contract, the Contractor shall be deemed to have included the most expensive item, system, procedure, etc. in its Bid or Proposal."

SC-3.05 Reuse of Documents

A. Delete the last sentence of Paragraph 3.05.B and insert the following in its place:

"Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes, unless specifically prohibited in writing by the Owner for security reasons. If the Owner so directs, Contractor shall surrender all copies of the construction Contract Documents and other related documents, in paper or digital format and remove these documents from computer equipment or storage devices as a condition of final payment."

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

SC-4.01 Commencement of Contract Times; Notice to Proceed

A. Delete Paragraph 4.01.A in its entirety and insert the following in its place:

"A. A Notice to Proceed for the prepurchase of long lead time items may be given at any time within 30 days of the Effective Date of the Contract. Long lead items are identified as any item for which the Contractor must begin the submittal and procurement process early to complete the work within the Contract Times. A second Notice to Proceed will be issued to start the contractual schedule once delivery confirmation of long lead time items is received."

SC-4.04 Progress Schedule

A. Supplement Paragraph 4.04 by adding the following paragraph:

"C. Contractor assumes and bears responsibility for all costs and time delays associated with any variation from the requirements of the Contract Documents."

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

SC-5.01 Availability of Lands

A. Supplement Paragraph 5.01.C by adding the following sentence:

"A copy of the written agreements for the use of such land shall be provided to the Owner for record purposes."

SC-5.02 Use of Site and Other Areas

A. Delete Paragraph 5.02.A.2 in its entirety and insert the following in its place:

"2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent

jurisdiction; and (c) **TO THE FULLEST EXTENT PERMITTED BY LAWS AND REGULATIONS, INDEMNIFY AND HOLD HARMLESS OWNER'S INDEMNITEES FROM AND AGAINST ANY SUCH CLAIM, AND AGAINST ALL COSTS, LOSSES, AND DAMAGES (INCLUDING BUT NOT LIMITED TO ALL FEES AND CHARGES OF ENGINEERS, ARCHITECTS, ATTORNEYS, AND OTHER PROFESSIONALS AND ALL COURT OR ARBITRATION OR OTHER DISPUTE RESOLUTION COSTS) ARISING OUT OF OR RELATING TO ANY CLAIM OR ACTION, LEGAL OR EQUITABLE, BROUGHT BY ANY SUCH OWNER OR OCCUPANT AGAINST OWNER, ENGINEER, OR ANY OTHER PARTY INDEMNIFIED HEREUNDER TO THE EXTENT CAUSED DIRECTLY OR INDIRECTLY, IN WHOLE OR IN PART BY, OR BASED UPON, CONTRACTOR'S PERFORMANCE OF THE WORK, OR BECAUSE OF OTHER ACTIONS OR CONDUCT OF THE CONTRACTOR OR THOSE FOR WHICH CONTRACTOR IS RESPONSIBLE.**"

SC-5.03 Subsurface and Physical Conditions

A. This Supplementary Condition identifies the reports and drawings referenced in Paragraph 5.03 of the General Conditions related to subsurface and physical conditions.

1. The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which Contractor may rely:

Report Title	Report Date	Technical Data
No applicable reports		

2. The following table lists the drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data, and specifically identifies the Technical Data upon which Contractor may rely:

Drawing Title	Drawing Date	Technical Data
No applicable drawings		

3. Copies of reports and drawings may be downloaded from the project procurement website.

SC-5.04 Differing Subsurface or Physical Conditions

A. Amend Paragraph 5.04.A by deleting the word "promptly" and inserting "promptly, but no later than within 3 days," in its place.

SC-5.05 Underground Facilities

A. Amend Paragraph 5.05.B by deleting the word "promptly" and inserting "promptly, but no later than within 3 days," in its place.

SC-5.06 Hazardous Environmental Conditions at Site

A. This Supplementary Condition identifies the reports and drawings referenced in Paragraph 5.06 of the General Conditions related to Hazardous Environmental Conditions at the Site.

1. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely:

Report Title	Report Date	Technical Data
No applicable reports		

2. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any) contained in such Drawings upon which Contractor may rely:

Drawing Title	Drawing Date	Technical Data
No applicable reports		

3. Copies of reports and drawings may be downloaded from the project procurement website.

B. Delete Paragraph 5.06.I in its entirety.

C. Delete Paragraph 5.06.J in its entirety and insert the following in its place:

"J. TO THE FULLEST EXTENT PERMITTED BY LAWS AND REGULATIONS, CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS OWNER'S INDEMNITEES FROM AND AGAINST ALL CLAIMS, COSTS, LOSSES, AND DAMAGES (INCLUDING BUT NOT LIMITED TO ALL FEES AND CHARGES OF ENGINEERS, ARCHITECTS, ATTORNEYS, AND OTHER PROFESSIONALS AND ALL COURT OR ARBITRATION OR OTHER DISPUTE RESOLUTION COSTS) ARISING OUT OF OR RELATING TO THE FAILURE TO CONTROL, CONTAIN, OR REMOVE A CONSTITUENT OF CONCERN BROUGHT TO THE SITE BY CONTRACTOR OR BY ANYONE FOR WHOM CONTRACTOR IS RESPONSIBLE, OR TO A HAZARDOUS ENVIRONMENTAL CONDITION CREATED BY CONTRACTOR OR BY ANYONE FOR WHOM CONTRACTOR IS RESPONSIBLE. NOTHING IN THIS PARAGRAPH 5.06.J OBLIGATES CONTRACTOR TO INDEMNIFY ANY INDIVIDUAL OR ENTITY FROM AND AGAINST THE CONSEQUENCES OF THAT INDIVIDUAL'S OR ENTITY'S OWN NEGLIGENCE."

ARTICLE 6—BONDS AND INSURANCE

SC-6.01 Performance, Payment, and Other Bonds

A. Supplement Paragraph 6.01 by adding the following paragraphs:

"I. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond or payment bond. By Contractor furnishing and Owner accepting these bonds, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor under these bonds, subject to Owner's priority to use the funds for the completion of the Work."

"J. Contractor or surety on behalf of Contractor shall promptly notify the Owner of all claims filed against the payment bond. When a claimant has satisfied the conditions prescribed by Laws and Regulations, the Contractor, or surety on behalf of Contractor, shall, with reasonable promptness, notify the claimant and Owner of the amounts that are undisputed and the basis for challenging any amounts that are disputed, including, but not limited to, the lack of substantiating documentation to support the claim as to entitlement or amount, and the Contractor, or surety on behalf of Contractor shall, with reasonable promptness, pay or make arrangements for payment of any undisputed amount; provided, however, that the failure of the Contractor or surety on behalf of Contractor to timely discharge its obligations under this paragraph or to dispute or identify any specific defense to all or any part of a claim shall not be deemed to be an admission of liability by the Contractor or surety as to such claim or otherwise constitute a waiver of the Contractor's or surety's defenses to, or right to dispute, such claim.

"K. Owner shall not be liable for payment of any costs or expenses of any claimant under payment bonds, and shall have no obligations to make payments to, give notices on behalf of, or otherwise have obligations to claimants under payment bonds."

SC-6.02 Insurance—General Provisions

A. Delete Paragraph 6.02.A in its entirety and insert the following in its place:

"A. Obtain and maintain insurance in accordance with the City of Midland Contract Documents."

SC-6.05 Property Losses; Subrogation

A. Delete the words "Owner and Contractor waive" in the first sentence of Paragraph 6.05.A.1 and replace it with the words "Contractor waives".

B. Delete Paragraph 6.05.B.1 in its entirety.

SC-6.06 Receipt and Application of Property Insurance Proceeds

A. Delete Paragraph 6.06 in its entirety.

SC-6.07 Owner's Insurance for Project

A. Add a new Paragraph 6.08 as follows:

"6.07 *Owner's Insurance for Project*

A. Owner shall not be responsible for purchasing and maintaining any insurance to protect the interest of the Contractor, Subcontractors, or others in the Work. The stated limits of insurance required are minimum only. Contractor shall determine the limits that are adequate. These limits may be basic policy limits or any combination of basic limits and umbrella limits. In any event, Contractor is fully responsible for all losses arising out of, resulting from or connected with operations under this Contract whether or not said losses are covered by insurance. The acceptance of certificates or other evidence of insurance by the Owner, Engineer, and/or others listed as an additional insured, that in any respect do not comply with the Contract requirements does not release the Contractor from compliance herewith."

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

SC-7.03 Labor; Working Hours

A. Delete Paragraph 7.03.C in its entirety and insert the following in its place:

"C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, no Work shall be performed at the Site between 6:00 p.m. and 7:00 a.m. Contractor will not permit the performance of Work on a Saturday, Sunday, or any Owner holiday without Owner's written consent. Should Contractor desire to work on these days, Contractor shall contact the Owner, in writing, for approval at least 48 hours in advance. Emergency work may be done without prior permission. Tie ins and connections to existing facilities will be made at time authorized by the Owner. Owner's legal holidays are New Year's Day, Martin Luther King Day, Presidents Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas, and New Year's Eve."

B. Supplement Paragraph 7.03 by adding the following paragraph:

"D. Contractor shall be responsible for the cost of overtime pay or other expense incurred by the Owner for Construction Management Services, Owner's representative, and construction observation services, occasioned by the performance of Work on Saturday, Sunday, any legal holiday, or as overtime on any regular work day. If Contractor is responsible but does not pay, or if the parties are unable to agree as to the amount owed, then Owner may impose a reasonable Set-off against payments due under Article 15. For purposes of administering the foregoing requirement, additional overtime costs will be billed at rates shown in SC-15.01.E."

SC-7.08 Patent Fees and Royalties

A. Delete Paragraph 7.08.B in its entirety.

B. Delete Paragraph 7.08.C in its entirety and insert the following in its place:

"C. TO THE FULLEST EXTENT PERMITTED BY LAWS AND REGULATIONS, CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS OWNER'S INDEMNITEES FROM AND AGAINST ALL CLAIMS, COSTS, LOSSES, AND DAMAGES (INCLUDING BUT NOT LIMITED TO ALL FEES AND CHARGES OF ENGINEERS, ARCHITECTS, ATTORNEYS, AND OTHER PROFESSIONALS AND ALL COURT OR ARBITRATION OR OTHER DISPUTE RESOLUTION COSTS) ARISING OUT OF OR RELATING TO ANY INFRINGEMENT OF PATENT RIGHTS OR COPYRIGHTS INCIDENT TO THE USE IN THE PERFORMANCE OF THE WORK OR RESULTING FROM THE INCORPORATION IN THE WORK OF ANY INVENTION, DESIGN, PROCESS, PRODUCT, OR DEVICE NOT SPECIFIED IN THE CONTRACT DOCUMENTS."

SC-7.11 Laws and Regulations

A. Delete Paragraph 7.11.B in its entirety and insert the following in its place:

"B. IF CONTRACTOR PERFORMS ANY WORK OR TAKES ANY OTHER ACTION KNOWING OR HAVING REASON TO KNOW THAT IT IS CONTRARY TO LAWS OR REGULATIONS, CONTRACTOR SHALL BEAR ALL RESULTING COSTS AND LOSSES, AND SHALL INDEMNIFY AND HOLD HARMLESS OWNER'S INDEMNITEES FROM AND AGAINST ALL CLAIMS, COSTS, LOSSES, AND DAMAGES (INCLUDING BUT NOT LIMITED TO ALL FEES AND CHARGES OF ENGINEERS, ARCHITECTS, ATTORNEYS, AND OTHER PROFESSIONALS AND ALL COURT OR ARBITRATION OR OTHER DISPUTE RESOLUTION COSTS) ARISING OUT OF OR RELATING TO SUCH WORK OR OTHER ACTION. IT IS NOT CONTRACTOR'S RESPONSIBILITY TO MAKE CERTAIN THAT THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS IS IN ACCORDANCE WITH LAWS AND REGULATIONS, BUT THIS DOES NOT RELIEVE CONTRACTOR OF ITS OBLIGATIONS UNDER PARAGRAPH 3.03."

SC-7.15 Emergencies

A. Amend Paragraph 7.15.A by deleting the last sentence and inserting the following in its place:

"Contractor may submit a Change Proposal if the incident giving rise to the emergency action was not the responsibility of the Contractor and a change in the Contract Documents is required because of the emergency or the action taken by Contractor in response to such an emergency."

SC-7.16 Submittals

A. Delete Paragraph 7.16.A.3 in its entirety and insert the following in its place:

"3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents on a Shop Drawing Deviation Request form provided by the Engineer and request that a Field Order or Change Order be issued for each of the specific variations submitted for approval. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation."

B. Delete Paragraph 7.16.C.4 in its entirety and insert the following in its place:

"4. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A and Engineer has given written approval of each such variation by issuing a Field Order or Change Order. If the proposed Modification is approved by the Engineer, the submittal will be considered to be in strict compliance with the Contract Documents and it will be reviewed in accordance with the Contract Documents. If the proposed Modification is not approved, the submittal will be returned to the Contractor with appropriate comments. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A."

C. Delete Paragraph 7.16.D.1 in its entirety and insert the following in its place:

"1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Resubmittals shall reference and respond directly to Engineer's previous comments. Any variations from strict compliance with the Contract Documents will be identified in the same manner as required in Paragraph 7.16.A and will require the same approvals."

SC-7.18 Indemnification

A. Delete Paragraph 7.18.A in its entirety and insert the following in its place:

"A. TO THE FULLEST EXTENT PERMITTED BY LAWS AND REGULATIONS, AND IN ADDITION TO ANY OTHER OBLIGATIONS OF CONTRACTOR UNDER THE CONTRACT OR OTHERWISE, CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS OWNER'S INDEMNITEES FROM LOSSES, DAMAGES, COSTS, AND JUDGMENTS (INCLUDING BUT NOT LIMITED TO ALL FEES AND CHARGES OF ENGINEERS, ARCHITECTS, ATTORNEYS, AND OTHER PROFESSIONALS, AND ALL COURT OR ARBITRATION OR OTHER DISPUTE RESOLUTION COSTS) ARISING FROM THIRD-PARTY CLAIMS OR ACTIONS RELATING TO OR RESULTING FROM THE PERFORMANCE OR FURNISHING OF THE WORK, PROVIDED THAT ANY SUCH CLAIM, ACTION, LOSS, COST, JUDGMENT OR DAMAGE IS ATTRIBUTABLE TO BODILY INJURY, SICKNESS, DISEASE, OR DEATH, OR TO DAMAGE TO OR DESTRUCTION OF TANGIBLE PROPERTY (OTHER THAN THE WORK ITSELF), INCLUDING THE LOSS OF USE RESULTING THEREFROM, BUT ONLY TO THE EXTENT CAUSED BY ANY NEGLIGENT ACT OR OMISSION OF CONTRACTOR, ANY SUBCONTRACTOR, ANY SUPPLIER, OR ANY INDIVIDUAL OR ENTITY DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM TO PERFORM ANY OF THE WORK, OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE."

B. Supplement Paragraph 7.18 by adding the following paragraph:

"C. Contractor's obligations to indemnify or hold Owner's Indemnitees harmless against losses, damages, or expenses specified in these General Conditions shall be subject to the applicable limitations of Chapter 130 of the Texas Civil Practice and Remedies Code."

SC-8.03 Legal Relationships

A. Delete Paragraph 8.03.C in its entirety and insert the following in its place:

"C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) **INDEMNIFY AND HOLD HARMLESS OWNER'S INDEMNITEES FROM AND AGAINST ANY SUCH CLAIMS, AND AGAINST ALL COSTS, LOSSES, AND DAMAGES (INCLUDING**

BUT NOT LIMITED TO ALL FEES AND CHARGES OF ENGINEERS, ARCHITECTS, ATTORNEYS, AND OTHER PROFESSIONALS AND ALL COURT OR ARBITRATION OR OTHER DISPUTE RESOLUTION COSTS) ARISING OUT OF OR RELATING TO SUCH DAMAGE, DELAY, DISRUPTION, OR INTERFERENCE."

SC-8.04 Claims Between Contractors

A. Supplement Article 8 by adding the following paragraph:

"8.04 *Claims between Contractors*

A. Should Contractor cause damage to the work or property of any other contractor at the Site, or should any claim arising out of Contractor's performance of the Work at the Site be made by any other contractor against Contractor, Owner, Engineer, or the construction coordinator, then Contractor (without involving Owner, Engineer, or construction coordinator) shall either (1) remedy the damage, (2) agree to compensate the other contractor for remedy of the damage, or (3) remedy the damage and attempt to settle with such other contractor by agreement, or otherwise resolve the dispute by arbitration or at law.

B. **TO THE FULLEST EXTENT PERMITTED BY LAWS AND REGULATIONS, CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS OWNER'S INDEMNITEES FROM AND AGAINST ALL CLAIMS AND INDEMNIFIED COSTS ARISING DIRECTLY, INDIRECTLY OR CONSEQUENTIALLY OUT OF ANY ACTION, LEGAL OR EQUITABLE, BROUGHT BY ANY OTHER CONTRACTOR AGAINST MEMBERS OF THE OPT TO THE EXTENT SAID CLAIM IS BASED ON OR ARISES OUT OF CONTRACTOR'S PERFORMANCE OF THE WORK. SHOULD ANOTHER CONTRACTOR CAUSE DAMAGE TO THE WORK OR PROPERTY OF CONTRACTOR OR SHOULD THE PERFORMANCE OF WORK BY ANY OTHER CONTRACTOR AT THE SITE GIVE RISE TO ANY OTHER CLAIM, CONTRACTOR SHALL NOT INSTITUTE ANY ACTION, LEGAL OR EQUITABLE, AGAINST OWNER'S INDEMNITEES OR PERMIT ANY ACTION AGAINST ANY OF THEM TO BE MAINTAINED AND CONTINUED IN ITS NAME OR FOR ITS BENEFIT IN ANY COURT OR BEFORE ANY ARBITER WHICH SEEKS TO IMPOSE LIABILITY ON OR TO RECOVER DAMAGES FROM MEMBERS OF THE OPT ON ACCOUNT OF ANY SUCH DAMAGE OR CLAIM.**

C. Contractor may submit a Change Proposal for an extension of Contract Times, in accordance with Article 11, if Contractor is delayed at any time in performing or furnishing the Work by any act or neglect of another contractor. An extension of the Contract Times will be Contractor's exclusive remedy with respect to members of the OPT for any delay, disruption, interference, or hindrance caused by any other contractor."

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

SC-10.03 Resident Project Representative

A. Supplement Paragraph 10.03.A by adding the following subparagraph:

"1. Engineer will not furnish a Resident Project Representative to represent Engineer at the Site or assist Engineer in observing the progress and quality of the Work on this Project by agreement with the Owner."

ARTICLE 11—CHANGES TO THE CONTRACT

SC-11.02 Change Orders

A. Supplement Paragraph 11.02 by adding the following paragraph:

"C. Contractor assumes and bears responsibility for all costs and time delays associated with any variation from the requirements of the Contract Documents unless the variation is specifically approved by Change Order."

SC-11.11 No Damage for Delays

A. Supplement Article 11 by adding the following paragraph:

"11.11 *No Damage for Delays*

A. Contractor agrees to make no Claims for damage for delay in the performance of the Contract occasioned by any act or omission to act of the Owner, Engineer, or any of the Engineer's or Owner's agents, and agrees that any such Claim shall be fully compensated by an extension of time, as set forth in a Change Order, to complete performance of the Work as provided herein."

ARTICLE 12—CLAIMS

SC-12.01 Claims

A. Amend Paragraph 12.01.B by deleting "but in no event later than 30 days" and inserting "but in no event later than 7 days" in its place.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

SC-13.01 Cost of the Work

A. Amend Paragraph 13.01.B by deleting the following words in the first sentence:

"commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:"

and insert the following in its place:

"those paid for the Work included in the Contract Price, and shall not include any of the costs itemized in Paragraph 13.01.C. Contractor shall provide certified payroll records listing personnel classifications and salaries for all individuals involved in additional Work. Salaries for those not included in the certified payroll will be considered as being compensated under Paragraph 13.01.C, and shall include only the following items:"

B. Amend Paragraph 13.01.B.1 by deleting the following words in the second sentence:

", without limitation, superintendents, foremen"

and inserting the following in its place:

"one foreman (unless agreed upon prior to beginning Work)"

C. Amend Paragraph 13.01.B.1 by deleting the following words in the last sentence:

"be included in the above"

and inserting the following in its place:

"not exceed 1.5 times regular pay and shall be included in the above"

D. Supplement Paragraph 13.01.B.5.c.(2) by adding the following sentence:

"The equipment rental rate book that governs the included costs for the rental of machinery and equipment owned by Contractor (or a related entity) under the Cost of the Work provisions of this Contract is the most current edition EquipmentWatch Cost Recovery Rental Rate Blue Book."

E. Amend Paragraph 13.01.C.1 by adding "superintendents" to the list of excluded personnel in the first sentence.

SC-13.03 Unit Price Work

A. Delete Paragraph 13.03.E in its entirety and insert the following in its place:

"E. *Adjustments in Unit Price*

1. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:

a. If the total cost of a particular item of Unit Price Work amounts to 20 percent or more of the total Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by the Contractor differs by more than 20 percent from the estimated quantity of such item indicated in the Contract; and

b. If there is no corresponding adjustment with respect to any other item of Work; and

c. If Contractor believes that Contractor has incurred additional expense as a result thereof; or if Owner believes that the quantity variation entitles Owner to an adjustment in the Unit Price, either the Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Article 11 if the parties are unable to agree as to the effect of any such variation in the quantity of the Unit Price Work performed."

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

SC-15.01 Progress Payments

A. Delete Paragraph 15.01.B.1 in its entirety and insert the following in its place:

"1. On the first working day following the 25th of each month, Contractor shall submit to Owner for review an Application for Payment, filled out and signed by Contractor, covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents."

B. Amend Paragraph 15.01.C.1 by deleting "10" and inserting "30" in its place.

C. Amend Paragraph 15.01.E.1 by deleting Subparagraph 15.01.E.1.l and adding the following in its place:

"l. Owner has been notified of failure to make payments to Subcontractors or Suppliers or for labor;"

"m. failure to submit up to date record documents as required by the Contract Documents;"

"n. failure to submit monthly Progress Schedule updates or revised schedules as requested by the Owner or Engineer;"

"o. failure to provide Project videos or photographs required by the Specifications;"

"p. Other items entitle Owner to a set off against the amount recommended."

D. Amend Paragraph 15.01.E.3 by deleting "and subject to interest as provided in the Contract."

E. Supplement Paragraph 15.01.E by adding the following subparagraph:

"4. Owner may permanently withhold payment from Contract Price for:

a. Liquidated damages incurred by Contractor.

b. Compensation for OPT for overtime charges of Design Professional, Construction Manager, Resident Project Representative, third review of submittals, review of substitutions, re inspection fees, inspections, or designs related to correction of defective Work, or other Services identified as requiring payment by the Contractor.

1) Compensation will be based on the following rates:

Position	Hourly Rate
Principal in Charge	252
Project Manager	219
Project Engineer	187
Construction Manager	173
Resident Representative	138
Design Engineer	164
Engineering Technician	132
Clerk	155

2) Expenses will be billed at the actual cost multiplied by 1.15.

c. Costs for tests performed by the Owner to verify that Work previously tested and found to be defective has been corrected. Verification testing is to be provided at the Contractor's expense to verify products or constructed works are in compliance after corrections have been made."

F. Supplement Paragraph 15.01 by adding the following paragraph:

"F. For contracts in which the Contract Price is based on the Cost of Work, if Owner determines that progress payments made to date substantially exceed the actual progress of the Work (as measured by reference to the Schedule of Values), or present a potential conflict with the Guaranteed Maximum Price, then Owner may

require that Contractor prepare and submit a plan for the remaining anticipated Applications for Payment that will bring payments and progress into closer alignment and take into account the Guaranteed Maximum Price (if any), through reductions in billings, increases in retainage, or other equitable measures. Owner will review the plan, discuss any necessary modifications, and implement the plan as modified for all remaining Applications for Payment."

SC-15.03 Substantial Completion

A. Supplement Paragraph 15.03.B by adding the following subparagraph:

"1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable Set-off against payments due under this Article 15."

SC-15.06 Final Payment

A. Delete Paragraph 15.06.E in its entirety and insert the following in its place:

"E. *Final Payment Becomes Due*: The first working day following the 10th day of the second month following the submittal of the final Application for Payment and accompanying documentation, the amount recommended by the Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation, including but not limited to set offs for liquidated damages and set offs allowed under the provisions above with respect to progress payments) will become due and will be paid by Owner to Contractor."

SC-15.08 Correction Period

A. Supplement Paragraph 15.08 by adding the following paragraph:

"G. When early acceptance of a Substantially Completed portion of the Work is accomplished in the manner indicated in the Contract Documents, the correction period for that portion of the Work shall commence at the time of Substantial Completion of that Work."

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

SC-16.02 Owner May Terminate for Cause

A. Delete Subparagraphs 16.02.A.3 and 16.02.A.4 in their entirety and replace them with the following:

"3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;"

"4. Contractor's repeated disregard of the authority of Owner or Engineer;"

"5. Contractor fails to provide a replacement bond or insurance coverage as required by the General Conditions and as amended by the Supplementary Conditions; or"

"6. If any petition of bankruptcy is filed by or against Contractor, or if Contractor is adjudged as bankrupt or insolvent or makes a general assignment for the benefit of creditors, or if a receiver is appointed for the benefit of Contractor's creditors, or if a receiver is appointed on account of Contractor's insolvency, upon the occurrence of any such event, Owner shall be entitled to request of Contractor or its successor in interest adequate assurance of future performance in accordance with the terms and conditions hereof. Failure to comply with such request within 7 days of delivery of the request shall entitle Owner to terminate this Contract and to the accompanying rights set forth in Article 16 of the General Conditions. In all events pending receipt of adequate assurance of performance and actual performance in accordance therewith, Owner shall be entitled to proceed with the Work with its own forces or with other contractors on a time and material or other appropriate basis. The cost of work by Owner or other contractors will be back charged against the Contract Sum hereof."

B. Delete Paragraph 16.02.G in its entirety.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

SC-17.01 Methods and Procedures

A. Delete Paragraph 17.01 in its entirety and insert the following in its place:

"17.01 *Methods and Procedures*

A. The Owner and Contractor may exercise such rights or remedies as either may otherwise have under the Contract Documents or by Law."

ARTICLE 18—MISCELLANEOUS

SC-18.02 Computation of Times

A. Supplement Paragraph 18.02 by adding the following paragraph:

"B. All references and conditions for a "Calendar Day Contract" in the General Conditions and Supplementary Conditions shall apply for a "Fixed Date Contract." A "Fixed Date Contract" is one in which the calendar dates for reaching Substantial Completion and/or final completion are specified in lieu of identifying the actual calendar days involved."

SC-18.10 Headings

A. Delete Paragraph 18.08.A in its entirety and insert the following in its place:

"A. The Article and paragraph headings in this Contract are inserted for convenience only and do not constitute parts of these General Conditions or act as a limitation of the scope of the particular section to which they refer. This Contract will be fairly interpreted in accordance with its terms and conditions and not for or against either party."

SC-18.09 Independent Contractor

A. Supplement Article 18 by adding the following paragraph:

"18.11 *Independent Contractor*

A. Each Party will perform its duties under this Contract as an independent contractor. The Parties and their personnel will not be considered to be employees or agents of the other Party. Nothing in this Contract will be interpreted as granting either Party the right or authority to make commitments of any kind for the other. This Contract will not constitute, create, or be interpreted as a joint venture, partnership, or formal business organization of any kind."

SC-18.12 Severability

A. Supplement Article 18 by adding the following paragraph:

"18.12 *Severability*

A. If a court of competent jurisdiction renders any part of this Contract invalid or unenforceable, that part will be severed and the remainder of this Contract will continue in full force and effect."

SC-18.13 No Third Party Beneficiaries

A. Supplement Article 18 by adding the following paragraph:

"18.13 *No Third Party Beneficiaries*

A. Nothing in this Contract shall be construed to create any right in any third party not a signatory to this Contract, and the parties do not intend to create any third party beneficiaries by entering into this Contract."

SC-18.14 Sovereign Immunity

A. Supplement Article 18 by adding the following paragraph:

"18.14 *Sovereign Immunity*

A. The parties agree that the Owner has not waived its sovereign immunity by entering into and performing its obligations under this Contract."

END OF SECTION

00 73 17 TEXAS WORKERS' COMPENSATION INSURANCE

ARTICLE 1 – REQUIRED NOTICE

1.01 Workers' Compensation Insurance Coverage

A. Definitions:

1. Certificate of coverage ("certificate") - A copy of a certificate of insurance, a certificate of authority to self-insure issued by the division, or a coverage agreement (DWC Form 81, DWC Form 82, DWC Form 83, or DWC Form 84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

2. Duration of the project - includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

3. Persons providing services on the project ("subcontractor" in §406.096) - includes all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

B. The contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.

C. The contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.

D. If the coverage period shown on the contractor's current certificate of coverage ends during the duration of the project, the contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

E. The contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

1. a certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

2. no later than 7 days after receipt by the contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

F. The contractor shall retain all required certificates of coverage for the duration of the project and for one year thereafter.

G. The contractor shall notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

H. The contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Insurance, Division of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

I. The contractor shall contractually require each person with whom it contracts to provide services on a project, to:

1. provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;

2. provide to the contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project;

3. provide the contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;

4. obtain from each other person with whom it contracts, and provide to the contractor:

   a. a certificate of coverage, prior to the other person beginning work on the project; and

   b. a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;

5. retain all required certificates of coverage on file for the duration of the project and for one year thereafter;

6. notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

7. contractually require each person with whom it contracts, to perform as required by paragraphs 1-7, with the certificates of coverage to be provided to the person for whom they are providing services.

J. By signing this contract or providing or causing to be provided a certificate of coverage, the contractor is representing to the governmental entity that all employees of the contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the

division. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

K. The contractor's failure to comply with any of these provisions is a breach of contract by the contractor which entitles the governmental entity to declare the contract void if the contractor does not remedy the breach within ten days after receipt of notice of breach from the governmental entity.

END OF SECTION

00 73 43 WAGE RATE REQUIREMENTS

ARTICLE 1 – PAYMENT OF PREVAILING WAGE RATES

1.01 Contractor and Subcontractors employed on this Project must pay not less than the rates established by the Owner as required by Tex. Gov't Code Chapter 2258.

1.02 The minimum wage rates for various labor classifications as established by the Owner are included in "Exhibit C – Heavy and Highway Wage Rates rev 02-03-2023" and "Exhibit D – Building Wage Rates rev 01-06-2023."

ARTICLE 2 – PENALTY

2.01 In accordance with Section 2258.023(b), any Contractor or Subcontractor who violates the requirements of Chapter 2258 shall pay the Owner $60 for each worker employed or each calendar day or part of the day that the worker is paid less than the wage rates stipulated in the Contract.

2.02 Failure to comply with the requirements of Chapter 2258 may subject the Owner, Contractor, or Subcontractor(s) to additional civil and criminal penalties.

ARTICLE 3 – RECORDS

3.01 In accordance with Section 2258.024, the Contractor and its Subcontractors, if any, shall keep a record showing:

A. The name and occupation of each worker employed by the Contractor or Subcontractor in the construction of the Work; and

B. The actual per diem wages paid to each worker.

3.02 This record shall be open at all reasonable hours to inspection by the officers and agents of the OPT.

ARTICLE 4 – ENFORCEMENT

4.01 Owner will enforce the provisions of this Contract related to the payment of prevailing wage rates as required by Chapter 2258, Subchapter C.

4.02 Owner may be required to withhold money forfeited or required to be withheld under Chapter 2258 from the payments to the Contractor. If required, these amounts will be withheld from payments to the Contractor through a Set-off in accordance with the General Conditions.

END OF SECTION

CITY OF MIDLAND

FRONT END DOCUMENTS

THE CITY OF MIDLAND

CONTRACT

Contract No. _____

THIS CONTRACT, effective the ____ day of _____, 20___, by and between the City of Midland, hereinafter referred to as "CITY", and _____, hereinafter referred to as "COMPANY", is made for the following considerations:

1. **Cost:** Total Proposal: $ _____ DOLLARS

2. **Scope of Work:** COMPANY shall perform all work described for a new sound system at Momentum Bank Ballpark. Said work being more particularly described in the following documents, which are attached hereto and incorporated herein for all purposes.

EXHIBIT A..... Specifications, Proposal or Cost Summary
EXHIBIT B .....Intentionally Omitted
EXHIBIT C..... Bonding instructions for Public Works Contract of $50,000 and more
EXHIBIT D..... Wage Scale

3. **City:** The words "CITY's Representative" or "representative" shall mean _____ or the designee under whose supervision these contract documents, including the plans and specifications, were prepared, or who may inspect work performed under this Contract; or such other representative, supervisor, or inspector as may be authorized by CITY to act in any particular capacity under this Contract.

4. **City's Representative:** CITY's Representative may make periodic visits to the site to observe the progress and quality of the executed work and to determine, in general, if the work is proceeding in accordance with the contract documents. CITY's representative will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the work, nor will such representative be responsible for the construction means, methods, techniques, sequences or procedures, or the safety precautions incident thereto. CITY's representative will not be responsible for COMPANY's failure to perform the work in accordance with the contract.

5. **Company:** Unless otherwise stipulated, COMPANY shall provide and pay for all materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and all water, light, power, fuel,

transportation and all other facilities necessary for the execution and completion of the work covered by the contract documents. Unless otherwise specified, all materials shall be new, and both workmanship and materials shall be of a good quality. COMPANY shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

5.1. COMPANY shall, at its expense, obtain all permits and licenses necessary for the performance of this contract and pay all fees and taxes required by law, and comply with all laws, ordinances, rules and regulations governing COMPANY's performance of the contract, including all environmental laws and regulations, whether state or federal.

5.2. All work shall be done and all materials furnished in strict conformity with the contract and specifications.

6. **Minor Work Not Mentioned:** All minor detail of the work not specifically mentioned in the Specifications but obviously necessary for the proper completion of the work, such as the proper connection of new work to old, shall be considered as incidental to and a part of the work for which the prices are named in the contract. COMPANY will not be entitled to any additional compensation therefor unless specifically stated otherwise. Otherwise the term "extra work" as used in this contract shall mean and include all work that may be required by CITY to be done by COMPANY to accomplish any alteration or addition to the work as shown on the Specifications.

6.1. COMPANY shall perform all extra work under the direction of CITY's Representative when presented with a written work order signed by CITY's Representative, subject, however, to the right of the COMPANY to require written confirmation of such extra work order by CITY. Payment for extra work shall be as agreed in the work order.

7. **Safety:** COMPANY shall at all times exercise reasonable precaution for the safety of employees and others on or near the work and shall comply with all applicable provisions of federal, state and municipal laws. All machinery and equipment and other physical hazards shall be guarded in accordance with federal, state or municipal laws or regulations.

8. **INDEMNITY: COMPANY SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND CITY AND ALL OF CITY'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, ACCIDENTAL DEATH, LOSSES, PROPERTY DAMAGE AND EXPENSES OF ANY CHARACTER WHATSOEVER, INCLUDING ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR**

PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF COMPANY, THEIR AGENTS OR EMPLOYEES, OR ANY SUBCONTRACTOR, IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS CONTRACT, AND COMPANY WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST CITY OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES. THE OBLIGATIONS CONTAINED IN THIS SECTION 8 SHALL SURVIVE THE TERMINATION OF THIS CONTRACT.

8.1. **COMPANY SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND CITY AND ALL OF CITY'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, ACCIDENTAL DEATH, PROPERTY DAMAGE, LOSSES, AND EXPENSES OF ANY CHARACTER WHATSOEVER INCLUDING ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF CITY, CITY'S OFFICERS, AGENTS AND EMPLOYEES, WHETHER SUCH NEGLIGENT ACT WAS THE SOLE PROXIMATE CAUSE OF THE INJURY OR DAMAGE OR A PROXIMATE CAUSE JOINTLY AND CONCURRENTLY WITH COMPANY OR COMPANY'S EMPLOYEES, AGENTS OR SUBCONTRACTORS NEGLIGENCE IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS CONTRACT, AND COMPANY WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST CITY OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES. THE OBLIGATIONS CONTAINED IN THIS SECTION 8.1 SHALL SURVIVE THE TERMINATION OF THIS CONTRACT.**

8.2. **COMPANY AGREES THAT IT WILL INDEMNIFY AND SAVE CITY HARMLESS FROM ALL CLAIMS GROWING OUT OF ANY DEMANDS OF SUBCONTRACTORS, LABORERS, WORKMEN, MECHANICS, MATERIALMEN, AND FURNISHERS OF MACHINERY AND PARTS THEREOF, EQUIPMENT, POWER TOOLS AND ALL SUPPLIES, INCURRED IN THE FURTHERANCE OF THE PERFORMANCE OF THIS CONTRACT. WHEN CITY SO DESIRES, COMPANY SHALL FURNISH SATISFACTORY EVIDENCE THAT ALL OBLIGATIONS OF THE NATURE HEREINABOVE DESIGNATED HAVE BEEN PAID, DISCHARGED OR WAIVED. COMPANY, ITS SURETIES AND INSURANCE CARRIERS SHALL DEFEND, INDEMNIFY AND SAVE HARMLESS CITY AND**

ALL OF ITS OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, OR CLAIMS OF ANY CHARACTER WHATSOEVER, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ARISING FROM ANY ACT OF COMPANY OR ANY SUBCONTRACTOR, THEIR AGENTS OR EMPLOYEES, IN THE EXECUTION AND SUPERVISION OF THIS CONTRACT, AND WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST CITY OR ANY OF ITS OFFICERS, AGENTS, OR EMPLOYEES INCLUDING ATTORNEY'S FEES. THE OBLIGATIONS CONTAINED IN THIS SECTION 8.2 SHALL SURVIVE THE TERMINATION OF THIS CONTRACT.

9. **Start of Work:** COMPANY shall commence work no later than ten (10) days after receipt of the execution of this document or other written release to proceed and shall complete such work no later than calendar days after release to proceed.

10. **Clean Up:** COMPANY shall promptly remove from CITY's premises all materials condemned by CITY's Representative on account of failure to conform to the contract, whether actually incorporated in the work or not, and COMPANY shall at its own expense promptly replace such condemned materials with other materials conforming to the requirements of the contract. COMPANY shall also bear the expense of restoring all work of other contractors damaged by any such removal or replacement. If COMPANY does not remove and replace any such condemned materials within a reasonable time after a written notice by CITY, CITY may remove and replace such at COMPANY's expense.

11. **Warranty:** Neither the final payment nor any provision in this contract shall relieve COMPANY of responsibility for faulty materials or workmanship, and he shall remedy any defects due thereto and pay for any damage to other work resulting therefrom, which shall appear within a period of one (1) year from the date of substantial completion. CITY shall give notice of observed defects with reasonable promptness.

12. **Remedy:** CITY may, on account of subsequently discovered evidence, withhold whole or part of any payment to such extent as may be necessary to protect itself from loss on account of:

12.1. Defective work not remedied; or

12.2. Claims filed or reasonable evidence indicating possible filing of claims; or

12.3. Failure of COMPANY to make payments promptly to subcontractors or for material or labor which CITY may pay as an agent for the COMPANY; or

12.4. Damages to another contractor or subcontractor.

When the above grounds to withhold payment are removed, or COMPANY provides a surety bond satisfactory to CITY, which will protect CITY in the amount withheld, payment may be released.

13. **Funding Out:** In the event no funds or insufficient funds are appropriated and budgeted or are otherwise unavailable in any fiscal period for contract payments due under the contract, then this contract shall terminate on the last day of the fiscal period for which full appropriations were made, without penalty or expense to CITY of any kind whatsoever.

14. **Wage Scale:** COMPANY agrees to pay all workmen in his employ no less than the generally prevailing wage rate for employees of similar category in the Permian Basin Area, as is depicted in the wage rate scale attached hereto as EXHIBIT D, and incorporated herein by reference for all legal purposes.

14.1. If applicable, the Davis-Bacon Act, 29 CFR 5.5, and any related acts or regulations are hereby incorporated by reference and made a part of this Contract, and all terms and requirements under said laws, by such incorporation, are made terms and requirements of this Contract, to which the parties to this Contract have agreed to be bound.

15. **Prompt Pay Act:** CITY and COMPANY agree that Texas Government Code, Chapter 2251, Payment for Goods and Services (the "Prompt Pay Act") does not waive governmental immunity.

16. **Payment; Retainage:** After all work is completed by COMPANY, including all Change Orders altering the original scope and amount of the contract are completed, and the CITY has inspected and approved that the work is completed and in compliance with the contract and all subsequent Change Orders, the CITY may thereafter issue payment to COMPANY in the amount of the contract and all Change Orders. The CITY shall be the final judge of when the work is completed by COMPANY. The CITY, in its sole discretion, shall determine if the work under the contract and under any Change Orders has been done to the CITY's requirements.

16.1. The CITY may make periodic payments to COMPANY; provided, however, such periodic payments may only be made pursuant to this section, and only after all work and all Change Orders are completed by COMPANY and approved by the CITY. The approval shall be in the CITY's sole discretion. Requests for progress payments may be made to the extent of the materials and labor completed at the end of each month. Upon approval by the CITY or the CITY's representative, the request and invoice shall be forwarded for payment less 5% retainage. The total of these payments shall not exceed 95% of the total contract amount.

17. **Late Completion; Liquidated Damages:** It is hereby understood and mutually agreed, by and between COMPANY and the CITY, that the date of beginning and the time for completion as specified in the contract of the work to be done hereunder are ESSENTIAL CONDITIONS of this contract; and it is further mutually understood and agreed that the work embraced in this contract shall be commenced on a date to be specified in the "Notice to Proceed." COMPANY agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between COMPANY and the CITY, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

17.1. In the event COMPANY shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the CITY, then COMPANY and COMPANY's surety, if any, shall be liable for and does hereby agree, as a part consideration for the awarding of this contract, to pay to the CITY $500.00, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every day that COMPANY shall be in default after the time stipulated in the contract for completing the work. Further, the CITY shall have the right to cancel this contract for such delay. In the event the CITY cancels this contract pursuant to the terms of this section, the CITY shall pay to COMPANY only those monies deemed appropriate by the CITY, in its sole discretion, to compensate COMPANY for any work actually performed, less any liquidated damages COMPANY owes the CITY.

17.2. The said amount is fixed and agreed upon by and between COMPANY and the CITY because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the CITY would in such event sustain, and said amount is agreed to be the amount of damages which the CITY would sustain and said amount shall be retained from time to time by the CITY from current periodical estimates.

17.3. It is further agreed that time is of the essence of each and every portion of this contract and of the specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this contract. Provided, that COMPANY shall not be charged with liquidated damages or any excess cost when the CITY determines, in its sole discretion, that COMPANY is without fault and COMPANY's reasons for the time extension are acceptable to the CITY. Provided, further, that COMPANY shall not be charged with liquidated damages or excess cost when the delay in completion of the work is due:

a. To any preference, priority or allocation order duly issued by the Government;

b. To unforeseeable cause beyond the control and without the fault or negligence of COMPANY, including, but not restricted to, acts of God, or of the public enemy, acts of the CITY, acts of another contractor in the performance of a contract with the CITY, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather; and

c. To any delays of subcontractors or suppliers occasioned by any of the causes specified in subsections (a) and (b) of this article.

17.4. Provided, further, that COMPANY shall, within ten (10) days from the beginning of such delay, unless the CITY shall, in its sole discretion grant a further period of time prior to the date of final settlement of the contract, notify the CITY, in writing, of the causes of the delay, who shall ascertain the facts and extent of the delay and notify COMPANY within a reasonable time of its decision in the matter.

17.5. **COMPANY AGREES THAT THE PAYMENT OF SUCH LIQUIDATED DAMAGES MAY BE RECOVERED BY THE CITY FROM RETAINAGE HELD BY THE CITY. NOTWITHSTANDING ANY OTHER PROVISION HEREOF, COMPANY HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY, CITY'S EMPLOYEES AND OFFICERS FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES, OR CAUSES OF ACTION OF ANY KIND WHATSOEVER ARISING FROM THE CITY WITHHOLDING PAYMENT FROM COMPANY AS LIQUIDATED DAMAGES FOR COMPANY'S FAILURE TO COMPLETE THE WORK WITHIN THE TIME SPECIFIED HEREIN, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, OR CITY'S NEGLIGENCE.**

17.6. **COMPANY SHALL RECEIVE NO FINANCIAL COMPENSATION FOR DELAY OR HINDRANCE TO THE WORK. IN NO EVENT SHALL THE CITY BE LIABLE TO COMPANY OR ANY SUBCONTRACTOR OR SUPPLIER, ANY OTHER PERSON OR ANY SURETY FOR OR ANY EMPLOYEE OR AGENT OF ANY OF THEM, FOR ANY DAMAGES ARISING OUT OF OR ASSOCIATED WITH ANY DELAY OR HINDRANCE TO THE WORK, REGARDLESS OF THE SOURCE OF THE DELAY OR HINDRANCE, INCLUDING EVENTS OF FORCE MAJEURE, AND EVEN IF SUCH DELAY OR HINDRANCE RESULTS FROM, ARISES OUT OF OR IS DUE, IN WHOLE OR IN PART, TO THE NEGLIGENCE OF THE CITY. COMPANY'S SOLE REMEDY IN ANY SUCH CASE SHALL BE AN EXTENSION OF TIME.**

18. **No Third-Party Beneficiary:** CITY's approval of this contract does not create a third-party

beneficiary. There is no third-party beneficiary to this contract. No person or entity who is not a party to this contract shall have any third-party beneficiary or other rights hereunder.

19. WAIVER OF ATTORNEY FEES: BY EXECUTING THIS CONTRACT, COMPANY AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST CITY REGARDING THE AWARD OR ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THIS CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THIS CONTRACT. COMPANY SPECIFICALLY AGREES THAT IF COMPANY BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS CONTRACT, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS CONTRACT, INCLUDING, BUT NOT LIMITED TO, ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET SEQ., AS AMENDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, COMPANY AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH COMPANY MIGHT OTHERWISE BE ENTITLED.

COMPANY AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY-EXISTING KNOWN RIGHT. COMPANY ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THIS CONTRACT. COMPANY FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN CITY AND COMPANY. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OR GOVERNMENTAL IMMUNITY AND SHALL SURVIVE THE TERMINATION OF THIS CONTRACT.

COMPANY IS RELYING ON ITS OWN JUDGMENT. COMPANY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION. THE OBLIGATIONS CONTAINED IN THIS SECTION 18 SHALL SURVIVE THE TERMINATION OF THIS CONTRACT.

20. **Governmental Immunity:** By executing this contract CITY is not waiving its right of governmental immunity. CITY is retaining its immunity from suit. CITY is not granting consent to be sued by legislative resolution or action.

THERE IS NO WAIVER OF GOVERNMENTAL IMMUNITY.

21. **Insurance:**

COMPANY shall at all times during the term of this Contract maintain and keep in full force and effect insurance in the following types and minimum amounts with companies authorized to do business in the State of Texas:

Commercial General Liability (including Contractual liability):	
-Personal Injury:	$1,000,000.00 per person
	$1,000,000.00 per occurrence
-Property Damage:	$500,000.00 per occurrence
Business Automobile Liability:	$250,000.00 combined single limit - Personal Injury and Property Damage
Workers' Compensation:	Statutory limits
Employers' Liability:	$500,000.00 per accident or occurrence

The Commercial General Liability shall be on a per project aggregate, including completed operations, and shall be on a claims-occurred basis. This insurance shall name CITY as an additional insured and waive subrogation in favor of CITY.

The Business Automobile Liability insurance provided by COMPANY shall cover any auto for bodily injury and property damage, including owned vehicles, hired and non-city vehicles, and employee non-ownership, and the amount of such policy shall be a minimum of $250,000.00 covering any vehicle used for the execution of the work that is the subject of this Contract. This insurance shall name CITY as an additional insured and waive subrogation in favor of CITY.

The Workers' Compensation coverage provided by COMPANY shall inure to the benefit of employees injured during the course and scope of their employment by COMPANY pursuant to this Contract. The Workers' Compensation shall waive all rights of subrogation in favor of CITY.

All insurance required pursuant to this Contract shall provide for a waiver of subrogation in favor of CITY. All insurance required pursuant to this Contract, except for Workers' Compensation Insurance, shall name CITY as an additional insured on a claims occurred basis. CITY shall be provided the notice by COMPANY's insurance provider not later than thirty (30) days prior to any reduction or termination of such coverage.

COMPANY shall contractually require all contractors, subcontractors, and sub-subcontractors that work on any portion of the work that is the subject of this Contract to obtain insurance coverage that meets or exceeds the policy requirements and minimum amounts specified herein. All contractors, subcontractors, and sub-subcontractors shall obtain insurance policies that provide blanket waivers of

subrogation in favor of the City of Midland and policies that name the City of Midland as an additional insured on a claims occurred basis (except workers' compensation).

The parties agree that, prior to the execution of the Contract, COMPANY shall provide one or more certificates of insurance specifically stating that these requirements have been met and subject to the approval of CITY. CITY shall not be required to provide any insurance whatsoever pursuant to this Contract.

COMPANY certifies that the certificate of insurance provided as required herein complies with the requirements of Chapter 1811 of the Texas Insurance Code. COMPANY shall not use an unapproved certificate of insurance or insert inappropriate language on a certificate. Compliance with state law is the sole responsibility of COMPANY.

22. **Assignment**: COMPANY shall not, either directly or indirectly, assign all or any part of this Contract or any interest, right or privilege herein, without the prior written consent of CITY. The issue on whether or not to grant consent to an assignment is in the sole discretion of CITY.

23. **RELEASE: NOTWITHSTANDING ANY OTHER PROVISION CONTAINED HEREIN, COMPANY HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY AND CITY'S COUNCIL MEMBERS, EMPLOYEES, AND OFFICERS FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER THAT COMPANY HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING, BUT NOT LIMITED TO, BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, OR CITY'S NEGLIGENCE. THE OBLIGATIONS CONTAINED IN THIS SECTION SHALL SURVIVE THE TERMINATION OF THIS CONTRACT.**

24. **Governing Law and Venue:** This contract shall be governed by the laws of the State of Texas. All performance and payment made pursuant to this contract shall be deemed to have occurred in Midland County, Texas. The obligations and undertakings of each of the parties to this Agreement shall be deemed to have occurred in Midland County, Texas. Exclusive venue for any claims, suits or any other action arising from or connected in any way to this contract or the performance of this contract shall be in Midland County, Texas.

25. **Independent Contractor:** COMPANY shall perform all work and services described herein as an independent contractor and not as an officer, agent, servant, or employee of CITY. COMPANY shall have exclusive control of, and the exclusive right to control the details of the services and work to be

performed hereunder, and all persons performing the same. COMPANY shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors and subcontractors and the doctrine of respondeat superior shall not apply as between CITY and COMPANY, its officers, agents, employees, contractors and subcontractors. Nothing in this Contract shall be construed as creating a partnership or joint enterprise between CITY and COMPANY. No person performing any of the work and services described hereunder by COMPANY shall be considered an officer, agent, servant or employee of CITY. Further, it is specifically understood and agreed that nothing in this contract is intended or construed as creating a "Community of Pecuniary Interest" or an "Equal Right of Control" which would give rise to vicarious liability.

COMPANY shall be an independent contractor under this Contract and shall assume all of the rights, obligations and liabilities, applicable to it as such independent contractor hereunder. CITY does not have the power to direct the order in which the work is done. CITY shall not have the right to control the means, methods or details of COMPANY's work. COMPANY shall assume exclusive responsibility for the work. COMPANY is entirely free to do the work in its own way.

26. **Notice of Alleged Breach; Statutory Prerequisites:** As a condition precedent to filing suit for alleged damages incurred by an alleged breach of an express or implied provision of this Contract, COMPANY or its legal representative, shall give the City Manager, or any other reasonable official of CITY, notice in writing (consisting of one (1) original and seven (7) copies of notice attached to a copy of this Contract) of such damages, duly verified, within one hundred twenty (120) days after the same has been sustained. The discovery rule does not apply to the giving of this notice. The notice shall include when, where and how the damages occurred, the apparent extent thereof, the amount of damages sustained, the amount for which COMPANY shall settle, the physical and mailing addresses of COMPANY at the time and date the claim was presented and the physical and mailing addresses of COMPANY for the six (6) months immediately preceding the occurrence of such damages, and the names and addresses of the witnesses upon whom COMPANY relies to establish its claim; and a failure to provide such written notification within the time and manner provided herein shall exonerate, excuse and except CITY from any liability whatsoever. CITY is under no obligation to provide notice to COMPANY that COMPANY's notice is insufficient. CITY reserves the right to request additional information regarding the claim. Said additional information shall be supplied within thirty (30) days after receipt of notice.

The statutory prerequisites outlined herein constitute jurisdictional requirements pursuant to Section 271.154 of the Texas Local Government Code and Section 311.034 of the Texas Government Code. Notwithstanding any other provision to the contrary, COMPANY's failure to comply with the

requirements of this Section shall perpetually bar COMPANY's claim for damages under Chapter 271 of the Texas Local Government Code, and Section 311.034 of the Texas Government Code, regardless if CITY has actual or constructive notice or knowledge of said claim or alleged damages. COMPANY agrees that the requirements of this entire Contract are reasonable. The provisions and obligations of this Section shall survive the termination of this Contract.

27. **Consideration:** The terms of this Contract are supported by good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the parties named herein.

28. **Termination At Will:** CITY may terminate this Contract at will for no or any reason upon giving at least one hundred eighty (180) days written notice to COMPANY. The parties to this Contract understand and agree that it is in CITY's sole discretion to cancel the Contract during the term of the Contract without penalty to CITY. COMPANY has no expectation and has received no guarantees that this Contract will not be terminated before the end of the Contract term. The parties have bargained for the flexibility of terminating this Contract upon tender of the requisite notice at any time during the term of the Contract. All work and services under the Contract shall be suspended upon termination of the Contract becoming effective.

29. **Compliance:** COMPANY agrees that it shall comply with Texas Government Code Section 2252.908, *et seq.*, as amended. COMPANY agrees that it shall comply with Texas Local Government Code Section 176.006, *et seq.*, as amended.

30. To the extent that Sections 2271.002 and 2274.002 of the Texas Government Code (collectively, the "Anti-Boycott Statutes") apply to this Contract, Company hereby verifies:

- that Company does not boycott Israel and will not boycott Israel during the term of this Contract;
- that Company does not boycott energy companies and will not boycott energy companies during the term of this Contract; and
- that Company does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association and will not discriminate during the term of this Contract against a firearm entity or firearm trade association.

To the extent that the Anti-Boycott Statutes do not apply to this Contract, such verification is not required, and Company shall be deemed to have not made such verification.

31. **Records Retention and Production of Information.** To the extent that this Contract constitutes a contract described by Section 552.371 of the Texas Government Code, COMPANY shall: (i) preserve all contracting information related to this Contract as provided by the records retention requirements

applicable to CITY for the duration of this Contract; (ii) promptly provide to CITY any contracting information related to the Contract that is in the custody or possession of COMPANY on request of CITY; and (iii) on completion of the Contract, either: (a) provide at no cost to CITY all contracting information related to the Contract that is in the custody or possession of COMPANY; or (b) preserve the contracting information related to the Contract as provided by the records retention requirements applicable to CITY.

32. **Public Information.** To the extent that this Contract is a contract described by Section 552.371 of the Texas Government Code, COMPANY agrees as follows in accordance with Section 552.372(b) of the Texas Government Code: The requirements of Subchapter J, Chapter 552, Government Code, may apply to this Contract, and COMPANY agrees that the contract can be terminated if COMPANY knowingly or intentionally fails to comply with a requirement of that subchapter.

33. **Conflict of Terms.** If a conflict of terms or language exists between: (i) any of the provisions of this Contract and (ii) any of the provisions contained in any exhibit(s) attached to this Contract, precedence shall be given to the provisions of this Contract. For the avoidance of any doubt, the provisions contained in this Contract shall supersede any and all conflicting provisions contained in any exhibit(s) attached hereto. Furthermore, the parties acknowledge and agree that any provision contained in an exhibit(s) attached to this Contract that imposes an additional express or implied obligation on CITY is hereby made void and of no force or effect. CITY's sole and exclusive obligations under this Contract are contained in the provisions of this Contract that precede the signature page(s), which evidences the parties' execution.

34. Company agrees that all iron or steel products produced through a manufacturing process and used in the project that is the subject of this Contract shall be produced in the United States in accordance with Government Code § 2252.202, et seq., as amended.

EXECUTED IN DUPLICATE the day and year first above mentioned.

THE CITY OF MIDLAND, TEXAS

By: _____
Tommy Gonzalez, City Manager

ATTEST

_____
Marcia Bentley-German, City Governance Officer/City Secretary

APPROVED ONLYAS TO FORM

_____
John Ohnemiller, City Attorney

COMPANY:

By: _____

Name:_____

Title: _____

STATE OF _____ §

§

COUNTY OF_____ §

BEFORE ME, the undersigned authority, on this ____ day of _____, 20____ personally appeared, _____, an officer of _____, known to me to be the person and official whose name is subscribed to the forgoing instrument, and acknowledged to me that he executed the same as the act and deed of said corporation, for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the ____day of _____, 20____.

_____

Notary Public, State of

EXHIBIT C

Bonding Requirements

The successful bidder shall be required to furnish a Performance & Payment Bond* for bids in excess of $50,000.00, in an amount equal to one hundred percent (100%) of the total contract price, such bond to be executed in five (5) original counterparts by a Corporate Surety authorized to do business in the State of Texas and acceptable to the City of Midland. All bonds must be executed on forms contained in these contract documents. The form of agreement which the successful bidder, as contractor, will be required to execute is also included herewith. The form of agreement and the form of the bonds should be carefully examined by the bidder.

A certified check, cashier's check, bank money order, or irrevocable letter of credit issued by a bank satisfactory to the City, or a bidder's bond on the form provided, in the amount of five percent (5%) of the largest possible lump sum bid submitted, payable without recourse to the City, must accompany the bidder's proposal, as a guaranty that the bidder will enter a contract and execute the required payment bond and guaranty in the forms provided within fifteen (15) days after notice of award of contract to him. Bids or proposals without the required bid guaranty will not be considered. All bid sureties and payment bonds shall name the City of Midland as Obligee.

*A cash security such as a cashier's check or irrevocable letter of credit issued by a bank satisfactory to the City for 100 % of the contract amount may be supplied in lieu of the Performance and Payment Bonds. The check will be returned un-cashed upon satisfactory completion of the work and evidence of payment of all obligations due for the contract.

BID BOND

THE STATE OF TEXAS §

SURETY NO. _____

COUNTY OF MIDLAND §

KNOW ALL MEN BY THESE PRESENTS, THAT _____

_____

_____

(hereinafter called the Principal), as Principal, and _____

_____

_____

(hereinafter called the Surety), as Surety, are held and firmly bound unto the City of Midland, Texas a home rule municipal corporation of Midland County, Texas, (hereinafter called the Obligee), in the amount of _____

_____ DOLLARS

($_____), for the payment whereof the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a Bid or Proposal to enter into a certain written Contract with the obligee to_____

_____.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully enter into such written Contract, then this obligation shall be void; otherwise to remain in full force and effect.

IT IS EXPRESSLY UNDERSTOOD AND AGREED that if said Principal should withdraw its Bid anytime after such Bid is opened and before official rejection to such Bid or, if successful in securing the award thereof, said Principal should fail to enter into the Contract and furnish satisfactory Performance Bond and Payment Bond, the Obligee, in either such events, shall be entitled and is hereby given the right to collect the full amount of this Bid Bond as liquidated damages.

PROVIDED, further that if any legal action be filed upon this Bond venue shall lie in Midland County, Texas

IN WITNESS THEREOF, THE SAID PRINCIPAL AND SURETY do sign and seal this instrument, this _____ day of _____, 20____.

_____	_____
Principal	Surety
By _____	By _____
Address _____	Address _____
_____	_____

APPROVED AS TO FORM:

_____

City Attorney

NOTE: ATTACH POWER OF ATTORNEY

PAYMENT BOND

THE STATE OF TEXAS §

COUNTY OF MIDLAND §

SURETY NO _____

KNOW ALL MEN BY THESE PRESENTS, THAT _____ of the City of _____ of the County of _____ and State of Texas as Principal, and _____, as Surety, are held and firmly bound unto the City of Midland, Texas, as Obligee, in the amount of _____ DOLLARS ($ _____) for the payment whereof the said Principal and Surety bind themselves, their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the _____ day of _____, 20__, for the furnishing of materials, equipment to perform all labor and work necessary for _____, hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, the condition of the obligation is that if the said Principal shall pay all claimants supplying labor and material to him or a subcontractor in the prosecution of the work provided for in said contract, then this obligation shall be null and void; otherwise, it is to remain in full force and effect.

Surety, for value received, stipulates and agrees that no change, extension of time alteration or addition to the terms of the contract, or to the work performed there under, or the plans, specifications of drawings accompanying the same, or any assignment of the contract as may be provided for in the instructions to bidders, shall in anywise affect its obligation on this Bond, and it does waive notice of any such change, extension of

time, alteration or addition to the terms of the contract, assignment thereof, or to the work to be performed there under.

IN WITNESS WHEREOF the said Principal and Surety have signed and sealed this instrument, this _____ day of _____, 20__.

_____	_____
Principal	Surety
By _____	By _____
Address _____	Address _____
_____	_____
_____	_____

APPROVED AS TO FORM:

_____
City Attorney

NOTE: Attach Power of Attorney

Form Revised August 2012

PERFORMANCE BOND

THE STATE OF TEXAS §

COUNTY OF MIDLAND §

SURETY NO _____

KNOW ALL MEN BY THESE PRESENTS, THAT _____ (Hereinafter called the Principal[s]), as Principal(s), and _____ (Hereinafter called the Surety), as Surety, are held and firmly bound unto the City of Midland, Texas a home rule municipal corporation of Midland County, Texas, (hereinafter called the Obligee), in the amount of _____ DOLLARS ($ _____) for the payment whereof the said Principal and surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the _____day of _____, 20___ , for the furnishing of materials and equipment to perform all labor and work necessary for the construction of _____, specifically including in the scope of this work and bond, the additional maintenance guaranty provisions set forth in the contract conditions, which contract is hereby referred to and made a part hereof as fully and to the same extent as if copies at length herein, as well as the Principal's primary obligation to perform according to plans and specifications.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully perform the work in accordance with the plans, specifications, instructions to bidder, general and special conditions and other contract documents, including any addendum thereto, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED further that if any legal action be filed upon this Bond venue shall lie in Midland County, State of Texas.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract, or to the work performed thereunder, or the plans, specifications or drawings accompanying the same, or any assignment of the contract as may be provided for in the instructions to bidders, shall in anywise affect its obligation on this Bond, and it does waive notice of any such change, extension of time, alteration or addition to the terms of the contract, assignment thereof, or the work to be performed thereunder.

IN WITNESS WHEREOF, the said Principal and surety do sign and seal this instrument, this _____ day of _____ , 20___.

_____	_____
Principal	Surety
By _____	By _____
Address _____	Address _____
_____	_____
_____	_____

APPROVED AS TO FORM:

_____

City Attorney

NOTE: Attach Power of Attorney

Form Revised August 2012

"General Decision Number: TX20230002 01/06/2023

Superseded General Decision Number: TX20220002

State: Texas

Construction Types: Heavy and Highway

Counties: Armstrong, Carson, Crosby, Ector, Irion, Lubbock, Midland, Potter, Randall, Taylor and Tom Green Counties in Texas.

HEAVY & HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $16.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2023.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $12.15 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2023.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2023

SUTX2011-002 08/02/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER (Paving & Structures)	$ 13.55 **	
ELECTRICIAN	$ 20.96	
FORM BUILDER/FORM SETTER		
Paving & Curb	$ 12.36 **	
Structures	$ 13.52 **	
LABORER		
Asphalt Raker	$ 12.28 **	
Flagger	$ 9.30 **	
Laborer, Common	$ 10.30 **	
Laborer, Utility	$ 11.80 **	
Work Zone Barricade Servicer	$ 10.30 **	
POWER EQUIPMENT OPERATOR:		
Asphalt Distributer	$ 14.87 **	
Asphalt Paving Machine	$ 13.40 **	
Broom and Sweeper	$ 11.21 **	
Crane, Lattice Boom 80 Tons or Less	$ 16.82	
Crawler Tractor Operator	$ 13.96 **	
Excavator, 50,000 lbs or less	$ 13.46 **	
Front End Loader Operator, Over 3 CY	$ 12.77 **	
Front End Loader, 3CY or less	$ 12.28 **	

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     Loader/Backhoe.............$ 14.18 **
     Mechanic...................$ 20.14
     Milling Machine............$ 15.54 **
     Motor Grader,  Rough.......$ 16.15 **
     Motor Grader, Fine.........$ 17.49
     Pavement Marking Machine....$ 16.42
     Reclaimer/Pulverizer.......$ 12.85 **
     Roller, Asphalt............$ 10.95 **
     Roller, Other..............$ 10.36 **
     Scraper....................$ 10.61 **
     Spreader Box...............$ 12.60 **

Servicer.......................$ 13.98 **

Steel Worker (Reinforcing).....$ 13.50 **

TRUCK DRIVER
     Lowboy-Float...............$ 14.46 **
     Single Axle................$ 12.74 **
     Single or Tandem Axle Dump..$ 11.33 **
     Tandem Axle Tractor with
     Semi.......................$ 12.49 **
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WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher
minimum wage under Executive Order 14026 ($16.20) or 13658
($12.15).  Please see the Note at the top of the wage
determination for more information.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave
for Federal Contractors applies to all contracts subject to the
Davis-Bacon Act for which the contract is awarded (and any
solicitation was issued) on or after January 1, 2017.  If this
contract is covered by the EO, the contractor must provide
employees with 1 hour of paid sick leave for every 30 hours
they work, up to 56 hours of paid sick leave each year.
Employees must be permitted to use paid sick leave for their
own illness, injury or other health-related needs, including
preventive care; to assist a family member (or person who is
like family to the employee) who is ill, injured, or has other
health-related needs, including preventive care; or for reasons
resulting from, or to assist a family member (or person who is
like family to the employee) who is a victim of, domestic
violence, sexual assault, or stalking.  Additional information
on contractor requirements and worker protections under the EO
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is available at
https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates

the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"

SPECIAL PROVISIONS

ATTENTION: All Bidders are directed to pay special attention to the NOTICE TO BIDDERS section of the bid packet. Bidders have sole responsibility for complying with the current bid process requirements. Bidders also have sole responsibility for verifying that any bid submitted is completed correctly and includes all of the required documentation, including addendums.

1. SCOPE OF WORK:

Included in this Project will be construction of the Wall Street Sewer Diversion to be performed as outlined in the Plans and Specifications, which are necessary to satisfactorily complete the work.

The project will include installation of a 15-inch gravity sewer pipeline, lift station with two submersible pumps, 10-inch force main and 15-inch pipeline along Wall Street, Industrial Avenue and Midland Drive. Work to include electrical and instrumentation upgrades, sewer connections and bypass pumping.

The Owner reserves the right to abandon, without obligation to the Contractor, any part of the project, or the entire project, at any time before the Contractor begins any construction work authorized by the Owner.

Standard Specifications for Construction of the City of Midland will govern all construction, except as modified by these Special Provisions.

2. ORDER OF PRECEDENCE:

The Special Provisions take precedence over the General Conditions in this bid packet anywhere these two sections are not in agreement.

The Special Provisions take precedence over the City of Midland Specifications in this bid packet anywhere these two sections are not in agreement.

The Contractor is to bid the quantities in the Proposal section of the bid packet even if there is a discrepancy between the Proposal quantities and those noted or measured in the construction drawing set.

In the Proposal the long-hand dollar amount written in the Description column for each bid item will take precedence over the numerical dollar amount listed in the Unit Price column if there is a discrepancy between the two.

In the construction drawing set any written or noted dimension takes precedence over dimensions measured based on the drawing scale unless otherwise directed by the Engineer.

Any changes or revisions made as part of an Addendum for this project take precedence over the original bid packet and construction drawing set where the documents are in conflict.

3. EXAMINATION OF SITE:

Prospective bidders are to make a careful examination of the entire site of the project and are to make such explorations as may be necessary to determine the subsoil and/or water conditions to be encountered; improvements and obstructions which may be encountered; methods of providing ingress-egress to private as

well as public property; methods of handling traffic during construction and maintenance of the entire project as well as any section thereof, protection of all existing structures both above and below ground; and how the plans fit the proposed project and especially if any discrepancies exist.

4. PAYMENT:

Payment and retainage (five percent, 5%) shall be per the General Conditions.

Payment will be made for material installed, not for material delivery.

5. SAFETY REQUIREMENTS:

It is the responsibility of the Contractor to follow and comply at all times with Occupational Safety and Health Administration (OSHA) and all other applicable safety regulations and requirements throughout the course of the project's work. The City of Midland reserves the right to require additional safety measures on the project site at any time if they are needed in the opinion of the Engineer for the safety of the work crews or public.

6. SAFETY RESTRICTIONS – WORK NEAR HIGH VOLTAGE LINES:

The following procedure will be followed regarding the subject item on this contract:

1) A warning sign painted yellow with black letters that are legible at twelve feet shall be placed inside and outside vehicles such as cranes, derricks, power shovels, drilling rigs, pile drivers, hoisting equipment or similar apparatus. The warning sign shall read as follows:

   "WARNING – UNLAWFUL TO OPERATE THIS EQUIPMENT WITHIN SIX FEET OF HIGH VOLTAGE LINES"

2) Equipment that may be operated within ten feet of high voltage lines shall have an insulation cage-type of guard about the boom or arm, except back hoes or dippers, and insulator links on the lift hook connections.

3) When necessary to work within six feet of high voltage electric lines, notification shall be given to the power company of who will erect temporary mechanical barriers, de-energize the line, or raise or lower the line. The notifying department shall maintain an accurate log of all such calls to the Power Company, and shall record action taken in each case.

4) The Contractor is required to make arrangements with the Power Company for the temporary relocation or raising of high voltage lines at the Contractor's sole cost and expense.

5) No person shall work within six feet of a high voltage line without protection having been taken as outlined in Paragraph (3).

7. TRAFFIC CONTROL:

All proposed traffic control shall be approved by the City where applicable. All traffic control plans must be submitted to and approved by the Construction Manager no less than two (2) business days prior to starting the construction work. Traffic control for each phase of work must be approved prior to starting that work.

Generic traffic control plans or typical details may be submitted for shoulder work on any class of roadway, or for work on local or collector streets that does not require the closure of any travel lanes (i.e., all lanes are open to traffic on striped roadways, or adequate width remains available for two-way traffic on unstriped roadways). Once a generic traffic control plan or typical detail for a certain type of setup has been approved one time, the Contractor shall only be responsible for notifying the Construction Manager of the location, type of setup, and dates on which they intend to utilize the pre-approved traffic control for the duration of the contract. No additional plan submittals will be required in these cases, except that the City reserves the right to suspend this exception at its discretion. For any work not fitting the above exception, or in the event that the exception is suspended by the City, a site-specific traffic control plan will be required for each work location and time period.

1. All temporary traffic control shall be in general conformance with the *Texas Manual on Uniform Traffic Control Devices* (TMUTCD) (latest edition as adopted by the Texas Department of Transportation), except as specifically directed by the City Engineer or City Traffic Engineer.
2. All temporary traffic control shall be designed, installed, and maintained by competent and qualified personnel with adequate experience in traffic control.
3. All temporary traffic control involving multiple lane closures or traffic shifts, full closures of collector or arterial streets, traffic control extending through a railroad crossing, or any setup reasonably determined by the City to be "complex", shall be implemented only by a contractor with specific experience and expertise in the field of traffic control (i.e., a qualified "barricade company").
4. A Traffic Control Plan (TCP) shall be submitted to the Engineering Services Department, Construction Manager, in advance of any work in the right-of-way that impacts traffic. No work shall occur until an approved TCP has been returned to the Contractor.
5. A copy of the approved TCP shall be kept in the possession of the person responsible for supervising the traffic control at all times while working in the right-of-way. The approved TCP shall be presented to City staff or law enforcement upon demand at any time.
6. Depending on site conditions and the nature of the work, temporary traffic control may be approved by the City for either of the following:
    a. All Times – All traffic control, including closures, may remain in place 24 hours per day until expiration of the approved TCP.
    b. Off-Peak Only – Lane or road closures are NOT permitted from 6:00-9:00 AM and 4:00-7:00 PM on weekdays (Monday through Friday). Other traffic control not related to lane or road closures may remain in place 24 hours per day until expiration of the approved TCP.
7. The contractor setting the temporary traffic control shall be responsible for the maintenance and upkeep of all signs, barricades, and other devices, at all times.
    a. All temporary traffic control setups shall be maintained at least one time per day, including weekends and holidays.
    b. More frequent maintenance shall be performed as needed, with particular emphasis to following up after severe weather events or during times of high winds.
    c. Maintenance shall include:
        i. Verifying and correcting the location and orientation of all signs, barricades, and other devices;
        ii. Keeping signs and reflective areas of barricades and other devices clean and free of dirt buildup so as to maintain appropriate visibility and legibility; and

iii. Ensuring the proper location, orientation, and operation of arrow boards or message boards, if present.

8. Arrow boards shall be required for lane closures under the following conditions:
    a. On roadways with a posted speed limit of 55 MPH or greater, for closures lasting more than one (1) hour;
    b. On roadways with a posted speed limit of 45 MPH or greater, for closures lasting more than four (4) hours;
    c. On any roadway if lanes will remain open to traffic travelling in the same direction on both sides of a closed lane during any overnight hours (from 7:00 PM to 6:00 AM); and

At other times as shown on the approved TCP, or as otherwise directed by the City.

8. DETOURS:

The Contractor is to prosecute his work in such a manner as to create a minimum of interruption to traffic and pedestrian facilities and to the flow of vehicular and pedestrian traffic within the project area.

9. PROPERTY AND RIGHT-OF-WAY ACCESS:

Access to adjacent properties must be maintained at all times unless otherwise directed by the Engineer. If the contractor will not be working in an area for a period of one week or more, special care is to be taken to address any unsafe conditions such as excavated areas or obstructions outside the worked area that could be tripping hazards, etc. Contractor must notify affected properties no less than two (2) business days prior to any planned access interruptions.

Contractor must coordinate with the City of Midland regarding any planned access interruptions for public Right-of-Way, or to restore any public infrastructure damaged during construction activities.

The City of Midland will provide the Contractor with a copy of the Temporary Construction Easement for the Ferguson Industrial (4407 W Industrial Ave, Midland, TX 79703).

10. PROPERTY AND RIGHT-OF-WAY SERVICE:

Service to adjacent properties must be maintained at all times unless otherwise directed by the Engineer. Such services include water, wastewater, fiber, cable, electric, and gas. Contractor must notify affected properties no less than two (2) business days prior to any planned service interruption.

Contractor must coordinate with the City of Midland regarding any planned service interruptions for public water or wastewater, or to restore any public infrastructure damaged during construction activities.

Contractor must coordinate with private service providers for any necessary service interruptions to their infrastructure or to restore service to their infrastructure in the event that a private service is disrupted, damaged, etc. during construction.

11. CONSTRUCTION SCHEDULE:

It is the responsibility of the Contractor to furnish the Construction Engineer, prior to construction, with a schedule outlining the anticipated time each phase of construction will begin and be completed, including sufficient time being allowed for clean-up.

12. CONSTRUCTION STAKING:

It is the responsibility of the Contractor to provide the project construction staking at fifty foot (50') intervals along the entire length of the project as well as at such control points as the Contractor deems necessary for proper execution of the work. Construction staking is to include grading and cuts as well as horizontal alignments and construction control points. Cut sheets are to be provided to the Engineer by the Contractor for review and approval.

13. SURVEY:

The Contractor is to provide GPS survey shots for all meters replaced to the City of Midland with each completed work order submittal. Survey data is to be shot in Texas Central Zone with 1983 NAD at 1.0' accuracy or better. Survey data is to be provided in Excel csv. file format with all rounding functions turned off.

14. CONSTRUCTION MATERIALS:

The Contractor is to only provide new materials for permanent installation in any and all parts of this project, and all such materials must comply with the General Conditions, the Bid Packet Specifications, and all applicable City of Midland Standards and Specifications.

For this project, the Standard Specification is hereby amended to read:

> Qualifications of Material Sources – Contractor is only to use pavement mixtures that have a proven record of acceptance by the City of Midland, or another Texas municipality, or have a proven record of meeting similar standards for state highway projects.

Concrete is only to be placed when the ambient temperature is between 40 degrees and 95 degrees Fahrenheit and the ambient temperature in the shade is higher than 40 degrees Fahrenheit or is 40 degrees Fahrenheit and rising.

All concrete pavement joints are to be sealed with Texas Department of Transportation (TxDOT) DMS-6310 SL-2 sealant, an American Society for Testing and Materials (ASTM) D 1190 Hot-Applied Single Component Joint Sealant, or a City of Midland approved equal. This will not apply to curb or sidewalk joints.

No construction materials are to be placed or installed during rain events unless they are necessary to resolve an emergency situation or to facilitate the project site erosion control measures.

15. EROSION CONTROL:

Erosion control is the responsibility of the Contractor and erosion control measures are to be implemented so as to prevent sediment erosion from wind, rain, and other elements from the project site. Should the Owner feel that supplementary erosion control measures are required in addition to those implemented by the Contractor then the Contractor will include additional erosion control measures within reason to the Owner's satisfaction and/or TCEQ requirements.

Reasonable erosion control measures include but are not limited to: construction entrance(s), concrete washout(s), perimeter silt fence or fiber wattle, rock rip-rap dams for concentrated runoff control, gutter and inlet protection measures such as sand bags, and stabilization of the construction area surfaces when construction work is not actively occurring by means of vegetative cover or seeded erosion control blankets.

Supplemental erosion control measures are ancillary to the project and not paid as a separate item, unless otherwise noted in the Proposal or Pay Notes.

Site cleanup work is to be done for this project as soon as possible as per the General Conditions and will be ancillary to the project and not paid as a separate item, unless otherwise noted in the Proposal or Pay Notes. Site cleanup is to take place throughout the project's construction as needed to maintain a clean and professional looking work area. No more than three calendar days are to elapse after completion of construction before the final roadway and right-of-way cleanup has been completed to the satisfaction of the Engineer.

16. WASTE MATERIAL:

Excess material from excavation and other construction or demolition activity will become the property of the Contractor. Excess excavation will be disposed of at locations secured by the Contractor and if necessary, approved by the Engineer. No material is to be placed on private property or City property without the approval of the Engineer and the property owner. Removal of excess material, excavation, and waste material are ancillary to the project and not paid as a separate item, unless otherwise noted in the Proposal or Pay Notes.

Excess concrete material must be washed out in a concrete washout within the project's job site area, or else any and all other concrete material washout must occur away from the job site area in the Contractor's or concrete Supplier's own operation yards or properties. Under no circumstances are concrete trucks allowed to washout in any job site excavations, channels, public right-of-way, or on private property.

Existing fire hydrants and existing water meters indicated for removal as part of the project are to be returned to the City of Midland by the Contractor and remain City property. These are ancillary to the project and will not be paid as separate items.

17. TESTING:

It is the Contractor's responsibility to perform all required testing for any and all materials and workmanship performed or installed as part of the project's work. The cost of all such testing is to be borne solely by the Contractor unless required by the Engineer for work or materials that had previously been tested and approved and had not experienced any change in condition since that time as a result of the Contractor's work or actions; or unless additional testing outside of the project scope is performed at the request of the Engineer.

Required testing includes:

Concrete Pavement – A Slump Test is required for every cylinder set (3 test cylinders) taken, and no less than 1 cylinder set per day is to be taken for testing when concrete is placed. Test results are to be given to the engineer upon completion of each test, with 1 cylinder set taken for:

A. Every 50 cubic yards of concrete placed for concrete pavement between street intersections.

B. Every 50 cubic yards of concrete placed for concrete pavement at a street intersection.

C. Every 2 sets of fillets and valley gutters at street approaches. (1 set = 2 fillets and 1 valley gutter)

D. Every 4 alley approaches or driveway approaches.

E. There will be no testing for curb, ramps, and sidewalks.

Concrete Pavement For Trench Repair – A Slump Test is required only if directed by the Engineer for pavement patches that are equal to or greater than 50 cubic yards (roughly equal to an 8' wide by 340' long by 6" thick pavement section). The slump test is to be performed once for every cylinder set (3 cylinders) taken, and no less than 1 cylinder set per day is to be taken for testing when concrete is placed. Test results are to be given to the engineer upon completion of each test. There will be no testing for curb, ramps, and sidewalks.

Asphalt Hot-Mix Pavement – A Nuclear Gauge Density Test is required for either each day that asphalt hot-mix is placed or for every 250 linear feet of asphalt hot-mix pass, whichever results in more frequent testing. The laboratory density limits will be a minimum limit of 96%, a maximum limit of 98%, and an optimum limit of 97%. The acceptable field density range for construction of this project is 93% - 98% with a target density of 95%. Test results are to be given to the Engineer upon completion of each test.

Asphalt Hot-Mix Pavement For Trench Repair – A Nuclear Gauge Density Test is required only if directed by the Engineer for pavement patches that are equal to or greater than 620 square yards (roughly equal to an 8' wide by 700' long pavement section). The laboratory density limits will be a minimum limit of 96%, a maximum limit of 98%, and an optimum limit of 97%. The acceptable field density limit will be a minimum limit of 93%, a maximum limit of 98%, and an optimum limit of 95%. Test results are to be given to the Engineer upon completion of each test.

Water Pipes & Fittings – Perform Pressure Testing and Bacterial Testing (Bac T)/Chlorination testing for all water mains and fire hydrants.

- Pressure Test – Perform test as described in the City of Midland Water Line Specifications, PART 10, Hydrostatic Tests, with the sole difference being that a continuous pressure of 180 pounds per square inch (psi) must be maintained over a continuous period of not less than four (4) hours rather than eight (8) hours. The acceptable field pressure limit will be a minimum 180 psi and a maximum 185 psi. A 2-3 psi drop in the measured pipe pressure during the first two (2) hour period will be acceptable to account for the compression of air within the pipe so long as the minimum and maximum allowed field pressure limits are not exceeded. There can be no variation in the measured pipe pressure during the last two (2) hours of the pressure test.

- Bac T/Chlorination Testing – Perform disinfection and test as described in the City of Midland Water Line Specifications, Part 9, Disinfection Of Pipe Lines.

Wastewater Gravity Pipes/Manholes – Perform air testing, mandrel testing, hydrostatic testing, and closed circuit televising (CCTV) for all wastewater mains and manholes.

- Air Test – Perform test as described in the City of Midland Gravity Flow Pipe Sewers And Fittings For Wastewater And Storm Water, Part 3.14, Testing Gravity Mains And Manholes.

- Mandrel Test – A successful mandrel pull is required for all wastewater pipes installed.

- Hydrostatic Testing – Perform test as described in the City of Midland Gravity Flow Pipe Sewers And Fittings For Wastewater And Stormwater Specifications, Part 3.14, Hydrostatic Testing.

- Closed Circuit Televising (CCTV) – Provide CCTV video of the wastewater mains for the full length of the wastewater system installed, including through all wastewater structures. CCTV video is not required for wastewater laterals unless directed by the Engineer.

Force Mains & Fittings (Wastewater & Storm Drain) – Perform pressure testing for all wastewater and storm drain force mains.

- Pressure Test – Perform test as described in the City of Midland Water Line Specifications, PART 10, Hydrostatic Tests, with the sole difference being that a continuous pressure of 180 pounds per square inch (psi) must be maintained over a continuous period of not less than four (4) hours rather than eight (8) hours. The acceptable field pressure limit will be a minimum 180 psi and a maximum 185 psi. A 2-3 psi drop in the measured pipe pressure during the first two (2) hour period will be acceptable to account for the compression of air within the pipe so long as the minimum and maximum allowed field pressure limits are not exceeded. There can be no variation in the measured pipe pressure during the last two (2) hours of the pressure test.

Storm Drain Pipes & Structures – Perform as-built survey and closed circuit televising (CCTV) for all storm drain pipes and structures.

- As-Built Survey of Storm Drain Pipes & Culverts – Provide as-built survey shots at fifty-foot (50') intervals along the storm drain pipe or culvert at the top of the pipe or culvert installed.

- As-Built Survey of Storm Drain Structures – Provide as-built survey shots at the inverts of all storm drain structures that are installed to verify the storm drain grades, including all manholes, junction boxes, and inlets.

- Closed Circuit Televising (CCTV) – Provide CCTV video of the storm drain for the full length of the storm drain system installed, including through all storm drain structures. CCTV video is not required for storm drain laterals unless directed by the Engineer.

18. COMPLIANCE:

The said Contractor further agrees to comply with all applicable provisions of the laws and building and construction codes of the City of Midland and the State of Texas, and with any regulations for the protection of workers which may be promulgated by the Government, and will protect such work with all necessary lights, barriers, safeguards, and warnings as provided for in said specifications and the Ordinance regulations.

19. PERSONNEL:

It is the Contractor's responsibility to have a supervising representative of the Contractor on the construction site any time that construction work is taking place. The Contractor's representative must be on the Contractor's direct payroll. Sub-contractors or paid consultants will not satisfy this requirement.

It is also the Contractor's responsibility to provide the City with a reliable contact for issue escalation coordination. Such contacts would include the Contractor's site foreman, the Contractor's construction project manager, etc.

20. INTENT OF THE PROPOSAL:

The intent of the proposal is to determine the lowest responsible bidder based on the total of the quantities and unit prices. Once the lowest responsible bidder is selected, the project will be awarded based on the terms and requirements of the contract outlined in the bid packet and construction drawings.

21. CONTRACT DEADLINE:

The deadline for substantial completion of this project is 240 calendar days total starting from the Notice to Proceed date.

Extensions of the project deadline may be requested by the Contractor for documented excepting conditions such as weather days, delays due to conflicts with existing franchise lines, etc. which are reasonably beyond the Contractor's control. Any and all deadline extensions must be submitted by the Contractor in writing to Engineer for review, and the approval or denial of the request rests solely with the Engineer.

Unless specifically granted in writing by the Engineer, there will be no suspension of project time between phases of construction.

22. WARRANTY PERIOD:

There is a one (1) year calendar warranty period on this project for all work performed or materials installed effective immediately upon acceptance of the improvements by the Owner. The warranty period will be based on the acceptance date of the project as a whole, and not any individual phases of the project.

23. BID PACKET COMPLETION ITEMS OF NOTE:

Bidders must be willing to sign the Contract as is if a bid is submitted. Revisions, alterations, deletions, additions, or any other changes of any kind by the bidder to the bid packet or other bid documents (such as the construction drawing set, addendums, etc.) will result in the bid submittal being deemed 'Non-Responsive' and the bid will not be accepted.

Bidders are reminded to make sure that the Conflict of Interest forms are completed if applicable before submitting a bid.

All bid items in the Proposal section must be completed for a bid submittal to be considered complete. Any bid item left blank, only partially completed, or that the bidder indicates they chose to not provide a bid for will be considered incomplete, and the entire bid submittal will also be deemed incomplete, the bid submittal will be deemed 'Non-Responsive', and the bid will not be accepted. Bidders bear sole responsibility for making sure that the Proposal is complete and in accordance with the instructions provided to bidders in the bid packet.

All acknowledgement forms for all addendums that are issued during the bid process for this project must be filled out and be included with any bid submittal for that bid submittal to be considered complete. Any bid submittal lacking these completed addendum acknowledgement forms will be deemed 'Non-Responsive' and the bid will not be accepted. Bidders bear sole responsibility for making sure that they have obtained all addendums issued prior to submitting their bid.

Bidders must provide documentation as part of the bid packet submittal proving that they possess active licenses that are equivalent to or a higher class than a Water Operator D license and also equivalent to or a higher class than either a Wastewater D license or a Class 1 Collections license, and the Contractor must maintain both of these active licenses for the entirety of the project. Any bid submittal that does not include this required

documentation for both licenses will be rejected as a non-responsive bid. If a Contractor allows either or both of the required licenses to lapse at any time during the course of the project then all work under this project will be halted and the City of Midland will have sole discretion to either allow the Contractor to renew both of their active licenses before resuming work or to end the project immediately.

Form Revised January 2023

IMPORTANT NOTICE

Conflict Of Interest Reporting Requirements

Compliance with LOCAL GOVERNMENT CODE TITLE 5. MATTERS AFFECTING PUBLIC OFFICERS AND EMPLOYEES SUBTITLE C. MATTERS AFFECTING PUBLIC OFFICERS AND EMPLOYEES OF MORE THAN ONE TYPE OF LOCAL GOVERNMENT CHAPTER 176. DISCLOSURE OF CERTAIN RELATIONSHIPS WITH LOCAL GOVERNMENT OFFICERS; PROVIDING PUBLIC ACCESS TO CERTAIN INFORMATION.

Form CIQ: This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session. This questionnaire shall be filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a). By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code. A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

Bidders are responsible for filing Conflict of Interest form "CIQ" in accordance with the above referenced statute. Failure to do so is a class C Misdemeanor. Contracts or Purchase Orders awarded to a vendor that has violated this law is subject to termination at such time that the violation is discovered with no recourse to the City of Midland. The bidder will be subsequently removed from the bidders list for a minimum of one year.

When there is no known conflict of interest as defined by the statute, it is not necessary to file/submit the Form CIQ. The form must be submitted if a conflict is subsequently discovered.

By submitting a response to this request, vendor represents that it complies with the requirements of Chapter 176 of the Texas Local Government Code.

For a current list of the local government officers go to: http://www.midlandtexas.gov/

Upon completion of the form, sign and submit with bid or mail to:

City of Midland
Attn: City Secretary
PO Box 1152
Midland, Texas 79702

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY
Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information is being disclosed.**

_____

Name of Officer

4 **Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.**

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

5 **Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.**

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7 _____ _____

Signature of vendor doing business with the governmental entity Date

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

(A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;

(B) a transaction conducted at a price and subject to terms available to the public; or

(C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

***

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds $2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than $100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

CITY OF MIDLAND

Consideration of Location of Bidder's Principal Place of Business
For Bids of $50,000 up to $100,000 for Services and $500,000 for Commodities
Affidavit of Eligibility

Pursuant to Texas Local Government Code 271.9051, in purchasing real property, personal property that is not affixed to real property, or services, if the City receives one or more bids from a bidder whose principal place of business is in the City of Midland and whose bid is within five percent (5%) of the lowest bid price received by the City from a bidder who is not a resident of the City of Midland, the City may enter into a contract with:

(1) the lowest bidder; or

(2) the bidder whose principal place of business is in the City of Midland if the City Council determines, in writing, that the local bidder offers the City the best combination of contract price and additional economic development opportunities for the City of Midland created by the contract award, including the employment of residents of the City of Midland and increased tax revenues to the City of Midland.

In order to receive consideration, bidders must submit this affidavit to:

Erika Martinez
Purchasing Manager
City of Midland
300 N. Loraine St.,
PO BOX 1152
Midland, TX 79702-1152

Complete all areas below. Incomplete affidavits may be rejected.

Local Business Name: _____

Local Address (must be within the City limits): _____

1. Is the above address the principal place of business for the business named above? ☐ Yes ☐ No
2. How many residents of the City of Midland are employed at the above business location? _____
3. Year your business was established in the City of Midland: _____
4. If you collect sales tax for ANY class of customer, provide the following Reseller information:

   Reseller Permit Number: _____

   Company Name and Address (as it appears on permit):

   _____

   _____

   _____

5. Does your business have more than one office in the State of Texas? ☐ Yes ☐ No
   If Yes, identify the office location considered as the point-of sale for the purpose of sales tax calculation:

   _____

   _____

6. Was the local business required to pay business and/or real property tax for the most recent tax year?

   ☐ Yes ☐ No

   If Yes, did the local business pay any of this tax to the City of Midland? ☐ Yes ☐ No

Under penalty of perjury, the undersigned states that the foregoing statements are true and correct. It is further acknowledged that any person, firm, corporation or entity intentionally submitting false information to the City in an attempt to qualify for eligibility shall be prohibited from bidding on City of Midland products and services for a period of one (1) year.

Authorized Signature: _____ Date: _____

Printed Name and Title: _____

NOTICE TO BIDDERS

IF THIS PURCHASE REQUIRES A CONTRACT, THE ATTACHED **CONTRACT AND INSURANCE REQUIREMENTS ARE NON-NEGOTIABLE**. MODIFICATIONS BY BIDDER/COMPANY OF ANY MATERIAL TERM(S) TO THE CONTRACT DOCUMENTS WILL BE DEEMED A NON-RESPONSIVE BID. NON-RESPONSIVE BIDS WILL BE REJECTED. BIDDER/COMPANY MUST BE WILLING TO SIGN THE CONTRACT AS IS AND WITHOUT MODIFICATIONS, PROVIDE PROPERLY EXECUTED BONDS (IF APPLICABLE) AND PROVIDE INSURANCE SPECIFICALLY AS REQUIRED WITHIN THE CONTRACT DOCUMENTS **WITHIN 21 DAYS** OF THE DATE OF THE TRANSMITTAL LETTER.

IF THE SELECTED BIDDER/COMPANY CANNOT MEET THE ABOVE REQUIREMENTS, THEN **THE CITY RESERVES THE RIGHT TO AWARD THIS PURCHASE TO ANOTHER BIDDER**.

IMPORTANT NOTICE – IF THE CONTRACT DOCUMENTS REQUIRE WORKER'S COMPENSATION INSURANCE, BIDDER/COMPANY MUST CARRY WORKER'S COMPENSATION INSURANCE TO BE ELIGIBLE FOR THIS CONTRACT. IF YOU CANNOT PROVIDE WORKER'S COMPENSATION INSURANCE AS REQUIRED BY STATE OF TEXAS STATUTE, WE RESPECTFULLY REQUEST THAT YOU "NO BID" THIS WORK.

COMPLIANCE: Company agrees that it shall comply with Texas Government Code Section 2252.908, *et seq.*, as amended. Company agrees that it shall comply with Texas Local Government Code Section 176.006, *et seq.*, as amended. For further instructions on how to comply with Texas Government Code Section 2252.908 and Texas Local Government Code Section 176.006,

please go to https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm and https://www.ethics.state.tx.us/filinginfo/conflict_forms.htm.

ANY VENDOR WHO FAILS TO COMPLY WITH THE TERMS OF THE AWARD **MAY BE DECLARED AN IRRESPONSIBLE VENDOR**. BIDS SUBMITTED BY SAID VENDOR SHALL NOT BE CONSIDERED AGAIN FOR A MINIMUM PERIOD OF SIX MONTHS AS DETERMINED BY THE CITY MANAGER.

IMPORTANT: READ CAREFULLY BEFORE MAKING BID
GENERAL CONDITIONS OF BIDDING

1. All bids are to be submitted as specified in the procurement document(s).

2. Each Bidder is requested to provide: Descriptive literature clearly marked to show each item on this bid. Any catalog or manufacturer's reference in this proposal is descriptive, but not restrictive, and is used only to indicate type and quality. If, however, the bidder proposes similar but not identical terms, he must furnish all particulars. If no mention is made of any exceptions, it is assumed that he is bidding on the article specified and not on an approved equal and he will be required to deliver exact article specified.

3. Prices should be itemized. (Indicate unit price and extend to show total price.) In case of discrepancy between the unit price and the extension, the unit price shall govern.

4. Unit price for each item offered shall include all discounts; e.g., trade, seasonal, etc. with net 30 days payment terms. Discounts shall not be shown as such but shall be incorporated in the base bid price. Any bid showing discounts will be considered an alternate bid. The City of Midland will not be responsible for any goods delivered without a purchase order number.

5. If the Contract is awarded, it will be awarded to either the lowest responsible bidder, or to the bidder who provides goods or services at the best value for the City of Midland. In determining the best value for the City of Midland, the City of Midland may consider the criteria enumerated in Section 252.043 of the Texas Local Government Code. The City of Midland reserves the right to award by item or by total bid, or to reject any or all bids or parts of bids. Further, the City of Midland reserves all rights granted by Section 271.027 of the Texas Local Government Code. The City of Midland reserves the right to award the bid to the lowest responsible bidder.

6. Time of proposed delivery shall be stated in number of calendar days.

7. NOTE: The City of Midland, Texas is exempt from all Federal, State and City tax. Please do not include these taxes in your bid price or invoice. Taxable items must be so designated, and the City will supply vendor with a Tax Exemption Certificate, properly executed.

8. All items are to be delivered, unloaded and stacked at the location indicated on the Bid Request and Purchase Order.

9. All items are to be delivered F.O.B. to the City of Midland, Texas with freight prepaid and included in the bid.

10. Detailed specifications rule over General specifications (headings, etc.)

11. The City of Midland reserves the right to remove a company from the bid list for (1) continued failure to respond to request for bids, (2) failure to deliver merchandise within promised time, or (3) delivery of substandard merchandise.

12. No officer or employee of the City shall have a financial interest, direct or indirect, in any contract with the City, or be financially interested, directly or indirectly, in the sale to the City of any lands, materials, supplies or services except as allowed under chapter 176 of the Local Government Code. Form CIQ shall be submitted and placed on file with the City of Midland.

13. The City shall determine the most advantageous bid for the City and accept the proposal of the responsible party submitting the lowest and/or most advantageous bid or reject any and all bids.

14. The City of Midland, Texas may consider as informal any bid not prepared and submitted in accordance with the provisions hereof, and may waive, in its sole discretion, any informalities.

15. Public Information. To the extent that Bidder is submitting a bid for a contract described by Section 552.371 of the Texas Government Code, Bidder agrees as follows in accordance with Section 552.372(b) of the Texas Government Code: The requirements of Subchapter J, Chapter 552, Government Code, may apply to this bid, and the contractor or vendor agrees that the contract can be terminated if the contractor or vendor knowingly or intentionally fails to comply with a requirement of that subchapter.

STANDARD PURCHASE TERMS AND CONDITIONS
PURCHASING DIVISION, CITY OF MIDLAND, TEXAS

"Seller", as used herein, has the same meaning as "Company". "Buyer", as used herein, has the same meaning as "City".

Seller and Buyer agree as follows:

1. SELLER TO PACKAGE GOODS - Seller will package goods in accordance with good commercial practice. Each shipping container shall be clearly and permanently marked as follows; (a) Seller's name and address, (b) Consignee's name, and address, and purchase order number, (c) Container number and total number of containers, e.g. box 1 of 4 boxes, and (d) the number of the container bearing the packing slip. Seller shall bear cost of packaging unless otherwise provided. Goods shall be suitably packed to secure lowest transportation costs and to conform with requirements of common carriers and any applicable specifications. Buyer's count or weight shall be final and conclusive on shipments not accompanied by packing lists.

2. SHIPMENT UNDER RESERVATION PROHIBITED - Seller is not authorized to ship the goods under reservation and no tender of a bill of lading will serve as a tender of goods.

3. TITLE & RISK OF LOSS - The title and risk of loss of the goods shall not pass to Buyer until Buyer actually receives and takes possession of the goods at the point or points of delivery in Midland, Texas.

4. NO REPLACEMENT OF DEFECTIVE TENDER - Every tender or delivery of goods must fully comply with all provisions of this contract as to time of delivery, quality and the like. If a tender is made which does not fully conform, this shall constitute a breach and Seller shall not have the right to substitute a conforming tender, provided, where the time for performance has yet expired, the Seller may reasonably notify Buyer of his intention to cure and may then make a conforming tender within the contract time but not afterward.

5. PLACE OF DELIVERY - The place of delivery shall be that set forth in the block of the purchase order entitled "deliver to".

6. INVOICES - Seller shall submit separate ORIGINAL invoices, on each purchase order. Invoices shall indicate the purchase order number. All invoices must be mailed to City of Midland, Accounts Payable, P.O. Box 1152, Midland, TX 79702-1152. Payment will be made within 30 days from the date the invoice and properly executed receiving documents are received by City of Midland, Accounts Payable at the above address. Invoices sent to any other address will delay payment.

7. GRATUITIES - The buyer may, by written notice to the seller, cancel this contract without liability to Seller, if it is determined by Buyer that gratuities, in the form of entertainment, gifts, or otherwise, were offered or given by the seller, or any agent or representative of the Seller, to any officer or employee of the City of Midland with a view toward securing a contract or securing favorable treatment with respect to performing of such a contract. In the event this contract is cancelled by Buyer pursuant to this provision, Buyer shall be entitled, in addition to any other rights and remedies, to recover or withhold the amount of the cost incurred by Seller in providing such gratuities.

8. WARRANTY - PRICE -

a. The price to be paid by the Buyer shall be that contained in Seller's bid which Seller warrants to be no higher than Seller's current prices on order by others for products of the kind and specifications covered by this agreement for similar quantities under similar or like conditions and methods of purchase. In the event Seller breaches this warranty, the prices of the items shall be reduced to the Seller's current prices on order by others, or in the alternative, Buyer may cancel this contract without liability to Seller for breach or Seller's actual expense.

b. The Seller warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for commission, percentage, brokerage, or contingent fee excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Seller for the purpose of securing business. For breach or violation of this warranty the Buyer shall have the right or rights to cancel this contract without liability and to deduct from the contract price, or otherwise recover the full amount of such commission, percentage, brokerage or contingent fee.

9. WARRANTY - PRODUCT - Seller shall not limit or exclude any implied warranties and any attempt to do so shall render this contract voidable at the option of the Buyer. Seller warrants that the goods furnished will conform to the specification, drawings, and description listed in the bid invitation, and to the sample(s) furnished by Seller, if any. In the event of a conflict between the specifications, drawings and descriptions, the specifications shall govern.

10. SAFETY WARRANTY - Seller warrants that the product sold to Buyer shall conform to the standards promulgated by the U.S. Department of Labor under the Occupational Safety and Health Act of 1970. In the event the product does not conform to OSHA standards, Buyer may return the product for correction or replacement at the Seller's expense. In the event Seller fails to make the appropriate correction within a reasonable time, correction made by buyer will be at Seller's expense.

11. RIGHT OF INSPECTION - Buyer shall have the right to inspect the goods at delivery before accepting them.

12. CANCELLATION - Buyer shall have the right to cancel for default all or any part of the undelivered portion of this order if Seller breached any of the terms hereof including warranties of Seller if the Seller becomes insolvent or commits acts of bankruptcy. Such right of cancellation is in addition to and not in lieu of any other remedies which Buyer may have in law or equity.

13. TERMINATION - The performance of work under this order may be terminated in whole, or in part by the Buyer in accordance with this provision. Termination of work hereunder shall be effected by the delivery to Seller of a "Notice of Termination" specifying the extent to which performance of work under the order is terminated and the date upon which such termination becomes effective. Such right of termination is in addition to and not in lieu of the rights of Buyer set forth in Clause 13, herein.

14. FORCE MAJEURE - Neither party shall be held responsible for losses, resulting if the fulfillment of any terms or provisions of this contract is delayed or prevented by any cause not within the control of the party whose performance is interfered with, and which by the exercise of reasonable diligence said party is unable to prevent.

15. ASSIGNMENT - DELEGATION - No right or interest in this contract shall be assigned or delegation of any obligation made by Seller without the written permission of the Buyer. Any attempted assignment or delegation by the Seller shall be wholly void and totally ineffective for all purposes unless made in conformity with this paragraph.

16. MODIFICATIONS - This contract can be modified or rescinded only by a writing signed by both of the parties or their duly authorized agents.

17. INTERPRETATION - PAROL EVIDENCE - This writing, plus any specifications for bids and performance provided by Buyer in its advertisement for bids, is intended by the parties as a final expression of this agreement. No course of prior dealings between the parties and no usage of the trade shall be relevant to supplement or explain any term used in this agreement. Acceptance or acquiescence in a course of performance rendered under this agreement shall not be relevant to determine the meaning of this agreement even though the accepting or acquiescing party has knowledge of the performance and opportunity for objection. Whenever a term defined by the Uniform Commercial Code is used in this agreement, the definition contained in the Code is to control.

18. ADVERTISING - Seller shall not advertise or publish without Buyer's prior consent the fact that Buyer has entered into the contract, except to the extent necessary to comply with proper requests for information from an authorized representative of the federal, state or local government.

19. RIGHT TO ASSURANCE - Whenever one party to the contract in good faith has reason to question the other party's intent to perform he may demand that the other party give written assurance of this intent to perform. In the event that a demand is made and no assurance is given within five (5) days, the demanding party may treat this failure as an anticipatory repudiation of the contract.

20. PROTECTION AGAINST ROYALTIES OR PATENT INFRINGEMENT - The Seller shall pay all royalties and license fees, and shall provide for the use of any design, device, material or process covered by letters patent or copyright by suitable legal agreement with Patentee or Owner thereof. The Seller shall defend all suits or claims for infringement of any patent or copyrights and shall indemnify and save the Buyer harmless from any loss on account thereof, except that Buyer shall defend all such suits and claims and shall be responsible for all such loss when a particular design, device, material or process is allowed to the Seller, the Seller shall indemnify and save Buyer harmless from any loss on account thereof. If the material or process specified or required by Buyer is an infringement, the Seller shall be responsible for such loss unless he promptly gives written notice to the buyer of such infringement.

21. TIME - It is hereby expressly agreed and understood that time is of the essence for the performance of this contract, and any failure by contract to meet the time specifications of this agreement will cause Seller to be in default of this agreement.

22. TAX - The City of Midland is exempt from all Federal, State and City tax. Please do not include these taxes in your bid price or invoice. Taxable items must be so designated, and the City will supply vendor with a Tax Exemption Certificate, properly executed.

23. **INSURANCE –**

The following provisions apply unless the agreement is for the supply of goods only:

Seller shall at all times during the term of this agreement maintain and keep in full force and effect insurance in the following types and minimum amounts with companies authorized to do business in the State of Texas:

Commercial General Liability (including Contractual liability):	
-Personal Injury:	$1,000,000.00 per person
	$1,000,000.00 per occurrence
-Property Damage:	$500,000.00 per occurrence
Business Automobile Liability:	$250,000.00 combined single limit - Personal Injury and Property Damage
Worker's Compensation:	Statutory limits
Employers' Liability:	$500,000.00 per accident or occurrence

The Commercial General Liability shall be on a per project or policy aggregate, including completed operations, and shall be on an occurrence basis.

The Workers' Compensation coverage provided by Seller shall inure to the benefit of employees injured during the course and scope of their employment by Seller pursuant to this agreement.

The Business Automobile Liability insurance provided by Seller shall cover any auto for bodily injury and property damage, including owned vehicles, hired and non-owner vehicles, and employee non-ownership, and the amount of such policy shall be a minimum of $250,000.00 covering any vehicle used for the execution of the work that is the subject of this agreement.

All insurance required pursuant to this agreement, except for Worker's Compensation Insurance, shall name the Buyer as an additional insured on a claims occurred basis. All insurance required pursuant to this agreement, including Worker's Compensation Insurance, shall provide for a waiver of subrogation as to the Buyer.

The parties agree that, prior to the execution of the agreement, Seller shall provide one or more certificates of insurance showing that the requirements of this article have been met, and specifically containing, without limitations, the following endorsement:

"The City of Midland is included as an additional insured, on a claims occurred basis, on all policies except for Worker's Compensation. The Seller and Insurer hereby waive all rights of subrogation with respect to claims against the City of Midland, its agents, employees and officers, on all policies of insurance."

Buyer shall be provided the notice by Seller's insurance provider not later than thirty (30) days prior to any reduction or termination of such coverage. Buyer shall not be required to provide any insurance whatsoever pursuant to this agreement.

Seller shall contractually require all contractors, subcontractors, and sub-subcontractors that work on any portion of the work that is the subject of this agreement to obtain insurance coverage that meets or exceeds the policy requirements and minimum amounts specified herein. All contractors, subcontractors, and sub-subcontractors shall obtain insurance policies that provide blanket waivers of subrogation in favor of the City of Midland and policies that name the City of Midland as an additional insured on a claims occurred basis (except workers compensation).

24. ASSIGNMENT - Seller shall not, either directly or indirectly, assign all or any part of this agreement or any interest, right or privilege herein, without the prior written consent of the Buyer. The issue on whether or not to grant consent to an assignment is in the sole discretion of the Buyer.

25. RELEASE - NOTWITHSTANDING ANY OTHER PROVISIONS, SELLER HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES BUYER, BUYER'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES, OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH SELLER HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, OR BUYER'S NEGLIGENCE.

26. GOVERNING LAW AND VENUE - This agreement shall be governed by the laws of the State of Texas. All performance and payment made pursuant to this agreement shall be deemed to have occurred in Midland County, Texas. Exclusive venue for any claims, suits or any other action arising from or connected in any way to this agreement or the performance of this agreement shall be in Midland County, Texas. The obligations and undertakings of each of the parties to this agreement shall be deemed to have occurred in Midland County, Texas.

27. INDEPENDENT CONTRACTOR - It is expressly understood and agreed that Seller shall perform all work and services described herein as an independent contractor and not as an officer, agent, servant or employee of the Buyer; that Seller shall have exclusive control of and the exclusive right to control the details of the services and work performed hereunder, and all persons performing the same; and shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors and subcontractors; that the doctrine of respondeat superior shall not apply as between Buyer and Seller, its officers, agents, employees, contractors and subcontractors; and that nothing herein shall be construed as creating a partnership or joint enterprise between Buyer and Seller. No person performing any of the work and services described hereunder by Seller shall be considered an officer, agent, servant or employee of the Buyer. Further, it is specifically understood and agreed that nothing in this agreement is intended or shall be construed as creating a "Community of Pecuniary Interest" or "An Equal Right of Control" which would give rise to vicarious liability. Seller shall be an independent contractor under this agreement and shall assume all of the rights, obligations and liabilities, applicable to it as such independent contractor hereunder. The Buyer does not have the power to direct the order in which the work is done. The Buyer shall not have the right to control the means, methods or details of the Seller's work. Seller shall assume exclusive responsibility for the work. Seller is entirely free to do the work in its own way.

28. NOTICE OF ALLEGED BREACH; STATUTORY PREREQUISITES - As a condition precedent to filing suit for alleged damages incurred by an alleged breach of an express or implied provision of this agreement, Seller or his legal representative, shall give the City Manager, or any other reasonable official of the Buyer, notice in writing (consisting of one original and seven copies of notice attached to a copy of this agreement) of such damages, duly verified, within one-hundred-twenty (120) days after the same has been sustained. The discovery rule does not apply to the giving of this notice. The notice shall include when, where and how the damages occurred, the apparent extent thereof, the amount of damages sustained, the amount for which the Seller will settle, the physical and mailing addresses of Seller at the time and date the claim was presented and the physical and mailing addresses of Seller for the six months immediately preceding the occurrence of such damages, and the names and addresses of the witnesses upon whom the Seller relies to establish its claim; and a failure to so notify the City Manager within the time and manner provided herein shall exonerate, excuse and except the Buyer from any liability whatsoever. The Buyer is under no obligation to provide notice to Seller that Seller's notice is insufficient. Buyer reserves the right to request reasonable additional information regarding the claim. Said additional information shall be supplied within thirty (30) days after receipt of notice.

The statutory prerequisites outlined herein constitute jurisdictional requirements pursuant to Section 271.154 of the Texas Local Government Code and Section 311.034 of the Texas Government Code. Notwithstanding any other provision, Seller's failure to comply with the requirements herein shall perpetually bar Seller's claim for damages under Chapter 271 of the Texas Local Government Code, and Section 311.034 of the Texas Government Code, regardless if Buyer has actual or constructive notice or knowledge of said claim or alleged damages. Seller agrees that the requirements of this entire agreement are reasonable.

29. INDEMNITY (NOT APPLICABLE TO PURCHASE AGREEMENTS) - SELLER WILL INDEMNIFY AND HOLD HARMLESS AND DEFEND BUYER AND ALL OF BUYER'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, LOSSES, PROPERTY DAMAGE AND EXPENSES OF ANY CHARACTER WHATSOEVER, INCLUDING REASONABLE ATTORNEY'S FEES,

BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF SELLER, its agents or employees, or any subcontractor, arising out of, or resulting from, Seller's use of, or activities on, the agreement premises, and Seller will be required to pay any judgment with costs which may be obtained against Buyer or any of its officers, agents or employees, including reasonable attorney's fees.

SELLER SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND BUYER AND ALL OF BUYER'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, ACCIDENTAL DEATH, PERSONAL INJURIES, PROPERTY DAMAGE, LOSSES, AND EXPENSE OF ANY CHARACTER WHATSOEVER INCLUDING REASONABLE ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF BUYER, BUYER'S OFFICERS, AGENTS AND EMPLOYEES, WHETHER SUCH NEGLIGENT ACT WAS THE SOLE PROXIMATE CAUSE OF THE INJURY OR DAMAGE OR A PROXIMATE CAUSE JOINTLY AND CONCURRENTLY WITH SELLER OR SELLER'S EMPLOYEES, AGENTS OR SUBCONTRACTORS NEGLIGENCE, IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS AGREEMENT AND SELLER WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST BUYER OR ANY OF BUYER'S OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.

30. SOVEREIGN IMMUNITY - By executing this agreement the Buyer is not waiving its right of sovereign immunity. The Buyer is retaining its immunity from suit. The Buyer is not granting consent to be sued by legislative resolution or action. **THERE IS NO WAIVER OF SOVEREIGN IMMUNITY**.

31. THIRD PARTY BENEFICIARY - The Buyer's approval of this agreement does not create a third party beneficiary. There is no third party beneficiary to this agreement. No person or entity who is not a party to this agreement shall have any third party beneficiary or other rights hereunder.

32. ATTORNEY FEES - BY EXECUTING THIS AGREEMENT, SELLER AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST THE BUYER, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THE AGREEMENT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE AGREEMENT. THE SELLER SPECIFICALLY AGREES THAT IF THE SELLER BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS AGREEMENT, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS AGREEMENT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET. SEQ., AS AMENDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, THE SELLER AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH SELLER MIGHT OTHERWISE BE ENTITLED.

SELLER AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. SELLER ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THE AGREEMENT. THE SELLER FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN THE BUYER AND THE SELLER. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF SOVEREIGN IMMUNITY.

THE SELLER AND BUYER ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS AGREEMENT WITH LEGAL COUNSEL PRIOR TO ITS EXECUTION.

33. CONSIDERATION - The terms of this agreement are supported by good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the parties named herein.

34. CERTIFICATION - In accordance with the Texas Local Government Code, the City of Midland Department of Facilities and Fleet Management does hereby certify that the City of Midland is in compliance with Sections 252, 271 and all applicable sections of the Texas Local Government Code and other state law as it applies to procurement and contracting issues.

35. FEDERAL WAGE REQUIREMENTS - If applicable, the Davis-Bacon Act, 29 CFR 5.5, and any related acts or regulations are hereby incorporated by reference and made a part of this agreement and all terms and requirements under said laws, by such incorporation, are made terms and requirements of this agreement, to which the parties to this agreement have agreed to be bound.

36. COMPLIANCE WITH FEDERAL, STATE AND LOCAL LAWS - Seller shall at all times during the term of this agreement comply with applicable federal, state, and local laws regarding Seller's activities pursuant to this agreement, including but not limited to all applicable sections of the Municipal Code of Midland, Texas, as may be amended, said sections being hereby incorporated by reference and made a part of this agreement for all legal purposes. Failure to abide by any such law mentioned herein constitutes grounds for the immediate termination of this agreement.

DIVISION 01

GENERAL REQUIREMENTS

01 11 00 SUMMARY OF WORK

PART 1 - GENERAL

1.01 SUMMARY

A. Construct Work as described in the Contract Documents.

1. Provide the materials, equipment, and incidentals required to make the Project completely and fully operable.
2. Provide the labor, equipment, tools, and consumable supplies required for a complete Project.
3. Provide the civil, architectural, structural, mechanical, electrical, instrumentation, and all other Work required for a complete and operable Project.
4. Test and place the completed Project in operation.
5. Provide the special tools, spare parts, lubricants, supplies, or other materials as indicated in the Contract Documents for the operation and maintenance of the Project.
6. The Contract Documents do not indicate or describe all Work required to complete the Project. Additional details required for the correct installation of selected products are to be provided by the Contractor and coordinated with the Construction Manager.

1.02 DESCRIPTION OF WORK

A. Work is described in general, non-inclusive terms as:

1. Install a 15-inch gravity sewer pipeline, two pump lift station, 10-inch force main and 15-inch pipeline along Wall Street, Industrial Avenue and Midland Drive. Work to include electrical and instrumentation upgrades, sewer connections and by-pass pumping.

1.03 WORK UNDER OTHER CONTRACTS

A. The Owner has no knowledge of work, other than the Work included in this Contract, which may impact construction scheduling, testing, and startup.

1.04 WORK BY OWNER

A. The Owner has no knowledge of work, other than the Work included in this Contract that may impact construction scheduling, testing, and startup.

B. Owner will provide normal operation and maintenance of the existing facilities during construction, unless otherwise stated.

1.05 CONSTRUCTION OF UTILITIES

A. Existing utilities will be used for this Project. Coordinate with others performing Work associated with this Project.

B. Power and Electrical Services:

1. Contractor may use the permanent power source for construction purposes in lieu of temporary power source when permanent power is available at the Site.

   a. Notify Construction Manager and Owner of intent to use the permanent power source.

   b. Arrange with the power utility and pay the charges for connections and monthly charges for use of this power.

   c. Pay for the power consumed until the Project has been accepted as Substantially Complete unless noted otherwise.

1.06 NOMINATED SUBCONTRACTOR

A. Owner has or will select a Subcontractor for furnishing, installing, and testing the following products:

Description	Supplier
SCADA Implementation	Signature Automation, LLC

B. These Subcontractors will be designated as "Nominated Subcontractors." Agreements for services are described in the referenced appendices. Obtain clarification from the Construction Manager in the case of a disagreement between the above list and those specified elsewhere in the Contract Documents.

C. Execute an agreement with each Nominated Subcontractor upon receiving the Notice to Proceed (execution of the Contract Documents).

D. Include the Nominated Subcontractor costs in the Contract Price.

E. Assume responsibilities for Nominated Subcontractors' products and installation as for those products selected and installed by the Contractor.

F. Coordinate Work performed by Nominated Subcontractors.

G. Provide labor, materials, equipment, tools, consumable supplies, and incidentals not specifically required by the subcontract required to provide a complete and operable Project.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

01 23 10 ALTERNATES AND ALLOWANCES

PART 1 - GENERAL

1.01 SUMMARY

A. Allowances:

1. Include the specified allowance amounts in the Contract Price.
2. The amount of each allowance includes:
    a. The cost of the product to the Contractor less any applicable trade discounts;
    b. Delivery to the Site; and
    c. Applicable taxes.
3. Include in the Contract Price all costs for:
    a. Handling at the Site, including unloading, uncrating, and storage per Section 01 31 00 "Project Management and Coordination."
    b. Cost for labor and equipment for installation and finishing.
    c. Cost for related products not specifically listed in the allowance required for installation, including consumable supplies and materials.
    d. All overhead, profit, and related costs.
4. Assist Owner in the selection of products.
    a. Identify qualified Suppliers.
    b. Obtain bids or proposals from qualified Suppliers.
    c. Present available alternates to the Owner through the Construction Manager. Notify Construction Manager of:
        1) Any objections to a particular Supplier or product.
        2) Effect on the construction schedule anticipated by the selection of each option.
        3) Cost of each option.
5. Upon selection of the product:
    a. Purchase and install the product.
    b. Contractor's responsibilities for products will be the same as for products selected by the Contractor.
6. Submit a Change Proposal per Section 01 26 00 "Change Management" to adjust the Contract Price if the net cost of the product is more or less than the specified amount.
    a. Adjust the unit cost applied to the quantities installed per the method of payment described in Section 01 29 00 "Application for Payment Procedures" for products specified as Unit Price Work.

b. Do not perform Work until selection of alternate has been approved by the Owner.

c. Provide actual invoices for the materials.

1.02 DOCUMENTATION

A. Provide documents for materials furnished as part of each alternate in accordance with Section 01 30 00 "Contract Administration."

1.03 DESCRIPTION OF ALLOWANCES

A. Allowance D-1 - Owner's Allowance for SCADA

1. Payment for instrumentation, SCADA, and programming will be provided through an owner's allowance, provided as a lump sum.

2. All labor, equipment, materials and installation of SCADA and instrumentation at the Nature Center/Midland Drive Lift Station shall be covered under the owner's allowance.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

01 26 00 CHANGE MANAGEMENT

PART 1 - GENERAL

1.01 REQUESTS FOR CHANGE PROPOSAL

A. Construction Manager will initiate Modifications by issuing a Request for Change Proposal (RCP).

1. Construction Manager and Design Professional will prepare a description of proposed Modifications.
2. Construction Manager will issue the Request for Change Proposal form to Contractor. A number will be assigned to the Request for a Change Proposal when issued.
3. Return a Change Proposal in accordance with Paragraph 1.02 for evaluation by the OPT.

1.02 CHANGE PROPOSALS

A. Submit a Change Proposal (CP) to the Construction Manager for Contractor initiated changes in the Contract Documents or in response to a Request for Change Proposal. Submit the Change Proposal and attach the forms provided by the Construction Manager.

1. Use the Change Proposal form provided by the Construction Manager.
2. Include with the Change Proposal:
   a. A complete description of the proposed Modification if Contractor initiated or proposed changes to the OPT's description of the proposed Modification.
   b. The reason the Modification is requested, if not in response to a Request for a Change Proposal.
   c. A detailed breakdown of the cost of the change if the Modification requires a change in Contract Price. The itemized breakdown is to include:
      1) List of materials and equipment to be installed;
      2) Man hours for labor by classification;
      3) Equipment used in construction;
      4) Consumable supplies, fuels, and materials;
      5) Royalties and patent fees;
      6) Bonds and insurance;
      7) Overhead and profit;
      8) Field office costs;
      9) Home office cost; and
      10) Other items of cost.
   d. Provide the level of detail outlined in the paragraph above for each Subcontractor or Supplier actually performing the Work if Work is to be provided by a

Subcontractor or Supplier. Indicate appropriate Contractor mark ups for Work provided through Subcontractors and Suppliers. Provide the level of detail outlined in the paragraph above for self-performed Work.

e. Submit Change Proposals that comply with the General Conditions for Cost of Work.

f. Provide a revised schedule. Show the effect of the change on the Project Schedule and the Contract Times.

B. Submit a Change Proposal to the Construction Manager to request a Field Order.

C. A Change Proposal is required for all substitutions or deviations from the Contract Documents.

D. Request changes to products in accordance with Section 01 33 02 "Shop Drawings."

1.03 CONSTRUCTION MANAGER WILL EVALUATE THE REQUEST FOR A MODIFICATION

A. Construction Manager will issue a Modification per the General Conditions if the Change Proposal is acceptable to the Owner. Construction Manager will issue a Change Order or Contract Amendment for any changes in Contract Price or Contract Times.

1. Change Orders and Contract Amendments will be sent to the Contractor for execution with a copy to the Owner recommending approval. A Work Change Directive may be issued if Work needs to progress before the Change Order or Contract Amendment can be authorized by the Owner.

2. Work Change Directives, Change Orders, and Contract Amendments can only be approved by the Owner.

a. Work performed on the Change Proposal prior to receiving a Work Change Directive or approval of the Change Order or Contract Amendment is performed at the Contractor's risk.

b. No payment will be made for Work on Change Orders or Contract Amendments until approved by the Owner.

B. Contractor may be informed that the Change Proposal is not approved and construction is to proceed in accordance with the Contract Documents.

1.04 EQUAL NON-SPECIFIED PRODUCTS

A. The products of the listed manufacturers are to be furnished where the Specifications list several manufacturers and do not specifically list "or equal" or "or approved equal" products. Use of any products other than those specifically listed is a substitution. Follow the procedures in Paragraph 1.05 for a substitution.

B. Contractor may submit other manufacturers' products that are in full compliance with the Specifications where Specifications list one or more manufacturers followed by the phrase "or equal" or "or approved equal."

1. Submit a Shop Drawing as required by Section 01 33 02 "Shop Drawings" to document that the proposed product is equal or superior to the specified product.

2. Prove that the product is equal. It is not the OPT's responsibility to prove the product is not equal.
    a. Indicate on a point-by-point basis for each specified feature that the product is equal to the Contract Document requirements.
    b. Make a direct comparison with the specified manufacturer's published data sheets and available information. Provide this printed material with the Shop Drawing.
    c. The decision of the Design Professional regarding the acceptability of the proposed product is final.
3. Provide a certification that, in furnishing the proposed product as an equal, the Contractor:
    a. Has thoroughly examined the proposed product and has determined that it is equal or superior in all respects to the product specified.
    b. Has determined that the product will perform in the same manner and result in the same process as the specified product.
    c. Will provide the same warranties and/or bonds as for the product specified.
    d. Will assume all responsibility to coordinate any modifications that may be necessary to incorporate the product into the construction and will waive all claims for additional Work which may be necessary to incorporate the product into the Project which may subsequently become apparent.
    e. Will maintain the same time schedule as for the specified product.

C. A Change Proposal is not required for any product that is in full compliance with the Contract Documents. If the product is not in full compliance, it may be offered as a Substitution.

1.05 SUBSTITUTIONS

A. Substitutions are defined as any product that the Contractor proposes to provide for the Project in lieu of the specified product. Submit a Change Proposal per Paragraph1.02 along with documents required for a Shop Drawing as required by Section 01 33 02 "Shop Drawings" to request approval of a substitution.

B. Prove that the product is acceptable as a substitute. It is not the Design Professional's responsibility to prove the product is not acceptable as a substitute.
    1. Indicate on a point-by-point basis for each specified feature that the product is acceptable to meet the intent of the Contract Documents requirements.
    2. Make a direct comparison with the specified Suppliers published data sheets and available information. Provide this printed material with the Shop Drawing.
    3. The decision of the Design Professional regarding the acceptability of the proposed substitute product is final.

C. Provide a certification that, in making the substitution request, the Contractor:

1. Has determined that the substituted product will perform in substantially the same manner and result in the same ability to meet the specified performance as the specified product;
2. Will provide the same warranties and/or bonds for the substituted product as specified or as would be provided by the manufacturer of the specified product;
3. Will assume all responsibility to coordinate any modifications that may be necessary to incorporate the substituted product into the Project and will waive all claims for additional Work which may be necessary to incorporate the substituted product into the Project which may subsequently become apparent; and
4. Will maintain the same time schedule as for the specified product.

D. Pay for review of substitutions in accordance with Section 01 33 02 "Shop Drawings."

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

01 29 00 APPLICATION FOR PAYMENT PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

A. Submit Applications for Payment for completed Work and for materials and equipment in accordance with the General Conditions, the Supplementary Conditions, the Agreement, and this Section. The Contract Price is to include costs for:

1. Providing the Work in accordance with the Contract Documents;
2. Installing Owner furnished equipment and materials, if any;
3. Providing Work for alternates and allowances, if any;
4. Providing Work for extra work items, if any and if authorized
5. Commissioning, startup, training, and initial maintenance and operation;
6. Acceptance testing at the manufacturer's facilities or at the Site;
7. All home office overhead costs and expenses, including profit made directly or indirectly from the Project;
8. Project management, contract administration, and field office and field operations staff including supervision, clerical support, and technology system support;
9. Professional services including design fees, legal fees, and other professional services;
10. Bonds and insurance;
11. Permits, licenses, patent fees, and royalties;
12. Taxes;
13. Providing all documentation and Samples required by the Contract Documents;
14. Facilities and equipment at the Site including:
    a. Field offices, office furnishings, and all related office supplies, software, and equipment,
    b. Storage facilities for Contractor's use and storage facilities for stored materials and equipment including spare parts storage,
    c. Shops, physical plant, construction equipment, small tools, vehicles, and technology and telecommunications equipment,
    d. Safety equipment and facilities to provide safe access and working conditions for workers and for others working at the Site,
    e. Temporary facilities for power and communications,
    f. Potable water and sanitation facilities, and
    g. Mobilization and demobilization for all these facilities and equipment.
15. Products, materials, and equipment stored at the Site or other suitable location in accordance with Section 01 31 00 "Project Management and Coordination";

16. Products, materials, and equipment permanently incorporated into the Project;
17. Temporary facilities for managing water including facilities for pumping, storage, and treatment as required for construction and protection of the environment;
18. Temporary facilities for managing environmental conditions and Constituents of Concern;
19. Temporary facilities such as sheeting, shoring, bracing, formwork, embankments, storage facilities, working areas, and other facilities required for construction of the Project;
20. Temporary and permanent facilities for protection of all overhead, surface, or underground structures or features;
21. Temporary and permanent facilities for removal, relocation, or replacement of any overhead, surface, or underground structures or features;
22. Products, materials, and equipment consumed during the construction of the Project;
23. Contractor labor and supervision to complete the Project including that provided through Subcontractors or Suppliers;
24. Correcting Defective Work during the Contract Times, during the Correction Period, or as required to meet any warranty provision of the Contract Documents;
25. Risk associated with weather and environmental conditions, startup, and initial operation of facilities including equipment, processes, and systems;
26. Contractor safety programs, including management, administration, and training;
27. Maintenance of facilities including equipment, processes, and systems until operation is transferred to Owner;
28. Warranties, extended or special warranties, or extended service agreements;
29. Cleanup and disposal of any and all surplus materials; and
30. Demobilization of all physical, temporary facilities not incorporated into the Project.

B. Include the cost not specifically set forth as an individual payment item but required to provide a complete and functional system in the Contract Price.

C. Provide written approval of the surety company providing performance and payment bonds for the Schedule of Values, Application for Payment form, and method of payment prior to submitting the first Application for Payment. Submit approval using the "Consent of Surety Company to Payment Procedures" form provided by the Construction Manager. Payment will not be made without this approval.

D. Construction Manager may withhold processing the Applications for Payment if any of the following processes or documentation is not up to date:
   1. Progress Schedule per Section 01 33 05 "Construction Progress Schedule."
   2. Project videos and photographs per Section 01 33 06 "Graphic Documentation."
   3. Record Documents per Section 01 31 13 "Project Administration."

1.02 SCHEDULE OF VALUES

A. Divide the Contract Price into an adequate number of line items to allow more accurate determination of the earned value for each line item when evaluating progress payments. Submit a detailed Schedule of Values for the Project at least 10 days prior to submitting the first Application for Payment using forms provided by the Construction Manager.

B. Do not apply for payment until the Schedule of Values has been approved by the Construction Manager.

C. Divide the cost associated with each line item in the Schedule of Values into installation and materials components.

1. Installation cost is to include all cost associated with the line item except materials cost.

2. Materials cost is the direct cost (as verified by invoice values) for products, materials, and equipment to be permanently incorporated into the Project associated with the line item.

3. Installation cost is to include all direct costs and a proportionate amount of the indirect costs for the Work associated with each line item. Include costs not specifically set forth as an individual payment item but required to provide a complete and functional system.

4. The sum of materials and installation costs for all line items must equal the Contract Price.

D. Use each unit price line item in the Agreement as a line item in the Schedule of Values. The sum of materials and installation costs for each line item for unit price contracts must equal the value of the line item in the Agreement. In addition to the installation cost described in Paragraph 1.02.C.3, installation costs for unit price items are to include costs for waste and overages.

1. Installation and materials cost may be left as a single installation component if:

a. Contractor does not intend to request payment for stored materials for that line item; or

b. Work in the line item will be completed within a single payment period.

2. Provide adequate detail to allow a more accurate determination of the earned value for installation costs, expressed as a decimal fraction of Work completed, for each line item.

3. Installation cost line items may not exceed $50,000.00. Items that are not subdivided into smaller units may only be included in the Application for Payment when Work on the entire unit is complete.

4. Lump sum items may be divided into an estimated number of units to estimate earned value. The estimated number of units times the cost per unit must equal the lump sum amount for that line item.

5. Include Contractor's overhead and profit in the installation costs each line item in proportion to the value of the line item to the Contract Price.

6. Include cost not specifically set forth as an individual payment item but required to provide a complete and functional system in the Contract Price for each item.

7. Line items may be used to establish the value of Work to be added or deleted from the Project.

E. Include a breakdown of both mobilization and demobilization costs in the Schedule of Values. The total cost for both mobilization and demobilization may not exceed **[specify]** percent of the total Contract Price. Payment for mobilization and demobilization will be based on the earned value of Work completed. Payment for these costs will only be made for Work completed for the following:

1. Bonds and insurance;

2. Transportation and setup for equipment;

3. Transportation and/or erection of all field offices, sheds, and storage facilities;

4. Salaries for preparation of documents required before the first Application for Payment; and

5. Salaries for field personnel directly related to the mobilization of the Project.

1.03 SCHEDULE OF ANTICIPATED PAYMENTS

A. Submit a schedule of the anticipated Application for Payments showing the anticipated application numbers, submission dates, and the amount to be requested for each Application for Payment on the form provided by the Construction Manager.

B. Update the schedule of anticipated payments as necessary to provide a reasonably accurate indication of the funds required to make payments each month to the Contractor for Work performed.

1.04 ALTERNATES, ALLOWANCES, AND EXTRA WORK ITEMS

A. Include line items and amounts for specified alternate Work and allowances for Work in the Agreement, if any, and as described in Section 01 23 10 "Alternates and Allowances."

B. Include line items and amounts for Extra Work items in the Agreement, if any, and as described in Section 01 29 01 "Measurement and Basis for Payment."

1.05 RETAINAGE AND SET-OFFS

A. Retainage will be withheld from each Application for Payment per the Agreement.

B. Reduce payments for set-offs per the General Conditions as directed by the Construction Manager.

1.06 PROCEDURES FOR SUBMITTING AN APPLICATION FOR PAYMENT

A. Submit a draft Application for Payment to the Construction Manager each month at least **20** days before the date established in the Agreement for Owner to make progress payments. Do not submit Applications for Payment more often than monthly. Review the

draft Application for Payment with the Construction Manager to determine concurrence with:

1. Values requested for materials and equipment, stored or incorporated into the Project as documented by invoices;
2. The earned value for installation costs for each line item in the Application for Payment form expressed as a percent complete for that line item;
3. The quantity of Work completed for each unit price item;
4. Amount of retainage to be withheld; and
5. Set-offs included in the Application for Payment.

B. Submit Applications for Payment to the Construction Manager after agreement has been reached on the draft Application for Payment with the Construction Manager.

C. Provide all information requested in the Application for Payment form. Do not leave any blanks incomplete. If information is not applicable, enter "N/A" in the space provided.

1. Number each application sequentially and include the dates for the application period.
2. Complete the "Contract Time Summary" section on the Application for Payment form. If the Final Completion date shows the Project is more than 30 days behind schedule, revise the Schedule of Anticipated Payments to correspond to the updated schedule required per Section 01 33 05 "Construction Progress Schedule."
3. Complete the "Summary of Earned Value and Set-offs" section on the Application for Payment form. Show the total amounts for earned value of original Contract performed, earned value for Work on approved Contract Amendments and Change Orders, retainage and set-offs.
4. Sign and date the Contractor's Certification on the Application for Payment form that all Work, including materials, covered by this Application for Payment have been completed or delivered and stored in accordance with the Contract Documents, that all amounts have been paid for Work, materials, and equipment for which previous Payment has been made by the Owner, and that the current payment amount shown in this Application for Payment is now due.
5. Include "Attachment A - Tabulation of Earned Value of Original Contract Performed" to show the value of materials stored and successfully incorporated into the Project and the earned value for installation of the Work for each line item in the Application for Payment for Work. Attachment A includes Work on the original Contract Price and on approved Contract Amendments and Change Orders.
6. Include "Attachment B - Tabulation of Values for Materials and Equipment" to track invoices used to support amounts requested as materials in Attachment A. Enter materials to show the amount of the invoice assigned to each item in Attachment A if an invoice includes materials used on several line items.
7. Include "Attachment C - Summary of Set-offs" to document set-offs made per the Contract Documents. Show each set-off as it is applied. Show a corresponding line item to reduce the set-off amount if a payment held by a set-off is released for payment.

8. Include "Attachment D - Retainage Calculation" to show method for calculating retainage. The amount of retainage with respect to progress payments is stipulated in the Agreement. Any request for a reduction in retainage must be accompanied by a Consent of Surety to Reduction or Partial Release of Retainage.

9. Include "Attachment E - EVA Calculation" and the EVA Chart showing the anticipated and actual total earned value of fees, Work, and materials. Create a graphic representation (curve) of the anticipated progress on the Project each month. Compare the anticipated cumulative total earned value of fees, Work, and materials to the actual total earned value of fees, Work, and materials to determine performance on budget and schedule. Adjust the table and curve to incorporate Modifications.

D. Submit attachments in Portable Document Format (PDF).

1. Generate attachments to the Application for Payment using the Excel spreadsheet provided by the Construction Manager.

2. Submit PDF documents with adequate resolution to allow documents to be printed in a format equivalent to the document original. Documents are to be scalable to allow printing on standard 8-1/2 x 11 or 11 x 17 paper.

1.07 ADJUSTMENTS TO THE SCHEDULE OF VALUES IN THE APPLICATION FOR PAYMENT

A. Submit a Change Proposal to request any changes to the Schedule of Values incorporated into the Application for Payment once approved. A Field Order will be issued by the Construction Manager to modify the Application for Payment form if approved.

B. Payment for materials and equipment shown in the Application for Payment will be made for the total of associated invoice amounts, up to the value shown for materials in the Application for Payment for that line item.

1. If the total amount for invoices for materials and equipment for a line item are less than the amount shown for the materials component of that line item in the Application for Payment, and it can be demonstrated that no additional materials or equipment are required to complete Work described in that item, the difference between the total invoice for materials and equipment and the materials component for that line item can be added to the installation component of that Work item.

2. Costs for material and equipment in excess of the value shown in the Schedule of Values may not be paid for under other line items.

1.08 CONSTRUCTION MANAGER'S RESPONSIBILITY

A. Construction Manager will review each draft Application for Payment with Contractor to reach an agreement on the amount to be recommended to Owner for payment. Contractor is to revise the Application for Payment to incorporate changes, if any, resulting from this review process.

B. Construction Manager will review the Application for Payment to determine that the Application for Payment has been properly submitted and is in accordance with the agreed to draft Application for Payment.

C. Construction Manager will either recommend payment of the Application for Payment to Owner or notify the Contractor of the reasons for not recommending payment. Contractor

may make necessary corrections and resubmit the Application for Payment. Construction Manager will review resubmitted Application for Payment and reject or recommend payment of the Application for Payment to Owner as appropriate.

D. Construction Manager's recommendation of the Application for Payment constitutes a representation that based on its experience and the information available:

1. The Work has progressed to the point indicated;
2. The quality of the Work is generally in accordance with the Contract Documents; and
3. Requirements prerequisite to payment have been met.

E. This representation is subject to:

1. Further evaluation of the Work as a functioning whole;
2. The results of subsequent tests called for in the Contract Documents; or
3. Any other qualifications stated in the recommendation.

F. Construction Manager does not represent by recommending payment that:

1. Inspections made to check the quality or the quantity of the Work as it was performed were exhaustive or extended to every aspect of the Work in progress; or
2. Other matters or issues that might entitle Contractor to additional compensation or entitle Owner to withhold payment to Contractor exist.

G. Neither Construction Manager's review of Contractor's Work for the purposes of recommending payments nor Construction Manager's recommendation of payment imposes responsibility on the Construction Manager or Owner:

1. To supervise, direct, or control the Work;
2. For the means, methods, techniques, sequences, or procedures of construction, or safety precautions and programs;
3. For Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
4. To make examinations to ascertain how or for what purposes Contractor has used the monies paid on account of the Contract Price; or
5. To determine that title to the Work, materials, or equipment has passed to Owner free and clear of Liens.

1.09 FINAL APPLICATION FOR PAYMENT

A. Include adjustments to the Contract Price in the final Application for Payment for:

1. Approved Change Orders and Contract Amendments;
2. Allowances not previously adjusted by Change Order;
3. Deductions for Defective Work that have been accepted by the Owner;
4. Penalties and bonuses;
5. Deduction for all final set-offs; and

6. Other adjustments if needed.

B. Construction Manager will prepare a final Change Order reflecting the approved adjustments to the Contract Price which have not been covered by previously approved Change Orders and, if necessary, to reconcile estimated unit price quantities with actual quantities.

C. Submit the final Application for Payment per the General Conditions, including the final Change Order. Provide the following with the final Application for Payment:

1. Evidence of payment or release of Liens on the forms provided by the Construction Manager and as required by the General Conditions.

2. Consent from surety to final payment.

D. Final payment will also require additional procedures and documentation per Section 01 70 00 "Execution and Closeout Requirements."

1.10 PAYMENT BY OWNER

A. Owner is to pay the amount recommended for monthly payments within 30 days after receipt of the Construction Manager's recommended Application for Payment.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

01 29 01 MEASUREMENT AND BASIS FOR PAYMENT

PART 1 - GENERAL

1.01 PAYMENT FOR MATERIALS AND EQUIPMENT

A. Payment will be made for materials and equipment materials properly stored and successfully incorporated into the Project less the specified retainage.

B. Provide a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of Liens. Provide documentation of payment for materials and equipment with the next Application for Payment. Remove items from the tabulation of materials and equipment if this documentation is not provided with the next Application for Payment.

C. Provide evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest.

D. The Work covered by progress payments becomes the property of the Owner at the time of payment. The Contractor's obligations with regard to proper care and maintenance, insurance, and other requirements are not changed by this transfer of ownership until final acceptance in accordance with the General Conditions.

E. Payment for materials and equipment does not constitute acceptance of the product.

1.02 MEASUREMENT AND BASIS FOR PAYMENTS ON LUMP SUM ITEMS

A. Measurement for progress payments is the invoice value for stored materials and the earned value for all other cost for constructing each item. Earned value is expressed as the value of the Work completed divided by the total value of installation cost. The total amount paid will be equal to the total lump sum amount for that item.

1.03 MEASUREMENT AND BASIS FOR PAYMENTS ON UNIT PRICE ITEMS

A. Measure the Work using the unit of measure indicated in this Section for each unit price line item. Payment will be made only for the actual measured unit and/or computed length, area, solid contents, number, and weight unless other provisions are made in the Contract Documents. Payment on a unit price basis will not be made for Work outside dimensions shown in the Contract Documents.

B. Payment will be made for the actual quantity of Work completed and for materials and equipment stored during the payment period. Payment amount is the Work quantity measured per Paragraph A above multiplied by the unit price for that line item in the Agreement.

1.04 MEASUREMENT AND BASIS FOR PAYMENT FOR BASE ITEMS

A. Item #1 & 2 – Performance, Payment Bonds, and Allowance for Insurance (2.5%) & Mobilization and Demobilization (2.5%)

1. Include the following costs in this lump sum bid item:

a. Transportation and setup/disassembly for equipment;

b. Transportation and/or erection of all field offices, sheds and storage facilities;

c. Salaries for preparation of documentation required before the first Application for Payment;

d. Salaries for field personnel assigned to the Project related to the mobilization and demobilization of the Project; and

e. Performance and Payment Bonds and insurance allowance; and

f. Mobilization/Demobilization, Performance and Payment Bonds and Insurance Allowance may not exceed 5.0 percent of the total Contract Price.

B. Item #3 - Storm Water Pollution Prevention Plan

1. There will be no measurement for Storm Water Pollution Prevention Plan.

2. Payment for Storm Water Pollution Prevention Plan shall be made at the lump sum price bid and shall be full compensation for design, implementation, and removal of the plan for the duration of the project. Plan shall be prepared in accordance with Section 01 57 00 – Temporary Controls of the project specifications. Payment shall be allowed for 25% of the lump sum bid price upon receipt and approval of the plan by the Owner. The remaining 75% of the lump sum bid price shall be paid in equal, monthly installments based on the time remaining to achieve substantial completion.

C. Item #4 – Site Preparation, Clearing and Grading

1. There will be no measurement for Site Preparation, Clearing and Grading.

2. Work performed includes removing and clearing trees, all existing debris, obstruction removal, refilling of depressions, and site grading for new lift station, all work fully performed. Any trees removed shall be approved by the owner and recorded by size and type. Any debris removed must be disposed of properly at an approved landfill and in compliance with environmental regulations. The amount bid for "Clearing and Grubbing" shall not exceed 2 percent of the total amount bid.

D. Item #5 – Pre-Packaged Duplex Lift Station

1. There will be no measurement for Pre-Packaged Duplex Lift Station.

2. Payment for Pre-Package Duplex Lift Station shall be made at the lump sum price bid also include supplying all labor, equipment, and materials for installation of two submersible pumps, access hatches, coating/painting, supports, pipe, valves, fittings, aerator, wiring, tubing, piping and blower locking/silencing cover, and all other items required for piping with in the wet well and valve vault.

E. Item #6 – Aerator at Lift Station (Wet Well Wizard or Approved Equal)

1. Measurement for Aerator shall be per each furnished and installed.

2. Payment for Aerators shall be made at the unit bid price and shall be full compensation for supplying all labor, equipment, and materials including, but not limited to installing aerators, wiring, tubing, piping, blower locking and silencing cover, and all other appurtenances and items related to the work.

F. Item #7 - Concrete Driveway/Pavement

1. Measurement and Payment shall be made on the basis of price bid per square yard and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

2. Work shall include placement of new concrete driveway at the lift station site, sawcut and repair from construction activities, removal and disposal of rubble, grading, flowable fill, subgrade preparation, concrete, rebar, and finishing.

G. Item #8 & 9 – 8' Chain-Link Fence w/ Double Swing Gate (8) & 8' Wood Panel Fence with CMU Columns (9)

1. Measurement for 8' Chain-Link Fence w/ Double Swing Gate and Manway Gate and/or 8' Wood Panel Fence with CMU Columns shall be per linear foot installed.

2. Payment for 8' Chain-Link Fence w/ Double Swing Gate and Manway Gate and/or 8' Wood Panel Fence with CMU Columns shall be made at the unit price bid per linear foot and shall be full compensation for supplying all labor, equipment, and materials including, but not limited to installing fence, masonry, posts, and all other appurtenances and items related to the work.

H. Item #10 – Site Restoration

1. There will be no measurement for Site Restoration.

2. Payment for site restoration shall be made at the lump sum price bid and shall be full compensation for restoration of areas within the construction limits impacted by construction, including the installation of the natural screen. Natural screen shall consist of trees shown in the Drawings. No additional payment will be made for restoration due to damage by Contractor's operations outside those limits shown on the Drawings.

I. Item #11 – Operation and Maintenance Manuals

1. There will be no measurement for Operation and Maintenance Manuals.

2. Payment for Operation and Maintenance Manuals shall made at the lump sum price bid and shall be paid only when O&M Manuals have been supplied and considered complete by the Owner

J. Item #12 & 13 – Temporary Bypass Pumping (Wall Street & I-20 Frontage Road)

1. There will be no measurement for Bypass Pumping.

2. Payment for Bypass Pumping shall be made at the lump sum price bid and shall be full compensation for supplying all labor, equipment, and materials for bypass operations, but not limited to pumps, pipe, valves, fittings, tapping sleeve and valve, and all other items required under 02 96 00.

K. Item #14 – 42" Steel Casing by Other Than Open Cut (Under TxDOT/UPRR)

1. This item is measured at the linear foot of horizontal length and paid at the contract unit price in the Proposal. Payment shall be full compensation for furnishing all design, materials, tools, labor, equipment, and incidentals necessary to perform the work.

2. Payment for the 42-inch steel casing by other than open cut under TxDOT and Union Pacific Railroad right-of-way shall include all costs of bulkheads, guardrails, casing, spacers, tunneling, access pits, exterior grouting, interior grouting, sealing ends of casing, pipe rails, and all other items for crossing as shown on the plans and required for installation, except the carrier pipe. Payment will also include all extra precautions necessary to protect existing utilities, highway, and railroad. This work includes all costs tied to Union Pacific RR for Railroad Liability Insurance, User Agreement execution, Flagging and Track Monitoring Services.

3. Contractor shall provide insurance specific to Union Pacific Railroad in accordance with Paragraph D of the Union Pacific Railroad Insurance Requirements. All other insurance requirements shall be the responsibility of the contractor and no additional pay shall be granted for obtaining the insurance requirements as specified herein by Union Pacific Railroad or the City.

L. Item #15 & 16 – 15" PVC (SDR-26 ASTM D3034) by Other Than Open Cut or by Open Cut

1. This item is measured at the linear foot of horizontal length and paid at the contract unit price. Payment shall be full compensation for furnishing all design, materials, tools, labor, equipment, testing and incidentals necessary to perform the work.

2. Furnish and install 15-inch PVC (SDR-26 ASTM D3034) at all depths by open cut, including trenching, embedment, backfill, connection to proposed lift station and existing sewer, and all related items, complete and in place. Contractor shall verify the depth and location of all sewer mains prior to beginning construction. The cost of removing the existing sanitary sewer line or manhole, where specified or where necessary, shall be covered under these Bid Items unless specified otherwise. The existing top of ground grades shown on the plans are approximate and there will no compensation if the depth of pipe is proved to be otherwise. The cost of bypass pumping is included as a separate pay item.

3. For mainline sewer installation by open-cut methods, upon completion of pipe laying, backfilling, and consolidation of trench backfill, payment will be allowed for 80 percent of the unit contract price for furnishing and installing mainline pipe per linear foot. The remaining 20 percent of the unit price bid for furnishing and installing mainline pipe will be allowed once all field testing is complete and the property affected by construction operations has been completely restored to its original or required condition, including fence replacement, grading, seeding, sodding, etc., and removal of all equipment or materials related to construction. The 20 percent to be allowed when said field testing of pipe and property restoration occurs shall not be considered retainage but shall be considered as payment for work associated with said pipe testing and property restoration.

M. Item #17 – 10" HDPE Force Main (DR-11 ASTM D3350) by Open Cut

1. Measurement for 10" HDPE Force Main shall be per linear foot of horizontal length and paid at the contract unit price. Payment shall be full compensation for all labor, equipment, and materials required for installation of the pipe including, but not limited to pipe, pipe penetrations, fittings, thrust restraint and blocking, embedment, backfilling, and incidentals necessary to perform the work.

2. For mainline sewer installation by open-cut methods, upon completion of pipe laying, backfilling, and consolidation of trench backfill, payment will be allowed for 80 percent of the unit contract price for furnishing and installing mainline pipe per linear foot. The remaining 20 percent of the unit price bid for furnishing and installing mainline pipe will be allowed once all field testing is complete and the property affected by construction operations has been completely restored to its original or required condition, including fence replacement, grading, seeding, sodding, etc., and removal of all equipment or materials related to construction. The 20 percent to be allowed when said field testing of pipe and property restoration occurs shall not be considered retainage but shall be considered as payment for work associated with said pipe testing and property restoration.

N. Item #18 – Permanent Asphalt Pavement Repair

1. Measurement and Payment shall be made on the basis of price bid per square yard and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

2. Work shall include sawcut and repair from construction activities, removal and disposal of rubble, grading, flowable fill, subgrade preparation, HMAC, HMAC sealant, flexbase, tack and prime coats, finishing, and testing of permanent roads.

O. Item #19 - Concrete Pavement Repair

1. Measurement and Payment shall be made on the basis of price bid per square yard and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

2. Work shall include sawcut and repair from construction activities, removal and disposal of rubble, grading, flowable fill, subgrade preparation, concrete, rebar, and finishing.

P. Item #20 – Trench Safety System

1. Measurement for Trench Safety shall be per linear foot installed.

2. Payment for trench safety shall be made at the unit price bid per linear foot installed and shall be full compensation for trench safety as outlined in the Contract Documents.

Q. Item #21 – Standard 4' Diameter Fiberglass Manhole

1. Standard 4' Diameter Fiberglass Manhole shall be measured per manhole installed and paid for at the contract unit price in the Proposal. Payment shall be full compensation for all labor, material, and equipment deemed necessary to complete this pay item.

2. Work shall include all labor, materials and equipment to provide a new manhole, including: watertight manhole, grout, reinforced concrete foundation, pipe connections, frame and cover, testing and inspection, excavation, backfill, restoration, cleaning and all other incidentals necessary to complete the manholes as indicated. Manhole frames shall be watertight or traffic-rated where indicated in the Contract Documents. The difference in cost shall be accounted for in the unit price shown in the Proposal.

R. Item #22 – Standard 4' Diameter Fiberglass Drop-Manhole

1. Standard 4' Diameter Fiberglass Drop-Manhole shall be measured per manhole installed and paid for at the contract unit price in the Proposal. Payment shall be full compensation for all labor, material, and equipment deemed necessary to complete this pay item.

2. Work shall include all labor, materials and equipment to provide a new manhole, including: watertight manhole, grout, reinforced concrete foundation, pipe connections, frame and cover, testing and inspection, excavation, backfill, restoration, cleaning and all other incidentals necessary to complete the manholes as indicated. Manhole frames shall be watertight or traffic-rated where indicated in the Contract Documents. The difference in cost shall be accounted for in the unit price shown in the Proposal.

S. Item #23 – Standard 4' Diameter Fiberglass Dog House-Manhole

1. Standard 4' Diameter Fiberglass Dog House-Manhole shall be measured per manhole installed and paid for at the contract unit price in the Proposal. Payment shall be full compensation for all labor, material, and equipment deemed necessary to complete this pay item.

2. Work shall include all labor, materials and equipment to provide a new manhole, including: watertight manhole, grout, reinforced concrete foundation, pipe connections, frame and cover, testing and inspection, excavation, backfill, restoration, cleaning and all other incidentals necessary to complete the manholes as indicated. Manhole frames shall be watertight or traffic-rated where indicated in the Contract Documents. The difference in cost shall be accounted for in the unit price shown in the Proposal.

T. Item #24 – 4' Polycrete Manhole for Force Main Outfall

1. Polycrete Manholes for Force Main Outfall shall be measured per manhole installed and paid for at the contract unit price in the Proposal. Payment shall be full compensation for all labor, material, and equipment deemed necessary to complete this pay item.

2. Work shall include all labor, materials and equipment to provide a new manhole, including: watertight manhole, grout, reinforced concrete foundation, pipe connections, frame and cover, testing and inspection, excavation, backfill, restoration, cleaning and all other incidentals necessary to complete the manholes as indicated. Manhole frames shall be watertight or traffic-rated where indicated in the Contract Documents. The difference in cost shall be accounted for in the unit price shown in the Proposal.

U. Item #25 - 4' Diameter Fiberglass Manhole Extra Depth

1. 4' Diameter Fiberglass Manhole Extra depth shall be measured per vertical foot exceeding six feet and paid for at the contract unit price in the Proposal. Payment shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

2. This bid item is to cover only the depth in excess of six vertical feet needed for the sanitary sewer manhole to be constructed in accordance with the plans and

specifications. Work performed includes furnishing and installing the manhole barrel, base, invert, and channel as needed and in accordance with the Contract documents.

V. Item #26 - Electrical Service Equipment & Transfer Switch

1. There will be no measurement for Electrical Service Equipment & Transfer Switch.
2. Payment for Electrical Service Equipment & Transfer Switch shall be made at the lump sum price bid and shall be full compensation for supplying all labor, equipment, and materials including, but not limited to all electrical service equipment and transfer switch, and all other appurtenances and items related to the work.

W. Item #27 – Pump Control Panel

1. There will be no measurement for Pump Control Panel.
2. Payment for Pump Control Panel shall be made at the lump sum price bid and shall be full compensation for supplying all labor, equipment, and materials including, but not limited to installing control panel, enclosure, and all other appurtenances and items related to the work.

X. Item #28 - Instrumentation

1. There will be no measurement for Instrumentation.
2. Payment for Instrumentation shall be made at the lump sum price bid and shall be full compensation for supplying all labor, equipment, and materials and installing SCADA and instrumentation for the lift station including, but not limited to level transmitters, intrusion detection, PLC, cellular modems, float switches, and all system modifications and programming required to the City's operator work station (located offsite), and any other instrumentation or SCADA work required to bring the new Nature Center/Midland Drive Lift Station on line with the City's existing system.

Y. Item #29 – Conduit, Conductors, & Terminal Boxes

1. There will be no measurement for Conduit, Conductors and Terminal Boxes.
2. Payment for Conduit, Conductors, and Terminal Boxes shall be made at the lump sum price bid and shall be full compensation for supplying all labor, equipment, and materials and installing all cable and conduit on the site, but not limited to conduit, duct banks, conductors, terminal boxes, and all miscellaneous electrical items for a complete and operational system.

Z. Item #30 – Area Lighting

1. There will be no measurement for Area Lighting..
2. Payment Area Lighting shall be made at the lump sum price bid and shall be full compensation for supplying all labor, expenses and support to install area lighting as required for a complete and operational system.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

01 31 00 PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.01 SUMMARY

A. Furnish resources required to complete the Project in accordance with the Contract Documents and within the Contract Times.

B. Construct Project in accordance with current safety practices.

C. Manage Site to allow access to Site and control construction operations.

D. Construct temporary facilities to provide and maintain control over environmental conditions at the Site. Remove temporary facilities when no longer needed.

E. Provide temporary controls for pollution, management of water, and management of excess earth as required in Section 01 57 00 "Temporary Controls."

1.02 STANDARDS

A. Perform Work to comply with:

1. Requirements of the Contract Documents;
2. Laws and Regulations; and
3. Specified industry standards.

1.03 DOCUMENTATION

A. Provide documents in accordance with Section 01 33 00 "Document Management."

B. Provide copies of Supplier's printed storage instructions prior to furnishing materials or products and installation instructions prior to beginning the installation.

C. Incorporate field notes, sketches, recordings, and computations made by the Contractor in Record Drawings per Section 01 31 13 "Project Administration."

1.04 PERMITS

A. Obtain building permits for the Project from the local authorities having jurisdiction.

B. Obtain environmental permits required for construction at the Site.

C. Provide required permits for transporting heavy or oversized loads.

D. Provide other permits required to conduct any part of the Work.

E. Arrange for inspections and certification by agencies having jurisdiction over the Work and include the cost for these inspections and certifications in the Contract Price.

F. Make arrangements with private utility companies and pay fees associated with obtaining services or inspections.

G. Retain copies of permits and licenses at the Site and comply with all regulations and conditions of the permit or license.

1.05 SAFETY REQUIREMENTS

A. Manage safety to protect the safety and welfare of persons at the Site.

B. Provide safe access to move through the Site. Provide protective devices to warn and protect from hazards at the Site.

C. Provide safe access for those performing tests and inspections.

D. Maintain a supply of personal protective equipment for visitors to the Site.

E. Comply with latest provisions of the Occupational Health and Safety Administration (OSHA) and other Laws and Regulations.

F. Cooperate with accident investigations. Provide two copies of all reports, including insurance company reports, prepared concerning accidents, injuries, or deaths related to the Project to the Construction Manager as Record Data per Section 01 31 13 "Project Administration."

1.06 ACCESS TO THE SITE

A. Maintain access to the facilities at all times. Do not obstruct roads, pedestrian walks, or access to the various buildings, structures, stairways, or entrances. Provide safe access for normal operations during construction.

B. Provide adequate and safe access for inspections. Leave ladders, bridges, scaffolding, and protective equipment in place until inspections have been completed. Construct additional safe access if required for inspections.

C. Use roadways for construction traffic only with written approval of the appropriate representatives of each entity. Roadways may not be approved for construction traffic. Obtain written approval to use roads to deliver heavy or oversized loads to the Site. Furnish copies of the written approvals to the Construction Manager as Record Data per Section 01 31 13 "Project Administration."

1.07 CONTRACTOR'S USE OF THE SITE

A. Limit the use of Site for Work and storage to those areas designated on the Drawings or approved by the Construction Manager. Coordinate the use of the Site with the Construction Manager.

B. Provide security at the Site as necessary to protect against vandalism and loss by theft.

C. Park construction equipment in designated areas only and provide spill control measures as discussed in Section 01 57 00 "Temporary Controls."

D. Park employees' vehicles in designated areas only.

E. Obtain written permission of the property owner before entering privately-owned land outside of the Owner's property, rights-of-way, or easements.

F. Cooperate with public and private agencies with facilities operating within the limits of the Project. Provide 48 hours' notice to any applicable agency when Work is anticipated to proceed in the vicinity of any facility by using 8-1-1 or Texas811.org.

G. Conduct of Contractor's or Subcontractor's Employees:

1. Do not permit alcoholic beverages or illegal substances on the Site. Do not allow persons under the influence of alcoholic beverages or illegal substances to enter or remain on the Site at any time. Persons on Site under the influence of alcoholic beverages or illegal substances will be permanently prohibited from returning to the Site. Criminal or civil penalties may also apply.

2. Do not allow the use of offensive language or sexual harassment in any form. These actions will cause immediate and permanent removal of the offender from the premises. Criminal or civil penalties may apply.

3. Require workers to wear clothing that is inoffensive and meets safety requirements. Do not allow sleeveless shirts, shorts, or any exceedingly torn, ripped, or soiled clothing to be worn on the Site.

4. Do not allow the use, possession, concealment, transportation, promotion, or sale of the following prohibited items anywhere on the Site:

   a. Firearms (including air rifles and pistols and BB or pellet guns) and ammunition;

   b. Bows, crossbows, arrows, bolts, or any other projectile weapons;

   c. Explosives of any kind, including fireworks;

   d. Illegal knives;

   e. Other weapons prohibited by state Laws and Regulations; and

   f. Any other item that has been designed or intended to be used as a weapon.

   No exceptions will be made for the possession of a firearm by a person that has a valid state-issued license to carry a firearm. Remove any of the prohibited items listed above from the Site immediately and permanently. Any person found to be in possession of any prohibited item must also be removed from the Site and may be reported to local law enforcement.

1.08 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

A. Examine the Site and review the available information concerning the Site. Locate utilities, underground facilities, and existing structures. Verify the elevations of the structures adjacent to excavations. Report any discrepancies from information in the Contract Documents to the Construction Manager before beginning construction.

B. Determine if existing structures, poles, piping, or other utilities at excavations will require relocation or replacement. Prepare a Plan of Action per Section 01 31 13 "Project Administration." Coordinate Work with local utility company and others for the relocation or replacement.

C. Protect utilities, underground facilities and existing structures unless they are shown to be replaced or relocated on the Drawings. Restore damaged items to the satisfaction of the Owner and utility or property owner.

D. Carefully support and protect all structures and/or utilities so that there will be no failure or settlement where excavation or demolition endangers adjacent structures and utilities. Do not take existing utilities out of service unless required by the Contract Documents or

approved by the Construction Manager. Notify and cooperate with the utility owner if it is necessary to move services, poles, guy wires, pipelines, or other obstructions.

E. Protect existing trees and landscaping at the Site. Mark trees that may be removed during construction and review with the Construction Manager for approval before removing. Protect trees to remain from damage limiting activity, including stockpiling of materials within the drip line of the tree.

F. Protect buildings from damage when handling material or equipment. Protect finished surfaces, including floors, doors, and jambs. Remove doors and install temporary wood protective coverings over jambs, if needed.

1.09 DISRUPTION TO SERVICES/CONTINUED OPERATIONS

A. Owner's facilities are to continue in service as usual during the construction unless noted otherwise. Owner or utilities must be able to operate and maintain the facilities. Keep disruptions to existing utilities, piping, process piping, or electrical services to a minimum.

1. Do not restrict access to critical valves, operators, or electrical panels.

2. Do not store material or products inside structures unless authorized by the Construction Manager.

3. Limit operations to the minimum amount of space needed to complete the specified Work.

4. Maintain storm sewers and sanitary sewers in service at all times. Provide temporary service around the construction or otherwise construct the Work in a manner that flow is not restricted.

B. Provide a Plan of Action in accordance with Section 01 35 00 "Special Procedures" if facilities must be taken out of operation.

1.10 FIELD VERIFICATION

A. Perform complete field measurements prior to purchasing products or beginning construction for products required to fit existing conditions.

B. Verify property lines, control lines, grades, and levels indicated on the Drawings.

C. Verify pipe class, equipment capacities, existing electrical systems, and power sources for existing conditions.

D. Check Shop Drawings and indicate the actual dimensions available where products are to be installed.

E. Include field measurements in Record Documents as required in Section 01 31 13 "Project Administration."

1.11 REFERENCE DATA AND CONTROL POINTS

A. Construction Manager will provide the following control points:

1. Base line or grid reference points for horizontal control.

2. Benchmarks for vertical control.

B. Locate and protect control points prior to starting the Work and preserve permanent reference points during construction. Designated control points may be on an existing structure or monument. Do not change or relocate points without prior approval of the Construction Manager. Notify Construction Manager when a reference point is lost, destroyed, or requires relocation. Replace Project control points on the basis of the original survey. Control points or benchmarks damaged, disturbed or destroyed as a result of the Contractor's negligence will be restored by the Construction Manager. Owner will impose a set-off as compensation for the effort required.

C. Provide complete engineering layout of the Work needed for construction.

1. Provide competent personnel. Provide equipment including accurate surveying instruments, stakes, platforms, tools, and materials.

2. Provide surveying with accuracy meeting the requirements established for the Texas Coordinate System of 1983, Central Zone. Elevations are NAVD88 (GEOID18).

3. Provide Record Data per Section 01 31 13 "Project Administration" and measurements per standards.

1.12 DELIVERY AND STORAGE

A. Deliver products and materials to the Site in time to prevent delays in construction.

B. Deliver packaged products to Site in original undamaged containers with identifying labels attached. Open cartons as necessary to check for damage and to verify invoices. Reseal cartons and store properly until used. Leave products in original packages or other containers until installed. If original packages or containers are damaged, repackage in containers and include packing slips, labels and other information from the original packaging.

C. Deliver products that are too large to fit through openings to the Site in advance of the time enclosing walls and roofs are erected. Set in place, raised above floor on cribs or pallets.

D. Assume full responsibility for the protection and safekeeping of products stored at the Site.

E. Store products at locations acceptable to the Construction Manager and to allow Owner access to maintain and operate existing facilities.

F. Store products in accordance with the Supplier's storage instructions immediately upon delivery. Leave seals and labels intact. Arrange storage to allow access for maintenance of stored items and for inspection. Store unpacked and loose products on shelves, in bins, or in neat groups of like items.

G. Provide additional storage areas as needed for construction. Store products subject to damage by elements in substantial weather-tight enclosures or storage sheds. Provide and maintain storage sheds as required for the protection of products. Provide temperature, humidity control, and ventilation within the ranges stated in the Supplier's instructions. Remove storage facilities at the completion of the Project.

H. Protect the pipe interior. Keep all foreign materials such as dirt, debris, animals, or other objects out of the pipe during the Work.

I. Provide adequate exterior storage for products that may be stored out-of-doors.

1. Provide substantial platforms, blocking, or skids to support materials and products above ground which has been sloped to provide drainage. Protect products from soiling or staining.
2. Cover products subject to discoloration or deterioration from exposure to the elements, with impervious sheet materials. Provide ventilation to prevent condensation below covering.
3. Store loose, granular materials on clean, solid surfaces, or on rigid sheet materials, to prevent mixing with foreign matter.
4. Provide surface drainage to prevent erosion and ponding of water.
5. Prevent mixing of refuse or chemically injurious materials or liquids with stored materials.
6. Pipes and conduits stored outdoors are to have open ends sealed to prevent the entrance of dirt, moisture, and other injurious materials. Protect PVC pipe from ultraviolet light exposure.
7. Store products to prevent wind damage.

J. Protect and maintain mechanical and electrical equipment in storage.
1. Provide Supplier's service instructions on the exterior of the package.
2. Service equipment on a regular basis as recommended by the Supplier. Maintain a log of maintenance services. Submit the log as Record Data per Section 01 31 13 "Project Administration" when Owner assumes responsibility for maintenance and operation.
3. Provide power to and energize space heaters for all equipment for which these devices are provided.
4. Provide temporary enclosures for all electrical equipment, including electrical systems on mechanical devices. Provide and maintain heat in the enclosures until equipment is energized.

K. Maintain storage facilities. Inspect stored products on a weekly basis and after periods of severe weather to verify that:
1. Storage facilities continue to meet specified requirements;
2. Supplier's required environmental conditions are continually maintained; and
3. Products that can be damaged by exposure to the elements are not adversely affected.

L. Replace any stored item damaged by inadequate protection or environmental controls.

M. Payment may be withheld for any products not properly stored.

1.13 CLEANING DURING CONSTRUCTION

A. Provide positive methods to minimize raising dust from construction operations and provide positive means to prevent air-borne dust from disbursing into the atmosphere. Control dust and dirt from demolition, cutting, and patching operations.

B. Clean the Site as Work progresses and dispose of waste materials, keeping the Site free from accumulations of waste or rubbish. Provide containers at the Site for waste collection. Do not allow waste materials or debris to blow around or off of the Site. Control dust from waste materials. Transport waste materials with as few handlings as possible.

C. Comply with Laws and Regulations. Do not burn or bury waste materials. Remove waste materials, rubbish, and debris from the Site and legally dispose of these at public or private disposal facilities.

1.14 MAINTENANCE OF ROADS, DRIVEWAYS, AND ACCESS

A. Maintain roads and streets in a manner that is suitable for safe operations of public vehicle during all phases of construction unless the Owner approves a street closing. Do not close public roads overnight. Coordinate and arrange for emergency vehicle access when streets are to be closed.

B. Submit a Notification by Contractor for Owner's approval of a street closing. The request must state:

1. The reason for closing the street.
2. How long the street will remain closed.
3. Procedures to be taken to maintain the flow of traffic.

C. Obtain permits and permissions of the entity that owns the road prior to any Work and provide a copy of the permit or permission Record Data per Section 01 31 13 "Project Administration."

D. Construct temporary detours, including by-pass roads around construction, with adequately clear width to maintain the free flow of traffic at all times. Maintain barricades, signs, and safety features around the detour and excavations. Maintain barricades, signs, and safety features around the Work in accordance with all provisions of the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).

E. Assume responsibility for any damage resulting from construction along roads or drives.

1.15 BLASTING

A. Blasting is not allowed for any purpose.

1.16 ARCHAEOLOGICAL REQUIREMENTS

A. Cease operations immediately and contact the Owner for instructions if historical or archaeological artifacts are found during construction.

B. Conduct all construction activities to avoid adverse impact of the sites where significant historical or archaeological artifacts are found or identified as an area where other artifacts could be found.

1. Obtain details for working in these areas from regulatory agencies.
2. Maintain confidentiality regarding the site(s) of artifacts.
3. Adhere to the requirements of applicable local, state, and federal Laws and Regulations.

4. Notify the Construction Manager and any local, state, or federal agency as required by applicable Laws and Regulations.

C. Do not disturb archaeological sites.

1. Obtain the services of a qualified archaeological specialist to instruct construction personnel on how to identify and protect archaeological finds on an emergency basis.

2. Coordinate activities to permit archaeological work to take place within the area.

a. Attempt to archaeologically clear areas needed for construction as soon as possible.

b. Provide a determination of priority for such areas.

D. Assume responsibility for any unauthorized destruction that might result to such sites by construction personnel, and pay all penalties assessed by state or federal agencies for non-compliance with these requirements.

E. Contract Times will be modified to compensate for delays caused by such archaeological finds. No additional compensation will be paid for delays.

1.17 ENDANGERED SPECIES RESOURCES

A. Do not perform any activity that is likely to destroy or adversely modify the habitat or jeopardize the continued existence of a threatened or endangered species as listed or proposed for listing under the Federal Endangered Species Act (ESA) or applicable state Laws and Regulations.

B. Cease Work immediately in the area of the encounter and notify the Construction Manager if a threatened or endangered species is encountered during construction. Construction Manager will implement actions in accordance with the ESA and applicable state statutes. Resume construction in the area of the encounter when authorized to do so by the Construction Manager.

1.18 OCCUPANCY

A. Owner has the right to occupy or operate any portion of the Project that is ready for use after notifying the Contractor of its intent to do so.

B. Testing of equipment and appurtenances including specified test periods, training, and startup does not constitute acceptance for operation.

C. Owner may accept the facility for continued use after startup and testing at the option of the Owner. If acceptance is delayed at the option of the Owner, shut down facilities per approved operation and maintenance procedures.

D. The execution of bonds is understood to indicate the consent of the surety to these provisions for occupancy of the structures and use of equipment.

E. Provide an endorsement from the insurance carrier permitting occupancy of the structures and use of equipment during the remaining period of construction.

F. Conduct operations to ensure the least inconvenience to the Owner and general public.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

01 31 13 PROJECT ADMINISTRATION

PART 1 - GENERAL

1.01 WORK INCLUDED

A. Administer contract requirements to construct the Project. Provide documentation per the requirements of this Section. Provide information as requested by the OPT.

1.02 DOCUMENTATION

A. Provide documents in accordance with Section 01 33 00 "Document Management."

1.03 COMMUNICATION DURING THE PROJECT

A. Construction Manager is to be the first point of contact for all parties on matters concerning this Project.

B. Construction Manager will coordinate correspondence concerning:

1. Contract administration;
2. Clarification and interpretation of the Contract Documents;
3. Contract modifications;
4. Observation of Work and testing; and
5. Claims.

C. Construction Manager will normally communicate only with the Contractor. Any required communication with Subcontractors or Suppliers will only be with the direct involvement of the Contractor.

D. Direct written communications to the Construction Manager at the address indicated at the pre-construction conference. Include the following with communications as a minimum:

1. Name of the Owner;
2. Project name;
3. Contract title;
4. Project number;
5. Date; and
6. A reference statement.

E. Submit communications on the forms referenced in this Section or in Section 01 33 00 "Document Management."

1.04 PROJECT MEETINGS

A. Pre-Construction Conference:

1. Attend a pre-construction conference;
2. The location of the conference will be determined by the Construction Manager;

3. The time of the conference will be determined by the Construction Manager, but will be after the Notice of Award is issued and not later than 15 days after the Notice to Proceed is issued;
4. OPT, Contractor's project manager and superintendent, representatives of utility companies, and representatives from major Subcontractors and Suppliers may attend the conference; and
5. Provide and be prepared to discuss:
    a. Preliminary construction schedule per Section 01 33 05 "Construction Progress Schedule";
    b. Preliminary Schedule of Documents per Section 01 33 00 "Document Management";
    c. Schedule of Values and anticipated schedule of payments per Section 01 29 00 "Application for Payment Procedures";
    d. List of Subcontractors and Suppliers;
    e. Contractor's organizational chart as it relates to this Project; and
    f. Letter indicating the agents of authority for the Contractor and the limit of that authority with respect to the execution of legal documents, contract modifications, and payment requests.

B. Progress Meetings:
1. Attend meetings with the Construction Manager, Design Professional, and Owner.
    a. Meet monthly or as requested by the Construction Manager to discuss the Project.
    b. Meet at the Site or other location as designated by the Construction Manager.
    c. Contractor's superintendent and other key personnel are to attend the meeting. Other individuals may be requested to attend to discuss specific matters.
    d. Notify the Construction Manager of any specific items to be discussed a minimum of 1 week prior to the meeting.
2. Provide information as requested by the Construction Manager, Design Professional or Owner concerning this Project. Prepare to discuss:
    a. Status of overall project schedule;
    b. Contractor's detailed schedule for the next month;
    c. Anticipated delivery dates for equipment;
    d. Coordination with the Owner;
    e. Status of documents;
    f. Information or clarification of the Contract Documents;
    g. Claims and proposed modifications to the Contract;
    h. Field observations, problems, or conflicts; and

i. Maintenance of quality standards.

3. Construction Manager will prepare a record of meeting proceedings. Review the record of the meeting and notify the Construction Manager of any discrepancies within 10 days of the date the record of the meeting is provided. The record will not be corrected after the 10 days have expired. Corrections will be reflected in the record of the following meeting.

C. Pre-Documentation and Pre-Installation Meetings:

1. Conduct pre-documentation and pre-installation meetings as required in the individual technical Specifications or as determined necessary by the Construction Manager (for example, instrumentation, roofing, concrete mix design, etc.).

2. Set the time and location of the meetings when ready to proceed with the associated Work. Submit a Notification by Contractor in accordance with Paragraph 1.07 for the meeting 2 weeks before the meeting. OPT must approve of the proposed time and location.

3. Attend the meeting and require the participation of appropriate Subcontractors and Suppliers in the meeting.

4. Construction Manager will prepare a record of meeting proceedings. Review the record of the meeting and notify the Construction Manager of any discrepancies within 10 days of the date the record of the meeting is provided. The record will not be corrected after the 10 days have expired. Corrections will be reflected in the record of the following meeting.

D. Weekly Coordination Meetings: Meet on a weekly basis with the Construction Manager or designated on-site representative of the OPT to discuss Work planned for the following week, review coordination issues, testing required, or other issues. Records of these meetings are not required.

1.05 REQUESTS FOR INFORMATION

A. Submit a Request for Information to the Construction Manager to obtain additional information or clarification of the Contract Documents.

1. Submit a separate Request for Information for each item on the form provided by the Construction Manager.

2. Attach adequate information to permit a response without further clarification. Construction Manager will return requests that do not have adequate information to the Contractor for additional information. Contractor is responsible for all delays resulting from multiple reviews due to inadequate information.

3. A response will be made when adequate information is provided. The response will be made on the Request for Information form provided by the Construction Manager.

B. Response to a Request for Information is given to provide additional information, interpretation, or clarification of the requirements of the Contract Documents, and does not modify the Contract Documents.

1. Submit a Change Proposal per Section 01 26 00 "Change Management" if a contract modification is suggested or required.

C. Use the Decision Register to document decisions made at meetings and actions to be taken in accordance with Paragraph 1.06.

D. Use the Action Item Register to document assignments for actions to be taken in accordance with Paragraph 1.06.

1.06 DECISION AND ACTION ITEM REGISTER

A. Construction Manager will maintain a Decision Register to document key decisions made during meetings, telephone conversations, or visits to the Site using the format provided by the Construction Manager:

1. Review the Decision Register prior to each regular meeting.

2. Report any discrepancies to the Construction Manager for correction or discussion at the next monthly meeting.

B. Construction Manager will maintain an Action Item Register in conjunction with the Decision Register to track assignments made during meetings, telephone conversations or visits to the Site using the format provided by the Construction Manager:

1. Review the Action Item Register prior to each regular meeting.

2. Report actions taken after the previous progress meeting on items in the register assigned to the Contractor or through the Contractor to a Subcontractor or Supplier to the Construction Manager. Report on status of progress 1 week prior to each progress meeting established in Paragraph 1.04 to allow Construction Manager to update the register prior to the Progress Meetings.

3. Be prepared to discuss the status at each meeting.

C. Decisions or action items in the register that require a change in the Contract Documents will have the preparation of a Modification as an action items if appropriate. The Contract Documents can only be changed by a Modification.

1.07 NOTIFICATION BY CONTRACTOR

A. Notify the Construction Manager of:

1. Need for testing;

2. Intent to work outside regular working hours;

3. Request to shut down facilities or utilities;

4. Proposed utility connections;

5. Required observation by Construction Manager, Engineer, or inspection agencies prior to covering Work; and

6. Training.

B. Provide notification a minimum of 2 weeks in advance to allow OPT time to respond appropriately to the notification.

C. Use the Notification by Contractor form provided by the Construction Manager.

1.08 REQUESTS FOR MODIFICATIONS

A. Submit requests for Modifications per Section 01 26 00 "Change Management."

1.09 PLAN OF ACTION

A. Submit a written Plan of Action for approval for shutting down essential services. These include:

1. Electrical power;
2. Control power;
3. Process piping;
4. Process equipment;
5. Communications equipment; and
6. Other designated functions.

B. Describe the following in the Plan of Action:

1. Scheduled dates for construction;
2. Work to be performed;
3. Utilities, piping, or services affected;
4. Length of time the service or utility will be disturbed;
5. Procedures to be used to carry out the Work;
6. Plan of Action to handle emergencies;
7. List of manpower, equipment, and ancillary supplies;
8. Backups for key pieces of equipment and key personnel; and
9. Contingency plan that will be used if the original schedule cannot be met.

C. Submit plan 1 month prior to beginning the Work.

1.10 RECORD DATA

A. Submit information required by the Contract Documents that is not related to a product as Record Data using the form provided by the Construction Manager.

1.11 RECORD DOCUMENTS

A. Maintain one complete set of printed Record Documents at the Site including:

1. Drawings;
2. Specifications;
3. Addenda;
4. Modifications;
5. Product Data and approved Shop Drawings;

6. Construction photographs;
7. Test Reports;
8. Clarifications and other information provided in Request for Information responses; and
9. Reference standards.

B. Store printed Record Documents and Samples in the Contractor's field office.
1. Record Documents are to remain separate from documents used for construction.
2. Provide files and racks for the storage of Record Documents.
3. Provide a secure storage space for the storage of Samples.
4. Maintain Record Documents in clean, dry, legible conditions, and in good order.
5. Make Record Documents and Samples available at all times for inspection by the OPT.

C. Maintain an electronic record of Specifications and Addenda to identify products provided in PDF format.
1. Reference the Product Data number, Shop Drawing number, and O&M manual number for each product and item of equipment furnished or installed.
2. Reference Modifications by type and number for all changes.

D. Maintain an electronic record of Drawings in PDF format.
1. Reference the Product Data number, Shop Drawing number, and O&M manual number for each product and item of equipment furnished or installed.
2. Reference Modifications by type and number for all changes.
3. Record information as construction is being performed. Do not conceal any Work until the required information is recorded.
4. Mark drawings to record actual construction.
   a. Depths of various elements of the foundation in relation to finished first floor datum or the top of walls.
   b. Horizontal and vertical locations of underground utilities and appurtenances constructed, and existing utilities encountered during construction.
   c. Location of utilities and appurtenances concealed in the Work. Refer measurements to permanent structures on the surface. Include the following equipment:
      1) Piping;
      2) Ductwork;
      3) Equipment and control devices requiring periodic maintenance or repair;
      4) Valves, unions, traps, and tanks;
      5) Services entrance;
      6) Feeders; and

7) Outlets.

d. Changes of dimension and detail.

e. Changes by Modifications.

f. Information in Requests for Information or included in the Decision Register.

g. Details not on the original Drawings. Include field verified dimensions and clarifications, interpretations, and additional information issued in response to Requests for Information.

5. Mark Drawings with the following colors:

a. Highlight references to other documents, including Modifications in blue.

b. Highlight mark ups for new or revised Work (lines added) in yellow.

c. Highlight items deleted or not installed (lines to be removed) in red.

d. Highlight items constructed per the Contract Documents in green.

6. Submit Record Documents to Construction Manager for review and acceptance 30 days prior to Final Completion of the Project.

E. Applications for Payment will not be recommended for payment if Record Documents are found to be incomplete or not in order. Final payment will not be recommended without complete Record Documents.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

01 33 00 DOCUMENT MANAGEMENT

PART 1 - GENERAL

1.01 SUMMARY

A. Submit documentation as required by the Contract Documents and as requested by the Construction Manager.

B. Use the Project Management Information System (PMIS) provided by the Construction Manager. Software for the PMIS is FNiManager which has the following system requirements:

1. Operating Systems: Windows 7 or later and OS X v10.8 or later.
2. Supported Internet Browsers: Internet Explorer 11.0 or later, Google Chrome 70.0 or later, Firefox 63.0 or later, Safari 11.0 or later, and Microsoft Edge 17.0 or later.
3. Screen Resolution: The recommended screen resolution is 1280 x 1024 or higher. The minimum screen resolution required to support all features is 1024 x 768.

1.02 QUALITY ASSURANCE

A. Submit legible, accurate, complete documents presented in a clear, easily understood manner. Documents not meeting these criteria will be returned without review as "Not Approved."

1.03 CONTRACTOR'S RESPONSIBILITIES

A. Review documents prior to submission. Make certifications as required by the Contract Documents and as indicated on Construction Manager provided forms.

B. Provide a Schedule of Documents to list the documents that are to be submitted and the dates on which documents are to be sent to the Construction Manager for review. Use the form provided by the Construction Manager for this list.

C. Incorporate the dates for processing documents into the Progress Schedule required by Section 01 33 05 "Construction Progress Schedule."

1. Provide documents in accordance with the schedule so construction of the Project is not delayed.
2. Allow a reasonable time for the review of documents when preparing the Progress Schedule. Assume a 14-day review cycle for each document unless a longer period of time is indicated in the Contract Documents or agreed to by Construction Manager and Contractor.
3. Schedule delivery of review documents to provide all information for interrelated Work at one time.
4. Allow adequate time for processing documents so construction of the Project is not delayed.

1.04 FORMS AND WORKFLOWS

A. Use the forms or workflow process provided by the Construction Manager for project documentation.

1.05 DOCUMENT PREPARATION AND DELIVERY PROCEDURES

A. Deliver documents in electronic format as directed by the Construction Manager.

1. Do not leave any blanks incomplete. If information is not applicable, enter NA in the space provided.

2. Deliver all documents in Portable Document Format (PDF).

a. Create PDF document using Bluebeam Revu software.

b. Create PDF documents from native format files unless files are only available from scanned documents.

c. Rotate pages so that the top of each document appears at the top of the monitor screen when opened in PDF viewing software.

d. Provide PDF document with adequate resolution to allow documents to be printed in a format equivalent to the document original. Documents are to be scalable to allow printing on standard 8-1/2 x 11 or 11 x 17 paper.

e. Submit color PDF documents where color is required to interpret the document.

f. Create or convert documents to allow text to be selected for comments or searched using text search features. Run scanned documents through Optical Character Recognition (OCR) software if necessary.

g. Flatten markups in documents to prevent markups made by Contractor from being moved or deleted. Flatten documents to allow markup recovery.

h. Use Bluebeam Revu software to reduce file size using default settings except the option for "Drop Metadata". Uncheck the "Drop Metadata" box when reducing file size.

i. Add footers to each document with the name of the Project.

1.06 DOCUMENT NUMBERING

A. Assign a document number to the Contractor originated document to allow tracking of the document during the review process.

1. Assign the number consisting of a prefix, a sequence number, and a letter suffix. Prefixes will be as follows:

Prefix	Description
AP	Application for Payment
CP	Change Proposal
CTR	Certified Test Report
EIR	Equipment Installation Report
GD	Graphic Documentation

Prefix	Description
NBC	Notification by Contractor
O&M	Operation and Maintenance Manuals
PD	Product Data
RD	Record Data
RFI	Request for Information
SD	Shop Drawing
SCH	Schedule of Progress

2. Issue sequence numbers in chronological order for each type of document as directed by the Construction Manager.
3. Issue numbers for resubmittals that have the same number as the original document followed by an alphabetical suffix indicating the number of times the same document has been sent to the Construction Manager for processing. For example: SD-025 A represents Shop Drawing number 25 and the letter "A" designates this is the second time this document has been sent for review.
4. Clearly note the document number on each page or sheet of the document.
5. Correct assignment of numbers is essential since different document types are processed in different ways.

B. Include reference to the Drawing number and/or Specification Section, detail designation, schedule, or location that corresponds with the data submitted on the Document Transmittal form. Other identification may also be required, such as layout drawings or schedules to allow the reviewer to determine where a particular product is to be used.

1.07 DOCUMENTATION

A. Furnish documents as indicated in Section 01 33 01 "Document Register" or in the individual Specification Sections. Submit documents per the procedures described in the Contract Documents.

B. Submit documents per the Specification Sections shown in the following table:

Document Type	Specification Section
Application for Payment	01 29 00
Certified Test Report	01 33 02 for approval of product 01 40 00 to demonstrate compliance
Change Management	01 26 00
Equipment Installation Report	01 75 00
Graphic Documentation	01 33 06
Notification by Contractor	01 31 13
Operation & Maintenance Manuals	01 33 04
Product Data	01 33 03
Progress Schedules	01 33 05
Record Data	01 31 13
Request for Information	01 31 13
Schedule of Values	01 29 00

Document Type	Specification Section
Shop Drawing	01 33 02
Substitutions	01 26 00
Suppliers and Subcontractors	01 31 13 01 33 03

1.08 Electronic Documents Protocol

A. The parties shall follow the provisions in this Section, referred to as the Electronic Documents Protocol ("EDP"), for exchange of electronic transmittals.

B. Basic Requirements:

1. Except as otherwise stated elsewhere in the Contract Documents, the OPT and Contractor will send and accept Electronic Documents sent by Electronic Means using the protocols provided in this Section.

2. The contents of the information in any Electronic Document will be the responsibility of the transmitting party. Electronic Documents may be used in the same manner as the printed versions of the same documents that are exchanged using non-electronic format and methods, and are subject to the same governing requirements, limitations, and restrictions, set forth in the Contract Documents.

3. Provisions of this Contract regarding Electronic Documents must be incorporated into other agreements or subcontracts on the Project. Nothing in this paragraph reduces or eliminates requirements:

a. to create, provide, or maintain an original printed record version of Drawings and Specifications, signed and sealed according to applicable Laws and Regulations;

b. to comply with any applicable Law or Regulation governing the signing and sealing of design documents and related Modifications or the signing and electronic transmission of any other documents; or

c. to comply with the notice requirements.

4. When sending Electronic Documents by Electronic Means the sending party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or sending Electronic Documents.

C. System Infrastructure for Electronic Document Exchange:

1. Contractor will provide hardware, operating system(s) software, internet, e-mail, and large file transfer functions ("System Infrastructure") at its own cost. System Infrastructure must comply with these requirements.

2. The maximum size of an email attachment for exchange of Electronic Documents under this EDP is 100 MB. Attachments larger than that may be exchanged in parts or by using large file transfer functions or physical media.

3. Contractor assumes full and complete responsibility for its own costs, delays, deficiencies, and errors associated with converting, translating, updating, verifying,

licensing, or otherwise enabling its System Infrastructure, including operating systems and software.

4. Contractor is responsible for its own system operations, security, back-up, archiving, audits, printing resources, and other Information Technology ("IT") for maintaining operations of its System Infrastructure during the Project, including coordination with individual(s) or entity responsible for managing its System Infrastructure and capable of addressing routine communications and other IT issues affecting the exchange of Electronic Documents.

5. Contractor will operate and maintain industry-standard, industry-accepted, ISO standard, commercial-grade security software and systems that are intended to protect others from: software viruses and other malicious software like worms, trojans, adware; data breaches; loss of confidentiality; and other threats in the transmission to or storage of information from the other parties, including transmission of Electronic Documents by physical media such as CD/DVD/flash drive/hard drive. Contractor will not be liable to others for any breach of system security to the extent that Contractor maintains and operates required security software and systems.

6. In the case of disputes, conflicts, or modifications to the use of Electronic Documents required to address issues affecting System Infrastructure, Contractor and OPT will cooperatively resolve the issues; but, failing resolution, OPT is authorized to make and require reasonable and necessary changes meet its original intent. Contractor may submit a Change Proposal if the changes cause additional cost or time to Contractor that could not have reasonably been anticipated.

7. Contractor and OPT are both responsible for their own back-up and archive of documents sent and received during the term of the contract. Contractor and OPT remain solely responsible for its own post-Project back-up and archive of Project documents after the term of the Contract as each party deems necessary for its own purposes.

8. If a Contractor or OPT receives an obviously corrupted, damaged, or unreadable Electronic Document, the receiving party will advise the sending party of the incomplete transmission. The parties will attempt to complete a successful transmission of the Electronic Document or use an alternative delivery method to complete the communication.

9. OPT will operate a project information management system (Project Website) for use of OPT and Contractor during the Project for exchange and storage of Project-related communications and information. Except as otherwise provided in this Contract, use of the Project Website will be mandatory for exchange of Project documents, communications, submittals, and other Project-related information.

D. Software Requirements:

1. OPT and Contractor will each acquire the software and software licenses necessary to create and transmit Electronic Documents and to read and to use any Electronic

Documents received from the other party (and if relevant from third parties), using the following software formats:

Document	Document Format
Email	.htm, .rtf, or .txt without formatting that impair legibility of content on screen or in printed copies
Submittals	Bluebeam PDF
Applications for Payment	Bluebeam PDF and Microsoft® Excel
Progress Schedules	PDF and Schedule in Schedule in Native Format
Layouts and drawings to be submitted to Owner for future use and modification	Autodesk® AutoCAD .dwg format
Document submitted to OPT for future word processing use and modification	Microsoft® Word
Spreadsheets and data submitted to OPT for future data processing use and modification	Microsoft® Excel
Photographs	.jpg or .jpeg
Videos	.mp4, .mpeg, or .avi

2. Software will be the version currently published at the time Contract is signed, unless a specific software version is listed in the Supplementary Conditions. Prior to using any updated version of the software required in this section for sending Electronic Documents to the other party, the originating party will first notify and receive concurrence from the other party for use of the updated version or convert to comply with this Section.

3. The parties agree not to intentionally edit, reverse engineer, decrypt, remove security or encryption features, or convert to another format for modification purposes any Electronic Document or information contained therein that was transmitted in a software data format, including Portable Document Format (PDF), intended by sender not to be modified, unless the receiving party obtains the permission of the sending party or is citing or quoting excerpts of the Electronic Document for Project purposes.

E. Requests by Contractor for Electronic Documents in Other Formats:

1. Release of any Electronic Documents developed during the design process (including Contract Documents, Technical Data, Drawings, and computer models) in formats other than those identified in this Section will be at the discretion of the OPT.

2. To the extent determined by OPT, release of Electronic Documents and other project information requested by Contractor ("Request") in formats other than those identified in this Section will be subject to the provisions of Owner's response to the Request, and to the following conditions:

a. The content included in the Electronic Documents covered by the Request was prepared by Design Professional as an internal working document or electronic computer model solely for Design Professional's purposes and not for any construction processes and is being provided to Contractor on an "AS IS" basis without any warranties of any kind, including, any implied warranties of fitness

for any purpose. Contractor is advised and acknowledges that the content may not be suitable for Contractor's application or may require substantial modification and independent verification by Contractor. The content may include limited resolution of models, not-to-scale schematic representations and symbols, use of notes to convey design concepts in lieu of accurate graphics, approximations, graphical simplifications, undocumented intermediate revisions, and other devices that may affect subsequent reuse.

b. Electronic Documents containing text, graphics, metadata, or other types of data that are provided by Design Professional to Contractor under the Request are only for convenience of Contractor. Any conclusion or information obtained or derived from such data will be at the Contractor's sole risk and Contractor waives any claims against the Design Professional or Owner arising from use of data in Electronic Documents covered by the Request.

c. **CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND DESIGN PROFESSIONAL AND THEIR SUBCONSULTANTS FROM ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING ATTORNEYS' FEES AND DEFENSE COSTS ARISING OUT OF OR RESULTING FROM THE CONTRACTOR'S USE, ADAPTATION, OR DISTRIBUTION OF ANY ELECTRONIC DOCUMENTS PROVIDED UNDER THE REQUEST.**

d. Contractor agrees not to sell, copy, transfer, forward, give away or otherwise distribute this information (in source or modified file format) to any third party without the direct written authorization of Design Professional, unless such distribution is specifically identified in the Request and is limited to the Contractor's subcontractors. Contractor warrants that subsequent use by the Contractor's subcontractors complies with all terms of the Contract Documents and the Owner's response to Request.

3. In the event that Owner elects to provide or directs Design Professional to provide to Contractor any Contractor-requested Electronic Document versions of project information that is not explicitly identified in the Contract Documents as being available to Contractor, Owner shall be reimbursed by Contractor on an hourly basis for any costs necessary to create or otherwise prepare the data in a manner deemed appropriate by Design Professional in accordance with the General Conditions.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

01 33 01 DOCUMENT REGISTER

Specification Section	Specification Description	Paragraph No.	Types of Documents Required		
			Product Information	Sample or Mockup	Operation Data
02 96 00	Temporary Bypass Pumpin	1.03.B	Shop Drawing		
03 30 00.01	Cast-In-Place Concrete (Limited Applications)	1.03	Shop Drawing		
09 96 00.01	High-Performance Coatings	1.03	Product Data		
09 96 01	Concrete Protective Coatings	1.03	Shop Drawing		
26 05 19	600-Volt Building Wire & Cable	1.05	Product Data		
26 05 23	Instrumentation Cable	1.05	Product Data		
26 05 33	Raceways and Boxes	1.05	Product Data		
26 05 33.16	Device, Pull & Junction Boxes	1.05	Product Data		
26 05 43	Underground Ducts & Pull Boxes	1.05	Product Data		
26 05 53	Electrical Identification	1.05	Product Data		
26 22 00	Transformers	1.05	Product Data		
26 24 16	Panelboards	1.05	Product Data		
26 27 16	Cabinets and Enclosures	1.05	Product Data		
26 27 26	Wiring Devices	1.05	Product Data		
26 29 36	Motor Controllers	1.05	Product Data		O&M Manual
26 36 13	Manual Transfer Switch	1.05	Product Data		
31 23 23.34	Flowable Fill	1.03	Product Data		
31 23 33	Trenching and Backfill (Utilities)	1.03.A	Product Data		
32 12 16	Asphalt Paving	1.03.A	Product Data		
33 01 30.16	TV Inspection of Sewer Pipelines	1.02.A	Shop Drawing		
33 05 01.09	Polyvinyl Chloride (PVC) Pressure Pipe and Fittings	1.03.A	Shop Drawing		
33 05 01.13	Sanitary Sewer Pipe	1.03.A	Shop Drawing		
33 05 23.33	Pipeline Crossing	1.03.A	Shop Drawing		
33 39 13	Sanitary Utility Sewage Manholes, Frames and Covers	1.02.A	Shop Drawing		
44 42 56.04	Submersible Pumps	1.03	Shop Drawing		O&M Manual

01 33 02 SHOP DRAWINGS

PART 1 - GENERAL

1.01 SUMMARY

A. Shop Drawings are required for those products that cannot adequately be described in the Contract Documents to allow fabrication, erection, or installation of the product without additional detailed information from the Supplier.

B. Submit Shop Drawings as required by the Contract Documents and as reasonably requested by the Construction Manager to:

1. Record the products incorporated into the Project;
2. Provide detailed information for the products proposed for the Project regarding their fabrication, installation, commissioning, and testing; and
3. Allow the Design Professional to advise the Owner if products proposed for the Project by the Contractor conform, in general, to the design concepts of the Contract Documents.

C. Contractor's responsibility for full compliance with the Contract Documents is not relieved by the review of Shop Drawings, Samples, or mockups.

D. Submit a Change Proposal per Section 01 26 00 "Change Management" to request modifications to the Contract Documents, including those for approval of "or equal" products when specifically allowed by the Contract Documents or as a substitution for specified products or procedures. Deviations from the Contract Documents can only be approved by Change Order or Field Order.

1.02 QUALITY ASSURANCE

A. Submit legible, accurate, and complete documents presented in a clear, easily understood manner. Shop Drawings not meeting these criteria will not be approved.

B. Demonstrate that the proposed products are in full compliance with the design criteria and requirements of the Contract Documents, or will be if deviations requested per Paragraph 1.11 are approved.

C. Furnish and install products that fully comply with the information included in the Shop Drawings.

1.03 CONTRACTOR'S RESPONSIBILITIES

A. Furnish Shop Drawings for products as indicated in Section 01 33 01 "Document Register" or in the individual Specification Sections.

B. Include Shop Drawings in the Document Register required by Section 01 33 00 "Document Management" to indicate the Shop Drawings to be submitted, the dates on which Shop Drawings are to be sent to the Construction Manager for review, and proposed dates that the product will be incorporated into the Project.

C. Incorporate the dates for processing Shop Drawings into the Progress Schedule required by Section 01 33 05 "Construction Progress Schedule."

1. Submit Shop Drawings in accordance with the schedule so construction of the Project is not delayed.
2. Submit Shop Drawings for interrelated Work at one time.
3. Allow adequate time for ordering, fabricating, delivering, and installing products so construction of the Project is not delayed.

D. Complete the following before submitting a Shop Drawing or Sample:

1. Prepare and review the Shop Drawing or Sample. Coordinate the Shop Drawing or Sample with other Shop Drawings and Samples, with the requirements of the Work, and the Contract Documents;
2. Determine and verify specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to Shop Drawings and Samples;
3. Determine and verify the suitability of materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
4. Determine and verify information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

E. Determine and verify:

1. Field measurements, quantities, and dimensions are shown on the Shop Drawing and are accurate;
2. Location of existing structures, utilities, and equipment related to the Shop Drawing have been shown and conflicts between the products, existing structures, utilities, and equipment have been identified;
3. Conflicts that impact the installation of the products have been brought to the attention of the Construction Manager;
4. Shop Drawing is complete for its intended purpose; and
5. Conflicts between the Shop Drawing related to the various Subcontractors and Suppliers have been resolved.

F. Review Shop Drawings prior to submitting to the Construction Manager. Certify that all Shop Drawings have been reviewed by the Contractor and are in strict conformance with the Contract Documents as modified by Addenda, Change Order, Field Order, or Contract Amendment when submitting Shop Drawings except for deviations specifically brought to the Construction Manager's attention on an attached Shop Drawing Deviation Request form in accordance with Paragraph 1.11.

G. Fabrication or installation of any products prior to the approval of Shop Drawings is done at the Contractor's risk. Defective products may be rejected at the Owner's option.

H. Payment will not be made for products for which Shop Drawings or Samples are required until these are approved by the Construction Manager and Design Professional.

1.04 DOCUMENTATION

A. Provide adequate information in Shop Drawings and with Samples so the Design Professional can:

1. Assist the Owner in selecting colors, textures, or other aesthetic features.
2. Compare the proposed features of the product with the specified features and advise Owner that the product does, in general, conform to the Contract Documents.
3. Compare the performance features of the proposed product with those specified and advise the Owner that the product does, in general, conform to the performance criteria specified in the Contract Documents.
4. Review required certifications, guarantees, warranties, and service agreements for compliance with the Contract Documents.

B. Include a complete description of the material or equipment to be furnished, including:

1. Type, dimensions, size, arrangement, model number, and operational parameters of the components;
2. Weights, gauges, materials of construction, external connections, anchors, and supports required;
3. Performance characteristics, capacities, engineering data, motor curves, and other information necessary to allow a complete evaluation of mechanical components;
4. All applicable standards;
5. Fabrication and installation drawings, setting diagrams, manufacturing instructions, templates, patterns, and coordination drawings;
6. Wiring and piping diagrams and related controls;
7. Mix designs for concrete, asphalt, or other materials proportioned for the Project; and
8. Complete and accurate field measurements for products which must fit existing conditions. Indicate on the document that the measurements represent actual dimensions obtained at the Site.

C. Submit Shop Drawings that require coordination with other Shop Drawings for fabrication at the same time. Shop Drawings requiring coordination with other Shop Drawings will not be approved until a complete package is submitted, unless approved by the Construction Manager.

D. Submit information for all of the components and related equipment required for a complete and operational system in one Submittal.

1. Include electrical, mechanical, and other information required to indicate how the various components of the system function together as a system.
2. Provide certifications, warranties, and written guarantees and service contracts with the document package for review when these are required.

1.05 SPECIAL CERTIFICATIONS AND REPORTS

A. Provide all required special certifications, reports, and other documentation with the Shop Drawings as specified in the individual Specification Sections which may include:

1. Certified Test Reports (CTR): A report prepared by an approved testing agency giving results of tests performed on products to indicate their compliance with the Specifications. This report is to demonstrate that the product, when installed, will meet the requirements of the Contract Documents and is part of the Shop Drawing. Field tests may be performed by the Owner to determine that in place materials or products meet the same quality as indicated in the CTR submitted as part of the Shop Drawing.

2. Certification of Local Field Service (CLS): A certified letter stating that field service is available from a factory or supplier approved service organization located within a 300-mile radius of the Site. Include the names, addresses, and telephone numbers of approved service organizations with the certificate.

3. Certification of Adequacy of Design (CAD): A certified letter from the manufacturer of the equipment stating that the equipment has been designed to be structurally stable and to withstand all imposed loads without deformation, failure, or adverse effects to the performance and operational requirements of the unit. The letter must state that mechanical and electrical components have been adequately sized to be fully operational for the conditions specified or normally encountered by the product's intended use.

4. Certification of Applicator/Subcontractor (CSQ): A certified letter stating that the applicator or subcontractor proposed to perform a specified function is duly designated as factory authorized and trained for the application of the specified product.

1.06 WARRANTIES AND SERVICE AGREEMENTS

A. Provide warranties and service agreements per Section 01 78 36 "Warranties and Service Agreements."

1.07 WARRANTIES AND GUARANTEES

A. Provide all required warranties, guarantees, and related documents with the Shop Drawing. The effective date of warranties and guarantees will be the date of Substantial Completion.

B. Identify all extended warranties which are defined as any guarantee of performance for the product or system beyond the one-year correction period described in the General Conditions. Issue the warranty certificate in the name of the Owner. Provide a warranty bond for extended warranties if required by the individual Specification Sections.

C. Include an additional copy of equipment warranties in operation and maintenance manuals.

D. Provide a copy of all warranties in a separate document in accordance with Section 01 70 00 "Execution and Closeout Requirements."

1.08 EXTENDED SERVICE AGREEMENTS

A. Provide Extended Service Agreements and related documents with the Product Data. An Extended Service Agreement is a contract between the Owner and an approved Subcontractor or Supplier to provide service and or maintenance beyond that required to fulfill requirements for warranty repairs, or to perform routine maintenance for a definite period beyond the one-year correction period specified in the General Conditions.

B. An Extended Service Agreement does not relieve the Contractor from obligations under the one-year correction period or warranty provisions specified in the General Conditions.

C. An Extended Service Agreement does not relieve the Contractor from obligations under the maintenance bond, if a maintenance bond is required by the Contract.

D. Requirements for the Extended Service Agreement are described in the Specification Sections for each piece of equipment or system requiring an Extended Service Agreement.

E. Enter into a contract with the service provider and assign the service contract to the Owner on the date Substantial Completion. Once assigned to the Owner, Contract requirements for the Extended Service Agreement will be complete and will not extend the Contract between the Owner and Contractor.

F. Owner may require that a performance bond be provided for the Extended Service Agreement. Provide a separate bond meeting the same requirements as those for the Contractor's performance bond if required. The bond will be in the amount of the Extended Service Agreement.

G. Include an additional copy of Extended Service Agreements in operation and maintenance manuals.

H. Provide a copy of Extended Service Agreements in a separate document in accordance with Section 01 70 00 "Execution and Closeout Requirements."

1.09 SHOP DRAWING SUBMITTAL PROCEDURES

A. Submit Shop Drawings to the Construction Manager. Send all documents in digital format for processing.

1. Provide all information requested. Do not leave any blanks incomplete. If information is not applicable, enter NA in the space provided.

2. Submit all documents in Portable Document Format (PDF) as required by Section 01 33 00 "Document Management." Provide color PDF documents where color is required to interpret the Shop Drawing. Provide Samples and color charts per Paragraph 1.10.

3. Submit each specific product, class of material, or equipment system separately so these can be tracked and processed independently. Do not submit Shop Drawings for more than one independent system in the same Submittal.

4. Submit items specified in different Specification Sections separately unless they are part of an integrated system.

5. Define abbreviations and symbols used in Shop Drawings.

a. Use terms and symbols in Shop Drawings consistent with the Contract Drawings.

b. Provide a list of abbreviations and their meaning as used in the Shop Drawings.

c. Provide a legend for symbols used on Shop Drawings.

6. Mark Shop Drawings to reference:

a. Related Specification Sections;

b. Drawing number and detail designation;

c. Equipment designation or name;

d. Schedule references;

e. System into which the product is incorporated; and

f. Location where the product is incorporated into the Project.

B. Use the following conventions to markup Shop Drawings for review:

1. Make comments and corrections in the color blue. Add explanatory comments to the markup.

2. Highlight items in black (redact) that are not being furnished when the Supplier's standard drawings or information sheets are provided so that only the products to be provided are in their original color.

3. Make comments in yellow where selections or decisions by the Design Professional are required, but such selections do not constitute a deviation from the Contract Documents. Add explanatory comments to the markup to indicate the action requested of the Design Professional.

4. Make comments in orange that are deviation requests. Include the deviation request number on the Shop Drawing that corresponds to the deviation request on the Shop Drawing Deviation Request form. Include explanatory comments in the Shop Drawing Deviation Request form.

5. Mark dimensions with the prefix "FD" to indicate field verified dimensions on the Shop Drawings.

C. Designate a document as requiring priority treatment to place the review of the Shop Drawing ahead of other Shop Drawings previously delivered. Shop Drawings are typically reviewed in the order received, unless Contractor requests that a different priority be assigned. Priority Shop Drawings will be reviewed before other Shop Drawings already received but not yet reviewed. Use of this priority designation for Shop Drawings may delay the review of Shop Drawings previously submitted. Contractor is responsible for delays resulting from the use of the priority designation status on Shop Drawings.

D. Complete the certification required by Paragraph 1.03.G.

1.10 SAMPLE AND MOCKUP SUBMITTAL PROCEDURES

A. Submit color charts and Samples for every product requiring color, texture, or finish selection.

1. Submit color charts and Samples only after Shop Drawings for the products have been approved.

2. Deliver all color charts and Samples at one time.
3. Provide Samples of adequate size to clearly illustrate the functional characteristics of the product, with integrally related parts and attachment devices.
4. Indicate the full range of color, texture, and patterns.
5. Deliver color charts and Samples to the field office and store for the duration of the Project.
6. Notify the Construction Manager that color charts and Samples have been delivered for approval using the Notification by Contractor form.
7. Submit color charts and Samples not less than 30 days prior to when these products are to be ordered or released for fabrication to comply with the Project schedule.
8. Remove Samples that have not been approved. Submit new Samples following the same process as for the initial Sample until Samples are approved.
9. Dispose of Samples when related Work has been completed and approved and disposal is approved by the Construction Manager. At Owner's option, Samples will become the property of the Owner.

B. Construct mockups for comparison with the Work being performed.

1. Construct mockups from the actual products to be used in construction per the detailed specifications.
2. Construct mockups of the size and in the area indicated in the Contract Documents.
3. Construct mockups complete with texture and finish to represent the finished product.
4. Notify the Construction Manager that mockups have been constructed and are ready for approval using the Notification by Contractor form. Allow 2 weeks for Construction Manager to approve of the mockup before beginning the Work represented by the mockup.
5. Remove mockups that have not been approved. Construct new mockups following the same process as for the initial mockup until mockup is approved.
6. Protect mockups until Work has been completed and accepted by the Construction Manager.
7. Dispose of mockups when related Work has been completed and disposal is approved by the Construction Manager.

1.11 REQUESTS FOR DEVIATION

A. Submit a Change Proposal per Section 01 26 00 "Change Management" to request modifications to the Contract Documents, including those for approval of "or equal" products when specifically allowed by the Contract Documents or as a substitution for specified products or procedures.

B. Provide a Shop Drawing with the Change Proposal that clearly identifies deviations for any product or component of the product that does not fully comply with the Contract Documents using the Shop Drawing Deviation Request form provided by the Construction Manager. Mark deviations on the Shop Drawing per Paragraph 1.09.B.

C. Include a description of why the deviation is required and the impact on Contract Price or Contract Times. Include the amount of any cost savings to the Owner for deviations that result in a reduction in cost.

D. Identify each deviation request as a separate item. Include all requested deviations that must be approved as a group together and identify them as a single item.

E. Construction Manager will issue a Field Order or Change Order to approve acceptable deviations. Approval of a requested Shop Drawing deviation by the Design Professional on the Shop Drawings Deviation Request form indicates approval of the requested deviation only on its technical merits as generally conforming to the Contract Documents. Deviations from the Contract Documents can only be approved by a Modification issued by the Construction Manager.

1.12 CONSTRUCTION MANAGER AND DESIGN PROFESSIONAL RESPONSIBILITIES

A. Shop Drawings will be received by the Construction Manager. Construction Manager will log the documents and forward to the Design Professional for review per this Section for general conformance with the Contract Documents.

1. Design Professional's review and approval will be only to determine if the products described in the Shop Drawing or Sample will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Design Professional's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.

3. Design Professional's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

B. Comments will be made on items called to the attention of the Design Professional for review and comment. Any marks made by the Design Professional do not constitute a blanket review of the document or relieve the Contractor from responsibility for errors or deviations from the Contract requirements.

1. Design Professional will respond to Contractor's markups by either making markups directly in the Shop Drawing file using the color red or by attaching a Document Review Comments form with review comments keyed to the Drawings or Shop Drawing Deviation Request.

2. Shop Drawings that are reviewed will be returned with one or more of the following status designations:

a. Approved: Shop Drawing is found to be acceptable as submitted.

b. Approved as Noted: Shop Drawing is approved so long as corrections or notations made by Design Professional are incorporated into the Shop Drawing.

c. Not Approved: Shop Drawing or products described are not acceptable.

d. Cancelled: This action indicates that for some reason, the Shop Drawing is to be removed from consideration and all efforts regarding the processing of that document are to cease.

3. Shop Drawings will also be designated for one of the following actions:

   a. Documents Filed: Shop Drawing is acceptable without further action and has been filed as a record document.

   b. Shop Drawing Not Required: A Shop Drawing was not required by the Contract Documents. Resubmit the document per Section 01 33 03 "Product Data."

   c. Cancelled: This action indicates that for some reason, the Shop Drawing is to be removed from consideration and all efforts regarding the processing of that document are to cease.

   d. Revise and Resubmit: Shop Drawing has deviations from the Contract Documents, significant errors, or is inadequate and must be revised and resubmitted for subsequent review.

   Actions "a" through "c" will close out the Shop Drawing review process and no further action is required as a Shop Drawing. Action "d" requires follow up action to close out the review process.

4. Drawings with a significant or substantial number of markings by the Contractor may be marked "Approved as Noted." These drawings are to be revised to provide a clean record of the document. Proceed with ordering products as the documents are revised.

5. Dimensions or other data that do not appear to conform to the Contract Documents will be marked as "At Variance With" (AVW) the Contract Documents or other information provided. The Contractor is to make revisions as appropriate to comply with the Contract Documents.

C. Bring deviations to the Shop Drawings to the attention of the Design Professional for approval by using the Shop Drawing Deviation Request form. Use a single line for each requested deviation so the Status and Action for each deviation can be determined for that requested deviation. If approval or rejection of a requested deviation will impact other requested deviation, then all related deviations should be included in that requested deviation line so the status and action can be determined on the requested deviation as a whole.

D. Requested deviations will be reviewed as a possible Modification to the Contract Documents.

1. A requested deviation will be marked as "Not Approved" if the requested deviation is unacceptable. Contractor is to revise and resubmit the Shop Drawing with corrections for approval.

2. A Field Order will be issued by the Construction Manager for deviations approved by the Design Professional if the requested deviation is acceptable and if the requested deviation will not result in a change in Contract Price or Contract Times. Requested deviations from the Contract Documents may only be approved by Field Order.

3. A requested deviation will not be approved if the requested deviation is acceptable but the requested deviation will or should result in a change in Contract Price or Contract Times. Submit any requested deviation that requires a change in Contract Price or Contract Times as a Change Proposal for approval prior to resubmitting the Shop Drawing.

E. Contractor is to resubmit a complete Shop Drawing incorporating revisions until it is acceptable and marked "Approved" or "Approved as Noted" and is assigned an action per Paragraph 1.12.B.3 that indicates that the Shop Drawing process is closed.

F. Information that is submitted as a Shop Drawing that should be submitted as Product Data or other type of document, or is not required may be returned without review, or may be deleted. No further action is required and the Shop Drawing process for this document will be closed.

1.13 RESUBMISSION REQUIREMENTS

A. Make all corrections or changes required by the Design Professional in the document and resubmit to the Construction Manager until approved.

B. Resubmit a complete Shop Drawing for each resubmittal. The last approved Shop Drawing must not rely on previous submissions. The final Shop Drawing is to provide a complete record for the Owner's records.

C. Revise initial drawings or data and resubmit as specified for the reviewed document.

1. Highlight or cloud in green those revisions which have been made in response to the previous reviews by the Design Professional. This will include changes previously highlighted or clouded in yellow to direct attention to Design Professional to items requiring selections, decisions by the Design Professional or highlighted or clouded in orange for a requested deviation from the Contract Documents, or comments in red made by the Construction Manager.

2. Highlight and cloud new items in yellow where selections or decisions by the Design Professional are required, but such selections do not constitute a deviation from the Contract Documents. Add explanatory comments to the markup to indicate the action to be taken by the Design Professional.

3. Highlight and cloud new items in orange that are deviation requests. Include the deviation request number on the Shop Drawing that corresponds to the deviation request on the Shop Drawing Deviation Request form. Numbering for these new items is to start with the next number following the last Shop Drawing deviation requested. Include explanatory comments in the Shop Drawing Deviation Request form.

D. Pay for excessive review of Shop Drawings.

1. Excessive review of Shop Drawings is defined as any review required after the original review has been made and the first resubmittal has been checked to see that corrections have been made.

2. Review of Shop Drawings or Samples will be an additional service requiring payment by the Contractor if the Contractor submits a substitution for a product for which a Shop Drawing or Sample has previously been approved, unless the need for such change is beyond the control of Contractor.

3. Cost for additional review time will be billed to the Owner by the Design Professional for the actual hours required for the review of Shop Drawings by Design Professional and in accordance with the rates listed in Section 00 73 00 "Supplementary Conditions."
4. A set-off will be included in each Application for Payment to pay the cost for the additional review. The set-off will be based on invoices submitted to the Owner for these services.
5. Need for more than one resubmission or any other delay in obtaining Design Professional's approval of Shop Drawings will not entitle the Contractor to an adjustment in Contract Price or an extension of Contract Times.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

01 33 03 PRODUCT DATA

PART 1 - GENERAL

1.01 SUMMARY

A. Submit Product Data as required by the Contract Documents and as reasonably requested by the Construction Manager. Provide Product Data for all products unless a Shop Drawing is required for the same item.

B. Submit Product Data to provide documents that allow the Owner to:

1. Record the products incorporated into the Project;
2. Record detailed information about products regarding their fabrication, installation, commissioning, and testing; and
3. Provide replacement or repair of products at some future date.

C. Contractor's responsibility for full compliance with the Contract Documents is not relieved by the receipt or cursory review of Product Data.

D. Submit a Change Proposal per Section 01 26 00 "Change Management" to request modifications to the Contract Documents, including those for approval of "or equal" products when specifically allowed by the Contract Documents or as a substitution for specified products or procedures. Deviations from the Contract Documents can only be made by an approved Change Order or Field Order.

1.02 QUALITY ASSURANCE

A. Submit legible, accurate, and complete documents presented in a clear, easily understood manner. Product Data not meeting these criteria will not be accepted and must be resubmitted.

1.03 CONTRACTOR'S RESPONSIBILITIES

A. Furnish Product Data for products as indicated in Section 01 33 01 "Document Register" or in the individual Specification Sections.

B. Include Product Data in the Document Register required by Section 01 33 00 "Document Management" to indicate the Product Data to be submitted, the dates on which documents are to be sent to the Construction Manager for review, and proposed dates that the product will be incorporated into the Project.

C. Complete the following before submitting Product Data:

1. Prepare Product Data and coordinate with Shop Drawings, Samples, Product Data for related products, and with the requirements of the Contract Documents;
2. Determine and verify specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information;
3. Determine and verify the suitability of materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

4. Determine and verify information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

D. Determine and verify:

1. Field measurements, quantities, and dimensions are shown on the Product Data and are accurate;
2. Location of existing structures, utilities, and equipment related to the Product Data have been shown and conflicts between the products, existing structures, utilities, and equipment have been brought to the attention of the Construction Manager;
3. Conflicts that impact the installation of the products have been brought to the attention of the Construction Manager;
4. Product Data is complete for its intended purpose; and
5. Conflicts between the Product Data related to the various Subcontractors and Suppliers have been resolved.

E. Review Product Data prior to submitting to the Construction Manager. Certify that all Product Data has been reviewed by the Contractor and is in strict conformance with the Contract Documents as modified by Addenda, Change Order, Field Order, or Contract Amendment when submitting Product Data.

1.04 DOCUMENTATION

A. Include a complete description of the material or equipment to be furnished, including:

1. Type, dimensions, size, arrangement, model number, and operational parameters of the components;
2. Weights, gauges, materials of construction, external connections, anchors, and supports required;
3. Performance characteristics, capacities, engineering data, motor curves, and other information necessary to allow a complete evaluation of mechanical components;
4. All applicable standards;
5. Fabrication and installation drawings, setting diagrams, manufacturing instructions, templates, patterns, and coordination drawings;
6. Wiring and piping diagrams and related controls;
7. Mix designs for concrete, asphalt, or other materials proportioned for the Project; and
8. Complete and accurate field measurements for products which must fit existing conditions. Indicate on the document that the measurements represent actual dimensions obtained at the Site.

B. Submit information for all components and related equipment required for a complete and operational system in one submittal.

1. Include electrical, mechanical, and other information required to indicate how the various components of the system function together as a system.

2. Provide certifications, warranties, and written guarantees and service contracts with the document package for review when these are required.

1.05 SPECIAL CERTIFICATIONS AND REPORTS

A. Provide all required certifications with the Product Data as specified in the individual Specification Sections:

1. Certified Test Reports (CTR): A report prepared by an approved testing agency giving results of tests performed on products to indicate their compliance with the Specifications. This report is to demonstrate that the product when installed will meet the requirements of the Contract Documents and is part of the Product Data. Field tests may be performed by the Owner to determine that in place materials or products meet the same quality as indicated in the CTR submitted as part of the Product Data.

2. Certification of Local Field Service (CLS): A certified letter stating that field service is available from a factory or supplier approved service organization located within a 300-mile radius of the Site. Include the names, addresses, and telephone numbers of approved service organizations with the certificate.

3. Certification of Adequacy of Design (CAD): A certified letter from the manufacturer of the equipment stating that the equipment has been designed to be structurally stable and to withstand all imposed loads without deformation, failure, or adverse effects to the performance and operational requirements of the unit. The letter must state that mechanical and electrical components have been adequately sized to be fully operational for the conditions specified or normally encountered by the product's intended use.

4. Certification of Applicator/Subcontractor (CSQ): A certified letter stating that the applicator or subcontractor proposed to perform a specified function is duly designated as factory authorized and trained for the application of the specified product.

1.06 WARRANTIES AND SERVICE AGREEMENTS

A. Provide warranties and service agreements per Section 01 78 36 "Warranties and Service Agreements."

1.07 WARRANTIES AND GUARANTEES

A. Provide all required warranties, guarantees, and related documents with the Product Data. The effective date of warranties and guarantees will be the date of Substantial Completion.

B. Identify all Extended Warranties which are defined as any guarantee of performance for the product or system beyond the one-year correction period described in the General Conditions. Issue the warranty certificate in the name of the Owner. Provide a warranty bond for extended warranties if required by Specification Sections.

C. Include an additional copy of equipment warranties in operation and maintenance manuals.

D. Provide a copy of all warranties in a separate document in accordance with Section 01 70 00 "Execution and Closeout Requirements."

1.08 EXTENDED SERVICE AGREEMENTS

A. Provide Extended Service Agreements and related documents with the Product Data. An Extended Service Agreement is a contract between the Owner and an approved Subcontractor or Supplier to provide service and or maintenance beyond that required to fulfill requirements for warranty repairs, or to perform routine maintenance for a definite period beyond the one-year correction period specified in the General Conditions.

B. An Extended Service Agreement does not relieve the Contractor from obligations under the one-year correction period or Warranty provisions specified in the General Conditions.

C. An Extended Service Agreement does not relieve the Contractor from obligations under the maintenance bond, if a maintenance bond is required by the Contract.

D. Requirements for the Extended Service Agreement are described in the Specification Sections for each piece of equipment or system requiring an Extended Service Agreement.

E. Enter into a contract with the service provider and assign the service contract to the Owner on the date of Substantial Completion. Once assigned to the Owner, Contract requirements for the Extended Service Agreement will be complete and will not extend the Contract between the Owner and Contractor.

F. Owner may require that a performance bond be provided for the Extended Service Agreement. Provide a separate bond meeting the same requirements as those for the Contractor's performance bond if required. The bond will be in the amount of the Extended Service Agreement.

G. Include an additional copy of Extended Service Agreements in operation and maintenance manuals.

H. Provide a copy of Extended Service Agreements in a separate document in accordance with Section 01 70 00 "Execution and Closeout Requirements."

1.09 PRODUCT DATA SUBMITTAL PROCEDURES

A. Submit Product Data to the Construction Manager. Send all documents in digital format for processing.

1. Provide all information requested. Do not leave any blanks incomplete. If information is not applicable, enter NA in the space provided.

2. Submit all documents in Portable Document Format (PDF) as required by Section 01 33 00 "Document Management." Provide color PDF documents where color is required to interpret the Product Data.

3. Submit each specific product, class of material, or equipment system separately so these can be tracked and processed independently. Do not submit Product Data for more than one system in the same Submittal.

4. Submit items specified in different Specification Sections separately unless they are part of an integrated system.

5. Define abbreviations and symbols used in Product Data.

a. Use terms and symbols in Product Data consistent with the Contract Drawings.

b. Provide a list of abbreviations and their meaning as used in the Product Data.

c. Provide a legend for symbols used on Product Data.

6. Mark Product Data to reference:

a. Related Specification Sections;

b. Drawing number and detail designation;

c. Equipment designation or name;

d. Schedule references;

e. System into which the product is incorporated; and

f. Location where the product is incorporated into the Project.

B. Complete the certification required by Paragraph 1.03.F.

1.10 CONSTRUCTION MANAGER AND DESIGN PROFESSIONAL RESPONSIBILITIES

A. Product Data will be received by the Construction Manager, logged, and provided to Owner as the Project record.

1. Product Data may be reviewed to see that the information provided is adequate for the purpose intended. Product Data not meeting the requirements of Paragraph 1.02 may not be approved.

2. Product Data is not reviewed for compliance with the Contract Documents. Comments may be returned if deviations from the Contract Documents are noted during the cursory review performed to see that the information is adequate.

3. Contractor's responsibility for full compliance with the Contract Documents is not relieved by the review of Product Data. Contract modifications can only be approved by a Change Order or Field Order.

B. Construction Manager may take the following action in processing Product Data:

1. File Product Data as received if the cursory review indicates that the document meets the requirements of Paragraph 1.02. Document will be marked "Filed as Received" and "Documents Filed." No further action is required on that Product Data.

2. Not approve the Product Data for one of the following reasons:

a. The documentation requirements of the Contract Documents indicate that the document submitted as Product Data should have been submitted as a Shop Drawing. The Product Data will be marked "Not Approved" and "Submit as Shop Drawing." No further action is required on this document as Product Data and the Product Data process will be closed. Resubmit the document as a Shop Drawing per Section 01 33 02 "Shop Drawings."

b. The cursory review indicates that the document does not meet the requirements of Paragraph 1.02. The Product Data will be marked "Not Approved" and "Revise and Resubmit." Contractor is to resubmit the Product Data until it is acceptable and marked "Filed as Received." When Product Data is filed, no further action is required and the Product Data process will be closed.

c. The Product Data is not required by the Contract Documents nor is applicable to the Project. The Product Data will be marked "Not Approved" and "Cancelled." No further action is required and the Product Data process will be closed.

C. Contractor is to resubmit the Product Data until it is acceptable and marked "Filed as Received."

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

01 33 04 OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.01 SUMMARY

A. Prepare a complete and detailed operation and maintenance manual (manual) for each type and model of equipment or product furnished and installed under this Contract.

B. Prepare manuals in the form of an instruction manual for the Owner. The manuals are to be suitable for use in providing the operation and maintenance instructions required by Section 01 79 00 "Training of Operation and Maintenance Personnel."

C. Provide complete and detailed information specifically for the products or systems provided for this Project. Include the information required to operate and maintain the product or system.

D. Manuals are to be provided in addition to any information packed with or attached to the product when delivered. Remove information packed with or attached to the product and include this information as an attachment to the manual.

E. Include cost for manuals provided by Suppliers and Subcontractors as described in this Section in the Cost of Work for that equipment item.

1.02 DOCUMENTATION

A. Submit manuals in accordance with Section 01 33 00 "Document Management." Attach a copy of the Operation and Maintenance Manual Review Report form provided by the Construction Manager to each manual with pertinent information completed.

B. Provide one preliminary electronic copy of the manual to the Construction Manager for review within 15 days after review of any equipment submittal by the OPT.

C. Provide one electronic copy and three printed copies of the final manual after:

1. Preliminary manuals have been approved;

2. Field test records have been incorporated into the manual; and

3. Record Documents per Section 01 31 13 "Project Administration" have been approved and have been incorporated in the final manual.

D. Provide copies of the manufacturer's warranties, guarantees, or service agreements in accordance with Section 01 70 00 "Execution and Closeout Requirements."

PART 2 - PRODUCTS

2.01 MATERIALS

A. Provide digital files for each manual as specified in Paragraph 2.02.

1. Use filenames that correspond to the equipment designation shown in the Contract Documents or other equipment designations provided by the OPT.

2. Submit a preliminary version of the electronic manual for review. Provide a final version of the manual incorporating OPT's comments.

B. Provide printed copies of each manual as specified in Paragraph 2.03.

2.02 ELECTRONIC MANUAL FORMAT

A. Manual contents are to be submitted in electronic format to the Construction Manager.

B. Provide individual electronic files for each manual.

1. Maximum file size is 75 MB. If manual is greater than maximum allowable file size, provide individual files for each major section of manual.

2. Acceptable file types for written documents are Portable Document File (PDF) or provide manual text in Microsoft Word. Provide drawings in native format and PDF format. All files must be compatible with the latest software version available.

3. Filename must identify the equipment location, equipment manufacturer, and date equipment placed in service, e.g. JCC1-Pump Room-Manufacturer-200503.pdf.

4. Each electronic file must contain a table of contents at the beginning of the file which includes hypertext links or bookmarks to navigate the file contents per section/chapter.

5. Scanned images of written documents are not acceptable. Document must allow character selection. Text within a file must be transferable to other documents.

6. Drawing files must have the ability to turn on/off drawing layers within the file.

2.03 PRINTED MANUAL FORMAT

A. Printed copies of each manual are to be submitted as follows:

1. Print manuals on heavy, first quality 8-1/2 x 11 paper.

a. Reduce drawings and diagrams to 8-1/2 x 11 paper size.

b. When reduction is not practical, fold drawings and place each separately in a clear, super heavy weight, top loading polypropylene sheet protector designed for three-ring binder use. Provide a typed identification label on each sheet protector.

c. Punch paper for standard three-ring binders.

2. Place manuals in heavy duty presentation, d-ring binders with clear front, back, and spine covers.

3. Identify each manual by placing a printed cover sheet in the front cover of the binder and as the first page in the manual. The first page is to be placed in a clear polypropylene sheet protector. The information on first page and the cover page are to include:

a. Name of Owner;

b. Project name;

c. Volume number; and

d. Table of contents.

4. Insert the name of the Project and volume number into the spine covers.

5. Sheet lifters are to be provided.
6. Minimum size is 2-inch capacity. Maximum size is 3-inch capacity. Fill binders to only three-fourths of its indicated capacity to allow for addition of materials to each binder by the Owner.
7. Provide index tabs for each section of the manual. Indexes are to be constructed of heavy-duty paper with a reinforced binding edge. The designation on each index tab is to correspond to the number and letter assigned in the Table of Contents.
8. Manuals for several products or systems may be provided in the same binder. Correlate the data into related groups when multiple products or systems are included in the same binder.
    a. Sections for each product or system must be included in the same binder.
    b. Sections must be in numerical order from volume to volume.

PART 3 - EXECUTION

3.01 MANUAL ORGANIZATION AND CONTENTS

A. Provide a table of contents listing each section of the manual for each product or system.
    1. Assign a number and letter to each section in the manual.
        a. The number is to correspond to the Owner's equipment numbering system or other system designated in the Contract Documents.
        b. The letter assigned will represent the part of the manual, consistent with the manual contents as required by this Section.
    2. Identify each product or system using the nomenclature shown in the Contract Documents. Provide a cross reference to the Owner's numbering system and designations for equipment indicated in the Contract Documents if these are different.
B. Include only the information that pertains to the product described. Annotate each sheet to:
    1. Clearly identify the specific product or component installed;
    2. Clearly identify the data applicable to the installation; and
    3. Delete or strike through references to inapplicable information.
C. Supplement manual information with drawings as necessary to clearly illustrate relations of component parts of equipment and systems, and control and flow diagrams.
D. Manuals for several products or systems may be provided in the same binder.
E. Fill binders to only three-fourths of its indicated capacity to allow for addition of information by the Owner.

3.02 EQUIPMENT AND SYSTEMS MANUAL CONTENT

A. Provide the following information in the first tabbed section of each manual:
    1. A description of the unit and component parts and how it functions.

2. Operating instructions for pre-startup, startup, normal operations, regulation, control, shutdown, emergency conditions, and limiting operating conditions.
3. The sequence of operation by the controls manufacturer. Provide control diagrams by the manufacturer, modified to reflect the as-built, as-installed condition.
4. Include general assembly contract drawings, sections, and photographic views as necessary to completely depict and properly identify the equipment. Indicate the dimensions, weight, capacity, and design conditions for the equipment.

B. Include detailed information to allow for the proper installation, calibration, testing, preventative, and corrective maintenance procedures in the second section of the manual or of each section of the manual information if the manual covers a multi-component equipment system. This information should include the following:

1. Maintenance instructions including assembly, installation, alignment, clearances, tolerances, and interfacing equipment requirements, adjustment, and checking instructions. Include any special rigging required to place the equipment into place, and any special test equipment required to place the equipment in service.
2. A safety subsection which addresses all safety and tag-out procedures necessary to safely operate and maintain the equipment.
3. Lubrication schedule and lubrication procedures. Include a cross reference for recommended lubrication products.
4. Troubleshooting guide.
5. A table showing the schedule of routine maintenance requirements and seasonal work which is not performed at a set frequency. Preventative maintenance tasking must address:
    a. Daily/weekly inspections performed by operations personnel;
    b. Routine preventative maintenance scheduled weekly, monthly, quarterly, semi-annually, or annually through major overhauls by maintenance personnel; and
    c. Predictive maintenance work such as alignment, analysis of the equipment, vibration, flow, oil sampling, etc.
6. Description of sequence of operation by the control manufacturer.
7. Warnings for detrimental maintenance practices.
8. Detailed corrective maintenance procedures including:
    a. Detail equipment for complete disassembly and assembly;
    b. Cross-sectional drawings or exploded views with all parts numbered to correspond with the numbers in the parts list to permit identification of the various parts;
    c. A table of normal clearances, diameters, thickness of new parts, and limits permissible for wearing parts; and
    d. List torque settings for nuts, bolts, and fasteners when critical to the equipment's performance.

C. Include all necessary diagrammatic piping and wiring diagrams and miscellaneous contract drawings and equipment in the third section of the manual or of each section of the manual if the manual covers a multi-component equipment system.

D. Provide spare parts information in the fourth section of the manual including:

1. Part numbers for ordering new parts;
2. Assembly illustrations showing an exploded view of the complex parts of the product;
3. Predicted life of parts subject to wear;
4. List of the manufacturer's recommended spare parts, current prices with effective date, and number of parts recommended for storage;
5. Directory of a local source of supply for parts with company name, address, and telephone number;
6. Complete nomenclature and list of commercial replacement parts; and
7. Complete list of spare parts, spare equipment, tools, and materials that are turned over to the Owner.

E. Provide statistical information from the original equipment manufacturer as to performance such as pump curves, flow charts insulation resistance, calibration, or test data sheets in the fifth section of the manual, including all field testing records used to verify actual performance.

F. Provide equipment name plate data installed on equipment and valves and equipment data sheets as required and furnished by the Owner in the sixth section of the manual.

G. Provide a copy of warranties and the date the warranty expires for equipment in the seventh section of the manual.

3.03 ELECTRICAL AND ELECTRONICS SYSTEMS MANUAL

A. Provide all of the information listed in Paragraph 3.02 as appropriate and include the following information:

1. Control schematics and point to point wiring diagrams prepared for field installation;
2. Circuit directories of panel boards and terminal strips and as installed color coded wiring diagrams; and
3. Other information as may be required by the individual Specification Sections.

3.04 ARCHITECTURAL PRODUCTS MANUAL

A. Provide the following information:

1. Information required for ordering replacement products;
2. Instructions for care and maintenance;
3. List of the manufacturer's recommended lubricants;
4. The manufacturer's recommendations for types of cleaning agents and methods;

5. Cautions against cleaning agents and methods that are detrimental to the product; and

6. Recommended maintenance and cleaning schedule.

B. Final balancing reports for mechanical systems.

C. Other information as may be required by the individual Specification Sections.

3.05 LIST OF SERVICE ORGANIZATIONS

A. Provide a directory of authorized service organizations with company name, address, telephone number, email address, and the contact person for warranty repair.

END OF SECTION

01 33 05 CONSTRUCTION PROGRESS SCHEDULE

PART 1 - GENERAL

1.01 SUMMARY

A. Prepare and submit a Progress Schedule for the Work and update the schedule on a monthly basis for the duration of the Project.

B. Provide Progress Schedule in adequate detail to allow Owner to monitor progress and to relate submittal processing to sequential activities of the Work.

C. Incorporate Contract Milestones into the schedule and show activities leading to achievement of these milestones.

D. Assume complete responsibility for maintaining the progress of the Work per the Progress Schedule submitted.

1.02 DOCUMENTATION

A. Submit the schedules to the Construction Manager. Send all documents in digital format for processing.

B. Do not leave any blanks incomplete. If information is not applicable, enter NA in the space provided.

C. Provide schedules, schedule updates and revisions to the Construction Manager in electronic format in its originating software and in Portable Document Format (PDF) as required by Section 01 33 00 "Document Management."

D. Submit a preliminary Progress Schedule at the pre-construction conference.

E. Submit a detailed Progress Schedule at least 10 days prior to the first payment request.

F. Submit Progress Schedule updates monthly within 10 days after submitting Applications for Payment to indicate the progress made on the Project to the closing date for the Application for Payment. Failure to submit Progress Schedules will cause delay in the review and approval of subsequent Applications for Payment.

1.03 PROGRESS SCHEDULE REQUIREMENTS

A. Progress Schedule is to be in adequate detail to:

1. Ensure adequate planning, scheduling, and reporting during the execution of the Work;
2. Ensure the coordination of the Work of the Contractor and the various Subcontractors and Suppliers;
3. Monitor the progress of the Work; and
4. Evaluate the impact of proposed changes to the Contract Times and Project Schedule.

B. Provide personnel with 5 years' minimum experience in scheduling construction work comparable to this Project. Prepare the Progress Schedule using acceptable scheduling software.

C. Provide the Progress Schedule in the form of a computer-generated critical path schedule which includes Work to be performed on the Project. It is intended that the Progress Schedule accomplish the following:

1. Give early warning of delays in time for correction.
2. Provide detailed plans for the execution of the Work in the form of future activities and events in sequential relationships.
3. Establish relationships of significant planned Work activities and provide a logical sequence for planned Work activities.
4. Provide continuous current status information.
5. Allow analysis of the Contractor's program for the completion of the Project.
6. Permit schedules to be revised when the existing schedule is not achievable.
7. Log the progress of the Work as it actually occurs.

D. Provide a time-scaled horizontal bar chart which indicates graphically the Work scheduled at any time during the Project. The chart is to indicate:

1. Complete sequence of construction by activity;
2. Identification of the activity by structure, location, and type of Work;
3. Chronological order of the start of each item of Work;
4. The activity start and stop dates;
5. The activity duration; and production rates used to determine the duration;
6. Successor and predecessor relationships for each activity;
7. A clearly indicated single critical path; and
8. Projected percentage of completion, based on dollar value of the Work included in each activity as of the first day of each month.

E. Provide a Progress Schedule for Submittals:

1. Indicate the specific dates each document is to be delivered to the Construction Manager.
2. Allow a reasonable time to review each document, taking into consideration the size and complexity of the document, other documents being processed, and other factors that may affect review time.
3. Include time for making revisions to the Shop Drawings and resubmitting the Shop Drawing for at least a second review.
4. Assume a 14-day review cycle for each time a Shop Drawing is submitted for review unless a longer period is indicated in the Contract Documents or provided by the Construction Manager.
5. Contractor is responsible for delays associated with additional time required to review incomplete or erroneous documents and for time lost when documents are submitted for products that do not meet specification requirements.

1.04 PROGRESS SCHEDULE REVISIONS

A. Revise the Progress Schedule if it appears that the schedule no longer represents the actual progress of the Work.

1. Submit a Plan of Action for schedule recovery if the Progress Schedule or earned value analysis indicates that the Project is more than 30 days behind schedule. The report is to include:

a. Number of days behind schedule;

b. Narrative description of the steps to be taken to bring the Project back on schedule; and

c. Anticipated time required to bring the Project back on schedule.

2. Submit a revised Progress Schedule indicating the action that the Contractor proposes to take to bring the Project back on schedule.

B. Revise the Progress Schedule to indicate any adjustments in Contract Times approved by a Modification.

1. Include a revised Progress Schedule with Change Proposals if a change in Contract Times is requested.

2. Construction Manager will deem any Change Proposal that does not have a revised Progress Schedule and request for a change in Contract Times as having no impact on the ability of the Contractor to complete the Project within the Contract Times.

C. Updating the Progress Schedule to reflect actual progress is not considered a revision to the schedule.

D. Applications for Payment will not be recommended for payment without a revised Progress Schedule and if required, the report indicating the Contractor's plan for bringing the Project back on schedule.

1.05 FLOAT TIME

A. Define float time as the amount of time between the earliest start date and the latest start date of a chain of activities on the construction schedule.

B. Float time is not for the exclusive use or benefit of either the Contractor or Owner.

C. Where several subsystems each have a critical path, the subsystem with the longest time of completion is the critical path and float time is to be assigned to other subsystems.

D. Schedule completion date must be the same as the Contract completion date. Time between the end of construction and the Contract completion date is float time.

1.06 MODIFICATION OF CONTRACT TIMES

A. Contract Times cannot be changed by the submission of a Progress Schedule. Contract Times can only be modified by a Change Order or Contract Amendment.

B. Submit a Change Proposal for any proposed change in Contract Times, and include justification for the change in accordance with the provisions of the Contract Documents.

1.07 NEAR-TERM LOOK AHEAD SCHEDULES

A. Provide a near-term look ahead schedule (NTLA Schedule) every 30 days, typically at periodic coordination meetings, using the form provided by the Construction Manager which shows the days of planned activity for the following:

1. Submittals to be provided and day of anticipated return;
2. Equipment and material deliveries;
3. Arrival and departure of key construction equipment; and
4. Activities for the Contractor and each Subcontractor.

B. Coordinate NTLA Schedule with Project Schedule. Submit a report with each NTLA Schedule identifying deviations from the Project Schedule.

C. Submit a report of near-term work planned in the previous NTLA Schedule that was delayed or not executed by marking actual activity on the previous near term look ahead schedule. Provide explanation of why planned work was not executed and plan to execute in the future and regain time lost.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

01 33 06 GRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.01 SUMMARY

A. Furnish an adequate number of photographs of the Site to clearly depict the completed Project.

1. Provide aerial photographs of the completed Project from an angle and height to include the entire Site.
2. Provide a minimum of four different views.
3. Photograph a panoramic view of the entire Site.
4. Photograph all significant areas of completed construction.
5. Do not take completion photographs until all construction trailers, excess materials, trash, and debris have been removed.
6. Employ a professional photographer approved by the Construction Manager to photograph the Project.

B. Provide video recordings of the Site.

1. Record the condition of all existing facilities in or abutting the construction area (right-of-way) including streets, curb and gutter, utilities, driveways, fencing, landscaping, etc., prior the beginning of construction. Provide one copy of the dated and labeled recording to the Construction Manager before the start of construction. Provide additional recording as directed by the Construction Manager if the recording provided is not considered suitable for the purpose of recording pre-existing conditions.
2. Provide a video recording of the Site after the Project is complete and all construction trailers, excess materials, trash, and debris have been removed. Provide a 360-degree view of the Project from a consistent height and angle.
3. Format must allow photographic still shots to be extracted from the video recording.

C. All photographs and video recordings are to become the property of the Owner. Photographs or recordings may not be used for public or private publication or display without the written consent of the Owner.

D. Unmanned Aerial Vehicles used for aerial photography must be registered and piloted by licensed individuals in accordance with Laws and Regulations.

1.02 DOCUMENTATION

A. Submit photographic documentation in accordance with Section 01 33 00 "Document Management."

1.03 QUALITY ASSURANCE

A. Provide clear photographs and video recordings taken with proper exposure. View photographs and video recordings in the field and take new photographs or video

recordings immediately if photos of an adequate print quality cannot be produced or video quality is not adequate. Provide photographs with adequate quality and resolution to permit enlargements.

PART 2 - PRODUCTS

2.01 PHOTOGRAPHS

A. Provide photographs in digital format with a minimum resolution of 1280x960, accomplished without a digital zoom.

B. Take photographs at locations acceptable to the Construction Manager.

C. Provide a digital copy of each photograph taken.

D. Identify each photograph with:

1. Name of the Project.
2. Date, time, location, and orientation of the exposure.
3. Description of the subject of photograph.

2.02 VIDEO RECORDING

A. Provide video recordings in digital format that can be played with Windows Media Player in full screen mode without loss of resolution.

B. Identify Project on video by audio or visual means.

C. Provide video with file size that does not exceed 1 GB.

D. Provide video resolution of at least 1080p.

E. The quality of the video must be adequate to determine the existing conditions of the construction area. Camera panning must be performed while at rest; do not pan the camera while walking or driving. Camera pans should be performed at intervals to clearly view the entire construction area.

F. Construction stationing is to be annotated in the video.

G. The entire construction area recording must be submitted at once. Sections submitted separately will not be accepted.

H. Site components must be video recorded in an organized sequential order with major components identified.

PART 3 - EXECUTION (NOT USED)

END OF SECTION

01 35 00 SPECIAL PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

A. The City of Midland is adding a lift station (at Nature Center/Midland Drive) to their system to divert peak flows from a 12-inch gravity sewer line to a nearby 30-inch gravity sewer pipeline. New lift station will require a combination of gravity sewer and force main pipelines. Temporary by-pass pumping will be required at both existing pipeline connections.

1.02 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00 "Submittal Procedures" and shall include:

1. Construction Sequencing Plan
2. Excavation Plan
3. Construction Shoring Plan
4. Dewatering Plan
5. Schedule for Work
6. Bypass Pumping Plan
7. Shop Drawings as required by Section 01 33 01 "Document Register".

1.03 CONSTRUCTION SEQUENCE

A. Perform the Work as required to complete the entire Project within the Contract Times and in the sequence stipulated below:

B. The design of the proposed Nature Center/Midland Drive Lift Station is based upon the sequencing and criteria indicated below. At the Contractor's option, construction sequencing indicated may be modified. However, any modifications to the specified sequencing shall be submitted for approval prior to beginning any construction activities and the Contractor shall be responsible for any issues arising from the construction sequence of the Work.

1. The following infrastructure can be constructed at the beginning in any order the Contractor prefers:
   a. The proposed force main and gravity sewer all the way to the drop manhole tie-in at the I-20 Frontage Road.
   b. The proposed gravity line all the way to the doghouse manhole tie-in on Wall Street.
   c. All proposed lift station facilities and site improvements.
2. Contractor shall determine the excavation plan for the proposed Nature Center/Midland Drive Lift Station as required to satisfy the other requirements

indicated herein and by OSHA standards. As required, excavation may be open cut or shored or any combination thereof. The excavation plan shall be sealed by a professional engineer licensed in the State of Texas. Submit to the Engineer for review prior to beginning construction. Excavation plan shall include a dewatering plan.

3. Prior to the 30-day operational test for proposed Nature Center/Midland Drive Lift Station, the following items shall be accomplished:
   a. Pressure test of proposed force main
   b. Air test joints and manholes on proposed gravity main
4. During the 30-day operational test of the proposed Nature Center/Midland Drive Lift Station, the system will be tested in various ways as directed by the Owner and Engineer to verify the performance of the equipment installed. In addition, the following items shall be accomplished:
   a. The new pumps shall be brought online, tested, and run for four days without unexpected interruptions, if unexpected interruptions occur then the four days period shall restart.

C. Consider the sequences, duration limitations, and governing factors outlined in this Section to prepare the schedule for the work

D. Perform the work not specifically described in this Section as required to complete the entire Project within the contract time.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

01 40 00 QUALITY MANAGEMENT

PART 1 - GENERAL

1.01 OVERVIEW

A. Quality management refers to the overall process of delivering a completed Project to the Owner that complies with the requirements of the Contract Documents. Quality management applies to documentation, products, services, and the Work.

B. Contractor is responsible for the quality of documentation, products, services, and the Work provided.

1. Contractor is to integrate quality control procedures into the execution of the Work that are adequate to produce a Project that meets the requirements of the Contract Documents, while minimizing loss of time and increased costs. Contractor is solely responsible for time and cost impacts of correcting Defective Work.

2. Contractor is to provide all testing and inspection required to control the quality of the Work in progress to determine that completed Work will comply with the requirements of the Contract Documents.

3. Contractor is to provide verification or acceptance testing as required by the Contract Documents to demonstrate that the completed Work complies with the requirements of the Contract Documents, except for those test that the Owner has determined are to be conducted independent of the Contractor and identified as Owner testing in the Owner's Quality Management Plan.

1.02 STANDARDS

A. Provide testing laboratories that comply with the American Council of Independent Laboratories (ACIL) "Recommended Requirements for Independent Laboratory Qualifications."

B. Perform testing in accordance with the published standards and procedures for testing listed in the Specifications and applicable Laws and Regulations.

1.03 DOCUMENTATION

A. Provide documentation which includes:

1. Contractor's Quality Management Plan that establishes the methods of ensuring compliance with the Contract Documents. Submit this plan as Product Data per Section 01 31 13 "Project Administration."

2. A statement of qualifications for any proposed testing laboratory that includes a list of the engineers and technical staff that will provide testing services on the Project, descriptions of the qualifications of these individuals, list of tests that can be performed, equipment used with date of last certification, and a list of recent projects for which testing has been performed with references for those projects.

3. Certified Test Reports for products to be incorporated into the Project. Provide reports to indicate that the proposed products comply with the Contract Documents or indicate that the proposed products do not comply with the Contract Documents and

why those products do not comply. Submit Certified Test Reports as part of a Shop Drawing submitted per Section 01 33 02 "Shop Drawings."

4. Certified Test Reports for inspections and testing required in this Section and in other Sections of the Specifications. Provide reports to indicate that the Work complies with the Contract Documents or indicate that the Work does not comply with the Contract Documents and why the Work does not comply. Submit these test reports on forms provided by the Construction Manager per Section 01 33 00 "Document Management."

5. Certified Test Reports of Defective Work and Certified Test Reports documenting that successful corrective action has produced Work that complies with the Contract Documents. Construction Manager will maintain a Defective Work register. Progress on correction of Defective Work will be discussed at progress meetings as described in Paragraph 1.05.E. The final Defective Work register will be incorporated into closeout documentation required per Section 01 70 00 "Execution and Closeout Requirements" as a record that all Defective Work has been corrected.

1.04 OWNER'S QUALITY MANAGEMENT ACTIVITIES

A. Owner may perform its own verification testing independent of the Contractor. The Owner's Quality Management Plan describes the Owner's anticipated verification testing program for this Project. The preliminary testing plan is shown in Paragraph 3.04. This plan outlines the anticipated testing in general terms and may not reflect the actual testing performed by the Owner. Actual testing will depend on the Contractor's means, methods, and procedures of construction which will not be known until the Contractor submits the Contractor's Quality Control Plan (CQCP) to the Construction Manager. There is no guarantee that all testing in the preliminary OQMP included in the Bidding/Proposal Documents will be performed by the Owner. Contractor will arrange and pay for all production control testing deemed necessary by the Contractor to produce quality results.

B. Quality management activities of the Owner are for verifying the results of the Contractor's Work complies with the requirements of the Contract Documents. Performance or non-performance of verification activities by the Owner:

1. Does not relieve the Contractor of its responsibility to provide Work and furnish products that comply with the requirements of the Contract Documents;

2. Does not relieve the Contractor of its responsibility to provide adequate quality control measures to produce quality documents, products, services, or Work;

3. Does not relieve the Contractor of its responsibility for damage to or loss of Work or products before Owner's acceptance; and

4. Does not affect the continuing rights of the Owner after acceptance of the completed Work.

C. The Work is subject to observations or testing at any time by the OPT. Products which have been tested or inspected and accepted by the Owner at a supply source or staging area may be inspected or tested again by the OPT before, during, or after incorporation into the Work and rejected if products do not comply with the Contract Documents.

D. Verification testing performed by the OPT will be paid for by the Owner, except for testing related to Defective Work as discussed in Paragraph 3.03.

1.05 CONTRACTOR'S RESPONSIBILITIES

A. Review the OQMP and provide a Contractor's Quality Control Plan (CQCP) outlining testing to be provided by the Contractor per Paragraph 1.07.

B. Implement the CQCP to provide Work that complies with the requirements of the Contract Documents.

1. Provide quality documents meeting the requirements of the Contract Documents.

2. Provide services meeting the requirements of the Contract Documents.

3. Provide the services of a Construction Materials Inspection and Testing (CMIT) provider meeting the requirements of this Section to provide testing required by the Contract Documents to demonstrate that products proposed for the Project in Shop Drawings and Product Data fully comply with the Contract Documents.

4. Inspect and test products to be incorporated into the Project to identify defects before installing them. Do not install Defective products. Conspicuously mark Defective products and remove from the Site. If products are installed before the defect is recognized, remove the Defective products, mark them as Defective and remove them from the Site when the defect is recognized.

5. Integrate production quality control measures into construction activities to produce Work meeting the requirements of the Contract Documents. Inspect self-performed Work and the Work of Subcontractors and Suppliers to identify defects. Correct or replace Defective Work.

6. Provide facilities, equipment, and Samples required for inspections and tests.

a. Give the Construction Manager adequate notice before proceeding with Work that would interfere with inspections or testing.

b. Notify the Construction Manager and CMIT provider prior to the time that testing is required, providing adequate lead time to allow arrangements for inspections or testing to be performed.

c. Do not proceed with Work that would impact the ability to correct defects, or with Work that would require that it be removed to correct defects, until testing is complete, and test results indicate that the corrected Work is acceptable.

d. Provide safe access for all CMIT activities, including those to be conducted as part of the Owner's Quality Management Program.

e. Cooperate fully with the performance of sampling, inspection, and testing. Provide personnel to assist with sampling or to assist in making inspections and field tests.

f. Provide Samples and products in adequate quantities for testing at the Site or at the production source of the product for testing.

g. Provide facilities required to store and cure test Samples.

h. Provide calibrated scales and measuring devices for OPT's use in performing inspections and testing.

i. Provide adequate lighting to allow OPT observations.

j. Make Contract Documents available to testing agencies when requested.

C. Perform tests as indicated in Contract Documents. All verification testing is to be observed by the Construction Manager or its designated representative.

D. Submit test reports to the Construction Manager.

E. Provide an update on quality control activities performed the previous month and planned for the coming month at monthly progress meetings required by Section 01 31 13 "Project Administration."

F. Determine testing or inspections required to implement the CQCP. Include costs for additional testing and inspections required to meet the Contractor's quality control obligations in the Contract Price.

1.06 CONTRACTOR'S QUALITY CONTROL MANAGER

A. Provide a Quality Control Manager for the Project. Quality Control Manager must have authority to reject Defective Work, redirect the efforts of the Contractor, Subcontractor and Suppliers to correct Defective Work, and implement steps to prevent future Defective Work.

B. The resident superintendent or an approved assistant can serve as Quality Control Manager, provided other duties will allow adequate time to serve in this capacity.

1.07 CONTRACTOR'S QUALITY CONTROL PLAN

A. Provide a CQCP that describes testing and inspections for Work performed at the Site and at remote locations. Include Work by Subcontractors and Suppliers. The CQCP is to include:

1. A description of the quality control organization, including an organization chart showing lines of authority to control the quality of Work.

2. Documentation describing name, qualifications (in resume format), duties, responsibilities, and level of authority of the Quality Control Manager.

3. The name, qualifications (in resume format), duties, responsibilities, and authorities of other persons assigned a quality control function.

4. Procedures for scheduling, reviewing, certifying, and managing documentation including documentation provided by Subcontractors and Suppliers.

5. Control, verification, and acceptance testing procedures for each specific test. Include:

a. Name of tests to be performed;

b. Specification paragraph requiring test;

c. Parameters of Work to be tested;

d. Test frequency;

e. Persons responsible for each test; and

f. Applicable industry testing standards and laboratory facilities to be used for the test.

6. Incorporate the testing specified in the OQMP into the CQCP, specifically identifying the tests or inspections that will be provided by the OQMP;

7. Procedures for tracking and documenting quality management efforts per Paragraph 1.03.

8. Reporting procedures which incorporate the use of forms provided by the Construction Manager.

9. The name of the proposed testing laboratories along with documentation of qualifications per Paragraph 1.03.

B. Use the Contractor's Quality Control Plan Checklist provided by the Construction Manager to review the CQCP before submitting and include a copy of the completed checklist with the CQCP. Do not begin Work until the CQCP is accepted. Submit an interim plan covering only the portion of Work to be performed if the Contractor plans to begin Work prior to submitting the complete CQCP for the Project. Do not begin Work on other parts of the Project until the complete CQCP is accepted.

C. Meet with the OPT 7 days after CQCP is submitted and before start of construction to discuss the CQCP.

D. Notify the Construction Manager of any changes to the CQCP or quality control personnel.

1.08 CONTRACTOR'S USE OF OWNER'S TEST REPORTS

A. Contractor will receive copies of all test reports documenting the Owner's verification tests. Contractor is entitled to rely on the accuracy of these tests results and use these as part of its quality control efforts.

B. Contractor may submit a Change Proposal if the Owner's testing program deviates significantly from the OQMP. Contractor must demonstrate that actual testing and inspection costs were incurred implementing the CQCP as a result of Owner's decision to not provide testing described in the OQMP.

1.09 LIMITATION OF AUTHORITY OF THE TESTING LABORATORY

A. The testing laboratory representatives are limited to providing testing services and interpreting the results of the test performed.

B. The testing laboratory is not authorized to:

1. Alter the requirements of the Contract Documents;

2. Accept or reject any portion of the Work;

3. Perform any of the duties of the Contractor; or

4. Direct or stop the Work.

1.10 TEST REPORTS

A. Certified Test Reports are to be prepared for all tests.

1. Tests performed by testing laboratories may be submitted on their standard test report forms if acceptable to the Owner using the process directed by the Construction Manager. These reports must include the following:
    a. Name of the Owner, Project title and number, and name of the Contractor;
    b. Name, address, and telephone number of the laboratory;
    c. Name and signature of the laboratory personnel performing the test;
    d. Description of the product being sampled or tested;
    e. Date and time of sampling, inspection, and testing;
    f. Date the report was issued;
    g. Description of the test performed;
    h. Weather conditions and temperature at time of test or sampling;
    i. Location at the Site or structure where the test was taken;
    j. Standard or test procedure used in making the test;
    k. A description of the results of the test;
    l. Statement of compliance or non-compliance with the Contract Documents; and
    m. Interpretations of test results, if appropriate.
2. Submit reports on tests performed by the Contractor, Subcontractors, or Suppliers as directed by the Construction Manager.
3. OPT will prepare test reports on tests performed by the OPT.

B. Submit test reports as directed by the Construction Manager within 24 hours of completing the test. Flag tests reports with results that do not comply with Contract Documents for immediate attention. Notify the Construction Manager, using acceptable means other than the test report, immediately of any test that fails to comply with the Contract Documents.

1.11 DELIVERY, STORAGE, AND HANDLING

A. Handle and protect test specimens of products and construction materials at the Site in accordance with recognized test procedures. Provide facilities for storing, curing, and processing test specimens as required by test standards to maintain the integrity of Samples. Transport test specimens in a manner to prevent damage to specimens while in transit.

PART 2 - PRODUCTS

2.01 TESTING APPARATUS

A. Furnish testing apparatus and related accessories necessary to perform the tests.

2.02 SAMPLE PRODUCTS

A. Provide Samples of products in adequate quantity for testing.

PART 3 - EXECUTION

3.01 IMPLEMENTING CONTRACTOR'S QUALITY CONTROL PLAN

A. Perform quality control observations and testing as required in each Section of the Specifications and where indicated on the Drawings.

B. Include the phases listed below for each definable work task. A definable work task is one which is separate and distinct from other tasks, has separate control requirements, may be provided by different trades or disciplines, or may be work by the same trade in a different environment.

1. Planning Phase: Perform the following before beginning each definable work task:

a. Review the Contract Documents.

b. Review documents the Contractor will submit and determine that they are complete in accordance with the Contract Documents.

c. Check to ensure that all materials and/or equipment have been tested, submitted, and approved.

d. Examine the work area to ensure that all required preliminary Work has been completed and complies with the Contract Documents.

e. Examine required materials, equipment, and sample Work to ensure that they are on hand, conform to Contract Documents, Shop Drawings and Product Data, and are properly stored.

f. Review requirements for quality control inspection and testing.

g. Discuss procedures for controlling quality of the Work. Document construction tolerances and workmanship standards for the work task.

h. Check that the portion of the plan for the Work to be performed incorporates document review comments.

i. Discuss results of planning phase with the Construction Manager. Conduct a meeting attended by the Construction Manager, Quality Control Manager, superintendent, other quality control personnel as applicable, and the foreman responsible for the work task. Instruct applicable workers as to the acceptable level of workmanship required to meet the requirements of the Contract Documents. Document the results of the planning phase actions by separate meeting minutes prepared by the Quality Control Manager and attached to the quality control report.

j. Do not move to the next phase unless results of investigations required for the planning phase indicate that requirements have been met.

2. Work Phase: Complete this phase after the planning phase.

a. Notify the Construction Manager at least 1 week in advance of beginning the Work and discuss the review of the planning phase effort to indicate that requirements have been met.

b. Check the Work to ensure that it is in full compliance with the Contract Documents.

c. Verify adequacy of controls to ensure full compliance with the Contract Documents. Verify required control inspection and testing is performed.

d. Verify that established levels of workmanship meet acceptable workmanship standards. Compare with required Sample panels as appropriate.

e. Repeat the work phase for each new crew to work on-site, or any time acceptable specified quality standards are not being met.

3. Follow-Up Phase: Perform daily checks to ensure control activities, including control testing, are providing continued compliance with contract requirements.

a. Make checks daily and record observations in the quality control documentation.

b. Conduct follow-up checks and correct all defects prior to the start of additional work tasks that may be affected by the Defective Work. Do not build upon nor conceal Defective Work.

c. Conduct a review of the Work at least 1 month prior to the expiration of the correction period prescribed in the General Conditions with the OPT. Correct defects as noted during the review.

C. Conduct additional planning and work phases if:

1. The quality of on-going Work is unacceptable;

2. Changes are made in applicable quality control staff, on-site production supervision, or crews;

3. Work on a task is resumed after a substantial period of inactivity; or

4. Other quality problems develop.

3.02 DEFECTIVE WORK

A. Immediately correct any Defective Work or notify the Construction Manager why the Work is not to be corrected immediately and when corrective action will be completed.

B. Work performed that is connected or adjacent to Defective Work or Work that would have to be removed to correct Defective Work is also considered to be Defective. Contractor is responsible for all costs associated with replacing any acceptable Work that must be removed, or might be damaged by corrective actions.

C. Document Defective Work, corrective actions taken to correct defects, and that corrected Work complies with the Contract Documents.

D. Implement countermeasures to prevent future Defective Work.

E. No payment will be made for Defective Work. Remove Work from the Application for Payment if Work paid for on a previous Application for Payment is found to be Defective.

F. Owner will withhold payment for Defective Work or Work that has not been tested or inspected in accordance with the CQCP, OQCP, or the Contract Documents.

3.03 VERIFICATION TESTING FOR CORRECTED DEFECTS

A. Provide verification testing on corrected Work when corrective action is complete to demonstrate that the corrected Work complies with the Contract Documents. Conduct the same tests or inspections used to determine that the original Work was Defective. Different tests or methods may be used if approved by the Owner. Document that Defective Work has been corrected with the Construction Manager.

B. Pay for verification testing until Work meets quality requirement set forth in the Contract Documents. OPT may perform verification testing as part of the Owner's Quality Management Program and impose a set-off to recover the cost for this testing.

3.04 OWNER'S PRELIMINARY QUALITY CONTROL PLAN

Spec. Section	Test / Frequency	OPT or Contractor
03 30 00	Compressive strength. One set of three cylinders for each concrete placement with one additional set of cylinders for each 50 yards in a single placement.	OPT
	Pressure and leakage test (entire pipeline)	Contractor
	Internal deflection testing of pipelines	Contractor
	Protective coatings testing	OPT
	Air Testing	OPT

END OF SECTION

01 50 00 TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 SUMMARY

A. Provide temporary facilities, including OPT's field office, Contractor's field offices, storage sheds, workshops, and other facilities needed to complete the Work.

B. Provide temporary utilities needed to support the operation of the facilities and construction activities.

C. Provide and maintain temporary project identification signs for Owner.

D. Provide temporary informational signs to identify key elements of construction and direct the flow of traffic.

E. Provide a weatherproof kiosk for display of permits and other notices required by Laws and Regulations.

1.02 DOCUMENTATION

A. Submit a Shop Drawing, in accordance with Section 01 33 02 "Shop Drawings," showing a scaled office floor plan prior to installation of OPT's field office. Include details for:

1. Telephone equipment;
2. Internet equipment;
3. Computer equipment;
4. Security/alarm systems; and
5. Office furniture and appliances.

1.03 QUALITY ASSURANCE

A. Inspect and test each utility before using facilities. Arrange for all required inspections and tests by regulatory agencies, and obtain required certifications and permits for use of facilities.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Transport, unload, and set up all temporary buildings and utilities.

1.05 JOB CONDITIONS

A. Locate buildings and sheds at the Site as indicated or as approved by the OPT.

B. Prepare the Site by removing trees, brush, or debris and performing demolition or grubbing needed to clear a space adequate for the structures.

C. Provide Contractor's temporary facilities and utilities in time to avoid delays in the performance of the Work.

D. Provide OPT's field office, complete and ready for occupancy, and use no later than 7 days after the Notice to Proceed. Applications for Payment will not be processed until OPT's field office facilities are completed and approved.

E. Provide and maintain temporary facilities and utilities.

F. Operate temporary facilities in a safe and efficient manner.

1. Restrict loads on utilities to operate within their designed or designated capacities.
2. Provide sanitary conditions. Prevent public nuisance or hazardous conditions from developing or existing at the Site.
3. Prevent freezing of pipes, flooding, or the contamination of water.
4. Maintain site security and protection of the facilities.

G. Remove temporary facilities and utilities when construction is complete and removal is approved by the Construction Manager.

PART 2 - PRODUCTS

2.01 SIGN MATERIALS

A. Provide wood or metal signs in sound condition, structurally adequate to withstand wind and weather.

B. Provide 3/4-inch exterior grade A/D face veneer plywood with medium density overlay for sign surface.

C. Provide galvanized or stainless steel bolts, brackets, fasteners, and other hardware.

D. Provide exterior quality coatings.

2.02 CONTRACTOR'S FIELD OFFICE

A. Furnish a field office of adequate size for Contractor's use.

B. Subcontractors may provide their own field offices only when space is available on the Site and the OPT agrees to its size, condition, and location.

2.03 TEMPORARY STORAGE BUILDINGS

A. Furnish storage buildings of adequate size to store any materials or equipment delivered to the Site that might be affected by weather.

2.04 TEMPORARY SANITARY FACILITIES

A. Provide sanitary facilities at the Site for the entire duration of the Project. Maintain these facilities in a clean and sanitary condition at all times, and comply with the requirements of the local health authority. On large sites, provide portable toilets at such locations so that no point at the Site will be more than 600 feet from a toilet.

B. Use these sanitary facilities. Do not use restrooms within existing or Owner-occupied buildings.

2.05 TEMPORARY HEAT

A. Provide heating devices needed to protect buildings during construction. Provide fuel needed to operate the heating devices and attend the heating devices at all times they are in operation, including overnight operations.

2.06 TEMPORARY UTILITIES

A. Provide the temporary utilities for administration, construction, testing, disinfection, and startup of the Work, including electrical power, water, and telephone. Pay all costs associated with furnishing temporary utilities.

1. Provide a source of temporary electrical power of adequate size for construction procedures.

a. Use existing power systems where spare capacity is available. Provide temporary power connections that do not adversely affect the existing power supply. Submit connections to the Construction Manager for approval prior to installation.

b. Provide electrical pole and service connections that comply with Laws and Regulations and the requirements of the power company.

2. Provide temporary water. Potable water may be purchased from the City of Midland. Contractor shall pay a deposit for a fire hydrant meter from the City of Midland.

3. Provide telephone service to the Site and install telephones inside the Contractor's and OPT's field offices.

B. Provide power for construction and storage. Provide power to energize space heaters for stored electrical equipment.

2.07 WATER FOR CONSTRUCTION

A. Provide temporary water. Potable water may be purchased from the Owner by obtaining a water meter from the Owner and transporting water from a water hydrant. Non-potable water may be used for hydraulic testing of non-potable basins or pipelines. Include the cost of water in the Contract Price.

PART 3 - EXECUTION

3.01 LOCATION OF TEMPORARY FACILITIES

A. Locate temporary facilities in areas approved by the Construction Manager. Construct and install signs at locations approved by the Construction Manager. Install informational signs so they are clearly visible.

3.02 PROJECT IDENTIFICATION SIGNS

A. Arrange for a professional sign painter to paint and erect a sign for the Site in accordance with the sign information provided in the Contract Documents or provided by Owner. Sign will include identification of the OPT and Contractor (including appropriate logos, as required) and other Project information as determined by the Construction Manager. Paint sign on a 4-foot by 8-foot by 3/4-inch exterior grade plywood board. Frame plywood with 2

x 4 wood frame and mount on not less than two 4 x 4 posts. House plywood board in a channel routed 1/2 inch deep in the 2 x 4 frame. Shoulder, glue, and screw corners.

3.03 TEMPORARY LIGHTING

A. Provide temporary lighting inside buildings once buildings are weatherproof.

B. Provide exterior security lighting.

C. Provide lighting that is adequate to perform Work within any space. Temporary lights may be removed once the permanent lighting is in service.

D. Provide portable flood lights at any time that Work will be performed outside the structure at night. Provide adequate lighting at any location Work is being performed.

3.04 DRINKING WATER

A. Provide all field offices with potable water. Provide a dispenser and cooling apparatus if bottled drinking water is provided.

B. Pay for water services and maintain daily.

3.05 CONSTRUCTION FENCE

A. Install and maintain a chain-link construction fence around the Site and off-site storage yards. Fence must be a minimum 6 feet high. Provide gates with padlocks.

3.06 REMOVAL OF TEMPORARY FACILITIES

A. Remove temporary buildings, sheds, and utilities at the conclusion of the Project and restore the Site to original condition or finished condition in accordance with the Drawings.

B. Remove informational signs upon completion of construction.

C. Remove project identification signs, framing, supports, and foundations upon completion of the Project.

3.07 MAINTENANCE AND JANITORIAL SERVICE

A. Provide janitorial service for the OPT's field office on a weekly basis or as requested. Empty trash receptacles daily or as needed.

B. Maintain signs and supports in a neat, clean condition. Repair damage to structures, framings, or signs.

C. Repair any damage to Work caused by placement or removal of temporary signage.

D. Service, maintain, and replace, if necessary, the field office computer equipment throughout the Project as required by the OPT including replacement cartridges for all office equipment.

END OF SECTION

01 57 00 TEMPORARY CONTROLS

PART 1 - GENERAL

1.01 SUMMARY

A. Provide labor, materials, equipment, and incidentals necessary to construct temporary facilities to provide and maintain control over environmental conditions at the Site. Remove temporary facilities when no longer needed.

B. Construct temporary impounding works, channels, diversions, furnishing, and operation of pumps, installing piping and fittings, and other construction for control of conditions at the Site. Remove temporary controls at the end of the Project.

1.02 DOCUMENTATION

A. Provide Shop Drawings in accordance with Section 01 33 02 "Shop Drawings."

B. Provide copies of notices, records, and reports required by the Contract Documents or Laws and Regulations as Product Data in accordance with Section 01 31 13 "Project Administration."

1.03 QUALITY ASSURANCE

A. Construct and maintain temporary controls with adequate workmanship using durable materials to provide effective environmental management systems meeting the requirements of the Contract Documents and Laws and Regulations. Use materials that require minimal maintenance to prevent disruption of construction activities while providing adequate protection of the environment.

B. Periodically inspect systems to determine that they are meeting the requirements of the Contract Documents.

1.04 POLLUTION CONTROL

A. Prevent the contamination of soil, water, or atmosphere by the discharge of noxious substances from construction operations. Provide adequate measures to prevent the creation of noxious air-borne pollutants. Prevent dispersal of pollutants into the atmosphere. Do not dump or otherwise discharge noxious or harmful fluids into drains or sewers, nor allow noxious liquids to contaminate public waterways in any manner.

B. Provide equipment and personnel and perform emergency measures necessary to contain any spillage.

1. Contain chemicals in protective areas and do not dump on soil. Dispose of such materials at off-site locations in an acceptable manner.

2. Excavate contaminated soil and dispose at an off-site location if contamination of the soil does occur. Fill resulting excavations with suitable backfill and compact to the density of the surrounding undisturbed soil.

3. Provide documentation to the Owner which states the nature and strength of the contaminant, method of disposal, and the location of the disposal site.

4. Comply with Laws and Regulations regarding the disposal of pollutants.

C. Groundwater or run-off water which has come into contact with noxious chemicals, sludge, or contaminated soil is considered contaminated. Do not allow contaminated water to enter streams or water courses, leave the Site in a non-contained form, or enter non-contaminated areas of the Site.

1. Construct temporary holding ponds or take other precautions and measures as required to contain the contaminated water and pump to a designated storage area.

2. Wash any equipment used for handling contaminated water or soil within contaminated areas three times with uncontaminated water prior to using such equipment in an uncontaminated area. Dispose of wash water used to wash such equipment as contaminated water.

1.05 EARTH CONTROL

A. Remove excess soil, spoil materials, and other earth not required for backfill. Control stockpiled materials to eliminate interference with Contractor and Owner's operations.

B. Dispose of excess earth off the Site. Provide written approval from the property owner for soils deposited on private property as Product Data per Section 01 31 13 "Project Administration." Obtain approval of the OPT if this disposal impacts the use of Site or other easements.

1.06 AIR POLLUTION CONTROL

A. Air Pollution Watch Days:

1. Air Pollution Watch Days (APWD) may occur in the following times:

a. Typical Ozone Season: May 1 through October 31.

b. Critical Emission Time: 6:00 a.m. to 10:00 a.m.

2. Watch Days:

a. State or local environmental regulatory agencies, in coordination with the National Weather Service, may designate the following day as an APWD by 3:00 p.m. on the prior afternoon.

b. Begin work after 10:00 a.m. on designated APWD if work requires the use of heavy construction equipment for run times in excess of 1 hour prior to 10:00 a.m. Heavy construction equipment may be used prior to 10:00 a.m. if equipment is certified by EPA as "Low Emitting" or equipment burns Ultra Low Sulfur Diesel (ULSD), diesel emulsions, or alternative fuels such as CNG.

B. Obtain air permit for construction activities per requirements of Laws and Regulations.

1.07 TEMPORARY STORMWATER POLLUTION CONTROL

A. Provide temporary stormwater pollution control per Section 01 57 23 "Temporary Stormwater Pollution Control."

1.08 MANAGEMENT OF WATER

A. Manage water resulting from rains or ground water at the Site. Maintain trenches and excavations free of water at all times.

B. Lower the water table in the construction area by acceptable means if necessary to maintain a dry and workable condition at all times. Provide drains, sumps, casings, well points, and other water control devices as necessary to remove excess water.

C. Provide continuous operation of water management actions. Maintain standby equipment to provide proper and continuous operation for water management.

D. Ensure that water drainage does not damage adjacent property. Divert water into the same natural watercourse in which its headwaters are located, or other natural stream or waterway as approved by the Owner. Assume responsibility for the discharge of water from the Site.

E. Remove the temporary construction and restore the Site in a manner acceptable to the Construction Manager and to match surrounding material at the conclusion of the Work.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Provide materials that comply with Laws and Regulations.

PART 3 - EXECUTION

3.01 CONSTRUCTING, MAINTAINING, AND REMOVING TEMPORARY CONTROLS

A. Construct temporary controls in accordance with Laws and Regulations.

B. Maintain controls in accordance with regulatory requirements where applicable or in accordance with the requirements of the Contract Documents.

C. Remove temporary control when no longer required, but before the Project is complete. Correct any damage or pollution that occurs as the result of removing controls while they are still required.

END OF SECTION

01 57 23 TEMPORARY STORMWATER POLLUTION CONTROL

PART 1 - GENERAL

1.01 SUMMARY

A. Furnish labor, materials, equipment, and incidentals necessary to provide stormwater pollution prevention for the duration of the construction period including furnishing, installing, and maintaining erosion and sediment control structures and procedures and properly removing the features when no longer required.

B. Develop, implement, and maintain a stormwater pollution prevention plan (SWPPP) in compliance with local, state, and federal Laws and Regulations. Provide preventive measures to keep sediment and other pollutants from the construction activity from entering any stormwater system, including open channels.

C. Comply with the Texas Commission on Environmental Quality General Permit, TXR150000, (General Permit) for storm water discharges from construction activities under the Texas Pollutant Discharge Elimination System (TPDES) program.

D. File all required legal notices and obtain required permits prior to beginning any construction activity.

E. This Section provides guidelines and Best Management Practices information for the Contractor to use in adhering to all local, state, and federal environmental Laws and Regulations with respect to stormwater pollution prevention during construction activities.

1.02 DOCUMENTATION

A. Documentation must be provided in accordance with Section 01 33 00 "Document Management."

B. Submit copies of required notices and reports to the Construction Manager as Product Data in accordance with Section 01 33 03 "Product Data." Retain copies of these documents at the Site for review and inspection by the OPT or regulatory agencies at all times.

C. Submit copies of required notices to local, state, and federal authorities and any other entity as required by the General Permit and applicable Laws and Regulations.

D. Post a copy of required notices at the Site in a location where it is readily available for viewing by the general public and local, state, and federal authorities prior to starting construction activities and maintain the posting until completion of the construction activities.

E. Maintain copies of a schedule of major construction activities, inspection reports, and revision documentation with the SWPPP required under the General Permit.

F. Provide schedules in accordance with Paragraph 3.05.

1.03 QUALITY ASSURANCE

A. Comply with applicable requirements of all governing authorities having jurisdiction. The Specifications and the Drawings are not intended to be prescriptive but rather to convey

the intent to provide complete slope protection, erosion control, and stormwater pollution prevention for both the Owner's property and adjacent properties.

B. Perform Work to comply with "Best Practices" as established by the local agency of jurisdiction.

C. Contractor must develop and implement a SWPPP in accordance with the General Permit prior to the beginning of construction activity.

D. Contractor assumes sole responsibility for implementing, updating, and modifying the General Permit per Laws and Regulations for the SWPPP and Best Management Practices.

E. Stormwater pollution prevention measures must be established prior to the beginning of construction and maintained during the entire length of construction until final stabilization has been achieved for the area protected.

F. All land-disturbing activities must be planned and conducted to minimize the area to be exposed at any one time as well as time of exposure, off-site erosion, sedimentation, and adverse water quality impacts.

G. Surface water runoff originating upgrade of an exposed area must be managed to minimize erosion and sediment loss during the period of exposure.

H. Install measures to control both the velocity and rate of release so as to minimize erosion and sedimentation of the receiving water body (i.e. , ditch, channel, stream) in accordance with regulatory requirements and as directed by the OPT.

I. Periodically clean out and dispose of all sediment and other pollutants as necessary to maintain adequate treatment capacity of each pollution control feature. Clean out and properly dispose of all sediment and other stormwater pollutants at the time of completion of the Work.

1.04 JOB CONDITIONS, CODES AND ORDINANCES

A. Comply with the local codes and ordinances. If local codes and ordinances require more stringent or additional stormwater pollution prevention measures during construction beyond those required by state and federal Laws and Regulations, the Contractor must provide such measures at no additional cost.

1.05 STANDARDS

A. The applicable provisions of the following standards apply as if written here in their entirety:

1. ASTM International (ASTM):

ASTM D4632	Standard Test Method for Grab Breaking Load and Elongation of Geotextiles, 90 pounds
ASTM D4833	Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products, 60 pounds
ASTM D3786	Standard Test Method for Hydraulic Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Tester Method, 280 psi
ASTM D4751	Standard Test Method for Determining Apparent Opening Size of a Geotextile, U.S. Sieve No. 70 (max) to No. 100 (min)

ASTM D4355	Standard Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture and Heat in a Xenon Arc-Type Apparatus
ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort

PART 2 - PRODUCTS

2.01 MATERIALS

A. All materials used for stormwater pollution prevention must meet the minimum design and specification requirements identified below for commonly used sediment loss prevention (referenced from the North Central Texas Council Of Governments (NCTCOG) integrated Storm Water Management (iSWM) Design Manual for Construction). The Contractor must use appropriate control devices to protect against stormwater pollution from construction site activities.

B. Erosion control blankets (ECBs) to hold seed and soil in place until vegetation is established on disturbed areas are subject to the following design criteria:

1. The type and class of erosion control mat must be specified as appropriate for the slope of the area to be protected, the flow rate (sheet flow on cut/fill slopes) or velocity (concentrated flow in swales) of stormwater runoff in contact with the ECB, and the anticipated length of service.

2. Erosion control blankets must meet the applicable Texas Department of Transportation (TxDOT) Minimum Performance Standards for TxDOT as provided in its Erosion Control Report and/or be listed on the most current annual Approved Products List for TxDOT applicable to TxDOT Item 169 Soil Retention Blanket and its Special Provisions.

C. Silt fences for perimeter controls located downstream of disturbed areas are subject to the following design criteria:

1. If 50 percent or less soil by weight passes the U.S. Standard sieve No. 200, select the apparent opening size (A.O.S.) to retain 85 percent of the soil.

2. If 85 percent or more of soil by weight passes the U.S. Standard sieve No. 200, silt fences must not be used unless the soil mass is evaluated and deemed suitable by a soil scientist or geotechnical engineer concerning the erodibility of the soil mass, dispersive characteristics, and the potential grain-size characteristics of the material that is likely to be eroded.

3. Silt fence fabric must meet the following minimum criteria:

a. Tensile Strength, ASTM D4632 Test Method for Grab Breaking Load and Elongation of Geotextiles, 90 pounds.

b. Puncture Rating, ASTM D4833 Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products, 60 pounds.

c. Mullen Burst Rating, ASTM D3786 Standard Test Method for Hydraulic Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Tester Method, 280 psi.

d. Apparent Opening Size, ASTM D4751 Test Method for Determining Apparent Opening Size of a Geotextile, U.S. Sieve No. 70 (max) to No. 100 (min).

e. Ultraviolet Resistance, ASTM D4355 Standard Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture and Heat in a Xenon Arc-Type Apparatus. Minimum 70 percent.

4. Filter stone for an overflow structure must be 1-1/2-inch washed stone containing no fine material. Angular shaped stone is preferable to rounded shaped stone.

5. Fence posts must be galvanized steel or equivalent and may be T-section or L-section, 1.3 pounds per linear foot minimum, and 4 feet in length minimum. Wood posts may be used depending on anticipated length of service and provided they are 4 feet in length minimum and have a nominal cross-section of 2 inches by 4 inches for pine or 2 inches by 2 inches for hardwoods.

6. Silt fence must be supported by galvanized steel wire fence fabric as follows:

   a. 4-inch by 4-inch mesh size, W1.4/1.4, minimum 14-gauge wire fence fabric;

   b. Hog wire, 12-gauge wire, small openings installed at bottom of silt fence;

   c. Standard 2-inch by 2-inch chain link fence fabric; or

   d. Other welded or woven steel fabrics consisting of equal or smaller spacing as that listed herein and appropriate gauge wire to provide support.

D. Inlet protection used in new developments that include new inlets or roads with new curb inlets or during repairs to existing roadways are subject to the following design criteria:

1. Filter fabric protection must be designed and maintained in a manner similar to a silt fence.

2. Where applicable, filter fabric, posts, and wire backing must meet the material requirements specified in Paragraph 2.01.C.

3. Filter gravel must be 3/4-inch washed stone containing no fines. Angular shaped stone is preferable to rounded shapes.

4. Concrete blocks must be standard 8-inch by 8-inch by 16-inch concrete masonry units.

5. When organic filter tubes are used, the designer must specify the type of material to be used (or excluded) on a particular site:

   a. Straw filter material must be Certified Weed Free Forage. The straw must be in good condition, air-dried, and not rotten or moldy.

   b. Compost must conform to the requirements for Erosion Control Compost in TxDOT Special Specification 1001 Compost (2004). Compost may provide some oil and grease removal; however, the large percentage of fines in compost will result in less filtering and more ponding of stormwater.

   c. Wood chips must be 100 percent untreated chips and free of inorganic debris, such as plastic, glass, metal, etc. Wood chip size must not be smaller than 1 inch and must not exceed 3 inches in diameter. Shavings must not be more than 5 percent of the total mass.

6. Bags used to secure inlet protection devices on pavement must be filled with aggregate, filter stone, or crushed rock that is less likely than sand to be washed into an inlet if the bag is broken. Filled bags must be 24 to 30 inches long, 16 to 18 inches wide, and 6 to 8 inches thick. Bags must be polypropylene, polyethylene, or polyamide woven fabric with a minimum unit weight of 4 ounces per square yard and meet the following criteria:

    a. Greater than 300 psi Mullen Burst Strength using ASTM D3786 Standard Test Method for Hydraulic Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Tester Method.

    b. Greater than 70 percent UV Stability using ASTM D4355 Standard Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture, and Heat in a Xenon Arc Type Apparatus.

E. Stone outlet sediment traps (bermed or excavated) used in situations where flows are concentrated in a drainage swale or channel are subject to the following design criteria:

1. The embankment must be placed on geotextile fabric meeting the following minimum criteria:

    a. Tensile Strength, ASTM D4632 Text Method for Grab Breaking Load and Elongation of Geotextiles, 250 pounds.

    b. Puncture Rating, ASTM D4833 Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products, 135 pounds.

    c. Mullen Burst Rating, ASTM D3786 Standard Test Method for Hydraulic Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Tester Method, 420 psi.

    d. Apparent Opening Size, ASTM D4751 Test Method for Determining Apparent Opening Size of a Geotextile, U.S. Sieve No. 20 (max).

2. Fill placed to constrict the swale for construction of the excavated stone outlet sediment trap and fill placed for the berm in the bermed stone outlet sediment trap must consist of clay material, minimum Plasticity Index of 30, using ASTM D4318 Standard Test for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

3. The embankment must be comprised of well graded stone riprap with a size range of 6 to 12 inches in diameter.

F. Sediment basins used as treatment devices for sites with disturbed areas of 10 acres and larger that are part of a common drainage area are subject to the following design criteria:

1. The embankment must be constructed with clay soil, minimum Plasticity Index of 30 using ASTM D4318 Standard Test for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

2. Texas Administrative Code Title 30, Chapter 299 (30 TAC 299), Dams and Reservoirs, contains specific requirements for dams that:

    a. Have a height greater than or equal to 25 feet and a maximum storage capacity greater than or equal to 15 acre-feet;

    b. Have a height greater than 6 feet and a maximum storage capacity greater than or equal to 50 acre feet;

c. Are a high- or significant-hazard dam as defined in Chapter 299, regardless of height or maximum storage capacity; or

d. Are used as a pumped storage or terminal storage facility.

3. If the size of the detention basin meets or exceeds the above applicability, the design must be in accordance with state criteria, and the final construction Drawings and Specifications must be submitted to the TCEQ for review and approval.

G. Check dams used for long drainage swales or ditches to reduce erosive velocities are subject to the following design criteria:

1. Use geotextile filter fabric under check dams exceeding 12 inches in height. The fabric must meet the material specified for the Stone Outlet Sediment Trap discussed above.

2. Loose, unconfined soil, wood chips, compost, and other material that can float or be transported by runoff must not be used to construct check dams.

3. Sand bags must not be used for check dams, due to their propensity to break and release sand that is transported by the concentrated flow in the drainage swale or ditch.

4. Rock Check Dams:

a. Stone must be well graded with stone size ranging from 3 to 6 inches in diameter for a check dam height of 24 inches or less.

b. The stone size range for check dams greater than 24 inches is 4 to 8 inches in diameter.

5. Rock Bag Check Dams Bags:

a. Fill material should be pea gravel, filter stone or aggregate that is clean and free of deleterious material.

b. Bag material must comply with the requirements of Inlet Protection above.

6. Sack Gabion Check Dams:

a. Sack gabions must be wrapped in galvanized steel, woven wire mesh. The wire must be 20 gauge with 1-inch diameter, hexagonal openings.

b. Stone must be well graded with a minimum size range from 3 to 6 inches in diameter.

7. Organic Filter Tube Check Dams:

a. Filter material used within tubes to construct check dams must be limited to coir, straw, aspen fiber and other organic material with high cellulose content.

b. The material should be slow to decay or leach nutrients in standing water and comply with the requirements for Inlet Protection above.

H. Stabilized construction exits used for sites in which significant truck traffic occurs on a daily basis are subject to the following design criteria:

1. The construction exit material must be a minimum thickness of 6 inches. The stone or recycled concrete used must be 3 to 5 inches in size with little or no fines.

2. The geotextile fabric must meet the following minimum criteria:

    a. Tensile Strength, ASTM D4632 Test Method for Grab Breaking Load and Elongation of Geotextiles, 300 pounds.

    b. Puncture Strength, ASTM D4833 Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products, 120 pounds.

    c. Mullen Burst Rating, ASTM D3786 Standard Test Method for Hydraulic Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Tester Method, 600 psi.

    d. Apparent Opening Size, ASTM D4751 Test Method for Determining Apparent Opening Size of a Geotextile, U.S. Sieve No. 40 (max).

I. Alternative pollution prevention measures selected by the Contractor must be identified from one or more of the following reference sources, as appropriate for the region of the construction activity:

1. North Central Texas Council of Governments (NCTCOG) integrated Stormwater Management (iSWM) Design Manual for Construction.

PART 3 - EXECUTION

3.01 PREPARATION

A. Prepare a SWPPP in accordance with applicable permit requirements for construction activity. Develop the SWPPP in conformance with the General Permit and any applicable local requirements.

B. Prepare and implement the SWPPP prior to the beginning of construction activity in accordance with local, state, and federal Laws and Regulations.

C. OPT may require Contractor to install stormwater pollution prevention devices and/or practices during construction in addition to those required under the approved SWPPP. Contractor must remain solely responsible for complying with all local, state, and federal Laws and Regulations.

3.02 INSTALLATION

A. Erosion control blankets to hold seed and soil in place until vegetation is established on disturbed areas are subject to the following installation criteria:

1. Prior to the installation of any erosion control matting, all rocks, dirt clods, stumps, roots, trash, and any other obstructions that would prevent the mat from lying in direct contact with the soil must be removed.

2. Anchor trenching must be located along the entire perimeter of the installation area, except for small areas with less than 2 percent slope.

3. Installation and anchoring must conform to the recommendations shown within the manufacturer's published literature for the erosion control blanket.

4. Anchors (staples) must be a minimum of 6 inches in length and 1 inch wide. They must be made of 11-gauge wire, or equivalent, unless the ECB is intended to remain in place with final stabilization and biodegrade.

5. Particular attention must be paid to joints and overlapping material. Overlap along the sides and at the ends of ECBs should be per the manufacturer's recommendations for site conditions and the type of ECB being installed. At a minimum, the end of each roll of ECB must overlap the next roll by 3 feet and the sides of rolls must overlap 4 inches.
6. After installation, check blankets for uniform contact with the soil, security of the lap joints, and flushness of the staples with the ground.

B. Silt fences for perimeter controls located downstream of disturbed areas are subject to the following installation criteria:

1. Construct fences along a line of constant elevation (along a contour line if possible).
2. Maximum drainage area must be 0.25 acres per 100 linear feet of silt fence.
3. Maximum flow to any 20-foot section of silt fence must be 1 cfs.
4. Maximum distance of flow to silt fence must be 200 feet or less. If the slope exceeds 10 percent, the flow distance must be less than 50 feet.
5. Maximum slope adjacent to the fence must be 2:1.
6. Stone overflow structures or other outlet control devices must be installed at all low points along the fence or spaced at approximately 300 feet if there is no apparent low point.
7. A 6-inch wide trench is to be cut 6 inches deep at the toe of the fence to allow the fabric to be laid below the surface and backfilled with compacted earth or gravel to prevent bypass of runoff under the fence. Fabric must overlap at abutting ends a minimum of 3 feet and must be joined such that no leakage or bypass occurs. If soil conditions prevent a minimum toe-in depth of 6 inches or installation of support post to depth of 12 inches, silt fences must not be used.
8. Sufficient room for the operation of sediment removal equipment must be provided between the silt fence and other obstructions in order to properly maintain the fence.
9. The last 10 feet (or more) at the ends of a line of silt fence must be turned upslope to prevent bypass of stormwater. Additional upslope runs of silt fence may be needed every 200 to 400 linear feet, depending on the traverse slope along the line of silt fence.

C. Inlet protection for new developments that include new inlets or roads with new curb inlets or during repairs to existing roadways are subject to the following installation criteria:

1. Maintain barricades, signs, and safety features around the Work in accordance with all provisions of the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD), when installing inlet protection on publicly traveled streets or in developed areas. Ensure that inlet protection is properly designed, installed, and maintained to avoid flooding of the roadway or adjacent properties and structures.
2. Maximum depth of flow must be 8 inches or less.
3. A 2-inch overflow gap or weir is required on all curb inlet protection devices.
4. Positive drainage is critical in the design of inlet protection. If overflow is not provided for at the inlet, excess flows must be routed through established swales, streets, or other watercourses to minimize damage due to flooding.

5. Filter Fabric Protection:
    a. Filter fabric protection is appropriate where the drainage area is less than 1 acre and the basin slope is less than 5 percent.
    b. Filter fabric, posts, and wire mesh must meet the material requirements specified in Paragraph 2.01.C.
    c. A 6-inch wide trench is to be cut 6 inches deep at the toe of the fence to allow the fabric to be laid below the surface and backfilled with compacted earth or gravel. This entrenchment prevents any bypass of runoff under the fence.
    d. Stone overflow structures must be installed where flow to the inlet is concentrated and more than 1 cfs according to the criteria in Paragraph 2.01.
6. Block and Gravel Protection (Curb and Drop Inlets):
    a. Concrete blocks are to be placed on their sides in a single row around the perimeter of the inlet, with ends abutting.
    b. Openings in the blocks should face outward, not upward. 1/2-inch by 1/2-inch wire mesh must then be placed over the outside face of the blocks covering the holes.
    c. Filter stone must then be piled against the wire mesh to the top of the blocks with the base of the stone being a minimum of 18 inches from the blocks.
    d. Alternatively, where loose stone is a concern (streets, etc.), the filter stone may be placed in appropriately sized geotextile fabric bags.
7. Excavated Impoundment Protection:
    a. Excavated impoundment protection is only applicable to drop inlets.
    b. It should not be applied to Y inlets because it will undermine the concrete pad surrounding the inlet opening. Nor can it be used for inlets on pavement.
    c. With this protection method, it is necessary to install weep holes to allow the impoundment to drain completely.
    d. The impoundment must be sized such that the volume of excavation is equal to or exceeds the runoff volume from the temporary control design storm (2-year, 24-hour) for the inlet's drainage area.
    e. The trap must have a minimum depth of 1 foot and a maximum depth of 2 feet as measured from the top of the inlet and must have side slopes of 2:1 or flatter.
8. Organic Filter Tube Protection (Curb and Drop Inlets):
    a. Organic filter tubes may be used on paved or unpaved surfaces. On paved surfaces, tubes must be secured in place by rock bags. On unpaved surfaces, the tubes must be embedded in the ground a minimum of 3 inches and staked at 4-foot spacing.
    b. Designer must provide calculations and specify the diameter of tube to be used based on the inlet's drainage area and the flow rate of runoff to the inlet.
    c. The minimum allowable diameter is 12 inches.

d. For curb protection, the diameter of the tube must be at least 2 inches less than the height of the inlet opening. The tube should not be allowed to block the entire opening, since it will clog.

e. The tube must be placed on 4-inch by 4-inch or 2-inch by 4-inch wire mesh to prevent the tube from sagging into the inlet. The tube should be long enough to extend a minimum of 12 inches past the curb opening on each side of the inlet.

D. Stone outlet sediment traps (excavated or bermed) for situations where flows are concentrated in a drainage swale or channel are subject to the following installation criteria:

1. The maximum drainage area contributing to the trap must be less than 10 acres for the excavated trap, and 5 acres or less for the bermed trap. For larger drainage areas a sediment basin must be used.
2. The minimum storage volume must be the volume of runoff from the temporary control design storm (2-year, 24-hour) for the sediment trap's drainage area.
3. The surface area of the design storage must be 1 percent of the area draining to the device.
4. The maximum embankment height must be 6 feet as measured from the toe of the slope on the downstream side.
5. Minimum width of the embankment at the top must be 2 feet.
6. Embankment slope must be 1:5:1 or flatter.
7. The embankment must have a depressed area to serve as the outlet with a minimum width of 4 feet.
8. A 6-inch minimum thickness layer of 1-1/2-inch filter stone must be placed on the upstream face of the embankment when stormwater runoff contains fine silt and clay particles.
9. The embankment must consist of stone riprap or a combination of compacted fill with stone riprap. The stone may be enclosed in wire mesh or a gabion basket and anchored to the channel bottom to prevent washing away.
10. Fill must be placed in 8-inch loose lifts (maximum) and compacted to 95 percent Standard Proctor Density at optimum moisture content using ASTM D698 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort.
11. Geotextile fabric, covered with a layer of stone, must extend past the base of the embankment on the downstream side a minimum of 2 feet.
12. The outlet must be designed to have a minimum freeboard of 6 inches at design flow.

E. Stabilized construction exits for sites in which significant truck traffic occurs on a daily basis are subject to the following installation criteria:

1. Limit site access to one route during construction, if possible; two routes for linear and larger projects.

2. Prevent traffic from avoiding or shortcutting the full length of the construction exit by installing barriers. Barriers may consist of silt fence, construction safety fencing, or similar barriers.
3. Design the access point(s) to be at the upslope side of the construction site. Do not place construction access at the lowest point on the construction site.
4. Stabilized Construction Exits are to be constructed such that drainage across the entrance is directed to a controlled, stabilized outlet on-site with provisions for storage, proper filtration, and removal of wash water.
5. The exit must be sloped away from the paved surface so that stormwater is not allowed to leave the Site onto roadways.
6. Minimum width of exit must be 15 feet.
7. Vehicles must not be permitted to track or drop sediment onto paved roads, streets, or parking lots. When necessary, vehicles must be cleaned to remove sediment prior to exit onto paved areas. When washing is required, it must be done on a constructed wheel wash facility that drains into an approved sediment trap or sediment basin or other sedimentation/filtration device.
8. Minimum dimensions for the exit must be as follows:

Tract Area	Min. Width of Exit	Min. Length of Exit
<1 Acre	15 feet	20 feet
≥ 1 acre but <5 Acres	25 feet	50 feet
≥5 Acres	30 feet	50 feet

F. Install pollution control devices in a manner consistent with their designed intent.

3.03 MAINTENANCE

A. Maintain pollution prevention control structures and procedures in full working order at all times during construction. This must include any necessary repair or replacement of items which have become damaged or ineffective. Remove sediment and other pollutants which accumulate in pollution control devices as necessary to maintain the intended design efficiency for the pollution prevention measure.

B. Dispose properly of trash, debris, and other pollutants.

C. Place sediment material in approved earth spoil areas or return the sediment material to the area from which it eroded.

D. Maintain pollution prevention structures and procedures until construction is complete for the area protected and until the Site achieves final stabilization. Unless more stringently defined by local, state, or federal requirements, final stabilization is defined as achieving 70 percent of background vegetative cover or placement of permanent cover, such as concrete or asphalt.

E. Upon completion of construction and achievement of final stabilization, properly remove the temporary pollutant control structures and complete the area as indicated. Pollution control devices made of organic materials designed to degrade naturally in place will not require removal, unless specifically required by the OPT.

F. Erosion control blankets must be inspected regularly (at least as often as required by the General Permit) for bare spots caused by weather related events. Missing or loosened blankets must be replaced or re-anchored. Also check for excess sediment deposited from runoff. Remove sediment and/or replace blanket as necessary. In addition, determine the source of excess sediment and implement appropriate Best Management Practices to control the erosion.

G. Silt fences must be inspected regularly (at least as often as required by the General Permit) for buildup of excess sediment, undercutting, sags, and other failures. Sediment should be removed when it reaches approximately one-half the height of the fence. In addition, determine the source of excess sediment and implement appropriate Best Management Practices to control the erosion. If the fabric becomes damaged or clogged, it must be repaired or replaced as necessary.

H. Inlet protection must be inspected regularly (at least as often as required by the General Permit). Floatable debris and other trash caught by the inlet protection should be removed after each storm event. Sediment should also be removed from curb inlet protection after each storm event because of the limited storage area associated with curb inlets. Sediment collected at inlet protection should be removed before it reaches half the height of the protection device. Sediment should be removed from inlets with excavated impoundment protection before the volume of the excavation is reduced by 50 percent. In addition, the weep holes should be checked and kept clear of blockage. Concrete blocks, 2-inch by 4-inch boards, stakes, and other materials used to construct inlet protection should be checked for damaged and repaired or replaced if damaged. When filter fabric or organic filter tubes are used, they should be cleaned or replaced when the material becomes clogged. For systems using filter stone, when the filter stone becomes clogged with sediment, the stones must be pulled away from the inlet and cleaned or replaced. Because of the potential for inlet protection to divert runoff or cause localized flooding, remove inlet protection as soon as the drainage area contributing runoff to the inlet is stabilized. Ensure that all inlet protection devices are removed at the end of the construction.

I. The stone outlet sediment trap should be inspected regularly (at least as often as required by the General Permit) to check for clogging of the void spaces between stones. If the filter stone appears to be clogged, such that the basin will not completely drain, then the filter stone will require maintenance. If the filter stone is not completely clogged it may be raked with a garden rake to allow the water to release from the basin. If filter stone is completely clogged with mud and sediment, then the filter stone will have to be removed and replaced. Failure to keep the filter stone material properly maintained will lead to clogging of the stone riprap embankment. When this occurs, the entire stone rip-rap structure will need to be replaced. If the aggregate appears to be silted in such that efficiency is diminished, the stone should be replaced. Trash and debris should be removed from the trap after each storm event to prevent it from plugging the rock. Deposited sediment must be removed before the storage capacity is decreased by one-third, or sediment has reached a depth of 1 foot, whichever is less. The removed sediment must be stockpiled or redistributed in areas that are protected with erosion and sediment controls.

J. Sediment basins should be inspected regularly (at least as often as required by the General Permit) to check for damage and to ensure that obstructions are not diminishing the effectiveness of the structure. Sediment must be removed and the basin must be re-graded to its original dimensions when the sediment storage capacity of the impoundment has

been reduced by 20 percent. The removed sediment may be stockpiled or redistributed on-site in areas that are protected by erosion and sediment controls. Inspect temporary stabilization of the embankment and graded basin and the velocity dissipaters at the outlet and spillway for signs of erosion. Repair any eroded areas that are found. Install additional erosion controls if erosion is frequently evident.

K. Check dams should be inspected regularly (at least as often as required by the General Permit). Silt must be removed when it reaches approximately one-third the height of the dam or 12 inches, whichever is less. Inspectors should monitor the edges of the dam where it meets the sides of the drainage ditch, swale, or channel for evidence of erosion due to bypass or high flows. Eroded areas must be repaired. If erosion continues to be a problem, modifications to the check dam or additional controls are needed. Care must be used when taking out rock check dams in order to remove as much rock as possible. Loose rock can create an extreme hazard during mowing operations once the area has been stabilized.

L. Stabilized construction exits should be inspected regularly (at least as often as required by the General Permit). The stabilized construction exit must be maintained in a condition that prevents tracking or flow of sediment onto paved surfaces. Periodic re-grading and top dressing with additional stone must be done to keep the efficiency of the exit from diminishing. The rock must be re-graded when ruts appear. Additional rock must be added when soil is showing through the rock surface. Additional controls are needed if inspections reveal a properly installed and maintained exit, but tracking of soil outside the construction area is still evident. Additional controls may be daily sweeping of all soil spilled, dropped, or tracked onto public rights-of-way or the installation of a wheel cleaning system.

3.04 FIELD QUALITY CONTROL

A. In the event of conflict between the specified requirements and stormwater pollution control laws, rules, or regulations or other local, state, or federal agencies, the more restrictive laws, rules, or regulations will apply.

3.05 SCHEDULES

A. Prior to start of construction, submit schedules to the OPT for accomplishment of temporary and permanent erosion control work in connection with required clearing and grubbing, grading, construction, and paving. Include a proposed method of erosion and dust control on haul roads and borrow pits and a plan for disposal of waste materials in the submittal.

END OF SECTION

01 70 00 EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

A. Comply with requirements of the General Conditions and specified administrative procedures in closing out the Contract.

1.02 DOCUMENTATION

A. Submit affidavits and releases on forms provided by the Construction Manager through the PMIS.

1.03 SUBSTANTIAL COMPLETION

A. The following requirements must be met for the Project or a designated portion of the Work to be Substantially Complete per the General Conditions:

1. Work must be fully functional and able to operate in accordance with the Contract Documents without special or extraordinary efforts on the part of the Owner.
2. The following items of Work must be fully functional and able to operate in accordance with the Contract Documents:
    a. Proposed Lift Station must have completed 30-day operational test.
3. Performance Acceptance Testing (PAT) must be complete and indicated compliance with the requirements of the Contract Documents.
4. Operation and maintenance manuals must be approved and operator training conducted to allow the Owner to assume responsibility for operations.

B. Conduct inspections with superintendent, Subcontractors, and Suppliers for the Work or a designated portion of the Work prior to calling for a Substantial Completion inspection by the OPT. Create a list of deficiencies in the Work that must be completed for the Project to qualify for Substantial Completion. Review the list with the Construction Manager or the designated member of the OPT. The Construction Manager or the designated member of the OPT may assist the Contractor with this effort; however, it is the Contractor's responsibility to create and manage this list of deficiencies until corrections are made.

C. Correct the identified deficiencies prior to calling for a Substantial Completion inspection.

D. Notify the Construction Manager that the Work or a designated portion of the Work is Substantially Complete per the General Conditions. Include a list of the items remaining to be completed or corrected before the Project will be considered for Final Completion.

E. OPT will visit the Site to observe the Work within a reasonable time after notification is received to determine the status of the Project.

F. Construction Manager will notify the Contractor that the Work is either Substantially Complete or that additional Work must be performed before the Project will be considered Substantially Complete.

1. Construction Manager will notify the Contractor of items that must be completed before the Project will be considered Substantially Complete.
2. Correct the noted deficiencies in the Work.
3. Notify the Construction Manager when the items of Work in the Construction Manager's notice have been completed.
4. OPT will revisit the Site and repeat the process.
5. Construction Manager will issue a Certificate of Substantial Completion to the Contractor when the OPT considers the Project to be Substantially Complete. The certificate will include a tentative list of items to be corrected before Final Payment will be recommended.
6. Review the list and notify the Construction Manager of any objections to items on the list within 10 days after receiving the Certificate of Substantial Completion.

1.04 TRANSFER OF UTILITIES

A. Transfer utilities to the Owner when the Certificate of Substantial Completion has been issued.

B. Submit final meter readings for utilities and similar data as of the date the Owner occupied the Work.

1.05 CLOSEOUT REQUIREMENTS

A. Provide the following before Final Completion:

1. Record Documents per Section 01 31 13 "Project Administration";
2. Keys and keying schedule;
3. Warranties, bonds, and service agreements;
4. Equipment Installation Reports;
5. Shop Drawings, Product Data, operation and maintenance manuals, and other documentation required by the Contract Documents;
6. Specified spare parts and special tools;
7. Certificates of occupancy, operating certificates, or other similar releases required to allow the Owner unrestricted use of the Work and access to services and utilities;
8. Evidence of continuing insurance and bond coverage as required by the Contract Documents; and
9. Final videos and photographs per Section 01 33 06 "Graphic Documentation."

1.06 WARRANTIES, BONDS, AND SERVICES AGREEMENTS

A. Provide warranties, bonds, and service agreements required by Section 01 33 00 "Document Management" or by the individual Sections of the Specifications.

B. The date for the start of warranties, bonds, and service agreements is established per the General Conditions.

C. Compile warranties, bonds, and service agreements and review these documents for compliance with the Contract Documents.

1. Each document is to be signed by the respective Supplier or Subcontractor.
2. Each document is to include:
    a. The product or Work item description;
    b. The firm name, with the name of the principal, address, and telephone number;
    c. Scope of warranty, bond, or services agreement;
    d. Date, duration, and expiration date for each warranty bond and service agreement;
    e. Procedures to be followed in the event of a failure; and
    f. Specific instances that might invalidate the warranty or bond.

D. Submit digital copies of the documents to the Construction Manager for review.

E. Submit warranties, bonds, and services agreements within 10 days after equipment or components placed in service.

1.07 FINAL COMPLETION

A. Conduct inspections with Superintendent, Subcontractors, and Suppliers prior to calling for a Final Completion inspection by the OPT. Create a list of deficiencies in the Work that must be completed for the Project to qualify for the Final Completion inspection. Review the list with the Construction Manager or the designated member of the OPT. The Construction Manager or the designated member of the OPT may assist the Contractor with this effort; however, it is the Contractor's responsibility to create and manage this list of deficiencies until corrections are made.

B. Identify, list, and correct deficiencies prior to calling for a Final Completion inspection. The Project at the call for Final Completion represents the Contractor's interpretation of a project completed in conformance with the Contract Documents and reflects the Contractor's representation of a quality project meeting the Owner's expectations.

C. Notify the Construction Manager when:

1. Work has been completed and complies with the Contract Documents;
2. Equipment and systems have been tested per the Contract Documents and are fully operational;
3. Final operation and maintenance manuals have been provided to the Owner and all operator training has been completed;
4. Specified spare parts and special tools have been provided;
5. Work is complete and ready for final inspection;
6. Final documentation for all outstanding Modifications and Claims (other than those listed on the Certificate of Final Completion) have been processed and are ready for incorporation into the final Application for Payment; and
7. Closeout requirements in Paragraph **[1.05]** have been completed.

D. OPT will visit the Site to determine if the Project is complete and ready for final payment within a reasonable time after the notice is received.

E. Construction Manager will notify the Contractor that the Project is complete or will notify the Contractor that Work is Defective.

F. Take immediate steps to correct Defective Work. Notify the Construction Manager when Defective Work has corrected. OPT will visit the Site to determine if the Project is complete and the Work is acceptable. Construction Manager will issue a Certificate of Final Completion to the Contractor when the Project is complete or will notify the Contractor that Work is Defective.

G. Submit the request for final payment with closeout documentation described in Paragraph **[1.06]** if notified that the Project is complete and the Work is acceptable.

1.08 REINSPECTION FEES

A. Owner may impose a set-off against the Application for Payment in accordance with the General Conditions to compensate the OPT for additional visits to the Project if additional Work is required.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

01 74 23 FINAL CLEANING

PART 1 - GENERAL

1.01 SUMMARY

A. Perform a thorough cleaning of the Site, buildings, or other structures prior to Owner occupancy of the buildings, and prior to Final Completion. Leave the Project clean and ready for occupancy.

1.02 DOCUMENTATION

A. Provide data for maintenance per Section 01 33 04 "Operation and Maintenance Data."

1.03 QUALITY CONTROL

A. Use experienced workmen or professional cleaners for final cleaning.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Furnish the labor and products needed for cleaning and finishing as recommended by the manufacturer of the surface material being cleaned.

B. Use cleaning products only on the surfaces recommended by the Supplier.

C. Use only those cleaning products which will not create hazards to health or property and which will not damage surfaces.

PART 3 - EXECUTION

3.01 FINAL CLEANING

A. Thoroughly clean the entire Site and make ready for occupancy.

1. Remove construction debris, boxes, and trash from the Site.
2. Remove construction storage sheds and field offices.
3. Restore grade to match surrounding condition and remove excess dirt.
4. Sweep all drives and parking lots clean of dirt and debris. Use water trucks or hose down paved site to like new appearance.

B. Clean floors and inspect for damage.

1. Remove oil, grease, paint drippings, and other contaminants from floors, then mop repeatedly until thoroughly clean. Replace damaged flooring.
2. Clean resilient flooring with an approved cleaner and provide one coat of liquid floor polish as recommended by the flooring manufacturer. Polish to a buffed appearance with powered floor buffer.
3. Vacuum all carpets with powered floor sweeper to remove dirt and dust. Remove glue or other substances from nap of carpet.

C. Clean and polish inside and outside glass surfaces. Wash with window cleaner and water, apply a coat of high quality glass polish, and wipe clean. Do not scratch or otherwise mar glass surfaces.

D. Clean wall surfaces to remove dirt or scuff marks. Remove excess adhesive along top edges of wall base. Remove adhesive from surfaces of vinyl wall coverings.

E. Align ceiling tile to fit properly in grid and replace cracked or damaged tile. Remove smear marks and other dirt from tile and clean surface of grid system.

F. Spot paint nicks and other damage. Repaint the wall from inside corner to inside corner if spot-painting does not blend into the existing color and texture of the surrounding surfaces. Touch up damaged surfaces on factory finished equipment using special paint furnished by the manufacturer.

G. Clean plumbing fixtures, valves, and trim. Clean toilet seats and covers. Remove labels and adhesive from fixtures. Remove floor drains and clean baskets or buckets. Polish strainers and exposed chrome or brass.

H. Remove dirt, oil, grease, dust, and other contaminants from floors, equipment, and apparatus in mechanical and electrical rooms.

I. Clean and polish ceramic tile floors and wall surfaces to remove mildew or other stains. Tuck point defective joints.

J. Inspect exterior painted surfaces. Spot paint any damaged surfaces.

K. Clean permanent filters and replace disposable filters on heating, ventilating, and air conditioning systems. Clean ducts, blowers, and coils if units were operated without filters during construction.

L. Clean roof areas of debris; flush roof drainage systems with water until clear.

M. Broom clean exterior paved surfaces and rake clean other surfaces of the grounds.

N. Clean and polish all electrical equipment and exposed conduits. Remove paint overspray. Provide a blemish free appearance on all exposed equipment and conduits.

END OF SECTION

01 75 00 STARTING AND ADJUSTING

PART 1 - GENERAL

1.01 SUMMARY

A. Provide step-by-step procedures for starting provided systems, including equipment, pumps, and processes.

B. Provide pre-startup inspections by equipment manufacturers.

C. Place each system in service and operate the system to prove performance and to provide for initial correction of defects in workmanship, calibration, and operation.

D. Provide for initial maintenance and operation.

E. Include costs for starting and adjusting provided by manufacturer's representative in the Cost of Work for the equipment package.

F. Owner will provide chemicals, if any, required for continued operations.

1.02 STANDARDS

A. Comply with the specified standards associated with the testing or startup of equipment.

1.03 DOCUMENTATION

A. Provide the following documents in accordance with Section 01 33 00 "Document Management":

1. A Plan of Action for testing, checking, and starting equipment as Product Data per Section 01 31 13 "Project Administration."

2. Equipment Installation Reports on the form provided by the Construction Manager certifying that the equipment and related appurtenances have been thoroughly examined and approved for startup and operation.

3. Operation and maintenance manuals per Section 01 33 04 "Operation and Maintenance Data." Preliminary operation and maintenance data must be approved before installation, testing, and initial operation of equipment or providing training required by Section 01 79 00 "Training of Operation and Maintenance Personnel."

1.04 SPECIAL JOB CONDITIONS

A. Do not start or test any equipment until the complete unit has been installed and thoroughly checked.

B. Provide the services of a qualified representative of the manufacturer to attend the tests and startup procedures as required by this Section.

C. Do not start or test any equipment until the preliminary operation and maintenance manual per Section 01 33 04 "Operation and Maintenance Data" has been approved.

PART 2 - PRODUCTS

2.01 TESTING INSTRUMENTATION

A. Provide new instrumentation and testing devices needed to conduct tests for maintenance and operation as recommended in the operation and maintenance manuals. This equipment is to become the property of the Owner and transferred in good working order as a spare part at Substantial Completion. This equipment is to be calibrated and ready for use during the startup procedure and for training provided in accordance with Section 01 79 00 "Training of Operation and Maintenance Personnel."

PART 3 - EXECUTION

3.01 SERVICES OF MANUFACTURER'S REPRESENTATIVES

A. Provide the services of experienced and technically competent representatives of the manufacturer for inspections, tests, supervision of installation, training, and assistance with placing equipment in operation.

B. Perform installation, adjustment, and testing of the equipment under the direct supervision of the manufacturer's representative where specified. Certify that the equipment and related appurtenances have been thoroughly examined and approved for startup and operation in the Equipment Installation Reports.

C. Provide on-site services as necessary for proper and trouble free operation of the equipment.

3.02 INSPECTION AND STARTUP

A. Inspect equipment prior to placing any equipment or system into operation. Make adjustments as necessary for proper operation. Do not start or test any apparatus until the complete unit has been installed and thoroughly checked.

1. Check for adequate and proper lubrication.
2. Determine that parts or components are free from undue stress from structural members, piping, or anchorage.
3. Adjust equipment for proper balance and operations.
4. Determine that vibrations are within acceptable limits.
5. Determine that equipment operates properly under full load conditions.
6. Determine that the equipment is in true alignment.
7. Ensure that the proper procedure is employed in startup of systems.

3.03 STARTING REQUIREMENTS

A. Refer to the individual Specification Sections for specific startup procedures or other requirements.

3.04 INITIAL OPERATION

A. Start, test, and place equipment and systems into operation for 30 days to allow the OPT to observe the operation and overall performance of the equipment and to determine that controls function as intended.

B. Operate equipment which is used on a limited or part-time basis in the presence of the OPT for a period long enough to demonstrate that controls function as specified.

C. Perform acceptance test as specified in individual Specification Sections. Demonstrate that equipment and systems meet the specified performance criteria.

D. Equipment and systems may be considered as substantially complete at the end of this initial operation period if the equipment is placed in continuous beneficial use by the Owner, unless specifically stated otherwise in the individual equipment Specifications.

3.05 INITIAL MAINTENANCE

A. Maintain equipment in accordance with the operation and maintenance manuals until Project is substantially complete and provisions have been made by the Owner for accepting responsibility for equipment operation in accordance with the General Conditions.

B. Service equipment in accordance with the operation and maintenance manuals immediately before releasing the equipment to the Owner.

END OF SECTION

01 78 36 WARRANTIES AND SERVICE AGREEMENTS

PART 1 - GENERAL

1.01 WARRANTY REQUIREMENTS

A. Provide products for this Project that comply with the requirements of this Section.

1.02 WARRANTIES AND GUARANTEES

A. Guarantee and warrant products furnished by the Contractor against:

1. Faulty or inadequate design;
2. Improper assembly or erection;
3. Defective workmanship or materials; and
4. Leakage, breakage, or other failure.

B. Guarantee and warrant the products installed under this Contract, including Goods furnished by the Owner, against leakage, breakage, or other failure due to improper assembly or erection and against improper installation of the equipment. The correction period is as defined in the General Conditions. Individual Specification Sections may have more stringent warranty requirements than those stated in the General Conditions. The most stringent warranty will be provided in the event of conflicts.

C. Provide all required warranties, guarantees, and related documents with the Shop Drawing. The effective date of warranties and guarantees will be the date of Substantial Completion.

D. Include an additional copy of equipment warranties in operation and maintenance manuals.

E. Provide a copy of all warranties in a separate document in accordance with Section 01 70 00 "Execution and Closeout Requirements."

1.03 EXTENDED WARRANTIES

A. Extended Warranties are defined as any guarantee of performance for the product or system beyond the one-year correction period described in the General Conditions.

B. Issue the warranty certificate in the name of the Owner.

C. Provide a warranty bond for Extended Warranties as required by the individual Specification Sections.

1.04 SERVICE AGREEMENTS

A. Provide Extended Service Agreements (ESA) and related documents with the Shop Drawing. An Extended Service Agreement is a contract between the Owner and an approved Subcontractor or Supplier to provide service and or maintenance beyond that required to fulfill requirements for warranty repairs or to perform routine maintenance for a definite period beyond the one-year correction period specified in the General Conditions.

B. Requirements for the Extended Service Agreement are described in the Specification Sections for each piece of equipment or system requiring an Extended Service Agreement.

C. Enter into a contract with the service provider and assign the service contract to the Owner on the date of Substantial Completion. Once assigned to the Owner, Contract requirements for the Extended Service Agreement will be complete and will not extend the Contract between the Owner and Contractor.

D. Owner may require that a performance bond be provided for the Extended Service Agreement. Provide a separate bond meeting the same requirements as those for the Contractor's performance bond if required. The bond will be in the amount of the Extended Service Agreement.

E. Include an additional copy of Extended Service Agreements in operation and maintenance manuals.

F. Provide a copy of Extended Service Agreements in a separate document in accordance with Section 01 70 00 "Execution and Closeout Requirements."

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

DIVISION 02

SITEWORK

02 41 00 DEMOLITION

1.00 GENERAL

1.01 WORK INCLUDED

A. Furnish labor, materials, equipment and incidentals necessary for every type of required demolition.

B. Furnish equipment of every type required to demolish and transport construction debris away from the Site.

C. Coordinate all demolition work with Section 01 35 00 "Special Procedures" if required.

1.02 STANDARDS

A. Work shall be performed in accordance with the codes and ordinances of the agency having authority over the Place of Record.

B. Resilient Floor Covering Institute (RFCI) publication "Recommended Work Practices for the Removal of Resilient Floor Coverings"

C. Occupational Safety and Health Association (OSHA), 29 CFR Parts 1010 and 1926, "Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite", 40 CPR Part 61 - "National Emission Standard for Hazardous Air Pollutants"

1.03 DELIVERY AND STORAGE

A. Stockpile construction debris at the Site only as long as necessary to haul to a disposal site. Stack materials neatly and handle in an orderly manner until removed from the Site.

1.04 JOB CONDITIONS

A. Contractor shall visit the Site and determine the extent of demolition required and the Site conditions that might affect its proposal. Include costs of covering all aspects of the demolition as part of the proposal.

B. The Drawings shall be carefully reviewed to determine the extent of necessary demolition and to identify elements of the existing construction which are to remain in place. Report any discrepancies to Owner and Engineer before disturbing existing conditions. Property lines and limits of demolition shall be accurately located prior to beginning site demolition. Start of demolition activities shall represent confirmation by Contractor that existing conditions are as presented in the Contract Documents. Demolition outside the limits indicated on the Drawings, or outside the property lines shall not be performed.

1. For electrical demolition, verify field measurements and circuiting arrangements are as shown on the Drawings. Verify that existing wiring and equipment designated to be abandoned or demolished serve only abandoned facilities.

2. For process piping demolition confirm with the Owner that current operations will not be impacted and provide temporary equipment with Owner to keep systems functional during demolition process if required.

C. Material removed during demolition, and any equipment not otherwise designated to remain the property of the Owner, shall become the property of the Contractor, and shall be promptly removed from the Site.

D. Equipment and material designated as remaining the property of the Owner shall be removed from the structure and transported to a designated location on the Site and stored for the Owner's use. Store on wood runners raised above the surrounding grade and cover with weather resistant covering that is tied securely in place.

E. Take necessary precautions in removing Owner designated property to prevent damage during the demolition process. Equipment shall be removed in one piece. Loose components may be removed separately. Controls and electrical equipment may be removed from the equipment and handled separately. Large units, such as motor driven pumps, may be dismantled and motors handled separately. Do not use a cutting torch to separate the Owner's equipment or material. Salvaged piping shall be taken apart at flanges or fittings and removed in sections.

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1.05 HAZARDOUS MATERIALS

A. Hazardous materials will be removed by Owner before start of the Work.

1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Engineer and Owner. Hazardous materials will be removed by Owner under a separate contract.

2.00 PRODUCTS

2.01 MATERIALS

A. New materials and equipment for patching and extending work shall meet the requirements of the individual Sections in these Contract Documents. For materials not addressed in these documents, materials used shall meet or exceed the dimensions and quality of the existing work.

3.00 EXECUTION

3.01 SITE CLEARING

A. Perform site clearing to the limits indicated on the Drawings. Scrape the Site, removing brush, trees, weeds and trash. Haul debris away from the Site to an approved site as it accumulates.

B. Grub out tree and brush roots within the limits of buildings, parking lots, driveways and other structures. Remove rock out-croppings and boulders from any area within the limits of grading or structures. Remove roots and backfill any excavation resulting from tree removal with suitable soil for final grading plan.

C. Trees not located within the construction limits, or otherwise indicated for removal, shall remain in place. Visit the Site with the Engineer or Owner and identify those trees that are to remain. Mark all other trees with yellow paint to indicate removal. Protect remaining

trees during construction. Wrap the tree trunks with 2 x 4 timbers if construction equipment must operate in close proximity to them.

D. Only designated trees shall be removed. In the event that trees other than those designated are erroneously removed or damaged to the point of distress, install replacement trees of equal size and number to compensate for those destroyed, at no additional cost to the Owner.

E. Provide dust control as needed or requested by the Owner.

3.02 BUILDING DEMOLITION

3.03 REMOVAL OF EXISTING SITE STRUCTURES

A. Remove concrete or masonry structures located below the ground line where indicated or where such structures will interfere with new construction. Where structures are a part of an active underground utility system, repair piping to prevent blockage in the flow.

B. Remove abandoned manholes, basins, or similar structures. With the Engineer's approval, and if structures will not interfere with any other proposed construction, they may be abandoned in place. Remove the top part of the structure so that it is a minimum of 2 feet below the new finish grade. Remove part of the floor system of basins, manholes and other such structures to prevent entrapment of water. Fill remaining cavities with approved backfill material.

C. Provide dust control as needed or as requested by the Owner.

3.04 REMOVAL OF STRUCTURES

A. Removal of Timber Structures:

1. Protect existing timber structures designated by Owner as salvageable. Remove using protective measures which prevent damage. Disconnect wood members at joints by removing fasteners. Do not cut into smaller sections, unless approved by the Engineer.

2. Extract timber piles from the ground, except when existing piles are located in an area not interfering with any other construction. When approved by the Engineer, piles may be cut 3 feet below the finished ground line.

3.05 UNDERGROUND PIPING

A. Contractor shall be responsible for obtaining location of underground utilities at the Site. Arrange for all applicable utility companies to accurately locate underground piping and set color-coded flags along the pipe route. Investigate utility company's records to ascertain depths and sizes of piping and other ancillary features.

B. In the event that exact location of piping cannot be obtained, dig test holes as necessary to establish location of piping. Contractor shall not use mechanical digging machines within 6 feet of any active buried piping. For a distance of 4 feet on either side of buried piping, all digging shall be by hand excavation. If the piping is not active, or is to be abandoned or removed, any form of excavation may be used. Any existing active piping that is damaged during demolition will be repaired to new condition by the Contractor at no additional cost to the Owner.

3.06 BACKFILLING

A. Backfill cavities resulting from demolition. Fill cavities occurring within the limits of buildings, structures, or pavements in accordance with the requirements of other Sections of the Specifications. Backfill and compact cavities outside the construction limits to the same density as the surrounding earth. No testing is required for backfill outside the limits of new construction.

3.07 CLEANING AND REPAIR

A. Clean and repair existing materials and equipment which remain or are to be reused.

B. Lights: Use mild detergent to clean all exterior and interior surfaces. Rinse with clean water and wipe dry. Replace lamps and broken electrical parts impacted by the demolition processes.

END OF SECTION

02 96 00 TEMPORARY BYPASS PUMPING

1.00 GENERAL

1.01 WORK INCLUDED

A. Furnish labor, materials, equipment and incidentals necessary to implement a temporary bypass pumping system for the purpose of diverting existing sewer flows around the work area regardless of number of locations, set-ups, length and duration, and shall be for the duration of the Project.

1.02 QUALITY ASSURANCE

A. Contractor shall demonstrate that the temporary bypass pumping system is in good working order and is sufficiently sized to successfully handle all sanitary sewer flows by performing a test run for a period of 24 hours prior to beginning Work.

B. Contractor shall be required to have all materials, equipment and labor necessary to complete the repair and/or replacement on the Site prior to isolating the sewer manhole or line segment and beginning flow diversion or pumping operations.

C. Contractor shall provide both a strobe light type, high level alarm, as well as alarm notification to their cell phones, as well as other appointed personnel to be identified by the Owner and ensure adequate alarm notification is attained prior to actual startup of the test period.

D. During active operations, Contractor shall have personnel on the Site 24/7. If multiple locations are active within a project site, Contractor must maintain a ratio of 2 to 1, active bypass pumping areas to personnel. If the two sites are more than 500 feet away from each other or the high-level strobe alarm cannot be seen from each location, then the Contractor will need dedicated personnel at every site.

E. Contractor shall coordinate all activities through Engineer and Owner.

F. It is anticipated that bypass pumping shall be required at the following locations:

1. **Proposed MH 01 – Intersection of I-20 Frontage Road and Midland Drive.**
2. **Proposed MH 10 – Intersection of Business I-20/Wall Street Frontage Road and Midland Drive.**

1.03 SUBMITTALS

A. Make submittals required by this Section under the provisions of Section 01 33 00 "Document Management."

B. Manufacturer's product data, instructions, recommendations, Shop Drawings, and necessary certifications in order for the proposed Temporary Bypass Pumping Plan to be reviewed. The plan shall include, but not be limited to, the following:

1. Staging areas for pumps.
2. Sewer plugging method and types of plugs.
3. Number, size, material, location and method of installation of suction piping.

4. Number, size, material, location and method of installation of discharge piping.
5. Bypass pump sizes, capacity, number of each size to be on site, including spare pump, and power requirements.
6. Calculations of static lift, friction losses, and flow velocity (pump curves showing pump operating range shall be submitted based on bypass pumping schedule at the end of this Section).
7. Standby power generator size and location.
8. Downstream discharge plan.
9. Calculations for selection of bypass pumping pump size.
10. Method of noise control for each pump and/or generator if required.
11. Method of protecting discharge manholes or structures from erosion and damage.
12. Schedule for installation and maintenance of bypass pumping lines.

2.00 PRODUCTS

2.01 MATERIALS

A. Contractor shall provide all necessary pumping equipment, piping and all other necessary appurtenances in order to maintain adequate and reliable sanitary sewer flow in the sewer system (excluding manholes) at all times during construction. All materials, equipment, etc., must be in good condition and should not have visible damage such as cracks, holes, foreign material, blisters, etc.

B. High-Density Polyethylene (HDPE) is the preferred pipe material for all bypass piping. HDPE must be used when bypass discharge piping will be going through streams, storm water culverts, and/or environmentally sensitive areas.

1. HDPE pipe must be assembled and joined using couplings, flanges or fusion welding in order to avoid joint leakage.
2. HDPE fusion welding must be performed by personnel certified as fusion technician(s) by the manufacturer of HDPE pipe and/or fusing equipment.
3. The bypass pumping plan shall indicate the proposed DR of the pipe to be used.

C. Pipe material other than HDPE shall be submitted to the Engineer for approval. Neither "irrigation type" pipe nor glued PVC pipe will be permitted.

D. Plugs must be selected and installed according to the size of the line to be plugged. An additional plug must be on-site and ready to be installed in the event a plug fails or becomes dislodged. Plug(s) will be reviewed by the inspector and/or Engineer for defects that might lead to failure prior to being installed. It is also imperative that the Contractor notify the inspector at the completion of the Work in order to verify that all plugs have been removed from the system.

2.02 EQUIPMENT

A. Pumps must be fully automatic self-priming units that do not require the use of foot-valves or vacuum pumps to prime the system. Pumps may be electric or diesel powered. The primary pump must be a grinder or chopper pump, in order to reduce the potential for debris to complicate the safe operation of the pumps.

B. Contractor shall have one backup pump, equal in capacity to the largest pump in the system, connected to the temporary bypass pumping system and ready for operation in case any of the primary pumps fail. The backup pump shall not be used in Contractor's calculations for determining the pumping capacity requirements for the stated flow conditions.

C. Sound-attenuated pump enclosures shall be required on all projects where the bypass pumps are located within 100 feet of any residence, business, park, or other presence of people.

3.00 EXECUTION

3.01 PREPARATION

A. Obtain the Engineer's approval of location of bypass pipelines, staging areas and pump locations prior to installation.

B. Obtain approvals for placement within public or private property.

3.02 CONSTRUCTION, INSTALLATION, AND REMOVAL

A. During construction, it will be the Contractor's responsibility to maintain a safe and secure environment at all times. All provisions and/or requirements of the temporary bypass pumping plan must be followed throughout the course of any bypass flow operations. Contractor must notify the Owner 72 hours prior to commencing the bypass pumping operations.

B. Contractor shall provide continuous supply on-site fuel storage sufficient for 24-hour operation of the bypass pumping installation.

C. Contractor shall protect all components of the bypass operations from vandalism and vehicular damage by making the site secure.

D. Contractor shall minimize sewer odors by using lids, shroud covers, or any method approved by the Inspector or Engineer.

E. Contractor shall be solely responsible for any and all damages to private and/or public property caused by or during the installation, operation, and/or removal of the bypass pumping system.

F. All piping, joints and accessories shall be designed to withstand at least twice the maximum system pressure, or a minimum of 50 psi, whichever is greater.

G. During flow diversion and/or pumping, no sewage shall be leaked, dumped, or spilled in or onto, any area outside of the existing sanitary sewer system.

H. When flow diversion and/or pumping operations are complete, all pumping shall be drained into the sanitary sewer prior to disassembly and all flow management components shall be removed.

3.03 BYPASS PUMPING SCHEDULE

A. Flows shown below are based on modeled flows.

B. It is the Contractors responsibility to verify the flows with the city prior to development of bypass pumping plan.

Sanitary Sewer Manhole / Location	Average Dry Weather (GPM)	Peak Wet Weather (GPM)
Proposed MH 01 (STA 0+67.92)	380	4,525
Proposed MH 11 (STA 9+58.17)	300	1300

END OF SECTION

APPENDIX A

A1.00 MEASUREMENT AND PAYMENT

A1.01 MEASUREMENT

A. Measurement for the Work specified herein will be by lump sum, as the Work progresses, and as required by the Contract Documents, in accordance with Section 01 29 01 "Measurement and Basis for Payment."

B. Temporary bypass pumping not specifically required on the Drawings, but directed by the Engineer and/or the inspector, will not be measured separately for payment and will be considered incidental. Repair or replacement of manhole sections disturbed as a part of the temporary bypass pumping operations is considered incidental to the line item and will not be measured separately for payment.

A1.02 PAYMENT

A. Partial payment of the lump sum bid item for temporary bypass pumping shall be in accordance with the following:

1. When initial setup and operation of the temporary bypass pumping system begins, 40 percent of the line item will be paid.
2. The remaining portion of the line item will be paid when the temporary bypass pumping system operations for the entire job are completed.

END OF APPENDIX A

DIVISION 03

CONCRETE

03 30 00.01 CAST-IN-PLACE CONCRETE (LIMITED APPLICATIONS)

1.00 GENERAL

1.01 SUMMARY

A. This Section specifies normal weight, cast-in-place concrete, including reinforcement, concrete materials, mixture design, placement procedures, and finishes.

1.02 SUBMITTALS

A. Product Data and Material Certifications: For each product or material indicated in Part 2.00 "Products," excluding formwork.

B. Design Mixture: For each concrete mixture submit:

1. Mix design proportions and characteristics.
2. Certifications indicating conformance of aggregate and cementitious materials.
3. Admixture data sheets.
4. Field test data or trial batch mixture data to validate specified compressive strength in accordance with ACI 301, latest edition.

C. Reinforcing bar layout drawing with bar lists clearly marked and referenced to the Drawings.

1.03 QUALITY ASSURANCE

A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C94/C94M requirements for production facilities and equipment.

B. Source Limitations: Obtain each type of cement of the same brand from the same manufacturer's plant, obtain aggregate from one source, and obtain admixtures through one source from a single manufacturer.

C. Comply with ACI 301, "Specification for Structural Concrete," including the following sections, unless modified by requirements in the Contract Documents:

1. "General Requirements."
2. "Formwork and Formwork Accessories."
3. "Reinforcement and Reinforcement Supports."
4. "Concrete Mixtures."
5. "Handling, Placing, and Constructing."

2.00 PRODUCTS

2.01 FORMWORK

A. Furnish formwork and formwork accessories according to ACI 301.

1. Form ties shall leave no material within 1-1/2 inches of concrete surface.

2. For fluid bearing and below grade walls, provide single tie rods with midpoint washer to prevent water seepage. Systems that result in a through wall hole are not permitted.

2.02 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A615/A615M, Grade 60, deformed.

B. Plain-Steel Welded Wire Reinforcement: ASTM A1064, fabricated from as-drawn steel wire into flat sheets.

C. Supports:

1. Unexposed Surface: CRSI Class 3 – No Protection.

2. Exposed Surface: CRSI Class 1 – Maximum Protection – uniform high density polyethylene (plastic) or fiberglass reinforced plastic (FRP). Plastic protected wire bar supports are not allowed.

2.03 CONCRETE MATERIALS

A. Cementitious Material:

1. Portland Cement: ASTM C150, Type I/II or III.

2. Fly Ash: ASTM C618, Class F. No more than 25 percent of the cement may be replaced with fly ash. If Class F fly ash is not available, then provide a straight cement mix.

B. Coarse Aggregate:

1. In conformance with ASTM C33, uniformly graded, with a maximum size as indicated in "Concrete Mixtures."

2. Class: Moderate weathering region, but not less than 3M.

C. Fine Aggregate: Washed and screened natural sands or sands manufactured by crushing stones; conforming to ASTM C33.

D. Water: Potable and complying with ASTM C1602 and ASTM C1602 Table 2.

2.04 ADMIXTURES

A. Air-Entraining Admixture: ASTM C260.

B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C494/C494M, Type A.

2. Retarding Admixture: ASTM C494/C494M, Type B.

3. Water-Reducing and Retarding Admixture: ASTM C494/C494M, Type D.

4. High-Range, Water-Reducing Admixture: ASTM C494/C494M, Type F.

5. High-Range, Water-Reducing and Retarding Admixture: ASTM C494/C494M, Type G.

6. Plasticizing and Retarding Admixture: ASTM C1017/C1017M, Type II.

2.05 RELATED MATERIALS

A. Joint-Filler Strips: ASTM D1751, asphalt-saturated cellulosic fiber, or ASTM D1752, cork or self-expanding cork. Closed cell sponge rubber joint filler in accordance with ASTM D1752, Type I, and resists ultraviolet degradation.

B. Repair Materials: Pre-packaged, low-shrink, non-slump, non-metallic, quick setting patching mortar, as approved by the manufacturer for each application.

1. Sikatop 123 by Sika Corporation.

2. Five Start Structural Concrete by Five Star Products, Inc.

3. Approved equal.

C. Non-Shrink Grout: Pre-packaged, non-metallic, precision, non-shrink grout conforming to ASTM C1107/C1107M.

D. Normal Shrinkage Grout: One part Portland cement to three parts of ASTM C33 fine aggregate; proportioning on a volumetric basis. Install for grouted areas not required to be non-shrink grout.

E. Waterstops: Place in joints where indicated and any intersecting construction joints to provide a continuous barrier to prevent passage of fluids through joints.

1. Flexible PVC Waterstops: 6 inches, ribbed, with a minimum thickness of 3/8 inch, USACE CRD-C-572 compliant.

2. Self-Expanding Strip Waterstops, Low Expansion (Hydrophilic):

a. KBA-1510FP; Adeka Ultra Seal; Mitsubishi International Corporation.

1). P-201 swelling sealant adhesive.

F. Bonding Agent: ASTM C1059, Type II, non-redispersible, acrylic emulsion.

G. Zinc Richer Primer: Coat aluminum surfaces embedded or in contact with concrete. Primer shall be Tneme-Zinc or approved equal.

H. Vapor Barriers: ASTM E1745, Class A. Include manufacturer's recommended pressure-sensitive tape.

1. Stego Wrap Vapor Barrier (15-mil), Stego Tape, and Stego Crete Claw; Stego Industries, LLC.

2. Approved equal.

2.06 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming; manufactured for application to fresh concrete.

B. Absorptive Cover: AASHTO M182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.

C. Waterproof Sheet: In accordance with ASTM C171.

D. Water: Potable and complying with ASTM C1602 and ASTM C1602 Table 2.

E. Membrane-Curing Compound: ASTM C309, Type 1D, Class B.

2.07 CONCRETE MIXTURES

A. Comply with ACI 301 requirements for concrete mixtures.

B. Normal-Weight Concrete: Prepare design mixes, proportioned according to ACI 301, as follows:

Use	Min. 28-Day Compressive Strength (psi)	Max. Size of Coarse Aggregate	Max. Water/ Cement Ratio	Max Slump (in.)
General	4000	1-1/2"	0.45	5* (+/-1")
Pipe blocking, lean concrete	1500	1-1/2"	0.70	---
*Slump may be increased to 8 inches with the addition of a HRWR.				

C. Air Content:

1. Air entrain exposed concrete within range permitted by ACI 301 for Exposure Class F1.
2. Do not allow entrapped air to exceed 3 percent in floor slabs to receive troweled finish.

2.08 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C94/C94M, and furnish batch ticket information.

3.00 EXECUTION

3.01 FORMWORK

A. Design, construct, erect, brace, and maintain formwork according to ACI 301.

3.02 STEEL REINFORCEMENT

A. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

1. Fabricate reinforcement steel to provide lapped connections, bends, and transitions in reinforcement as required for continuity of the typical reinforcement specified on the Drawings.
2. Unless otherwise detailed, intersecting wall and/or beam reinforcement shall extend to the far face and terminate in a standard hook. Reinforcement at the outside face of corners shall be continuous or provide tension lap splices at each side of the corner.

B. Do not weld reinforcement.

3.03 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete. Purposefully roughen joints to a 1/4-inch amplitude and clean.

B. Construction Joints: Locate joints as indicated or as approved by Owner's Representative.

C. Isolation Joints: Install joint-filler strips at junctions with slabs-on-grade and vertical surfaces, and as indicated.

1. Extend joint fillers full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.

3.04 WATERSTOPS

A. Install in construction joints as indicated to form a continuous obstruction to prevent fluids passing through the joint.

B. Secure waterstops to concrete or reinforcing as recommended by the manufacturer.

C. Install and protect waterstops as recommended by the manufacturer and as indicated here.

D. PVC Waterstops:

1. All fittings and changes in direction shall be factory fabricated.

2. Only straight, butt splices shall be made in the field. Field splices shall be in accordance with manufacturer's instructions.

3. Secure waterstop in place using hog rings or grommets at the outermost rib. Except as recommended by the manufacturer, do not pierce, notch, or cut waterstop.

E. Self-Expanding Strip Waterstops:

1. Bond waterstop to substrate using continuous bead of swelling sealant or adhesive as recommended by the manufacturer.

2. Install in longest lengths practical. Splice as required; lap in accordance with manufacturer's recommendations.

3. Protect from moisture, oil, dirt, and sunlight.

3.05 CONCRETE PLACEMENT

A. Comply with ACI 301 for measuring, batching, mixing, transporting, and placing concrete.

B. Additional water may only be added to concrete prior to placement and only at Project Site. Slump shall be evaluated prior to and after the addition of all water. Do not take strength cylinders until after addition of all water.

1. Quantity of water shall not exceed the amount withheld at the batch plant. Quantity withheld shall be indicated on the batch ticket. Addition of water shall not result in a slump or water-cement ratio greater than that specified.

C. Do not allow concrete to free fall more than 5 feet. With HRWR concrete may free fall a maximum of 10 feet.

D. Consolidate concrete with mechanical vibrating equipment.

3.06 FINISHING UNFORMED SURFACES

A. General: Comply with ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Screed surfaces with a straightedge and strike off. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane before excess moisture or bleedwater appears on surface. Do not further disturb surfaces before starting finishing operations.

C. Float Finish: Apply float finish to surfaces to receive trowel finish or nonslip broom finish. Except as indicated below, apply a final "light float" finish to the surface as the concrete hardens. Surface shall have a uniform granular texture and shall meet the straightness requirements.

D. Trowel Finish: Apply a normal steel trowel finish to interior surfaces exposed to view and grouted surfaces in junction boxes.

E. Nonslip Broom Finish: Apply a nonslip broom finish to exterior concrete sidewalk and ramp surfaces. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route.

3.07 FINISHING FORMED SURFACES

A. No Finish: After forms are removed, repair or patch tie-holes and defects. Otherwise, no additional finish is required. Apply to surfaces which are not visible from the inside or outside of the completed structure or less than 12 inches below finish grade (i.e. back of retaining walls below embankment, etc.).

B. Smooth-Formed Finish: As-cast surface texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defective areas. Remove fins and other projections exceeding 1/8 inch. Apply to surfaces exposed to view and 12 inches below finish grade.

C. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.08 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 301. Additionally, comply with ACI 306.1 for cold-weather protection and with ACI 305.1 for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb./sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.

D. Curing Methods: Cure formed and unformed concrete for at least 7 days by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than 7 days with the following materials:

   a. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.

2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than 7 days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within 3 hours after initial application. Maintain continuity of coating and repair damage during curing period.

3.09 MISCELLANEOUS CONCRETE ITEMS

A. Non-Shrink Grout: Install and cure as recommended by manufacturer, and as required here:

1. Clean and roughen exposed concrete surface; remove laitance. Saturate the foundation 24 hours before installation. Surface shall be clear of standing water. Baseplates shall be free of oil, grease, and other objectionable substances.

2. Steel trowel exposed edges.

3. Moist cure as specified by manufacturer, but not less than 3 days.

B. Normal Shrinkage Grout:

1. Clean and roughen exposed concrete surface, remove laitance. Saturate the foundation 24 hours before installation. Surface shall be clear of standing water. Apply scrub coat of grout immediately prior to grout placement. While scrub coat is still moist install grout.

2. Wet cure as specified for concrete.

C. Bonding Agent: Apply Bonding Agent, as required by manufacturer.

D. Zinc Rich Primer: Apply Zinc Rich Primer, as required by manufacturer.

E. Vapor Barrier:

1. Install in accordance with manufacturer's recommendations including seams, penetrations, and repairs.

2. At perimeter of concrete, secure vapor barrier to concrete with Stego Crete Claw.

3.10 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to sample materials, perform tests, and submit test reports during concrete placement according to requirements specified in this Article.

B. Tests: Perform according to ACI 301.

1. Testing Frequency: One composite sample shall be obtained for each day's pour of each concrete mix exceeding 5 cu. yd. but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.

3.11 REPAIRS

A. Remove and replace concrete that does not comply with requirements in this Section.

B. Repair materials and surface preparation shall be completed in accordance with manufacturer recommendations. Coordinate with Owner's Representative prior to beginning any demolition of defective area.

END OF SECTION

DIVISION 09

COATINGS

09 96 00.01 HIGH-PERFORMANCE COATINGS

1.00 GENERAL

1.01 WORK INCLUDED

A. Furnish labor, materials, equipment and incidentals necessary to apply protective coatings to material and equipment as specified herein, including the preparation of surfaces prior to application of coatings.

B. Protective coatings are special coatings to be used at specific locations or on specific surfaces as indicated herein and are complementary to the coating surfaces specified in Section 09 96 01 "Concrete Protective Coatings" in that every surface of every description, except those which are specifically noted not to receive a coating finish, must be covered by a paint system as specified in this Section or in Section 09 96 01 "Concrete Protective Coatings."

C. Protective coatings must be applied to the following surfaces:

1. Metal surfaces located outside of buildings and other structures anywhere on the Site.
2. New piping and valves, including:
    a. Within the wet well
    b. Within the valve vault
3. Concrete surfaces at the following location:
    a. Lift Station site

D. The following must not be coated and must be protected from drips, overspray, etc. unless indicated otherwise

1. Stainless steel piping, materials and equipment.
2. Galvanized steel piping, materials and equipment unless specifically indicated to be coated.
3. Aluminum materials and equipment.
4. Interior electrical items.

E. Special applications for painting include the following:

1. Aluminum surfaces in contact with or embedded in concrete must be treated in accordance with Section 03 30 00 "Cast-In-Place Concrete."
2. Buried pipe and valves must receive a shop applied protective coating as described in the appropriate Section of the Specifications.

F. Contain, treat, and dispose of any dust, spray, drainage, or spillage resulting from coating operations. It is the Contractor's responsibility to determine if the materials to be disposed of are classified as Hazardous Waste. Disposed of waste, hazardous or otherwise, must be in accordance with applicable regulations. Contractor must be aware of and understand the regulations concerning disposal of waste generated by coating operations.

1.02 QUALITY ASSURANCE

A. Acceptable Manufacturers:

1. Products which comply with the Contract Documents and are manufactured by the following companies will be acceptable:

a. Tnemec Company, Inc.

b. Carboline.

c. PPG Protective & Marine Coatings.

d. The Sherwin-Williams Company.

e. Akzo Nobel / International Paint, LLC.

f. ICI Devoe High Performance Coatings.

g. Plasite Protective Coatings.

2. It is desired that the paint products be furnished by as few manufacturers as possible to meet the requirements of the Specifications. Coating products of the same type must be supplied by the same manufacturer. Do not mix products from different sources.

B. Applicator's Qualifications: Applicators must be qualified in this line of work and have a minimum of 5 years of experience in the application of the protective coatings of the types specified herein. Submit a list of recent projects and names of references for those projects.

C. Product Quality:

1. Use only the coatings specified in this Section. Use only those thinners and solvents recommended by the manufacturer, only in the amounts necessary to produce the manufacturer's recommended spreading rate, and in amounts not exceeding the maximum quantities stated in the manufacturer's literature.

2. The coating material must not show excessive settling in a freshly opened full can and must be easily re-dispersed with a paddle to a smooth, homogeneous state. It must show no curdling, livering, caking, or color separation and must be free of lumps or skim surfaces.

D. Inspection:

1. Inspect and provide substrate surfaces prepared in accordance with the Contract Documents and the printed directions and recommendations of paint manufacturer whose product is to be applied.

2. Provide Engineer minimum 3 days of notice prior to start of surface preparation work or coating application work.

3. Perform Work only in the presence of Engineer, unless Engineer grants prior approval to perform such Work in Engineer's absence. Approval to perform Work in the Engineer's absence is limited to the current day unless specifically noted to extend beyond the completion of the workday.

4. Inspection by the Engineer, or the waiver of inspection of any particular portion of the Work, must not be construed to relieve the Contractor of responsibility to perform the Work in accordance with the Contract Documents.

5. Contractor is solely responsible for testing for this Section, at no further cost to the Owner. Engineer may also make such tests if it is considered necessary. Cooperate with the Engineer, providing equipment, scaffolds, and other equipment as requested by the Engineer.

E. Testing Equipment: Furnish the testing apparatus necessary for testing coatings, including the following:

1. One set of U.S. Department of Commerce thickness calibration plates, certified by the National Bureau of Standards, to test dry film thickness.
2. Wet-film thickness gauges. Give one to Owner's representative. Each painter must keep one to test paint as it is applied.
3. One electronic dry-film thickness gauge capable or measuring 0-200 mils with calibration standards approved by the Bureau of Standards.
4. One Elcometer 319 Dewpoint Meter or approved equal.
5. One Tinker and Rasor Model M 1 Holiday Detector and recommended wetting agent and/or High Voltage Holiday Detector if required for coating thickness specified.
6. One set of SSPC-VIS 1, 3 and 4 - Visual Standards as applicable.

F. Testing Reports: Submit an inspection report for each coating applied on the Project. The testing report must be completed on a form furnished by the Engineer and must bear the signature of the Contractor and the Owner's representative.

1.03 SUBMITTALS

A. Submittals must be in accordance with Section 01 33 00 "Document Management."

B. The following Product Data for products, including manufacturer's data sheets, are due prior to ordering coating and surface preparation materials:

1. Coating manufacturer's color selection literature for coating materials and caulk.
2. Sample warranty document for products.
3. Provide certification from the manufacturer that all coatings will not contain more than 0.06 percent by weight of lead in the cured coating for each coat applied.
4. Coating manufacturer's Product Information and Safety Data Sheets (SDS) for each coating and caulk material. Product Information must include the following:
   a. The manufacturer's published instructions for use in specifying and applying all proposed coatings.
   b. Application instructions written and published by the coating manufacturer.
   c. All anticipated limitations, precautions and requirements that may adversely affect the coating, that may cause unsatisfactory results after the application or that may cause the coating not to serve the purpose for which it was intended, must be clearly and completely stated in the instructions. Limitations and requirements must include, but are not necessarily limited to the following:
      1). Surface preparation.

2). Method(s) of application.

3). Thickness of each coat (maximum and minimum DFT).

4). Drying and curing time of each coat.

5). Time (minimum and maximum) allowed between coats.

6). Thinner and use of thinner.

7). Proper mixing of coating before application.

8). Weather limitations during and after application (temperature and humidity, time weighted).

9). Physical properties of coating, including percent solids content by volume.

10). Equipment settings (air cap, fluid tip, equipment pressure settings, etc.).

11). Pot life at various temperature and humidity conditions.

12). Provide documentation that interior coating system is compatible with the cathodic protection system.

C. The following samples are required prior to ordering the materials:

1. Three samples of selected exterior finish colors for approval on 6-inch by 6-inch swatches. Label each swatch with the manufacturer's name, coating name/type, color name and number.

D. The following Product Data is required prior to coating Work:

1. Coating Plan:

a. Anticipated coating process schedule by date, including dates when hold-point inspections are anticipated. Schedule must indicate detailed activities on a daily basis.

b. Detailed procedures and schedule for all pre-cleaning, surface preparation and application of coating, including touch-up and repair procedures for all coating systems.

c. Recoat schedule on the submitted coating materials.

d. Data sheets must include curing characteristics and recommendations regarding complete coating curing.

e. Provide a written plan documenting how spent cleaning debris and/or paint over spray or droplets will be contained/confined to the jobsite and tank site during the surface preparation and coating application operations. Reasonable care must be exercised by the Contractor to prevent damage, nuisance, or hazardous conditions to adjacent or nearby property owners. Include all materials and method to be used for protection of exterior surfaces and allow for recovery and disposal of paint scraps and blast media.

2. Provide documentation on proposed containment system methods for blasting and coating operations.

3. Contractor must submit evidence of notification of the appropriate office of the Texas Commission on Environmental Quality (TCEQ) prior to abrasive blasting as required. Submit copies of any obtained permits.
4. Coating Manifest - Within 48 hours of coating delivery to the jobsite, the Contractor must record the batch number stamped on each coating container and submit a typed list to the Owner's representative. Minimum information required is listed below.
    a. Date of delivery to jobsite.
    b. Name and signature of superintendent recording the data.
    c. List of batch number including corresponding coating identification, color, date of manufacture and volume of each container.

E. The following Certified Test Report(s) are required prior to coating Work:
1. SDS sheets for all abrasive to be used on the Project.
2. Certification and laboratory test results indicating recycled metallic abrasive per SSPC-AB 2 or 4 and atomic absorption test results.

1.04 STANDARDS

A. The applicable provisions of the following standards apply as if written here in their entirety. Adhere to the latest standards and codes published by the following organizations.

B. In the event of a conflict between the published standards, codes, and this Section, the more stringent requirement govern as interpreted by the Engineer.

1. NSF International (NSF) / American National Standards Institute (ANSI):

NSF/ANSI Standard 61	Drinking Water System Components – Health Effects
NSF/ANSI/CAN 600	Health Effects Evaluation and Criteria for Chemicals in Drinking Water

2. ASTM International (ASTM):

ASTM D523	Standard Test Method for Specular Gloss
ASTM D610	Standard Test Method for Evaluating Degree of Rusting on Painted Steel Surfaces
ASTM D2244	Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates
ASTM D3359	Standard Test Methods for Rating Adhesion by Tape Test
ASTM D4214	Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films
ASTM D4258	Standard Practice for Surface Cleaning Concrete for Coating
ASTM D4259	Standard Practice for Abrading Concrete
ASTM D4260	Standard Practice for Liquid and Gelled Acid Etching of Concrete
ASTM D4263	Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method
ASTM D4285	Standard Test Method of Indicating Oil and Water in Compressed Air
ASTM D4417	Standard Test Methods for Field Measurement of Surface Profile of Blast Cleaned Steel

ASTM D4541	Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Tester
ASTM D4787	Standard Practice for Continuity Verification of Liquid or Sheet Linings Applied to Concrete Substrates
ASTM D5162	Standard Practice for Discontinuity (Holiday) Testing of Nonconductive Protective Coating on Metallic Substrates
ASTM D6386	Standard Practice for Preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Product and Hardware Surfaces for Painting
ASTM D7234	Standard Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Pull-Off Adhesion Testers
ASTM D7682	Standard Test Method for Replication and Measurement of Concrete Surface Profiles Using Replica Putty
ASTM E337	Standard Practice Test Method for Measuring Humidity with a Psychrometer (the Measurement of Wet- and Dry-Bulb Temperatures)
ASTM F1869	Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride

3. American Water Works Association (AWWA):

AWWA C210	Liquid-Epoxy Coating and Linings for Steel Water Pipelines
AWWA C222	Polyurethane Coatings and Linings for Steel Water Pipe and Fittings

4. Consumer Product Safety Act, Part 1303.
5. Environmental Protection Agency (EPA).
6. International Concrete Repair Institute (ICRI):

Technical Guideline No. 03732	Selecting and Specifying Concrete Surface Preparation for Coatings, Sealers and Polymer Overlays
Standard 310.2	Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays and Concrete Repair with CSP Chips

7. NACE International (NACE):

NACE TPC2	Coating and Lining for Immersion Service: Chapter Safety, Chapter 2 Surface Preparation, Chapter 3 Curing, and Chapter 4 Inspection
NACE SP0178	Design Fabrication, and Surface Finish Practices for Tanks and Vessels to be Lined for Immersion Service
NACE SP0188	Discontinuity (Holiday) Testing of New Protective Coatings on Conductive Substrates
NACE SP0178	Surface Finishing of Welds Prior to Coating; Weld Replica Only to be used with NACE SP0178
NACE RP0287	Field Measurement of Surface Profile of Abrasive Blast Cleaned Steel Surfaces Using a Replica Tape

8. National Association of Pipe Fabricators (NAPF):

NAPF 500-03	Surface Preparation Standard for Ductile Iron Pipe and Fittings in Exposed Locations Receiving Special External Coatings and/or Special Internal Linings

9. Occupational Safety & Health Administration (OHSA):

1915.35 Standards - 29 CFR	Painting
1926.62 Standards - 29 CFR	Lead

10. The Society for Protective Coatings (SSPC):

SSPC-VIS 1	Guide and Reference Photographs for Steel Surfaces Prepared by Dry Abrasive Blast Cleaning
SSPC-VIS 3	Guide and Reference Photographs for Steel Surfaces Prepared by Power and Hand Tool Cleaning
SSPC Vol. 1	Good Painting Practices
SSPC-AB 1	Mineral and Slag Abrasives
SSPC-AB 2	Cleanliness of Recycled Ferrous Metallic Abrasives
SSPC-AB 3	Ferrous Metallic Abrasives
SSPC-AB 4	Recyclable Encapsulated Abrasive Media in a Compressible Matrix
SSPC-SP 1	Solvent Cleaning
SSPC-SP 2	Hand Tool Cleaning
SSPC-SP 3	Power Tool Cleaning
SSPC-SP 11	Bare Metal Power Tool Cleaning
SSPC-SP I6	Brush-Off Blast Cleaning of Coated and Uncoated Galvanized Steel, Stainless Steels, and Non-Ferrous Metals
SSPC-PA 1	Shop, Field and Maintenance Painting of Steel
SSPC-PA 2	Determining Compliance to Required DFT
SSPC-PA 10	Guide to Safety and Health Requirements for Industrial Painting Projects
SSPC-PA 17	Procedure for Determining Conformance to Steel Profile/Surface Roughness/Peak Count Requirements
SSPC Guide 6 (CON)	Containment of Debris
SSPC Guide 12	Illumination of Painting Projects
SSPC Guide 15	Retrieval and Analysis of Soluble Salts

11. SSPC/NACE International Joint Standards:

SSPC-SP 5/NACE 1	White Metal Blast Cleaning
SSPC-SP 6/NACE 3	Commercial Blast Cleaning
SSPC-SP 7/NACE 4	Brush - Off Blast Cleaning
SSPC-SP 10/NACE 2	Near - White Metal Blast Cleaning
SSPC-SP 13/NACE 6	Surface Preparation of Concrete

12. Texas Commission on Environmental Quality (TCEQ):

30 TAC Chapter 290, Subchapter D	Rules and Regulations for Public Water Systems

1.05 DELIVERY AND STORAGE

A. Deliver coating products to the jobsite in original unopened containers, with manufacturer's label and batch number attached. Do not apply products until the Owner's field representative has approved the product for use.

B. Use one location at each jobsite for the storage of coating products. Protect the floor from spills and other damage. Protect the products from extreme heat or cold. Keep containers covered. Keep the storage rooms clean of trash and debris. Dispose of oily or used rags daily. Under no circumstances will they be allowed to accumulate. Take precautions to prevent fires. The storage of flammable liquids must comply with the city, state, or other fire codes.

C. Storage of coatings and other products must be in accordance with the manufacturer's requirements. Coatings that have been damage or not stored properly must not be applied and must be removed from the jobsite.

D. All products and coatings that are not approved for the Project must be removed from the jobsite and must not be stored at the jobsite.

E. All materials must be delivered to the jobsite in original sealed containers with the date of manufacture and batch number stamped thereon by the coating manufacturer. Materials are subject to random observations by the Owner's representative at the jobsite.

1.06 ENVIRONMENTAL CONDITIONS

A. Do not apply coatings under conditions that are unsuitable for the production of good results. Remove trash and debris from enclosed buildings and thoroughly clean prior to application of coatings. Do not begin application of coatings in areas where other trades are working, or where construction activities result in airborne dust or other debris. Do not apply coatings in conditions which do not conform to the recommendations of the coatings manufacturer.

B. Coatings must only be applied when conditions fall within the parameters listed in the manufacturer's printed data.

C. Contractor must provide dehumidification equipment sized to maintain dew point temperature 5 deg F or more above surface temperature of metal surfaces to be prepared and coated.

D. Do not apply any coatings when weather conditions are unfavorable. In the event that climatic conditions are not conducive for best results, postpone application of coatings until conditions conform to the manufacturer's recommendations and the provisions of this Section.

E. Do not apply coatings to a wet or damp surface in wet or damp weather conditions, or when there is dust in the air. Surfaces exposed to direct sunlight must be shaded by awnings or other protective devices while coatings are being applied, if recommended by coating manufacturer. When necessary, provide temporary heating devices of a type that produces no fumes or water vapor which will discolor the paint system.

F. Heating and Dehumidification:

1. Dehumidification equipment must be used to control the environment during surface preparation, rehabilitation, coating application and coating curing at no additional cost to the Owner, if acceptable environmental conditions cannot be met.
2. If the Contractor cannot meet the required environmental conditions to apply the interior coating system per this Section and the coating manufacturer's written recommendations, Contractor will cease operations until approved dehumidification equipment has been provided and acceptable environmental conditions are achieved.
3. If coating system is applied without dehumidification or in conditions not acceptable by this Section and by the coating manufacturer's written requirements, Contractor must fully remove coating system applied and replace per the Engineer's direction.
4. Contractor must furnish all labor, materials, equipment, fabrication and quality control inspections, and all other incidentals required to control and maintain the environment of the reservoir within the parameters stated in this Section and must incorporate these and any other expenses into its bid.
5. Owner reserves the rights, in the event the dehumidification equipment is not performing to the minimum requirements stated in this Section, to require the Contractor to modify and or add additional equipment to satisfy the conditions of this Section, at the sole cost to the Contractor.
6. It is the Contractor's responsibility to provide adequate dehumidification equipment to meet this specification and the coating manufacturer's requirements of this Section and coating manufacturer's requirements. The coating manufacturer's limits of surface temperature, tank inside air temperature and relative humidity requirements will govern, if more stringent than the requirements stated within this Section.

G. Forced Ventilation:

1. Provide continuous forced fresh air ventilation when working inside of containment systems or enclosed areas that are not openly vented from the beginning of surface preparation through final coating operations and coating curing.
2. Forced ventilation must be supplied per the recoat time required by the coating manufacturer and at least 48 hours after the final coat has been applied.
3. From the beginning of interior coating applications to until the coating system is cured, the Contractor must monitor the air for the lower explosion limit (LEL) as published in the coating manufacturer's product SDS.
4. Contractor is responsible for supplying, installing and maintaining the forced ventilation system.

H. Containment System:

1. Contractor must provide containment methods, either full or partial, which allows for the containment of the environmentally sensitive waste, dust and paint over spray that will be generated during the abrasive blasting and painting operation.

2. Minimum Containment for Field Surface Preparation:
    a. Provide a minimum SSPC Guide 6 (CON) Class 3A.D1.E3 containment system when dry abrasive blasting.
    b. Provide a minimum SSPC Guide 6 (CON) Class 2W containment system when wet abrasive blasting. All water must be contained and properly disposed of.
    c. Provide a minimum SSPC Guide 6 (CON) Class 2P.E3 containment system when power tool cleaning.
3. The ground surrounding the project area must be protected from all debris, emissions, dust, and other materials generated in the cleaning operations with a minimum of two layers of polyethylene covered with plywood or the same material used for the perimeter containment system.
4. Containment is not required when blasting on the interior of a completely enclosed area (i.e. roof is in place) as long as no visible emissions are created.
5. Contractor must ensure that no spent cleaning/blasting debris, dust, overspray, coating droplets, or emissions of any kind, escape to the atmosphere, or to adjacent buildings, private property, work sites, parking lots, etc.
6. Owner reserves the right to stop Work or require containment, additional containment or different containment methods if the Contractor's operations create a nuisance beyond the tank site property line in the sole opinion of the Owner, the Engineer, the Owner's representative, any regulatory agency, or neighbor. All costs of providing an adequate containment system must be included by the Contractor in the Base Bid.
7. Contractor will be responsible for all materials that are used and for any apparatus used to contain dust emissions, debris, overspray, and coating droplets. The containment system attachments to existing or proposed structures must be designed by a professional engineer, licensed in the state where the Project is located, not to impose excessive loading on the structure. Contractor must submit the designed and sealed details of the containment system on the tank.
8. Any damage to the structure(s) as a direct or indirect result of the containment system must be repaired or sections replaced by the Contractor at no additional cost to the Owner. Neither the Owner, nor the Owner's Engineer, assumes any responsibility for the structural ability of the structure to support the containment system.
9. If tarps are used as part of the containment system, the tarps must be an impervious, solid, flame-resistant material, reinforced with a fiber mesh and must allow as much light as possible to pass through the material.

I. Visible Emissions:
1. Contractor must control visible emissions and releases while dust producing activities are underway.
2. Visible emissions more than SSPC Guide 6, Level 1 (1 percent of the workday or 5 minutes in an 8-hour shift) are unacceptable. Sustained emissions of more than 1 minute, regardless of the total time of emissions for the day is unacceptable. If unacceptable emissions are observed, Contractor must shut down immediately and

correct the situation and clean up any debris generated from the release to the satisfaction of the Engineer before continuing Work.

1.07 WORKING CONDITIONS

A. Provide adequate lighting at any location that coatings are being applied or testing is performed. Illumination must be of sufficient intensity to achieve good results. Provide explosion-proof lighting when required.

B. Temporary ladders and scaffolds must conform to applicable safety requirements. Erect temporary scaffolds where needed to cover large areas. Provide ladders or scaffolding during testing procedures.

1.08 WARRANTY/GUARANTEE

A. Protective coating must be guaranteed for a period of 1 year from the date of the Owner's acceptance of the Project.

B. A warranty inspection must be conducted prior to the end of the warranty period. Any Defective Work discovered at this date must be corrected by the Contractor in accordance with the Contract Documents at no additional cost to the Owner.

2.00 PRODUCTS

2.01 GENERAL COATING REQUIREMENTS

A. All coatings must be free of heavy metals such as arsenic, barium, chromium, selenium, silver, lead, mercury and cadmium.

B. All coatings in contact with potable water must meet the applicable requirements of NSF/ANSI/CAN 600 according to the requirements of NSF/ANSI/CAN 61, including the most current health effects criteria for xylenes, toluene and ethylbenzene for the application and volume of tank on the Project.

C. All coatings submitted or used on this Project must comply with the EPA's Clean Air Act for maximum VOC (volatile organic compound) limits.

D. Finish coatings must be from the same batch.

2.02 MATERIALS

A. Coating products are to be as follows:

Type A - Alkyd-Phenolic Universal Primer	
Manufacturer	**Approved Coating**
Tnemec	Series 37H Chem-Prime H.S.
Sherwin-Williams	Kem Kromik Universal
Akzo Nobel / International Paint, LLC	Interlac 573
Devoe Coatings	Devprime 1403
Carboline	Carbocoat 150UP

Type A - Alkyd-Phenolic Universal Primer	
Manufacturer	**Approved Coating**
PPG	Multiprime 4360

Type B - Epoxy-Polyamide Primer	
Manufacturer	**Approved Coating**
Tnemec	Series 66
Sherwin-Williams	Macropoxy 240
Akzo Nobel / International Paint, LLC	Intergard 251; Intergard 269 for valves and gates, submerged structural steel and misc. metals, and submerged piping
Devoe Coatings	Devran 201V Series
Carboline	890
PPG	Amercoat 385

Type C - Penetrating Epoxy Pre-Primer	
Manufacturer	**Approved Coating**
Tnemec	Approved Equal
Sherwin-Williams	Macropoxy 920 Pre-Prime
Akzo Nobel / International Paint, LLC	Interbond 600
Devoe Coatings	Approved Equal
Carboline	Rustbond Penetrating Sealer
PPG	Amerlock Sealer

Type D - Inorganic Zinc Primer (Minimum 80% Zinc by Weight)	
Manufacturer	**Approved Coating**
Tnemec	Series 90-98 Tneme-Zinc
Carboline	Carbozinc 11 VOC
Sherwin-Williams	Zinc Clad II Plus
PPG	Dimetcote 9 VOC
Approved Manufacturer	Approved Equal

Type E - Organic Zinc Primer (Minimum 80% Zinc by Weight)	
Manufacturer	**Approved Coating**
Tnemec	Series 90-97 or 90G-1K97 Tneme-Zinc
Carboline	Carbozinc 859
Sherwin-Williams	Corothane I Galvapac

Type E - Organic Zinc Primer (Minimum 80% Zinc by Weight)	
Manufacturer	**Approved Coating**
PPG	Amercoat 68HS
Akzo Nobel / International Paint, LLC	Interzinc 52
Approved Manufacturer	Approved Equal

Type F - Alkyd Enamel	
Manufacturer	**Approved Coating**
Tnemec	Series 2H Hi-Build Tneme-Gloss
Sherwin-Williams	DTM Alkyd Enamel
Akzo Nobel / International Paint, LLC	Interlac 665
Devoe Coatings	Devlac 1431
Carboline	Carbocoat 8225
PPG	Fast Dry 35

Type G - Epoxy-Polyamide Coatings	
Manufacturer	**Approved Coating**
Tnemec	Series 66
Sherwin-Williams	Macropoxy 646 Epoxy
Akzo Nobel / International Paint, LLC	Intergurd 475HS; Interseal 670HS for valves and gates, PVC pipe and conduit, submerged structural steel and misc. metals, and submerged piping
Devoe Coatings	Bar-Rust 235
Carboline	Carboguard 60
PPG	Amerlock 385

Type H - Epoxy-Polyamide Coatings for Potable Water (NSF 61 Certified)	
Manufacturer	**Approved Coating**
Tnemec	Series 20 Pota-Pox or N140 Pota-Pox Plus
Sherwin-Williams	Tank Clad Epoxy
Akzo Nobel / International Paint, LLC	Interline 850 or Interseal 670HS (NSF colors)
Devoe Coatings	Bar-Rust 233H Series
Carboline	Carboguard 61
PPG	Amerlock 2/400

Type I - Aliphatic Polyurethane Enamel	
Manufacturer	**Approved Coating**
Tnemec	Series 1074 Endura-Shield II
Sherwin-Williams	Hi-Solids Polyurethane
Akzo Nobel / International Paint, LLC	Interthane 990 Series
Devoe Coatings	Devthane 379 Series
Carboline	Carbothane 133HB (Satin) or Carbothane 134HG (High Gloss)
PPG	Pitthane Ultra Series

Type J - Silicone Aluminum Coatings for High Temperature	
Manufacturer	**Approved Coating**
Tnemec	Series 39 Silicone Aluminum
Sherwin-Williams	Silver Brite Aluminum B59S8
Akzo Nobel / International Paint, LLC	Intertherm 50 Series
Devoe Coatings	Intertherm 50 Series
PPG	Hi-Temp 500
Carboline	Carbozinc 11; Finish: Thermaline 4700 Series (up to 1000 deg F); Thermaline 4900 (up to 450 deg F)

Type K- Epoxy Concrete Coating	
Manufacturer	**Approved Coating**
Tnemec	Series 46H-413 Hi-Build Tneme-Tar
Sherwin-Williams	Tar Guard Epoxy
Akzo Nobel / International Paint, LLC	Interzone 954
Devoe Coatings	Devtar 5A Series
PPG	Amercoat 78HB Coal Tar Epoxy
Carboline	Bitumastic 300M

Type L - Novolac Vinyl Ester/Novolac Epoxy Concrete Coating - High Friction Surface (HFS)	
Manufacturer	**Approved Coating**
Tnemec	Series G436 Perma-Shield / Chembloc Series 252SC
Sherwin Williams	Dura-Plate 8200

Type L - Novolac Vinyl Ester/Novolac Epoxy Concrete Coating - High Friction Surface (HFS)	
Manufacturer	**Approved Coating**
Akzo Nobel / International Paint, LLC	Ceilcote 380 / 242GF Flakeline System
PPG	SFT 675 / FlakeRez 8303
Carboline	Carboguard 510 Series / Plasite 4500 Series

Type M - High Solids Epoxy Siloxane	
Manufacturer	**Approved Coating**
Carboline	Carboxane 2000
Sherwin-Williams	Sher-Loxane 800
PPG	PSX 700 Polysiloxane
Approved Manufacturer	Approved Equal

Type N - Epoxy Mastic	
Manufacturer	**Approved Coating**
Carboline	Carbomastic 15
Sherwin-Williams	Epoxy Mastic II
PPG	Amerlock 2/400 AL
Tnemec	Chembuild Series 135
AkzoNobel/International Paint, LLC	Interseal 670HS

Type O - Elastomeric Polyurethane Hybrid	
Manufacturer	**Approved Coating**
Carboline	Reactamine 760 Series
Sherwin-Williams	Poly-Cote 115
PPG	Amerthane 490
Tnemec	Elasto-Shield Series 406
AkzoNobel/International Paint, LLC	Polibrid 705E Elastomeric

Type P - Glass Flake Reinforced Epoxy	
Manufacturer	**Approved Coating**
Carboline	Carboguard 890GF
Sherwin-Williams	Sher-Glass FF
PPG	Amerlock 2/400 GF

Type P - Glass Flake Reinforced Epoxy	
Manufacturer	**Approved Coating**
Tnemec	Tnemec Series G435
AkzoNobel/International Paint, LLC	Approved Equal

Type Q - 100 Percent Solids Epoxy for Wastewater	
Manufacturer	**Approved Coating**
Carboline	Plasite 4550-S Novolac Epoxy
Sherwin-Williams	Dura-Plate 6000 Amine Epoxy
PPG	Novaguard 890 or Novaguard 810 Novolac Epoxy
Tnemec	Perma-Glaze Series G435 or Series G436 Modified Polyamine Epoxy
AkzoNobel/International Paint, LLC	Approved Equal

B. Petrolatum (Wax) Tape:

1. Petrolatum (wax) tape must be installed per the manufacturer's written recommendations. Provide all primers and appurtenant materials as required for installation per the recommendations.
2. Approved Manufacturers:
   a. Trenton Corp. - Trenton Primer and #1 Wax-Tape.
   b. Denso North America, Inc. - Denso Paste and Densyl Tape.
   c. Approved equal.

C. Pipe Wrap Tape System:

1. System must be designed to mechanically protect coated piping from corrosion and abrasion in above ground, below ground and submerged conditions and be compatible with specified pipe coating system(s).
2. System must be UV resistant and may be constructed of HDPE, PVC, or fiberglass with an adhesive backing on one side for application to coated piping.
3. System must include a fiberglass reinforced outer shield for abrasion resistance and be able to be top coated for aesthetics.
4. Approved Manufacturers:
   a. SealForLife.
   b. Denso North America, Inc.
   c. Approved equal.

2.03 COLOR SELECTION

A. The color chart must include the complete available range of colors, including tints and shades. Owner will select the colors during construction.

B. Use a multi-color system coating for any surface receiving more than one coat. Each coat must be tinted differently from the preceding coat in a manner that will allow the various coats to be easily distinguished. Colors must generally be from light to dark shades, but the Contractor may have the option to select tint shades to insure coats will receive adequate coverage without bleeding or otherwise showing through the preceding coat.

C. Piping and equipment must be color coded in accordance with the requirements of the TCEQ.

3.00 EXECUTION

3.01 GENERAL

A. All coatings must be applied in strict conformance with the coating manufacturer's published specifications, this Section, or as approved by the Engineer.

B. Surfaces which will be inaccessible after installation must be coated prior to installation or must be coated and approved in stages as the Work is installed.

C. Engineer will approve surfaces for application of coatings at each stage. Any material that is coated prior to the Engineer's approval will be stripped back to bare metal and repainted.

D. At least 7 days or as required by the coating manufacturer, must be allowed for drying of finished surfaces before any machinery can be placed into service.

E. The number of coats called for in this Section are considered the minimum required. If more coats are required to provide the specified dry film thickness or for complete coverage and uniform appearance, they must be provided at no additional cost to the Owner.

F. Illumination equipment must be provided by the Contractor in accordance with SSPC Guide 12. Explosion-proof lights and electrical equipment must be provided. The minimum illumination at the surface of the work during surface preparation and coatings is 215 lux (20 fc). The minimum illumination during inspection is 538 lux (50 fc). Whenever required by the Owner's representative, the Contractor must provide additional illumination and necessary supports to cover all areas to be inspected.

3.02 STEEL SURFACE PREPARATION

A. The adequacy of the preparation of steel surfaces will be determined by comparing the surface with SSPC VIS 1 "Pictorial Surface Preparation Standards for Painting Steel Surfaces" and SSPC VIS 3 "Guide and Reference Photographs for Steel Surfaces Prepared by Power and Hand Tool Cleaning." Prepare surfaces in accordance with the following requirements:

1. SSPC-SP 1 — Solvent Cleaning.
2. SSPC-SP 2 — Hand Tool Cleaning.
3. SSPC-SP 3 — Power Tool Cleaning.
4. SSPC-SP 5 / NACE 1 — White Metal Blast Cleaning.

5. SSPC-SP 6 / NACE 3 — Commercial Blast Cleaning.
6. SSPC-SP 7 / NACE 4 — Brush-Off Blast Cleaning.
7. SSPC-SP 10 / NACE 2 — Near-White Blast Cleaning.
8. SSPC-SP 11 — Power Tool Cleaning to Bare Metal.

B. The resulting surface profile must be in accordance with the coating manufacturer's recommendations.

C. "Solvent Cleaning" must be performed prior to subsequent surface preparation, including abrasive blast cleaning.

D. All sharp edges and welds must be ground smooth to a rounded contour and all weld splatter must be removed prior to abrasive blasting. Edges of metal to be coated must be rounded to a minimum of 1/16-inch radius of chamfered a minimum of 1/16 inch at an angle of 45 degrees.

E. Welds and adjacent areas:

1. Prepared such that there is:
    a. No undercutting or reverse ridges on the weld bead.
    b. No weld spatter on or adjacent to the weld or any other area to be painted.
    c. No sharp peaks or ridges along the weld bead.
    d. Grind embedded pieces of electrode or wire flush with the adjacent surface of the weld bead.
2. Weld profiles must conform to NACE RP0178, Profile 'D'.

3.03 DUCTILE IRON PIPE AND FITTINGS SURFACE PREPARATION

A. Prepare surfaces in accordance with the following requirements:

1. NAPF 500-03-01 — Solvent Cleaning.
2. NAPF 500-03-02 — Hand Tool Cleaning.
3. NAPF 500-03-03 — Power Tool Cleaning.
4. NAPF 500-03-04 — Abrasive Blast Cleaning for Ductile Iron Pipe.
5. NAPF 500-03-05 — Abrasive Blast Cleaning for Cast Ductile Iron Fittings.

B. "Solvent Cleaning" must be performed prior to subsequent surface preparation as specified in NAPF 500-03.

3.04 PETROLATUM (WAX) TAPE

A. Petrolatum (wax) tape must be installed per the manufacturer's written recommendations. Provide all primers and appurtenant materials as required for installation per the recommendations.

B. Tape must be installed on all buried flexible couplings and at locations indicated on the Drawings and as specified.

3.05 PIPE WRAP TAPE SYSTEM

A. Tape must be installed per the manufacturer's written recommendations. Provide all primers and appurtenant materials as required for installation per the recommendations.

B. Tape must be installed on all piping at the transition between above grade and below grade. Coat piping a minimum of 2 feet vertically above and below the ground surface.

C. Paint wrap to match adjacent piping.

3.06 CONCRETE SURFACE PREPARATION

A. The adequacy of the preparation of concrete surfaces will be determined by comparing the surface with ICRI Surface Finish Comparators. Prepare surfaces in accordance with the following requirements and the coating manufacturer's recommendations:

1. SSPC-SP 13 / NACE 6 — Surface Preparation of Concrete.
2. ICRI CSP 3 – 5, or as required by the coating manufacturer.

B. Allow a minimum of 28 days curing time to elapse before coatings are applied. Concrete surfaces which are scheduled to receive coatings must be in accordance with the coating manufacturer's moisture requirements. Contractor must provide any primers required by the coating manufacturer to address outgassing, as needed.

C. Contractor must field verify that the pH of the concrete is suitable for application per the coating manufacturer's product requirements.

D. Bug holes, air pockets, voids or imperfections in the concrete surface must be filled or patched with a cementitious resurfacing material approved by the coating manufacturer.

E. All coating terminations points, including from concrete to metal are to include a 1/4-inch key cut.

F. Concrete Surface Preparation Inspection:

1. Adhesion Testing:
    a. Tensile testing of the surface preparation must be performed by the Contractor using a Type 4 or Type 5 pneumatic adhesion testing equipment in accordance with ASTM D7234 using 2-inch diameter dollies for concrete surface adhesion testing. Provide a minimum of three tests (dollies) per area and coating system. Engineer will select location of test dollies.
    b. Concrete surface or applied coating must be scored for concrete adhesion testing.
    c. Adhesive failure greater than 50 percent of the dolly surface area indicate inadequate surface preparation.
    d. Cohesive failures which result in loss of sound concrete will be acceptable provided the loss is greater than 50 percent of the dolly surface area.
    e. Low adhesion cohesive failures with a thin layer of concrete due to weak concrete or laitance over 50 percent of the dolly surface will be rejected.
2. Concrete Soundness: Concrete soundness will be determined using the scratching or hammer impact methods as defined in SSPC-SP 13.

3. Moisture Content: Moisture must be tested as specified in SSPC-SP 13 and in accordance with ASTM D4263 and ASTM F1869 (for conditioned spaces). Moisture content cannot exceed the moisture content recommended by the coating manufacturer.

3.07 SURFACE PREPARATION

A. Clean and degrease surfaces prior to abrasive blasting by solvent cleaning as specified using solvents, detergent/water, emulsions, and steam. Proposed method must be documented in the coating plan. Contractor must contain and properly dispose of all runoff and debris from cleaning.

B. If the following conditions exist or are prevalent, surface preparation and coating must be delayed or postponed until conditions are favorable. Each day's coating must be completed in time to permit the film sufficient drying time prior to damage by atmospheric conditions or changes. No surface preparation can begin or coating applied:

1. When the surface, air or material is below or above the manufacturer's printed instructions.
2. When surfaces are wet or damp.
3. During weather conditions of rain, snow, fog or mist.
4. When the air and steel temperature is less than 5 deg F above the dew point temperature.
5. If the relative humidity is above 85 percent.
6. When it is expected that the dew point, air and/or surface temperature will be below or above the coating manufacturer's recommended temperatures within 4 hours after applications of coating, minimum. Coating manufacturer may require additional time between application and temperature and weather changes.

C. Shop Surface Preparation:

1. Notify Engineer at least 7 days prior to start of shop blast cleaning to allow for inspection of the Work during surface preparation and shop application of paints. Work is subject to the Engineer's approval before shipment to the jobsite.
2. Items such as structural steel, metal doors and frames, metal louvers, and similar items as reviewed and approved by the Engineer may be shop prepared and primed. Centrifugal wheel blast cleaning is an acceptable alternate to shop blast cleaning. Blast clean and prime in accordance with the Specifications.
3. Prepare surfaces by abrasive blasting as specified and apply shop prime coat. Shop primed steel plates must not have primer extended within 4 inches along all edges to be welded. All primer within 4 inches of an area to be welded must be removed prior to welding. Welding of painted surfaces will not be allowed.

D. All pre-assembled shop primed items must be prepared in accordance with these specifications and inspected by the Owner's representative before and after priming.

E. Abrasive Blasting:

1. Prior to commencing abrasive blasting operations, the Contractor must perform a test blast to verify that the surface cleanliness and profile meet the requirements of this Section and meet the coating manufacturer's requirements for the coating to be applied. If the test section does not meet the requirements, the Contract must make changes to the abrasive materials and/or methods to provide suitable blast.
2. Abrasive blast only the amount of surface area which can be primed the same day or before any rust starts to form, whichever occurs first. Areas which are not painted the same day must be re-blasted on the day the prime coat is applied.
3. Shrouding or recovery of all blast material will be mandatory during all exterior blasting.
4. Contractor must contain all waste and process discharge in accordance with the accepted methods for the process and materials that are in abatement.
5. Where abrasive blast cleaning will not remove or properly prepare metal surfaces, hand and/or power tool cleaning must be used to remove such conditions as weld splatter, laminations and radius-sharp edges. Hand tool or power tool must be used on areas less than 2 feet in diameter or smaller or on corners and edges.
6. All abrasive blast equipment must be equipped with, including but not limited to the following:
    a. Noise reducing devices.
    b. Hose coupling safety devices.
    c. Electrical grounding devices.
    d. Moisture traps and filters.
    e. Fresh air hoods for all blasters.
    f. "Dead Man" switches on all blast hoses.
    g. Air dryers.

F. Surface profile must be in accordance with manufacturer's printed requirements.

G. The adequacy of the preparation of surfaces must be determined by comparing the surface with SSPC-VIS 1, SSPC-VIS 3, NACE RP0178 and ICRI Surface Finish Comparators.

H. Adequate surface preparation must be verified throughout surface preparation per SSPC-PA 17. Minimum testing requirements:

1. Test the surface profile within the first 15 minutes and one additional time during each work shift or 12-hour period, whichever is shorter for each gun or blasting apparatus used or at any time the process producing the acceptable profile indicated above is changed, as interpreted by the Engineer.
2. Select a minimum of three 6-inch square locations and take two readings. The average to the two readings is a "profile measurement." The group of three locations is the "location average." The location average must be within the specified profile range.
3. Contractor must report the location averages (lowest location average and highest location average, and the profile measurement for each surface preparation apparatus.

4. If the substrate has been previously coated, an existing profile may exist. Contactor must adjust blast media size to ensure that the resulting surface profile meets the profile required.

I. Wherever the words "solvent cleaning", "hand tool cleaning", "wire brushing", or "blast cleaning", or similar words of equal intent are used in the Specifications or in paint manufacturer's specifications, they are understood to refer to the applicable specifications indicated.

J. Where OSHA or EPA regulations preclude standard abrasive blast cleaning, wet or vacuum-blasting methods may be required. Coating manufacturer's recommendations for wet blast additives and first coat application will apply.

K. Clean surfaces of dust and residual particles from cleaning operations by dry (no oil or water vapor) air blast cleaning or other method prior to painting. Vacuum clean enclosed areas and other areas where dust settling is a problem and wiped with a tack cloth.

3.08 PREPARATION OF HOT-DIP GALVANIZED COATED STEEL, STAINLESS STEEL AND NON-FERROUS METALS

A. For galvanized coated steel, remove all soluble and insoluble contaminants. Prepare hot-dipped galvanized coated iron and steel products in accordance with ASTM D6386.

B. Abrasive blast per SSPC-SP I6 to achieve an angular anchor profile as required by the coating manufacturer.

C. Contractor is responsible for coordinating with the coating manufacturer to verify compatibility of the specified coating system with the provided surface preparation.

3.09 PREPARATION OF EXISTING COATED OR SHOP PRIMED SURFACES

A. General:

1. Factory-applied primers to equipment must be those specified or verified by the Contractor to be compatible with the specified coating systems. Where possible, notify manufacturers which shop prime coats will be required in order to be compatible with field-applied finish coats.

2. Where equipment is purchased which has the manufacturer's standard primer or a factory finish which is other than as specified in this Section, remove the factory-applied paint system or apply passivators or other special coatings as required to make the surface compatible with the finish coat specified.

3. Do not apply any coating to machinery, piping, or other surfaces before testing has been completed and systems approved. Any damage to coatings resulting from subsequent corrective procedures must be stripped back to bare metal and repainted with the appropriate paint system as directed by the Engineer.

4. Check for compatibility when applying coatings over existing coatings. Apply a test patch of the recommended coating system, covering at least 2 to 3 square feet or as directed by the Engineer. Allow to cure 1 week before testing adhesion per ASTM D3359 in the presence of the Engineer. If adhesion does not meet the manufacturer's published data, consult with the Engineer.

5. Shop primed or coated surfaces must be reviewed with the Engineer to determine if the extent of damage to the coating and suitability of finish coats to adhere to shop applied coats.
6. If a cured epoxy, polyurethane, or plural-component material is to be top coated provide brush-off blast as specified herein or as recommended by the coating manufacturer.
7. Surface preparation recommendations of coating manufacturer are subject to approval of the Engineer.

B. To Be Recoated or Final Coated:

1. Solvent clean.
2. Perform touch-up repairs of existing coating.
3. Asphaltic coated ductile iron pipe will require an application of a seal coat prior to the application of a cosmetic finish coat.

C. Touch-Up Repairs:

1. Clean loose, abraded, or damaged coatings to substrate by power tool to bare metal per SSPC-SP 11 and/or NAPF 500-03-03 "Power Tool Cleaning."
2. Feather surrounding intact coating.
3. Apply one spot coat of the specified primer to bare areas overlapping the prepared existing coating.
4. Apply one full finish coat of the specified primer or finish coat(s) overall.

D. Application of a Cosmetic Coat:

1. The exact nature of shop-applied coatings is not known in all cases.
2. Check compatibility by application to a small area prior to starting the coating.
3. If lifting or other problems occur, request disposition from the Engineer.

3.10 APPLICATION

A. Contractor and painting technicians are responsible for the application of the coating system and must have current applicator approvals from the coating manufacturer, as required.

B. After abrasive blast cleaning, dust and spent abrasive must be removed from the surfaces by vacuum process or with clean, dry, oil-free compressed air.

C. The prime coat must be applied as soon as possible after the blasting and surface cleaning is completed, inspected and approved by the Inspector. Blasted surfaces must be coated before rust forms on the surface. No prepared surface will be allowed to receive a coating if "rust bloom" or surface discoloration has occurred. All blasted surfaces must be coated to within 6 inches of the edge of a blasted area. No visible rust must be coated under any circumstances, including rust bloom or if discoloration has occurred, regardless of elapsed time between blasting and coating. Leave an uncoated strip of exposed metal to clearly identify where abrasive blasting was halted.

D. Provide mist coat if recommended by the coating manufacturer.

E. All weld seams, gaps, edges, bolts and difficult areas to coat must receive a stripe coat. Stripe coat must be a contrasting color. Stripe coat may be applied with intermediate or finish coating, but must be applied prior to the installation of the finish coat.

F. Contractor must apply each coat at the rate and in the manner specified by the coating manufacturer, except as may be modified herein. If material has thickened or must be diluted for application, coating must be built up to achieve the dry film thickness as specified for each coat of the complete system.

G. Maximum and minimum DFT must be per the supplied coating manufacturer's printed requirements and as required by this Section. DFT will be measured per SSPC-PA 2, Level 2 with an allowable measurement of spot DFT of:

   1. Minimum DFT, as specified.

   2. 120 percent of maximum DFT specified.

H. Contractor and painting technicians are responsible for the application of coating system and must have current applicator certifications from the coating manufacturer. Submit certifications with coating submittal.

I. Coatings which have an expired shelf or pot life may not be used and must be removed from the jobsite.

J. Coating must be applied by skilled workmen and must be brushed out or sprayed evenly, without runs, crazing, sags, or other blemishes.

K. Sand between coats to remove over spray and dry fall.

L. Apply the first coat to the surface, including cutting in around edges, before the second coat is applied. The second coat and any successive coats must not to be applied before notifying the Owner's field representative and obtaining approval. Each coat must be tested before the successive coat is applied.

M. The coating curing period must be adjusted to compensate for less than adequate weather conditions, as recommended by the coating manufacturer, for complete curing of the entire coating system. The full curing time recommended by the manufacturer must be provided.

N. Coating must be continuous and must be accomplished in an orderly manner to facilitate proper inspection control.

O. Where a roller or brush is used to apply the coating, additional coats may be necessary to achieve the recommended dry film thickness and/or to achieve total coverage of the underlying surface. Coated surfaces must be totally free of all roller nap, roller marks, brush bristles and brush marks.

P. When using conventional coating spray equipment for coating operations, effective oil and water separators combined with after coolers or deliquescent dryers must be used in compressed air lines to remove detrimental oil and moisture from the air. Separators must be placed as far as practical from the compressor. Compressors must be tested periodically by the Contractor for oil and water contamination of compressed air. Testing must follow ASTM D4285 "Standard Test Method of Indicating Oil and Water in Compressed Air." All compressor units found to produce unacceptable amounts of oil and or water, as determined by results of ASTM D4285 test data must be replaced with a compressor that is acceptable.

Q. For porous surfaces, such as concrete or masonry, a prime coat may be thinned to provide maximum penetration and adhesion. The type and amount of thinning must be determined by the coating manufacturer and is dependent on surface density and type of coating.

R. Concrete and Steel Floors and Walks, including Bulk Storage Areas:

1. Provide non-skid surface in walkway areas and on floors.
2. Contractor is to include non-skid additive such as aluminum oxide to coatings or may use 50 mesh dry wash silica sand broadcasted into the film and back rolled to encapsulate as recommended by the coating manufacturer.
3. Contractor is to provide a test area to confirm with Owner that the non-skid surface is adequate and consistent. Contractor must modify method or products used as required to provide an acceptable surface.

3.11 WATER AND WASTEWATER PIPE COLORS

A. General coating colors in accordance with the TCEQ are as follows for general selection of pipe coatings. Contractor must provide samples for Engineer's approval prior to ordering as specified.

Pipe/Pumps/Valves System Description	Color
Backwash Waste/Drain	Dark grey
Settled Water	Green
Effluent after Clarification	Dark green
Filter Effluent	Light blue
Gray Water	Purple with yellow lettering
Heated Water	Blue with 6-inch red bands, spaced 30-inches apart
Potable Water/Treated Water	Light blue
Power Conduits	In compliance with the National Fire Protection Association 70 National Electrical Code
Raw Water	Tan
Reclaimed Water	Purple with black lettering
Sewage	Grey
Sludge	Brown

Chemical Lines	Color
Liquid Alum	Yellow w/orange bands
Alum (solution)	Yellow w/ green bands
Ammonia	Yellow w/ brown bands
Chlorine (gas, liquid, or vent)	Yellow
Chlorine (solution)	Yellow w/ red bands

Chemical Lines	Color
Ferric Chloride	Brown with red bands
Ferric Sulfate	Brown with yellow bands
Fluoride	White with yellow bands
Liquid Caustic	White with red bands
Caustic (solution)	White with orange bands
Polymers	White with green bands (varies for water or WW applications)
Ozone	Stainless steel with white bands
Settled Water	Green
Sulfur Dioxide	Lime green with yellow bands

Other Lines	Color
Compressed Air	Light green
Instrument Air	Light green with dark green bands

3.12 FIELD QUALITY CONTROL

A. Field Tests: Make wet film tests during painting operations to assure proper thicknesses of coating are being applied. After each coat has been applied, test the paint film thickness with a nondestructive, magnetic type thickness gauge. The total dry-film thickness for each coat must be per Paragraph 3.09.G. Apply additional coats until the specified thickness is reached or exceeded.

B. Holiday Testing:

1. Holiday testing must be performed in accordance with NACE SP0188 or ASTM D5162 for steel substrates and ASTM D4787 for concrete substrates.

2. Test the entire surface of coated steel and piping in moderate or severe environments, as determined by the Engineer, with a holiday detector. For thickness between 10 and 20 mils (250 to 500 microns) a non-sudsing type wetting agent, as recommended by the holiday detector manufacturer, must be added to the water prior to wetting the detector sponge.

3. Holiday detect coatings in excess of 20 mils with high voltage holiday testers as recommended by the coating manufacturer.

4. Mark and repair failures in accordance with the manufacturer's printed instructions, then retest failure areas. No failures or other irregularities will be permitted in the final coats. Areas containing holidays must be repaired until tests indicate no holidays.

3.13 PROTECTION OF SURFACES NOT TO BE PAINTED

A. Remove, mask, or otherwise protect hardware, lighting fixtures, switch plates, aluminum surfaces, machined surfaces, couplings, shafts, bearings, nameplates on machinery, and other surfaces not intended to be painted.

B. Provide drop cloths to prevent paint materials from falling on or marring adjacent surfaces.

C. Protect working parts of mechanical and electrical equipment from damage during surface preparation and painting process.

D. Mask openings in motors to prevent paint and other materials from entering the motors.

3.14 DAMAGED COATINGS, PINHOLES, AND HOLIDAYS

A. Feather edges and repaired in accordance with the recommendations of the paint manufacturer.

B. Repair fusion bonded coatings to be as recommended by the original applicator. Applicator must provide liquid repair kits for this purpose as recommended by the coating manufacturer.

C. Apply finish coats, including touchup and damage-repair coats in a manner that will present a uniform texture and color-matched appearance.

3.15 UNSATISFACTORY APPLICATION

A. If the item has an improper finish color, or insufficient film thickness, clean and topcoat surface with specified paint material to obtain the specified color and coverage. Obtain specific surface preparation information from the coating manufacturer.

B. Hand or power sand visible areas of chipped, peeled, or abraded paint and feather the edges. Follow with primer and finish coat in accordance with the Specifications. Depending on the extent of repair and its appearance, a finish sanding and topcoat may be required.

C. Evidence of runs, bridges, shiners, laps, or other imperfections are cause for rejection.

D. Repair defects in coating system per written recommendations of coating manufacturer.

E. Leave all staging up until the Engineer has inspected the surface or coating. Replace staging removed prior to approval by Engineer.

3.16 COATING INSPECTION

A. General:

1. All coats will be subject to inspection by the Engineer and the coating manufacturer's representative.

2. Visually inspect concrete, nonferrous metal, plastic, and wood surfaces to ensure proper and complete coverage has been attained.

3. Give particular attention to edges, angles, flanges, and other areas where insufficient film thicknesses are likely to be present and ensure proper millage in these areas.

B. Coating Thickness Testing:

1. Owner's representative may conduct coating thickness testing as necessary and without limitation.

2. Measure coating thickness specified in mils with an electronic type dry film thickness gauge.

3. Check each coat for the correct millage.

4. Tests for concrete coating thickness may be taken using a Tooke Gauge or gauge approved for testing coatings over concrete substrates. Contractor must repair coating after thickness testing, if required.

C. Coating Continuity (Holiday) Testing: Owner's representative will witness holiday testing performed by the Contractor.

3.17 CLEANING AND ADJUSTING

A. Promptly remove trash and debris resulting from painting operation from the Site. Remove drop cloths, masking tapes and other protective coverings. Remove paint spills, splatters, overlap of paint from adjacent material and other defects. Spot paint nicks and other defects.

B. Remove paint containers and waste products. Thoroughly clean paint storage rooms, removing spilled paint from walls and floors.

C. Damages due to over spray on buildings, vehicles, trees, or other surfaces not specified to be painted would be the responsibility of the Contractor.

3.18 SCHEDULE

A. Protective coatings must be applied in accordance with the following paint schedule. If additional or alternate primers, etc. are recommended by the coating manufacturer for any of the coatings specified, they must be provided at no additional cost to the Owner to provide a complete and compatible coating system, as approved by the Engineer.

PROTECTIVE COATINGS PAINT SCHEDULE

System	Application	Surface Prep	Product Type	No. of Coats	DFT/Coat (mils)
No. 1	**Submerged Metal - Potable Water** All metal surfaces new and existing below a plane 1 ft. above the maximum liquid surface, metal surfaces above the maximum liquid surface which are a part of the immersed equipment, concrete embedded surfaces of metallic items under submerged or buried conditions, such as wall pipes, pipes, wall or floor sleeves, access manholes, gate guides and thimbles, and structural steel. Not to be used for potable water storage tanks. All coatings must be NSF 61 certified.	SSPC-SP 1 SSPC-SP 10 NAPF 500-03-01 NAPF 500-03-04 NAPF 500-03-05	TYPE H - Epoxy-Polyamide TYPE H - Stripe Coat TYPE H - Epoxy-Polyamide	1 2	4.0 4.0
				Total Minimum Dry Film Thickness	**12.0 mils**
No. 2	**Above-Grade Interior/Exterior Steel and D.I. Piping Non-Immersion/Non-Corrosive Environment** All metal surfaces new and existing, such as inside pump station buildings, exterior piping and valves, exterior structural steel, etc. **Application Notes:** 1. Proposed piping and valves may be provided with factory applied prime coat(s), with fusion bonded epoxy or Type H epoxy. For damaged factory applied coatings spot prime with Epoxy Mastic. Provide application of Type C and Type M coatings in the field. 2. Proposed Field Coated and Existing Previously Coated Piping and Valves: Prepare as indicated and provide full coat of Epoxy Mastic and continue with stripe, intermediate and top coat as indicated.	**For New Piping and Valves:** SSPC-SP 1 SSPC-SP 6 NAPF 500-03-01 NAPF 500-03-04 NAPF 500-03-05 **For Previously Coated Piping and Valves:** SSPC-SP 1 SSPC-SP 3 NAPF 500-03-01 NAPF 500-03-03	TYPE N - Epoxy Mastic TYPE C - Penetrating Epoxy Pre-Primer TYPE M - Stripe Coat Type M - HS Epoxy Siloxane	1 1 1	5.0 2.0 5.0-7.0
				Total Minimum Dry Film Thickness	**12.0 mils**
No. 3	**Concrete Floor Surfaces/Bulk Storage Areas of Chemical Storage Areas** All new and existing interior concrete floors, such as inside pump station buildings and chemical storage areas. All coatings must include skid-resistant additives. Coatings provided must be resistant to **sodium hypochlorite (12.5%), liquid ammonium sulfate (XX%), hydrochloric acid and sodium chlorite (XX%).**	SSPC-SP 13 ICRI CSP 3-5	Primer - As Needed TYPE L - Epoxy/Vinyl Ester	1	35 mils

System	Application	Surface Prep	Product Type	No. of Coats	DFT/Coat (mils)
	Application Notes: Provide epoxy primer as required by coating manufacturer to address outgassing and resurfacing as required.				
				Total Minimum Dry Film Thickness	**35.0 mils**
No. 4	**Electrical Equipment - Exterior** All new and existing exterior electrical panels and equipment with factory coatings. Not for pumps and motors.	SSPC-SP 1 SSPC-SP 2	TYPE A - Alkyd-Phenolic Universal Primer TYPE F - Stripe Coat TYPE F - Alkyd Enamel	1 2	2.0 3.0
				Total Minimum Dry Film Thickness	**8.0 mils**
No. 5	**High-Temperature Surfaces** Interior and exterior surfaces of surfaces with temperatures from 200 to 400 deg F.	SSPC-SP 1 SSPC-SP 10	TYPE J - Silicone Aluminum	2	1.0
				Total Minimum Dry Film Thickness	**2.0 mils**
No. 6	**Above-Grade Interior and Exterior PVC Pipe** Exterior surfaces PVC piping.	SSPC-SP 1 Light Sanding	TYPE B - Epoxy-Polyamide Primer TYPE I - Aliphatic Polyurethane Enamel	1 1	3.0 3.0
				Total Minimum Dry Film Thickness	**6.0 mils**
No. 7	**Metal Piping and Valves – Immersion in Wet Wells Moderate to Severe Environment (Non-Potable)** Exterior/interior surfaces of submersed valves & pumps, penstocks, piping, sewer interceptors, wastewater vessels, settling tanks and buried piping connecting to them for severe conditions with exposure to H2S gas, including wastewater digesters, etc. **Application Notes:** Coating may be applied in two coats, as recommended by the manufacturer.	SSPC-SP 1 SSPC-SP 6 NAPF 500-03-01 NAPF 500-03-04 NAPF 500-03-05	Type Q - 100% Solids Epoxy for Wastewater	1-2	40.0
				Total Minimum Dry Film Thickness	**40.0 mils**

System	Application	Surface Prep	Product Type	No. of Coats	DFT/Coat (mils)
No. 8	**New and Existing Metal Piping and Valves within Vaults and Under Insulation** **Moderate to Severe Environment** All metal surfaces new and existing that will be installed in areas where temporary submerged conditions can occur, such as within vaults and for piping and valves covered with insulation. **Application Notes:** 1. Proposed piping and valves may be provided with factory applied prime coat(s), with fusion bonded epoxy or Type H epoxy. For damaged factory applied coatings spot prime with Epoxy Mastic. Provide application of Type C and Type M coatings in the field. 2. Proposed Field Coated and Existing Previously Coated Piping and Valves: Prepare as indicated and provide full coat of Epoxy Mastic and continue with stripe, intermediate and top coat as indicated.	**For New Piping and Valves:** SSPC-SP1 SSPC-SP6 NAPF 500-03-01 NAPF 500-03-04 NAPF 500-03-05 **For Previously Coated Piping and Valves:** SSPC-SP1 SSPC-SP3 NAPF 500-03-01 NAPF 500-03-03	TYPE N – Epoxy Mastic TYPE C – Penetrating Epoxy Pre-Primer TYPE G - Stripe Coat TYPE G – Epoxy-Polyamide	1 1 2	4.0 2.0 4.0
				Total Minimum Dry Film Thickness	**12.0 mils**

END OF SECTION

09 96 01 CONCRETE PROTECTIVE COATINGS

1.00 GENERAL

1.01 SCOPE OF WORK

A. Contractor will furnish all labor, materials, equipment and incidentals necessary to apply protective coatings as shown on the Drawings or as specified herein, including the preparation and/or repair of surfaces prior to application of coatings.

B. Protective coatings will be applied at the following locations:

1. Any new concrete manholes.

C. Contain, treat, and dispose of any dust, spray, drainage, or spillage resulting from coating operations. It will be the Contractor's responsibility to determine if the materials to be disposed of are classified as Hazardous Waste. Disposal of waste, hazardous or otherwise, will be in accordance with applicable regulations. Contractor will be aware of and understand the regulations concerning disposal of waste generated by coating operations.

D. Contractor will ensure that coating manufacturer's technical representative will be on-site for the initial surface preparation and coating application processes. The technical representative will confirm, with a follow-up report, that surface preparation and coating application processes were performed in compliance with the coating manufacturer's written guidelines.

1.02 QUALITY ASSURANCE

A. Manufacturer's Qualifications:

1. Certified in compliance with latest version of ISO 9001 Quality Standards for formulation (research and development), manufacture, and technical support.

2. Manufacturer must provide an authorized technical specialist to assist the Contractor, if necessary.

3. Products will be manufactured in the United States.

B. Applicator's Qualifications: Applicators must be qualified in this line of work and have a minimum of 5 years of experience in the successful application of the protective coatings of the types specified herein. Submit a list of five recent projects, completed within the last 3 years, including names of references with contact information for those projects. Submit manufacturer's approved applicator and training certificates for those who will be installing the coating. Applicator's qualifications and training certificates to be included in coating submittal and will be filed as Record Data.

C. Applicator Prove-Out: Prior to beginning the coating procedure for the entirety of the structure, the applicator will coat a 10-foot by 10-foot test section which will include a corner in the structure. The section to be coated will be determined through coordination with the Owner and the Owner's representative. The purpose of the prove-out will be to identify and define a level of expected quality that is agreed upon by both the Owner and the Owner's representative prior to coating the entire structure per the on-site manufacturer's representative's observations and direction regarding application requirements. After the completion of a successful prove-out, the test section will be left in

place and incorporated into the final coating. Therefore, additional payment will not be made for this prove-out and the cost will be considered subsidiary to the unit price bid. The prove-out will be to evaluate the following:

1. Surface Preparation: Surface preparation will be observed by the manufacturer's representative, Owner, and Owner's representative. The methods and materials used will be verified to comply with manufacturer's recommendation and that the resulting surface is prepared as required to achieve proper coating application and bonding.
2. Application Techniques and Equipment / Personnel Skill Demonstration: The applicator's personnel, the equipment used, and their techniques followed will be observed by the manufacturer's representative, Owner, and Owner's representative during the prove-out to verify that qualified and experienced personnel using the manufacturer's recommended equipment and application techniques are used and followed.
3. Coating Thickness and Uniformity Testing: The coating thickness and uniformity of the thickness will be tested during the application of the 10-foot by 10-foot test section. Tests will be witnessed by the manufacturer's representative, Owner, and Owner's representative. The testing of the thickness will be in accordance with the testing procedure outlined in Paragraph 3.02, Application, and will serve to verify the applied coating thickness meets the manufacturer's minimum required thickness or the required minimum thickness outlined within this specification, whichever is greater. Tests will be made on a 2-foot by 2-foot grid for the purposes of this prove-out.
4. Visual Coating Uniformity and Texture Observation: The uniformity and texture of the coating will be observed during the application by the manufacturer's representative, Owner, and Owner's representative. The texture and uniformity of the applied coating will be adjusted until a level of uniformity and texture is reached that is agreed upon by the Owner and Owner's representative.
5. Coating Pull-Off Adhesion Testing (Destructive Testing): The applied coating will be tested for adhesion during the application to the 10-foot by 10-foot test section. Tests will be witnessed by the manufacturer's representative, Owner, and Owner's representative. The testing of the adhesion will be in accordance with the testing procedure outlined in Paragraph 3.03, Field Quality Control/Testing and will serve to verify the applied coating is adequately adhering to the 10-foot by 10-foot test section. Tests will be made on a 2-foot by 2-foot grid for the purposes of this prove-out.

D. Testing: Protective coatings will be applied under quality control procedures that include inspection of surface preparation before each coat. Do not proceed with the next step until the Owner has approved the previous step (refer to Applicator Prove-Out in Paragraph 1.02.C). Contractor will be solely responsible for all testing for this work. Engineer may request additional tests if it is considered necessary. Cooperate with the Owner, providing equipment, scaffolds, and other equipment as requested by the Owner for inspection purposes.

1.03 SUBMITTALS

A. Submittals will be in accordance with Section 01 33 00 "Document Management" and will include:

1. Manufacturer's product data sheet for each coating type, including surface preparation requirements, recommended spreading rates, application procedures, recommended primers, environmental limits (temperature, humidity, and dew point) and other instructions.
2. Material Safety Data Sheets (MSDS) for all coatings, solvents, etc.
3. Applicator's qualifications, including training certificates for those who will be performing the coating application.
4. Manufacturer's statement regarding applicator instruction on product use and application.
5. Warranty documentation.
6. Certified Material Test Reports.
7. Documentation of Field Testing: The location and results of the thickness tests will be documented during field testing. The documentation will include test method and procedure used, equipment used, air temperature, surface temperature, humidity, dew point, quantity of structure(s) lined (square footage covered), number of gallons of lining compound expended and materials used. If a location fails a test, the failing result will be included in the documentation along with what actions were taken to repair the failing area and the results of the subsequent retest of the area. After successful completion of the coating installation, this documentation will be submitted to the Owner as Record Data. This documentation shall be included in the weekly inspection reports.
8. Coating Plan:
    a. Anticipated coating process schedule by date, including dates when hold-point inspections are anticipated. Schedule must indicate detailed activities performed daily.
    b. Detailed procedures and schedule for all pre-cleaning, surface preparation and application of coating, including touch-up and repair procedures for all coating systems.
    c. Recoat schedule on the submitted coating materials.
    d. Data sheets complete with a graduated scale or curve, produced by the coating manufacturer, with curing characteristics and recommendations regarding complete coating curing.
    e. Provide a written plan documenting how spent cleaning debris and/or paint over-spray or droplets will be contained/confined to the Site during the surface preparation and coating application operations. Reasonable care must be exercised by the Contractor to prevent damage, nuisance, or hazardous conditions to adjacent or nearby property owners. Include all materials and method to be used for

protection of exterior surfaces and allow for recovery and disposal of paint scraps and blast media.

f. Provide written plan documenting how paint and/or abrasive damage to automobiles and property will be addressed, including a process for quick removal of the paint or abrasive, and how the Work will be accomplished (this will not relieve the Contractor from the responsibility of setting claims for damage, but is intended to expedite and minimize said claims).

1.04 REFERENCE STANDARDS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by designation only. In the event of a conflict between the published standards, codes, and this Section, the more stringent requirement will govern.

1. ASTM International (ASTM):

ASTM C307	Standard Test Method for Tensile Strength of Chemical-Resistant Mortar, Grouts, and Monolithic Surfacings
ASTM C531	Standard Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, Monolithic Surfacings, and Polymer Concretes
ASTM C579	Standard Test Methods for Compressive Strength of Chemical-Resistant Mortars, Grouts, Monolithic Surfacings, and Polymer Concretes
ASTM C580	Standard Test Method for Flexural Strength and Modulus of Elasticity of Chemical-Resistant Mortars, Grouts, Monolithic Surfacings, and Polymer Concretes
ASTM C884	Standard Test Method for Thermal Compatibility Between Concrete and an Epoxy-Resin Overlay
ASTM C1028	Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method
ASTM D543	Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents
ASTM D638	Standard Test Method for Tensile Properties of Plastics
ASTM D695	Standard Test Method for Compressive Properties of Rigid Plastics
ASTM D790	Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
ASTM D1653	Standard Test Methods for Water Vapor Transmission of Organic Coating Films
ASTM D2240	Standard Test Method for Rubber Property-Durometer Hardness
ASTM D2584	Standard Test Method for Ignition Loss of Cured Reinforced Resins
ASTM D4060	Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser
ASTM D4258	Standard Practice for Surface Cleaning Concrete for Coating

ASTM D4262	Standard Test Method for pH of Chemically Cleaned or Etched Concrete Surfaces
ASTM D4263	Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method
ASTM D4272	Standard Test Method for Total Energy Impact of Plastic Films by Dart Drop
ASTM D4414	Standard Practice for Measurement of Wet Film Thickness by Notch Gages
ASTM D4541	Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testing
ASTM D4787	Standard Practice for Continuity Verification of Liquid or Sheet Linings Applied to Concrete Substrates
ASTM D6132	Standard Test Method for Nondestructive Measurement of Dry Film Thickness of Applied Organic Coatings Using an Ultrasonic Coating Thickness Gage
ASTM D7234	Standard Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testing
ASTM E337	Standard Test Method for Measuring Humidity with a Psychrometer (the Measurement of Wet- and Dry-Bulb Temperatures)
ASTM F1869	Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
ASTM F2170	Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes
ASTM F2659	Standard Guide for Preliminary Evaluation of Comparative Moisture Condition of Concrete, Gypsum Cement and Other Floor Slabs and Screeds Using a Non-Destructive Electronic Moisture Meter
ASTM G210	Standard Practice for Operating the Severe Wastewater Analysis Testing Apparatus

1.05 JOB CONDITIONS

A. The material must provide a permanent impermeable, high strength, monolithic lining for concrete structures that is sulfuric acid corrosion, hydrogen sulfide gas, abrasion and impact resistant.

B. All steps of the coating system will be subject to observation prior to progression to succeeding steps. Phases of observation will include, but not be limited to:

1. Pre-cleaning (before surface preparation) survey of facilities to be resurfaced or primed.
2. During surface preparation and prior to coating application.
3. During and immediately after each coating application.
4. Final coating observation.

C. Environmental Conditions:

1. Do not apply coating under conditions that are unsuitable to produce good results. Do not begin application of coatings in areas where other trades are working, or where construction activities result in airborne dust or other debris. Do not apply coatings in conditions which do not conform to the recommendations of the coating manufacturer.

2. Coatings will only be applied when conditions fall within the parameters listed in the manufacturer's printed data.

3. Concrete will be cured for 28 days minimum and attain the required strength before coating is applied.

4. Do not apply any coatings when weather conditions are unfavorable. If climatic conditions are not conducive for best results, postpone application of coatings until conditions conform to the manufacturer's recommendations and the provisions of this Section. Do not apply coatings to a wet or damp surface in wet or damp weather conditions, or when there is dust in the air. Surfaces exposed to direct sunlight will be shaded by awnings or other protective devices while coatings are being applied. When necessary, provide temporary heating devices of a type that produces no fumes, and which will not discolor the paint system.

D. Working Conditions:

1. Provide adequate lighting at any location that coatings are being applied or testing is performed. Illumination will be of enough intensity to allow for safe working conditions and ability to properly apply and test the coating. Provide explosion-proof lighting when required.

2. Temporary ladders and scaffolds will conform to applicable safety requirements. Erect temporary scaffolds where needed to cover large areas. Provide ladders or scaffolding during testing procedures.

E. Forced Ventilation:

1. Provide continuous forced fresh air ventilation when working inside of containment systems or enclosed areas that are not openly vented from the beginning of surface preparation through final coating operations and coating curing.

2. Forced ventilation must be supplied per the recoat time required by the coating manufacturer and at least 48 hours after the final coat has been applied.

3. From the beginning of interior wet and/or dry coating application and until the coating is cured, the Contractor must monitor the air for the lower explosion limit (LEL) as published in the coating manufacturer's project SDSs.

4. Contractor is responsible for supplying, installing and maintaining the forced ventilation system.

F. Contractor will conform to all local, state, and federal regulations including those set forth by OSHA, RCRA and the EPA and any other applicable authorities.

G. Confined space entry program and other required safety training certificates will be submitted by the Contractor as Record Data to the Owner as necessary to perform the specified work.

H. Flow diversion and/or bypass plans will be submitted by Contractor to Owner as necessary to perform the specified work. Refer to Section 02 96 00 "Temporary Bypass Pumping" for submittal requirements.

I. Exterior concrete waterproofing has not been specified. If the coating manufacturer or the Contractor requires the installation of a waterproofing material on the exterior of the

structure in order to warranty the product, then the Contractor will provide waterproofing at no additional cost to the Owner.

1.06 WARRANTY

A. Contractor will warrant all work against defects in materials and workmanship for a period of 10 years from the date of final acceptance of the project. Contractor will, within a reasonable time after receipt of written notice thereof, repair defects in materials or workmanship which may develop during said 10-year period, and any damage to other work caused by such defects or the repairing of same, at his own expense and without cost to the Owner. If the manufacturer's standard warranty does not extend to 10 years, manufacturer will provide documentation of extended warranty.

B. A warranty inspection will be conducted annually for the entire warranty period with the manufacturer present. Any defective work discovered will be corrected by the Contractor in accordance with specifications at no additional cost to the Owner. Other corrective measures may be required during the warranty period.

1.07 DELIVERY AND STORAGE

A. Deliver coating products to the Site in original unopened containers, with manufacturer's label, batch number, warning labels, contents (by volume) attached. Do not apply products until the Owner's field representative has approved the product for use.

B. Use one location at each site for the storage of coating products. Protect the area from spills and other damage. Protect the products from extreme heat or cold. Keep containers covered. Keep the storage rooms clean of trash and debris. Dispose of oily or used rags daily. Under no circumstances will they be allowed to accumulate. Take precautions to prevent fires. The storage of flammable liquids will comply with city, state, or other fire codes.

C. Storage of coating products and associated materials must be in accordance with the manufacturer's requirements. Coatings that have been damaged or not stored properly must not be used and will be removed from the Site.

D. All products and coatings that have not been approved for the Project will be immediately removed from the Project Site.

E. All materials must be delivered to the Site in original sealed containers with the date of manufacture and batch number stamped thereon by the coating manufacturer. Materials shall be subject to random observations by the Owner's representative at the Site.

2.00 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Products listed herein are specified to establish a standard of quality. Products which comply with the Contract Documents and are manufactured by the companies listed in this Section will be acceptable. Products from other coating manufacturers may not be submitted and will not be considered.

B. A.W. Chesterton Company:

Coat	Product	DFT
Top Coat	Chesterton ARC S1HB	125 mils
Primer	Two-component, chemically unique from the topcoat mix, will be hydrophobic, have a low viscosity, and be able to bond to wet concrete	

C. Raven Lining Systems:

Coat	Product	DFT
Top Coat	Raven 405 Series Epoxy, a two component (resin and curing agent)	80 mils
Primer	Two-component, chemically unique from the topcoat mix, will be hydrophobic, have a low viscosity, and be able to bond to wet concrete	

D. CCI Spectrum, Inc.:

Coat	Product	DFT
Resurfacer	Spectra-Grout (Hydrophilic Polyurethane for repairing cracks and leaks)	
Primer	SpectraShield (Multi-layer Liner System): Moisture Barrier - Modified Polymer (Silicone Modified Polyurea) Surfacer - Polyurethane/Polymeric Blend Foam Final Corrosion Barrier - Modified Polymer (Silicone Modified Polyurea)	500 mils

E. Warren Environmental, Inc.:

Coat	Product	DFT
Resurfacer	301-18 Single Coat, Two-Part, Thixotropic Epoxy Spray/Hand System 151 Injection Grout, Hydrophobic water cut-off grout and soil stabilization grout	
Primer	301-14 Single Coat, Two-Part, Thixotropic Epoxy Spray System Series 218 MortarClad	125 mils (new conc) 250 mils (rehabbed)

E. TNEMEC Company, Inc.:

Coat	Product	DFT
Resurfacer	Series 218 MortarClad	
Primer	Series 201 Epoxoprime	6-12 mils
Top Coat	Series 436 PermaShield	100 mils

F. The Sherwin-Williams Company:

Coat	Product	DFT
Resurfacer	Dura-Plate 2300 Cementitious Resurfacer	
Primer	Corobond 100	5-6 mils
Top Coat	Dura-Plate 6100 High Performance Epoxy Mortar, or Dura-Plate 6000 Reinforced Epoxy (Spray or Mortar)	125 mils

2.02 MATERIALS

A. General:

1. All components of the coating system must have a flash point above 203 F.
2. The resurfacer, primer and topcoat composite will contain no chemicals classified by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), or the Occupational Safety and Health Administration (OSHA) as carcinogenic, nor suspected carcinogenic chemicals.
3. Raw materials of the resurfacer, primer and topcoat composite will not contain any non-reactive diluents or solvents.
4. To ensure correct mix ratios are achieved, the packaging of each component will be pre-measured to the correct mix ratio and in the quantities that will be mixed on the job site. Each discrete batch size will not exceed 1.25 cubic feet in volume.
5. The material must be suitable for overhead, vertical and horizontal surfaces, and capable of being spray applied, brushed or rolled at a specified thickness as recommended by the manufacturer.

3.00 EXECUTION

3.01 PREPARATION

A. Prepare surfaces in accordance with manufacturer's written recommendations.

B. For coating existing concrete surfaces, the Contractor will blast surface for initial inspection. If concrete surface is corroded and/or reinforcing steel is visible, the surface will be repaired before coating is applied.

C. Appropriate actions will be taken by the Contractor to comply with local, state, and federal regulatory and other applicable agencies regarding environment, health, and safety during work.

D. All structures to be coated will be readily accessible to the Owner.

E. Thoroughly cure concrete surfaces prior to application of coatings. Allow a minimum of 28 days curing time, or as recommended by manufacturer, to elapse before coatings are applied.

F. Remove all grease, oils, and grime from concrete structure by washing with an emulsifying alkaline water-base cleaner. Follow with a thorough rinsing.

G. Remove all surface contaminants including old coatings, chemical salts, dust, loose concrete, and the laitance layer from concrete structure by method recommended by the manufacturer.

H. Alternate methods of surface preparation, i.e. acid etch or high-pressure water wash, may be used with prior written approval of the coating manufacturer.

I. Resulting surface must be structurally sound and free of contaminants prior to coating application. Repair and resurface any defective areas prior to surface preparation. Apply resurfacing material in accordance with the manufacturer's recommendation.

J. Any active flows will be dammed, plugged, or diverted as required to ensure all liquids are maintained below or away from the surfaces to be coated until final applications are cured as recommended by the manufacturer.

K. Surface to be coated can be damp, if allowed by manufacturer. There will be no standing water. Refer to the manufacturer's recommendation on maximum allowable moisture vapor transmission.

L. Pre-fill cracks in horizontal surfaces with resurfacer as per the manufacturer's recommendations. For cracks in vertical surfaces, pressure inject with a suitable injection system per manufacturer's recommendations.

3.02 APPLICATION

A. Application will be in accordance with the manufacturer's written recommendations.

B. Product Quality:

1. Use only the coatings specified in Part 2.00 (Products). Use only those thinners and solvents recommended by the manufacturer, only in the amounts necessary to produce the manufacturer's recommended spreading rate, and in amounts not exceeding the maximum quantities stated in the manufacturer's literature.

2. The coating material will not show excessive settling in a freshly opened full can and will be easily re-dispersed with a paddle to a smooth, homogeneous state. It will show no

curdling, thickening, becoming lumpy, caking, or color separation and will be free of lumps or skim surfaces.

3.03 FIELD QUALITY CONTROL / TESTING

A. Owner or Owner's third-party inspector will approve surfaces for application of coating at each stage. Any surface that is coated prior to the approval will be stripped back and recoated.

B. Observations must be conducted by the Owner's representative or a third-party inspection company. Final observations will be performed in the presence of the Owner or its representative and the Contractor's superintendent. All materials and equipment used in the accomplishment of testing are subject to observation at any time by the Owner and/or inspector. Periodic observation times will be agreed upon by the inspector and Contractor and approved by the Owner.

C. Owner may conduct the tests and observations to verify the coating manufacturer's data. If the coating testing results fall below the test requirements or visual observation, the Owner reserves the right to have the Contractor change coating materials and/or coating manufacturer to a coating that will meet all the stated requirements in this Section. All coating runs, sags, pinholes, voids, and skips will be repaired in accordance with the coating manufacturer's written recommendations and be retested. All disbonded coatings will be removed and replaced in accordance with the coating manufacturer's written recommendations.

D. All steps of the coating system will be subject to observation prior to progression to succeeding steps. Phases of observation will include, but not be limited to:

1. Pre-cleaning (before surface preparation) survey of facilities to be resurfaced or primed.
2. During surface preparation and prior to coating application.
3. During and immediately after each coating application.
4. Final coating observation.

E. Contractor may not move or remove scaffolding, ladders or other fixtures necessary to provide proper observation until such work has been observed and approved by the inspector and/or the Owner's representative.

F. Any work found to be deficient, damaged, or otherwise unacceptable will be repaired in accordance with the coating manufacturer's latest written repair recommendations at no additional cost to the Owner.

G. Owner and Owner's representative will make every attempt to minimize damage to newly coated areas during observation activities, but any damage caused, regardless of by whom, will be repaired by the Contractor at no additional cost to the Owner.

H. Observation and/or acceptance of the Contractor's Work by the Owner, inspector or their representatives in no way releases the Contractor from any of the terms and conditions of the Contract Documents.

I. The following test and observations will be performed:

1. Surfaces of all concrete will first be cleaned and observed by the Contractor's superintendent to ensure that all grease, oil, and other foreign materials have been removed before coating. Any area found to be improperly cleaned, will be redone to the Owner's representative's satisfaction. Final surface preparation will be as per the manufacturer's recommendation. Prior to observation of all interior and exterior surfaces by the Owner's representative, Contractor's superintendent will observe and confirm readiness for inspection.

2. No pinholes, holidays, or other irregularities will be permitted in the final interior coating inspection.

3. On days when coating is being performed, the Contractor will monitor and record ambient climatic conditions and interior conditions as follows:

   a. Air temperature, surface temperature, humidity and dew point will be measured and recorded by the Contractor prior to application of coating, daily. Surface temperature will be measured using Owner-approved thermometers. Temperature of both the sunny side and shady side of the structure will be recorded periodically each day.

   b. The structure surface temperatures, relative humidity, dry bulb, wet bulb and dew point temperatures, both interior and exterior (as appropriate), are to be recorded at least every 3 hours. The dew point will be measured by use of a sling psychrometer in conjunction with U.S. Department of Commerce Weather Bureau Psychometric Tables. Contractor will use a form approved by the Owner for recording this data. The completed forms will be kept on the Site at all times, from the time coating is first applied until the coating system is complete.

4. Destructive Testing: A minimum of five pull off adhesion tests, on each of application, will be performed on surfaces in compliance with ASTM D4541. Tests will be performed on the primer, intermediate and finished coating system. If test results do not meet the criteria of the coating manufacturer's written adhesion limits, additional tests will be performed as deemed necessary by the Owner. Contractor will repair, to the Owner's satisfaction and per the manufacturer's recommendations, all test areas where coating has been damaged and repair all areas where adhesion of coating is below the coating manufacturer's written adhesion limits. Repairs will be made by the Contractor at no additional cost to the Owner. Repair areas will be subject to re-testing and will continue to be re-tested until the adhesion of the repaired coating meets the stated minimum adhesion limit of the coating manufacturer. Retest costs, including actual labor and materials, will be at Contractor's expense.

5. Field Tests: Make wet film tests during coating operations to assure proper thicknesses of coating is being applied. After each coat has been applied, test the paint film thickness with a nondestructive, magnetic type thickness gauge. The total dry-film thickness for each coat will not be less than 75 percent of the amount specified. If the thickness is less than 75 percent, apply additional coats until the total specified thickness is obtained. The total thickness after the final coat has been applied will be 100 percent of the thickness specified, at a minimum. Apply additional coats per the manufacturer's recommendations regarding preparation and application over existing conditions until the specified thickness is reached or exceeded. Tests will be made

starting at 2 feet above the bottom of the coating and will be taken every 10 feet vertically on all walls. Additional testing will be performed as required by field observation by the Owner or Owner's representative.

6. Holiday Testing: Test the entire surface of coated structures with a holiday detector. Testing must be conducted using a high voltage holiday detector for coatings with a DFT greater than 20 mils in accordance with ASTM D4787. Mark and repair pinholes in accordance with the manufacturer's printed instructions, then retest pinholes. No pinholes or other irregularities will be permitted in the final coats. Areas containing holidays will receive additional coats until tests indicate no holidays.

3.04 CLEAN AND ADJUST

A. Promptly remove trash and debris and any over-spraying resulting from coating operation from the Site, including all coating containers and waste products.

END OF SECTION

DIVISION 26

ELECTRICAL

26 00 00 ELECTRICAL GENERAL PROVISIONS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Basic requirements specifically applicable to the work of Division 26 - Electrical Requirements.

B. The Contractor shall furnish equipment, materials, and labor for assembly and installation plus checkout and start-up of the complete electrical system as shown on the Drawings and stipulated in the Specifications.

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 REFERENCES

A. As a minimum requirement, the electrical system shall be constructed in accordance with:

B. American National Standards Institute/National Fire Protection Association (ANSI/NFPA), No. 70 - National Electrical Code (NEC).

C. Local Building Code.

D. Other applicable Codes and Standards as referenced in other Master Specifications.

E. Comply with local, county, state and federal regulations and codes in effect as of date of purchase.

F. Equipment of foreign manufacture must meet U.S. codes and standards.

G. Equipment and materials shall conform to requirements of specification and to the criteria provided in data sheets for the project.

1.4 ADMINISTRATIVE REQUIREMENTS [NOT USED]

1.5 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00.

1.6 CONTRACTOR QUALIFICATIONS

A. All electrical work shall be performed only by a Texas State Licensed Electrical Contractor.

B. Electrical Contractor shall have full-time Master Electrician License on staff for City or County; in which project is located and shall have a State issued Master Electrician License.

C. All electrical work must be completed with a State of Texas Licensed Electrical Journeyman onsite at all times.

D. Contractor's Project Manager or his Assistant shall be familiar with types of electrical construction required by this project in order to determine that all subcontractor and vendor's work is in conformance with the plans and specifications.

E. Contractor shall have an established safety-training program in effect for the duration of this project and will be required to submit proof of safety training for all employees working on this project.

1.7 QUALITY ASSURANCE

A. Product Conformance Certificate and Quality Assurance Release.

1. Submit an overall conformance certificate for electrical components signed by the person responsible for product quality. Specifically identify the purchased material or equipment by project name and location, purchase order number, supplements, and item number where applicable, including materials and services provided by others. Indicate that all requirements have been met and identify any approved deviations.
2. Field Inspection:

   a. Electrical work shall be inspected and approved by the local code inspector and the Engineer.
   b. Contractor shall give a minimum of one-day notice to the Inspector that the installation is ready for inspection and two days' notice to the Engineer.
   c. Concealed work shall be inspected before it is covered.
      1) Conduit with stub-ups, underground in duct banks before concrete is poured.
      2) Conduit in slabs, walls and ceilings, complete with boxes.
   d. Electrical equipment and materials shall be inspected upon arrival by the Engineer for compliance with specifications.

1.8 SITE CONDITIONS

A. Take the following site conditions into consideration when fabricating, erecting, installing and wiring electrical equipment under this contract:

1. Seismic Zone — Zone 0
2. Wind Velocity — 90 mph
3. Temperature, Min/Max.:
   a. Coldest Winter Month: High 60 degrees F — Low 34 degrees F
   b. Warmest Summer Month: High 95 degrees F — Low 72 degrees F
   c. Lowest Expected: 11 degrees F
   d. Highest Expected: 112 degrees F
4. Rainfall:
   a. Annual — 14.9 inches
   b. Design hours — 3.4 inches/hour, 8.4 inches/24 hours
5. Design Relative Humidity: 54%
6. Station Barometric Pressure:
   a. Average Annual — 29.5 inches Hg Absolute.
7. Electric Power Supply Characteristics (Available to Contractor):

	Voltage	Phase	Hz	Wire	Delta or Wye
1	480	3	60	TBD	TBD

PART 2 - PRODUCTS

2.1 COMPONENT DESIGN

A. Components utilized in the construction of the material or equipment shall be of the latest proven design, new and in current production. Do not use obsolete components or components to be phased out of production.

2.2 FACTORY INSPECTION

A. Provide free access with prior notice for the Engineer at all times to the shop where the material or equipment is being fabricated or tested. Provide reasonable facilities for inspection, witnessing tests, and examining records. Give 7 days notice prior to starting tests, which are scheduled for factory inspection.

PART 3 - EXECUTION

3.1 PREPARATION

A. Verify dimensions and ratings of equipment and materials to ensure proper fit and performance.

3.2 INSTALLATION

A. Install equipment and materials in accordance with the Drawings and manufacturer's written instructions. If field conditions necessitate changes in electrical installation, obtain approval from the Engineer.

B. All electrical equipment shall be mounted at an elevation of twenty-four (24) inches above the base water surface flood elevation of the construction site. Should there be a difference in the mounting elevation on the construction Drawings that is in conflict with the previous directive the Contractor shall immediately bring such conflict to the attention of the Engineer for resolution.

3.3 DEMONSTRATION

A. Test the electrical system to specification requirements and to demonstrate correct installation and operation of equipment.

B. Before 7-days test, demonstrate the system to the Engineer. Show the system to be fully operational. All alarms, safety's, and communication points to central and locally must operate in both full-automatic and back-up modes. Use fresh water in the test medium.

C. Operate the system continuously for a period of 7 days in full automatic, without failure, to qualify as acceptable. "Failure" is considered any problem that requires correction by maintenance personnel, such as: high or low water level, any motor alarm, power failure, phase failure, communication failure, PLC failure, or UPS failure. This would exclude conditions not under the control of Contractor, such as: evident lightning strikes, 25-year rains, purchased power failure longer than the specified duration of service from UPS. Failures due to uncontrollable situations would allow the 7-day test to continue, as soon as test conditions are restored and the Engineer is notified.

3.4 WARRANTY

A. The Contractor warrants to the Engineer and Owner that all material and equipment furnished under this contract will be new and of good quality. The Contractor also warrants that all work will be of good quality, free from faults and defects for two (2) years from Final Acceptance date.

END OF SECTION

26 05 00 ELECTRICAL WORK

PART 1 - GENERAL

1.1 DESCRIPTION

A. The work shall include providing materials and equipment required for installation of complete and functioning electrical system as specified and as shown on the drawings.

B. This section is an integral part of all Specification Sections related to electrical, control and instrumentation construction under this contract. Conditions of this section are paramount to all other conditions in applicable sections and shall supercede all other conditions and requirements.

C. Electrical Control and Instrumentation Plans & Specifications are representative of the design intent and may not contain minute details normally associated with normally accepted electrical construction, as described in applicable codes or as described in manufacturer's literature. Contractor shall provide all appurtenances normally associated with a particular equipment or device, and as required for a properly operating system.

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 MAJOR ITEMS OF WORK AS FOLLOWS

A. Installation of Control Panel

B. Installation of Pump Junction Boxes

C. Installation of Transducer Based Level Measurement System

D. Installation of Electrical Service Equipment

1.4 PLANT CONTROL SYSTEM

A. The Contractor shall furnish and install added motor control center components and sections, as indicated on the plans, by the same manufacturer and model of the existing motor control center. Interrupting capacity, ratings, wiring method, and specific starter/section options shall be identical to those components already installed unless specifically directed otherwise by the Plans & Specifications. The added motor control center components shall include but shall not be limited to all necessary circuit breakers, motor starters, contactors, indicating lights, selector switches, lightning arrestor, surge capacitor, phase failure relays, elapsed time meters, PLC I/O, alarm horn, push button, control transformers, system monitor, power supplies, interlock wiring, control piping, blocks, valves, nameplates, and all other associated items required to provide a complete and workable system, without loss of existing functionality.

1.5 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00.

B. Submit all products covered under this specification for Engineer's approval.

C. Where submittals for a particular equipment, device or material item vary from that specified or shown on plan drawings, and where that item is not specifically noted as acceptable and, where installation of submitted item results in improper or undesirable operation of the system, Contractor shall be liable for removal and/or replacement of that item with the item specified or shown on plan drawings at no additional cost to Owner.

D. With each submittal include a copy of the applicable specification(s) Page(s) for the item submitted and mark "complies" or "non-compliance" or "exception" adjacent to the applicable paragraph. Identify applicable drawing sheet number and specification section on front of each submittal cover.

1.6 CONTRACTORS RESPONSIBILITIES

A. Electrical Contractor shall coordinate electrical power, telephone, data or special purpose line installation with utility companies. Within 30 days after award of contract, Electrical contractor shall contact utility company and owner and shall request service needed.

B. It is Electrical Contractors sole responsibility to assure that utility company and owner are notified and are kept aware of requirements.

C. Contractor shall provide all conduit, conductors and termination equipment as needed for utilities and shall coordinate with utility companies for installation requirements and shall provide installation constructed according to the utility company standards whether or not such is shown in detail or plans.

D. Electrical Contractor shall review all sections of the plans including Civil, Structural, Mechanical, Instrumentation, Process, Architectural, and Electrical and shall note all electrical and/or requirements for devices and equipment shown or implied, and shall provide service accordingly for a complete operating electrical system.

E. Electrical Contractor shall provide all programming set-up, adjustments and testing of devices or equipment included under this contract unless specifically excluded or unless equipment is not provided by Electrical Contractor.

F. General Contractor is specifically responsible for coordination of all electrical systems, devices and equipment provided or installed under this contract and shall assure that all requirements by all trades are met such as to insure a complete and operating electrical, control, process or instrumentation system.

G. Electrical Contractor shall be experienced with all types of electrical systems covered under this contract. No work shall be undertaken where Contractor's firm, project supervisors and project electrical workers have not had recent experience in similar projects in area or project location. Contractor will be required to furnish proof of experience where requested by Owner or Engineer or their Representatives.

H. General Contractors Project Manager or his Assistant shall be familiar with types of electrical construction required by this project in order to determine that all subcontractors work in conformance with the plans and specifications.

I. Contractor shall assure that all systems have been properly installed, adjusted and tested prior to final inspection, unless, Engineer has been duly notified in writing that certain equipments are not ready for final testing and such is acceptable with Engineer.

J. Additional site visits, inspections, and tests conducted by Engineer due to systems not being ready at designated time of final inspection may result in charges to Contractor by Engineer to pay for additional time of electrical inspectors not covered in Electrical Engineers scope of work. All charges will be at Engineers Standard rates.

K. Contractor shall fully inspect all motors and nameplates, controls, conduit, wiring devices and other items before starting work, ordering materials or submitting shop drawings in order to verify existing conditions are as shown on plans and shall immediately notify Engineer of any discrepancies between plans & specifications and existing conditions. Failure to do so may result in responsibility for any required changes in construction.

L. At completion of project and before final inspection, Contractor shall provide the Electrical Engineer with full size blue prints, red-lined to reflect the As-Built electrical installation. Any variation from plans shall be shown on each applicable plan sheet.

PART 2 - PRODUCTS

2.1 MATERIALS

A. All materials provided under all sections of the specifications shall be new and the standard products of manufacturers regularly engaged in the production of such equipment. All materials shall conform to the National Electrical Code and shall be approved and listed by the Underwriters' Laboratories. Materials described by manufacturer's name and catalog number are selected to set a definite standard of design and quality to be required. There is not any intention to discriminate against a product of another manufacturer, which is equally durable in construction, similar in design, and will serve the purpose for which it is intended. Within 30 days after award of the contract and before any materials and equipment are placed on order, the Contractor shall submit to the Engineer for approval a complete list including catalog numbers and descriptive matter, of all materials and equipment he proposes to provide.

B. Materials and equipment specifications are general in coverage and may contain reference to construction items that apply in only particular situations and may not apply as a general rule for materials installed on this project.

2.2 PLANS AND SPECIFICATIONS

A. Electrical plans and specifications are not intended to discriminate against any particular manufacturer. Specific values shown for a particular manufacturer's product may vary slightly for another product. The Electrical Engineer reserves the right to interpret the electrical specifications and to make judgement as to acceptance of a product, regardless of minute details in the specifications or on the Plans.

B. Specifications shall be reviewed for applicability of materials under certain conditions and in certain environments and, where not shown otherwise on plan drawings. These application directions shall be adhered to.

C. Where a particular reference on drawing plans does not conform to standard acceptable construction methods for a particular type project, the Contractor shall immediately notify the Engineer and request a clarification before ordering materials or starting construction.

PART 3 - EXECUTION

3.1 WORKMANSHIP

A. All wiring shall be installed in accordance with current NEC and local codes. Conduits exposed to the weather shall be PVC coated rigid galvanized steel (RGS) unless noted otherwise on plans. Conduit placed underground shall be schedule 40 PVC unless noted otherwise on plans.

B. A fish wire shall be left in all conduits in which the permanent wiring is not installed.

C. All fixtures, switch, and receptacle locations shall be approved by Engineer.

D. Refer to other sections of this specification for controls. Under this section of the specifications, the Contractor shall install the control devices and provide control wiring switches, outlet boxes, and shall make all final connections. Control wiring and interlocks shall conform to wiring diagrams furnished by equipment manufacturers.

E. The Contractor shall provide services of his Engineer or a factory trained technician to instruct plant-operating Personnel for a period of at least one (1) full day after completion of the contract work.

3.2 EXCAVATION AND BACKFILL

A. All underground conduits shall be buried to a minimum depth of 24-inches below finished grade. All trenches shall be uniform width and shall be backfilled and compacted to 95% that of original density. Any damage to underground conduits caused by other Contractors shall be repaired by this Contractor and shall be compensated accordingly by the party or parties responsible for the damage.

3.3 CLEAN UP

A. The Contractor shall upon completion of the work, remove all materials, empty containers, and any other materials that are not incorporated into the work.

END OF SECTION

26 05 19 600-VOLT BUILDING WIRE & CABLE

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Specifications for 600-volt building wire and cable.

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 REFERENCES

A. American National Standards Institute/National Fire Protection Association (ANSI/NFPA), NFPA 70 - National Electrical Code (NEC), Article 310 - Conductors for General Wiring.

B. Underwriter's Laboratories (UL)

1. UL 83: Thermoplastic Insulated Wires and Cables
2. UL 1063: Machine Tool Wires and Cables

C. American Society for Testing and Materials (ASTM)

1. ASTM B3: Soft or Annealed Copper Wires
2. ASTM B8: Concentric-Lay-Stranded Copper Conductors, Hard, Medium Hard, Soft

D. Insulated Cable Engineers Association (ICEA), ICEA S-61-402: Thermoplastic-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy (NEMA WC-5).

1.4 ADMINISTRATIVE REQUIREMENTS [NOT USED]

1.5 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00.

B. Submit the following for Engineer's approval.

1. Manufacturer's cut sheets and catalog data
2. Instruction for handling and storage
3. Dimensions and weight

1.6 QUALITY ASSURANCE

A. Tests. Cable shall meet all the requirements of Part 6 of ICEA S-61-402.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Ship wire and cable on manufacturer's standard reel sizes unless otherwise specified. Where cut lengths are specified, mark reel footage accordingly. Each reel shall contain one continuous length of cable. Provide impact protection by wood lagging or suitable barrier across the traverse of the reel. Provide moisture protection by using manufacturer's standard procedure or heat shrinkable self-sealing end caps applied to both ends of the cable.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Alan Wire

B. American Insulated Wire Corporation

C. Cerro Wire

D. General Cable Company

E. Houston Wire & Cable

F. Okonite Company

G. Interstate Wire Company

H. Southwire

I. Service Wire Company

J. Encore Wire

2.2 MATERIALS AND EQUIPMENT

A. Design. Provide cable designated as THWN/THHN or XHHW single conductor type and UL 83 and UL 1063 listed, rated 600 volts and certified for continuous operation at maximum conductor temperature of 90 degrees C in dry locations and 75 degrees C in wet locations while installed in underground duct, conduit or in control panels (MTW).

B. Conductors. Provide conductors which are Class B, concentric stranded, annealed un-coated copper with physical and electrical properties complying with ASTM B3 and B8 and Part 2 of ICEA S-61-402.

C. Insulation. Each conductor shall be PVC insulated and nylon jacketed to meet the requirements of Part 3 of ICEA S-61-402. The insulation thickness shall match the dimensions listed in NEC Table 310-13 for type THHN and THWN wire.

D. Wire Marking

1. Wire marking shall be in accordance with NEC Article 310-11 and shall be printed on the wire insulation at 2-foot intervals.
2. The printing method used shall be permanent and the color shall sharply contrast with the jacket color.

E. The single conductor color coding shall be as follows:

System Voltage	A	B	C	Neutral
120/208 Volt 3Ph/4w	Black	Red	Blue	White
120/240 Volt 3Ph/4w	Black	Orange	Blue	White
277/480 Volt 3Ph/4w	Black	Purple	Yellow	Grey

Motor Control	1	Black
	2	Red

	3	Blue
Ground		Green

PART 3 - EXECUTION

3.1 PREPARATION

A. Complete the cable raceway systems and underground duct banks before installing cables.

B. Verify sizing of raceways and pullboxes to ensure proper accommodation for the cables.

C. Check the length of the cable raceway system against the length of cable on the selected reel.

D. Clean conduits of foreign matter before cables are pulled.

3.2 INSTALLATION

A. Wiring Methods

1. Use wiring methods indicated on the Drawings
2. In general, use THHN/THWN or XHHW building wire for lighting, power and control wiring were conductors are enclosed in raceways such as above ground conduit system, underground duct banks, or inside control panels.
3. Do not use solid conductors.
4. Use conductors not smaller than No. 12 AWG stranded for lighting circuits.
5. Use conductors not smaller than No. 14 AWG for control circuits, except when part of a multiconductor cable or internal panel wiring.
6. In general, do not splice conductors unless approved by the Engineer.
7. Splices associated with taps for lighting and control circuits are allowed without approval.
8. Make splices in accessible junction boxes.
9. Use wire nuts with insulated caps for lighting wiring splices. Splice control circuit with insulated crimp connectors.

B. Single Conductor in Conduit and Ductbank

1. Install cables in accordance with the manufacturer's instructions and NEC Chapter 3 – Wiring Methods and Materials.
2. Pull cables into conduits using adequate lubrication to reduce friction. Lubricants must not be harmful to the conductor insulation.

C. Preparation for Termination

1. Make 600-volt power cable terminations and splices with heat shrinkable sleeves and seals.
2. Terminal lugs and connectors for all sizes of conductors shall be crimp-on type.
3. For size 1/0 AWG and larger, crimp-on lugs shall have the long barrel with 2-hole tongues except in places where termination space is limited.

D. Tests

1. In general, test insulation integrity of the wiring system before terminating.
2. Make sure to disconnect sensitive electronic equipment before testing insulation.
3. Use a 500 VDC megohmmeter and perform the wire system insulation test.

E. Termination

1. After the 600-volt wiring system has been tested with satisfactory results, reconnect wire.

END OF SECTION

26 05 23 INSTRUMENTATION CABLE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes

1. Specifications for instrumentation cable.

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM).

1. ASTM B3: Soft or Annealed Copper Wires.
2. ASTM B8: Concentric-Lay-Stranded Copper Conductors, Hard, Medium Hard, Soft.
3. ASTM B33: Tinned Soft or Annealed Copper Wire for Electrical Purposes.

B. Institute of Electrical and Electronics Engineers (IEEE), IEEE 383-2.5: IEEE Standard for Type Test of Class IE Electric Cables, Field Splices, and Connections for Nuclear Power Generating Stations.

C. Insulated Cable Engineers Association (ICEA):

1. ICEA S-61-402: Thermoplastic-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy (NEMA WC-5).
2. ICEA S-66-524: Cross-Linked-Thermosetting-Polyethylene-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy (NEMA WC-7).
3. ICEA S-68-516: Ethylene-Propylene-Rubber-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy (NEMA WC-8).

D. Underwriters' Laboratories (UL):

1. UL 44: Rubber Insulated Wires and Cables.
2. UL 83: Thermoplastic Insulated Wire and Cables.

E. American National Standards Institute/National Fire Protection Association (ANSI/NFPA), NFPA No. 70 - National Electrical Code (NEC), Chapter No. 3 - Wiring Methods and Materials, Article 725 - Class 1, Class 2, and Class 3 Remote Control, Signaling, and Power-Limited Circuits.

1.4 ADMINISTRATIVE REQUIREMENTS [NOT USED]

1.5 SUBMITTALS

A. Submit the following under the provisions of Section 01 33 00 - Submittals:

1. Completed engineer's data sheets from this specification or manufacturer's data sheets, cut sheets, and catalog data.
2. Installation, terminating and splicing procedure (including bending radius and pulling tension data).

3. Instruction for handling and storage.
4. Dimensions and weight.

1.6 QUALITY ASSURANCE

A. Tests:

1. Cable shall be tested at the factory to confirm that the cable complies with requirements of ICEA Section 7.7.9 of S-66-524 or 7.5.9 of S-68-516. Refer to data sheet for additional test requirements.
2. Where applicable, the cable shall meet the requirements of the vertical tray flame test as described in IEEE 383-2.5.

1.7 DELIVERY, STORAGE AND HANDLING

A. Ship cable on manufacturer's standard reel sizes unless otherwise specified. Where cut lengths are specified, mark reel footage accordingly. Each reel shall contain one continuous length of cable. Reels shall be of the type specified on the data sheets. Provide impact protection by wood lagging or suitable barrier across the traverse of the reel. Provide moisture protection by manufacturer's standard procedure or heat shrinkable self-sealing end caps applied to both ends of the cable.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Alpha Wire Corporation

B. Belden Division, Cooper Industries, Inc.

C. Cablec Continental Cables Company

D. Dekoron Wire & Cable, LLC

E. General Cable Company

F. Manhattan Electric Cable Corporation

G. Okonite Company

2.2 MATERIALS AND EQUIPMENT

A. Design: Provide cable with the following design characteristics. The cable shall consist of multiple conductors. The cable assembly shall be UL listed, flame, oil and sunlight resistant, and certified for continuous operation at the temperature specified on the Instrumentation Cable Data Sheets in wet or dry locations while installed in underground duct, conduit, or cable tray. The number and size of conductors supplied in each cable shall correspond to the quantities specified on the Instrumentation Cable Data Sheets. Each conductor shall be individually insulated. Pairs and triads shall have conductors, which are twisted together with a drain wire, shielded, and covered with a jacket. Multi-pair/triad cables shall consist of the required number of electrically isolated, shielded pairs or triads, which are bundled together and covered by an overall jacket as specified on the Instrumentation Cable Data Sheets.

B. Conductors: Provide conductors which are Class B, concentric stranded, annealed tinned copper whose physical and electrical properties comply with ASTM B3, B8 or B33 and Part 2 of ICEA S-61-402, S-66-524, or S-68-516, unless otherwise specified on the Instrumentation Cable Data Sheets.

C. Insulation: Each conductor shall be insulated as specified on the Instrumentation Cable Data Sheets in compliance the requirements of Part 3 of ICEA S-61-402, S-66-524, or S-68-516. The average insulation thickness shall not be less than the dimensions shown in Table 7-32 or 7.5.1 of ICEA S-66-524 or S-68-516 for 600-volt insulation unless otherwise specified on the Instrumentation Cable Data Sheets. The minimum insulation thickness shall not be less than 90 percent of the value given in the table.

D. Drain Wire: Provide drain wire which is Class B, seven-stranded, tin-coated copper in accordance with ASTM B3, B8, or B33 and as specified on the Instrumentation Cable Data Sheets. The drain wire shall not be less than two AWG sizes smaller than the insulated conductor's size, except for multiple pair triad drain wires, which shall not be less than the insulated conductor size.

E. Shielding: Provide shielding consisting of laminated, nonburning, mylar-backed aluminum tape applied helically around a twisted pair or triad with the aluminum side in continuous contact with the drain wire unless otherwise specified on the Instrumentation Cable Data Sheet. Wrap the tape around each twisted pair or triad with a 25 percent minimum overlap unless otherwise specified on the Instrumentation Cable Data Sheets.

F. Jacket: The physical and electrical properties of the jacket used to cover single or multi-pair or triad cables shall meet the requirements of section 7.7.7 or ICEA S-66-524 or section 7.5.6 of ICEA S-68-516. Jacket material is specified on the Instrumentation Cable Data Sheets. The jacket thickness shall be equal to the dimensions shown in Table 7-33 or 7.5.2 of ICEA S-66-524 or S-68-516. The jacket material is specified on the Instrumentation Cable Data Sheets. The jacket thickness shall be equal to the dimensions shown in Table 7-33 or 7.5.2 of ICEA S-66-524 or S-68-516.

G. Armor: Where requested, use instrumentation cables protected by an interlocked metal tape armor coating made of galvanized steel which meets the requirements of paragraph 4.5 of ICEA S-68-516 or S-66-524, unless otherwise specified on the Instrumentation Cable Data Sheets.

H. Conductor Identification: Use individual conductors in single-pair and single-triad cables which are color coded black and white; and black, white and red, respectively. Multi-pair-triad cables shall have one conductor in each pair or triad colored white, and all other conductors are color coded in sequence according to Table L-2 of Appendix 2 of ICEA S-66-524, and as specified on the Instrumentation Cable Data Sheets.

I. Cable Marking: Print cable-marking information on the jacket of each cable at 2-foot intervals. Use a permanent printing method with color sharply contrasting the jacket color. See the Instrumentation Cable Data Sheets for the minimum information required.

PART 3 - EXECUTION

3.1 PREPARATION

A. Complete cable raceway systems, underground duct banks and cable support systems before installing cables.

B. Verify sizing of raceways and pullboxes to ensure proper accommodation for the cables.

C. Check the length of the cable raceway system against the length of cable on the selected reel.

D. Do not install or work on PVC insulated or jacketed cables in temperatures below 32 degrees F.

E. Clean conduits of foreign matter before cables are pulled.

F. Provide at least 30 percent spare conductors or pairs.

3.2 INSTALLATION

A. Cable in Conduit and Ductbank

1. Install cables in accordance with the manufacturer's instructions and NEC Article 725 - Class 1, Class 2, and Class 3 Remote Control, Signaling and Power Limited Circuits. Do not exceed maximum wire tension, maximum insulation pressure and minimum bending radius.
2. Pull cables into conduits using adequate lubrication to reduce friction. Lubricants must not be harmful to the conductor insulation or cable jacket.
3. Conduits carrying low-level signal cables shall be PVC-coated rigid steel

B. Cable in Tray: Install instrument and signal cable in cable tray only when the tray is dedicated for this type cable and cables are approved for tray installation.

C. Termination:

1. Do not splice conductors. For termination use crimp-on type ring tongue non-insulated tin-plated copper lugs.
2. For shielded control cable, terminate the shield and ground it at one end only, preferably at the control panel end for instrument and communication cable and at the supply end for electronic power cables. Shield on ungrounded cable end to be wrapped cylindrically around cable end and thoroughly insulated with Scotch 33 electrical tape. Grounded end to be of sufficient length to reach ground screw or terminal strip and insulated with transparent tubing.
3. If splicing is required, maintain shield continuity by jumpering the ground shield across connection point where it is broken at junction boxes, or other splice points. Insulate these points from ground.
4. Mark wiring on both ends with circuit numbers or loop tag numbers. Heat shrink wire markers after the ring tongue terminal has been installed. Extend the marker over the crimp or base of the terminal.

D. Tests:

1. Before connecting the cables, test insulation integrity and conductor continuity.

2. Test shielded cable shields with an ohmmeter for continuity along the length of the cable and for shield continuity to ground.
3. Connect shielded instrumentation cables to a calibrated 4-20 milliamp DC signal transmitter and receiver. Test at 4,12, and 20 milliamp transmitter settings.
4. Test each electrical circuit after permanent cables are in place to demonstrate that the circuit and connected equipment perform satisfactorily and that cables are free from improper grounds and short circuits.

E. Termination: After the instrumentation cable has been tested with satisfactory results, the cable can be terminated at both ends to their designated terminal points.

END OF SECTION

26 05 26 GROUNDING AND BONDING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Grounding electrodes and conductors

B. Equipment grounding conductors

C. Bonding

D. Power system grounding

E. Communication system grounding

F. Electrical equipment and raceway grounding and bonding

G. Control equipment grounding

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM B3: Soft or Annealed Copper Wires
2. ASTM B8: Concentric-Lay-Stranded Copper Conductors, Hard, Medium Hard, Soft
3. ASTM B33: Tinned Soft or Annealed Copper Wire for Electrical Purposes

B. Institute of Electrical and Electronics Engineers (IEEE):

1. IEEE 142-82: Recommended Practice for Grounding of Industrial and Commercial Power Systems
2. IEEE 383-2.5: IEEE Standard for Type Test of Class IE Electric Cables, Field Splices, and Connections for Nuclear Power Generating Stations.

C. Underwriters' Laboratories (UL):

1. UL 83: Thermoplastic Insulated Wire and Cables
2. UL 467: Grounding and Bonding Equipment

D. National Fire Protection Association (NFPA), NFPA No. 70 - National Electrical Code (NEC), Article No. 250 - Grounding.

1.4 ADMINISTRATIVE REQUIREMENTS [NOT USED]

1.5 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00.

B. All submittals shall be approved by the City prior to delivery.

1.6 ACTION SUBMITTALS/INFORMATIONAL SUBMITTALS

A. Submit the following under the provisions of Section 01300 - Submittals:

1. Manufacturer's cut sheets and catalog data
2. Installation, terminating and splicing procedure
3. Instruction for handling and storage
4. Dimensions and weight

B. Submittals after construction

1. Report of field tests and observations certified by Contractor.

1.7 CLOSEOUT SUBMITTALS [NOT USED]

1.8 MAINTENANCE MATERIAL SUBMITTALS [NOT USED]

1.9 QUALITY ASSURANCE

A. Tests:

1. Use insulated cable conforming to requirements of the vertical tray flame test as described in IEEE 383-2.5.
2. Test grounding system in the field in accordance with procedures outlined in Part 3 - Execution.

1.10 DELIVERY, STORAGE AND HANDLING

A. Ship grounding cable on manufacturer's standard reel sizes unless otherwise specified. Where cut lengths are specified, mark reel footage accordingly. Each reel shall contain one continuous length of cable. Provide impact protection by wood lagging or suitable barrier across the traverse of the reel. Pack and crate other materials specified to withstand normal abuse during shipping, handling and storage.

1.11 SITE CONDITIONS [NOT USED]

1.12 WARRANTY [NOT USED]

PART 2 - - PRODUCTS

2.1 CITY-SUPPLIED PRODUCTS [NOT USED]

2.2 MATERIALS

A. MANUFACTURERS

1. Cable:
   a. American Insulated Wire Company
   b. General Cable Company
   c. Okonite Company
   d. Interstate Wire Company
   e. Southwire
   f. Encore Wire

2. Ground Rods and Connectors:
   a. Blackburn
   b. Copperweld
   c. Thomas & Betts
3. Exothermic Connections:
   a. Burndy Corporation (Therm-O-Weld)
   b. Erico Products (Cadweld)
4. Grounding Connectors:
   a. Burndy Corporation
   b. O.Z. Gedney
   c. Thomas & Betts

B. Design:

1. Provide grounding cable and materials with the following characteristics:
   a. Use a grounding system designed in accordance with NEC Article No. 250 - Grounding, and the IEEE 142-82 - Recommended Practice for Grounding of Industrial and Commercial Power Systems.

C. Materials:

1. Use grounding conductors, bare or insulated, which are manufactured and tested in accordance with applicable standards ASTM B3, ASTM B8 and ASTM B33.
2. Where specified on Drawings, provide a main ground loop of No. 4/0 AWG, Class C stranded, bare copper cable. Small groups of isolated equipment may be grounded by a No. 2 AWG minimum insulated conductor connected to the main loop. Generally, taps shall be sized as follows:
   a. Main ground loop or grid: #4/0 minimum
   b. Switchgear, motor control centers and power transformers: #4/0
   c. Motors 200 hp and above: #4/0
   d. Power panels - AC and DC: #2/0
   e. Control panels and consoles: #2
   f. Building columns: #4/0
   g. Fencing posts: #2/0
3. Where single conductor insulated grounding conductors are called for, use 600-volt insulation. Use ground conductors identified with green insulation or green tape marking.
4. Supply identifying ribbon which is PVC tape, 3 inches wide, red color, permanently imprinted with "CAUTION BURIED ELECTRIC LINE BELOW" in black letters as specified in Section 26 05 53, Electrical Identification.
5. Utilize flexible copper braid across hinged chain link or fence gates to bond the movable portion to the grounded fence post.

2.3 ACCESSORIES [NOT USED]

2.4 SOURCE QUALITY CONTROL [NOT USED]

PART 3 - EXECUTION

3.1 INSTALLERS [NOT USED]

3.2 EXAMINATION [NOT USED]

3.3 PREPARATION

A. Complete site preparation and soil compaction before trenching and driving ground rods for the underground grid.

B. Verify from Drawings the exact location of stub-up points for grounding of equipment, fences and building or steel structures.

3.4 INSTALLATION

A. Construction Criteria

1. Install the main ground loop at a depth of at least 30 inches below earth surface. Connect the ground loop to ground rods and to tap connections to form a complete system as indicated on the electrical Drawings. The Contractor shall give special attention to the grounding of service equipment, structures and fences to comply with the NEC, local authorities and the serving utility company.
2. Electrical equipment, buildings, tanks, and other structures and equipment shall be grounded as indicated on the Drawings. Where ground rods are required, the rods shall be 10 feet long, 3/4-inch diameter, copper-clad steel ground rods, or as specified on the Drawings. Rods shall be driven vertically, and the top of the rods shall be a minimum of 18 inches below finished grade, or as specified on the Drawings.
3. Local pushbutton and selector switch stations, two-wire control devices, disconnect switches, lighting transformers, panelboards, operator panels, benchboards, and the enclosures of other electrical apparatus shall be grounded through an equipment grounding conductor run with the power supply or control circuit conductors or shall be grounded as shown on the Drawings.
4. Ground medium voltage motors, in addition to the grounding conductors in the motor feeder cable, with a separate No. 4/0 AWG cable to motor frame.
5. Motors having power supplied by multiconductor cable shall be grounded by a separate grounding conductor in the cable and where supplied by single conductor cable in conduit by a grounding conductor pulled in the conduit. Connect ground conductors to the ground bus in the motor control center and to the ground terminal provided in the motor conduit box.
6. Do not ground the insulated bearing pedestals of large motors.
7. Connect ladder-type cable trays to the grounding electrode system.
8. Install a warning ribbon approximately 12 inches below finished grade directly above the ground grid.

9. Connect fence posts of chain link and metal fences to the main ground loop at least every 50 feet.

B. Equipment Grounding:

1. Make grounding connections to surfaces, which are dry and cleaned of paint, rust, oxides, scales, grease and dirt to ensure good conductivity. Clean copper and galvanized steel to remove oxide before making welds or connections.
2. Use the exothermic welding process for below-grade grounding connections, except at ground rods. Use mechanical connectors or thermal connections for above-grade grounding connections as shown on the Drawings.
3. Make grounding connections to electrical equipment, vessels, mechanical equipment and ground rods in accordance with the Drawings.
4. Ground tanks and vessels by making connections to integral structural supports or to existing grounding lugs or pads, and not to the body of the tank or vessel.
5. Leave ground connections to equipment visible for inspection. Protect them with PVC non-metallic conduit as indicated on the Drawings.
6. Make connections to motor frames and ground buses with lugs attached to the equipment by means of bolts. Do not use motor anchor bolts or equipment housing for fastening lugs of grounding cable.
7. Where the wiring for lighting systems consists of single conductor cables in conduit, provide each conduit with an equipment-grounding conductor. Use a grounding conductor with green colored insulation and ground equipment in the lighting system.

C. Raceway and Support Systems Grounding:

1. Install raceway, cable rack or tray and conduit so that it is bonded together and permanently grounded to the equipment ground bus, according to the Drawings. Connection to conduit may be grounding bushing or ground clamp.
2. Install raceway at low voltage motor control centers or other low voltage control equipment so that it is bonded and grounded, except that any conduit which is effectively grounded to the sheet metal enclosure by bonding bushing or hubs need not be otherwise bonded.
3. Where a grounding conductor is run in or on a cable tray, bond the grounding conductor to each section of cable tray with a cable tray ground clamp.
4. Where only grounding conductor is installed in a metal conduit, bond both ends of the conduit to the grounding conductor.
5. Provide flexible "jumpers" around raceway expansion joints. Use copper bonding straps for steel conduit. Install jumpers across cable tray joints, which have been parted to allow for expansion and any hinged cable tray connections.

D. Fences and Gates:

1. Ground fences, fence posts and gates to the underground grid as shown on the Drawings.

E. Power System Grounding:

1. Solidly ground the secondary neutral of the main power supply transformer either to the ground grid or through an impedance. See Drawings for details.
2. Solidly ground the neutral of lighting, instrument and control transformers.

F. Cable Armor and Shields:

1. For shielded control cable, terminate and ground the shield at one end only, preferably at the control panel end for instrument and communication cable and at the supply end for electronic power cables. Maintain shield continuity by jumpering the ground shield across connection point where it is broken at junction boxes, or other splice points. Insulate these points from ground.
2. Connect the ground wire in power cable assemblies at each terminal point to a ground bus, if available, or to the equipment enclosure. Do not carry these ground wires through a "doughnut" current transformer (CT) used for ground fault relaying; do carry ground leads from stress cones through CTs. Ground power cable armor and shield at each terminal point.

G. Test Wells:

1. Provide access (test wells) for testing the ground grid system at one or several ground rod locations. Make test wells of a pipe surrounding the rod and connections with a cover placed on top at grade level. See Drawings for details.

H. Restoration

1. Restore surface features at areas disturbed by excavation and reestablish original grades except as otherwise indicated.
2. Where sod has been removed, replace it as soon as possible after backfilling is completed.
3. Restore areas disturbed by trenching, storing of dirt, cable laying, and other Work to their original condition.
4. Include necessary topsoiling, fertilizing, liming, seeding, sodding, sprigging, or mulching.
5. Restore disturbed paving as indicated.

3.5 REPAIR [NOT USED]

3.6 RE-INSTALLATION [NOT USED]

3.7 FIELD QUALITY CONTROL

A. Test:

1. Perform ground resistance tests after underground installation and connections to building steel are complete, unless otherwise noted on applicable Drawings.
2. Make tests at each ground test well using a "fall of potential" test method. Each ground test well shall not exceed a maximum resistance of 5 ohms. Where measured values exceed this figure, install additional ground rods as required to reduce the resistance to the specified limit.

B. Inspection:

1. Inspection of the grounding system by the Engineer and the local Code Inspector must take place before the grid trenches are backfilled.

3.8 SYSTEM STARTUP [NOT USED]

3.9 ADJUSTING [NOT USED]

3.10 CLEANING [NOT USED]

3.11 CLOSEOUT ACTIVITIES [NOT USED]

3.12 PROTECTION [NOT USED]

3.13 MAINTENANCE [NOT USED]

3.14 ATTACHMENTS [NOT USED]

END OF SECTION

Revision Log		
DATE	NAME	SUMMARY OF CHANGE

26 05 33 RACEWAYS AND BOXES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Material and installation requirements for:

a. Conduits.

b. Conduit fittings.

c. Conduit supports.

d. Wireways.

e. Outlet boxes.

f. Pull and junction boxes.

B. Related Specification Sections include but are not necessarily limited to:

1. Division 1 – General Requirements

2. Section 16119 – Underground Ducts & Pull Boxes

3. Section 16140 – Wiring Devices

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 DEFINITIONS

A. Underfloor Conduits.

1. Conduits which run underground within perimeter of building walls under building floor. This may consist of one conduit, or several conduits grouped together.

B. Duct Bank Conduits

1. Conduits which run underground outside perimeter of building walls. This may consist of one conduit, or several conduits grouped together.

C. Underground Conduits

1. Underground conduits are both under floor conduits and duct bank conduits.

1.4 ADMINISTRATIVE REQUIREMENTS [NOT USED]

1.5 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00.

B. Shop Drawings:

1. Product technical data:

a. Provide submittal data for all products specified in PART 2 of this Specification Section.

2. Fabrication and/or layout drawings:

a. Identify dimensional size of pull and junction boxes to be used.

1.6 QUALITY ASSURANCE

A. Items provided under this section shall be listed or labeled by UL or other Nationally Recognized Testing Laboratory (NRTL).

1. Term "NRTL" shall be as defined in OSHA Regulation 1910.7.

2. Terms "listed" and "labeled" shall be as defined in National Electrical Code, Article 100.

B. Referenced Standards:

1. Aluminum Association (AA).

2. American Iron and Steel Institute (AISI).

3. ASTM International (ASTM):

a. A123, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.

b. A153, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.

c. D2105, Standard Test Method for Longitudinal Tensile Properties of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Tube.

d. D2564, Standard Specification for Solvent Cements for Polyvinyl Chloride (PVC) Plastic Piping Systems.

e. F512, Standard Specification for Smooth-Wall Polyvinyl Chloride (PVC) Conduit and Fittings for Underground Installation.

4. National Electrical Manufacturers Association (NEMA):

a. 250, Enclosures for Electrical Equipment (1000 Volts Maximum).

b. RN 1, Polyvinyl Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit (IMC).

c. TC 2, Electrical Polyvinyl Chloride (PVC) Tubing and Conduit.

d. TC 3, Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing.

5. National Electrical Manufacturers Association/American National Standards Institute (NEMA/ANSI):

a. C80.1, Electric Rigid Steel Conduit (ERSC).

b. C80.3, Steel Electrical Metallic Tubing (EMT).

c. C80.5, Electrical Aluminum Rigid Conduit.

d. OS 1, Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports.

6. National Fire Protection Association (NFPA):

a. 70, National Electrical Code (NEC)

7. Underwriters Laboratories, Inc. (UL):

a. 1, Standard for Flexible Metal Conduit.

b. 6, Standard for Electrical Rigid Metal Conduit – Steel.

c. 50, Enclosures for Electrical Equipment, Non-Environmental Considerations.

d. 360, Standard for Liquid-Tight Flexible Steel Conduit.

e. 467, Grounding and Bonding Equipment.

f. 514A, Metallic Outlet Boxes.

g. 514B, Conduit, Tubing, and Cable Fittings.

h. 651, Standard for Schedule 40 and 80 Rigid PVC Conduit and Fittings.

i. 797 Electrical Metallic Tubing – Steel.

j. 870, Standard for Wireways, Auxiliary Gutters, and Associated Fittings.

k. 886, Standard for Outlet Boxes and Fittings for Use in Hazardous (Classified) Locations.

l. 1660, Liquid-Tight Flexible Nonmetallic Conduit.

C. Comply with NECA "Standard of Installation."

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Subject to compliance with the Contract Documents, the following manufactures are acceptable:

1. Rigid metallic conduits:

a. Allied Tube and Conduit Corporation.

b. Triangle PWC Inc.

c. Western Tube and Conduit Corporation.

d. Wheatland Tube Company.

e. LTV Steel Company.

f. EASCO Aluminum.

g. Indalex.

h. VAW of American, Inc.

2. PVC coated rigid metallic conduit and repair kits:

a. Calbond

b. KorKap

c. Perma-Cote

d. Rob-Roy Ind.

e. Raychem "GelTek" tape.

f. Thomas & Betts O-Cal

g. NEC Black Guard

3. Rigid non-metallic conduit:
   a. Carlon.
   b. Cantex.
   c. Heritage Plastics.
   d. Osburn Associates.
   e. Prime Conduit
   f. Champion Fiberglass.
   g. United Fiberglass of America, Inc.
4. Flexible metallic conduit:
   a. AFC Cable Systems.
   b. Anamet, Inc.
   c. Carlon.
   d. Electri-Flex.
   e. Flexible Metal Hose Company.
   f. International Metal Hose Company.
   g. Triangle PWC Inc.
   h. LTV Steel Company.
5. Flexible non-metallic conduit.
   a. Carlon
   b. Carflex.
6. Wireway:
   a. Hoffman Engineering Company.
   b. Weigmann.
   c. Square D.
7. Conduit fittings and accessories:
   a. Appleton.
   b. Carlon.
   c. Cantex.
   d. Crouse-Hinds.
   e. Killark.
   f. Osburn Associates.
   g. OZ Gedney Company.
   h. RACO.

i. Steel City.

j. Thomas and Betts.

8. Support systems:

a. Unistrut Building Systems.

b. B-Line Systems Inc.

c. Kindorf.

d. Minerallac Fastening Systems.

e. Caddy.

9. Outlet, pull, and junction boxes:

a. Appleton.

b. Crouse-Hinds.

c. Killark.

d. OZ Gedney Company.

e. Steel City.

f. RACO.

g. Bell.

h. Hoffman Engineering Company.

i. Wiegmann.

j. B-Line Circle AW.

k. Adalet.

l. Rittal.

10. Anti-seize compound:

a. Crouse-Hinds

2.2 RIGID METALLIC CONDUITS

A. PVC-Coated Rigid Steel Conduit (PVC-RGS):

1. Nominal 40 mil Polyvinyl Chloride (PVC) exterior coating:

a. Coating: Bonded to hot-dipped galvanized rigid steel conduit conforming to NEMA/ANSI C80.1.

b. The bond between the PVC coating and the conduit surface: Greater than the tensile strength of the coating.

2. Nominal 2 mil, minimum, urethane interior coating.

3. Urethane coating on threads.

4. Conduit: Epoxy prime coated prior to application of PVC and urethane coatings.

5. Female Ends:

a. Have a plastic sleeve extending a minimum of 1 pipe diameter or 2 in, whichever is less beyond the opening.

b. The inside diameter of the sleeve shall be the same as the outside diameter of the conduit to be used with it.

6. Standards: NEMA/ANSI C80.1, UL 6, NEMA RN 1.

B. PVC-Coated Rigid Aluminum Conduit (PVC-RAC):

1. Nominal 40 mil Polyvinyl Chloride (PVC) exterior coating:

a. Coating: Bonded to rigid aluminum conduit conforming to NEMA/ANSI C80.1.

b. The bond between the PVC coating and the conduit surface: Greater than the tensile strength of the coating.

2. Nominal 2 mil, minimum, urethane interior coating.

3. Urethane coating on threads.

4. Conduit: Epoxy prime coated prior to application of PVC and urethane coatings.

5. Female Ends:

a. Have a plastic sleeve extending a minimum of 1 pipe diameter or 2 in, whichever is less beyond the opening.

b. The inside diameter of the sleeve shall be the same as the outside diameter of the conduit to be used with it.

6. Standards: NEMA/ANSI C80.1, UL 6, NEMA RN 1.

C. Rigid Galvanized Steel Conduit (RGS):

1. Mild steel with continuous welded seam.

2. Metallic zinc applied by hot-dip galvanizing or electro-galvanizing.

3. Threads galvanized after cutting.

4. Internal coating: Backed lacquer, varnish, or enamel for smooth surface.

5. Standards: NEMA/ANSI C80.1, UL 6.

6. Rigid Aluminum Conduit (RAC) is an acceptable alternative to RGS.

D. Electrical Metallic Tubing (EMT):

1. Mild steel with continuous welded seam.

2. Metallic zinc applied by hot-dip galvanizing or electro-galvanizing.

3. Internal coating: Baked lacquer, varnish, or enamel for a smooth surface.

4. Standards: NEMA/ANSI C80.3, UL 797.

E. Rigid Aluminum Conduit (RAC):

1. AA Type 6063 aluminum allow, T-1 temper.

2. Maximum copper content of 0.10 percent.

3. Extruded, seamless.

4. Standards: NEMA/ANSI C80.5, UL 6.

2.3 RIGID NON-METALLIC CONDUIT

A. Schedules 40 (PVC-40) and 80 (PVC-80)

1. Polyvinyl-chloride (PVC) plastic compound which includes inert modifiers to improve weatherability and heat distribution.
2. Rated for direct sunlight exposure.
3. Fire retardant and low smoke emission.
4. Shall be suitable for use with 90 DegC wire and shall be marked "maximum 90 DegC".
5. Standards: NEMA TC 2, UL 651.

B. Fiberglass:

1. Epoxy based resin system using an anhydride curing agent.
2. Continuous E-glass roving.
3. Winding angle approximately 54.75 degrees.
4. Halogen free additive for flame spread and smoke control.
5. Ultraviolet inhibitor: Carbon black.
6. Two (2) step curing process.
7. Tensile strength: 9000 psi per ASTM D2105.
8. Integral bell and spigot.
9. Conduits and fittings to be joined with an epoxy adhesive creating a water tight connection.
10. Standard: UL 1684.

2.4 FLEXIBLE CONDUIT

A. Flexible Galvanized Steel Conduit (FLEX):

1. Formed of continuous, spiral wound, hot-dip galvanized steel strip with successive convolutions securely interlocked.
2. Standard: UL 360.

B. PVC-Coated Flexible Galvanized Steel (liquid-tight) Conduit (FLEX-LT):

1. Core formed of continuous, spiral wound, hot-dip galvanized steel strip with successive convolutions securely interlocked.
2. Extruded PVC outer jacket positively locked to the steel core.
3. Liquid and vaportight.
4. Standard: UL 360.

C. Flexible non-metallic (liquid-tight) conduit (FLEX-NM):

1. Formed of a helically wound spiral of rigid PVC reinforcement embedded within a flexible PVC wall.
2. Layered construction with a smooth seamless inner core of flexible PVC that is bonded to a covering of flexible PVC.

3. Between the layers is a woven nylon mesh for reinforcement.

4. Standard: UL1660

2.5 WIREWAY

A. General:

1. Suitable for lay-in conductors.

2. Designed for continuous grounding.

3. Covers:

a. Hinged or removable in accessible areas.

b. Non-removable when passing through partitions.

c. Finish: Rust inhibiting primer and manufacturer's standard paint inside and out except for stainless steel type.

d. Standards: UL 870, NEMA 250.

B. General Purpose (NEMA 1 rated) Wireway:

1. 14 or 16 gage steel without knockouts.

2. Cover: Non-gasketed and held in place by captive screws.

C. Raintight (NEMA 3R rated) Wiring Trough:

1. 14 or 16 gage galvanized steel without knockouts.

2. Cover: Non-gasketed and held in place by captive screws.

D. Watertight (NEMA 4X rated) Wireway:

1. 14 gage type 304 or 316 stainless steel bodies and covers without knockouts and 10 gage stainless steel flanges.

2. Cover: Fully gasketed and held in place with continuous piano hinge with three-point latch.

3. Flanges: Fully Gasketed and bolted.

E. Dusttight (NEMA 12 rated) Wireway:

1. 14 gage steel bodies and covers without knockouts and 10 gage steel flanges.

2. Cover: Fully gasketed and held in place with continuous piano hinge with three-point latch.

3. Flanges: Fully gasketed and bolted.

2.6 CONDUIT FITTINGS AND ACCESSORIES

A. Fittings for use with RGS:

1. General:

a. In hazardous locations, provide fittings listed for use in Class I, Groups C and D locations.

2. Locknuts:

a. Threaded steel or malleable iron.

b. Gasketed or non-gasketed.

c. Grounding or non-grounding type.

3. Bushings:

a. Threaded, insulated metallic.

b. Grounding or non-grounding type.

4. Hubs: Threaded, insulated and gasketed metallic for raintight connection.

5. Couplings:

a. Threaded straight type: Same material and finish as the conduit with which they are used on.

b. Threadless type: Gland compression or self-threading type, concrete tight.

6. Unions: Threaded galvanized steel or zinc plated malleable iron.

7. Conduit bodies (ells and tees):

a. Body: Zink plated cast iron with threaded hubs.

b. Standard and mogul size.

c. Cover:

1) Clip-on type with stainless steel screws.

2) Gasketed or non-gasketed galvanized steel, zinc plated cast iron.

8. Conduit bodies (round):

a. Body: Zinc plated cast iron.

b. Cover: Threaded screw on type, gasketed, galvanized steel, zinc plated cast iron.

9. Sealing fittings:

a. Body: Zinc plated cast iron with threaded hubs.

b. Standard and mogul size.

c. With or without drain and breather.

d. Fiber and sealing compound: UL listed for use with the sealing fitting.

B. Fittings for use with RAC:

1. General:

a. In hazardous locations, provide fittings listed for use in Class I, Groups C and D locations.

2. Locknuts:

a. Threaded stainless steel.

b. Gasketed or non-gasketed.

c. Grounding or non-grounding type.

3. Bushings:

a. Threaded, insulated metallic.

b. Grounding or non-grounding type.

4. Hubs: Threaded, insulated and gasketed metallic for raintight connection.

5. Couplings:

a. Threaded straight type: Same material and finish as the conduit with which they are used on.

6. Unions: Threaded copper free cast aluminum.

7. Conduit bodies (ells and tees):

a. Body: Copper free cast aluminum with threaded hubs.

b. Standard and mogul size.

c. Cover:

1) Clip-on type with stainless steel screws.

2) Gasketed or non-gasketed copper free cast aluminum.

8. Conduit bodies (round):

a. Body: Copper free cast aluminum.

b. Cover: Threaded screw on type, gasketed, copper free cast aluminum.

9. Sealing fittings:

a. Body: Copper free cast aluminum with threaded hubs.

b. Standard and mogul size.

c. With or without drain and breather.

d. Fiber and sealing compound: UL listed for use with the sealing fitting.

C. Fittings for use with PVC-RGS:

1. The same material and construction as those fittings listed under paragraph "Fittings for use with RGS" and coated as defined under paragraph "PVC Coated Rigid Steel Conduit (PVC-RGS).

D. Fittings for use with PVC-RAC:

1. The same material and construction as those fittings listed under paragraph "Fittings for use with RAC" and coated as defined under paragraph "PVC Coated Rigid Steel Conduit (PVC-RGS).

E. Fittings for use with EMT:

1. Connectors:

a. Straight, angle and offset types furnished with locknuts.

b. Zinc plated steel.

c. Insulated gland compression type.

d. Concrete and raintight.

2. Couplings:

a. Zinc plated steel.

b. Gland compression type.

c. Concrete and raintight.

3. Conduit bodies (ells and tees):

a. Body: Copper free aluminum with threaded hubs.

b. Standard and mogul size.

c. Cover:

1) Screw down type with steel screws.

2) Gasketed or non-gasketed galvanized steel or copper free aluminum.

4. Standard: UL 514B

F. Fittings for use with FLEX:

1. Connector:

a. Zinc plated malleable iron.

b. Squeeze or clamp type.

2. Standard: UL 514B.

G. Fittings for use with FLEX-LT and FLEX-NM:

1. Connector:

a. Straight or angle type.

b. Metal construction, insulated and gasketed.

c. Composed of locknut, grounding ferrule and gland compression nut.

d. Liquid tight.

2. Standards: UL 467, UL 514B.

H. Fittings for use with Rigid Non-Metallic PVC Conduit:

1. Coupling, adapters, and conduit bodies:

a. Same material, thickness, and construction as the conduits with which they are used.

b. Homogeneous plastic free from visible cracks, holes, or foreign inclusions.

c. Bore smooth and free of blisters, nicks or other imperfections which could damage the conductor.

2. Solvent cement for welding fittings shall be supplied by the same manufacturer as the conduit and fittings.

3. Standards: ASTM D2564, NEMA TC3, UL 651, UL 541B.

I. Fittings for use with Rigid Non-Metallic Fiberglass Conduit:

1. Coupling and adapters shall be of the same material, thickness, and construction as the conduit.

2. Epoxy adhesive for joining conduits and fittings shall be supplied by the same manufacturer as the conduit and fittings and shall provide a water tight connection.

3. Standard: UL 1684.

J. Weather and Corrosion Protection Tape:

1. PVC based tape, 10 miles thick.
2. Protection against moisture, acids, alkalis, salts and sewage and suitable for direct bury.
3. Used with appropriate pipe primer.

2.7 ALL RACEWAY AND FITTINGS

A. Mark Products:

1. Identify the nominal trade size on the product.
2. Stamp with the name or trademark of the manufacturer.

2.8 OUTLET BOXES

A. Metallic Outlet Boxes:

1. Hot-dip galvanized steel.
2. Conduit knockouts and grounding pigtail.
3. Styles:
   a. 2 IN x 3 IN rectangle.
   b. 4 IN square.
   c. 4 IN octagon.
   d. Masonry/tile.
4. Accessories:
   a. Flat blank cover plats.
   b. Barriers.
   c. Extension, plaster or tile rings.
   d. Box supporting brackets in stud walls.
   e. Adjustable bar hangers.
5. Standards: NEMA/ANSI OS 1, UL 514A.

B. Cast Outlet Boxes:

1. Zinc plated cast iron or die-cast copper free aluminum with manufacturer's standard finish.
2. Threaded hubs and grounding screw.
3. Styles:
   a. "FS" of "FD".
   b. Single or multiple gang and tandem.
   c. "EDS" or "EFS" for hazardous locations.

4. Accessories: 40 mil PVC exterior coating and 2 mil urethane interior coating.

5. Standards: UL 514A, UL 886.

C. Non-metallic Outlet Boxes:

1. Polyvinyl-chloride (PVC) plastic compound.

2. Rated for direct sunlight exposure.

3. Fire retardant and low smoke emission.

4. Suitable for use with 90 DegC wire.

5. Styles:

a. "FS" or "FD".

b. Single or multiple gang.

6. Standard: UL 514A, NEMA TC 3.

D. See Specification 16140 for wiring devices, wallplates, and cover plates.

2.9 PULL AND JUNCTION BOXES

A. NEMA 1 Rated:

1. Body and cover: 14 gage minimum, galvanized steel or steel finished with rust inhibiting primer and manufacturer's standard paint inside and out.

2. With or without concentric knockouts on four (4) sides.

3. Flat cover fastened with screws.

B. NEMA 3R Rated:

1. Body and cover: 14 gage minimum steel finished with rust inhibiting primer and manufacturer's standard paint inside and out.

2. No knockouts.

3. Seams continuously welded and ground smooth.

4. Door with hinge and latch

C. NEMA 4X Rated (metallic):

1. Body and cover: 14 gage type 304 or 316 stainless steel.

2. Seams continuously welded and ground smooth.

3. No knockouts.

4. External mounting flanges.

5. Door with oil-resistant gasket.

D. NEMA 4X Rated (non-metallic):

1. Body and cover: Ultraviolet light protected fiberglass-reinforced polyester boxes.

2. No knockouts.

3. External mounting flanges.

4. Hinged door with quick release latches and padlocking hasp.

5. Door with oil resistant gasket.

E. NEMA 7 and NEMA 9 Rated:

1. Cast gray iron allow or copper-free aluminum with manufacturer's standard finish.
2. Drilled and tapped openings or tapered threaded hub.
3. Cover bolted down with stainless steel bolts or threaded cover with neoprene gasket.
4. External mounting flanges.
5. Grounding lug.
6. Accessories: 40 mil PVC exterior coating and 2 mil urethane interior coating.

F. NEMA 12 Rated:

1. Body and cover:
   a. 14 gage steel finished with rust inhibiting primer and manufacturer's standard paint inside and out.
   b. Type 5052 H-32 aluminum, unpainted.
2. Seams continuously welded and ground smooth.
3. No knockouts.
4. External mounting flanges.
5. Non-hinged cover held closed with captivated cover screws threaded into sealed wells or hinged cover held closed with stainless steel screws and clamps.
6. Flat door with oil resistant gasket.

G. Miscellaneous Accessories:

1. Rigid handles for covers larger than 9 SF or heavier than 25 LBS.
2. Split covers when heavier than 25 LBS.
3. Weldnuts for mounting optional panels and terminal kits.
4. Tamper proof screws.
5. Terminal blocks: Screw-post barrier-type, rated 600 volt and 20 ampere minimum.

H. Standards: NEMA 250, UL 50

2.10 SPECIAL PURPOSE BOXES

A. Pedestal-Type Floor-Mounted or Counter-Mounted Duplex Receptacles:

1. Horizontal design housing with threaded conduit fittings in base with satin chromium finish.

B. Flush in Floor Duplex Receptacles:

1. Dual level, full adjustable box with power fittings and brass carpet flange.

2.11 SUPPORT SYSTEMS

A. Multi-conduit Surface or Trapeze Type Support and Pull or Junction Box Supports:

1. Material Requirements.

a. Galvanized steel: ASTEM A123 or ASTM A153.

b. Stainless steel: AISI Type 304 or 316.

c. PVC coated galvanized steel: ASTM A123 or ASTM A153 and 20 mil PVC coating.

d. Aluminum: AA Type 6063-T6.

e. Fiberglass: Fire-retardant polyester or vinylester resin, ASTM E84, UL 94.

B. Single Conduit and Outlet Box Support Fasteners:

1. Material Requirements:

a. Zinc plated steel.

b. Stainless steel, Type 304 or 316.

c. Malleable iron.

d. PVC coated malleable iron or steel: 20 mil PVC coating.

e. Steel protected with zinc phosphate and oil finish.

2.12 RACEWAY/DUCT SEALING COMPOUND

A. Use with explosion-proof fittings to separate hazardous areas from non-hazardous areas:

1. UL Listed compound

2. Crouse-Hinds Chico or approved equal.

3. Use fiber dam for vertical installation.

B. All other areas:

1. Non-hardening, putty-like consistency workable at temperatures as low as 35 F.

2. Compound shall not slump at temperature of 300 F and shall readily adhere to clean surfaces of plastic ducts, metallic conduits, conduit coatings, concrete, masonry, lead, cable sheaths, cable jackets, insulation materials, and common metals.

PART 3 - EXECUTION

3.1 RACEWAY INSTALLATION – GENERAL

A. Shall be in accordance with requirements of:

1. NFPA 70- NEC.

2. Manufacturer's instructions.

B. Size of Raceways:

1. Raceway sizes are shown on Drawings. If not shown on the Drawings, then size in accordance with NFPA 70.

2. Unless specifically indicated otherwise, the minimum raceway size shall be:

a. Conduit: 1 IN.

b. Wireway: 2-1/2 IN x 2-1/2 IN.

C. Field Bending and Cutting of Conduits:

1. Utilize tools and equipment recommended by the manufacturer of the conduit, designed for the purpose and the conduit material to make all field bends and cuts.
2. Do not reduce the internal diameter of the conduit when making conduit bends.
3. Prepare tools and equipment to prevent damage to the PVC coating. Use strap wrenches only to tighten joints in PVC-RGS. Replace all conduit and fittings with damage to the PVC coating, such as cuts, nicks, and threader chuck jaw marks.
4. Degrease threads after threading and apply a zinc rich paint.
5. Deburr interior and exterior after cutting.

D. Male threads of conduit systems shall be coated with an electrically conductive anti-seize compound.

E. The protective coating integrity of conduits, fittings, outlet, pull and junction boxes and accessories shall be maintained.

1. Repair galvanized components utilizing a zinc rich paint.
2. Repair painted components utilizing touch up paint provided by or approved by the manufacturer.
3. Repair PVC coated components utilizing a patching compound, of the same material as the coating, provided by the manufacturer of the conduit; or a self-adhesive, highly conformable, cross-linked silicon composition strip, followed by a protective coating of vinyl tape.
    a. Total nominal thickness: 40 mil.
4. Repair surface which will be inaccessible after installation prior to installation.

F. Remove moisture and debris from conduit before wire is pulled into place.

1. Pull mandrel with diameter nominally ¼ IN smaller than the interior of the conduit, to remove obstructions.
2. Swab conduit by pulling a clean, tight-fitting rag through the conduit.
3. Tightly plug ends of conduit with tapered wood plugs or plastic inserts until wire is pulled.

G. Only nylon or polyethylene rope shall be used to pull wire and cable in conduit systems.

H. Install pull wires in empty raceways. Leave not less than 12 IN of slack at each end of the pull wire.

I. Where portions of a raceway are subject to different temperatures and where condensation is known to be a problem, as in cold storage areas of buildings or where passing from the interior to the exterior of a building, the raceway shall be sealed to prevent circulation of warm air to colder section of the raceway.

J. Fill openings in walls, floor, and ceilings and finish flush with surface.

1. Where penetrating CMU block walls, repair with cementitious grout and paint to match.
2. Where conduit terminates at a cable tray system, fit conduit with an insulated bushing.
3. When conduits are passing through a firewall or fire-rated floor into different rooms, cabinets, or enclosures, use a fire-rated seal.

K. Install explosion-proof seals in conduit runs crossing or entering a hazardous classified area. Install CSBE removable sealing fittings to seal submersible pump cables in the wet well and at the first junction box outside the well.

L. Conduit Stub-ups

1. Protect stub-ups from damage where conduits rise through floor slabs. Arrange so curved portion of bends is not visible above finished slab.

2. Transition underground conduit to aboveground conduit at 90 DEG elbow where conduit transitions from horizontal to vertical conduit.

3. Where RGC or RAC is in contact with earth or concrete, wrap conduit with corrosion protective tap to 4 IN above finished grade.

4. Stub-up connections: Extend conduits for connection to freestanding equipment with an adjustable top or coupling threaded inside for plugs, and set flush with finished floor.

3.2 RACEWAY ROUTING

A. Raceways shall be routed in the field unless otherwise indicated.

1. Conduit and fittings shall be installed, as required, for a complete system that has a neat appearance and is in compliance with all applicable codes.

2. Run in straight lines parallel to or at right angles to building lines.

3. Install raceways level and square and at proper elevations. Provide adequate headroom.

4. Do not route conduits:

a. Through areas of high ambient temperature or radiant heat.

b. In suspended concrete slabs.

5. Conduit shall not interfere with, or prevent access to, piping, valves, ductwork, or other equipment for operation, maintenance and repair.

6. Provide pull boxes or conduit bodies as needed so that there is a maximum of 270 degrees of bends or 3-90 degree bends in the conduit run or in long straight runs to limit pulling tensions.

7. Make changes in direction of conduit using elbows or fittings. Do not use pull boxes to make direction changes unless specifically designated otherwise.

B. All rigid conduits within a structure shall be installed exposed except as follows:

1. As indicated on the Drawings.

2. Concealed above gypsum wall board or acoustical tile suspended ceilings.

3. Concealed within stud frame, poured concrete, concrete block and brick walls of an architecturally finished area.

4. Embedded in floor slabs or buried under floor serving equipment in non-architecturally finished areas that are not locate on or near a wall or column and the ceiling height is greater than 12 FT.

5. Embedded in floor slabs or buried under floor slabs where shown on the Drawings or with the Engineer's permission.

C. Maintain minimum spacing between parallel conduit and piping runs in accordance with the following when runs are greater than 30 FT:

1. Between instrumentation and telecommunication: 1 IN.
2. Between instrumentation and 125 V, 48 V, and 24 Vdc: 2 IN.
3. Between instrumentation and 600 V and less AC power or control: 12 IN.
4. Between instrumentation and greater than 600 Vac power: 12 IN.
5. Between telecommunication and 125 V, 48 V, and 24 Vdc: 2 IN.
6. Between telecommunication and 600 V and less AC power or control: 6 IN.
7. Between telecommunication and greater than 600 Vac power: 12 IN.
8. Between 125 V, 48 V, and 24 Vdc and 600 V and less AC power or control: 1 IN.
9. Between 125 V, 48 V, and 24 Vdc and greater than 600 V power or control: 2 IN.
10. Between process, gas, air, and water pipes: 6 IN.

D. Conduits shall be installed to eliminate moisture pockets.

1. Where water cannot drain to openings, provide drain fittings in the low spots of the conduit run.

E. Conduit shall not be routed on the exterior of structures except as specifically indicated on the Drawings.

F. Where sufficient room exists within the housing of roof-mounted equipment, the conduit shall be stubbed up inside the housing.

G. Provide all required openings in walls, floors, and ceilings for conduit penetration.

1. Repair penetrations to existing condition or better.

H. Conduit embedded in columns and floor slabs or buried under slab-on-grade:

1. Run in the most direct, practical route.
2. Not to be installed under equipment pads unless approved by Engineer.
3. No crossovers unless approved by Engineer.
4. To be backfilled with concrete during the installation of the slab-on-grade or to be placed, backfilled, and compacted in the slab subgrade, as indicated on drawings.
5. Secured in place to prevent movement during the backfill and pour.

I. Conduits and accessories embedded in concrete where shown on the Drawings:

1. Shall not be considered to replace structurally the displaced concrete except as indicated in the following:
    a. Conduit and fittings shall not displace more than 4 percent of the area of the cross-section of a column on which stress is calculated or which is required for fire protection.

b. Size and locate sleeves or conduits passing through floors, walls, or beams so as not to significantly impair the strength of the construction.

c. Sleeves or conduits passing through floors, walls or beams may be considered as replacing the displaced concrete structurally in compression.

1) Shall not be exposed to rusting or other deterioration.

2) Nominal inside diameter shall not exceed 2 IN.

3) Minimum spacing: 3 DIA OC.

2. Shall not be larger in outside diameter than one-third the thickness of the slab, column, or beam.

3. Shall have a minimum spacing of 3 DIA OC.

4. In reinforced concrete construction:

a. Conduit shall not be run in beams.

b. Place conduit after reinforcing steel has been laid.

c. The reinforcement steel shall not be displaced by the conduit.

d. Provide a minimum of 1-1/2 IN of cover over conduit, excluding surface finish.

e. Conduits parallel to main reinforcement shall be run near the center of the wall.

f. Conduits perpendicular to main reinforcement shall be run midway between wall or slab supports.

3.3 RACEWAY APPLICATIONS

A. Permitted Raceway Types Per Area Designations (unless specifically indicated on Drawings):

1. Dry areas:

a. RGS.

b. RAC.

2. Wet areas:

a. RGS.

b. RAC.

3. Exterior Corrosive areas (includes, but not limited to wastewater project sites):

a. PVC-RGS.

b. PVC-RAC.

4. Interior Corrosive areas (includes, but not limited to chemical rooms):

a. PVC-40.

b. PVC-80.

c. Fiberglass.

d. As indicated on drawings.

B. Permitted Raceway types per Routing Locations:

1. In stud framed walls:
   a. EMT.
2. In concrete block or brick walls:
   a. PVC-40.
3. Above acoustical tile ceilings:
   a. EMT.
   b. NEMA 1 rated Wireway.
4. Embedded in poured concrete walls and floors:
   a. PVC-40
   b. PVC-80
   c. Fiberglass
   d. PVC-RGS when emerging from concrete into areas designated as exterior and corrosive.
5. Beneath floor slab-on grade:
   a. PVC-40
   b. PVC-80
   c. Fiberglass
6. Direct buried conduits and ductbanks:
   a. PVC-40.
   b. PVC-80.
   c. Fiberglass.
   d. 90 degree elbows for transition to above grade:
      1) PVC-RGS.
      2) Fiberglass.
   e. Long sweeping bends greater than 15 degrees.
      1) PVC-RGS.
      2) Fiberglass.
7. Concrete encased ductbanks:
   a. PVC-40.
   b. PVC-80.
   c. Fiberglass.
   d. 90 degree elbows for transition to above grade:
      1) PVC-RGS.
      2) Fiberglass.

e. Long sweeping bends greater than 15 degrees.

1) PVC-RGS.

2) Fiberglass.

C. FLEX conduits shall be installed for connections to light fixtures, HVAC equipment and other similar devices above the ceilings.

1. The maximum length shall not exceed:

a. 6 FT to light fixtures.

b. 3 FT to all other equipment.

D. FLEX-LT and FLEX-NM conduits shall be installed as the final conduit connection to light fixtures, dry type transformers, motors, electrically operated valves, instrumentation primary elements, and other electrical equipment that is liable to vibrate.

1. The maximum length shall not exceed:

a. 6 FT to light fixtures.

b. 3 FT to motors.

c. 2 FT to all other equipment.

E. NEMA 1 Rated Wireway:

1. Surface mounted in electrical rooms.

2. Surface mounted above removable ceilings tiles of an architecturally finished area.

F. NEMA 3R Wiring Trough:

1. Surface mounted in exterior, non-corrosive locations.

G. NEMA 4X Rated Wireway:

1. Surface mounted in areas designated as corrosive.

H. NEMA 12 Rated Wireway:

1. Surface mounted in areas designated as dry in architecturally and non-architecturally finished areas.

3.4 CONDUIT FITTINGS AND ACCESSORIES

A. Conduit Seals:

1. Install in conduit systems located in hazardous areas as required by the NEC or as shown on Drawings.

B. Rigid non-metallic conduit and fittings shall be joined utilizing solvent cement.

1. Immediately after installation of conduit and fitting, the fitting or conduit shall be rotated ¼ turn to provide uniform contact.

C. Install Expansion Fittings:

1. Where conduits are exposed to the sun and conduit run is greater than 200 FT.

2. Elsewhere as identified on the Drawings.

D. Install Expansion/Deflection Fittings:

1. Where conduits enter a structure.
    a. Except electrical manholes and handholes.
    b. Except where the duct bank is tied to the structure with rebar.
2. Where conduits span structural expansion joints.
3. Elsewhere as identified on the Drawings.

E. Threaded connections shall be made wrench-tight.

F. Conduit joints shall be watertight:
1. Where subjected to possible submersion.
2. In areas classified as wet.
3. Underground.

G. Terminate Conduits:
1. In metallic outlet boxes:
    a. RGS and RAC:
        1) Conduit hub and locknut.
        2) Insulated bushing and two (2) locknuts.
        3) Use grounding type locknut or bushing when required by NEC.
    b. EMT: Compression type connector and locknut.
2. In NEMA 1 rated enclosures:
    a. RGS and RAC:
        1) Conduit hub and locknut.
        2) Insulated bushing and two (2) locknuts.
        3) Use grounding type locknut or bushing when required by NEC.
    b. EMT: Compression type connector and locknut.
3. In NEMA 12 rated enclosures:
    a. Watertight, insulated and gasketed hub and locknut.
    b. Use grounding type locknut or bushing when required by NEC.
4. In NEMA 3R, 4 and NEMA 4X rated enclosures:
    a. Watertight, insulated and gasketed hub and locknut.
5. In NEMA 7 and NEMA 9 rated enclosures:
    a. Into an integral threaded hub.
6. When stubbed up through the floor into floor mounted equipment:
    a. With an insulated grounding bushing on metallic conduits.
    b. With end bells on non-metallic conduits.

H. Threadless couplings shall only be used to join new conduit to existing conduit when the existing conduit end is not threaded and it is not practical or possible to cut threads on the existing conduit with a pipe threader.

3.5 CONDUIT SUPPORT

A. Permitted multi-conduit surface or trapeze type support system per area designations and conduit types:

1. Dry or wet and/ or hazardous areas:

a. Galvanized system consisting of: Galvanized steel channels and fittings, nuts and hardware and conduit straps.

b. Aluminum system consisting of: Aluminum channels, fittings and conduit clamps with stainless steel nuts and hardware.

c. Stainless steel system consisting of: Type 304 or 316 stainless steel channels and fittings, nuts and hardware and conduit straps.

2. Corrosive areas:

a. PVC coated steel system consisting of: PVC coated galvanized steel channels and fittings and conduit clamps with stainless steel nuts and hardware.

b. Fiberglass system consisting of: Fiberglass channel and fittings, and conduit clamps with stainless steel nuts and hardware.

c. Stainless steel systems consisting of Type 304 or 316 stainless steel channels and fittings, nuts and hardware and conduit straps.

3. Conduit type shall be compatible with the support system material.

a. Galvanized steel system may be used with RGS and EMT.

b. Stainless steel system may be used with RGS, PVC-RGS and RAC.

c. PVC coated galvanized steel system may be used with PVC-RGS, RAC, PVC-40, PVC-80, and Fiberglass.

d. Aluminum system may be used with RAC and PVC-RGS.

e. Fiberglass system may be used with PVC-40, PVC-80, PVC-RGS, and Fiberglass.

B. Permitted single conduit support fasteners per area designations and conduit types:

1. Architecturally finished areas:

a. Material: Zinc plated steel, or steel protected with zinc phosphate and oil finish.

b. Types of fasteners: Spring type hangers and clips, straps, hangers with bolts, clamps with bolts, and bolt on beam clamps.

c. Provide anti-rattle conduit supports when conduits are routed through metal studs.

2. Dry or wet and/or hazardous areas:

a. Material: Zinc plated steel, stainless steel and malleable iron.

b. Types of fasteners: Straps, hangers with bolts, clamps with bolts, and bolt on beam clamps.

3. Corrosive areas:
    a. Material: Type 304 or 316 stainless steel or PVC coated malleable iron or steel. For indoor corrosive areas, non-metallic PVC or fiberglass straps may be used.
    b. Types of fasteners: Straps, hangers with bolts, clamps with bolts, and bolt on beam clamps.
4. Conduit type shall be compatible with the support fastener material.
    a. Zinc plated steel, steel protected with zinc phosphate and oil finish and malleable iron fasteners may be used with RGS and EMT.
    b. Stainless steel system may be used with RGS, PVC-RGS, and RAC.
    c. PVC coated fasteners may be used with PVC-RGS, RAC, PVC 40, and PVC-80.
    d. Non-metallic fasteners may be used with PVC-40, PVC-80, and fiberglass.

C. Conduit Support General Requirements:
1. Maximum spacing between conduit supports per NEC.
2. Support conduit from the building structure.
3. Do not support conduit from process, gas, air, water piping or other conduits.
4. Provide hangers and brackets to limit the maximum uniform load on a single support to 25 LBS or to the maximum uniform load. Recommended by the manufacturer if the support is rated less than 25 LBS.
    a. Do not exceed the maximum concentrated load recommended by the manufacturer on any support.
    b. Conduit hangers:
        1) Continuous threaded rods combined with struts or conduit clamps: Do not use perforated strap hangers and iron bailing wire.
    c. Do not use suspended ceiling support systems to support raceways.
    d. Hangers in metal roof decks:
        1) Utilize fender washers.
        2) Not extend above top of ribs.
        3) Not interfere with vapor barrier, insulation, or roofing.
5. Conduit support system fasteners:
    a. Use sleeve-type expansion anchors as fasteners in masonry wall construction.
    b. Do not use concrete nails and powder-driven fasteners.

3.6 OUTLET, PULL, AND JUNCTION BOX INSTALLATION

A. General:
1. Install products in accordance with manufacturer's instructions.
2. Install approved thread grease on all plugs prior to installation.

3. Fill unused punched-out tapped, or threaded hub openings with insert plugs. Size boxes to accommodate quantity of conductors enclosed and quantity of conduits connected to the box.

B. Outlet Boxes:

1. Permitted uses of metallic outlet boxes:

a. Housing of wiring devices:

1) Recessed in all stud framed walls and ceilings.

2) Recessed in poured concrete, concrete block, and brick walls of architecturally finished areas and exterior building walls.

b. Pull or junction box:

1) Above gypsum wall board or acoustical tile ceilings.

2) Above 10 FT in an architecturally finished area where there is no ceiling.

2. Permitted uses of cast outlet boxes:

a. Housing of wiring devices surface mounted in non-architecturally finished dry, wet, corrosive, and hazardous areas.

b. Pull and junction box surface mounted in non-architecturally finished dry, wet, and corrosive areas.

3. Permitted uses of non-metallic outlet boxes:

a. Housing of wiring devices surface mounted in non-architecturally finished corrosive areas.

b. Pull and junction boxes mounted in non-architecturally finished corrosive areas.

4. Mount devices outlet boxes where indicated on the Drawings and at the following heights:

a. Light switch (to center): 48 IN.

b. Receptacle in architecturally finished areas (to center): 18 IN.

c. Receptacle on exterior wall of building (to center): 18 IN.

d. Receptacle in non-architecturally finished areas (to center): 48 IN.

e. Telephone outlet in architecturally finished areas (to center): 18 IN.

f. Telephone outlet for wall-mounted phone (to center): 54 IN.

g. Pushbutton or selector switch control station (to center): 48 IN.

5. Set device outlet boxes plumb and vertical to the floor.

6. Outlet boxes recessed in walls:

a. Install with appropriate stud wall support brackets or adjustable bar hangers so that they are flush with the face of the wall.

b. Locate in ungrouted cell of concrete block with bottom edge of box flush with bottom edge of block and flush with the face of the block.

7. Place barriers between switches in boxes with 277 V switches on opposite phases.

8. Back-to-back installations are not permitted.

9. When an outlet box is connected to a PVC coated conduit, the box shall also be PVC coated.

C. Pull and Junction Boxes:

1. Install pull or junction boxes in conduit runs where indicated or required to facilitate pulling of wires or making connections.

   a. Make covers of boxes accessible.

2. Permitted uses of NEMA 1 enclosure:

   a. Pull or junction box surface mounted above removable ceiling tiles of an architecturally finished area.

   b. Pull or junction box surface in a non-architecturally finished area.

3. Permitted uses of NEMA 3R enclosure:

   a. Pull or junction box surface mounted in dry and wet areas, unless stated otherwise in Drawings.

4. Permitted uses of NEMA 4X metallic enclosure:

   a. Pull or junction box surface mounted in areas designated as wet and/or corrosive.

5. Permitted uses of NEMA 4X non-metallic enclosure:

   a. Pull or junction box surface mounted in indoor areas designated as wet and/or corrosive where used with PVC-40 or PVC-80 conduit.

6. Permitted uses of NEMA 7 enclosure:

   a. Pull or junction box surface mounted in Class I hazardous areas.

      1) Provide PVC coating in corrosive areas when PVC-RGS conduit is used.

7. Permitted uses of NEMA 9 enclosure:

   a. Pull or junction box surface mounted in Class II hazardous areas.

      1) Provide PVC coating in corrosive areas when PVC-RGS conduit is used.

8. Permitted uses of NEMA 12 enclosure:

   a. Pull or junction box surface mounted in areas designated as dry.

END OF SECTION

26 05 33.16 DEVICE, PULL, & JUNCTIONS BOXES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Specifications for device, pull, and junction boxes.

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 REFERENCES

A. American National Standards Institute/National Electrical Manufacturers Association (ANSI/NEMA).

1. FB1 - Fittings and Support for Conduits and Cable Assemblies
2. 250 - Enclosures for Electrical Equipment (1000 volts maximum)

B. American National Standards Institute/National Fire Protection Association (ANSI/NFPA), NFPA70 - National Electrical Code (NEC) - Article 370 - Outlet Device, Pull and Junction Boxes, Conduit Bodies and Fittings.

C. Underwriters Laboratories (UL):

1. 50 - Safety Cabinets and Boxes
2. 508 - Safety Industrial Control Equipment
3. 514B - Safety Fittings for Conduit and Outlet Boxes
4. 886 - Safety Outlet Boxes and Fittings for Use in Hazardous Areas

1.4 ADMINISTRATIVE REQUIREMENTS [NOT USED]

1.5 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00.

B. Submit all products covered under this specification for Engineer's approval.

C. Manufacturer's cut sheets, catalog data

D. Instruction for handling and storage

1. Installation instructions
2. Dimensions and weights

1.6 DELIVERY, STORAGE AND HANDLING

A. Pack and crate boxes to permit ease of handling and to provide protection from damage during shipping, handling and storage.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Cast Device Boxes

1. Appleton Electric Company
2. Crouse-Hinds, Division of Cooper Industries
3. Killark Electric Manufacturing Company

2.2 MATERIALS AND EQUIPMENT

A. Device Boxes

1. Provide UL-approved boxes designed and manufactured to house electrical devices like receptacles and switches, and in conformance with NEMA FB1 and NEC Article 370.
2. Supply boxes that are hot-dip galvanized on cast iron suitable for corrosive and 0 wet atmosphere.

B. Hardware

1. Mounting Hardware: Stainless steel
2. Conduit Connectors: Watertight as manufactured by Myers Hubs, or equal.

PART 3 - EXECUTION

3.1 PREPARATION

A. Review the drawings and determine how many boxes of each kind are required and check if supplied quantity is sufficient.

3.2 INSTALLATION

A. Boxes described in this specification shall be used both in dry and wet, corrosive areas, both inside and outside locations.

B. Install boxes in accordance with NEC Article 370 in locations indicated on the Drawings.

C. Install junction and pull boxes in readily accessible places to facilitate wire pulls, maintenance and repair.

D. Plug unused conduit openings.

E. Make conduit connections to sheet metal boxes with watertight conduit connectors.

END OF SECTION

26 05 43 UNDERGROUND DUCTS & PULL BOXES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Ducts
2. Duct banks
3. Pull Boxes

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 REFERENCES & DEFINITIONS

A. American National Standards Institute (ANSI):

1. C2-93 - National Electrical Safety Code.

B. Duct: General term for electrical conduit and other raceway, either metallic or nonmetallic, specified for use underground, embedded in earth or concrete.

C. Duct Bank: Group of two or more ducts in continuous run between two points.

D. Underfloor Conduits.

1. Conduits which run underground within perimeter of building walls under building floor. This may consist of one conduit, or several conduits grouped together.

E. Duct Bank Conduits

1. Conduits which run underground outside perimeter of building walls may consist of 1 conduit, or several conduits grouped together.

F. Underground Conduits

1. Underground conduits are both underfloor conduits and duct bank conduits.

G. Pull boxes: Below-the-surface enclosure in connection with ducts into which people reach, but do not enter, for purpose of installing, operating, or maintaining equipment or wiring.

1.4 ADMINISTRATIVE REQUIREMENTS [NOT USED]

1.5 SUBMITTALS

A. Submit all products covered under this specification for Engineer's approval.

B. Submittals are not required if Contractor supplies materials or equipment of specified or named manufacturers. If Contractor proposes substitutions to material or equipment of specified or named manufacturers, submittals identified below are required.

1. Product data.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturers of precast pull boxes shall be firms regularly engaged in manufacturing factory-fabricated pull boxes, of types and sizes required, whose products have been in satisfactory use in similar service for not less than 3 yrs.

B. Items provided under this section shall be listed or labeled by UL or other Nationally Recognized Testing Laboratory (NRTL).

1. Term "NRTL" shall be as defined in OSHA Regulation 1910.7.

2. Terms "listed" and "labeled" shall be as defined in National Electrical Code, Article 100.

C. Regulatory Requirements:

1. National Electrical Code (NEC): Components and installation shall comply with National Fire Protection Association (NFPA) 70.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store precast concrete units at site as recommended by manufacturer to prevent physical damage. Arrange so identification markings are visible.

B. Lift and support precast concrete units only at designated lifting or supporting points.

1.8 SEQUENCING AND SCHEDULING

A. Coordination of Work:

1. Coordinate layout and installation of pull boxes with final arrangement of ducts as influenced by actual final location of other utilities in field.

2. Coordinate elevations of duct and raceway entrances into pull boxes with final profiles of ducts and raceways as determined by coordination with other utilities, underground obstructions, and buildings.

3. Establish locations and elevations to suit field conditions and assure duct banks run drain to pull boxes, or as shown on Drawings.

PART 2 - PRODUCTS

2.1 DUCTS AND FITTINGS

A. Conform to Raceways

2.2 DUCT BANK ACCESSORIES

A. Duct Supports: Rigid PVC spacers selected to provide minimum duct spacings and concrete cover depths indicated, while rigidly supporting ducts during concreting.

2.3 PULL BOXES AND ACCESSORIES

A. Frames and Covers: Cast iron conforming to ANSI C2, Rule 323. Furnish with cast-in legend, "Electric" or "Signal" as appropriate. Cover-to-frame bearing surfaces machined.

B. Sump Frame and Grate: Comply with FS RR-F-621, Type VII for frame, Type I for cover.

C. Pulling Eyes in Walls: Eyebolt with rebar fastening insert. 2-in. dia eye, 1-in. by 4-in. long bolt. Working load embedded in 6-in., 4,000 psi concrete: 13,000-lbs. minimum tension.

2.4 MASONRY (NOT APPLICABLE)

2.5 PRECAST MANHOLES AND HANDHOLES (NOT APPLICABLE)

2.6 RACEWAY/DUCT SEALING COMPOUND

2.7 COMPOUND:

A. Non-hardening, putty-like consistency workable at temperatures as low as 35 F.

B. Compound shall not slump at temperature of 300 F and shall readily adhere to clean surfaces of plastic ducts, metallic conduits, conduit coatings, concrete, masonry, lead, cable sheaths, cable jackets, insulation materials, and common metals.

PART 3 - EXECUTION

3.1 WIRING METHOD

A. General: Install ducts for wiring runs indicated. Provide sizes as indicated.

3.2 EXCAVATION AND BACKFILL

A. Excavation: Cut trenches neatly and uniformly, and slope uniformly to required pitch.

3.3 INSTALLATION OF DUCTS

A. Slope: Pitch ducts to drain towards manholes and handholes and away from buildings and equipment, unless otherwise shown on Drawings. Minimum slope shall be 4-in. in 100-ft. Where necessary to achieve this between manholes, slope ducts from high point in run to drain in both directions.

B. Curves and Bends: Use manufactured elbows for stub-ups at equipment and at building entrances. For other curves and bends, except as otherwise indicated, use manufactured long sweep bends with minimum radius of 25ft. in both horizontal and vertical directions.

C. Make joints in ducts and fittings watertight in accordance with manufacturer's instructions. Stagger couplings so those of adjacent ducts do not lie in same plane.

D. Concrete-Encased Ducts: Support on plastic separators coordinated with duct size and required duct spacing, and install in accordance with following:

1. Separator Installation: Space separators close enough to prevent sagging and deforming of ducts, and secure separators to earth and to ducts to prevent floating during concreting. Do not use tie wires or reinforcing steel in such way as to form conductive or magnetic loops around ducts or duct groups.

2. Reinforcing: Reinforce duct banks. Size and arrange reinforcing steel as indicated on Drawings.

3. Concreting: Spade concrete carefully during pours to prevent voids under and between conduits and at exterior surface of envelope. Do not use power-driven agitating equipment unless specifically designed for duct bank application. Pour each run of envelope between manholes or other terminations in one continuous operation unless approved by Engineer. Where more than one pour is necessary, terminate each pour in vertical plane and continue duct bank reinforcing minimum of 18-in. beyond termination of pour.

4. Forms: Walls of trench may be used to form side walls of duct bank provided soil is self-supporting and concrete envelope can be poured without soil inclusions. Use forms where soil is not self-supporting.

5. Minimum Clearances: As Indicated on Drawings.

6. Depth: Except as otherwise indicated, top of duct bank shall be 24-in. below finished grade, minimum, in non-traffic areas, and 30 in. below finished grade, minimum, in vehicular traffic areas.

E. Stub-ups: Duct stub-ups to equipment shall be rigid steel, PVC-coated rigid steel, or rigid aluminum type conduit matching the above ground conduit requirements for the area. PVC conduit is not permitted to be used. For equipment mounted on outdoor concrete pads, steel conduit shall extend minimum of 5-ft. away from edge of pad. Install insulated grounding bushings on terminations. Couple steel conduits to ducts with adapters designed for purpose and encased concrete.

1. For galvanized rigid steel and aluminum conduit, wrap all portions of the conduit exposed to soil or concrete to 4" above finished grade with corrosion protection tape.

F. Sealing: For ducts to be wired in this Project, provide temporary closure at terminations. For spare ducts, seal bore of ducts at terminations. Use sealing compound and plugs as required to withstand 15 psi minimum hydrostatic pressure.

G. Pulling Cord: Provide 100-lb test nylon cord in ducts including spares.

H. Marker Tape: Provide plastic marker tape over ducts at 12 in. below finished grade.

3.4 INSTALLATION OF PULL BOXES, GENERAL

A. General:

1. Provide pull boxes of sizes, shapes, and locations as indicated.

2. Determine final elevation of ducts as influenced by possible adjustments in other utilities and surface features and discovery of underground obstructions before installing pull boxes. Obtain Engineer's approval for pull boxes installation adjustments necessitated by obstructions.

3. Install units plumb and level and with orientation and depth coordinated with arrangement of connecting ducts to minimize bends and deflections required for proper entrances.

B. Elevation:

1. Pull Boxes: Install flush with grade.

C. Drainage: Install drains in bottom of units where indicated. Arrange to coordinate with drainage provisions as indicated or specified.

3.5 CLEANING AND RESTORATION

A. Clean Ducts: Clean full length of ducts with a round bristle brush with dia ½-in. greater than internal diameter of duct.

B. Clean Pull Boxes: Clean internal surfaces of manholes including sump. Remove foreign material.

3.6 RESTORATION

A. Restore surface features at areas disturbed by excavation and reestablish original grades except as otherwise indicated.

B. Where sod has been removed, replace it as soon as possible after backfilling is completed.

C. Restore all areas disturbed by trenching, storing of dirt, cable laying, and other work to their original condition.

D. Include necessary top soiling, fertilizing, liming, seeding, sodding, sprigging, or mulching.

E. Restore disturbed paving as indicated.

END OF SECTION

26 05 53 ELECTRICAL IDENTIFICATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Identification of electrical materials, equipment, and installations.

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 REFERENCES [NOT USED]

1.4 ADMINISTRATIVE REQUIREMENTS [NOT USED]

1.5 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00.

B. Submit all products covered under this specification for Engineer's approval.

C. Product Data:

1. Submit for each type of product specified.

D. Samples:

1. Submit for each color, lettering style, and or graphic representation required for identification materials, samples of labels and signs.

E. Miscellaneous:

1. Schedule of identification nomenclature to be used for identification signs and labels.

1.6 QUALITY ASSURANCE

F. Regulatory Requirements:

1. National Electrical Code: Components and installation shall comply with NFPA 70.

G. Comply with ANSI C2.

PART 2 - PRODUCTS

2.1 RACEWAY AND CABLE LABELS

A. Manufacturer's Standard Products:

1. Where more than one type is listed for specified application, selection is Installer's option, but provide single type for each application category. Use colors prescribed by ANSI A13.1, NFPA 70, or as specified elsewhere.

B. Conform to ANSI A13.1, Table 3, for minimum size of letters for legend and minimum length of color field for each raceway or cable size.

1. Color: Black legend on orange field.

2. Legend: Indicates voltage.

C. Adhesive Labels:

1. Preprinted, flexible, self-adhesive vinyl. Legend is over-laminated with clear, wear and chemical resistant coating.

D. Pre-tensioned, Wraparound Plastic Sleeves:

1. Flexible, preprinted, color-coded, acrylic bands sized to suit diameter of line it identifies and arranged to stay in place by pre-tensioned gripping action when placed in position.

E. Colored Adhesive Tape:

1. Self-adhesive vinyl tape not less than 3-mils thick by 1 to 2-in. wide (0.08-mm thick by 25 to 51-mm wide).

F. Underground Line Warning Tape:

1. Permanent, bright-colored, continuous printed, vinyl tape with following features:

a. Size: Not less than 6-in. wide by 4-mils thick (152-mm wide by 0.102-mm thick).

b. Compounded for permanent direct burial service.

c. Embedded continuous metallic strip or core.

d. Printed Legend: Indicates type of underground line.

G. Tape Markers:

1. Vinyl or vinyl cloth, self-adhesive, wraparound type with preprinted numbers and letters.

H. Aluminum, Wraparound Marker Bands:

1. Bands cut from 0.014-in. (0.4-mm) thick aluminum sheet, with stamped or embossed legend, and fitted with slots or ears for permanently securing around wire or cable jacket or around groups of conductors.

I. Plasticized Card Stock Tags:

J. Vinyl cloth with preprinted and field printed legends. Orange background, except as otherwise indicated, with eyelet for fastener.

K. Aluminum Faced Card Stock Tags:

1. Wear resistant, 18-point minimum card stock faced on both sides with embossable aluminum sheet, 0.002-in. (0.05-mm) thick, laminated with moisture resistant acrylic adhesive, and punched for fastener. Preprinted legends suit each application.

L. Brass or Aluminum Tags:

1. Metal tags with stamped legend, punched for fastener. Dimensions: 2 by 2-in. (51 by 51-mm) by 0.05-in. (1.3-mm).

2.2 ENGRAVED NAMEPLATES AND SIGNS

A. Manufacturer's Standard Products:

1. Where more than one type is listed for specified application, selection is Installer's option, but provide single type for each application category. Use colors prescribed by ANSI A13.1, NFPA 70, or as specified elsewhere.

B. Engraving stock, melamine plastic laminate, 1/16-in. (1.6-mm) minimum thick for signs up to 20-sq. in. (129-sq. cm), 1/8-in. (3.2-mm) thick for larger sizes.

1. Engraved Legend: Black letters on white face.

2. Punched for mechanical fasteners.

C. Baked Enamel Signs for Interior Use:

1. Preprinted aluminum signs, punched for fasteners, with colors, legend, and size as indicated or as otherwise required for application. 1/4-in. (6.4-mm) grommets in corners for mounting.

D. Exterior, Metal Backed, Butyrate Signs:

1. Wear resistant, non-fading, preprinted, cellulose acetate butyrate signs with 0.0396-in. (1-mm), galvanized steel backing, with colors, legend, and size appropriate to application. 1/4-in. (6.4-mm) grommets in corners for mounting.

E. Fasteners for Plastic Laminated and Metal Signs:

1. Self-tapping stainless steel screws or No. 10/32 stainless steel machine screws, with nuts, flat washers and lock washers.

2.3 MISCELLANEOUS IDENTIFICATION PRODUCTS

A. Cable Ties:

1. Fungus inert, self-extinguishing, 1 piece, self-locking, Type 6/6 nylon cable ties with following features:

a. Minimum Width: 3/16-in. (5-mm).

b. Tensile Strength: 50-lb (22.3 kg) minimum.

c. Temperature Range: Minus 40 to 185°F (Minus 4 to 85°C).

d. Color: As indicated where used for color-coding.

B. Paint:

1. Alkyd-urethane enamel. Primer as recommended by enamel manufacturer.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install identification devices according to manufacturer's written instructions.

B. Install labels where indicated and at locations for best convenience of viewing without interference with operation and maintenance of equipment.

C. Lettering, Colors, and Graphics:

1. Coordinate names, abbreviations, colors, and or designations used for electrical identification with corresponding designations used in Contract Documents or required by codes and standards. Use consistent designations throughout Project.

D. Sequence of Work:

1. Where identification is to be applied to surfaces that require finish, install identification after completion of finish work.

E. Self Adhesive Identification Products:

1. Clean surfaces of dust, loose material, and oily films before applying.

F. Identify feeders over 600 V with "DANGER HIGH VOLTAGE" in black letters 2-in. (51-mm) high, stenciled with paint at 10-ft (3-m) intervals over continuous, painted orange background. Identify following:

1. Entire floor area directly above conduits running beneath and within 12-in. (305-mm) of basement or ground floor that is in contact with earth or is framed above unexcavated space.

2. Wall surfaces directly external to conduits concealed within wall.

3. All accessible surfaces of concrete envelope around conduits in vertical shafts, exposed in building, or concealed above suspended ceilings.

4. Entire surface of exposed conduits.

G. Install painted identification as follows:

1. Clean surfaces of dust, loose material, and oily films before painting.

2. Prime Surfaces:

a. For galvanized metal, use single component, acrylic vehicle coating formulated for galvanized surfaces. For concrete masonry units, use heavy duty, acrylic resin block filler. For concrete surfaces, use clear, alkali resistant, alkyd binder type sealer.

3. Apply one intermediate and one finish coat of silicone alkyd enamel.

4. Apply primer and finish materials according to manufacturer's instructions.

H. Identify Raceways and Exposed Cables of Certain Systems with Color Banding:

1. Band exposed and accessible raceways of systems listed below for identification.

a. Bands: Pre-tensioned, snap around, colored plastic sleeves; colored adhesive tape; or combination of both. Make each color band 2-in. (51-mm) wide, completely encircling conduit, and place adjacent bands of 2 color markings in contact, side by side.

b. Locate bands at changes in direction, at penetrations of walls and floors, at 50-ft (15 m) maximum intervals in straight runs, and at 25-ft (7.6 m) in congested areas.

c. Colors: As follows:

(1) Fire Alarm System: Red.

(2) Fire Suppression Supervisory and Control System: Red and yellow.

(3) Combined Fire Alarm and Security System: Red and blue.

(4) Security System: Blue and yellow.

(5) Mechanical and Electrical Supervisory System: Green and blue.

(6) Telecommunications System: Green and yellow.

I. Install Caution Signs for Enclosures Over 600 V:

1. Use pressure sensitive, self-adhesive label indicating system voltage in black, preprinted on orange field. Install on exterior of door or cover.

J. Install Circuit Identification Labels on Boxes:

1. Label externally as follows:

a. Exposed Boxes: Pressure sensitive, self-adhesive plastic label on cover.

b. Concealed Boxes: Plasticized card stock tags.

c. Labeling Legend: Permanent, waterproof listing of panel and circuit number or equivalent.

K. Identify Paths of Underground Electrical Lines:

1. During trench backfilling, for exterior underground power, control, signal, and communications lines, install continuous underground plastic line marker located directly above line at 6 to 8-in. (150 to 200-mm) below finished grade. Where multiple lines installed in common trench or concrete envelope do not exceed an overall width of 16-in. (400-mm), use single line marker.

a. Install line marker for underground wiring, both direct buried and in raceway.

L. Color Code Conductors:

1. Secondary service, feeder, and branch circuit conductors throughout secondary electrical system.

a. Field applied, color coding methods may be used in lieu of factory coded wire for sizes larger than No. 10 AWG.

(1) Colored, pressure sensitive plastic tape in half-lapped turns for distance of 6-in. (150-mm) from terminal points and in boxes where splices or taps are made. Apply last 2 turns of tape with no tension to prevent possible unwinding. Use 1-in. (25-mm) wide tape in colors as specified. Adjust tape bands to avoid obscuring cable identification markings.

2. Colored cable ties applied in groups of 3 ties of specified color to each wire at each terminal or splice point starting 3-in. (76-mm) from terminal and spaced 3-in. (76-mm) apart. Apply with special tool or pliers, tighten to snug fit, and cut off excess length.

System Voltage	A	B	C	Neutral
120/240 Volt 1Ph/3w	Black	Red		White
120/208 Volt 3Ph/4w	Black	Red	Blue	White
120/240 Volt 3Ph/4w	Black	Orange	Blue	White
277/480 Volt 3Ph/4w	Brown	Purple	Yellow	Gray

Motor Control	1	Black
	2	Red
	3	Blue
Ground		Green

M. Power Circuit Identification:

1. Use metal tags or aluminum wraparound marker bands for cables, feeders, and power circuits in vaults, pull boxes, junction boxes, manholes, and switchboard rooms.
   a. Legend: ¼-in. (6.4-mm) steel letter and number stamping or embossing with legend corresponding to indicated circuit designations.
   b. Fasten tags with nylon cable ties; fasten bands using integral ears.

N. Apply identification to conductors as follows:

1. Conductors to Be Extended in Future: Indicate source and circuit numbers.
2. Multiple Power or Lighting Circuits in Same Enclosure: Identify each conductor with source, voltage, circuit number, and phase. Use color coding for voltage and phase indication of secondary circuit.
3. Multiple Control and Communications Circuits in Same Enclosure: Identify each conductor by its system and circuit designation. Use consistent system of tags, color-coding, or cable marking tape.

O. Apply warning, caution, and instruction signs and stencils as follows:

1. Install warning, caution, and instruction signs where indicated or required to ensure safe operation and maintenance of electrical systems and of items to which they connect. Install engraved plastic laminated instruction signs with approved legend where instructions or explanations are needed for system or equipment operation. Install butyrate signs with metal backing for outdoor items.
2. Emergency Operating Signs:
   a. Install engraved laminate signs with white legend on red background with minimum 3/8-in. (9-mm) high lettering for emergency instructions on power transfer, load shedding, and or emergency operations.

P. Install identification as follows:

1. Apply equipment identification labels of engraved plastic laminate on each major unit of equipment, including central or master unit of each system. This includes communication, signal, and alarm systems, unless units are specified with their own self-explanatory identification. Except as otherwise indicated, provide single line of text with ½-in. (13-mm) high lettering on 1-1/2-in. (38-mm) high label; where 2 lines of text are required, use lettering 2-in. (51-mm) high. Use white lettering on black field. Apply labels for each unit of following categories of equipment:
   a. Panelboards, electrical cabinets, and enclosures.
   b. Access doors and panels for concealed electrical items.

c. Electrical switchgear and switchboards.

d. Electrical substations.

e. Motor control centers.

f. Motor starters.

g. Push button stations.

h. Power transfer equipment.

i. Contactors.

j. Remote controlled switches.

k. Dimmers.

l. Control devices.

m. Transformers.

n. Inverters.

o. Rectifiers.

p. Frequency converters.

q. Battery racks.

r. Power generating units.

s. Telephone switching equipment.

t. Clock/program master equipment.

u. Call system master station.

v. TV/audio monitoring master station.

w. Fire alarm master station or control panel.

x. Security monitoring master station or control panel.

2. Apply designation labels of engraved plastic laminate for disconnect switches, breakers, push buttons, pilot lights, motor control centers, and similar items for power distribution and control components above, except panelboards and alarm/signal components where labeling is specified elsewhere. For panelboards, provide framed, typed circuit schedules with explicit description and identification of items controlled by each individual breaker.

END OF SECTION

26 09 16 CONTROL EQUIPMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Pilot Devices:

1. Selector switches.
2. Pushbuttons.
3. Indicating lights.
4. Potentiometer.

B. Relays/timers

1. Control relays
2. Time delay relays.

C. Pump alternators.

D. Phase failure relays.

E. Signal isolators.

F. Miniature circuit breakers.

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 REFERENCES

A. National Electrical Manufactures Association (NEMA)

1. 250, Enclosures for Electrical Equipment (1000 volts Maximum)
2. ICS 2, Industrial Control and Systems: Controllers, Contactors, and Overload Relays Rated 600 Volts

B. ANSI/NFPA 70 - National Electrical Code (NEC).

C. Underwriters Laboratories, Inc. (UL).

D. Factory Mutual (FM).

E. American National Standards Institute (ANSI).

1.4 ADMINISTRATIVE REQUIREMENTS [NOT USED]

1.5 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00.

1.6 CONTRACTOR QUALIFICATIONS

A. Supplier of Industrial Control Panels shall build control panel under the provisions of UL 508A.

B. Entire assembly shall be affixed with a UL 508A label "Listed Enclosed Industrial Control Panel" prior to shipment to the jobsite.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers

1. Subject to compliance with the Contract Documents, the manufactures listed in the applicable articles below are acceptable.
2. Provide similar components from the same manufacturer for uniformity of appearance, operations, and maintenance.

B. Substitutions: Comply with sections regarding substitutions.

2.2 SELECTOR SWITCHES, PILOT LIGHTS, AND PUSHBUTTONS

A. Manufactures:

1. Square D Class 9001, Type K
2. Allen Bradley 800T
3. Eaton 10250T
4. Pre-approved equal

B. Construction:

1. NEMA 4X
2. Heavy duty
3. Oil-tight
4. Dust-tight
5. Water-tight
6. 30.5 mm diameter
7. Provide nameplates as required for application or as indicated on drawings.

C. Selector Switches:

1. Position switches
   a. Maintained contact type.
   b. Knob type operator.
   c. Provide position switches as required to perform functions specified or shown in drawings:
      1) Two-position
      2) Three-Position
      3) Four-Position
2. Contact Blocks:

D. Provide contacts as required to perform functions specified or shown in drawings.

   a. Double break.
   b. AC Rating:
      1) 7,200 VA make

2) 720 VA break

E. Pilot Lights

1. LED type
2. Lenses:
   a. Glass type
   b. Color as appropriate for application or as indicated on drawings.
   c. Interchangeable
   d. Push to test
   e. Voltage as required

F. Pushbuttons

1. Flush mounted.
2. Black button color, unless otherwise noted.
3. Contacts
   a. Double break.
   b. Momentary or maintained contacts as appropriate for application or as indicated on drawings.
   c. AC Rating:
      1) 7,200 VA make
      2) 720 VA break

G. Potentiometers

1. Linear adjustment through 0-1,000 ohm with 1 percent resolution.
2. Three-wire interface.
3. Dial plate with 0-100 percent scale.
4. One-turn adjustment knob.

2.3 CONTROL RELAYS

A. Manufacturers:

1. Square D
2. Allen Bradley
3. IDEC
4. Pre-approved equal

B. DIN rail mounted Plug-in socket.

C. Clear polycarbonate dust cover with clip fastener.

D. Internal LED indicator when coil is energized.

E. Check button.

F. Temperature rise:

1. Coil 85 DegF max.
2. Contact 65 DegF max.

G. Insulation resistance: 100 Meg min.

H. Frequency response: 1800 operations/hour.

I. Operating temperature: -20 to +150 DegF.

J. Life expectancy:

1. Electrical: 500,000 operations or more
2. Mechanical: 50,000,000 operations or more.

K. Four (4) single-pole double-throw contacts rated 10A at 120V.

L. Coil voltage as required.

2.4 TIME DELAY RELAYS

A. Manufacturers:

1. ATC
2. Idec
3. Macromatic
4. Eagle Signal Controls
5. Pre-approved equal

B. Melt design test and performance requirements of NEMA ICS 2-218.

C. Heavy-duty.

D. Solid-state construction.

E. External adjustment dial.

F. DIN rail mounted Plug-in socket.

G. Two (2) single-pole double-throw switches rated 5A at 120V.

H. Auxiliary relays as required to perform functions specified or shown in drawings.

I. LED indication during time cycle.

J. Power source voltage as required.

K. Operation Modes:

1. On-Delay Relay
   a. Five (5) time ranges.
   b. .02 seconds to 30 minutes or as required to perform functions specified or shown in drawings.
2. Instantaneous Open, Time Delay Close.
   a. 1.5 seconds to 15 seconds or as required to perform functions specified or shown in drawings.
3. Or operation modes as required to perform functions specified or shown in drawings.

2.5 ELAPSED TIME METERS

A. Manufacturers:

1. Cramer 635s/Hrs

2. Quartz 722-0004

B. Six (6) digits.

C. Non-resettable.

D. Voltage as required.

2.6 TIMERS

A. 24 Hour Clock Timer (Repeat Cycle)

1. Manufacturers:
   a. Tork Time Controls
   b. Intermatic
   c. Pre-approved equal
2. Surface mount.
3. 24-hour LCD display.
4. One (1) single-pole double-throw contact rated 20A at 120V.
5. 288 setpoints per 24 hours.
6. 1 to 7-day skip feature.
7. Time cycle programmable by keyboard.

B. Interval/Duration Timer

1. Manufactures:
   a. ATC
   b. Pre-approved equal
2. DIN rail mounted plug-in base with dust tight cover.
3. Time range as indicated on drawings.
4. Two (2) single-pole, double-throw contacts rated 10A at 120V.

2.7 EXTERIOR MOUNTED FLASHING BEACON

A. Manufactures:

1. Edwards Model No. 48XBRMR120A
2. Or Equal

B. NEMA 4X

C. Red Polycarbonate Lens

D. -31 to +150 DegF Operating Range

2.8 ALTERNATORS

A. Provide the following types of alternators to perform functions specified or shown in drawings:

1. Two (2) Pump Lead/Lag
   a. Alternate two pumps in a lead/ lag sequence.
   b. Toggle switch to lock operating sequence.
   c. Din rail mounted plug-in base.
   d. LED indicating lights.

e. 120VAC.
f. 10A contacts at 120V.
g. Time Mark 2611 or equal.

2. Two (2) Pump Duplexer
   a. Toggle switch to lock operating sequence.
   b. DIN rail mounted plug-in base.
   c. LED indicating lights.
   d. 120VAC.
   e. 10A contacts at 240V.
   f. Diversified Electronics ARA-120-ABA

2.9 PHASE FAILURE PROTECTION DEVICES

A. Diversified Electronics Model No. SLD-440-ALE, 480 Volt, three-phase.

B. Diversified Electronics Model No. SLD-220-ALE, 240 Volt, three-phase.

C. Macromatic Model No. PMDU, 208-480 Volt, three-phase.

2.10 FLOAT SWITCH

A. Manufactures:

1. Siemens 9G
2. Anchor Scientific
3. Pre-approved equal

B. Direct acting switch.

C. Teflon coated 316 SS Float Switch

D. 60' cable

2.11 SUBMERSIBLE PUMP PROTECTION MODULE

A. As provided by pump vendor.

B. Winding overtemp alarm, indication, and protection.

C. Seal leak alarm, indication, and protection.

D. Manual reset pushbutton.

2.12 PUMP CONTROLLER

A. GENERAL FUNCTIONS

The pump controller shall provide user ready automatic control of pumps with an intuitive HMI interface. The pump controller shall contain pre-designed operational parameters that are selected and configured via the user interface (HMI). The minimum features available in the pump controller shall include:

1. Pump control of up to 6 pumps; including pump grouping and pump alternation.
2. Intelligent Hand-Off-Auto Control:

a. Hand mode (semi-automatic, non-maintained manual mode), the pump switches off at the deactivation set point and then resets to Auto mode for the next pump run cycle.
b. Hand mode (fully manual, maintained mode). To pump beyond the off (deactivation) set point, the Hand-Off-Auto button must be held down by the user for failsafe control.

3. Level set point adjustment for pump activation, deactivation and station level alarms.
4. Level device input capability shall include: 4-20mA analog signal, conductive probe or floats.
5. Redundant level device input capability with automatic input fault control (input device switching).
6. Selectable charge (fill) or discharge (empty) modes.
7. Pre-configured station optimization features:
   a. Maximum pump off time
   b. Maximum pumps to run
   c. Maximum starts per hour
   d. Inter-pump start and stop time delays
   e. Maximum pump run time
   f. Blocked pump detection
   g. Well washer control capability
   h. Well clean out control capability
   i. Pump operation control (profile programming) capability
8. "Locked level" alarm function to indicate a level device fault.
   a. User-defined % change within a specified time period
   b. Different set point values for low use or high use time periods (user defined)
9. Pump alternation modes:
   a. Fixed lead pump assignment
   b. Normal alternation
   c. User defined alternation using N:1 ratio
   d. Run most efficient pump using N:1 ratio
   e. Alternation by the number of hours run or the number of starts within a specified time period
10. Pump decommissioning:
    a. Decommissioned pump is automatically removed from the pump controller.
    b. Internal remote monitoring data tag shall flag the decommissioned status of a pump
11. Up to (6) unique user defined profiles of set points shall be available to control pumps during specific site conditions or events. Features shall include:
    a. Automatic profile change based on date and time
    b. Profile selection option from SCADA (remote control), digital input, logic tag or local display HMI
12. Datalogger for user-defined faults and events:

a. 50,000 events to internal flash memory

b. 10,000,000 events by writing directly to an SD card or USB

c. FTP data transfer or download data capability of event and fault logs in the form of a (csv) file for Microsoft Excel analysis

13. 3-phase supply voltage monitoring and supply fault management for the following conditions:

    a. Under-voltage
    b. Over-voltage
    c. Phase fail
    d. Phase rotation

14. Monitoring of dc power supply, battery voltage, and internal controller temperature

    a. Energy, power and pump efficiency monitoring:
    b. kW, kVA, power factor, kWHr, KVAH calculation for each pump
    c. Pump efficiency calculation (litres or gals per KWHr) for each pump

15. Motor protection features:

    a. 3-phase current monitoring for each pump
    b. Over- and under-current trip
    c. Ground/earth fault
    d. Current phase imbalance fault
    e. I2T fault
    f. Insulation resistance testing for motor windings

16. Flow measurement:

    a. Calculated flow via liquid level draw down data

17. VFD speed control capability.

18. Fault module capability as follows:

    a. Pump hold out function
    b. Automatic restart function after fault condition is no longer present
    c. Manual reset of fault required (if user intervention of fault reset is selected)

19. Remote control via remote telemetry monitoring to include the following:

    a. Changing the mode of pumps (hand/off/auto)
    b. Reset of pump faults and station faults
    c. Changing pump and alarm set points
    d. Changing operational profiles

20. Security

    a. User defined password management for access to programming areas in the controller
    b. Automatic data logging of personnel who have entered the programming areas
    c. Automatic logging of all unsuccessful login attempts with a date and time stamp
    d. Digital input option for controlled access to programming areas

21. SD/USB ports shall be available for the following operations:

    a. Firmware upgrades
    b. Save and load pump controller configuration
    c. Download data logs
    d. Export or import Modbus and DNP3 points list

B. PERFORMANCE AND ENVIRONMENTAL CHARACTERISTICS

1. The pump controller shall meet the following performance and environmental characteristics:

    a. Central Processing Unit Speed: 566MHz
    b. Central Processing Unit RAM Size: 256Mbyte
    c. Central Processing Unit Flash Memory Size: 64Mbyte
    d. Real Time Clock
    e. Working temperature -10°C to +60°C
    f. Storage temperature -40°C to +90°C
    g. Humidity 5% to 95% (non-condensing)
    h. IP Rating

        1) Controller Base Unit: IP20, NEMA 1
        2) Display Interface IP65, Nema 4

C. MANUFACTURERS

1. Xylem – Multitrode Multismart Pump Station Manager & RTU

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install as indicated and in accordance with manufacturer's recommendations and instructions.

B. Control Panels:

1. Size as required to mount the equipment.
2. Permitted uses of NEMA 4 enclosure:
    a. Surface mounted in areas designated as wet.
3. Permitted uses of NEMA 4X 317 Stainless Steel enclosure:
    a. Surface mounted in areas designated as wet and/or corrosive or highly corrosive.

3.2 FIELD QUALITY CONTROL

A. See Specification Section 26 05 00.

END OF SECTION

26 21 00 ELECTRICAL SERVICE

PART 1 - GENERAL

1.1 SUMMARY

A. Electric Utility Charges:

1. Electric Utility charges for extension of distribution system to point of service termination and meters will be paid by Contractor

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 DEFINITIONS

A. Electric Utility: Local Electric Power Company.

1.4 QUALITY ASSURANCE

A. Regulatory Requirements:
   1. National Fire Protection Association (NFPA):
      a. NFPA No. 70-93 - National Electrical Code (NEC).

1.5 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00.

PART 2 - PRODUCTS

2.1 ELECTRIC SERVICE

A. Electric Service Characteristics:

1. As indicated on Drawings and provided by Electric Utility.

PART 3 - - EXECUTION

3.1 PREPARATION

A. Confirmation of Electric Service:

1. Consult with Electric Utility to verify service information specified and shown on Drawings.
2. Include deviations required by Electric Utility from contract documents to comply with Electric Utility standards and requirements.

B. Metering:

1. Consult with Electric Utility regarding service entrance requirements and metering equipment.
2. Install metering equipment and empty conduit for metering conductors to meet standards and requirements of Electric Utility.

C. Application for Electric Service.

1. Obtain required forms from Electric Utility.
2. Assist OWNER in completion of forms and deliver completed forms to Electric Utility.
3. Coordinate schedule for installation of electric service with Electric Utility.

END OF SECTION

26 22 00 TRANSFORMERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. General purpose, dry type transformers.

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 REFERENCES

A. Underwriters Laboratories, Inc. (UL):
   1. UL 486A-80 - Wire Connectors and Soldering Lugs for Use with Copper Conductors.
   2. UL 506-89 - Specialty Transformers.

1.4 ADMINISTRATIVE REQUIREMENTS [NOT USED]

1.5 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00.
B. Submit the following for Engineer's approval.
C. Product Data:
   1. Dimensional plans and sections.
   2. Wiring diagrams.
   3. Manufacturer's nameplate data and electrical ratings.

1.6 QUALITY ASSURANCE

A. Items provided under this section shall be listed or labeled by UL or other Nationally Recognized Testing Laboratory (NRTL).
   1. Terms "NRTL" shall be as defined in OSHA Regulation 1910.7.
   2. Terms "listed" and "labeled" shall be as defined in National Electrical Code, Article 100.
B. Regulatory Requirements:
   1. National Electrical Code (NEC): Components and installation shall comply with National Fire Protection Association (NFPA) 70.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Eaton/Cutler-Hammer
B. Square D.
C. General Electric.
D. Siemens
E. Or equal.

2.2 GENERAL

A. Transformers:

1. Factory-assembled and tested, air-cooled units of types specified, having characteristics and ratings as indicated.
2. Design unit for 60 Hz service.

B. Cores: Grain-oriented, non-aging silicon steel.
C. Coils: Continuous windings without splices, except for taps.
D. Internal Coil Connections: Brazed or pressure type.
E. Bolt coil/core to bottom of enclosure for transformers larger than 15 kVA.
1. Isolated by rubber, vibration-absorbing mounts.
2. Metal-to-metal contact between coil/core and enclosure not allowed.
F. Provide aluminum or copper windings.
G. Nameplates: Provide metal nameplate listing manufacturer's name, serial number, type, class, kVA voltage, frequency, and showing internal wiring diagram.
H. Sound Level: Meets sound levels for transformer type and size indicated when factory-tested in accordance with NEMA ST 20.

2.3 GENERAL PURPOSE, DRY TYPE TRANSFORMERS

A. Comply with NEMA ST 20.
B. Windings: 2-winding type. 3-phase transformers shall use 1 coil/ phase in primary and secondary.
C. Transformers shall have following features and ratings.
1. Enclosure: Indoor, ventilated unless otherwise shown on Drawings.
2. Insulation Class: 185°C or 220°C class for transformers 15 kVA or smaller; 220°C class for transformers larger than 15 kVA.
3. Insulation Temperature Rise: 80°C maximum rise above 40°C for 15 kVA and larger; 115°C maximum rise above 40°C below 15kVA.
4. Taps: For transformers 3 kVA and larger, full capacity taps in high voltage winding as follows.
a. 3 through 10 kVA: Two 5% taps below rated high voltage.
b. 15 through 500 kVA: Six 2-1/2% taps, 2 above and 4 below rated high voltage.
c. 750 through 1,000 kVA: Four 2-1/2% taps, 2 above and 2 below rated high voltage.

D. Accessories: Following accessory items are required where shown on Drawings.
1. Wall Mounting Brackets: Manufacturer's standard brackets for transformers sized up to 75 kVA where wall mounting indicated.

2.4 CONTROL AND SIGNAL TRANSFORMERS

A. Comply with NEMA ST 1 and UL 506.
B. Ratings:
1. As indicated and for continuous duty.
2. Where rating not indicated, provide 125% of load.
C. Type: Self-cooled, 2-winding dry type.
D. Enclosure: Indoor, except as indicated.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Arrange equipment to provide adequate spacing for cooling air circulation.
B. Tighten electrical connectors and terminals in accordance with manufacturer's published torque-tightening values. Where manufacturer's torque values not indicated, use those specified in UL 486A and 486B.
C. Install wall-mounted transformers on prefabricated brackets designed for purpose.
D. Touch up scratched or marred surfaces to match original finish.
E. Identify transformers as specified herein.
F. Install lightning arresters as shown on Drawings.

3.2 GROUNDING

A. Ground in accordance with Specifications.

3.3 FIELD QUALITY CONTROL

A. Test and permanently record as follows.
   1. Prior to energization of transformers, test phase-to-phase and phase-to-ground insulation resistance levels.
   2. Test transformers for continuity of circuits and short-circuits.

3.4 ADJUSTING

A. Adjust transformer taps to provide optimum voltage conditions at utilization equipment.

3.5 CLEANING

A. Upon completion of installation, inspect interiors and exteriors of accessible components.
   1. Remove paint splatters and other spots, dirt, and construction debris.
   2. Touch up scratches and mars of finish to match original.

3.6 PROTECTION

A. Temporary Heating: Comply with manufacturer's written recommendations within enclosure of each transformer throughout periods during which equipment is not in a space continuously under normal control of temperature and humidity.

END OF SECTION

26 24 16 PANELBOARDS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Lighting and power panelboards and associated auxiliary equipment rated 600 V or less.

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 REFERENCES

A. National Electrical Manufacturers Association (NEMA):

1. NEMA PB.1-90 - Panelboards.
2. NEMA PB1.1-91 - General Instructions for Proper Installation, Operation and Maintenance of Panelboards Rated 600 volts or less.

B. Underwriter's Laboratory (UL):

1. UL 486A-86- Wire Connectors and Soldering Lugs for Use with Copper Conductors, 7th Edition.
2. UL 870-85 - Wireways, Auxiliary Gutters, and Associated Fittings, 5th Edition.

1.4 DEFINITIONS

A. Load Center: Panelboard with thermal magnetic circuit-breaker branches, primarily of plug-in type, designed for residential and light commercial projects, operating at 240 V and below, available in both single and 3-phase versions, and equipped with combination flush/surface mounting trim.

B. Overcurrent Protective Device (OCPD): Device operative on excessive current that causes and maintains interruption of power in circuit it protects.

1.5 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00.

B. Submit all products covered under this specification for Engineer's approval.

C. Product Data:

1. For each type panelboard, accessory item, and component specified.
2. Identification materials.

D. Shop Drawings:

1. Dimensioned plans, sections, and elevations.
2. Tabulations of installed devices, major features, and voltage rating.

3. Include:

a. Enclosure type with details for types other than NEMA Type 1.

b. Bus configuration and current ratings.

c. Short-circuit current rating of panelboard.

d. Features, characteristics, ratings, and factory settings of individual protective devices and auxiliary components.

E. Wiring diagrams detailing schematic diagram including control wiring, and differentiating between manufacturer-installed and field- installed wiring.

1.6 QUALITY ASSURANCE

A. Items provided under this section shall be listed or labeled by UL or other Nationally Recognized Testing Laboratory (NRTL).

1. Terms "NRTL" shall be as defined in OSHA Regulation 1910.7.

2. Terms "listed" and "labeled" shall be as defined in National Electrical Code, Article 100.

B. Regulatory Requirements:

1. National Electrical Code (NEC): Components and installation shall comply with National Fire Protection Association (NFPA) 70.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Square D

B. Or equal

2.2 PANELBOARDS, GENERAL REQUIREMENTS

A. Construction in accordance with NEMA PB1.

B. Overcurrent Protective Devices (OCPDs):

1. Provide type, rating, and features as indicated.

2. Comply with Section 16475 with OCPDs adapted to panelboard installation.

3. Tandem circuit breakers shall not be used.

4. Multipole breakers shall have common trip.

C. Enclosures:

1. Cabinets, flush or surface mounted as indicated. NEMA Type 4X stainless steel

D. Front:

1. Secure to box with concealed trim clamps except as indicated.

2. Front for surface-mounted panels shall be same dimensions as box.

3. Fronts for flush panels shall overlap box except as otherwise specified.

E. Directory Frame: Metal, mounted inside each panel door.

F. Bus: Hard drawn copper of 98 percent conductivity.

G. Main shall be equipped with solderless lugs. Bussing shall be of sequence type so that multi-pole breakers can be substituted for single-pole breakers without buss or assembly rearrangement.

H. Branch circuit breakers shall be of the Thermal Magnetic type, ITE Co. type or approved equal, having inverse time delay thermal trip on overloads and instantaneous magnetic trip on short circuits. These breakers shall employ quick-make and quick-break toggle mechanisms for manual operation as well as automatic operations. Automatic tripping shall be indicated by the breaker handle assuming a clearly distinctive position. The neutral bar shall have numbered terminals.

I. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment ground conductors. Bonded to box.

J. Provision for Future Devices: Equip with mounting brackets, bus connections, and necessary appurtenances, for the OCPD ampere ratings indicated for future installation of devices.

K. Special Features: Provide following features for panelboards as indicated.

1. Isolated Equipment Ground Bus: Adequate for branch-circuit equipment ground conductors; insulated from box.

2. Auxiliary Gutter: Conform to UL 870.

2.3 LOAD CENTERS

A. Provide load-center-type panelboards only where specifically indicated.

B. OCPDs: Plug-in full module (nominal 1-in. width) circuit breaker.

C. Circuit Breakers for Switching Lights at Panelboards: Indicated type SWD.

D. Circuit Breakers for Equipment Marked HCAR Type: Indicated HCAR type.

E. Interiors: Provide physical means to prevent installation of more OCPDs than quantity for which enclosure was listed.

F. Main, Neutral, and Ground Lugs and Buses: Mechanical connectors for conductors.

2.4 IDENTIFICATION

A. General: Provide nameplates for all panelboards.

B. Panelboard Nameplates: Engraved laminated plastic for each panelboard.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Install panelboards and accessory items in accordance with NEMA PB 1.1, and manufacturers' written installation instructions, and approved submittals.

B. Mounting Heights: Top of trim 6 ft 2-in. above finished floor, except as indicated.

C. Mounting:

1. Plumb and rigid without distortion of box.

2. Mount flush panels uniformly flush with wall finish.

D. Circuit Directory: Typed and reflective of final circuit changes required to balance panel loads. Obtain approval before installing.

E. Install filler plates in unused spaces.

F. Wiring in Panel Gutters: Train conductors neatly in groups, bundle, and wrap with wire ties after completion of load balancing.

3.2 GROUNDING

A. Connections: Make equipment grounding connections for panelboards as indicated.

B. Provide ground continuity to main electrical ground bus indicated.

C. Ground in accordance with Section 16452.

3.3 CONNECTIONS

A. Tighten electrical connectors and terminals, including grounding connections, in accordance with manufacturer's published torque- tightening values. Where manufacturer's torque values are not indicated, use those specified in UL 486A.

3.4 FIELD QUALITY CONTROL

A. Perform tests on low-voltage power panelboards and accessories.

B. Upon completing installation of system, perform following tests:

1. Make insulation resistance tests of panelboard buses, components, and connecting supply, feeder, and control circuits.

2. Make continuity tests of circuits.

C. Quality Control Program.

1. Procedures: Make field tests and inspections and prepare panelboard for satisfactory operation in accordance with manufacturer's recommendations and these specifications.

D. Visual and Mechanical Inspection: Include following inspections and related work:

1. Inspect for defects and physical damage, labeling, and nameplate compliance with requirements of up-to-date drawings and panelboard schedules.

2. Exercise and perform operational tests of all mechanical components and other operable devices in accordance with manufacturer's instruction.

3. Check panelboard mounting, area clearances, and alignment and fit of components.

4. Check tightness of bolted electrical connections with calibrated torque wrench. Refer to manufacturer's instructions for proper torque values.

5. Perform visual and mechanical inspection and related work for overcurrent protective devices as within this section.

E. Electrical tests: Include following items performed in accordance with manufacturer's instruction:

1. Insulation resistance test of buses and portions of control wiring that disconnected from solid-state devices. Insulation resistance less than 100 megohms is not acceptable.

2. Ground resistance test on system and equipment ground connections.

3. Test main and subfeed overcurrent protective devices in accordance within this section.

F. Retest: Correct deficiencies identified by tests and observations and provide retesting of panelboards. Verify by system tests that total assembly meets specified requirements.

3.5 CLEANING

A. Upon completion of installation, inspect interior and exterior of panelboards.

B. Remove paint splatters and other spots, dirt, and debris.

C. Touch up scratches and mars of finish to match original finish.

D. Clean interior of panelboard.

3.6 ADJUSTING

A. Adjust doors and operating mechanisms for free mechanical movement.

3.7 COMMISSIONING

A. Balancing Loads: After Substantial Completion, but before Final Acceptance, conduct load-balancing measurements and circuit changes as follows:

1. Perform measurements during period of normal working load as advised by Owner.

2. Perform load-balancing circuit changes outside the normal occupancy/working schedule of the facility. Make special arrangements with Owner to avoid disrupting critical 24-hr services such as Fax machines and on-line data processing, computing, transmitting, and receiving equipment.

3. Recheck loads after circuit changes during normal load period. Record load readings before and after changes and submit test records.

4. Tolerance: Difference between phase loads exceeding 20 percent at any one panelboard is not acceptable. Re-balance and recheck as required to meet this minimum requirement.

END OF SECTION

26 27 16 CABINETS AND ENCLOSURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Specifications for cabinets and enclosures for housing of control panels and motor controls.

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 REFERENCES

A. National Electrical Manufacturers Association (NEMA):
   1. 250 - Enclosures for Electrical Equipment (1000 volts maximum).
      a. NEMA 3R - Enclosures for outdoor use primarily to provide a degree of protection against wind-blown dust, rain, and sleet; undamaged by formation of ice on the enclosure.
      b. NEMA 12 - Enclosures for indoor use primarily to provide a degree of protection against dust, falling dirt, and dripping non-corrosive liquids.
      c. NEMA 4X – Enclosures for outdoor use primarily to provide a degree of protection against wind-blown dust, rain, sleet, hose directed water, and corrosion; undamaged by formation of ice on the enclosure.

B. American National Standards Institute/National Fire Protection Association (ANSI/NFPA), NFPA 70 - National Electrical Code (NEC), Article 373 - Cabinets, Cutout Box, and Meter Socket Enclosures.

C. Underwriters Laboratories (UL), UL 50 - Safety for Cabinets and Boxes.

1.4 ADMINISTRATIVE REQUIREMENTS [NOT USED]

1.5 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00.

B. Submittals to include:
   1. Manufacturer's cut sheets and catalog data.
   2. Instruction for handling and storage.
   3. Installation instructions.
   4. Dimensions and weights.

1.6 DELIVERY, STORAGE AND HANDLING

A. Have cabinets and enclosures packed and crated to permit ease of handling and to provide protection from damage during shipping, handling and storage.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. The EMF Company
B. Hennessey Products, Inc.
C. Hoffman Industrial Products
D. Pauluhn Electric Manufacturing Company
E. Weigman Company

F. Rose Enclosure
G. N.E.M.A. Enclosure Mfg. Co.

2.2 MATERIALS AND EQUIPMENT

A. Sheet Metal Boxes:
   1. Provide enclosures manufactured in accordance with NEMA 250 and NEC Article 373. Fabricate outdoor NEMA 3R and NEMA 4X panels from 0.125- inch thick type 5052 H32 aluminum or 14 gauge, 317 stainless steel. NEMA 12 indoor panels shall be painted steel.
   2. Dimensions and special features are shown on the Drawings.
   3. Construct outdoor enclosures with continuously welded seams ground smooth.
   4. Additional material thickness and bracing requirements shall be determined by the manufacturer to provide the strength required by the standard listed. The bracing shall be provided in such a way as to minimize the protrusion into the wiring and the equipment spaces.
   5. Install the door with a stainless steel continuous hinge, stainless steel padlock handle with gasket and stainless steel hardware.
   6. Furnish the door with oil-resistant neoprene gasket attached with oil-resistant adhesive and held in place with aluminum retaining strips.
   7. Use a single, 3/4-inch minimum, door handle that provides a 3-point latching through latch rods with rollers. Provide rollers with at least 3/4-inch diameter.
   8. Gasketed overlapping doors may be used instead of a center post.
   9. Provide heavy duty lifting eyes of suitable material.
   10. Fabricate the enclosure with a stud-mounted panel inside. Make panels from 12-gauge steel painted with white enamel finish.
   11. Equip NEMA 12, NEMA 3R, and NEMA 4X enclosures with thermostatically controlled space heaters and corrosion inhibitors. Provide heaters rated for 240V for 120V operation.
   12. Weld mounting feet to the enclosure if called for on the Drawing.
   13. Include a high impact plastic data pocket in the enclosure.
   14. Provide ground connections on the enclosures to enable grounding of the enclosure with a No. 2 AWG conductor.
   15. Equip free-standing outdoor cabinets with inner and outer door restraint bars to prevent door swing during windy conditions.
   16. Supply indoor enclosures with filtered passive air intake and exhaust openings, 4-inch square in the side near the top and near the bottom of the adjacent side panel.

B. Hardware:
   1. Mounting Hardware: Stainless steel
   2. Conduit Connectors: Watertight as manufactured by Myers Hubs, or equal.

2.3 TESTING

A. Test cabinets and enclosures in accordance with UL 50 so unit qualifies for a UL label.

PART 3 - EXECUTION

3.1 PREPARATION

A. Review Drawings and determine how many enclosures of each kind are required and check if supplied quantity is sufficient.
B. Check the mounting pads or foundations for proper mounting dimensions and features, including grounding conductor stub-up.

3.2 INSTALLATION

A. Use enclosures described in this specification only above grade.
B. Install enclosures in accordance with NEC Article 373 in locations as indicated on the Drawings.
C. Install enclosures in readily accessible locations to facilitate general operations, wire pulls, maintenance and repair.
D. Plug unused conduit openings.
E. Make conduit connections to the enclosures with watertight conduit connectors.

END OF SECTION

26 27 26 WIRING DEVICES

PART 1 - - GENERAL

1.1 SECTION INCLUDES

A. Specifications for wiring devices including:
   1. Receptacles.
   2. Wall switches.
   3. Wall plates and cover plates.

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 REFERENCES

A. American National Standards Institute/National Electrical Manufacturers Association (ANSI/NEMA):
   1. NEMA WD1 - General Purpose Wiring Devices.
   2. NEMA WD6 - Dimensional Requirements.
B. Federal Specifications (WC-596F).
C. American National Standards Institute/National Fire Protection Association (NFPA):
   1. NFPA No. 70 - National Electrical Code (NEC), Articles 210 Branch Circuits, 250 Grounding and 410, Paragraphs 56, 57 and 58.

1.4 ADMINISTRATIVE REQUIREMENTS [NOT USED]

1.5 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00.
B. Submit all products covered under this specification for Engineer's approval:
   1. Manufacturer's product literature and specifications including dimensions, weights, certifications and instructions for handling, storage and installation.

1.6 DELIVERY, STORAGE AND HANDLING

A. Pack and crate devices to permit ease of handling and protect from damage during shipping, handling and storage.

PART 2 - - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Bryant Electric
B. Crouse-Hinds, Arrow Hart Division
C. Hubbel Inc. Wiring Devices Division
D. Leviton Manufacturing Company
E. Pass & Seymour/Legrand.

2.2 MATERIALS AND EQUIPMENT

A. Standards: Conform to NEMA WD1 for general requirements and NEMA WD6 for dimensional requirements.

B. Manufacture devices to heavy-duty industrial specification grade with brown nylon bodies (orange for isolated-ground receptacles) back and side wiring provisions and green-colored grounding screws.

C. Receptacles:
   1. Duplex-type receptacles: Rated 20 amps at 120 volts.
   2. Contacts: Brass or phosphor bronze.
   3. Receptacle grounding system: Extend to the mounting strap unless isolated ground is indicated or required.
   4. GFI or GFCI (ground fault circuit interrupter) receptacles: Provide feed-through type with test and reset button.

D. Wall Switches:
   1. Toggle switches: Rated 20 amps at 120/277 volts AC rated for both resistive and inductive loads.
   2. Contacts: Silver cadmium oxide construction to prevent sticking, welding and excessive pitting.

E. Cover Plates:
   1. Receptacles:
      a. In outdoor areas, provide cover plates of cast metal, in-use type with stainless steel hardware.
      b. In indoor, corrosive and/or wet areas, provide cover plates of polycarbonate type with stainless steel hardware.
      c. All other plates: Type 302 stainless steel.
   2. Wall Switches
      a. In outdoor or corrosive or wet locations, provide cover plates of cast metal, gasketed with spring-loaded hinged covers and stainless steel hardware.
      b. All other plates: Type 302 stainless steel.

PART 3 - EXECUTION

3.1 PREPARATION

A. Verify that device boxes are correctly placed.

B. Verify that the correct quantity, size and type of wires are pulled to each device box.

C. Verify that wiring has been checked at both ends.

D. Prepare wire ends for connection to devices.

E. Inspect each wiring device for defects.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install devices plumb and level.

C. Install switches with OFF position down.

D. Install receptacles with grounding pole on top.

E. Connect wiring device grounding terminal to outlet box with bonding jumper.

F. Connect wiring devices by wrapping conductors clockwise around screw terminals.

G. Install cover plates on switch, receptacle and blank outlets in finished areas.
H. Energize and test devices for proper operation.

END OF SECTION

26 28 00 OVERCURRENT PROTECTION DEVICES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Overcurrent protective devices (OCPDs) rated 600 V and below and switching devices commonly used with them.

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 REFERENCES

A. National Electrical Manufacturers Association (NEMA).
   1. NEMA AB1-86 - Molded Case Circuit Breakers and Molded Case Switches.
B. National Fire Protection Association (NFPA):
   1. NFPA 70-90 - National Electrical Code (NEC).
C. Underwriters Laboratory (UL):
   1. UL 98-87 - Enclosed and Dead Front Switches.
   2. UL 486A-80 - Wire Connectors and Soldering Lugs for Use with Copper Conductors. Seventh Edition.
   3. UL 489-86 - Molded-Case Circuit Breakers and Circuit-Breaker Enclosures. Seventh Edition.

1.4 ADMINISTRATIVE REQUIREMENTS [NOT USED]

1.5 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00.

1.6 DEFINITIONS

A. Overcurrent Protective Device (OCPD): Device operative on excessive current that causes and maintains interruption of power in circuit it protects.
B. Ampere-Squared-Seconds: Expression of available thermal energy resulting from current flow. With regard to current-limiting fuses and circuit breakers, ampere-squared-seconds during fault current interruption represents energy allowed to flow before fuse or breaker interrupts fault current within its current limiting range.

1.7 QUALITY ASSURANCE

A. Items provided under this section shall be listed and labeled by UL or other Nationally Recognized Testing Laboratory (NRTL).
   1. Term "NRTL" shall be as defined in OSHA Regulation 1910.7.
   2. Terms "listed" and "labeled" shall be as defined in National Electrical Code, Article 100.
B. Regulatory Requirements:
   1. Components and Installation:

a. NFPA 70 "National Electrical Code (NEC)."
b. Local codes and ordinances.

C. Single-Source Responsibility: Obtain similar OCPDs from single manufacturer.

PART 2 - PRODUCTS

2.1 OVERCURRENT PROTECTIVE DEVICES (OCPDS), GENERAL

A. General: Provide OCPDs in indicated types, as integral components of panelboards, switchboards, and motor control centers; and also as individually enclosed and mounted single units.

2.2 MOLDED-CASE CIRCUIT BREAKERS

A. Manufacturers except as indicated:
1. Square D
2. Or approved equal

B. UL 489 and NEMA AB 1.

C. Construction: Bolt-in type, except breakers in load-center-type panelboards and breakers 225-ampere frame size and larger may be plug-in type if held in place by positive locking device requiring mechanical release for removal.

D. Tripping Device: Quick-make, quick-break toggle mechanism with inverse-time delay and instantaneous overcurrent trip protection for each pole.

E. Adjustable Instantaneous Trip Devices: Factory adjusted to low-trip-setting current values.

F. Enclosure for Switchboard or Panelboard Mounting: Suitable for panel mounting in switchboard or panelboards where indicated.

G. Enclosure for Switchboard or Motor Control Center Mounting: Provide individual mounting where indicated.

H. Enclosure for Independent Mounting: NEMA Type 1 enclosure, as indicated or required to suit environment where located.

I. Combination Circuit Breakers and Ground-Fault Circuit Interrupters: UL 943 arranged for sensing and tripping for ground-fault current in addition to overcurrent and short-circuit current.
1. Match features and module size of panelboard breakers and provide clear identification of ground fault trip function.
2. Trip Setting for Ground Fault: 4 to 6 milliamperes, listed and labeled as Class A, Type 1 device.
3. Trip Setting for Ground Fault: 30 milliamperes.

J. Current-Limiting Circuit Breakers: Arranged to limit let-through ampere-squared-seconds during fault conditions to value less than ampere-squared-seconds of one-half-cycle wave of prospective symmetrical fault current. Circuit breaker shall use no fusible devices in its operation. Current-limiting characteristic shall be in addition to normal time-delay and instantaneous-trip characteristics and other features as indicated.

K. Circuit Breakers With Solid-State Trip Devices: Provide indicated circuit breakers with solid-state trip devices having following features:
1. Ambient Compensation: Trip device insensitive to temperature changes between minus 20C and plus 55C.

2. Adjustability: Breaker ratings and trip settings shall be changeable by operation of controls on front panel of breaker, by change of plug-in element without removing breaker from mounting, or by combination of 2 methods.
3. Ground-Fault Tripping: Adjustable for pick-up and time-delay values. Provide for indicated units.
4. Provide clear plastic shield limiting access to rating plug and adjustments on solid state trip circuit breaker. Seal by attaching sealing wire through hole in posts provided. With wire seal installed, circuit breaker rating plug and adjustments shall not be "readily accessible."

2.3 INSULATED-CASE CIRCUIT BREAKERS

A. Manufacturers:
   1. Square D
   2. Or approved equal
B. UL 489 and NEMA AB 1.
C. Ratings: Continuous-current, interrupting, and short-time-current ratings, and voltage and frequency ratings as indicated.
D. Operating Mechanism: Mechanically and electrically trip-free, stored-energy operating mechanism with following features:
   1. Moving Contacts Closing Speed: Independent of both control and operator.
E. Circuit-Breaker Trip Devices: Solid-state overcurrent trip device system that includes 1 integrally mounted current transformer or sensor per phase, release mechanism, and following features:
   1. Functions: Long-time-delay, short-time-delay, and instantaneous-trip functions, which are independent of each other in both action and adjustment.
   2. Temperature compensation to assure accuracy and calibration stability from minus 20°C to plus 55°C.
   3. Field-adjustable, time-current characteristics.
   4. Current Adjustability: Effected by operating controls on front panel or by changing plug-in elements or current transformers or sensors.
   5. Three bands for long-time- and short-time-delay functions marked "minimum," "intermediate," and "maximum."
   6. Five pickup points, minimum, for long-time- and short-time-trip functions.
   7. Six pickup points, minimum, for instantaneous-trip functions.
   8. Ground fault protection with at least 3 short-time-delay settings and 37 trip-time-delay bands. Adjustable current pickup.
   9. Trip Indication: Labeled lights or mechanical indicators on trip device shall indicate type of fault causing breaker trip. If lights are used, integral power source shall maintain indication for 60 hrs, minimum.
F. Auxiliary Contacts for Remote Indication: Where remote indication of breaker position is indicated, provide spare auxiliary switch in addition to other auxiliary switches required for normal breaker operation. Spare auxiliary switch shall consist of 2 Type "a" and 2 Type "b" stages (contacts), wired to terminal block in breaker housing.
G. Circuit-Breaker Features and Accessories: Include following:
   1. Padlocking Provisions: For installing at least 2 padlocks on each breaker to secure its enclosure and prevent movement of draw out mechanism.

2. Operating Handle: Provide 1 for each manually operated breaker. No handle ties are permitted.
3. Electric Close Button: Provide 1 for each electrically operated breaker.
4. Indicating Lights: Contacts for "Breaker Open" and "Breaker Closed," for main and bus tie circuit breakers, and for other indicated breakers.

PART 3 - EXECUTION

3.1 CONNECTIONS

A. Check connectors, terminals, bus joints, and mountings for tightness.
B. Tighten field-connected connectors and terminals, including screws and bolts, in accordance with equipment manufacturer's published torque tightening values. Where manufacturer's torqueing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL 486A and UL 486B.

3.2 GROUNDING

A. Provide equipment grounding connections for individually mounted OCPD units as indicated and as required by NEC. Tighten connectors to comply with tightening torques specified in UL Standard 486A to assure permanent and effective grounding.
B. Ground in accordance with Section 16452.

3.3 FIELD QUALITY CONTROL

A. Testing:
   1. Reports: Prepare certified written reports on tests and observations. Report defective materials and workmanship and unsatisfactory test results. Include complete records of repairs and adjustments made.
   2. Labeling: Upon satisfactory completion of tests and related effort, apply label to tested components indicating test results, date, and responsible person.
   3. Schedule visual and mechanical inspections and electrical tests with at least 1 week's advance notification.
   4. Pretesting: Upon completing installation of system, perform following preparations for tests:
      a. Make insulation resistance tests of OCPD buses, components, and connecting supply, feeder, and control circuits.
      b. Make continuity tests of circuits.
      c. Include full updating on final system configuration and parameters where they supplement or differ from those indicated in original Contract Documents.
      d. Comply with manufacturer's instructions for installation and testing of OCPDs.
   5. Visual and mechanical inspection: Include following inspections and related work.
      a. Overcurrent-Protective-Device Ratings and Settings: Verify indicated ratings and settings to be appropriate for final system arrangement and parameters. Where discrepancies are found, test organization shall recommend final protective device ratings and settings. Use accepted revised ratings or settings to make final system adjustments.

b. Inspect for defects and physical damage, NRTL labeling, and nameplate compliance with current single line diagram.
c. Exercise and perform operational tests of mechanical components and other operable devices in accordance with manufacturer's instruction manual.
d. Check tightness of electrical connections of OCPDs with calibrated torque wrench. Refer to manufacturer's instructions for proper torque values.
e. Clean OCPDs using manufacturer's approved methods and materials.
f. Verify installation of proper fuse types and ratings in fusible OCPDs.

6. Electrical Tests: Include following items performed in accordance with manufacturer's instructions:
   a. Insulation resistance test of OCPD conducting parts. Insulation resistance less than 100 megohms is not acceptable.
   b. Verify trip unit reset characteristics for insulated-case circuit breakers.
   c. Make adjustments for final settings of adjustable-trip devices.
   d. Activate auxiliary protective devices such as ground fault or undervoltage relays, to verify operation of shunt-trip devices.
   e. Check stored-energy charging motors for proper operation of motor, mechanism, and limit switches.
   f. Check operation of electrically operated OCPDs in accordance with manufacturer's instructions.
   g. Check key and other interlock and safety devices for operation and sequence. Make closing attempts on locked-open and opening attempts on locked-closed devices including moveable barriers and shutters.
7. Retest: Correct deficiencies identified by tests and observations and retest. Verify by system tests that specified requirements are met.

3.4 CLEANING

A. Upon completion of installation, inspect OCPDs. Remove paint splatters and other spots, dirt, and debris. Touch up scratches and mars of finish to match original finish.

END OF SECTION

26 29 36 MOTOR CONTROLLERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. AC motor control devices rated 600 v and below.
B. Overcurrent protective devices and disconnect switches used with motor controllers are specified in Section 26 28 00.

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 DEFINITIONS

A. Motor Controller: Device that controls, protects, and energizes electric motor, and where required, controls its speed or torque or power delivered by it.

1.4 ADMINISTRATIVE REQUIREMENTS [NOT USED]

1.5 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00.
B. Submit the following for Engineers approval:
   1. Product Data:
      a. Include dimensions, ratings, and data on features and components.
   2. Test Results:
      a. Certified reports of field tests and observations.
   3. Miscellaneous:
      a. Load Current and Overload Relay Heater List: Compiled by Contractor after motors have been installed. Arrange list to demonstrate selection of heaters to suit actual motor nameplate full load currents.
   4. Operation and Maintenance (O&M) Data:
      a. Manufacturer's data on maintenance and operation of equipment.

1.6 QUALITY ASSURANCE

A. Single-Source Responsibility: Obtain similar motor-control devices from single manufacturer.
B. Manufacturer Qualifications:
   1. Provide controllers from manufacturers regularly engaged in manufacture of equipment of types and capacities indicated, with such products in satisfactory use in similar service for not less than 5 yrs.
C. Items provided under this section shall be listed or labeled by UL or other Nationally Recognized Testing Laboratory (NRTL).
   1. Term "NRTL" shall be as defined in OSHA Regulation 1910.7.
   2. Terms "listed" and "labeled" shall be as defined in National Electrical Code (NEC), Article 100.
D. Regulatory Requirements:
   1. National Electrical Code (NEC): Components and installation shall comply with National Fire Protection Association (NFPA) No. 70.

1.7 COORDINATION

A. Coordinate features of controllers and control devices with pilot devices and control circuits provided under other sections of Specifications covering control systems.

1.8 MAINTENANCE

A. Extra Materials:
   1. Spare Fuses and Incandescent Indicating Lamps: Furnish one spare for every 5 installed units, but not less than one set of 3 of each kind.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manual and Magnetic Motor Controllers:
   1. Square D
   2. General Electric
   3. Eaton/Cutler-Hammer
   4. Siemens
   5. Or, approved equal

2.2 MOTOR CONTROLLERS, GENERAL

A. Coordinate features of each motor controller with ratings and characteristics of supply circuit, motor, required control sequence, duty cycle of motor, drive, and load, and pilot device, and control circuit affecting controller functions. Provide controllers horsepower rated to suit motor controlled.
B. NEMA Size 1 minimum.
C. Contacts shall open each ungrounded connection to motor.
D. Overload Relays:
   1. Ambient-compensated type with inverse-time-current characteristic.
   2. Provide with heaters or sensors in each phase matched to nameplate full load current of specific motor to which connected with appropriate adjustment for duty cycle.
   3. Enhanced Protection Overload Relay: Provide overload relays with NEMA Class 10 tripping characteristics for submersible equipment or where indicated. Select to protect motor against voltage unbalance and single phasing.
E. Enclosures:
   1. For individually mounted motor controllers and control devices, comply with NEMA 250.
   2. Provide enclosures suitable for environmental conditions at controller location.
   3. Provide NEMA Type enclosures as indicated on the contract drawings. If not shown, provide as required to suit environment where located.

2.3 MANUAL MOTOR CONTROLLERS

A. Quick-make, quick-break toggle action.
B. Doublebreak silver alloy contacts.
C. Pilot light.
D. Padlocking provision.

2.4 MAGNETIC MOTOR CONTROLLERS

A. Full voltage, non-reversing, across the line, magnetic controller, except where another type indicated.

B. Control Circuit: 120 v. Control power transformer integral with controller where no other supply of 120-v control power to controller indicated. Control power transformer with adequate capacity to operate connected pilot, indicating and control devices, plus 100% spare capacity.
C. Combination Controller: Switch type; fused or nonfused as indicated; quick-make, quick-break switch; factory assembled with controller and arranged to disconnect it. For fused switches, provide rejection type fuse clips and fuses rated as indicated.
D. Combination Controller: Motor circuit protector; molded case circuit breaker type with magnetic only trip element calibrated to coordinate with actual locked rotor current of connected motor and controller overload relays. Provide breakers factory-assembled with controller, interlocked with unit cover or door, and arranged to disconnect controller. Provide motor circuit protectors with field-adjustable trip elements.
E. Overvoltage/Undervoltage/Phase-Failure Relays: Solid-state sensing circuit with isolated output contacts for hard-wired connection. Provide adjustable undervoltage setting.
    1. Provide in starter enclosure for Size 2 and larger starters.
    2. Delay initial motor start.
    3. Delay motor restart due to starter dropout caused by undervoltage or starter coil circuit interruption for maintained control circuits.
    4. Adjustable on delay from 0.15 to 30.0 sec set at 10.0 sec.
    5. Connect control relay in motor starter coil circuit.
    6. Coordinate control relay selection with motor starter to cause motor starter to drop out at voltage slightly higher than dropout voltage of starter and have dropout time slightly faster than motor starter to ensure if motor starter drops out, relay will drop out.

2.5 AUXILIARY CONTROL DEVICES

A. General: Furnish auxiliary control device as specified. Factory-install in controller enclosure except as otherwise indicated.
B. Pushbutton Stations, Pilot Lights, and Selector Switches: Heavy-duty type.
C. Stop Pushbutton Station: Momentary break pushbutton station with factory-applied hasp arranged so padlock can be used to lock pushbutton in depressed position with control circuit open.
D. Lockout Pushbutton Station: Maintained contact red mushroom pushbutton station with factory-applied hasp arranged so padlock can be used to lock pushbutton in depressed position with control circuit open.
E. Control Relays: Auxiliary and adjustable time-delay relays.
F. Elapsed Time Meters: Heavy duty with digital readout in hrs.
G. Ammeters, Voltmeters, and Frequency Meters: Panel type, 2 ½-in. minimum size with 90 or 120 degree scale, and ±2% accuracy. Where indicated, provide transfer device with off position.
H. Current Sensors: Rated to suit application.
I. Current-Sensing Phase-Failure Relays: Solid-state sensing circuit with isolated contacts for hard-wired connection. Arranged to operate on phase failure, phase reversal, current unbalance of from 5% to 30%, or loss of supply voltage. Provide adjustable response delay.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Install motor controllers and auxiliary motor control devices in accordance with manufacturer's written instructions and approved submittals.
B. Mounting:

1. For control equipment at walls, bolt single units to wall. Mount multiple units on lightweight structural steel channels bolted to wall.
2. For controllers not at walls, provide freestanding racks fabricated of structural steel members and lightweight slotted structural steel channels. Use feet consisting of 3/8-in. thick steel plates, 6-in. square, bolted to floor. Use feet for welded attachment of 1-1/2-in. by 1-1/2-in. by ¼-in. vertical angle posts not over 3-ft oc. Connect posts with horizontal lightweight slotted steel channels and bolt control equipment to channels.

C. Motor Controller Fuses and Circuit Breakers: Conform to requirements of Section 26 28 00.

3.2 IDENTIFICATION

A. Comply with Specifications.

3.3 CONTROL WIRING INSTALLATION

A. Install wiring as specified in Section 26 05 23.
B. Install wiring in enclosures bundled, trained, and supported.

3.4 CONNECTIONS

A. Tighten connectors, terminals, and mountings. Tighten field-connected connectors and terminals, including screws and bolts, in accordance with equipment manufacturer's published torque-tightening values. Where manufacturer's torqueing requirements not indicated, comply with tightening torques specified in UL 486A and 486B.

3.5 FIELD QUALITY CONTROL

A. Manufacturer's Field Services:
1. Supplier's or manufacturer's technician for equipment specified herein shall be present at job site or classroom designated by Owner for minimum man-days indicated, travel time excluded, for equipment adjustment, and training of Owner's personnel for plant operation.

B. Testing:
1. Reports: Notify Engineer in writing indicating defective materials and workmanship and unsatisfactory test results. Include records of repairs and adjustments made.
2. On completing installation of system, perform following tests:
   a. Make insulation resistance tests of conducting parts of motor control components; and of connecting supply, feeder, and control circuits. For devices containing solid-state components, use test equipment and methods recommended by manufacturer.
   b. Make continuity tests of circuits.
   c. Review updating of final system configuration and parameters where they supplement or differ from those indicated in original Contract Documents.
   d. Review manufacturer's written instructions for installation and testing of motor control devices.
3. Visual and Mechanical Inspection: Include following inspections and related work.
   a. Motor Control Device Ratings and Settings: Verify ratings and settings as installed are appropriate for final loads and final system arrangement and parameters. Recommend final protective device ratings and settings where differences found. Use accepted revised ratings or settings to make final system adjustments.
   b. Inspect for defects and physical damage and nameplate.
   c. Exercise and perform operational tests of mechanical components and other operable devices in accordance with manufacturer's written instructions.

d. Check tightness of electrical connections of devices with calibrated torque wrench. Use manufacturer's recommended torque values.
e. Verify proper fuse types and ratings in fusible devices.

4. Electrical Tests: Perform following in accordance with manufacturer's written instructions.
   a. Insulation resistance test of motor control devices conducting parts to extent permitted by manufacturer's written instructions. Insulation resistance less than 100-megohms not acceptable.
   b. Use primary current injection to check performance characteristics of motor circuit protectors and for overload relays of controllers for motors 15 hp and larger. Trip characteristics not within manufacturer's published time-current tolerances not acceptable.
   c. Make adjustments for final settings of adjustable trip devices.
   d. Test auxiliary protective features such as loss of phase, phase unbalance, and undervoltage to verify operation.
   e. Check for improper voltages at terminals in controllers having external control wiring when controller disconnect opened. Voltage over 30 v unacceptable.
5. Correct deficiencies and retest motor control devices. Verify by system tests that specified requirements are met.

3.6 ADJUSTING

A. Overvoltage/Undervoltage/Phase Failure Control Relay:
   1. Adjust control relay to cause motor starter to drop out at voltage slightly higher than dropout voltage of starter and have dropout time slightly faster than motor starter to ensure if motor starter drops out, relay will drop out.

3.7 CLEANING

A. Remove paint splatters and other spots, dirt, and debris. Touch up scratches and mars of finish to match original finish. Clean devices internally using manufacturer's recommended methods and materials.

END OF SECTION

26 36 13 MANUAL TRANSFER SWITCH

PART 1 - GENERAL

1.1 SUMMARY

A. SECTION INCLUDES

1. Specification for manual transfer switch (MTS) with the following features:
   a. Cam-lock quick connects
   Overcurrent protection for generator connection

1.2 PRICE AND PAYMENT PROCEDURES

A. The work performed and the materials furnished in accordance with this Item are to be included within the total lump sum price.

1.3 REFERENCES

A. American National Standards Institute/National Electrical Manufacturers Association (ANSI/NEMA)

1. NEMA AB1: Molded Case Circuit Breakers
2. NEMA KS1: Enclosed Switches

B. Underwriters Laboratories (UL)

1. UL 98: Standard for safety enclosed switches and Dead Front Switches
2. UL 198C: High Interrupting Capacity Fuses, Current Limiting type
3. UL 198E: Class R Fuses

C. American National Standards Institute/National Fire Protection Association (ANSI/NFPA), NFPA No. 70 - National Electrical Code (NEC), Article 380 - Switches.

1.4 ADMINISTRATIVE REQUIREMENTS [NOT USED]

1.5 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00.

B. Manufacturer shall submit shop drawings for review, which shall include the following, as a minimum:

1. Descriptive literature
2. Plan, elevation, side, and front view arrangement drawings, including overall dimension, weights and clearances, as well as mounting or anchoring requirements and conduit entrance locations.
3. Schematic diagrams.
4. Wiring diagrams.
5. Accessory list.

1.6 ACTION SUBMITTALS/INFORMATIONAL SUBMITTALS

A. Submit the following in accordance with specifications:

1. Manufacturer's cut sheets and catalog data
2. Switch internal arrangement

3. Breaker or fuse characteristic curves
4. Instructions for handling and storage
5. Installation instructions
6. Dimensions and weights
7. Wire lug sizes

1.7 CLOSEOUT SUBMITTALS [NOT USED]

1.8 MAINTENANCE MATERIAL SUBMITTALS [NOT USED]

1.9 QUALITY ASSURANCE:

A. Items provided under this section shall be listed or labeled by UL or other Nationally Recognized Testing Laboratory (NRTL).
   1. Term "NRTL" shall be defined in OSHA Regulation 1910.7.
   2. Terms "listed" and "labeled" shall be defined in National Electrical Code, Article 100.

B. Single-Source Responsibility: Enclosed switches and circuit breakers shall be product of single manufacturer.

PART 2 - PRODUCTS

2.1 CITY-SUPPLIED PRODUCTS [NOT USED]

2.2 MATERIALS

A. Manual Transfer Switch Manufacturers
   1. Eaton/Cutler-Hammer
   2. ESL Power Systems, Inc.
   3. Trystar

B. Fuses:
   1. Bussman Division, Cooper Industries
   2. Mersen
   3. Littelfuse Incorporated

C. Circuit Breakers
   1. ABB
   2. Allen-Bradley
   3. Eaton/Cutler-Hammer
   4. GE
   5. Siemens
   6. Square D

D. General
   1. Switching:

a. MTS shall be three positions: Utility – Off – Generator.
b. Switching may be completed by rotary switch, double-throw switch, or interlocking circuit breakers.

2. If MTS requires no load for manual transfer, a permanent nameplate stating "DO NOT TRANSFER UNDER LOAD" or equivalent language is required on front of switch.
3. Entire package must be listed to ETL or UL 1008 Standards.
4. Enclosure:
   a. Provide enclosure material as stated in contract drawings. If not stated, provide NEMA 3R, Type 317 stainless steel for corrosive areas such as lift stations and wastewater treatment plants, NEMA 3R painted steel for non-corrosive, outdoor areas such as water plants, and NEMA 1 painted steel for non-corrosive, indoor areas.
5. Portable generator connectors shall be Camlok style. Camlok connectors shall be color coded.
6. Voltage, Phase, and Amperage ratings shall be as required on contract drawings.
7. Overcurrent protection sized for MTS amperage rating is required on portable generator. Circuit breaker or fuses are acceptable.

E. Fuses: Unless otherwise noted on Drawings, for fuses used in manual transfer switches, provide the dual-element, time-delay type with the maximum interrupting rating of 200,000 amperes, conforming to the current NEC.

F. Circuit Breakers: When circuit breakers are used in manual transfer switches, provide the thermal-magnetic type with current interruption ratings as required at the point of application. Provide 100% rated breakers if required in contract drawings.

G. Conduit Connectors: Watertight as manufactured by Myers Hubs, or equal.

2.3 ACCESSORIES [NOT USED]

2.4 SOURCE QUALITY CONTROL [NOT USED]

PART 3 - EXECUTION

3.1 INSTALLERS [NOT USED]

3.2 EXAMINATION [NOT USED]

3.3 PREPARATION

A. Review the Drawings and verify the manual transfer switches are correct for the applications.

B. Prepare adhesive labels on the inside door of each switch indicating UL fuse class and size or breaker type and size for replacement.

3.4 INSTALLATION

A. Install manual transfer switches in accordance with manufacturer's written instructions.

B. Provide access and working space as indicated or as required.

C. Mount switches 6'-6" (to top of cabinet) above finished floor or grade. Provide minimum 18" from finished grade to bottom of enclosure for easy access to connect generator cables.

D. Install switches level and plumb.

E. In wet and corrosive areas, including outdoor locations, install switches on spacers to provide a space of approximate 1/4-inch between the back of cabinet and the mounting surface.

F. In wet and corrosive areas, including outdoor locations, connect conduit to the bottom of enclosure and to the lower 30 percent of the sides using watertight connectors.

3.5 REPAIR [NOT USED]

3.6 RE-INSTALLATION [NOT USED]

3.7 FIELD QUALITY CONTROL

3.8 SYSTEM STARTUP [NOT USED]

3.9 ADJUSTING

A. Set field-adjustable enclosed switches and circuit breaker trip ranges as indicated.

3.10 CLEANING

A. After completing system installation, including outlet fittings and devices, inspect exposed finish. Remove burrs, dirt, and construction debris and repair damaged finish including chips, scratches, and abrasions.

3.11 CLOSEOUT ACTIVITIES [NOT USED]

3.12 PROTECTION [NOT USED]

3.13 MAINTENANCE [NOT USED]

3.14 ATTACHMENTS [NOT USED]

END OF SECTION

DIVISION 31

EARTHWORK

31 05 13 SOILS FOR EARTHWORK

1.00 GENERAL

1.01 WORK INCLUDED

A. This Section of the specifications describes the various classes of Earth Fill. All of the classes of Earth Fill contained in this specification may not be used on this project. The classes of Earth Fill used on this project are shown on the drawings or specified in other sections of the specifications. This Section does not include specifications for placement and compaction of Earth Fill. Specifications for placement and compaction of Earth Fill are included in other sections of the specifications and/or shown on the drawings.

1.02 STANDARDS

A. Soil materials shall be classified into the appropriate class of Earth Fill shown below according to ASTM D2487 "Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System)" or other appropriate methods as designated by the Engineer.

2.00 PRODUCTS

2.01 MATERIALS; CLASSIFICATIONS

A. Class 1 Earth Fill: Limited to clays and sandy clays classified as CH material with a liquid limit greater than or equal to 50, a plasticity index greater than or equal to 25, and a minimum of 60 percent passing the No. 200 sieve, which are free of organic materials.

B. Class 2 Earth Fill: Limited to clays and sandy clays classified as CH and CL materials with a coefficient of permeability less than or equal to 1.0×10^{-7} cm/sec, a liquid limit greater than or equal to 30, a plasticity index greater than or equal to 15, and more than 50 percent passing the No. 200 sieve, which are free of organic materials.

C. Class 3 Earth Fill: Consist of any materials classified as CH, CL, SM, SP, SP-SM, SC, and GC, which have a minimum plasticity index of 4, which are free of organic materials.

D. Class 4 Earth Fill: Consist of materials which are classified as SP, SM, SC, CL, or dual classifications thereof, which have a liquid limit less than or equal to 35 and a plasticity index of a minimum of 4 and a maximum of 15, which are free of organic materials.

E. Class 5 Earth Fill: Consist of materials classified as SP or SP-SM which have a plasticity index less than or equal to 4 and a maximum of 12 percent passing the No. 200 sieve, which are free of organic materials.

F. Class 12 Earth Fill: Consist of soils suitable for topsoil which are relatively free of stones or other objectionable debris, which have sufficient humus content to readily support vegetative growth. The suitability of soils for topsoil shall be subject to the approval of the Engineer.

3.00 EXECUTION (NOT APPLICABLE)

END OF SECTION

31 05 16 AGGREGATES FOR EARTHWORK

1.00 GENERAL

1.01 WORK INCLUDED

A. This Section of the specifications describes the various classes of Aggregate Fill. All of the classes of Aggregate Fill contained in this specification may not be used on this project. The classes of Aggregate Fill used on this project are shown on the drawings or specified in other sections of the specifications. This Section does not include installation. Installation of Aggregate Fill is included in other sections of the specifications and/or on the drawings.

1.02 QUALITY ASSURANCE

A. Classification Testing:

1. Contractor Testing:

a. Arrange and pay for the services of an independent testing laboratory to sample and test proposed Aggregate Fill materials.

b. Submit the test results to the Engineer, and obtain approval prior to providing Aggregate Fill.

2. Owner Testing: The Owner shall arrange and pay for additional testing on the Aggregate Fill after delivery to the project site as determined necessary by the Engineer.

B. Contamination Certification:

1. Obtain a written, notarized certification from the Supplier of each proposed Aggregate Fill source stating that to the best of the Supplier's knowledge and belief there has never been contamination of the source with hazardous or toxic materials.

2. Submit these certifications to the Engineer prior to proceeding to furnish Aggregate Fill to the site. The lack of such certification on a potential Aggregate Fill source shall be cause for rejection of that source.

1.03 STANDARDS

A. Aggregate Fill shall be classified into the appropriate class listed below according to ASTM testing procedures as specified for the various classes.

1. American Society for Testing and Materials (ASTM) Standards:

ASTM C33	Specification for Concrete Aggregates
ASTM C88	Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium sulfate
ASTM C125	Terminology Relating to Concrete and Concrete Aggregates
ASTM C131	Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C535	Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM D448	Classification for Sizes of Aggregate for Road and Bridge Construction

2.00 PRODUCTS

2.01 MATERIALS; CLASSIFICATIONS

A. Class 1 Aggregate Fill: Consist of durable particles of crushed stone free of silt, clay, or other unsuitable materials and have a percentage of wear of not more than 40 percent when tested in accordance with ASTM C131 or C535. When material is subjected to five cycles of the sodium sulfate soundness test in accordance with ASTM C88, Sodium Sulfate Solution, the weighted percentage of loss shall not exceed 12 percent. The source of the material shall be approved by the Engineer and meet the following gradation in accordance with ASTM D448, size number 57:

Sieve Size Square Opening	Percent Passing
1-1/2"	100
1"	95-100
1/2"	25-60
No. 4	0-10
No. 8	0-5

B. Class 2 Aggregate Fill: Consist of durable particles of crushed stone free of silt, clay, or other unsuitable materials and have a percentage of wear of not more than 40 percent when tested in accordance with ASTM C131 or C535. When material is subjected to five cycles of the sodium sulfate soundness test in accordance with ASTM C88, Sodium Sulfate Solution, the weighted percentage of loss shall not exceed 12 percent. The source of the material shall be approved by the Engineer and meet the following gradation in accordance with ASTM D448, size number 67:

Sieve Size Square Opening	Percent Passing
1"	100
3/4"	90-100
3/8"	20-55
No. 4	0-10
No. 8	0-5

C. Class 3 Aggregate Fill: Consist of durable particles of crushed stone free of silt, clay, or other unsuitable materials and have a percentage of wear of not more than 40 percent when tested in accordance with ASTM C131 or C535. When material is subjected to five cycles of the sodium sulfate soundness test in accordance with ASTM C88, Sodium Sulfate Solution, the weighted percentage of loss shall not exceed 12 percent. The source of the material shall be approved by the Engineer and meet the following gradation in accordance with ASTM D448, size number 7:

Sieve Size Square Opening	Percent Passing
3/4"	100

1/2"	90-100
3/8"	40-70
No. 4	0-15
No. 8	0-5

D. Class 4 Aggregate Fill: Consist of durable particles of crushed stone free of silt, clay, or other unsuitable materials and have a percentage of wear of not more than 40 percent when tested in accordance with ASTM C131 or C535. When material is subjected to five cycles of the sodium sulfate soundness test in accordance with ASTM C88, Sodium Sulfate Solution, the weighted percentage of loss shall not exceed 12 percent. The source of the material shall be approved by the Engineer and meet the following gradation in accordance with ASTM D448, size number 467:

Sieve Size Square Opening	Percent Passing
2"	100
1-1/2"	95-100
3/4"	35-70
3/8"	10-30
No. 4	0-5

E. Class 5 Aggregate Fill: Consist of durable particles of crushed stone free of silt, clay, or other unsuitable materials and have a percentage of wear of not more than 40 percent when tested in accordance with ASTM C131 or C535. When material is subjected to five cycles of the sodium sulfate soundness test in accordance with ASTM C88, Sodium Sulfate Solution, the weighted percentage of loss shall not exceed 12 percent. The source of the material shall be approved by the Engineer and meet the following gradation in accordance with ASTM D448, size number 357:

Sieve Size Square Opening	Percent Passing
2-1/2"	100
2"	95-100
1"	35-70
1/2"	10-30
No. 4	0-5

F. Class 6 Aggregate Fill: Consist of durable particles of crushed stone free of silt, clay, or other unsuitable materials and have a percentage of wear of not more than 40 percent when tested in accordance with ASTM C131 or C535. When material is subjected to five cycles of the sodium sulfate soundness test in accordance with ASTM C88, Sodium Sulfate Solution, the weighted percentage of loss shall not exceed 12 percent. The source of the material shall be approved by the Engineer and meet the following gradation in accordance with ASTM D448, size number 1:

Sieve Size Square Opening	Percent Passing
4"	100
3-1/2"	90-100
2-1/2"	25-60
1-1/2"	0-15
3/4"	0-5

G. Class 7 Aggregate Fill: Consist of durable particles of crushed stone free of silt, clay, or other unsuitable materials and shall have a percentage of wear of not more than 40 percent when tested in accordance with ASTM C131 or C535. When material is subjected to five cycles of the sodium sulfate soundness test in accordance with ASTM C88, Sodium Sulfate Solution, the weighted percentage of loss shall not exceed 12 percent. The source of the material shall be approved by the Engineer and meet the following gradation in accordance with ASTM D448, size number 6:

Sieve Size Square Opening	Percent Passing
1"	100
3/4"	90-100
1/2"	20-55
3/8"	0-15
No. 4	0-5

H. Class 8 Aggregate Fill: Consist of durable particles of crushed stone free of silt, clay, or other unsuitable materials and shall have a percentage of wear of not more than 40 percent when tested in accordance with ASTM C131 or C535. When material is subjected to five cycles of the sodium sulfate soundness test in accordance with ASTM C88, Sodium Sulfate Solution, the weighted percentage of loss shall not exceed 12 percent. The source of the material shall be approved by the Engineer and meet the following gradation in accordance with ASTM D448, size number 56:

Sieve Size Square Opening	Percent Passing
1-1/2"	100
1"	90-100
3/4"	40-85

1/2"	10-40
3/8"	0-15
No. 4	0-5

I. Class 9 Aggregate Fill:

1. Consist of washed and screened gravel and natural sands or sands manufactured by crushing stones complying with the requirements of ASTM C33, except that the gradation shall be as follows:

Sieve Size Square Opening	Percent Passing
1/2"	100
3/8"	95-100
No. 4	80-95
No. 8	65-85
No. 16	50-75
No. 30	25-60
No. 50	10-30
No. 100	0-10

2. Class 9 Aggregate Fill shall have not more than 45 percent passing any sieve and retained on the next consecutive sieve of those shown above, and its fineness modulus, as defined in ASTM C125, shall be not less than 2.3 nor more than 3.1.

J. Class 10 Aggregate Fill:

1. Consist of washed and screened natural sands or sands manufactured by crushing stones complying with the requirements and tests of ASTM C33. The gradation as included in ASTM C33 is as follows:

Sieve Size Square Opening	Percent Passing
3/8"	100
No. 4	95-100
No. 8	80-100
No. 16	50-85
No. 30	25-60
No. 50	10-30
No. 100	0-10

2. Class 10 Aggregate Fill shall have not more than 45 percent passing any sieve and retained on the next consecutive sieve of those shown above, and its fineness modulus, as defined in ASTM C125, shall be not less than 2.3 nor more than 3.1.

K. Class 11 Aggregate Fill: Consist of durable particles of crushed stone free of silt, clay, or other unsuitable material and have a percentage of wear of not more than 40 percent when tested in accordance with ASTM C131 or C535. When material is subjected to five cycles of the sodium sulfate soundness test in accordance with ASTM C88, Sodium Sulfate Solution, the weighted percentage of loss shall not exceed 12 percent. The source of the material shall be approved by the Engineer and meet the following gradation:

Sieve Size Square Opening	Percent Passing
1-3/4"	100
7/8"	65-90
3/8"	50-70
No. 4	35-55
No. 40	15-30
No. 100	0-12 (Wet Sieve Method)

L. Class 12 Aggregate Fill: Consist of durable particles of crushed stone free of silt, clay, or other unsuitable material and have a percentage of wear of not more than 40 percent when tested in accordance with ASTM C131 or C535. When material is subjected to five cycles of the sodium sulfate soundness test in accordance with ASTM C88, Sodium Sulfate Solution, the weighted percentage of loss shall not exceed 12 percent. The source of the material shall be approved by the Engineer and meet the following gradation:

Sieve Size Square Opening	Percent Passing
1-1/2"	100
1"	85-100
3/4"	60-95
3/8"	50-80
No. 4	40-65
No. 16	20-40
No. 100	0-12 (Wet Sieve Method)

M. Class 13 Aggregate Fill: Consist of durable particles of crushed stone free of silt, clay, or other unsuitable material and have a percentage of wear of not more than 40 percent when tested in accordance with ASTM C131 or C535. When material is subjected to five cycles of the sodium sulfate soundness test in accordance with ASTM C88, Sodium Sulfate Solution, the weighted percentage of loss shall not exceed 12 percent. The source of the material shall be approved by the Engineer and shall meet the following gradation:

Sieve Size Square Opening	Percent Passing
1-3/4"	100
7/8"	65-90

3/8"	50-70
No. 4	35-55
No. 40	15-30
No. 100	0-3 (Wet Sieve Method)

N. Class 14 Aggregate Fill: Consist of durable particles of crushed stone free of silt, clay, or other unsuitable material and have a percentage of wear of not more than 40 percent when tested in accordance with ASTM C131 or C535. When material is subjected to five cycles of the sodium sulfate soundness test in accordance with ASTM C88, Sodium Sulfate Solution, the weighted percentage of loss shall not exceed 12 percent. The source of the material shall be approved by the Engineer and meet the following gradation:

Sieve Size Square Opening	Percent Passing
1-1/2"	100
1"	85-100
3/4"	60-95
3/8"	50-80
No. 4	40-65
No. 16	20-40
No. 100	0-3 (Wet Sieve Method)

O. Class 15 Aggregate Fill: Consist of durable particles of silica sand, washed clean, chemically inert, and packaged by the Supplier. The material shall meet applicable regulatory requirements for monitor well filter pack. The source of the material shall be approved by the Engineer and shall meet the following gradation requirements:

Sieve Size Square Opening	Percent Passing
No. 20	98-100
No. 40	0-2

3.00 EXECUTION (NOT APPLICABLE)

END OF SECTION

31 11 00 CLEARING AND GRUBBING

1.00 GENERAL

1.01 WORK INCLUDED

A. Provide labor, materials, equipment and incidentals necessary to perform operations in connection with clearing, grubbing, and disposal of cleared and grubbed materials.

1.02 QUALITY ASSURANCE; DEFINITIONS

A. Clearing: Clearing is defined as the removal of trees, shrubs, bushes, and other organic matter at or above original ground level.

B. Grubbing: Grubbing is defined as the removal of stumps, roots, boards, logs, and other organic matter found at or below ground level.

2.00 PRODUCTS (NOT APPLICABLE)

3.00 EXECUTION

3.01 PREPARATION

A. Mark areas to be cleared and grubbed prior to commencing clearing operations. The Owner's Representative shall approve clearing and grubbing limits prior to commencement of clearing operations.

B. Trees and shrubs outside of the clearing limits, which are within 10 feet of the clearing limits, shall be clearly marked to avoid damage during clearing and grubbing operations.

C. Remove trees and brush outside the clearing limits, but within the immediate vicinity of the work, upon receipt of approval by the Owner's Representative, when the trees or brush interfere with the progress of construction operations.

D. Clearly mark trees and shrubs within the clearing limits, which are to remain, and protect the trees and shrubs from damage during the clearing and grubbing operations.

E. The clearing limits shall not extend beyond the project limits.

F. Establish the clearing limits as follows:

1. Excavations plus 5 feet beyond the top of the excavation.
2. Roadways plus 5 feet beyond the edge of pavement or R.O.W. limits.
3. Underground utility trench top width plus 8 feet.

G. Establish the grubbing limits as follows:

1. Roadways plus 1 foot beyond the edge of pavement.

3.02 INSTALLATION

A. Clearing: Clearing shall consist of the felling, cutting up, and the satisfactory disposal of trees and other vegetation, together with the down timber, snags, brush, rubbish, fences, and debris occurring within the area to be cleared.

B. Grubbing:

1. Grubbing shall consist of the removal and disposal of stumps and roots larger than 1 inch in diameter.

2. Extend grubbing to the depth indicated below: In the case of multiple construction items, the greater depth shall apply.

a. Utilities: 18 inches below the bottom of the trench.

3.03 FIELD QUALITY CONTROL

A. Completely remove timber, logs, roots, brush, rotten wood, and other refuse from the Owner's property. Disposal of materials in streams shall not be permitted and no materials shall be piled in stream channels or in areas where it might be washed away by floods. Timber within the area to be cleared shall become the property of the Contractor, and the Contractor may cut, trim, hew, saw, or otherwise dress felled timber within the limits of the Owner's property, provided timber and waste material is disposed of in a satisfactory manner. Materials shall be removed from the site daily, unless permission is granted by the Engineer to store the materials for longer periods.

END OF SECTION

31 23 23.34 FLOWABLE FILL

1.00 GENERAL

1.01 WORK INCLUDED

A. Furnish labor, materials, equipment, and incidentals necessary to mix and place flowable fill, consisting of Portland cement, fine aggregate, fly ash, and water in the proper proportions as specified hereinafter. Flowable fill (Controlled Low-Strength Material, CLSM) shall be used to bed and backfill around piping, utilities, and structures where indicated.

1.02 QUALITY ASSURANCE

A. Design Criteria – Flowable Fill Proportions and Consistency: Flowable fill shall be proportioned to give the necessary workability, strength, and consistency, and shall conform to the following governing requirements:

1. Permeability: Maximum permeability limit of $1x10^{-6}$ cm/sec. This limit shall apply at all locations where flowable fill is used as a utility trench plug (dam) within trench backfill materials.
2. Subsidence: Evaporation of bleed water shall not result in shrinkage of more than 10.4 mm per m (1/8 inch per ft.) of flowable fill depth. Measurement of a Final Bleeding shall be as measured in Section 10 of ASTM C940.
3. Strength for Excavatable Flowable Fill: Unconfined compressive strength at 28-days when tested in accordance with ASTM D4832: 100 psi (+/- 50 psi).
    a. Long-term strengths (greater than 90 days) shall not exceed 150 psi.
    b. Where indicated provide Excavatable Flowable Fill around utilities, unless noted otherwise.
    c. Excavatable Flowable Fill shall be excavatable with hand tools and conventional machinery such as backhoes.
4. Fluidity: Flowable fill shall be self-consolidating and non-segregating in accordance with ASTM C1611:
    a. Slump Flow Test: Minimum 20-inch mean spread.
    b. Visual Stability Index (VSI) Test: Less than or equal to 1.
5. Density, minimum: 100 pcf

B. Factory Testing: The Contractor shall be responsible for the design of the material. A trial mix shall be designed by an independent testing laboratory, retained by the Contractor. The testing laboratory shall submit verification that the materials and proportions of the trial mix design meets the requirement of the Specifications. In lieu of trial mix design, Contractor may submit historical data for a mix design used successfully in previous similar work. The Contractor shall not make changes in materials, either in gradation, source, or brand, or proportions of the mixture after having been approved, except by specific approval of the Engineer.

C. Owner Testing: It is the responsibility of the Contractor to achieve and maintain the quality of material required by this Section. However, the Owner may secure the services of an independent testing laboratory to verify the quality of the flowable fill. The Owner shall have the right to require additional testing, strengthening, or replacement of flowable fill which has failed to meet the minimum requirements of this Section.

1.03 SUBMITTALS

A. Submit mix design on each material required. Provide backup data as required below.

B. Submit historical or trial mix data and test results as a basis for mix design approval. Required data shall include:

1. Permeability test results if plugs are required on Project.
2. Subsidence test results.
3. Strength test results for Excavatable and Non-Excavatable Flowable Fill if used on Project.
4. Fluidity test results.

1.04 STANDARDS AND REFERENCES

A. Materials shall meet recommendation for mix design and placement, as published by National Ready Mixed Concrete Association.

B. The applicable provisions of the following references and standards shall apply to this Section as if written herein in their entirety.

1. ASTM International (ASTM) Standards:

ASTM C33	Specification for Concrete Aggregates
ASTM C40	Test Method for Organic Impurities in Fine Aggregates for Concrete
ASTM C150	Specification for Portland Cement
ASTM C618	Specification for Fly Ash and Raw or Calcined Natural Pozzolan for Use as Mineral Admixture in Portland Cement Concrete
ASTM C 940	Standard Test Method for Expansion and Bleeding of Freshly Mixed Grouts for Preplaced-Aggregate Concrete in the Laboratory
ASTM C 1611	Standard Test Method for Slump flow of Self Consolidating Concrete
ASTM D 4832	Standard Test Method for Preparation and Testing of Controlled Low Strength Material (CLSM) Test Cylinders

2.00 PRODUCTS

2.01 MATERIALS

A. Cement: ASTM C150, Type I or II.

B. Fly Ash/Pozzolans: ASTM C618, Class C.

C. Fine Aggregate: ASTM C33, fine aggregate.

1. ASTM C40: Aggregate shall not contain strong alkali, or organic material which gives a color darker than the standard color.

D. Water: Potable and in conformance with ASTM C1602 and ASTM C1602, Table 2.

E. Performance Additive: As required to meet specification requirements:

1. DaraFill by GCP Applied Technologies.
2. MasterCell 25 by Master Builders Solutions US LLC.
3. Sika Lightcrete Powder by Sika Corporation.
4. Approved equal.

F. Chemical Admixtures for Concrete per ASTM C 494, as required by performance requirements.

2.02 MIXES

A. In the determination of the amount of water required for mix, consideration shall be given to the moisture content of the aggregate. The net amount of water in the mix will be the amount added at the mixer; plus the free water in the aggregate; and minus the absorption of the aggregate, based on a 30 minute absorption period. No water allowance shall be made for evaporation after batching.

B. The methods of measurement of materials shall be such that the proportions of water to cement are closely controlled during the progress of the Work and easily checked at any time by the Owner's representative. To avoid unnecessary or haphazard changes in consistency, the aggregate shall be obtained from sources which will insure a uniform quality and grading during any single day's operation and they shall be delivered to the Work and handled in such a manner that the variation in moisture content will not interfere with the steady production of flowable fill of reasonable degree of uniformity. Sources of supply shall be approved by the Owner's representative.

C. All material shall be separately and accurately measured. All equipment for measurement of materials shall be subject to approval by the Owner's representative.

3.00 EXECUTION

3.01 INSTALLATION

A. Contractor shall give the Owner's representative sufficient advance notice before starting to place material in any area, to permit inspection of the area, and preparation for pouring.

B. Conduct the operation of depositing the material so as to form a well consolidated mass and so as not to develop air pockets in confined spaces.

C. Unless specified otherwise, flowable fill shall be uniformly placed to the depth shown on the Drawings. The fill shall be brought up uniformly to the top of excavation elevation or as otherwise indicated on the Drawings. Placement of flowable fill shall then cease and the fill protected from traffic for a period of not less than 72 hours.

1. To prevent pipe flotation place material in lifts or provide alternate means.
2. Around manholes, material shall be placed in lifts. Lift depth shall not exceed 4 feet.

3. When multiple lifts are required, material shall be allowed to harden before placing next lift. Hardening time varies with each mix. Verify flowable fill has reached a penetration number of 1500, in accordance with ASTM C 403, but not less than 3 hours.

D. The material shall be placed against undisturbed trench walls, and shall not be placed on or against frozen ground.

E. At time of placement the ambient temperature shall be 35 F and rising.

3.02 FIELD QUALITY CONTROL

A. An approved testing laboratory shall perform the quality control testing of backfill operations. The testing laboratory shall sample material in accordance with ASTM D5971. The testing laboratory shall monitor backfill operation continuously or at intervals acceptable to the Owner and Engineer at structures. It shall be the responsibility of the Contractor to provide sufficient advance notification to the testing laboratory before backfill operations begin.

1. Strength: A strength test is the average of two cylinders per ASTM D4832.
2. Fluidity: A fluidity test is a Slump Flow Test and a VSI Test per ASTM C1611.
3. For all tests required, at a minimum perform one test per day, but not less than one per 150 cubic yards.

END OF SECTION

31 23 33 TRENCHING AND BACKFILL [UTILITIES]

1.00 GENERAL

1.01 WORK INCLUDED

A. Furnish labor, materials, equipment and incidentals necessary to perform operations in trenching, pipe bedding, backfilling, clearing, grubbing and site preparation; handling, storage, transportation and disposal of excavated material; pumping and dewatering; preparation of subgrades; protection of adjacent property; fills, grading; and other appurtenant work. Trenching, backfilling, and pipe embedment procedures shall be in full compliance with Section 31 23 33.14 "Trench Safety." Earth removed from excavations and which is not required for backfill shall be removed from the Site by the Contractor at his own expense, unless arrangements are made with the Owner through his representative to allow disposal on Site. If permitted, the Contractor shall dump and spread excess earth in a manner agreed upon by the Contractor and the Owner. Excavations, other than trench excavation, are not part of this Section.

1.02 QUALITY ASSURANCE

A. Classification:

1. Excavations shall include material of whatever nature encountered, including but not limited to clays, sands, gravels, conglomeritic boulders, weathered clay shales, rock, debris and abandoned existing structures. Excavation and trenching shall include the removal and subsequent handling of materials excavated or otherwise handled in the performance of the Work.
2. Bidders must satisfy themselves as to the actual existing subsurface conditions prior to the submittal of a proposal to complete the proposed Work.
3. Trench excavation shall consist of excavation to the lines and grades indicated, required for installation of the pipe, pipe bedding, backfill, and to accommodate trench safety systems.

1.03 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00 "Document Management" and shall include:

1. Sieve analysis on embedment materials.
2. Test results indicating soil resistivity for embedment material used on metal pipe.
3. Record Data: Certified test reports for compaction tests.

1.04 REFERENCE SPECIFICATIONS

A. Section 01 33 00 "Document Management."

B. Section 03 30 00.01 "Cast-In-Place Concrete (Limited Applications)"

C. Section 31 23 23.34 "Flowable Fill"

D. Section 31 23 33.14 "Trench Safety."

1.05 STANDARDS

A. The following publications, referred to hereafter by basic designation only, form a part of this Section to the extent indicated by the references thereto:

1. American Society for Testing and Materials (ASTM) Standards:

ASTM C33	Standard Specification for Concrete Aggregates
ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C125	Standard Terminology Relating to Concrete and Concrete Aggregates
ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C535	Standard Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Lost Angeles Machine
ASTM D448	Standard Classification for Size of Aggregate for Road Bridge Construction
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lb/ft^3 (600 kN-m/m^3)
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D4253	Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
ASTM D4254	Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density
ASTM D6938	Standard Test Method for In-Place Density and Water Content of Soil and Soil-aggregate by Nuclear Methods (Shallow Depth)
ASTM G57	Standard Test Method for Field Measurement of Soil Resistivity Using the Wenner Four-Electrode Method

B. Any other testing required by these specifications and not specifically referenced to a standard shall be performed under ASTM or other appropriate standards as designated by the Engineer.

C. Reference herein or on the Drawings to soil classifications shall be understood to be according to ASTM D2487, Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System).

1.06 DELIVERY AND STORAGE

A. Excavated materials to be used for backfill may be deposited in stockpiles at points convenient for rehandling the material during the backfilling process. The location of stockpiles shall be within the limits of construction easements or public right-of-way. The location of stockpiles is subject to the approval of the Owner or the Owner's representative. Keep drainage channels clear of stockpiled materials.

1.07 JOB CONDITIONS

A. Place no embedment or backfill material during freezing weather or upon frozen subgrades or previously placed frozen embedment or backfill materials.

2.00 PRODUCTS

2.01 MATERIALS

A. Concrete for Backfill, Blocking, Cradling and Encasement: Unless other strength requirements are designated, concrete used shall be 1500 psi as specified in Section 03 30 53 "Miscellaneous Cast-In-Place Concrete (Limited Applications)."

B. Class 1 Earth Fill: Limited to clays and sandy clays classified as CH material with a liquid limit greater than or equal to 50, a plasticity index greater than or equal to 25, and a minimum of 60 percent passing the No. 200 sieve, which are free of organic materials.

C. Class 3 Earth Fill: Consist of any materials classified as CH, CL, SM, SP, SP-SM, SC, and GC, which have a minimum plasticity index of 4, which are free of organic materials.

D. Class 12 Earth Fill: Consist of soils suitable for topsoil which are relatively free of stones or other objectionable debris, which have sufficient humus content to readily support vegetative growth. The suitability of soils for topsoil shall be subject to the approval of the Engineer.

E. Class 3 Aggregate Fill: Composed of durable particles of crushed stone, angular, tough durable particles, free from thin, flat and elongated pieces of silt, clay, or other unsuitable materials and have a percentage of wear of not more than 40 percent when tested in accordance with ASTM C131 or C535. When material is subjected to five cycles of the sodium sulfate soundness test in accordance with ASTM C88, Sodium Sulfate Solution, the weighted percentage of loss shall not exceed 12 percent. The source of the material shall be approved by the Engineer and meet the following gradation in accordance with ASTM D448, size number 7:

Sieve Size Square Opening	Percent Passing
3/4"	100
1/2"	90-100
3/8"	40-70
No. 4	0-15
No. 8	0-5

F. Class 10 Aggregate Fill: Consists of washed and screened natural sands or sands manufactured by crushing stones complying with the requirements and tests of "Standard

Specifications for Concrete Aggregates", ASTM C33. The gradation as included in ASTM C33 is as follows:

Sieve Size Square Opening	Percent Passing
3/8"	100
No. 4	95-100
No. 8	80-100
No. 16	50-85
No. 30	25-60
No. 50	10-30
No. 100	2-10

1. Class 10 Aggregate Fill shall have not more than 45 percent passing any sieve and retained on the next consecutive sieve of those shown above, and its fineness modulus, as defined in ASTM C125, shall be not less than 2.3 nor more than 3.1.

G. Cement: Type I Portland Cement.

H. Flowable Fill: Flowable fill shall be in accordance with Section 31 23 23.34 "Flowable Fill."

I. Modified Flowable Fill: Modified flowable backfill in areas of possible future excavation shall consist of a mixture of native soils or manufactured materials, cement and/or fly ash, air entraining material and water which produces a material with unconfined compressive strength of between 250 and 450 psi after 28 days. Any materials used shall be primarily granular, with a plasticity index less than 12 and with 100 percent passing a 3/4-inch sieve. The flowable mixture shall be mixed in a pug mill, concrete mixer, or transit mixer and shall have a minimum slump of 5 inches. The flowable mixture must be allowed to set prior to the placement of any overlying materials. Modified flowable backfill in permanent areas such as abandoned pipe closures shall contain the same materials and have an unconfined compressive strength greater than 250 psi after 28 days.

J. Embedment Geotextile Material: Embedment geotextile material shall be Mirafi 180N polypropylene or approved equal.

K. Utility Detection Tape: Utility pipe detection tape, green in color for sewer, blue in color for water, with black non-degradable printing reading "CAUTION SANITARY SEWER LINE BURIED BELOW" or "CAUTION WATER LINE BURIED BELOW" shall be installed over all PVC, HDPE, or fiberglass pipelines 8 inches and larger. The tape shall be bright-colored, continuous-printed plasticized aluminum tape, intended for direct-burial service; not less than 6 inches wide by 5 mils thick. Detection tape must be installed above the pipe zone, 12 inches above pipe.

L. Tracer Wire: All piping shall be installed with a continuous, insulated TW, THW, THWN or HMWPE insulated copper, 10 gauge or thicker wire for pipeline location purposes by means of an electronic line tracer. The wire shall be installed along the entire length of pipe. The insulation color shall match the color of the pipe being installed. Sections of wire shall be spliced together using approved splice caps and water proof seals. Twisting the wires together is not acceptable.

2.02 MIXES; SAND-CEMENT BACKFILL

A. A minimum sand and cement mixture of 25 parts sand and 2 parts cement will be required.

1. Fine Sand: 25 Cubic Feet.
2. Cement: 2 Bags (minimum).
3. Water: Optimum moisture.

B. Sand shall be free of any cohesive material and shall meet the following gradation and plasticity index requirements:

Sieve Size	Percent Passing
1"	100
1/2"	95-100
No. 40	80-100

C. PI and LL Amounts:

1. Plasticity Index: 10 Maximum.
2. Liquid Limit: 25 or less.

3.00 EXECUTION

3.01 PREPARATION

A. Site:

1. Clear sites of logs, trees, roots, brush, tree trimmings and other objectionable materials and debris which are to be occupied by pipe trenches, and grub stumps. Designate material not salvaged for reuse as surface material as spoiled and dispose of material in accordance with Paragraph 3.01.E, Disposal of Spoil Material.
2. Do not remove trees outside of the required working area unless their removal is authorized in writing by the Engineer and with the approval of the local governing authority. Adequately protect the trees left standing from permanent damage by construction operations. Standing trees may be trimmed where necessary to facilitate construction, but only with written authorization from the Engineer.

B. Dewatering:

1. Provide and maintain adequate dewatering equipment to remove and dispose of surface and ground water entering the excavations, trenches, or other parts of the Work. Keep each excavation dry during subgrade preparation and continually thereafter until the proposed pipe is installed. Maintain the proper procedures necessary to protect against damage to the proposed Work from hydrostatic pressure, flotation, or other water related causes.
2. Dewater excavations which extend down to or below ground water elevation by lowering and keeping the ground water level a minimum of 2 feet below the bottom of the excavation.
3. Divert surface water or otherwise prevent water from entering excavated areas to the fullest extent possible without causing damage to adjacent property.

4. Provide and maintain any piping or conduit necessary to facilitate drainage. Do not alter area drainage patterns to the extent that adjacent property and landowners become threatened with localized flooding and/or water damage. Should such a situation occur, the Contractor shall be responsible for repairing the damage at no additional cost to the Owner.

C. Protection of Existing Structures and Utilities:

1. Prior to the start of construction, communicate with the representatives of the local utility companies, including the oil, gas, telephone and communications companies, and local water and sewer utilities operating in the location of the proposed construction area. Seek the utility companies' assistance in locating existing facilities to avoid conflicts during construction. The location, number, depth, and owner of utilities indicated are for information purposes only, and all utilities and structures may not be shown or may not be at the location shown.

2. Where construction endangers adjacent structures, utilities, embankments and/or roadways, the Contractor shall, at his own expense, carefully support and protect such structures so that no damage occurs throughout the construction process. In case damage should occur, the Contractor shall be responsible for restoring the damaged structure to a condition acceptable to the Owner of that structure and shall bear all cost of such reparations.

3. Repair or replace damaged street surfaces, driveways, sidewalks, curbs, gutters, fences, drainage structures, or other such facilities to the satisfaction of the Owner. Structures shall be returned to a condition equal to or better than the original condition and of same or better material and quality.

D. Blasting: Blasting shall not be allowed in any instance.

E. Disposal of Spoil Material:

1. Suitable material from excavations which meets the requirements for pipe backfill material as indicated, except stripping excavation, may be reused. Designate the remaining excavated materials as spoiled material and dispose of material off the Site in accordance with all applicable laws, ordinances, and codes. Contractor shall be responsible for the storage, transportation, and deposition of spoiled material and shall be responsible for acquiring the necessary permits, and the payment of fees and duties at no additional cost to the Owner.

2. No burning of materials shall be permitted on the Site.

3.02 TRENCH EXCAVATION

A. General: The trenches shall be excavated to the alignment and depth indicated or as necessary for the proper installation of the pipe and appurtenances. Brace and dewater the trench if necessary so that the workmen may work therein safely and efficiently. Any specific requirement listed in Paragraph 3.00, Execution, may be modified as necessary to meet OSHA requirements. However, if trench widths are wider than indicated, the Contractor shall be responsible for determining and furnishing the proper class of embedment and piping for the installation with no additional compensation to the Contractor.

B. Trench Width: The trench widths shall be as shown on the Drawings.

C. Pipe Foundation Subgrade:

1. Excavate the trench to an even grade to permit the installation of the pipe so that the full length of the pipe barrel is supported on the proper depth of bedding material. The entire foundation subgrade area in the bottom of the excavations shall be firm, stable material, and the material shall not be disturbed below required grade except as described in this Section. Where the character of the subgrade material is such that proper subgrade cannot be obtained at the elevation indicated, deepen the excavation to a satisfactory subgrade material.

2. Remove the material until a firm, stable, and uniform bearing is reached and the subgrade brought back to the required grade with the specified bedding material compacted in place or with lean concrete material. The expense of replacing any unsatisfactory subgrade shall be borne by the Contractor.

D. Correcting Faulty Grade: Should any part of the trench be excavated below required grade, correct the trench with bedding material, thoroughly compacted, or with lean concrete, at no additional compensation to the Contractor.

E. Care of Surface Material for Reuse: If local conditions permit reuse, keep surface material suitable for reuse separate from the general excavation material.

F. Trenching Methods: The use of any suitable trench digging machinery is permitted except in places where such operations may cause damage, above or below ground, in which case, employ hand methods.

G. Pipe Clearance in Rock: Remove ledge rock, rock fragments, shale, or other rock to provide proper clearance for bedding materials. Provide adequate clearance for properly jointing pipe laid in rock trenches at bell holes.

3.03 BACKFILL

A. Bedding within Pipe Zone:

1. Concrete Cradle, Encasement or Concrete Arch: Where indicated, install the pipe in concrete cradle, encasement, or concrete arch. Take precautions to prevent pipe movement or deflection during construction. Where pipes are placed below structures, completely encase pipes in 1500 psi concrete, and extend up to bottom of structure.

2. Concrete Blocking: Place blocking to rest against firm undisturbed trench walls. The supporting area for each block shall be at least as great as that indicated and shall be sufficient to withstand the thrust, including water hammer, which may develop. Each block shall rest on a firm undisturbed foundation of trench sides and bottom.

B. Aggregate Fill Bedding:

1. After the trench has been cut to the depths indicated, install bedding geotextile material below the bedding layer, bring up the bedding layer to a point slightly above grade in maximum 4-inch lifts and uniformly compact to the density indicated. Form bell holes and scoop out a trough to grade so that the pipe is uniformly supported by the embedment material. Lay and joint the pipe. Bring up the embedment material in

maximum 4-inch lifts on either side of the pipe to the elevation above the pipe shown on the Drawings. Uniformly compact the pipe as indicated.

2. After moisture is gone from the embedment material, place utility detection tape and backfill and compact the remaining backfill by tamping or other appropriate methods. Water jetting shall not be permitted.
3. Install utility detection tape and tracer wire.

C. Compaction Requirements:

1. Compact earth fill and cohesive aggregate fill in maximum 4-inch lifts with pneumatic rollers or power hand tampers and make a minimum of eight passes.
2. Compact cohesionless aggregate fill in maximum 4-inch lifts with vibratory rollers or vibratory plate power hand compactors and make a minimum of eight passes.
3. The acceptability of the compaction equipment shall be based upon the results of a test section. Compact earth fill and cohesive aggregate fill to a minimum of 95 percent of maximum dry density as determined by ASTM D698, Standard Proctor.
4. Compact Class 1 and 2 earth fill at a moisture content within minus 0 to plus 5 percentage points of the optimum moisture content. Compact the remaining classes of earth fill and cohesive aggregate fill at a moisture content within minus 2 to plus 5 percentage points of optimum moisture content. The moisture ranges listed above are minimum and maximum limits. A tighter moisture range within these limits may be required to consistently achieve the specified density.
5. Compact cohesionless aggregate fill on which it is not practical to control the density by "Proctor" methods to a minimum of 75 percent relative density as determined by ASTM D4253 and D 4254, or at the discretion of the Engineer, by a field compaction mold method correlated to ASTM D4253 and D 4254.
6. Compact cohesionless aggregate fill at a moisture content within a range that accommodates consistent placement and compaction to the minimum relative density specified above.
7. The Owner will arrange and pay for density and moisture testing. The testing frequency and methods shall be as requested by the Engineer. The Engineer may waive testing requirements on cohesionless bedding where testing is not practical because of limited space between the pipe and trench walls, however, the minimum number of passes of the compaction equipment specified above shall be achieved.

3.04 FINISHING

A. Grade and rake areas smooth and even which do not receive any type of paved surface, to allow drainage to drain away from the structures and toward the roads and streets or the natural drainage course. Break up large clods of earth and remove rocks, trash or debris near the surface.

B. Finish the top portion of backfill beneath established sodded (lawn) areas with not less than 6 inches of topsoil corresponding to, or better than, that underlying adjoining sodded areas.

3.05 FIELD QUALITY CONTROL

A. Compact backfill and appropriate embedment material to a minimum of 95 percent of maximum density at a moisture content of 0 to plus 5 percent of optimum for backfill and at optimum for sand-cement embedment as determined by ASTM D698, Standard Proctor.

B. Make periodic tests of compaction for conformance with this Section by an approved testing laboratory selected and paid for by the Owner. Contractor shall pay for re-testing until acceptable test results are obtained.

3.06 CLEAN AND ADJUST

A. Remove surplus pipeline materials, tools, rubbish and temporary structures and leave the construction site clean, to the satisfaction of the Engineer.

END OF SECTION

31 23 33.14 TRENCH SAFETY

1.00 GENERAL

1.01 WORK INCLUDED

A. This specification is for the purpose of providing minimum performance specifications and consists of the basic requirements which the Contractor must comply with in order to provide for the safety and health of workers in a trench.

B. Contractor shall develop, design, and implement the trench safety system and will be solely responsible for the adequacy of the trench safety system and providing "a safe place to work" for the workman.

C. Should the trench safety protection system require wider trenches than specified elsewhere, the Contractor shall be responsible for the costs associated with determining adequacy of pipe bedding and class, including the purchase and installation of alternate materials.

D. Contractor shall comply with all applicable federal, state, and local rules, regulations, and ordinances related to trench excavation and safety.

1.02 STANDARDS

A. The following standard shall be the minimum governing requirement of this specification and is hereby made a part of this specification as if written in its entirety.

1. Occupational Safety and Health Administration (OSHA): 29 CFR Part 1926 - Safety and Health Regulations for Construction, Subpart P – Excavations.

B. For pit excavations greater than 20 feet in depth, such are to be designed by a professional engineer retained by the Contractor per OSHA 1926 Subpart P, Appendix B.

2.00 PRODUCTS (NOT APPLICABLE)

3.00 EXECUTION (NOT APPLICABLE)

END OF SECTION

31 25 13.13 SEEDING FOR EROSION CONTROL

1.00 GENERAL

1.01 WORK INCLUDED

A. Provide labor, materials, equipment and incidentals necessary to seed the slopes and other areas as specified. This specification includes seedbed fertilization, watering, mulching, and emulsifying or tacking the mulch and maintenance until final acceptance by the Owner.

1.02 QUALITY ASSURANCE

A. Soil Testing: Fertilizer requirements for each planting area and for significantly different soil types within planting areas, will be determined by a qualified laboratory such as the Texas A&M University - Agricultural Extension Service soil testing laboratory. Representative composite soil samples will be collected from the planting areas and submitted to an approved soil testing laboratory.

1.03 STANDARDS

A. The seed used on this project will conform to ITEM 164.2 Standard Specifications for Construction of Highways, Streets and Bridges, Texas Department of Transportation.

1.04 DELIVERY AND STORAGE

A. Deliver seed with each variety separately bagged.

1.05 OPTIONS

A. If dry mechanical methods are used, the fertilizer may be spread at the same time as the seed. After sowing, straw mulch will be mechanically spread over the seeded area.

B. When seed and fertilizer are to be distributed as a water slurry, apply the mixture within 30 minutes of mixing.

2.00 PRODUCTS

2.01 MATERIALS

A. Seed: From the previous season's crop, labeled in accordance with the Texas Seed Law.

1. Seed for Fall planting (temporary) shall be one or more of the following small grains as designated by the Engineer: Wheat, oats, rye, or barley.

2. Seed for spring planting (permanent) shall be Bermuda grass.

B. Fertilizer: Insert requirements.

C. Mulch:

1. Consisting of straw, wood-fiber, mulch nettings, wood chips or other suitable material approved by the Engineer and free of Johnson grass and other noxious weed seeds.

2. Straw mulch shall be oat, wheat or rice straw, prairie hay, Bermuda grass hay, or other hay harvested before seed production and approved by the Engineer. The straw mulch

will be kept dry and shall not be rotted or molded. A minimum of 50 percent by weight of the herbage making up the hay shall be 10 inches in length or longer.

D. Topsoil: As specified for Class 12 earth fill in Section 31 05 13 "Soils for Earthwork."

E. Herbicide: Contractor shall be responsible for using herbicides in a manner consistent with label requirements and precautions. Only registered herbicides having a minimal residual effect shall be used. Contractor shall strictly adhere to all federal, state, and local laws governing herbicide usage.

3.00 EXECUTION

3.01 TOPSOIL PLACEMENT

A. Place topsoil as specified for Class 12 earth fill in Section 31 23 23.16 "Compacted Earth Fill [Landfills and Heavy Earthwork Projects, Excluding Dams]."

3.02 FALL PLANTING

A. Fall planting will be temporary only and will be required if construction is completed between May 15 and November 30. The fall planting is to be followed by a spring planting of perennial vegetation.

B. Seedbed Preparation: Use a one-way plow, tandem disk, bedder, or equipment which will accomplish similar results. Break or mix the surface of the soil with the tillage equipment. Additional tillage operations will be necessary if required so planting can be on a clean, firm seedbed. Chiseling will be necessary on areas which have been severely compacted.

C. Seeding:

1. Seeding will be required on disturbed or excavated areas and on new embankments of whatever nature unless requested otherwise by the Engineer.

2. Optimum fall planting dates are September 1 to November 30. Accomplish the seeding for fall planting within these dates unless approval to do otherwise is obtained from the Engineer. Planting rates when drilled or broadcast are as follows:

Seeding	lb./acre
Wheat	120 lb./acre
Oats	128 lb./acre
Rye	112 lb./acre
Barley	114 lb./acre

3.03 SPRING PLANTING

A. Follow procedures for spring planting if construction is completed between November 30 and May 15, or after a temporary fall planting has been made:

1. Seedbed Preparation: Seedbed preparation for Spring planting is the same as that stated in the Fall planting of temporary cover with one addition: Any temporary cover crop must be top killed using an approved contact herbicide or by mechanically undercutting the growing cover crop, leaving residues on or near the soil surface.

2. Mulching:

   a. Spread mulch material on the area to be planted if construction was completed too late for planting a temporary fall crop or if insufficient residues are produced by the fall planting. Mulch the planting areas to control soil erosion and seed loss by wind and water and to promote grass establishment. Apply Mulch hay at the rate of 2 tons per acre and spread uniformly so that about 25 percent of the ground surface is uniformly visible through the mulch.

   b. Anchor the mulch hay by treading into the soil with a straight disk type mulch tiller. Perform disking across the slope along contours. Other types of mulch such as wood cellulose fiber or cotton bur mulch may be used at recommended rates, if approved by the Engineer. Apply mulch in a manner that will not hinder emergence of seedlings.

   c. Other methods of mulch anchoring are available, including mulch netting, peg and twine, pick chain, slit, and asphalt mulch tie-down. Descriptions of these methods are available in the 1976 Soil Conservation Service report entitled, "Erosion and Sediment Control Guidelines for Developing Areas in Texas."

3. Seeding:

   a. Plant Bermuda grass seed between March 1 and May 15. Sow the seed at the rate of 50 pounds of pure live seed (PLS) per acre, or more if required to obtain a complete stand of grass. The PLS content is determined by multiplying the seed package weight by the product of the percent purity and the percent germination, which are contained on the seed label.

   b. Accomplish seeding by mechanical means using either broadcasting or drilling type equipment to provide uniform distribution of the seed in the planting areas. Cover Bermuda grass seed by 1/4 to 1/2 inch of soil. If seed is drilled, the distance between drill rows shall not exceed 12 inches. Hydro seeding may be used to apply seed, fertilizer, and wood-fiber mulch with the approval of the Engineer.

3.04 MAINTENANCE

A. Irrigation: Supply the seeded areas with adequate moisture (3- to 4-inch penetration) at 10-day intervals, if needed, for seed germination and plant growth until acceptance by the Owner. Water the seed in a manner which will prevent erosion of the soil. Furnish all water to be used.

B. Repair: Repair washouts and other bare soil areas in a seeded area either by re-seeding, sprigging, or spot sodding, and perform maintenance as needed to establish grass in the area.

C. Weed Control:

   1. Control competitive weed growth during the establishment period by mowing and/or with herbicides. Chemical usage shall be in accordance with the current recommendations of the Texas Agricultural Experiment Station or local Soil Conservation Service Field Office Technical Guides. Strictly adhere to all federal, state, and local laws governing herbicides.

2. Weed control shall be the Contractor's responsibility whether topsoil is from on-site or off-site sources and also for seeded areas which are specified not to receive topsoil.

3.05 SEEDING OF DISTURBED AREAS

A. Disturbed areas will require seeding as specified in this Section unless requested otherwise by the Engineer or shown otherwise on the drawings or in the specifications.

B. Any areas which are disturbed by the Contractor which are not shown on the drawings or specified to require disturbance including any approved areas not shown on the drawings, shall be considered as unauthorized disturbed areas. Any such areas shall be seeded as specified in this Section at the Contractor's expense and shall not be measured or paid under this Section.

3.06 FIELD QUALITY CONTROL; OBSERVATION AND ACCEPTANCE

A. Observation: Upon completion of the site preparation, mulching, fertilizing, seeding, and maintenance of seeded areas, the Engineer will observe the seeded areas periodically to determine the establishment success. Engineer will consider soil coverage, purity of the grass stand, and maturity of the plants.

B. Establishment of Stand and Acceptance:

1. The Engineer will determine that a grassed area is established upon fulfillment of the following conditions:

2. The permanent grass stand uniformly covers the planting area, with no exposed soil areas more than 36 inches across in any dimension.

3. The permanent grass stand is free of over-topping weed species which would compete for sunlight, moisture, and nutrients. In addition, no area of pure weed species greater than 36 inches across in any dimension shall occur within a permanent grass stand.

4. The majority of the grass plants in a stand shall have a well-established root system to survive if irrigation is discontinued.

5. Establish the permanent grass stand before October 1 to preclude having to perform a temporary Fall seeding. In the event a fall seeding must be performed, follow-up the temporary seeding with a permanent seeding as specified. Upon final acceptance of the work under this contract, the Owner will assume the responsibility of maintaining the grassed areas.

END OF SECTION

DIVISION 32

EXTERIOR IMPROVEMENTS

32 12 16 ASPHALT PAVING

1.00 GENERAL

1.01 WORK INCLUDED

A. Furnish labor, materials, equipment and incidentals necessary to perform operations in connection with the construction of hot mix asphaltic concrete (HMAC) base course, leveling-up course and surface course or any other combination of these courses. Construct the pavement on the previously completed and approved subgrade, base, or existing pavement.

1.02 QUALITY ASSURANCE

A. Design Criteria: Use the services of an independent testing laboratory to prepare a mix design to comply with Texas Department of Transportation, Standard Specification Item 340 or may use a previously prepared mix design meeting the specification requirements with satisfactory substantiation of experience with the mix.

1.03 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00 "Document Management" and shall include:

1. Mix design as record data.

1.04 STANDARDS

A. Hot mix asphaltic concrete (HMAC) pavement shall conform to the requirements of the current Texas Department of Transportation (TXDOT), Standard Specification for "Dense-Graded Hot Mix Asphaltic ", Item 340.

B. Asphaltic material shall comply with Texas Department of Transportation (TXDOT) Standard Specification Item 300.

1.05 DELIVERY AND STORAGE

A. Haul the asphaltic mixture to the job site in tight vehicles previously cleaned of foreign materials. Arrange the dispatching of vehicles so that all material delivered shall be placed and all rolling shall be completed during daylight hours. In cool weather, or for long hauls, canvas covers may be required. The inside of the truck body may be given a light coating of oil, if necessary, to prevent the asphaltic mixture from adhering to the body.

1.06 JOB CONDITIONS

A. Do not apply prime coat when the air temperature is below 50 F and falling, but may be applied when the air temperature is above 40 F and rising, the air temperature being taken in the shade and away from artificial heat. Do not place asphaltic material when general weather conditions, in the opinion of the Owner's Representative are not suitable.

B. The asphaltic mixture shall be at a temperature between 225 and 350 F when dumped from the mixer. The Owner's Representative shall determine the temperature, within the above

limitations. The mixture when dumped from the mixer shall not vary from the selected temperature more than 30 F.

2.00 PRODUCTS

2.01 MATERIALS

A. Aggregate: Conform to TXDOT Standard Specification Item 340. The Type "B" mixtures and at least three bins when producing Type "D" mixture. These bins shall contain the following sizes of aggregate, in percentages by weight or by volume, as applicable.

1. Gradation for base course or leveling-up course shall comply with Type B listed as follows:

a. Type "B" (Fine Graded Base Course):

Sieve Size	Percent Passing by Weight or Volume
1"	98-100
3/4"	84-98
5/8"	75-95
3/8"	60-80
No. 4	40-60
No. 8	29-43
No. 30	13-28
No. 50	6-20
No. 200	2-7
VMA percent minimum	12
The asphaltic material shall form from 3.5 to 7 percent of the mixture by weight unless specified otherwise on the plans.	

2. Gradation for surface course shall comply with Type D listed as follows:

a. Type "D" (Fine-Graded Surface Course):

Sieve Size	Percent Passing by Weight or Volume
1/2"	98-100
3/8"	85-100
No. 4	50-70
No. 8	35-46
No. 30	15-29
No. 50	7-20
No. 200	2-7

Sieve Size	Percent Passing by Weight or Volume
VMA percent minimum	14
The asphaltic material shall form from 4 to 8 percent of the mixture by weight unless specified otherwise on the plans.	

B. Asphaltic Materials: Comply with TXDOT Standard Specification Item 300. In general, the grade of asphalt shall be AC-10. Other grades of asphalt shall be considered if weather conditions or mix design appear to warrant a change. Prime coat shall comply with TXDOT Standard Specification Item 300, Grade MC-30. Tack coat shall meet the requirements of cutback asphalt RC-250.

2.02 EQUIPMENT

A. The equipment necessary for the construction of the hot mix asphaltic concrete pavement shall be on the project site and shall be approved by the Owner's Representative as to condition before the Contractor shall be permitted to begin construction operations on which the equipment is to be used. Equipment shall be maintained in good repair and operating condition.

B. Spreading and Finishing Machines:

1. The spreading and finishing machine shall be of a type approved by the Owner's Representative and capable of producing a surface that shall meet the requirements of the typical cross section and surface test.

2. Rollers:

a. Pneumatic Tire Roller: The roller shall consist of not less than seven pneumatic tire wheels, running on axles in such a manner that the rear group of tires shall cover the entire gap between adjacent tires of forward group; mounted in a rigid frame; and provided with a loading platform or body suitable for ballast loading. The front axle shall be attached to the frame in such a manner that the roller may be turned within a minimum circle. The tire shall afford surface contact pressures up to 90 pounds per square inch or more. The roller shall be so constructed as to operate in both forward and a reverse direction with suitable provisions for moistening the surface of the tires while operating; and shall be approved by the Owner's Representative.

b. Two-Axle Tandem Roller: The roller shall be an acceptable power-driven, steel-wheel tandem roller weighing not less than 8 tons. The roller must operate in forward and reverse directions; contain provisions for moistening the surface of the wheels while in motion; and shall be approved by the Owner's Representative.

c. Three-Wheel Roller: The roller shall be an acceptable power-driven, all steel three wheel roller weighing not less than 10 tons. The roller must operate in forward and reverse directions; contain provisions for moistening the surface of the wheels while in motion; and shall be approved by the Owner's Representative.

d. Vibratory Steel Wheel Roller: If approved for use by the Owner's Representative, this roller shall have a minimum weight of 6 tons. The compactor shall be equipped

with amplitude and frequency controls and shall be specifically designed to compact the material on which it is used. The roller shall be operated in accordance with the Manufacturer's recommendations.

3. Straightedges: The Contractor shall provide acceptable straightedges for the surface testing. Satisfactory templates shall be provided as required by the Owner's Representative.

3.00 EXECUTION

3.01 PREPARATION

A. Prime Coat: Apply a uniform coat of prime coat asphaltic material to the surface of the prepared subgrade, sub-base, or base, applied at a rate of not less than 0.30 gallons per square yard of surface. Apply a thin uniform coat of the prime coat material to contact surfaces of gutters, manholes, and other structures.

B. Tack Coat: Thoroughly clean the surface of the asphalt base course and apply a uniform coat of tack material meeting the requirements for cutback asphalt RC-250. Apply a tack coat when the surface to be paved is Portland cement concrete, brick, or asphaltic pavement. Apply the tack coat using sprayer at a rate not exceeding 0.05 gallons per square yard surface. Paint contact surfaces of curbs, gutters, vertical faces, and other structures in actual contact with asphaltic mixes with asphaltic material to provide a closely bonded, water-tight joint.

C. Compacted Thickness of Asphaltic Concrete Surface Courses and Base Courses:

1. Surface Course: The compacted thickness or depth of the asphaltic concrete surface shall be as indicated on the plans. Where the plans indicate a depth or thickness of the surface course greater than 2 inches compacted depth, same shall be placed in multiple courses of equal depth, each which shall not exceed 2 inches compacted depth. A tack coat is required between any of the multiple courses, and applied at the rate specified.

2. Base Course: The compacted thickness or depth of each base shall be as indicated. Where the plans indicate a depth or thickness of the course greater than 4 inches, same shall be accomplished by constructing multiple lifts of approximately equal depth, each of which shall not exceed these maximum compacted depths. An additional tack coat is required between any of the multiple lifts and must be applied at the rate specified.

3.02 PLACEMENT

A. Place the asphaltic mixture on an approved base course with the previously specified spreading and finishing machine in such a manner that, when properly compacted, the finished course shall comply with the maximum thickness requirements, shall be smooth, of uniform density and meet the requirements of the typical cross-sections and the surface test. During the placing and spreading of the asphaltic material, take care to prevent the spilling of the material onto adjacent pavement, gutters, or structures.

B. In small areas, which are inaccessible to the spreading and finishing machine, hand spreading may be authorized by the Owner's Representative, provided an acceptable surface can be obtained.

3.03 COMPACTION

A. Rolling with the three-wheel and tandem rollers shall start longitudinally at the sides and proceed toward the center of the surface course, overlapping on successive trips by at least half the width of the rear wheels. Alternate trips of the roller shall be slightly different in length. Rolling with the pneumatic tire roller shall be done as directed by the Owner's Representative. Rolling shall continue until no further compression can be obtained and all roller marks are eliminated. The motion of the rollers shall be slow enough at all times to avoid displacement of the asphaltic surface material. If displacement should occur, correct the situation at once by the use of rakes and fresh asphaltic mixtures. The roller shall not be allowed to stand on the surface course when it has not been fully compacted and allowed to cool. To prevent adhesion of the surface to the roller, the wheels shall be kept thoroughly moistened with water, but an excess of water shall not be permitted. Rollers must be in good mechanical condition. Take the necessary precautions to prevent the dripping of gasoline, oil, grease, or other foreign matter on the surface course while the rollers are in motion or when standing. In areas where surface course cannot be compacted with the roller, hand tamps, lightly oiled, shall be used to secure the required compaction.

B. With approval by the Owner's Representative, the vibratory steel wheel roller may be substituted for the three-wheel roller and tandem roller. Each course, after final compaction, shall contain from 5 to 9 percent air voids determined by TXDOT Test Method TEX207-F and TEX-227-F.

3.04 FIELD QUALITY CONTROL

A. Surface Tests: The finished surface of the pavement after compression shall be smooth and true to the established line, grade, and cross-section. When tested with a 16-foot straightedge placed parallel to the centerline of the roadway, the finished surface shall have no deviation in excess of 1/16 inch per foot from the nearest point of contact. The maximum ordinate measured from the face of the straightedge shall not exceed 1/4 inch at any point. Any point in the pavement surface not meeting these requirements shall be immediately corrected.

B. Pavement Thickness Test: Upon completion of the work and before final acceptance and final payment shall be made, pavement thickness test shall be made by the Owner or his authorized representative unless otherwise specified in the special provisions or in the plans. The number and location of tests shall be at the discretion of the Owner's Representative. The cost for the initial pavement thickness test shall be at the expense of the Owner. In the event a deficiency in the thickness of the pavement is revealed during normal testing operations, subsequent tests necessary to isolate the deficiency shall be at the Contractor's expense. The cost for the additional coring test shall be at the same rate charged by commercial laboratories.

END OF SECTION

32 16 13 CURBS AND GUTTERS

1.00 GENERAL

1.01 WORK INCLUDED

A. Furnish labor, materials, equipment and incidentals necessary to construct reinforced concrete curb and gutter in accordance with the lines, grades, and section indicated on the plans or as directed by the Owner's Representative.

1.02 OPTIONS

A. A curb and gutter laydown machine may be used for placing reinforcing steel and forming and placing concrete.

2.00 PRODUCTS

2.01 MATERIALS

A. Concrete: Conforming to the requirements for 3000-psi concrete in Section 03 30 00 "Cast-In-Place Concrete."

B. Expansion Joint Material: Conforming to the requirements in Section 03 30 00 "Cast-In-Place Concrete."

2.02 MIXES

A. Mortar: 1 part Portland cement and 2 parts fine aggregate.

3.00 EXECUTION

3.01 PREPARATION, EXCAVATION AND GRADING

A. Excavate, stabilize and shape the subgrade or foundation to line, grade and section as indicated on the plans or as directed by the Owner's Representative. Lightly sprinkle the subgrade or foundation material immediately before placing concrete.

B. Where curb and gutter is not adjacent to new pavement, use 2 inches of sand cushion. After the fine grading has been completed, evenly spread a 2-inch layer of sand or suitable gravel cushion over the subgrade for curb and gutter. Thoroughly wet and tamp sand cushion into place to the satisfaction of the Owner's Representative. Place the forms upon this sand or gravel base and use a screed to shape the sand cushion to parallel the top of gutter.

3.02 INSTALLATION

A. Forms:

1. Forms shall be made of wood or steel and framed, braced, or staked in a substantial and approved manner so as to insure perfect alignment and grade. Clean and oil the forms immediately before placing concrete. Take care in removing forms to prevent marring or spalling of the concrete. Forms shall be of a depth equal to the depth of the curb and

gutter and a minimum of 1-1/2 inches in width when wooden forms are used or a rage that provides equivalent rigidity and strength when metal forms are used.

2. Forms showing a deviation of 1/8 inch in 10 feet from a straight line shall be cause for rejection.

3. For curves with a radius of less than 250 feet, acceptable flexible metal forms or wood forms may be used upon approval by the Owner's Representative.

B. Reinforcing Steel:

1. Accurately place steel reinforcement as indicated and hold in place during progress of placing concrete, and do not allow movement from the true position. Wire the bars at intersections and laps or splices. Lap bars at splices a minimum of 20 diameters of the bar or 12 inches, whichever is greater.

2. Place the reinforcement necessary for a section of concrete, and have the Owner's Representative approve the reinforcement before any concrete is deposited in the section. Steel shall be free from paint and oil, and completely remove loose scale, rust, dirt, and other foreign substances before using.

3. Reinforcing steel shall conform to requirements in Section 03 21 00 "Reinforcing Steel."

C. Expansion Joints:

1. Form expansion joints using preformed expansion joint material as specified herein. Place expansion joints in the curb and gutter at 36-foot intervals and at intersection returns or as otherwise shown on the plans or as directed by the Owner's Representative. Place "Flagging" or a tooled joint at 6-foot intervals to provide a plane of weakness, unless otherwise shown on the plans or as directed by the Owner's Representative. Place expansion joints at abutting structures such as concrete driveways, sidewalks, buildings, inlets, etc. Expansion joints shall be 1/2 inch in thickness and shall extend the full depth of the concrete. Neatly trim any expansion material extending above the finished work to the surface of the finished work. The expansion joints in concrete pavement shall coincide with the expansion joints in the curb and gutter. Longitudinal dowels, across the expansion joints in the curb and gutter, shall be required. There shall be three No. 3 round, smooth bars for dowels at each expansion joint spaced in accordance with standard reinforcement steel. The dowel shall be a minimum of 24 inches in length. Coat one end of the dowel with asphalt and terminated with an expansion cap. The cap shall provide a minimum of 1 inch free expansion. Support dowels by an approved method to provide a true horizontal and longitudinal alignment.

2. Seal joints through the gutter with a joint sealant material as specified herein.

3. Construct joints in a neat and workmanlike manner with edges rounded in conformity with the plans and specifications, and at locations as indicated on the plans or as designated by the Owner's Representative.

3.03 PLACEMENT

A. Deposit concrete so as to maintain a horizontal surface and thoroughly and continuously work into spaces and around all reinforcement to form a dense voidless mass.

B. Work the coarse aggregate away from contact with the forms so as to form a smooth, hard exposed concrete surface.

C. Continuously pour the concrete for curb and gutter between expansion joints. If construction joints are allowed at other locations by the Owner's Representative, properly construct joints with wood bulkheads so as to completely separate adjacent concrete sections.

3.04 FINISHING

A. After the concrete has been struck off and while still plastic, thoroughly work the exposed surfaces with a wooden float. Round the exposed edges by the use of an edging tool to the radius indicated. Float and trowel exposed surfaces. Brush exposed surfaces of curb and gutter to a smooth and uniform surface. Avoid excess working of the surface. Remove excess water, laitance and inert material from the surface.

3.05 CURING

A. Cure the completed curb and gutter in accordance with the requirements of Membrane Curing, as specified in Section 03 30 00 "Cast-In-Place Concrete (Limited Applications)." Other methods of curing as outlined herein shall be acceptable with a required curing period of 72 hours.

3.06 BACKFILLING

A. Backfill the curb and gutter to the full height of the concrete, and tamp and slope as indicated or as directed by the Owner's Representative.

3.07 FIELD QUALITY CONTROL

A. The top of the work and the face of the curbs shall be checked for irregularities as soon as the surface is finished, using a 10-foot straightedge. The maximum distance from the straightedges to the concrete shall not exceed 1/4 inch. Variations exceeding 1/4 inch shall be immediately corrected. Immediately chip out and patch honeycombed areas disclosed by removal of forms with mortar as specified.

END OF SECTION

32 91 19.13 TOPSOIL PLACEMENT AND GRADING

1.00 GENERAL

1.01 WORK INCLUDED

A. Furnish labor, materials, equipment and incidentals necessary to place topsoil, free from rock and foreign material in areas designated to receive sodding or seeding.

2.00 PRODUCTS

2.01 TOPSOIL

A. General: The topsoil shall be fertile loam, easily cultivated and free from objectionable material, and shall have a relatively high erosion resistance and be readily able to support the growth of the planting, seeding, or sodding specified on the plans.

B. Sources:

1. The topsoil may be obtained from the right-of-way at sites of proposed excavation, or it may be obtained from sources outside the right-of-way, secured by the Contractor, and meeting the approval of the Engineer.

2. Topsoil required in addition to salvaged topsoil from the project shall be secured from approved off-site borrow sources. Excavated material from construction which is suitable for topsoil shall be salvaged and used before any topsoil is obtained from borrow source.

3.00 EXECUTION

3.01 INSTALLATION

A. Stockpile topsoil material at locations approved by the Owner's Representative. Remove any trash, wood, brush, stumps or other objectionable materials prior to placement. The source and stockpile areas shall be kept drained and in a neat and presentable condition. Place and spread topsoil to a uniform depth to provide 6-inch compacted depth, while maintaining drainage in areas to be seeded or sodded.

END OF SECTION

DIVISION 33

UTILITIES

33 01 30.16 TV INSPECTION OF SEWER PIPELINES

1.00 GENERAL

1.01 WORK INCLUDED

A. Provide all necessary materials, equipment, tools, labor, and associated appurtenances for cleaning sanitary sewer mains in preparation for rehabilitation. Cleaning shall remove debris and foreign materials from the mains and manholes in preparation for television inspection of sewer mains.

B. Provide all television equipment, technical assistance, labor, tools and associated incidentals and appurtenances required to internally inspect the existing sewer mains and new sewer mains shown on the Drawings. Verify the mains are properly cleaned in preparation of inspection and/or rehabilitation. Locate service laterals and identify pipeline segments that require repair prior to the slip lining, pipe bursting or CIPP installation. The internal TV inspection shall also document the post rehabilitation status of the pipe for comparison and total acceptance of Work done. After cleaning, visually inspect the main sections by means of a closed-circuit television. Inspect one line section between manholes at a time, during which the sewer flow in that line section is properly controlled according to the flow control requirements of this Section.

C. Provide control of sewer flow in conjunction with cleaning of sewer mains, and installation of replacement lines. Sewer flow diversion shall not cause surcharging or damage to public or private property. The sewer flow shall be plugged at an upstream manhole for the section of sewer line that is to be rehabilitated (by sliplining, cured in place pipe, or pipe bursting, etc.), for both installation and televised post installation inspection. Provide notification to property owners and tenants on flow control lines a minimum of 48 hours prior to institution of flow control measures.

1.02 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00 "Document Management" and shall include:

1. Television inspection logs in paper and digital format.
2. Digital format video of television inspection.
3. Flow Control Plan.
    a. Listing of safety precautions and traffic control measures.
    b. Certification that staff to be used for the Work are properly trained in confined space entry and hazardous environments.

1.03 REFERENCE SPECIFICATIONS

A. Section 01 33 00 "Document Management."

B. Section 01 33 01 "Document Register."

C. Section 02 96 00 "Temporary Bypass Pumping."

1.04 CLEANING EQUIPMENT

A. Selection of cleaning equipment and method of cleaning must be based on the condition of the sewer mains at the time Work commences and is subject to the Owner's representative's approval. Operation of all cleaning equipment and devices shall be by personnel experienced in the use of such equipment. Owner may require the Contractor to demonstrate the performance capabilities of the proposed cleaning equipment. If the cleaning equipment does not give the desired results required by the Owner, Contractor shall use different equipment that does provide the desired results. More than one type of equipment/attachments may be required at any particular location.

1.05 TELEVISION CAMERA

A. The television camera used for inspection must be specifically designed and constructed for internal inspection of sanitary sewer pipe with partial liquid flow through it. Lighting for the camera must allow a clear picture of the entire periphery of the pipe above the existing flow. The camera will operate in 100 percent humidity conditions. The camera, television monitor, and other components of the video system shall produce a picture quality satisfactory to the Owner's representative.

1.06 COMMUNICATION EQUIPMENT

A. When manually operated winches are used to pull the television camera through the main, set up two-way radio or other suitable means of communication between the two manholes of the line section being inspected to ensure good communications between members of the crew.

1.07 METHODS OF FLOW CONTROL

A. Furnish temporary plugs as required to provide for diversion of flows and temporary isolation of sanitary sewer sections during rehabilitation. The plugs must be designed so all or any portion of the sewer flow can be released at any time. Insert a plug into the upstream manhole of the line section being worked. A plug in the downstream manhole may be required to prevent any backflow.

B. Furnish bypass pumping equipment as required to provide for diversion of flows and temporary isolation of sanitary sewer sections during rehabilitation. When total bypassing and pumping are required, supply the pumps, conduits, and other equipment to divert the flow of sewer around the line section where rehabilitation work is to be performed. Begin the flow diversion at the upstream manhole. Divert flow to the downstream manhole of the line section being worked. The total bypass system must have sufficient capacity to handle peak flow during a wet weather event. Contractor is responsible for furnishing the necessary labor and supervision to set up and operate the pumping and bypassing. If pumping is required on a 24-hour basis or outside of specified normal work hours, use engines with Hospital Rated noise suppression equipment. A comprehensive bypass pumping plan shall be submitted by the Contractor as required in Paragraph **[1.02]**.

2.00 PRODUCTS

2.01 CLEANING MATERIALS

A. Use only the type of cleaning material which will not create hazards to health or property or affect treatment plant processes.

3.00 EXECUTION

3.01 CLEANING

A. General:

1. All materials, equipment, and personnel necessary to complete the cleaning of the sanitary sewer main and manholes must be present on the Site prior to isolating the sewer manhole or line segment and beginning the cleaning process.
2. Clean the sewer lines from upstream to downstream, manhole to manhole. Remove dirt, grease, rocks, sand, roots and other materials and obstructions from the sewer lines and manholes or junction boxes. Dispose of removed materials in accordance with applicable federal, state, and local rules and regulations. It is the sole responsibility of the Contractor to secure a licensed legal dump site for the disposal of this material. Under no circumstances shall sewage or solids removed from the main or manhole be dumped onto streets or into ditches, catch basins, storm drains, or sanitary sewers. The cleaning shall leave the interior pipeline suitable for adequate television inspection and installation of replacement materials as applicable for the Project. Multiple passes and different equipment may be required. TV Inspection shall be used to verify acceptable completion of the cleaning.
3. Satisfactory precautions shall be taken to protect the sanitary sewer mains and manholes from damage that might be inflicted by the improper use of the cleaning process or equipment.
4. Any damages done to a sewer main and/or structure by the Contractor shall be repaired by the Contractor at no additional cost and to the satisfaction of the Owner.
5. Cleaning shall also include the manhole wall and junction box wall by high pressure water jet.
6. Contractor may be required to demonstrate the performance capabilities of the cleaning equipment proposed for use on the Project.
    a. If the results obtained by the proposed sanitary sewer cleaning equipment are not satisfactory, Contractor shall use different equipment and/or attachments, as required, to meet the requirements of the Contract Documents.
    b. More than one type of equipment/attachments may be required at a location.
7. When hydraulic or high velocity cleaning equipment is used, a suitable sand trap, weir, dam, or suction shall be constructed in the downstream manhole in such a manner that all the solids and debris are trapped for removal.
8. Whenever hydraulically-propelled cleaning tools which depend upon water pressure to provide their cleaning force, or any tool which retard the flow of water in the sanitary

sewer lines are used, precautions shall be taken to ensure that the water pressure created does not cause any damage or surcharging to public or private property being served by the manhole section involved.

9. Any damage of property, as a result of surcharging, shall be the liability and responsibility of the Contractor.
10. The flow present in the sanitary sewer main shall be utilized to provide necessary fluid for hydraulic cleaning devices whenever possible.
11. When additional quantities of water from fire hydrants are necessary to avoid delay in normal working procedures, the water shall be conserved and not used unnecessarily.
    a. No fire hydrant shall be obstructed or used when there is a fire in the area.
    b. It is the responsibility of the Contractor to obtain the fire hydrant, water meter and all related charges for the set-up, including the water usage bills from respective water purveyor agency.
    c. All expenses shall be considered incidental to the cleaning of the existing sanitary sewer mains.

B. Methods:

1. Hydraulic Cleaning:
    a. Hydraulic-propelled devices which require a head of water to operate must utilize a collapsible dam.
    b. The dam must be easily collapsible to prevent damage to the sewer main, property, etc.
    c. When using hydraulically-propelled devices, precautions shall be taken to ensure that the water pressure created does not cause damage or flood public or private property.
    d. Do not increase the hydraulic gradient of the sanitary sewers beyond the elevation that could cause overflow of sewage into area waterways or laterals.
    e. The flow present in the sanitary sewer main shall be utilized to provide necessary fluid for hydraulic cleaning devices whenever possible.
2. High-Velocity Cleaning:
    a. Cleaning equipment that uses a high velocity water jet for removing debris shall be capable of producing a minimum volume of 50 gpm, with a pressure of 1500 psi for the sanitary sewer line and 3500 psi for the (manhole) structure at the pump.
    b. Any variations to this pumping rate must be approved, in advance, by the Owner.
    c. To prevent damage to older sewer mains and property, a pressure less than 1500 psi can be used.
    d. A working pressure gauge shall be used on the discharge of all high-pressure water pumps.
    e. For sewers 18 inches and larger in diameter, in addition to conventional nozzles, use a nozzle which directs the cleaning force to the bottom of the pipe.

f. Operate the equipment so that the pressurized nozzle continues to move at all times.

g. The pressurized nozzle shall be turned off or reduced anytime the hose is on hold or delayed in order to prevent damage to the line.

3. Mechanical Cleaning:

a. Mechanical cleaning, in addition to normal cleaning when required, shall be with approved equipment and accessories driven by power winching devices.

b. Submit the equipment manufacturer's operational manual and guidelines to the Owner, which shall be strictly followed unless modified by the Owner.

c. All equipment and devices shall be operated by experienced operators so that they do not damage the pipe in the process of cleaning.

d. Buckets, scrapers, scooters, porcupines, kites, heavy duty brushes, and other debris-removing equipment/accessories shall be used as appropriate and necessary in the field, in conjunction with the approved power machines.

e. The use of cleaning devices such as rods, metal pigs, porcupines, root saws, snakes, scooters, sewer balls, kites, and other approved equipment, in conjunction with hand winching device, and/or gas, electric rod propelled devices, shall be considered normal cleaning equipment.

3.02 TELEVISING

A. Move the camera through the main in either direction at a moderate rate, stopping when necessary to permit proper documentation of the sewer line condition. In no case shall the television camera be pulled at a speed greater than 30 feet per minute. Use manual winches, power winches, TV cable, and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the sewer main condition. Identify locations of defects by means of a measurement device (distance meter) above ground. Marking on the cable or similar practices that require interpolation for depth of manhole is not allowed. Check accuracy of the distance meter with a walking meter, roll-a-tape, or other suitable device satisfactory to the Owner.

1. Television Inspection Logs: Keep printed location records that clearly show the camera location in relation to an adjacent manhole for each infiltration point or defect observed during inspection. In addition, record other points of significance such as locations of service line entry points, unusual conditions, roots, storm sewer connections, broken pipe, presence of scale and corrosion, and other discernible features. Submit a copy of such records and copies of the video in digital format to the Owner's representative.

3.03 FLOW CONTROL

A. Provide flow control measures needed to allow for isolation of individual sanitary sewer sections for rehabilitation work. Prior to beginning Work, Contractor shall submit a written plan for flow control as noted in Paragraph 1.02. In providing this Work, protect the sewer main from damage that might result from sewer surcharging. In addition, take precautions necessary to ensure that sewer flow control operations do not cause flooding or damage to public or private property being served by the sewer mains involved. Contractor is advised

to schedule its Work in section lengths such that in the event of a wet weather event that might cause an increase in the sewer flow, the Work can be adequately secured, the flow diversion stopped, and flow resumed back in the existing main expeditiously and without damage to the new Work.

1. Notify property owners and tenants a minimum of 48 hours prior to scheduled flow control diversion operations.
2. Locate flow diversion equipment, facilities, and activities such that local traffic, private property access, or any public activities are not interrupted.
3. Where diversion piping crosses side streets, alleys and driveways, provide asphalt ramps and covers over the piping to facilitate passage of any traffic. Provide pedestrian cross-over ramps and walkways where needed or requested by the Owner. Do not open cut streets, alleys, or driveways to bury piping.
4. Divert incoming flow from all service connections and laterals. Provide all the necessary materials and equipment to tie this flow into the main diversion system.
5. Flow diversion materials and equipment must be in place and successfully operating for a period of 4 hours prior to starting any rehabilitation work requiring flow diversion.
6. Reduce flow to within the limits required for TV inspection. After the Work has been completed, restore flow to normal.
7. Keep pumping engine noise complaints from the citizens to a minimum. Owner's representative may terminate all pumping activities if noise control is not adequately addressed.

3.04 REPAIR OF DAMAGED MAIN

A. If the main is damaged and requires repair prior to rehabilitation, make such repairs as directed by the Owner's representative. Any pavement cut excavation and repair must comply with the details in the Drawings. If the main is damaged through the negligence of the Contractor, make repairs as approved by the Owner's representative at no additional cost to the Owner.

END OF SECTION

33 05 01.09 POLYVINYL CHLORIDE (PVC) PRESSURE PIPE AND FITTINGS

1.00 GENERAL

1.01 WORK INCLUDED

A. Furnish labor, materials, equipment and incidentals necessary to install polyvinyl chloride (PVC) pressure pipe, appurtenances, and fittings to the diameters indicated for water supply and wastewater pressure piping. Trenching, backfilling, and pipe embedment shall be in accordance with Section 31 23 33 "Trenching and Backfill [Utilities]."

1.02 QUALITY ASSURANCE

A. Certification: Domestic water piping shall be approved by the Underwriters Laboratory and shall be accepted by the State Fire Insurance Commission for use in water distribution systems. PVC water pipe shall bear the seal of approval (or "NSF" mark) of the National Sanitation Foundation Testing Laboratory for potable water pipe.

B. Design Criteria: The maximum allowable load for PVC pipe installations shall produce a maximum deflection of 4 percent.

1.03 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00 "Document Management" and shall include:

1. Certified Test Reports from the Manufacturer's testing facility or an approved testing laboratory.
2. Shop Drawing including the following information:
    a. Manufacturer.
    b. Dimension ratio.
    c. Joint types.
    d. Gaskets material.
    e. Means of restraint.
    f. Manufacturer's recommendation for maximum deflected joint angle and minimum longitudinal bending radius
    g. Thrust restraint lengths and lay schedule as Shop Drawing. Lay schedule shall include the following:
        1). Pipe class.
        2). Joint type.
        3). Fittings.
        4). Stationing.
        5). Transitions.
        6). Joint deflection.

3. Shop Drawing of Detectable Warning Tape.

1.04 REFERENCE SPECIFICATIONS

A. Section 01 33 00 "Document Management."

B. Section 01 40 00 "Quality Management."

C. Section 31 23 33 "Trenching and Backfill [Utilities]."

D. Section 33 05 05.31 "Hydrostatic Testing"

E. Section 33 10 13 "Disinfecting of Water Utility Distribution."

1.05 STANDARDS

A. The applicable provisions of the following standards shall apply as if written here in their entirety. PVC piping and fittings shall be in full compliance with the applicable standards and specifications for each type of plastic pipe involved. Pipe may be rejected for failure to comply with any requirement of this Section.

1. ASTM International (ASTM) Standards:

ASTM D1784	Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds
ASTM D1785	Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
ASTM D2241	Standard Specification for Poly(Vinyl Chloride) (PVC) Pressure-Rated PVC Pipe (SDR) Series
ASTM D2464	Standard Specification for Threaded Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
ASTM D2466	Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings Schedule 40
ASTM D2467	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
ASTM D2855	Standard Practice for the Two-Step (Primer and Solvent Cement) Method of Joining Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Piping Components with Tapered Sockets
ASTM D3139	Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
ASTM F1674	Standard Test Method for Joint Restraint Products for Use with PVC Pipe

2. American Water Works Association (AWWA) Standards:

AWWA C104	Cement-Mortar Lining for Ductile Iron Pipe and Fittings
AWWA C105	Polyethylene Encasement for Ductile-Iron Pipe Systems
AWWA C110	Ductile-Iron and Gray-Iron Fittings
AWWA C153	Ductile-Iron Compact Fittings

AWWA C605	Underground Installation of Polyvinyl Chloride (PVC) and Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe and Fittings
AWWA C900	Poly Vinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 through 60 Inches (100 mm Through 1,500 mm)
AWWA M23	PVC Pipe – Design and Installation.
AWWA M41	Ductile – Iron Pipe and Fittings

3. NSF International (NSF):

NSF 61	Drinking Water System Components – Health Effects

4. Underwriters Laboratories, Inc. (UL).

1.06 DELIVERY AND STORAGE

A. Store PVC material so that there is no exposure to sunlight.

2.00 PRODUCTS

2.01 MATERIALS

A. Pipe:

1. Four to 60 inches:

a. Class 235 (DR18) C900 with cast iron outside dimensions.

B. PVC Pressure Piping:

1. Smaller than 4 inches in size shall be Type 1, Grade 1, Polyvinyl Chloride, Schedule 40 pipe conforming to ASTM D1785.
2. For pipe 2 inches in diameter and smaller, joints shall be glued.
3. For pipe larger than 2 inches in diameter, joints shall be bell and spigot push-on type as specified in ASTM D3139.
4. PVC Pressure Pipe for potable water shall meet the requirements of NSF 61.
5. PVC Pressure Pipe for Sanitary Sewer shall conform to either C900 or ASTM D2241.

C. Fittings: 3- through 24-inch ductile iron and conforming to AWWA C110 or AWWA C153. Fittings for piping smaller than 3 inches shall be in accordance with ASTM D2466.

D. Thrust Restraint: Thrust restraint devices shall be Mega-lug or approved equal and shall be factory tested and pressure rated in accordance with ASTM F1674.

1. Joint restraint devices shall be designed specifically for use with PVC pipe of the joint type and pressure rating specified.
2. Restrained joints shall be used for a sufficient distance from each bend, tee, plug, valve or other fitting to resist thrust which will be developed at the design pressure of the

pipe. For the purposes of thrust restraint, working pressure shall be 50 psi, design pressure shall be 1.5 times the design working pressure of 50 psi or the pipe pressure class indicated.

3. The length of pipe with restrained joints to resist thrust forces shall be the sole responsibility of and determined by the Pipe Manufacturer using the following parameters:
   a. Laying condition equal to AWWA C605 Type 3 bedding.
   b. No thrust restraint contribution shall be allowed for pipe in casing.
   c. Soil density = 100 pcf.
   d. Place concrete blocking (1500 psi concrete) at bends, tees, crosses, valves and plugs in the pipe line. Rest blocking against firm undisturbed trench walls. Concrete thrust blocking shall not be accounted for in joint restraint calculations.

E. Detectable Warning Tape:
   1. Provide detectable warning tape as follows:
      a. Thickness: 5.0 mil overall thickness.
      b. Width: 3 inch minimum.
      c. Weight: 27.5 pounds per inch per 1000 square feet.
      d. Triple layer with:
         1). Minimum thickness 0.35 mils solid aluminum foil encased in a protective inert plastic jacket.
         2). 100 percent virgin low density polyethylene.
         3). Impervious to all known alkalis, acids, chemical reagents and solvents within soil.
         4). Aluminum foil visible to both sides.
      e. Locatable by conductive and inductive methods.
      f. Printing encased to avoid ink rub-off.
      g. Color and Legends:
         1). Potable Water Lines:
            a). Color: Blue (in accordance with APWA Uniform Color Code).
            b). Legend: Caution Potable Water Line Below (repeated every 24 inches).
         2). Reclaimed Water Lines:
            a). Color: Purple (in accordance with APWA Uniform Color Code).
            b). Legend: Caution Reclaimed Water Line Below (repeated every 24 inches).
         3). Sewer Line:
            a). Color: Green (in accordance with APWA Uniform Color Code).
            b). Legend: Caution Sewer Line Below (repeated every 24 inches).

2.02 MARKINGS

A. The Pipe Manufacturer shall mark the piping with the size and appropriate AWWA/ASTM Standard designations as applicable.

3.00 EXECUTION

3.01 INSTALLATION

A. Install pipe, fittings, and specials to the lines and grades indicated. Begin installation at the main supply line valve and make connections where indicated.

B. Excavate trenches to alignment and depth specified or as required for proper installation of pipe. Carefully lower pipe, fittings, and specials into the trench to avoid damage to the pipe and/or fittings. Take necessary precautions to protect pipe during backfilling operations. Replace any damaged pipe before it is buried. Keep the pipe clean during laying operations, and seal the pipe against the entrance of objects at the close of each operating day.

C. Place thrust restraint fittings at bends, tees, crosses, valves, and plugs in the pipe line in accordance with approved Shop Drawing lay schedule and Paragraph 2.01.D.

D. Buried ductile iron fittings shall be double wrapped in 8mm high density polyethylene encasement in accordance with AWWA C105, repair or replace encasements which have tears, rips or punctures in the polyethylene wrap.

E. Solvent weld joints shall be in accordance with ASTM D2855, and shall be made generally as follows: cut square and smooth the ends of the plastic pipe and wipe clean. Apply primer and solvent cement to the outside of the pipe and the inside of the fitting socket with a small brush. Immediately push the coated surfaces snugly together and rotate the pipe approximately one-half turn to insure uniform distribution of the cement. Remove the excess cement by wiping. Cement shall be of type which welds plastic surfaces together. Cement shall be as recommended by the Pipe Manufacturer and shall be compatible with the chemical conveyed.

F. Push-on joints shall be in accordance with the manufacturer's instructions.

G. Use of deflected joints shall be at 75 percent of the manufacturer recommendation or longitudinal deflection shall be 133 percent of the manufacturer's minimum radius.

H. Joint lubricant shall be as recommended by the pipe manufacturer.

3.02 FIELD CONTROL HYDROSTATIC TESTING

A. Test PVC pressure piping for leakage by a hydrostatic pressure test in accordance with Section 33 05 05.31 "Hydrostatic Testing."

3.03 FIELD QUALITY CONTROL

A. Do not enclose or cover any Work until inspected.

END OF SECTION

33 05 01.13 SANITARY SEWER PIPE (PVC)

1.00 GENERAL

1.01 WORK INCLUDED

A. Furnish labor, materials, equipment, and incidentals necessary to install 4- through 48-inch gravity flow PVC pipe. Trenching, backfilling, and pipe embedment shall be in accordance with Section 31 23 33 "Trenching and Backfill [Utilities]."

1.02 QUALITY ASSURANCE

A. Certification: The sewer pipe manufacturer shall provide certification that the pipe supplied conforms to these specifications and shall include laboratory tests results that support such certification. If the manufacturer is unable to provide the certification, an independent testing facility shall be utilized and retained at no cost to the Owner. The pipe supplied shall be permanently marked with the manufacturer's name, the date of manufacture, and identification with the tests performed to warrant its certification as being in conformance with this standard.

B. Testing:

1. At a minimum, actual test results shall be required as follows:
    a. Load bearing tests.
    b. Material tests.
    c. Hydrostatic tests.
2. Tests on PVC pipe 4 through 48 inches shall be made in accordance with appropriate ASTM standard testing procedures and shall be performed on a minimum of 1 percent of the pipe purchased.

C. Inspection: An inspection of the pipe after delivery to the Project shall be made by a representative of the Owner. Pipe with visible defects which are indicative of poor structural condition or poor workmanship shall be rejected and replaced without cost to the Owner. Visible defects shall include cracks of any type, honeycombs, or any other defects of poor workmanship. Any pipe rejected shall not be returned under any condition to the Project.

1.03 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00 "Document Management" and shall include:

1. Shop Drawing including the following information:
    a. Product data sheet.
    b. Manufacturer.
    c. Nominal pipe diameter.
    d. Standard dimension ratio (SDR).

e. Cell classification.

f. Laying lengths.

g. Joint methods.

h. Manufacturers minimum radii for horizontal deflection.

1.04 REFERENCE SPECIFICATIONS

A. Section 01 33 00 "Document Management."

B. Section 01 40 00 "Quality Management."

C. Section 31 23 33 "Trenching and Backfill [Utilities]."

1.05 STANDARDS

A. The applicable provisions of the following standards shall apply as if written here in their entirety:

1. ASTM International (ASTM) Standards:

ASTM D1784	Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds
ASTM D2241	Standard Specification for Poly (Vinyl Chloride) PVC Pressure Rated Pipe (SDR Series)
ASTM D2412	Standard Test Method for determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
ASTM D3034	Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings
ASTM D3212	"Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals"
ASTM F477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F679 & Annex	Standard Specification for Poly(Vinyl Chloride) (PVC) Large Diameter Plastic Gravity Sewer Pipe and Fittings
ASTM F794	Standard Specification for Poly(Vinyl Chloride) (PVC) Profile Wall Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter
ASTM F1803	Standard Specification for Poly(Vinyl Chloride) (PVC) Closed Profile Wall Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter

2. American Water Works Association (AWWA) Standards:

AWWA C900	Standard for Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 In. through 60 In. (100 mm Through 1,500 mm)

2.00 PRODUCTS

2.01 MATERIALS

A. Gravity Pipe: ASTM D3034 4- to 15-inch SDR 26 or ASTM F679 18- to 48-inch PS46 (115) Polyvinyl chloride pipe with bell and spigot compression joints. Pipe shall have a home mark on the spigot to indicate proper penetration when the joint is made.

1. Use green coloring for ground identification as sanitary sewer pipe.

2. PVC meeting the requirements of ASTM D1784, with a cell classification of 12454 or 12364.

Notes to Specifier:

B. Pressure Pipe: Refer to Section 33 05 01.09 "Polyvinyl Chloride (PVC) Pressure Pipe and Fittings."

C. Gaskets: Conform to ASTM F477.

D. Joints: Tested in accordance with ASTM D3212.

E. Services: Where pressure rated piping is called for on the Drawings, PVC service laterals shall be pressure rated.

F. Detectable Warning Tape:

1. Provide detectable warning tape as follows:

a. Thickness: 5.0 mil overall thickness.

b. Width: 3 inch minimum.

c. Weight: 27.5 pounds per inch per 1000 square feet.

d. Triple Layer with:

1). Minimum thickness 0.35 mils solid aluminum foil encased in a protective inert plastic jacket.

2). 100 percent virgin low density polyethylene.

3). Impervious to all known alkalis, acids, chemical reagents and solvents within soil.

4). Aluminum foil visible to both sides.

e. Locatable by conductive and inductive methods.

f. Printing encased to avoid ink rub-off.

g. Color and Legends:

1). Sewer Line:

a). Color: Green (in accordance with APWA Uniform Color Code).

b). Legend: Caution Sewer Line Below (repeated every 24 inches).

3.00 EXECUTION

3.01 INSTALLATION

A. Install pipe to the lines and grades indicated. Begin installation at the downstream discharge connection point and make connections where indicated.

B. Carefully lower sanitary sewage pipe into the trench to avoid damage to the pipe. Remove dirt and trash from the pipe while suspended. Keep pipe clean during laying operations, and seal the pipe against entrance of objects at the close of each operating day.

C. Where a gravity flow PVC wastewater line is within 9 feet of, and parallels a waterline, construct the sewer of PVC meeting ASTM or AWWA specifications with a minimum pressure rating for both the pipe and joints of 150 psi. The vertical separation shall be a minimum of 2 feet between outside diameters and the horizontal separation shall be a minimum of 4 feet between outside diameters. The gravity flow line shall be located below the waterline.

D. Where a gravity flow PVC wastewater line crosses a waterline, construct the wastewater line of PVC with a minimum pressure rating of 150 psi, and maintain an absolute minimum distance of 6 inches between outside diameters. In addition, the wastewater line shall be located below the waterline where possible and one length of the wastewater pipe must be centered on the waterline.

E. Where a gravity flow PVC wastewater line crosses over a waterline, construct all portions of the wastewater line within 9 feet of the waterline of PVC pipe with a pressure rating of at least 150 psi with one joint of pipe centered on the waterline, using appropriate adapters.

F. Minimum horizontal deflection shall be 133 percent of manufacturers minimum radius or 75 percent of the manufacturer's maximum recommended joint deflection.

3.02 FIELD QUALITY CONTROL

A. Pressure testing shall be as specified in Section 33 05 05.31 "Hydrostatic Testing."

B. Hydrostatic leak test gravity flow sewer lines shall be in accordance with the following:

1. Perform hydrostatic leak tests after backfilling.
2. The length of the pipe to be tested shall be such that the head over the crown of the upstream end is not less than 2 feet or 2 feet above the ground water level whichever is higher and the head over the downstream crown is not more than 6 feet.
3. Plug the pipe by pneumatic bags or mechanical plugs so that the air can be released from the pipe while it is being filled with water.
4. Make provisions for measuring the amount of water required to maintain the water at a constant level during this period.
5. The maximum allowable leakage is 10 gallons per inch of diameter per mile of pipe per 24 hours.
6. Remove the jointing material and remake the joint if any joint shows any visible leakage or infiltration.
7. Remove and replace any defective or broken pipes.

8. Determine the rates of infiltration by means of V-Notch weirs, pipe spigot, or plugs in the end of the pipe. Methods, times, and locations are subject to the Engineer's approval.

9. Pipe with visible leaks or infiltration or exceeds the maximum allowable leakage or infiltration is considered defective and must be corrected.

C. Low Pressure Air Test- Gravity Flow Sewer Lines:

1. Use air test in lieu of the hydrostatic test if desired, or if pipeline grades do not allow filling the entire pipeline segment or manhole to the indicated depth.

2. Perform low-pressure air tests, using equipment specifically designed and manufactured for the purpose of testing sewer pipelines using low-pressure air. Test is to conform to procedure described in ASTM F1417 except for testing times. The following test times are required:

Pipe Diameter (inches)	Minimum Time (seconds)	Length for Minimum Time (feet)	Time for Long Length (sec./ft.)
6	340	398	0.855
8	454	298	1.520
10	567	239	2.374
12	680	199	3.419
15	850	159	5.342
18	1020	133	7.693
21	1190	114	10.471
24	1360	100	13.676
27	1530	88	17.309
30	1700	80	21.369
33	1870	72	25.856

a. Provide the equipment with an air regulator valve or air safety valve set to an internal air pressure in the pipeline that cannot exceed 6 psig.

b. Pass air through a single control panel.

c. Provide pneumatic plugs that have a sealing length equal to or greater than the circumference of the pipe to be tested.

d. Provide pneumatic plugs that resist internal test pressures without requiring external bracing or blocking.

e. Provide an air compressor of adequate capacity for charging the system.

3. Perform air test only on lines 33 inches in diameter or smaller. Air tests for pipes larger than 27 inches may be air tested at each joint.

4. Check connections for leakage with a soap solution. Release the air pressure, repair the leak, and retest with soap solution until results are satisfactory, before resuming air test if leaks are found.
5. Determine the shortest allowable time for the pressure to drop from 3.5 pounds per square inch to 2.5 pounds per square inch by the following formula:

$$T = \frac{0.085 * D * K}{Q}$$

Equation Term	Represents	Measure
T	Time for the pressure to drop 1.0 pound per square inch gauge	Seconds
K	Factor equal to 0.000419*D*L, but not less than 1.0	
D	Average inside diameter of the pipe	Inches
L	Length of line of the same pipe size	Feet
Q	Rate of loss. Use 0.0015 cubic feet per minute per square foot of internal surface	

D. Air Test for Individual Joints:
   1. Lines 27 inches and larger may be tested at individual joints.
   2. The shortest allowable time for the pressure to drop from 3.5 pounds per square inch gauge to 2.5 pounds per square inch gauge is 10 seconds for all pipe sizes.

E. Deflection Testing:
   1. Perform deflection tests on flexible and semi-rigid pipe in accordance with TCEQ requirements.
      a. The maximum allowable deflection of pipe measured as the reduction in vertical inside diameter is 5.0 percent unless specified otherwise.
      b. Conduct test after the final backfill has been in place a minimum of 30 days.
      c. Thoroughly clear the lines before testing.

F. Do not enclose or cover any Work until inspected.

G. CCTV sewer lines as specified in Section 33 01 30.16 "TV Inspection of Sewer Pipelines."

END OF SECTION

33 05 05.31 HYDROSTATIC TESTING

1.00 GENERAL

1.01 WORK INCLUDED

A. Hydrostatically test new pipe between valves or plugs at the pressure and for the duration specified.

B. Additional plugs may be installed to reduce the length of each test section. No additional compensation will be paid if additional plugs are used.

C. Provide a pressure reducing backflow preventer and all temporary piping, pumping, fittings and gauges required to fill, test and then drain the pipe.

D. Do not begin test until pipe has been backfilled for at least 7 days.

1.02 SUBMITTALS

A. Submit detailed hydrostatic test procedure 10 days prior to conducting the test.

B. Submit Hydrostatic Pipe Test Reports per Section 01 33 00 "Document Management."

1.03 STANDARDS

A. The applicable provisions of the following standards shall apply as if written here in their entirety:

1. ASTM International (ASTM):

ASTM F2164	Standard Practice for Field Leak Testing of Polyethylene (PE) Pressure Piping Systems Using Hydrostatic Pressure

2. American Water Works Association (AWWA):

AWWA C200	Steel Water Pipe, 6 In (150 mm) and Larger
AWWA C600	Installation of Ductile-Iron Mains and Their Appurtenances
AWWA C604	Installation of Buried Steel Water Pipe – 4 In. (100 mm) and Larger
AWWA C605	Underground Installation of Polyvinyl Chloride (PVC) and Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe and Fittings
AWWA M9	Concrete Pressure Pipe
AWWA M11	Steel Pipe – A Guide for Design and Installation
AWWA M23	PVC Pipe – Design and Installation
AWWA M41	Ductile-Iron Pipe and Fittings
AWWA M55	PE Pipe – Design and Installation

2.00 PRODUCTS

2.01 WATER FOR TESTING

A. Obtain water for filling and testing the pipeline and provide all temporary pumps and piping necessary to fill the pipeline.

B. If chlorinated water is used, then dechlorinate it before disposal per all regulations.

C. Available water sources and special conditions are listed in the table below. This schedule is given to facilitate coordination with water sources and is not guaranteed to be complete.

Water Source	Special Conditions
Fire Hydrant Tap	Coordiante with City Staff prior to use.

2.02 TEST PLUGS

A. Design plugs or blind flanges to withstand the test pressure on either side with only atmospheric pressure on the opposite side.

3.00 EXECUTION

3.01 GENERAL

A. Perform hydrostatic test in accordance with this Section, AWWA Standards, AWWA Manuals, and the supplier's recommendations.

3.02 TEST PRESSURE

A. Test pressure shall be 1.5 times the working pressure of 50 psi.

3.03 TEST PREPARATION

A. Fill pipe at 0.5 feet per second in the main pipe.

B. Verify all air valves are working and air is vented from temporary taps. Plug taps after test. Temporary air valves shall be provided by Contractor at no additional cost to the Owner.

C. Examine bulkheads, valves, manholes, flanges, and connections for leaks during this period. Stop any leaks before continuing.

D. If an existing valve is in the test section, then coordinate with the Construction Manager to determine an approved method for measuring any leakage past the valve. Furnish all necessary equipment and include the cost for this effort in the Contract Price.

3.04 TEST DURATION

A. Test the test section for 4 hours.

3.05 EXAMINATION UNDER PRESSURE

A. Increase pressure to the specified test pressure.

B. Protect the gauge from direct sunlight during the test.

C. Inspect the pipe during the test to locate any leaks or breaks, defective joints, cracked or defective pipe, fittings, or valves. Correct defective Work identified during the pressure test.

D. Correct all identified leaks even if leakage is within the parameters for permissible make up water per Paragraph [3.06].

E. Test the pipe again after defective Work has been corrected. Repeat the test and correction of defective Work until satisfactory test results are obtained.

3.06 PERMISSIBLE MAKEUP WATER

A. Measure make up water. Make up water is the amount of water added to the test section to maintain the pressure within 5 psi of the specified test pressure.

B. The maximum acceptable volume of makeup water for gasketed pipe is 3 gallons per inch of pipe diameter per mile of pipe tested per day.

3.07 CORRECTIONS OF DEFECTS

A. Repair any defective joints, cracked or defective pipe, fittings, or valves discovered in performance of this pressure test with sound material meeting the requirements of the Contract Documents and repeat the test until satisfactory results are obtained. Repair all noticeable leaks even if the actual leakage is within the allowable limits.

3.08 REMOVAL OF TEST PLUGS

A. Remove test plugs once both sides of the pipeline have been tested. If another contractor may need the plug, then coordinate with them – the last contractor to need the plug shall remove it and repair the mortar lining.

B. Leave the pipeline full of water upon completion of the hydrostatic test, except where internal test plugs must be removed to allow construction to continue.

END OF SECTION

33 05 23.33 PIPELINE CROSSING [HIGHWAYS, ROADWAYS, RAILROADS, UTILITIES, OR DRAINAGE CHANNELS BY TUNNEL OR TRENCHLESS CONSTRUCTION METHODS]

1.00 GENERAL

1.01 WORK INCLUDED

A. Furnish labor, materials, equipment and incidentals necessary to install casing pipe or tunnel liner plates by tunnel or trenchless construction methods as specified herein. This Section sets forth the requirements for construction and installation of pipelines crossing highways, roadways, or railroads using horizontal auger boring, a jacking shield, or hand tunneling methods.

1.02 QUALITY ASSURANCE

A. Qualifications:

1. Tunnel or Trenchless Contractor: Unless specified otherwise, tunnel or trenchless construction shall be performed by a competent, experienced contractor or subcontractor. The tunnel or trenchless contractor or subcontractor shall have a satisfactory experience record of at least 5 years engaged in similar work and shall demonstrate successful completion of at least three previous projects within the last 5 years using tunnel or trenchless methods similar to those proposed involving installation of casing pipe or tunnel liner plate equal to or greater than the diameter as that proposed and in similar ground conditions anticipated for this Project.

B. Performance Requirements: Horizontal or vertical variation in the final position of the casing pipe or tunnel liner plate from the proposed line and grade shall be permitted only to the extent of the tolerances provided herein, provided that such variation shall be regular and only in the direction that will not detrimentally affect the installation or intended function of the carrier pipe in the opinion of the Engineer.

1.03 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00 "Document Management" and shall include:

1. Copies of permit(s) as required herein for construction of the pipeline crossing, if required to be obtained by the Contractor.
2. Qualifications for the Contractor or subcontractor who is performing the tunnel or trenchless construction as required by Paragraph 1.02.A.
3. Pipeline Crossing Work Plan, which shall include, but not be limited to the following:
    a. Site layout plan, including a plan view of the Contractor's proposed operations, including but not limited to dimensions of the pit excavations, dimensions of equipment to be utilized, location where excavated materials will be placed, location of where casing pipe or tunnel liner plate will be stored prior to installation, etc.
    b. Product data, description of, and operation manual for auger boring, jacking shield, or hand tunneling equipment proposed to be used. Include capacity, number, and

arrangement of hydraulic jacks as applicable. Provide details of thrust ring, jacking controls, and pressure gages as applicable.

c. Means and methods to control of line and grade of equipment.

d. Theoretical volume calculation for the proposed excavation, including an estimated bulking factor.

e. Description of the proposed procedures for performing tunnel or trenchless excavation, including handling and disposal of excavated materials.

f. Description of the proposed procedures for installation of casing pipe, including jointing and welding procedures of casing pipe, as applicable.

g. Description of the proposed procedures for installation of tunnel liner plates, if used.

h. Product Data and proposed procedures for use of pipe lubrication materials proposed for use for installation of the casing pipe, if used.

i. Description of the proposed procedures for installation of the carrier pipe, including Product Data and Shop Drawings of casing spacers or insulators and end seals and dimensions and proposed locations of such to ensure line and grade.

j. Mix design for the proposed contact grout and backfill grout, including Product Data and applicable test reports for each constituent of the mix design.

k. Description of the proposed procedures for batching, mixing, pumping, and placement of contact grout and backfill grout.

4. Shop Drawings and mill test certificates of the casing pipe from the casing pipe manufacturer, including jointing and welding requirements, lubrication/grout ports or fittings, joint details, and other items to be furnished with and fabricated for the pipe. Include dimensions, tolerances, wall thicknesses, material properties and strength, and other pertinent information. Shop Drawings shall include calculations for the design of the casing pipe, including calculations for the anticipated jacking forces along the full length of the casing pipe installation and the maximum allowable jacking force that may be applied to the casing pipe without damage. Calculations shall be performed by a professional engineer licensed in the state where Project is located and retained by the Contractor. Calculations associated with the casing pipe are for record purposes only and will not be reviewed by the Engineer.

5. Shop Drawings and mill test certificates of the tunnel liner plate and fasteners from the tunnel liner plate manufacturer. Shop Drawings shall include calculations for the design of the tunnel liner plate, including calculations for the maximum allowable jacking force that may be applied against the tunnel liner plate without damage. Calculations shall be performed by a professional engineer licensed in the state where Project is located and retained by the Contractor. Calculations associated with the tunnel liner plate are for record purposes only and will not be reviewed by the Engineer.

6. Daily reports, to be submitted no more than 12 hours after the end of each shift, including, but not limited to the following:
    a. Name of crew members and their classification, number of hours worked, quantity of materials installed or used, and a summary of the work activities, regardless of the amount of progress made.
    b. Starting and ending station of excavation face and limits of installation of casing pipe or tunnel liner plate completed.
    c. Torque, jacking pressures, and other parameters measured by the excavation equipment as applicable.
    d. Type and quantity of material excavated and removed compared to the theoretical volume.
7. As-built documentation, to be submitted no more than 1 week after completion of casing pipe or tunnel liner plate installation and another submittal no more than 1 week after completion of carrier pipe installation, which shall include, but not be limited to the following:
    a. Name of Contractor and subcontractor, if applicable, and contact information.
    b. Date of completion of installation.
    c. Summary of type, size, and dimensions of casing pipe, tunnel liner plate, or carrier pipe installed.
    d. Summary of project survey information.
    e. Plan and profile drawing, including theoretical alignment, actual installed alignment, survey benchmarks, and other pertinent information such as adjacent structures or facilities.
8. Contingency plan that includes corrective actions to be taken in the event of excessive ground movement (settlement or heave), excessive deviation from line and grade, slower than anticipated progress, stuck excavation equipment, damage to an existing utility, or encountering greater than anticipated groundwater inflows.

1.04 STANDARDS

A. American Association of State Highway and Transportation Officials (AASHTO):

AASHTO	Standard Specifications for Highway Bridges

B. American Railway Engineering and Maintenance-of-Way Association (AREMA):

AREMA	Manual for Railway Engineering

C. American Society of Civil Engineers (ASCE):

ASCE MOP 106	Manual of Practice [for] Horizontal Auger Boring Projects

D. ASTM International (ASTM):

ASTM A36/ A36M	Standard Specification for Carbon Structural Steel

ASTM A123/ A123M	Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A135/ A135M	Standard Specification for Electric-Resistance-Welded Steel Pipe
ASTM A139/ A139M	Standard Specification for Electric-Fusion (Arc)-Welded Steel Pipe (NPS4 and Over)
ASTM A153/ A153M	Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A307	Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60,000 PSI Tensile Strength
ASTM A449	Standard Specification for Hex Cap Screws, Bolts and Studs, Steel, Heat Treated, 120/105/90 ksi Minimum Tensile Strength, General Use
ASTM A572/ A572M	Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel
ASTM A1011/ A1011M	Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength

E. American Water Works Association (AWWA):

AWWA C200	Steel Water Pipe, 6 in. (150 mm) and Larger
AWWA C206	Field Welding of Steel Water Pipe
AWWA C210	Liquid-Epoxy Coatings and Lining for Steel Water Pipe and Fittings
AWWA M11	Steel Water Pipe – A Guide for Design and Installation

F. Railroad Crossing Standards:

BNSF Railway	Utility Accommodation Policy
Union Pacific	Pipeline Installation Requirements

G. Highway or Roadway Crossing Standards:

TxDOT	Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, Item 476, Jacking, Boring, or Tunneling Pipe or Box

1.05 JOB CONDITIONS; PERMITS AND EASEMENT REQUIREMENTS

A. Owner shall obtain and comply with permits from the highway and railroad agencies as described or referenced herein.

B. Contractor shall comply with regulations and instructions of the highway and railroad agencies as to the methods of performing the Work and shall take all necessary precautions for the safety of the public and protection of existing infrastructure. Coordination with the highway and railroad agencies shall be performed by the Contractor, as required, unless otherwise instructed by the Owner.

C. The Contractor shall comply with all the requirements of the UPRR Pipeline Crossing Agreement, provide the required notifications to the UPRR as required by the Pipeline Crossing Agreement. Contractor shall comply with all safety rules and regulations and training requirements established by the Union Pacific Railroad. The Contractor shall ensure

that all Contractor and subcontractor personnel maintain current training certifications throughout the duration of the work as required by UPRR. The Contractor must submit and provide sufficient safety measures to UPRR for approval. The Contractor shall also submit a proposed method of erosion control in accordance with the Contract Documents for approval by UPRR.

D. In the event of an emergency, the Contractor shall immediately contact the Union Pacific Railroad Company at 888-877-7267 to stop railroad traffic on the affected railroad track. In the event the UPRR cannot be reached, the Contractor shall dial 911 and provide the GPS coordinates of the location of the crossing (31.968511 degrees latitude, -102.126669 degrees longitude).

E. A hard copy of approved permits shall be available on-site for the duration of the construction activity pertaining to the permit.

F. All work within the Texas Department of Transportation (TXDOT) right-of-way shall comply with the latest version of the TXDOT Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges and CAD Standard Plan Files.

G. Construction along highways roadways, and railroads shall be performed in such a manner that construction materials and excavated material be kept off the highways, roadways, and railroads at all times, as well as all operating equipment. Construction shall not interfere with the operations of the highways, roadways and railroads, unless otherwise allowed by the authority having jurisdiction.

H. Traffic control devices, such as barricades and warning signs, and flagmen, when necessary and required by the authority having jurisdiction, shall be provided by the Contractor. All traffic control devices for highways and roadways shall comply with the Texas Manual on Uniform Traffic Control Devices (TMUTCD).

I. If rock is encountered, no blasting shall be allowed. Existing pipelines and other existing infrastructure are to be protected. The Contractor shall verify location and elevation of any existing pipelines and other existing infrastructure before proceeding with the construction so as to avoid damage to the existing pipelines or other existing infrastructure during construction. Verification of location and depths of existing pipelines and other existing infrastructure shall be the complete responsibility of the Contractor.

1.06 OPTIONS

A. Casing Material: Unless specified otherwise, the Contractor may use steel pipe or tunnel liner plate where tunnel or trenchless construction is required for installation of carrier pipe. The material specifications for casing pipe and tunnel liner plate herein are the minimum acceptable requirements. The Contractor shall be fully responsible to ensure the materials used are of sufficient strength for the installation method chosen and the soil conditions that are actually encountered.

B. Tunnel and Trenchless Methods: Unless specified otherwise, the Contractor may use auger boring, a jacking shield, or hand tunneling for the installation method of casing material. The Contractor shall be fully responsible to ensure the methods used are adequate for the protection of workers and the public.

1.07 DEFINITIONS

A. Auger Boring: A technique for forming a bore from a jacking shaft to a receiving shaft by means of a rotating auger, which may include cutting tools. Casing pipe is jacked forward sequentially in a cyclic process while the auger is turning. Spoils are removed back to the jacking shaft by helically wound auger flights rotating inside the casing pipe. The equipment may have limited guidance and steering capability.

B. Casing Pipe: A casing pipe is a pipe used to support a tunnel or trenchless excavation and subsequent installation of a carrier pipe.

C. Jacking Shaft: An excavation from which tunnel or trenchless equipment is launched for the installation of a pipeline or conduit.

D. Jacking Shield: A jacking shield is a fabricated steel cylinder where excavation is carried out either by machine or by hand while support, such as tunnel liner plates are installed. The shield may have limited guidance and steering capability.

E. Pipe Jacking: Pipe jacking is a system of using hydraulic jacks from a jacking shaft to directly install pipes behind a jacking shield so that they form a continuous string of pipe in the ground.

2.00 PRODUCTS

2.01 MATERIALS

A. Casing Insulators or Spacers:

1. Casing insulators or spacers shall be specifically designed to adequately support and electrically isolate the carrier pipe within the casing pipe under all conditions. Insulators or spacers shall consist of pre-manufactured steel bands with plastic lining and plastic runners. Insulators shall fit snug over the carrier pipe and position the carrier pipe approximately in the center of the casing pipe, to provide adequate clearance between the carrier pipe bell and the casing pipe. Fasteners for insulators shall be stainless steel or cadmium plated. The number and location of casing insulators or spacers shall be determined by the manufacturer to protect carrier pipe from damage.

2. Manufacturers of casing insulators or spacers shall be:

   a. Advance Products & Systems, LLC (http://www.apsonline.com).

   b. Cascade Waterworks Manufacturing Company (http://www.cascademfg.com).

   c. CCI Piping Systems (http://www.ccipipe.com).

   d. Approved equal.

B. Mortar Bands: If allowed by the authority having jurisdiction, concrete cylinder pipe and mortar coated steel pipe may have thickened outside mortar bands in lieu of casing insulators or spacers. Mortar bands shall properly position the carrier pipe within the casing pipe or tunnel liner plates.

C. End Seals:

1. End seals shall be specifically designed to seal the annular space between the casing pipe and the carrier pipe at the ends of the casing pipe.

2. Manufacturers of end seals shall be:

a. Advance Products & Systems, LLC (http://www.apsonline.com).

b. Cascade Waterworks Manufacturing Company (http://www.cascademfg.com).

c. CCI Piping Systems (http://www.ccipipe.com).

d. Approved equal.

D. Casing Pipe: Casing pipe shall be welded steel pipe or press-fit steel pipe. Contractor shall be fully responsible for the design of the steel casing pipe, including joints, that meet or exceeds all of the requirements presented herein. Design of the casing pipe shall be performed by a licensed professional engineer licensed in the state where the Project is located as required herein.

1. Welded steel casing pipe shall have a minimum yield strength of 35,000 psi and shall conform to the requirements of ASTM A139/A139M, AWWA C200, and AWWA M11. Pipe joints of welded steel pipe shall be full butt welded in accordance with the casing pipe manufacturer's recommendations and with AWWA C206, as applicable.

2. Press-fit steel casing pipe shall conform to the requirements of ASTM A36/A36M and A572/A572M, Grade 42. Proprietary Permalok T-5 joints or similar shall be used.

3. Minimum wall thickness of steel casing pipe shall be as indicated below, as otherwise indicated in the applicable standards referenced herein, or as otherwise required by the authority having jurisdiction, and shall be considered the minimum thickness acceptable. The wall thickness of the steel casing pipe shall be increased as necessary by the Contractor to obtain the adequate strength, stiffness, buckling strength, resistance to deflection, and be able to accommodate the maximum allowable jacking load. The casing pipe shall be designed as to not allow deflection of more than 3 percent.

Nominal Diameter of Steel Casing Pipe (Inches)	Minimum Wall Thickness of Steel Casing Pipe (Inches)	
	Roadway/Highway Crossing	Railway Crossing
6 to 14	0.188	0.250
16	0.188	0.282
18	0.250	0.313
20 to 22	0.250	0.344
24	0.281	0.375
26	0.281	0.407
28	0.312	0.438
30	0.312	0.469
32	0.312	0.500
34	0.312	0.532
36	0.344	0.532
38	0.344	0.563
40	0.344	0.594
42	0.344	0.625
44 to 46	0.344	0.657
48	0.344	0.688

E. Tunnel Liner Plates:

1. Tunnel liner plates shall be fabricated from a single piece of metal and flanged on each side, each piece shall contain a grout port, and shall conform to the requirements of ASTM A1011/A1011M, with a minimum tensile strength of 42,000 psi, and a minimum yield strength of 28,000 psi. Tunnel liner plates and associated bolts and nuts shall be hot-dip galvanized.

2. Contractor shall be fully responsible for the design of the tunnel liner plates. Design of the tunnel liner plates shall be performed by a professional engineer licensed in the state where the project is located as required herein.

3. Plates shall be of uniform fabrication and those intended for one size tunnel shall be interchangeable. Welding of tunnel liner plate shall not be allowed.

4. The material used for the construction of the tunnel liner plates shall be new, unused, and suitable for the purpose intended.

5. Manufacturer of tunnel liner plates shall be:

   a. Contech Engineered Solutions LLC (https://www.conteches.com).

   b. DSI Tunneling LLC (http://www.dsitunneling.com).

   c. Jennmar Corporation (https://www.jennmar.com).

   d. Approved equal.

6. Minimum thickness of tunnel liner plates shall be as latest edition and/or as indicated in AREMA Manual for Railway Engineering, or indicated in other applicable standards referenced herein, or as otherwise required by the authority having jurisdiction, and shall be considered the minimum thickness acceptable. The thickness of the tunnel liner plates shall be increased as necessary to obtain the adequate strength, stiffness, buckling strength, resistance to deflection and be able to accommodate the maximum allowable jacking load, as applicable. The tunnel liner plate shall be designed as to not allow deflection of more than 3 percent.

2.02 GROUT MIXES

A. Contact grout shall consist of cement, water, and fluidizers as required to produce a satisfactory pumpable grout with a minimum compressive strength of 500 psi at 28 days.

B. Backfill grout shall be either structural grout or cellular concrete.

1. Structural grout shall consist of a mixture of sand, cement, and water with a minimum compressive strength of 4000 psi at 28 days. Admixtures may be used to control set times and prevent washout of the cement paste.

2. Cellular concrete shall consist of a mixture of cement, water, and a foaming agent with a minimum compressive strength of 150 psi at 7 days and 250 psi at 28 days. Cellular concrete shall have a minimum wet density of 50 pcf, unless water is present inside the casing, where a minimum wet density of 65 pcf shall be required. The foaming agent shall conform to ASTM C869 and shall be tested in accordance with ASTM C796. No aggregate or fillers shall be used. No admixtures shall be without specific written approval from the foaming agent manufacturer.

C. Cement used in the grout mixes shall conform to ASTM C150, Type II.

D. Water used in the grout mixes shall conform to ASTM C94.

3.00 EXECUTION

3.01 GENERAL CONSTRUCTION PROCEDURES

A. Contractor shall comply with all applicable requirements of permits as described or referenced herein, whether or not such permits were obtained by the Contractor.

3.02 JACKING AND RECEIVING PITS

A. Excavation and backfill of jacking and receiving pits shall be performed in accordance with Section 31 23 33.16 "Trenching and Backfill [Water Resources]" and Section 31 23 33.14 "Trench Safety" and as required by standards referenced herein.

B. Contractor shall not perform excavation activities beyond the limits shown on the Drawings.

C. Contractor shall keep the jacking and receiving pits free from standing water to the extent practical and shall perform dewatering as necessary.

D. Upon completion of the Work described herein, Contractor shall restore the Site as required by the Contract Documents.

3.03 TUNNEL OR TRENCHLESS EXCAVATION

A. Contractor shall commence excavation operations from the low or downstream end of the tunnel or trenchless crossing, unless otherwise specified.

B. Contractor shall perform Work in a manner that minimizes ground settlement or heave.

C. Contractor shall furnish all equipment and all necessary temporary electrical power and water service to perform the Work described herein.

D. Auger boring or jacking shield equipment shall be manufactured by a company that specializes in the design and fabrication of this type of equipment and has at least 5 years of experience in the design and fabrication of such equipment. The equipment shall meet the following minimum requirements:

1. Capable of installing casing pipe or tunnel liner plate at the diameters and lengths required by the Drawings.
2. Provide a means for controlling line and grade within the tolerances listed herein.
3. Capable of maintaining settlement or heave of the ground to limits as required herein or as otherwise acceptable to the authority having jurisdiction.
4. Hydraulically operated and capable of installing casing pipe or tunnel liner plate in a controlled manner.
5. Capable of providing sufficient torque and jacking loads as appropriate.

E. For auger boring equipment, the auger shall only extend a maximum of 3 inches beyond the leading edge of the casing pipe to avoid ground loss. If non-cohesive or unstable conditions are encountered, the end of the auger and cutting tools, if used, shall be retracted into the

casing a distance of at least three times the diameter of the casing to create a soil plug at the end of the casing to prevent ground movement. The diameter of the auger and cutter tools shall not be greater than the outside diameter of the casing pipe.

F. Excavated materials shall be removed from the tunnel or trenchless excavation to the jacking pit and shall be disposed of properly at an off-site facility.

3.04 INSTALLATION OF CASING PIPE BY AUGER BORING OR A JACKING SHIELD

A. Casing pipe to be installed by tunnel or trenchless methods as described herein shall meet the requirements for the type of casing pipe specified herein and shall be in accordance with the Contractor's accepted submittals.

B. Contractor shall monitor the volume of material excavated and adjust rate of excavation to prevent settlement or heave of the ground.

C. Casing pipe shall be set on properly braced and supported guide rails in the jacking shaft prior to installation.

D. Contractor shall not exceed the maximum allowable jacking force when jacking the pipe.

E. Jointing and welding of the casing pipe shall be performed in accordance with the casing pipe manufacturer's recommendations.

F. Provide a means of tracking the leading edge of the casing pipe using an electronic transmitting and receiving device.

G. In the event a section of casing pipe is damaged during installation, the additional casing pipe shall be advanced through the receiving pit to allow for the removal of the damaged casing pipe. This shall be performed at no additional cost to the Owner.

3.05 INSTALLATION OF TUNNEL LINER PLATE WITH A JACKING SHIELD OR HAND TUNNELING

A. Tunnel liner plate to be installed by tunnel or trenchless methods as described herein shall meet the requirements for the type of tunnel liner plate specified herein and shall be in accordance with the Contractor's accepted submittals.

B. Assembly of the tunnel liner plate shall be performed in accordance with the tunnel liner plate manufacturer's recommendations. Assemble steel liner plates into circumferential rings. Liner plates shall be of the type to permit segments to be installed completely from inside the tunnel or trenchless crossing.

C. Accurately maintain the face of the excavation inside the tunnel so as to allow the absolute minimum of void space outside the liner plate. Maintain a maximum of a 1/2-inch tolerance between the outside of the tunnel liner plate and the surrounding excavation wherever possible. The excavated tunnel diameter shall not be greater than 2 inches larger than the tunnel liner plate outside diameter.

D. Tunnel liner plate installation shall proceed as closely as possible behind the face of the excavation. The face of the excavation shall at no time be more than 6 inches ahead of the required space to install an individual tunnel liner plate. Use breast plates, poling boards, or other suitable devices to maintain accurate excavation with the minimum of unsupported excavation at any time. Tunnel liner plates shall not be allowed to deflect vertically during installation.

E. Contractor shall not exceed the maximum allowable jacking force when advancing the jacking shield against the tunnel liner plate, if used.

F. In the event tunnel liner plate(s) are damaged during installation or jacking operations, the damaged tunnel liner plate(s) shall be removed and replaced. This shall be performed at no additional cost to the Owner.

3.06 INSTALLATION OF CONTACT GROUT

A. Install contact grout in the void space between the outside of the casing pipe or tunnel liner and the excavation, especially in any voids created by over-excavation, caving, or collapse. For casing pipe, install contact grout mix immediately upon completion of setting casing pipe. For tunnel liner plate, install contact grout at the end of each workday as tunnel liner plates are actively being installed or more often as conditions warrant.

B. Unless specified otherwise, install contact grout through grout ports or grout fittings installed in the casing pipe or tunnel liner plate that are 42 inches in diameter or larger or if voids are suspected. Grout ports or fittings shall be fabricated into casing pipe at a maximum spacing of 10 feet. Grout ports or fittings shall be fabricated into each individual liner plate.

C. Grouting operations shall be performed in such a manner to prevent damage to the casing pipe, tunnel liner plate, the surrounding ground, or adjacent facilities or existing utilities. Contact grout shall be injected at a pressure that will not distort or imperil any portion of the Work.

D. Remove fittings and plug grout ports and fittings after completion of contact grouting.

3.07 CONTROL OF LINE AND GRADE

A. Benchmarks and other survey control points shall be established by the Contractor. Accuracy of the benchmarks shall be verified prior to commencement of construction by the Contractor.

B. The casing pipe or tunnel liner plate shall be installed to meet the following tolerances along the entire length of the tunnel or trenchless crossing. If the installation exceeds the specified tolerances herein, Contractor shall perform corrective work that is acceptable to the Engineer and at no additional cost to the Owner.

1. Horizontal Tolerance: Plus or minus 6 inches from theoretical horizontal alignment for every 100 feet of tunnel or trenchless crossing, unless otherwise specified.

2. Vertical Tolerance: Plus or minus 2 inches from theoretical vertical alignment for every 100 feet of tunnel or trenchless crossing, unless otherwise specified.

3.08 INSTALLATION OF CARRIER PIPE

A. Carrier pipe to be installed within the casing pipe or tunnel liner plates shall meet the requirements for the type of carrier pipe as specified. Where indicated, place, align, and anchor casing insulators or spacers inside the casing pipe.

B. Pull or skid pipe into place inside the casing pipe or tunnel liner plate. Lubricants such as flax soap or drilling mud may be used to ease pipe installation. Contractor shall not use petroleum products, such as oil or grease for this purpose.

C. Perform all required testing and surveying of the carrier pipe prior to performing backfill grouting.

3.09 BACKFILL GROUTING

A. The annular space between the casing pipe and the carrier pipe shall be completely backfilled throughout the entire length from the low (downstream) end of the pipeline crossing. Seal the low end and place backfill grout until grout is extruded from the opposite end.

B. The carrier pipe and any other piping or conduits whether temporary or permanent shall be firmly anchored or blocked in place, while maintaining required clearances, to prevent floatation or movement during backfilling operations.

C. After backfill grouting is completed, seal or plug the ends of the casing pipe with End Seals as required herein.

END OF SECTION

33 31 13.16 HDPE PIPING

1.00 GENERAL

1.01 WORK INCLUDED

A. Furnish labor, materials, equipment and incidentals necessary to install polyethylene pipe, and complete installation in accordance with the Contract Documents. The finished pipe shall be continuous over the entire length of the sewer between manholes and be free from defects.

1.02 QUALITY ASSURANCE

A. Polyethylene pipe jointing shall be performed by personnel trained in the use of the thermal butt-fusion equipment and recommended methods for new pipe connections. Personnel directly involved with installing the new pipe shall have received training in the proper methods for handling and installing the polyethylene pipe. Training shall be performed by a qualified representative of the pipe manufacturer. The Contractor shall maintain records of trained personnel, and shall certify that training was received not more than 12 months before commencing construction.

1.03 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00 "Document Management" and shall include:

1. Shop Drawings, catalog data, and manufacturer's technical data showing complete information on material composition, color, physical properties, and dimensions of new pipe and fittings. Include manufacturer's recommendation for handling, storage, and repair of pipe and fittings.

1.04 STANDARDS

A. Comply with local governing regulations if more stringent than specified herein. Piping shall meet the following standards and shall be a part of this Section as if written here in their entirety.

1. ASTM International (ASTM) Standards:

ASTM F1473	Test Method for Notch Tensile Test to Measure the Resistance to Slow Crack Growth of Polyethylene Pipes and Resins
ASTM D2122	Determining Dimensions of Thermoplastic Pipe and Fittings
ASTM F2620	Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings
ASTM D2837	Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials
ASTM D3035	Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Controlled Outside Diameter (up to 3-Inch IPS)
ASTM D3350	Specification for Polyethylene Plastics Pipe and Fittings Material
ASTM F714	Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter (4-Inch IPS and larger)

2. American Water Works Association (AWWA) Standards:

AWWA C906	Polyethylene (PE) Pressure Pipe and Fittings, 4 through 64 Inches, for Water Distribution
AWWA M55	Polyethylene (PE) Pipe Design and Installation

B. Domestic water piping shall be approved by the Underwriters Laboratory and shall be accepted by the State Fire Insurance Commission for use in water distribution systems. HDPE water pipe shall bear the seal of approval (or "NSF" mark) of the National Sanitation Foundation Testing Laboratory for potable water pipe.

1.05 DELIVERY, STORAGE, AND HANDLING OF MATERIALS

A. Transport, handle, and store pipe and fittings as recommended by manufacturer.

B. If new pipe and fittings become damaged before or during installation, it shall be repaired as recommended by the manufacturer or replaced as required by the Owner's Project Representative at the Contractor's expense, before proceeding further.

C. Deliver, store, and handle other materials as required to prevent damage.

2.00 PRODUCTS

2.01 MATERIALS

A. Pipe: Polyethylene Plastic Pipe shall be high density polyethylene pipe (HDPE).

1. Appropriate for use as a gravity sanitary sewer and meet the applicable requirements of ASTM F714 "Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter", ASTM D3350, Ductile Iron Pipe Sizing.

B. All pipe shall be made of virgin material. No rework except that obtained from the manufacturer's own production of the same formulation shall be used.

1. The pipe shall be homogenous throughout and shall be free of visible cracks, holes, foreign material, blisters, or other deleterious faults.

2. Dimension Ratios: The minimum wall thickness of the polyethylene pipe shall meet the following:

a. Pressure Applications: AWWA C906 DR-11 Pressure Class 160

b. Gravity Flow Applications – ASTM F714 DR21 Pressure Class 101 psi

3. All HDPE shall be carbon black or solid gray stabilized throughout the structural wall for ultra-violet protection. The pipe shall have a near white inside diameter to facilitate future TV inspection.

C. Polyethylene Fittings: The polyethylene fittings shall be manufactured from a polyethylene compound which conforms to ASTM D3350 cell class PE445574C or E material. Fittings shall be manufactured by the same manufacturer as the pipe.

1. Pipe fittings shall have a long-term hydrostatic strength rating of 1600 psi or more at 23 degrees Celsius, in accordance with ASTM D2837.

2. Environmental stress crack resistance (ESCR) of the material shall meet the requirements as specified in ASTM D3350 Cell Classification of 7 for a 500-hour PENT material using ASTM F1473 (PENT).

D. Select Material: Selected or processed excavated trench material shall be Class 10 Aggregate Fill in accordance with Section 31 23 33 "Trenching and Backfill."

2.02 MATERIALS TEST

A. Tests for compliance with this Section shall be made as specified herein and in accordance with the applicable ASTM Specification. A certificate of compliance with ISO 9000 shall be furnished, by the manufacturer for all material furnished under this Section. Polyethylene plastic pipe and fittings may be rejected for failure to meet any of the requirements of this Section.

3.00 EXECUTION

3.01 HANDLING

A. The joints shall be handled near the middle with wide web slings and spreader bars. Rope slings also work well with straight lengths. The use of chains, end hooks or cable slings that may scar the pipe are not permitted. The following procedures shall be observed when handling HDPE pipe.

1. Always stack the heaviest series of pipe at the bottom.
2. Protect the pipe from sharp edges when overhanging the bed of a truck or trailer by placing a smooth, rounded protecting strip on the edge of the bed.
3. The load should be anchored securely to prevent slippage.

B. Lengths of small-diameter, lightweight pipe can be unloaded manually.

C. Pipe applications shall normally be handled by:

1. Unloading the pipe from the truck in a row along the side of the installation area and moving the fusion unit along the row of joints.
2. Stacking the pipe beside the fusion unit and trailing the pipe out after fusion, then dragging the long length of pipe into place for installation. It is suggested that as the pipe is fused and moved through the fusion machine, additional joints of pipe should be placed in the moveable jaw side of the machine for each subsequent fusion. This prevents the hydraulic system of the machine from having to pull the previously fused long length.

D. Dragging the pipe into place is permitted provided the pipe isn't damaged from sharp rocks or excessive abrasion created by pulling the pipe great distances.

3.02 STORAGE

A. If the pipe must be stacked for storage, avoid excessive stacking heights. Out-of-roundness can be created in the lower rows of pipe, due to excessive stacking heights. The limitation on storage height is 8 rows for pipe 6 inches or less, 3 rows for pipe 8 inches or less, 2 rows for pipe 32 inches or less and 1 row for pipe 63 inches or less.

B. Care shall be taken to ensure that the pipe is stacked in straight rows. The expansion and contraction caused by uneven heating by the sunlight shall be prevented by restraining the racks.

C. Pipe laid directly on the ground shall be placed on an area free of loose stones or sharp objects. Scarring or gouging of the pipe shall be avoided.

3.03 PIPE JOINING

A. The polyethylene pipe shall be assembled and joined at the Site using the thermal butt-fusion method to provide a leak proof joint. Threaded or solvent-cement joints and connections are not permitted. All equipment and procedures used shall be in strict compliance with the manufacturer's recommendations. Fusing shall be accomplished by personnel certified as fusion technicians by a manufacturer of polyethylene pipe and/or fusing equipment.

B. The butt-fused joint shall be in true alignment and shall have uniform roll-back beads resulting from the use of proper temperature and pressure. The joint shall be allowed adequate cooling time before removal of pressure. When cool, all weld beads shall then be removed from both the inside and outside surface such that the joint surfaces shall be smooth. The fused joint shall be watertight and shall have a tensile strength equal to that of the pipe. All joints shall be subject to acceptance by the Owner's Project Representative. All defective joints shall be cut out and replaced at no cost to the Owner. Any section of the pipe with a gash, blister, abrasion, nick, scar or other deleterious fault greater in depth than 10 percent of the wall thickness, shall not be used and must be removed from the Site. However, a defective area of the pipe may be cut out and the joint fused in accordance with the procedures stated above. In addition, any section of pipe having other defects such as concentrated ridges, discoloration, excessive spot roughness, pitting, variable wall thickness or any other defect of manufacturing or handling as determined by the Owner's Project Representative shall be discarded and not used.

3.04 BENDING PIPE

A. HDPE may be cold-bent to a minimum radius of 40 times the pipe diameter as it is installed, eliminating the need in many cases for elbows for slight bends. The minimum bending radius that can be applied to the pipe without kinking varies with the diameter and wall thickness of the pipe. Contractor shall conform to manufacturer's recommendations. If adequate space is not available for the required radius, a fitting of the desired angle shall be fused into the piping system to obtain the necessary change in direction.

3.05 INSTALLATION BELOW GROUND

A. Pipe Laying:

1. When pulling pipe, either a pulling head or a suitable wraparound sleeve with rubber protective cover shall be used to prevent the pulling cables from damaging the pipe. The pipe shall not be pulled by the flanged end.

2. Open cut installations shall be in accordance with Section 31 23 33 "Trenching and Backfill."

B. Grouting (Continuous or at Manholes): Pipe running through a manhole wall shall be anchored by attaching a collar or side fused branch saddles to the pipe and encasing them in the wall of the manhole.

3.06 FIELD QUALITY CONTROL

A. Hydrostatic Testing for pressure piping systems shall be performed in accordance with ASTM F2164. Testing pressure shall not exceed 1.5 times the system design pressure and total testing time including the time required to pressurize, stabilize, hold test pressure, and depressurize should not exceed 8 hours. If 5 psi is lost during testing pipeline must be re-pressurized.

B. Air testing of gravity piping systems shall be performed in accordance with ASTM F1417. The specified rated test pressure shall be maintained for 10 minutes to 1 hour (dependent on pipe diameter and according to ASTM F1417), but not more than 1 hour. Test pressure ratings shall not be exceeded. Consult pipe manufacturer for maximum allowable test pressure.

C. HDPE pipe deflection shall not exceed deflection percentages identified in ASTM F1962 or manufacturer's maximum allowable deflection, whichever is lower. In Texas, the maximum gravity flow vertical deflection allowable is 5 percent. Otherwise, allowable pipe deflection varies based on DR rating. The following maximum deflection percentages can be used for the following DR ratings: DR21 – 7.5 percent, DR17 – 6.0 percent, DR15.5 – 6.0 percent, DR13.5 – 6.0 percent, DR11 – 5.0 percent, DR9 – 4.0 percent, DR7.3 – 3.0 percent. Deflection measurements can be taken by mandrel or by measurement of inside diameter before and after backfill operations.

D. Do not enclose or cover any Work until inspected.

3.07 CLEAN AND ADJUST

A. Remove surplus pipeline materials, tools, rubbish and temporary structures and leave the construction site clean, to the satisfaction of the Owner's Project Representative.

END OF SECTION

33 39 13 SANITARY UTILITY SEWAGE MANHOLES, FRAMES AND COVERS

1.00 GENERAL

1.01 WORK INCLUDED

A. Provide labor, materials, equipment and incidentals necessary to construct manholes and cleanouts complete with covers, fittings, and other appurtenances, in accordance with the details and/or called out in the Drawings.

1.02 QUALITY ASSURANCE

A. Polymer Concrete Manholes:

1. Certification from manufacturer that polymer concrete manhole design meets or exceeds the load and strength requirements of ASTM C478 and ASTM C857, reinforced in accordance with ASTM C478 or ACI 440.1R.
2. Proof of independent chemical resistance testing conducted in accordance with ASTM C267.
3. Manufacturer must provide references of 10 previous polymer concrete projects including scope in the last 5 years performed with both the owner and contractor for reference and review.

1.03 SUBMITTALS

A. Submittals must be in accordance with Section 01 33 00 "Document Management" and must include:

1. Shop Drawings:
   a. Drawings and data covering manhole sections. These drawings must include manhole designation matching the plans, invert elevations and diameters for each manhole.
   b. Concrete batch mix for cast-in-place sections must be submitted as a Shop Drawing.
2. Product Data:
   a. Manhole cover and ring.
   b. Engineer to include other products as specified.
3. Polymer Concrete Manholes:
   a. Certification from the manufacturer that polymer concrete manhole design meets or exceeds the load and strength requirements of ASTM C478 and ASTM C857, reinforced in accordance with ASTM C478 or ACI 440.1R.

1.04 STANDARDS

A. Applicable provisions of the following standards apply as if written here in their entirety:

1. ASTM International (ASTM) Standards:

ASTM A48	Specification for Gray Iron Castings
ASTM C267	Test Methods for Chemical Resistance of Mortars, Grouts, and Monolithic Surfacings and Polymer Concretes
ASTM C443	Standard Specification for Joints for Concrete Pipe and Manholes using Rubber Gaskets
ASTM C478	Specification for Precast Reinforced Concrete Manhole Sections
ASTM C497	Test Methods for Concrete Pipe, Manhole Sections, or Tile
ASTM C579	Test Methods for Compressive Strength of Chemical-Resistant Mortars, Grouts, Monolithic, Surfacing, and Polymer Concretes
ASTM C857	Test Method for Flexural Strength and Modulus of Elasticity of Chemical-Resistant Mortars, Grouts, Monolithic Surfacings, and Polymer Concretes
ASTM D2240	Test Method for Rubber Property - Durometer Hardness
ASTM C76	Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C33	Concrete Aggregates
ASTM C990	Specification for Joints for Concrete Pipe, Manholes and Precast Box Sections using Preformed Flexible Joint Sealants
ASTM C923	Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals
ASTM D6783	Specification for Polymer Concrete Pipe

2. American Concrete Institute (ACI) Standards:

ACI 440-1R-15	Guide for the Design and Construction of Structural Concrete Reinforced with Fiber-Reinforced Polymer (FRP) Bars

3. American National Standards Institute (ANSI) Standards:

ANSI A21.10	American National Standard for Gray Iron and Ductile Iron Fittings, 3 through 48 Inches for Water and Other Liquids

1.05 DELIVERY AND STORAGE

A. Do not deliver precast concrete section to the Site until representative concrete control cylinders have attained a strength of at least 80 percent of the specified minimum.

B. Inspect precast concrete sections upon delivery and reject any cracked or otherwise visibly defective units.

2.00 PRODUCTS

2.01 MATERIALS

A. Concrete and Mortar:

1. Concrete, mortar and non-shrink grout for all cast-in-place manholes and/or bases must be as specified in Section 03 30 00.01 "Cast-in-Place Concrete (Limited Applications)."
2. The minimum compressive strength for concrete is 3000 psi.

2.02 MANUFACTURED PRODUCTS

A. Precast Concrete Manholes:

1. Above the manhole base, manholes must be constructed with precast concrete rubber gasket sections in accordance with ASTM C478 pipe as detailed in the Drawings using materials as specified below.
2. Material must be a non-shrink, non-metallic cement-based grout.
3. Rubber Gaskets: Neoprene or other synthetic, 40 plus or minus 5 hardness when measured by ASTM D2240, Type A durometer.
4. Precast Cone: Precast cone must be concentric.
5. Manhole steps must not be furnished for wastewater manholes.
6. All ASTM C478 pipe must be machine made by a process that must provide for uniform placement of zero slump concrete in the form and compaction by mechanical devices which must assure a dense concrete in the finished product, except that reducer cones may be wet-cast.
7. Aggregates for the concrete must comply with the requirements of ASTM C33, with the additional requirement that the aggregate must have a minimum of 50 percent of calcium carbonate equivalent.
8. Minimum wall thicknesses for the manhole risers must be as listed under Wall "B" in the ASTM C76 "Class Tables."
9. Approved Manufacturers:
    a. Forterra Pipe and Products.
    b. CSR Hydroconduit.
    c. Approved equal.

B. Polymer Concrete Manholes:

1. Riser Sections:
    a. Provide base riser section with monolithic floors, unless shown otherwise in the Drawings.
    b. Provide riser sections joined with bell and spigot/ship-lap design seamed with butyl mastic (ASTM C990) and or rubber gaskets (ASTM C443) so that on assembly, manhole base, riser and top section make a continuous and uniform manhole

structure. Joints shall meet the testing requirements without the use of an external joint wrap.

c. Construct riser sections for polymer concrete manholes from standard polymer concrete manhole sections of the diameter indicated in the Drawings. Use various lengths of polymer concrete manhole sections in combination to provide the correct height with the fewest joints. Lifting inserts shall not fully penetrate the wall.

2. Resin: The manufacturer must use only polyester or vinyl ester resin systems designed for use with this particular application. Resin additives such as curing agents, pigments, dyes, fillers and thixotropic agents, when used, must not be detrimental to the manhole. Minimum resin content shall not be less than 7 percent by weight.

3. Aggregate: All aggregate, sand and quartz powder must meet the requirement of ASTM C33, where applicable. Limestone aggregates shall not be used.

4. Polymer concrete must have a minimum compressive strength of 9000 psi when measured in accordance with ASTM C497.

5. Elastomeric Gaskets: Gaskets must be suitable for the service intended and must meet the requirements of ASTM C443. Assembled joints shall meet the testing requirements of ASTM C443 without the use of an external joint wrap. Pipe to manhole connections shall be accomplished with connectors meeting ASTM C923 for both materials and performance requirements. Proof of connector testing can be requested from connector manufacturer.

6. Marking and Identification: Each manhole must be marked with the manufacturer's name and production date.

7. Invert Channel: Construct invert channels to provide smooth flow transition with minimal disruption of flow at pipe to manhole connections. Polymer bench and channel are to be constructed with all polymer concrete material. Extended ballast slab for buoyancy concerns can be addressed with cementitious concrete material.

8. Manholes must be reinforced per ASTM C478 or ACI 440.1R and designed to withstand all live loads and dead loads as described in the Drawings. Manhole wall thickness must be designed to resist hydrostatic pressures with a minimum safety factor of 2.0 for full depth conditions from grade to invert.

9. Materials needed for grouting and patching must be a polyester mortar compound provided by the manufacturer or as approved by the manufacturer.

10. Approved Manufacturers:

    a. Armorock Polymer Concrete.

    b. U.S. Composite Pipe, Inc. (a division of Thompson Pipe Group).

    c. Approved equal.

C. Concrete Additive for Microbiological Induced Corrosion Control:

1. Antimicrobial Additive: ConmicShield® or approved equal must be used to render the concrete or mortar uninhabitable for bacteria growth. The liquid antibacterial additive must be an EPA registered material and the registration number must be submitted for approval prior to use in the Project. The antibacterial additive must have successfully

demonstrated prevention of Microbiological Induced Corrosion in sanitary sewers for 10 or more years.

2. The amount to be used must be as recommended by the manufacturer of the antibacterial additive. This amount must be included in the total water content of the concrete mix design.
3. The additive must be added into the concrete mix water to insure even distribution of the additive throughout the concrete mixture. The antibacterial must be used by factory certified precast concrete plants or factory certified applicators. A letter of certification from the precaster or certified applicator stating that the correct amount and correct mixing procedure as recommended by the manufacturer were followed for all antimicrobial concrete.
4. The addition of the antimicrobial additive must be verified by the addition of Con Tint colorant which gives the concrete a brownish color. The Con Tint used must be manufactured by A+ Engineering Services.

D. Metallic Manhole Rings and Covers:

1. Manhole rings and covers must be made of gray iron castings, ASTM A48, Class No. 30.
2. A minimum of four 316 stainless steel anchor bolts for the ring are required for the connection to manholes. A minimum of five stud bolts for anchoring of the waterproof lid must be of 316 stainless steel.
3. Castings must be clean, sound, and free of blow or sand holes or other defects.
4. Lids must have pick slots.
5. Minimum manhole ring and cover inside diameter (clear opening) is 30 inches.
6. Ring depth must be a minimum of 6 inches.
7. Lid and ring must be designed for HS-20 traffic loading.
8. Water-tight lids must be bolted using 316 stainless steel bolts to ring with neoprene gaskets within flood plain areas and as indicated in the Drawings.
9. Manhole covers must be hinged.
10. Approved Manufacturers:
    a. EJ.
    b. Neenah Foundry, Co.
    c. Calcutta Foundry, Ltd.
    d. Shree Ram Foundry.
    e. SIP Industrial Products, Ltd.
    f. Victory Iron Works, Ltd.
    g. Approved equal.

E. Non-Metallic Manhole Rings and Covers:

1. All rings and covers must be made from high strength nonmetallic fiber reinforced polymer/composite materials. The material must be a resin thermoset matrix that can be reinforced with continuous filament engineered fabrics, fiber rovings, short fiber filaments, or equivalent nonmetallic reinforcing structure(s). Sealing gaskets must be bonded to the frame continuously at the interface with the cover to reduce wear, shock, noise, malodors and infiltration.
2. Rings and covers intended for traffic service must be capable of withstanding AASHTO M306: Proof Testing (includes items such as frames, covers, etc.).
3. Fabricate rings and covers to conform to shapes, dimensions, and with wording or logos shown in the Drawings.
4. Molding Process:
    a. Before the moldings are removed from the molding operation, they must be thoroughly de-flashed and cleaned at the parting lines, holes, notches and all exposed edges.
    b. If using a lock or latch, these must be independent of the method used to open the cover to ensure the cover can be opened in the event of lock or latch failure.
    c. Covers and frames must be compression molded under high pressures (>0.5 tons/sq. inch of x-y surface area) and high temperatures (>200 deg F).
    d. Metal reinforcements or metal hinges molded within the composite will not be permitted. Small non-stress bearing pieces of metal may be encapsulated or attached.
5. All rings and covers must be molded and assembled in the United States in accordance with the requirements of AASHTO M306.
6. Covers must be provided with a positive sealing mechanism utilizing 316 stainless steel hardware with nuts molded in or attached at pre-molded designated points of the frame and must be Teflon coated. Other equivalent locking mechanisms must be approved by the Engineer.
7. Composite covers must be detectable by metal detectors.
8. Composite covers must be furnished with two concealed pick holes molded with 316 stainless steel inserts. An additional 316 stainless steel lifting clip must be molded into the top of the cover to facilitate removal and replacement.
9. Composite covers must have provisions for 316 stainless steel threaded inserts molded into the bottom surface to accommodate monitoring and remote transmission sensors and antenna utilized by the utility. Antenna placed on the bottom side must have the capability to transmit through the cover without the need to drill and install antenna on the upper surface.
10. Markings: Covers and frames must have the following molded into the substrate of the cover:
    a. Name (or abbreviation) of molder.
    b. Country of origin.

c. Molding date.

d. Indication that material is non-metallic.

11. Approved Manufacturers:

a. Composite Access Products, L.P.

b. Approved equal.

F. Manhole Grade Adjustment Rings:

1. Concrete Manhole Grade Rings:

a. Grade adjustment rings must be pre-cast, reinforced concrete in conformance to ASTM C478.

b. Mortar concrete grade rings using 1 part Portland cement and 2 parts sand and sufficient potable water to produce a working mixture.

c. Coat all exposed concrete surfaces per 09 96 01 "Concrete Protective Coatings."

2. HDPE and EPP Manhole Grade Rings:

a. Grade adjustment rings must be made of high-density polyethylene (HDPE) meeting ASTM D4976 or expanded polypropylene meeting ASTM D3575 and ASTM D4819-13.

b. Provide adhesive/sealant between each ring per the manufacturer's requirements.

c. Approved Manufacturers:

1). Ladtech, Inc.

2). PRO-RING by Cretex Specialty Products.

G. Wastewater Manhole Internal Drop:

1. Internal drop for wastewater manholes must consist of a fiberglass reinforced resin bowl in combination with a PVC drop pipe.

2. Bowl and pipe must be attached to manhole using manufacturer provided 316 stainless steel hardware with epoxy anchors.

3. Drop pipe must be ASTM D3034, SDR26 PVC pipe.

4. Provide 316 stainless steel bracket extensions as required for manhole ID changes.

5. Approved Manufacturers:

a. Duran, Inc. – Reliner Drop Bowl.

b. Approved equal.

H. Cleanout Fittings:

1. Pipe fittings must be ductile iron and must conform to ANSI A21.10 with a minimum pressure rating of 250 psi.

2. The cleanout casting must conform to ASTM A48, Class 30.

3. Ductile iron fittings must be lined with factory installed Protecto 401 Ceramic Epoxy Lining by Induron or American Polybond Plus (fusion bonded epoxy and fusion bonded

polyethylene) or an approved equal. Lining primers, applications and thicknesses must be in accordance with manufacturer's recommendations for sanitary sewer applications.

I. Pipe Connections:

1. Field connections to FRP manholes to pipe penetration must use a compression fit into the cored wall of the RFP liner and use stainless steel bands to secure the gasketed connection to the pipe.
2. Approved Manufacturers:
   a. ADS – Insert-a-Tee.
   b. Trelleborg – Kor-N-Seal.
   c. Approved equal.

J. Manhole Vent:

1. Vent is to be constructed of aluminum with an epoxy powder coating that is resistant to hydrogen sulfide gases. Vent is to include 1/4-inch by 1/4-inch 316 stainless steel screen. All hardware is to be 316 stainless steel.
2. As indicated in the Drawings, provide vents equipped with an inverted check valve. Check valve must automatically seal the vent pipe to prevent inflow of water into the lines when submerged and automatically reset when not submerged. Float must be constructed of 316 stainless steel.
3. As indicated in the Drawings, provide vents equipped with odor control canisters equipped with filter media designed to scrub H2S odors.
4. Ductile iron pipe and fittings must be lined with factory installed Protecto 401 Ceramic Epoxy Lining by Enduron or American Polybond Plus (fusion bonded epoxy and fusion bonded polyethylene) or approved equal.
5. Coat vents, valves, and above grade ductile iron pipe and fittings per 09 96 00.01 "High Performance Coatings."
6. Approved Manufacturers:
   a. Wager Company.
   b. Approved equal.

K. Manhole Cover Infiltration Insert:

1. The insert must be constructed of an HDPE or 316 stainless steel body with a neoprene gasket.
2. Insert must be equipped with a manufacturer installed gas relief valve designed to release pressure within the manhole, with minimal water inflow back into the manhole.
3. Insert must be equipped with a handle to allow for easy removal of the insert. All hardware must be 316 stainless steel.
4. Approved Manufacturers:
   a. Rainstopper.
   b. Approved equal.

L. Chimney Seals:

1. Chimney seals consist of a flexible internal or external rubber sleeve, interlocking extensions and stainless steel expansion bands.
2. The seal must remain flexible, allowing repeated vertical movement of the frame of not less than 2 inches and/or repeated horizontal movements of not less than 1/2 inch.
3. The sleeve portion of the seal must be either double or triple pleated with a minimum unexpanded vertical height of either 8 or 10 inches respectively. The sleeve and extension must have a minimum thickness of 3/16 inch and must be made from a high-quality rubber compound conforming to the applicable requirements of ASTM C923, with a minimum 1500-psi tensile strength, a maximum 18 percent compression set and a hardness (durometer) or 48 plus or minus 5.
4. The bands must be integrally formed from 16 gauge stainless steel conforming to ASTM A240, Type 316, with no welded attachments, and must have a minimum adjustment range of 2 diameter inches and a positive locking mechanism.
5. All hardware used for this mechanism must be 316 stainless steel.
6. Product must have a minimum 25-year manufacturer's warranty.
7. Approved Manufacturers:
   a. Cretex Specialty Products.
   b. Approved Equal.

3.00 EXECUTION

3.01 INSTALLATION

A. Manhole Sizing: Manhole diameters are to be as indicated in the Drawings and as indicated below. If there is a conflict between the Drawings and these requirements, the larger manhole diameter will be required.

1. Pipe Diameters 18 Inches and Smaller: Provide 48-inch inside diameter manholes.
2. Pipe Diameters 24 to 27 Inches: Provide 60-inch inside diameter manholes.
3. Pipe Diameters 30 Inches and Larger: Provide 72-inch inside diameter manholes.

B. Foundation Support: Manholes must be founded on stable subgrade. Precast base units must be founded on a minimum 6-inch-thick layer of compacted course aggregate bedding. A pipe section with a prefabricated tee manhole and half the length of the adjoining pipe sections on each side must be founded on a minimum 6-inch layer of Class A concrete. The cradle is to extend to the trench walls and to the spring line of the pipe.

C. Manhole Base:

1. Precast Manhole Base: The applicable details as indicated in the Drawings apply. Place the manhole base at an elevation that allows the invert to match the pipe flowline.
   a. The precast manhole base must form a watertight seal with the bottom of the manhole. This may be accomplished by placing a continuous 1-inch ring of epoxy

grout or using a rubber gasket at the joint of the manhole and manhole base or other pre-approved methods.

2. Cast-in-place Manhole Base: The applicable details as indicated in the Drawings apply. Form and place the manhole base at an elevation that allows the invert to match the pipe flowline.
3. Give the concrete portion of all inverts within the manholes a smooth steel trowel finish.
4. The first section of pipe extending out a minimum of 24 inches from each side of the manhole base must be supported by lean concrete as part of the manhole base. No additional payment will be made for this concrete cradle; the sum must be included in the bid price for the manhole.

D. For precast manholes, the tops of the manholes will be set to proper elevation by using a predetermined length of the bottom section of the manhole riser and using standard lengths for the other sections of the riser pipe.

E. Monolithic Manholes: Pour monolithic concrete manholes on the Site using specifically designed, re-usable plastic or metal forms. Pour manholes using 3000-psi concrete to provide a formed wall thickness of at least 8 inches. Monolithic manholes must be substantially water-tight when completed. Bases or footing for these manholes must be as described above.

F. Inverts: Construct invert channels to provide a smooth waterway with no disruption of flow at the connection between the pipe and manhole. The channel depth at the point where a pipe connects to the manhole wall, for pipes 24 inches in diameter and smaller, must be a minimum of 3/4 of the diameter of the pipe, with the top of the channel being a smooth transition between the inlet and outlet pipe connections. For manholes connecting to larger pipe diameters, the channel depth must be equal to the full pipe diameter. Changes in flow direction must be constructed using smooth, long radius sweeps. Inlet and outlet pipe grades must be carried through the centerline of the manhole with a minimum slope of 2.5 percent between the inlet and outlet pipe inverts or 0.10 feet, whichever is greater. Where wastewater lines enter the manhole above the outlet flowline, the invert must be filleted to the flowline of the manhole.

G. Manhole Rings and Covers: Securely anchor the base of the manhole ring into a 6-inch minimum thick precast concrete ring as indicated and set on top of concentric manhole cone as a unit.

H. Non-Metallic Manhole Rings and Covers: Install composite frames and covers according to approved Shop Drawings, instructions in related specifications and details, and written installation instructions from manufacturer. Set units accurately at required locations to proper alignment and elevation. Keep units plumb, level, true, and free of trash. Measure location accurately from established lines and grades. Brace or anchor frames temporarily in form work until permanently set.

I. All adjustments to the manhole lid and cover must be completed prior to the placement of final roadway surface and/or final grading.

J. Cleanouts: Provide a cleanout at the ends of all sewer lines unless a manhole is provided at that point. Construct cleanouts in accordance with the details shown in the Drawings.

K. Drop Manholes: Install a drop manhole piping assembly in all cases where the distance between the incoming pipe and the floor of the manhole is 2 feet or more. External drop assemblies must be encased in concrete as indicated in the Drawings.

3.02 GROUTING

A. Use the mortar for grouting within 40 minutes after mixing. Discard mortar which has begun to take an initial set. Do not mix mortar with additional cement or new mortar.

3.03 CORROSION PROTECTION

A. All exposed concrete surfaces on the interior of the manhole, including concrete grade rings must be coated as indicated in section 09 96 01 "Concrete Protective Coatings".

B. If the manhole is to be in an area where water infiltration through the concrete is expected and/or if required by the interior lining being provided, install an exterior waterproofing coating.

3.04 FIELD QUALITY CONTROL

A. Manhole Testing:

1. Test manholes for leakage separately and independently of the wastewater lines by hydrostatic exfiltration testing, vacuum testing or other approved methods acceptable to TCEQ. Test manholes after installation with all connections (existing and /or proposed) in place. Plug lift holes with an approved non-shrink grout prior to testing. Install drop-connections and gas sealing connections prior to testing.

2. Vacuum Test: Temporarily plug lines entering the manhole with the plugs braced to prevent them from being drawn into the manhole. Install plugs in the lines beyond drop-connections, gas sealing connections, etc. Place the test head inside the frame at the top of the manhole and inflate in accordance with the manufacturer's recommendations. Draw a vacuum of 10 inches of mercury, then turn off the vacuum pump. Read the level of vacuum after the required test time with the valve closed. The manhole will pass the test if the drop in the level is less than 1 inch of mercury (final vacuum greater than 9 inches of mercury). The required test time for 48-, 60-, and 72-inch manholes with depths up to 30 feet is 2 minutes. Test times for manholes of greater size and depths will be determined by the Engineer.

3. Manhole Repairs: Manholes will be accepted in accordance with the criteria above. Repair any manhole which fails the initial test with non-shrink grout or other suitable material as determined for the material from which the manhole is constructed. Retest the manhole as described above until a successful test is achieved. Remove all temporary plugs and grout after a successful test.

4. Repair all hydrostatic leaks in the structure prior to applying the liner system.

END OF SECTION

DIVISION 44

POLLUTION AND WASTE CONTROL EQUIPMENT

44 42 56.04 SUBMERSIBLE PUMPS

1.00 GENERAL

1.01 WORK INCLUDED

A. Furnish labor, materials, equipment and incidentals necessary to install two new submersible sewage pumps, valves, check valves, vault, pressure gauge assemblies, air release valve, piping, access hatches, ventilators and vents as indicated on the plans, and new control panel(s). Coordinate wetwell access doors with the slide rails. Test equipment in accordance with Paragraph 1.02 of this Section.

B. The pump supplier shall furnish discharge elbows, pump impellers, guiderails, brackets, anchor bolts and anchor bolt layouts and bases, lifting chains and grip eye systems, power cables, and trash basket hoists and stands as indicated on the plans.

C. Provide a flush mix valve on the new pumps. Flush mix valves shall be as manufactured by Flygt or approved equal.

D. Provide safety grate at each of the access doors to the wet well at the lift station. Verify actual size of the access doors. Installation of the safety grate shall be in accordance with the manufacturer's recommendations and the manufacturer shall provide an Equipment Installation Report certifying that it was installed properly. The manufacturer shall furnish brackets, anchor bolts and anchor bolt layouts and appurtenances required for the installation of the safety grate.

1.02 QUALITY ASSURANCE

A. Acceptable Manufacturers:

1. Flygt.
2. KSB.
3. Owner approved equal.

B. Manufacturer's Representative for Startup and Testing: The services of the Manufacturer's technical representative shall be provided for pre-startup installation checks, startup assistance, training of Owner's operating personnel, troubleshooting and other services as required in Section 01 75 00 "Starting and Adjusting."

C. The pump supplier shall also provide all of the maintenance required for the first year of operation including the following as a minimum:

1. After 60 days operation, run each pump and record voltage and amperage, pull each pump, open the volute and examine the condition of the volute, impeller, and wear rings. Check condition of oil in seal chambers and condition of coating system on motor housing. Perform any necessary repair under terms of the warranty. Prepare a field service report.
2. After 12 months operation, repeat procedure described above for 60 days. Change oil in the seal chambers.

D. Testing:

1. Each pump and motor shall be performance tested at the factory. All pumps shall be tested with motor cables to be supplied with the pumps. Three copies of certified test reports, including actual test records, shall be submitted and approved by the Engineer prior to shipment of the equipment.
2. Each pump shall be tested for performance at the factory to determine the head vs. capacity, and motor input power for the full speed at which the pumps are specified and shown on a certified performance test curve as continuous functions throughout the pump's performance range. Tests of models, prototypes or similar units will not be acceptable. All tests shall be run in accordance with the test code for centrifugal pumps of the Standards of Hydraulic Institute, latest edition. The motor and cable on each pump shall be tested for moisture content or insulation defects. After the test, the pump cable end shall be fitted with a shrink-fit rubber boot to protect it from moisture or water.

1.03 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 00 "Document Management" and shall include:
   1. Shop Drawings:
      a. Shop drawings shall include a complete description of the equipment offered including control and mounting system. Shop drawings shall include catalog cuts and pertinent engineering data required to fully evaluate the equipment. Characteristic curves shall be submitted with the shop drawings showing the capacity, head, efficiency, and brake horsepower throughout the full operating range of the pump. Complete specifications on the control equipment including a list of optional features shall be submitted with the shop drawings. Submittal data shall be in such form and so presented that the Engineer may readily review the data.
      b. The Equipment Manufacturer shall submit with the shop drawings a list of 20 similar installations in Texas which have been in satisfactory operation for at least two years. Shop drawings not including this required information will not be accepted. Also, manufacturer must furnish evidence of having an authorized fully staffed and stocked service facility within 100-mile radius of the jobsite as well as having 24-hour parts availability.
      c. Data sheets supplying the following information for the pumping units shall be submitted with the shop drawings.
         1). Pump:

Make and type of pump	
Speed	
Horsepower at rated head	

         2). Pump:

Total weight (pump and motor)	

Rated capacity and head on pump curve	

3). Motor:

Make and type of motor	
Brake horsepower of motor	
Locked Rotor Current at full nameplate voltage	
Motor Voltage Phase	
Motor service factor	
Insulation class and temperature rise at service factor load	

d. Shop drawings shall be supplied to insure successful installation and operation of the control system and shall consist of all of the following:

1). Sufficient detail to evaluate compliance with these specifications.

2). A detailed component list including manufacturer and catalog number.

3). A custom wiring diagram for this specific application to facilitate and insure accurate field connections to the control panel by electrical installation personnel.

4). A description of operation for the control system.

5). An enclosure dimension print.

2. Operation and Maintenance Manuals:

a. Manuals shall be prepared by the equipment Manufacturer per Section 01 33 04 "Operation and Maintenance Data" and shall incorporate storage and installation instructions and operation and maintenance procedures, appropriate final certified shop drawings, performance curves, and test data. Manuals may be Manufacturer's standard instructions, but shall be supplemented as necessary to cover any special feature not included in standard material. Submit preliminary manuals for review prior to delivery of the equipment.

1.04 DESIGN CONDITIONS

A. The pumps shall be designed to handle raw unscreened sewage on a continuous duty basis and shall be capable of passing a 3-inch non-compressible sphere. Pumps shall be guaranteed free from excessive cavitation and/or vibration throughout the system performance range. The pumps shall meet the operating conditions as specified and shall be designed to operate on a continuous duty basis. Design conditions for the pumps at each lift station shall be as specified. The presence of abrasives, rags, large solids and stringy materials shall not be considered as abnormal, unanticipated or abusive with regard to the equipment operation or warranty.

1.05 DELIVERY AND STORAGE

A. The Vendor shall be responsible for delivery of the pump, motor, and accessories, f.o.b. to the job site or to such storage site as may be designated by the OWNER or Construction CONTRACTOR, in good condition and undamaged.

B. Unloading and storage of the equipment shall be the responsibility of the Construction CONTRACTOR who shall inspect the equipment for apparent damage. Equipment which is found to be damaged shall not be accepted until properly repaired or replaced by the Vendor.

C. The pumps, motors, and accessories shall be stored indoors. When this equipment is stored indoors, it shall never be in direct sunlight and the indoor temperature shall be maintained at a level satisfactory to the OWNER. The CONTRACTOR is responsible for providing the indoor storage facility or enclosure.

1.06 WARRANTY

A. Guarantee: The equipment supplier shall furnish a warranty for all equipment provided by the equipment supplier for a period of 2 years from date of Owner's final inspection and acceptance but not longer than 30 months from date of equipment delivery. All equipment shall be guaranteed against defects in material and workmanship to the effect that any defective equipment shall be repaired or replaced without cost or obligation to the Owner.

B. A full parts and service warranty shall be provided on all installed equipment and components for a period of 5 year(s) after written notice of start-up acceptance by the Engineer. Additional limited warranty shall be provided for an additional period of 4 years.

C. Vendor shall warrant the equipment and motors furnished under this specification for a period of 1 year against defects in materials and workmanship and operational failure.

1. In the event of failure of any part or parts of the equipment and motors during the first 1 year of service, provided that the equipment and motor has been operated and maintained in accordance with good practice, the Vendor shall furnish, deliver, and install a replacement for the defective part or parts at the Vendor's own expense. Vendor is also responsible for pump and/or motor removal, reinstallation, and freight.

2. The first 1 year of service shall be interpreted as the 12-month period following the installation, adjusting and acceptance testing, and the start of actual operation of the equipment, or 24 months after delivery, whichever occurs first.

3. For the 1-year warranty, the OWNER and Vendor shall together perform an equipment evaluation on each unit during the eleventh month of the warranty. This shall be a complete electrical, mechanical, and hydraulic evaluation of the motor and pump. The Vendor's cost for the equipment evaluations shall be included in the price under this contract, and the coordination and scheduling of the annual equipment evaluation shall be the responsibility of the Vendor. A detailed report will be produced by the Vendor after the evaluation describing the tests, data collected, and issues identified.

2.00 PRODUCTS

2.01 SUBMERSIBLE SEWAGE PUMP

A. Each pump, motor, and cable assembly shall be furnished in one integral unit, factory assembled by the Pump Manufacturer. Pump shall be listed as explosion proof by Underwriter Laboratories (U.L.) or by C.S.A.

B. The pump design shall be such that the pumping unit will be automatically and firmly connected to the discharge piping when lowered into place on its mating discharge

connection. The discharge connection shall be permanently installed in the wet well. The pump shall be easily removable for inspection or service, requiring no bolts, nuts or other fastenings to be disconnected. The guide mechanism shall be a non-sparking design and U.L. or C.S.A. listed. Connection and disconnection of the pumping unit from the discharge piping shall not require personnel to enter the wet well. Sealing of the pumping unit to the discharge connection elbow shall be accomplished by a simple linear downward motion of the pump. A sliding guide bracket shall be an integral part of the pump unit.

C. The pump assembly shall also be capable of running dry or partially submerged for extended periods without any damage to the pump, motor, seals, or accessories.

D. Major parts, such as the stator casing, oil casing, sliding bracket, volute, impeller, and base coupling shall be constructed of cast iron or bronze. Surfaces coming into contact with the pumped liquid shall be protected by a factory-applied epoxy coating or shall be stainless steel. External bolts, nuts, and fastening hardware shall be a minimum 300 series stainless steel.

2.02 PUMP CONSTRUCTION

A. Pump Volute: The pump volute shall be constructed of cast iron. A wear ring shall be provided in the volute which is constructed of 304 stainless steel with a minimum Brinell hardness of 300.

B. Impeller: The impeller shall be constructed of cast iron, ductile iron or bronze and shall be of the enclosed, non-clogging, dynamically balanced, one-, two- or three-vane design capable of passing 3-inch diameter spherical solids. The impeller shall have a slip fit onto the motor shaft and drive key and shall be fastened using the manufacturer's standard technique. The impeller wear ring shall be 304 stainless steel, with a minimum Brinell hardness of 200.

C. Shaft: The pump shaft shall be series 421 stainless steel. Carbon steel shafts or shafts with sleeves of any type are not acceptable. The shaft shall be one piece construction without joints or stubs attached. All shafts shall be dynamically balanced and shall be amply sized to minimize shaft deflection. Shaft overhang shall not exceed 2.5 times the shaft diameter.

D. Mechanical Seals: Each pump shall be equipped with a double mechanical seal of the cartridge type or a balanced tandem-type design, running in an oil reservoir. The upper and lower faces of the rotating portion of the seal shall be made of tungsten carbide or a high-quality silicon carbide. The two faces shall be held in contact by multiple springs or bellows to ensure uniform face following of the rotating faces against the stationary faces. The entire seal shall be mounted within the oil chamber. The lower stationary seal face shall be made of tungsten carbide or a high-quality silicon carbide. The seals shall require neither routine maintenance, nor adjustment, and shall not be damaged when the pump is run dry. When required, seal oil inspection shall be achieved without disassembly of the pump. The seal shall not require the pumped liquid as a lubricant. All metal parts shall be 316 series stainless steel.

E. O-Rings and Fasteners: All mating surfaces of the pump and motor shall be machined and fitted with Viton or Buna-N O-rings where watertight sealing is required. Sealing shall be accomplished by the proper fitting of the parts and not be compression or special torque requirements. All external screws and fasteners shall be made of 316 series stainless steel.

F. Bearings: The impeller and motor shaft for each pump shall be suspended on two permanently lubricated ball bearings that are designed by the manufacturer for minimum 50,000-hour AFBMA B10 bearing life under the design conditions.

2.03 MOTOR AND CABLE

A. The motor shall be housed in either an air or oil filled chamber, watertight enclosure. The motor shall conform to NEMA design Class B and incorporate minimum Class F insulation material to withstand a continuous operating temperature of 155 C (311 F). The pump and motor shall be capable of handling liquids with a maximum temperature of 40 C (104 F). The motor shall be capable of sustaining up to 10 evenly spaced starts per hour. The motor shall be capable of operating in dry or partially submerged conditions for extended periods without damage. If the motor is expected to be exposed for longer than 15 minutes, furnish air filled motors with a water jacket if required. The nameplate motor service factor shall be at least 1.15. The motor shaft shall be 400 series stainless steel. The motors shall be 460 - volt, 3-phase, 60-cycle. Lead wires shall be suitable for operation in oil. The motor shall be provided with Klixon motor thermal switches embedded in the windings to protect the motor from burnout due to excessive heating. Inrush on starting shall be no more than allowed by NEC Code Letter F for motors 50 HP and larger, and no more than allowed by NEC Code Letter G for motors less than 50 HP. Each motor shall be suitable for use in a NEC Class 1, Division 1, Group D location and be U.L. or C.S.A. listed.

B. The electrical cable entrance to the motor shall be provided with positive strain relief to prevent leakage or pullout of the cable in the event that a force is accidentally placed on the cable during the raising or lowering of the pump. The design of cable entry shall preclude specific torque requirements to insure a watertight and submersible seal. Cable entry shall consist of a single cylindrical elastomer or Buna-N grommet, flanked by stainless steel washers all having a close tolerance fit against the cable's outside diameter and the entry inside diameter and compressed by the body containing the strain relief function separate from the function of sealing the cable. One spare set of cable seal accessories shall be provided. The entry cable system shall be warranted as described in Paragraph 1.06, Warranty.

C. Incoming lead wires shall be spliced in the motor terminal housing. After splicing, the terminal housing shall be filled with epoxy to seal the outer cable jacket and the individual strands to prevent possibility of water entering the motor housing or the terminal housing. A secondary elastomer compression grommet shall also be supplied. The combination of the epoxy seal and compression grommet shall provide complete sealing and strain relief. Sufficient cable shall be supplied to extend from the motors to the pump control without splicing. Each pump shall be equipped with adequate cable to be routed from the termination junction box to the pump without any splices at a minimum. The power cable shall be sized according to NEC and ICEA standards and also meet P122-MSHA approval and this classification shall be embossed on the cable.

D. The junction chamber, containing the terminal board, shall be sealed from the motor by elastomer compression seals (O-ring). Connection between the cable conductors and stator leads shall be made with threaded compressed type binding post permanently affixed to a terminal board each with an individual O-ring to prevent liquid passage.

E. Each unit shall be provided with an adequately designed cooling system. Provision for external cooling and flushing shall also be provided if the cooling system consists of a water jacket. Each unit shall have motor seal failure sensor(s).

F. The motor, cable, and electrical controls shall be sized, furnished, and installed so that the motor shall never exceed the nameplate rating at any point on the pumping curve.

G. Provide stainless steel cable strain relief on each cable at wet well roof slabs.

2.04 DISCHARGE ELBOW AND GUIDERAIL BASE

A. A discharge elbow and guiderail base shall be provided for each pump and shall be permanently installed in the wet well. Stainless steel anchor bolts embedded in concrete in accordance with pump manufacturer's layout and recommendations shall secure these connections.

2.05 GUIDERAIL AND LIFTING CHAIN

A. The guiderails and lifting chain positive recovery system shall be sized by the pump supplier. Guiderails and lifting chains shall be constructed of stainless steel. Intermediate and upper guiderail brackets shall be provided by the pump supplier to achieve the arrangement shown on the Plans.

B. The slide rails shall be continuous stainless steel designed to resist corrosion in sewage or sludge applications. Any joints in the rails shall be reinforced from within if pipe is used; continuously full depth welded, ground smooth, and treated to resist corrosion. If pipe is used, it shall be minimum Schedule 40. The rail system shall be of adequate length to extend from the lower guide holders on the pump discharge connection to 6 inches below the top of the wet well. The system shall be mounted with stainless steel hardware.

C. The rail support system shall be furnished by the Pump Manufacturer, to adequately support the guide (slide) rails. Intermediate guide rail supports shall be used every 12 to 15 feet or as recommended by the pump manufacturer. The system shall be mounted with stainless steel hardware.

D. Each pump shall be fitted with a stainless-steel chain or cable of adequate strength and length to permit raising and lowering the pump for inspection or removal. The chain or cable shall be long enough to extend from the pump in its operating position to 4 inches above the top of the wet well. Furnish and install a stainless-steel hook at the top of the wet well to hold the chain when the pump is in service.

E. Each pump shall be fitted with 3 feet of stainless-steel chain of adequate strength to permit raising and lowering of the pump, and an adequate length of 1/4-inch diameter nylon rope or 18-inch stainless steel rope. The pump supplier shall provide a grip eye, which when lowered into position over the nylon rope, will automatically attach to the chain for lifting and automatically release the chain after lowering the pump back into position. The grip eye, pump chain, and associated hardware shall have a minimum capacity of 1-1/2 times the pump weight.

F. An ASTM 316 stainless steel cable system as designed and manufactured by the pump manufacturer may be utilized in place of the slide rail removal system if the cable system is the standard used by the pump manufacturer and there are adequate number of installations using this type of system as required in Paragraph 1.03A.

2.06 SLIDING COUPLING SYSTEM

A. A sliding guide bracket shall be an integral part of the pumping unit or securely attached thereto. The guide bracket shall be designed such that no strain is placed on the pump or guide rails. The volute casing shall have a machined discharge flange to automatically and firmly connect with the discharge connection, which when bolted to the floor of the sump and discharge line, will receive the pump discharge connecting flange without the need of adjustment, fasteners, clamps, or similar devices. Discharge base elbow and base plate shall be supplied by the Pump Manufacturer.

B. The pump sliding coupling system shall be designed so that the downward force of the machined mating flanges shall shear away rags, hair, or other debris that would prevent a uniform watertight seal. No portion of the pump unit shall bear directly on the floor of the wet well. The pump body and slide coupling mating faces shall be bronze against cast iron.

2.07 ACCESS COVER

A. Heavy duty double door access cover shall be constructed of a minimum 3/8-inch aluminum checkered plate. The structural frame for the cover shall be designed to support one of the submersible pumps at any location on the cover. The pump supplier shall provide the construction details and dimensions for the cover to the Contractor so that he will have adequate information to construct the adjacent flooring system. Suitable brackets shall be provided to mount the lifting chain power cable supports and any other accessories that are not mounted on the lower level. All accessories shall be mounted so that they are not disturbed during removal of the pumps for routine maintenance. The access cover shall be provided with open assist-slow closure device and hold open device. Provide hasp and staple or other means for locking. Coat access cover frame exterior in contact with concrete with bituminous coating.

2.08 MIX FLUSH VALVE SYSTEM

A. The flush mix valve shall be designed to mix the contents of the wet well without use of external equipment. The system shall use the discharge of the submersible pumps as the mixing media and the length of mixing shall be adjustable. The mix valve shall be designed to allow removal of the system along with the removal of the submersible pumps.

B. Provide Mix-Flush Valve Systems for the new submersible pumps. All pumps in the lift station wet well shall be equipped with an automatically operating valve that will provide a mixing action within the sump at the start-up of the pumping cycle.

C. This valve system shall be mounted directly on the pump volute and shall direct a portion of the pumpage into the sump to flush and re suspend solids and grease by the turbulent action of its discharge. The turbulent action caused by the flow shall also provide some sump aeration benefits. The valve shall be mounted on the pump volute so that it can be removed from the sump along with the pump during normal and routine maintenance checks and shall be positioned on the volute or pipe to provide for non-clogging operation. The valve shall be equipped with an adjustable, wear resistant discharge nozzle which shall be used to direct flow from the valve to optimize mixing action within the sump.

D. The valve shall operate entirely on the pressure in the pump. The valve shall not require any external power source or control to operate, neither electric nor pneumatic or any special

equipment. The use of the external power source is not acceptable. The valve shall be suitable for use in Class I, Division 1 hazardous locations.

E. The valve shall open at the beginning of each pumping cycle and shall automatically close during pump operation after a pre-selected time of operation. The valve shall operate automatically by differential pressure across the valve and shall be actuated through a self-contained hydraulic system which uses an environmentally safe fluid.

F. A method of adjusting the valve operating time shall be provided. Minimum flushing time shall be approximately 20 seconds before the valve closes with a maximum time of 50 seconds. The valve shall open again once the pump has stopped and be ready to provide the flush-mix action at the start of the next pump cycle. A means of adjustment shall be provided on the outside of the valve to obtain the desired flushing period.

2.09 SAFETY GRATE

A. The safety grate shall be designed to withstand a minimum live load of 300 pounds per square foot using 17,300 psi as the design stress for the aluminum. Deflection shall not exceed 1/150th of the span. Each safety grate shall be designed to combine covering of the opening, fall through protection per OSHA standard 1910.23 and controlled confine space entry per OSHA standard 1910.146.

B. Safety grate shall be as manufactured for Halliday, USB Fab, Flygt Corporation or approved equal.

C. The safety grate shall be made of 6061-T6 aluminum and designed per the "Specifications for Aluminum Structures", by the Aluminum Association, Inc., 5th Edition, Dec. 1986 for "Bridge Type Structures." This specification requires the manufacturer to use 38,000 psi as the ultimate strength and 35,000 psi as the minimum yield strength, for grade 6061-T6 aluminum and then a safety factor of 2.2 be applied, leaving a 17,300-psi design stress.

D. Grate openings shall allow for visual inspection, limited maintenance, and float adjustments while the safety grate fall through protection is left in place.

E. Grating design shall provide an opening for the pump power cable once the pump is pulled. This design allows the safety grate(s) to be closed after the pump is pulled, while leaving a space for the power cable.

F. Design must assure that the fall through protection is in place before the doors can be closed.

G. Each grate shall be provided with a permanent hinging system, which will lock the grate in the 90-degree position once opened.

H. Each grate shall have an opening arm, which will allow opening of the grate, while providing the grate as a barrier between the operator and the pit. The opening arm shall also be equipped with a controlled confined space entry lock (lock provided by Owner). This locking device will prevent unauthorized entry to the confined space. The grating system will allow anyone to make visual inspection and float adjustments without entering the confined space.

I. Each aluminum safety grate shall be coated with a safety orange color, promoting visual awareness of the hazard. Powder coat system shall be applied by the electrostatic spray process. The coating is a thermosetting, powder coat finish with a minimum thickness of 2

to 4 mils and shall be baked at 350 to 375 F, or as recommended by the manufacturer, until cured.

J. Welding shall be in accordance with ANSI/AWS D1.2-90 Structural Welding Code for Aluminum.

K. All mounting hardware, bolts, nuts, etc. shall be 316 stainless steel.

2.10 PUMP CONTROLLER

A. Furnish package pump control panel that shall be supplied by the submersible pump manufacturer. Refer to specification 26 09 16 Control Equipment for additional requirements.

B. Pump control panel shall include three-phase magnetic full-voltage non-reversing starters for each pump motor, control, overcurrent protection, main disconnect, and all devices required for a complete and operable duplex pump control system. Provide float switches for level control as well as for low level cutoff, reset and for high level alarm.

C. Pump control panels shall be enclosed in NEMA 4X stainless steel panel. Panels shall be dead front door-in-door construction with swing-out inner panel and stud-mounted backpan. Provide print pocket with accepted drawings of control and power wiring. Pump control panel shall have the following additional features.

1. Top-mounted audible-visible alarm that shall be energized from the high-level float switch. Provide top hub for mounting alarm to cabinet. Provide interior alarm silence pushbutton.
2. Externally operable main disconnect handle rated NEMA 4X. In addition, provide panel mounted disconnect for each motor starter.
3. Control wiring shall be SIS and trained into wire chases that shall be backpan mounted. Each control wire shall be labeled with waterproof plastic labels at each and every connection.
4. Provide panel mounted HOA selector switches, each with engraved function and position identification.
5. Provide panel mounted alarm silence pushbutton, selector switches, run lights, moisture alarm pilot lights, elapse time meter for each motor control circuit. Each device shall be equipped with engraved metal surround to identify function.
6. Provide time delay relays for on-delay of each pump starting cycle.
7. Provide phase protection relay that shall afford protection from line unbalance, over and under voltage. Device shall be immune to line notching caused by VFD and other external electronic devices, up to 10 percent total harmonic distortion.
8. Control voltage shall be 120 VAC and provided by fused control power transformer with panel mounted primary breaker.
9. Provide master terminal blocker for termination of all external power and control wiring. Each terminal shall be labeled. Terminals shall be plated copper.
10. Pump control panel shall be manufactured by U.L. approved shop and shall have a U.L. label.

D. Incoming power is 480 V, 3 phase derived from 480-volt wye, grounded, neutral supply . Provide equipment ground lug and insulated barriered phase lugs for accepting field wiring.

E. All wiring shall be in accordance with Division 26 of the Specifications and NFPA 70 (NEC).

F. Pump manufacturer and electrical supplier shall coordinate the size of the pumps with the required electrical equipment. If the Contractor provides pumps larger than those indicated, all modifications to the electrical (such as starter size, conductor size, transformer size, generator size, VFD size, etc.) shall be solely at the Contractor's expense.

G. Auto Control:

1. Wet Well Level-Responsive Automatic Pump and Alarm Control System: An automatic pump control system shall operate the pumps in accordance with variations in the wet well liquid level. The automatic control system shall employ a submersible probe transmitter to sense the liquid level in the wet well. The transmitter shall generate a 4-20 mA signal that shall be used by the pump controller for control of the lift pumps. It shall also provide a 4-20 mA output signal that shall be connected to the SCADA system for remote indication.

   a. Level Transmitter: The liquid level of the wet well shall be sensed by a type of level transmitter. The transmitter shall include a duplex air compressor unit with automatic switchover and associated bulkhead fittings. The transmitter shall be a loop powered type to produce an instrumentation signal in direct proportion to the measured level excursion in the wet well. The sensor shall be mounted as shown on the Drawings.

   b. Liquid Level Pump/Alarm Controller: This specification is intended to cover a complete and operational automatic pump and alarm control system that responds to the wastewater pumping station wet well level excursions.

      1). The system shall sense the station wet well liquid level over a calibrated range, display it on a 4-inch LED bar graph on the face of the controller, graphically display eight level adjustments for automatic pump control and abnormal level alarm in a coordinated arrangement with the level display and provide automatic operation of the station pumps and alarms as herein described.

      2). The pump/alarm Controller shall accept a single, level-proportional analog input signal and provide level-differential automatic operation of pumps. It shall also provide a contact closure for high level alarm.

      3). The Controller shall display the sensed control level on a 40-segment LED bar graph display. The level shall be displayed in a 0- to 20-foot range with 6-inch resolution.

      4). The Controller shall operate directly with the level sensing transmitter. The Controller shall include transmitter excitation voltage regulation, signal spanning, offsetting, and "quelling" (rate-of-change-limiting).

      5). Directly aligned with the calibrated L.E.D. bar graph display shall be eight vertical receptacles with programming pins and adjacent range scales to match the calibrated bar graph giving full-range, level-differential, On/Off operation of

pumps and alarms from the sensed level excursion. The receptacles and programming pins shall be gold-plated to insure reliable, long-term operation.

6). The left receptacle of each control stage shall receive the low-level programming pin. The right receptacle shall receive the high-level programming pin. A red LED indicator shall be provided on the front of the controller as part of each control/alarm stage to indicate when the stage output is activated.

7). The arrangement of the level and programming display with an integral wet well level scaled mylar overlay shall allow easy setting and viewing of all control adjustments from the front of the controller which shall be mounted on the inner door of the enclosure.

8). A three-position "raise-auto-lower" manual level simulator shall allow the manual creation of a "false signal" when the switch is raised or lowered from the central auto position. By use of this switch, the effective operation of each pump shall be confirmed, and the station returned to normal without danger of leaving the station in a "non-automatic" condition.

9). The input power and the control outputs shall be wired to screw/clamp barrier type terminals on the back of the controller housing able to accept one or two #12 AWG or smaller conductors per terminal. The controller shall operate with a power supply that shall accept 120-VAC input power and include fusing and transient protection.

10). The controller shall also provide an adjustable level-responsive alarm output. The controller shall include high level alarm annunciation with a front accessible silence push button and a light mounted on the exterior of the panel. A battery back-up shall be provided to provide power to the alarm system in the event of normal power loss.

11). Upon power-up, the controller shall go through a timing routing which allows the analog signal and display to stabilize before any control or alarm outputs are enabled. After the stabilization period, the control circuits of the Controller shall be sequentially enabled on a time-step arrangement.

12). In addition to the time delay upon power up, the differential-level control circuits shall each be forced to an Off condition upon power up so that a level excursion will need to go past their turn-on elevation for them to operate.

13). The controller shall include an integral solid-state automatic alternator (duplex) with an auto alternator override switch mounted on the front of the controller.

14). The controller front face measurements shall be approximately 8-1/2 inches high by 8 inches wide. It shall semi-flush mount in a control panel inner door and have a depth behind the panel of not greater than 3-1/2 inches.

15). It is the specific intention of this functional requirements that a standard controller will be employed with features as herein described and that it be a fully integrated assembly. That is, the furnishing of similar functions using a generic programmable controller with custom software, a multiplicity of setpoint modules or extensive relay/timer logic to accomplish control

sequences, etc., is specifically precluded by this specification and shall not be acceptable.

16). An inner door mounted ground fault interrupter (GFI) type convenience receptacle rated at 15 amperes shall be supplied for the operating of trouble lights, drill, etc. It shall be protected by a separate 15-ampere trip rated circuit breaker.

17). Seal Failure Alarm/Over-Temperature Pump Protection: Over-temperature protection/seal failure sensing modules shall be provided by the pump supplier to the control manufacturer for mounting and wiring in the control panel. The module shall operate in conjunction with an over-temperature and moisture sending switch in each pump motor. The control shall provide pump lockout of operation upon occurrence of high temperature. The circuitry shall also include a yellow over-temperature failure indicating light and manual reset push button on the inner door for each pump. Inner door mounted pilot lights shall be provided to indicate a seal failure alarm condition for each sewage pump. These lights shall be operated by a contact closure from each pump protection module. The control equipment manufacturer shall supply any additional control devices necessary for the proper operation of the pump protection modules (transformers, relays, lights, push buttons, etc.). Dry contact closures for remote alarm through an automatic telephone dialer shall be provided for each alarm.

3.00 EXECUTION

3.01 INSTALLATION

A. Installation shall be in accordance with the Manufacturer's instructions. Any modification to the structure as a result of requiring different size access door hatchways is the responsibility of the Contractor.

3.02 FIELD QUALITY CONTROL

A. Upon completion of installation of the equipment, an acceptance test to verify the satisfactory operation of each unit shall be conducted. The Contractor shall provide the services of authorized representative to conduct all field tests. The test shall be conducted in a manner approved by and in the presence of the Engineer. The unit shall be checked for excessive noise, vibration, alignment, general operation, ease of removal, etc. All automatic and manual controls shall be tested to verify that they function in accordance with the requirements. Verify that drive equipment operates without being overloaded. The unit must perform in a manner acceptable to the Engineer before final acceptance will be made by the Owner.

3.03 PAINTING

A. Pumps, motors, baseplates, discharge elbows, and guiderails shall be painted in accordance with Section 09 96 00.01 "High-Performance Coatings" of these Specifications.

3.04 SCHEDULES

	Location No. 1
Location	Midland Drive Lift Station
Equipment No.	Pumps No. 1 and No.2
Number of Units	2
Rated Capacity (gpm)	2.0
Rated Head, TDH (ft.)	30
Minimum Capacity (gpm)*	1300
Minimum Motor HP	15
Minimum Pump Efficiency	50%

END OF SECTION

ATTACHMENT A

SUBMITTAL DATA SHEET

Submit the following data with Shop Drawings for each size of Pumping Unit:

Submersible Sewage Pumps

Location of Pumps (To be changed by Engineer)		
Item No.	**Description**	**Pump Numbers (To be Filled by Engineer)**
1	Make and Type Design	
2	Rated Speed	
3	Casing Material	
4	Impeller Diameter and Material	
5	Max. Impeller Diameter for Casing	
6	Diameter of Suction Flange	
7	Diameter of Discharge Flange	
8	Shutoff Head	
9	Diameter of Shaft at Impeller	
10	Maximum Brake Horsepower	
11	NPSH Required at Rated Head	
12	NPSH Required at Minimum Head	
13	Suction Specific Speed	
14	Specific Speed	

Motor Data

Item No.	Description	Pump Numbers (To be Filled by Engineer)
1	Rated Brake Horsepower	
2	Rated Full Load Speed	
3	Full Load Efficiency	
4	3/4 Load Efficiency	
5	Full Load Power Factor	
6	3/4 Load Power Factor	
7	Maximum Thrust Rating	
8	Locked Rotor KVA	
9	Frame Size	
10	Enclosure Type	

11	Locked Rotor Amperes (LRA) at rated voltage	
12	NEMA Starting Code Letter	

Weight

Item No.	Description	
1	Complete Pumping Unit	

Adjustable Frequency Drive

Item No.	Description	
1	Manufacturer	
2	Model	
3	Dimensions (L x W x H)	
4	Horsepower Rating	
5	Amperage Rating	
6	Voltage Rating	

END OF ATTACHMENT

APPENDIX A

GEOTECHNICAL DATA

FREESE AND NICHOLS

Innovative approaches
Practical results
Outstanding service

GEOTECHNICAL REPORT

WALL STREET SEWER DIVERSION LIFT STATION

Prepared for:

City of Midland

January 2023

Prepared by:

FREESE AND NICHOLS, INC.
2711 North Haskell Avenue, Suite 3300
Dallas, Texas 75204
214-217-2200

MDD22466

FREESE AND NICHOLS

Innovative approaches
Practical results
Outstanding service

GEOTECHNICAL REPORT

Wall Street and Midland Drive Lift Station and Sewer System Improvements

Prepared for:

City of Midland

Prepared by:

Revision	Date	Description
00	March 1, 2023	Geotechnical Report

FREESE AND NICHOLS, INC.
2711 North Haskell Avenue, Suite 3300
Dallas, Texas 75204
214-217-2200

MDD22466

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Appendix A – Geotechnical Data Report

1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

The City of Midland is experiencing overflows on the existing sewer system upstream of the I-20 Wildlife Preserve and has requested FNI to design sewer system improvements to divert peak flow from the sewer system north of Wall Street to the existing 30" sewer line just north of I-20. The improvements will be located to the north of West Wall Street and extend below the railroad to West Industrial Avenue, then continue southward along South Midland Drive to the north of I-20. The general vicinity of the project is shown in Figure 1, below. The improvements considered for this project include the following.

- 950 LF of 12" gravity sewer line, from West Wall Street to the proposed lift station
- 980 GPM duplex pre-packaged lift station on City property (City-Owned Wildlife Preserve). The lift station includes a wet well approximately 29 feet deep.
- 850 LF of 8" force main from the lift station site within South Midland Drive ROW
- 2100 LF of 12" gravity sewer line by open cut to existing 30" sewer line at the intersection of South Midland Drive and the north Frontage Road for IH-20.

Figure 1: General Vicinity of the Project

About 350 LF of the 12" sewer line will be installed using trenchless technology to advance the line west of the Wall Street and under the railroad while the 600 LF of the 12" sewer line from the railroad connecting to the lift station will be constructed using open excavation methods. The lift station will include a canopy structure supporting electrical equipment and will have concrete driveways. Panel fences will be surrounding the property. The sewer line will extend southward along South Midland drive for another 2,950 ft, which will be constructed using open excavation. For a detailed view of the alignment, please refer to the Project Drawing Set of Plans.

1.2 PURPOSE AND SCOPE

The purpose of this memorandum is to provide geotechnical information to be used in the design of above referenced improvements. In addition, general earthwork and construction recommendations are provided. This work was conducted under Freese and Nichols, Inc. (FNI) project number MDD22466,

authorized by the contract with City of Midland dated May 12th, 2022 (Professional Services Agreement #22003065). This report has been prepared based on our current knowledge and understanding of the proposed project. Exhibits, copies of the boring logs, and laboratory test results are included in the appendices.

2.0 SUBSURFACE EXPLORATION

The subsurface was explored by drilling seven (7) exploratory borings in October and November 2022 at locations selected by FNI based on the proposed alignments. Terracon was contracted to drill the borings, perform laboratory testing and provide a geotechnical data report, summarizing information collected during the investigation. Terracon's geotechnical data report is provided in Appendix A, attached to this report. The boring schedule is presented in Table 1. The boring locations were not surveyed; however, the approximate latitude and longitude of the borings were obtained by a hand-held GPS unit with an accuracy of +/- 25 feet as shown on the boring logs. The borings elevations were estimated from Google Earth. Details of drilling techniques and testing procedures are summarized in Appendix A.

Table 1 – Boring Schedule

Boring	Date Drilled	Top El. (ft)	Depth, ft-bgs[1]	Latitude	Longitude
B-1	10/20/2022	2819	40	31.9688°	-102.1275°
B-2	10/20/2022	2817	40	31.9684°	-102.1258°
B-3	10/21/2022	2820	30	31.9677°	-102.1257°
B-4	10/21/2022	2819	30	31.9676°	-102.1255°
B-5	10/21/2022	2817	30	31.9677°	-102.1254°
B-6	11/10/2022	2827	20	31.9616°	-102.1237°
B-7	11/20/2022	2825	10	31.9659°	-102.1253°

(1) Below Ground Surface

3.0 LABORATORY TESTING

Laboratory testing was performed by Terracon Consultants Inc. on selected samples collected from the borings during drilling. These samples were selected as being generally representative of that stratum. Testing was performed to allow for material classification according to the Unified Soil Classification System (ASTM D 2487) and to provide index properties. Testing included the following:

- Atterberg Limits
- Moisture Content
- Percent Passing a No. 200 Sieve
- Sieve analysis

The results of these tests are presented at the corresponding depths on the individual boring logs and/or on individual test report sheets (as appropriate) included in Appendix A.

4.0 GENERALIZED SUBSURFACE CONDITIONS

4.1 GEOLOGY AND STRATIGRAPHY

Based on the Geologic Atlas of Texas, the project is situated within Blackwater Draw Formation which generally consists of sand, fine- to medium-grained quartz. The formation can be silty, calcareous, locally clayey and frequently contains caliche nodules. Material encountered within this formation usually have a distinct massive, grayish red soil profile with a thickness up to 25 ft. Caliche deposits are scattered around the proposed site, the closest being approximately 3 miles to the east. Caliche deposits may underlain the shallower soils and be present towards the bottom of the borings.

4.2 GENERAL SUBSUFACE CONDITIONS

Subsurface conditions encountered in the borings generally consisted of silty or clayey sand with varying gravel contents. The materials were tested in the field using Standard Penetration Test (SPT) with spoon samplers to evaluate the in-situ density of the encountered material. Results of the SPT test indicated the granular material encountered in the borings is medium dense to very dense, with localized caliche layers embedded within the sand strata.

In general, material encountered deeper than approximately 8 ft below ground surface in Borings B-1 and B-2 had blow counts on the order of 5 inches of penetration for 50 blows or lower. Material encountered in Borings B-3, B-4 and B-5 represented various degrees of cementation, from moderately cemented to highly cemented material properties between depths of 4 ft to 14 ft below ground surface, but the cementation and hardness of the material decreased with depth to blow counts of between 12 to 31. Material encountered in Borings B-6 and B-7 were generally very cemented, with blow counts of 50/3" or less. The cementation of the subsurface material needs to be considered for planning the trenchless crossing segment of the proposed pipeline.

Please note, the strata identified by the driller show the encountered subsurface conditions at the location of the borings at the time of drilling. The stratification between the layers can be and often is gradual. In addition, due to the lateral variability of geological formations, the subsurface conditions in between the borings can be different from those encountered in the borings.

4.3 GROUNDWATER

Groundwater seepage was observed in five of the borings drilled during this investigation. Table 2 below presents a summary of the water observations. Groundwater was not observed in Borings B-6 and B-7. Based on the collected data, the groundwater at the time of drilling and immediately upon completion of the drilling was between 8 ft and 11 ft below ground surface at approximate elevations of 2806 ft and 2811 ft.

Table 2 – Groundwater Summary

Boring	At Time of Drilling, ft.-bgs (Elevation, ft)	After Drilling, ft.-bgs (Elevation, ft)
B-1	8 (2811)	9 (2810)
B-2	8.5 (2808.5)	8.5 (2808.5)
B-3	11 (2809)	11.5 (2808.5)
B-4	10.5 (2808.5)	10.5 (2808.5)
B-5	11 (2806)	11 (2806)

Caving soils were not encountered in the borings. However, the presence of granular material in conjunction with groundwater increases the chances of sloughing and caving soils during underground construction, including open excavations and wet well installations. Measures for controlling groundwater seepage should be employed during construction.

The occurrence of and variations of groundwater can vary due to many factors, such as, seasonal changes, site topography, surface runoff, the layering and permeability of subsurface strata, water levels in waterways, utilities, and other factors not evident at the time of this investigation. Chances of groundwater fluctuations particularly increases in presence of granular material. The depths mentioned above only provide information at the time of measurement. Water depths at other times and locations may vary from those measured. If more accurate groundwater information is needed, piezometers and monitoring wells may be installed.

5.0 DESIGN RECOMMENDATIONS

5.1 POTENTIAL VERTICAL RISE

A majority of the subsurface materials encountered in the borings consists of silty sands with varying gravel content and isolated layers of sandy silty clays. The plasticity indices of the material encountered were generally lower than 10, indicating very low to low tendency to swell. Maximum potential vertical movement for structures constructed within 2 ft of existing grade is estimated to be up to about 1 inch or less, assuming any fill material used to raise the grade consists of onsite or similar material. This Potential Vertical Rise (PVR) is usually generated from the upper 15 ft of onsite material (termed as the active zone) and tends to decrease with depth below the ground surface.

Potential vertical movements were estimated using the Potential Vertical Rise (PVR) spreadsheet from TxDOT procedure Tex-124-E, using soil properties obtained from laboratory testing of specimens obtained as part of the drilling investigation.

5.2 ELECTRICAL CANOPY AND PANEL FENCE FOUNDATION

The canopy structure supporting the electrical equipment and the panel fencing can be supported with deep seated spread footings. The spread footings should bear on native silty sand, clayey sand or silty clay material a depth of at least 4 ft below final grade. Spread footings constructed as recommended above can be designed using a net allowable bearing pressure of 2 kips per sq ft. Spot footings should have a minimum dimension of 24 inches for bearing capacity considerations. Footings should be dimensioned such that the resultant force on the footing acts on the middle third of the footing. Footings bearing at

least 4 ft below existing grade would be subjected to a settlement of approximately 1 inch or less as a results of the applied loads.

Careful monitoring during construction is necessary to locate any pockets or seams of unsuitable materials which might be encountered in excavations for footings. Unsuitable materials encountered at the foundation bearing level should be removed and replaced with lean concrete (at least 200 psi strength at 28 days) or structural concrete.

Resistance to sliding will be developed by friction along the base of the footings and passive earth pressure acting on the vertical face of the footings and a (possible) key installed in the base of the footings, if required. A coefficient of base friction of 0.30 can be used along the bottom of the footings. The available passive earth resistance on the vertical face of the footings and a (possible) key constructed in the base of the footings may be calculated using a uniform allowable passive earth pressure of 350 psf. This passive pressure is based on footings and keys bearing against undisturbed vertical cuts in native soils or against fill material placed and compacted in this report. The passive resistance along the vertical face of the footing should be neglected within 2 ft of the final site grade.

Recommendations about wet well excavation and lateral earth pressure is provided in Section 6.3.

5.3 IBC SEISMIC SITE CLASSIFICATION

Seismic designs are typically based upon the criteria established in the International Building Code (IBC). The seismic design is based on the Site Class, as defined in Sections 1613.3.2, in accordance with Chapter 20 of ASCE 7. Based on the results of the site-specific borings, the average subsurface conditions correspond to Site Class "C," as defined in in Table 20.3-1 – Site Classification within Chapter 20 of ASCE 7.

Several seismic events within the vicinity of the site, ranging between magnitude 3 and 4, have been observed in the last few years. The recent activity has been characterized as nontectonic and has been possibly attributed to high-pressure, deep well injection of fracking wastewater that has activated existing faults. Consideration for these potentially induced phenomena should be considered during structural design by including an upscale factor, particularly for the short period spectral response accelerations.

5.4 PAVEMENT RECOMMENDATIONS

We understand portions of Midland Drive will be removed for open excavation and will be replaced in-kind with Hot Mix Asphalt (HMA) pavement. A portion of Industrial avenue to the north of the project will also be replaced in-kind with Portland Cement Concrete (PCC). In addition, the lift station area will include concrete driveways. Sections below provide recommendations for the above referenced pavement sections.

5.4.1 Pavement Subgrade Preparation

The subgrade of the areas receiving new pavement should be stabilized with cement where clayey sand and low plasticity sandy clay (PI of 15 or less) is exposed after final subgrade elevation is achieved. The exposed surface of the pavement subgrade soils should be proofrolled and scarified to a depth of 8 inches (for the streets) and 6 inches (for lift station areas) and mixed with at least 5 percent Portland cement (by dry unit weight) in conformance with TxDOT Item 275. The soil-cement mixture should be compacted to

at least 95 percent of standard Proctor maximum dry density (ASTM D 698) and within the range of -1 to +3 percentage points of the mixture's optimum moisture content. Cement stabilization could also be utilized where subgrade consists of sandy clay soils with a plasticity index greater than 15. Cement modification is generally more difficult in clay soils with higher plasticity indexes.

It is recommended that subgrade stabilization extend at least 1 ft beyond the edge of the pavement to reduce effects of seasonal shrinking and swelling upon the extreme edges of pavement.

Cement treatment of the subgrade as described in above is recommended for drive lanes, fire lanes, and pavement subject to truck and dumpster traffic. Cement modification of the pavement subgrade is not necessary for PCC pavements subjected exclusively to passenger vehicle traffic, although subgrade modifications in these areas would be generally beneficial to the long-term performance of the pavement.

5.4.2 Street Pavement Recommendations

Calculations used to determine the required pavement thickness are based only on the physical and engineering properties of the materials used and conventional thickness determination procedures. Related civil design factors such as subgrade drainage, shoulder support, cross-sectional configurations, surface elevations, reinforcing steel, joint design and environmental factors will significantly affect the service life and must be included in preparation of the construction drawings and specifications. Normal periodic maintenance will be required for all pavement to achieve the design life of the pavement system. The sections provided below conform to the minimum thickness requirements of City of Midland.

Please note, the recommended pavement sections provided in Table 3 are considered the minimum sections as required by the City of Midland. It is assumed that If traffic loads are determined to be higher than anticipated, please let us know to verify/update the design as necessary.

Table 3 – Street Pavement Recommendations

Street	Recommended Pavement Section	Recommended Subgrade Stabilization
West Industrial Avenue	6" of PCC over 6" of compacted Flexible Base	8" of prepared subgrade (Section 5.4.1)
South Midland Drive	2" of HMA Type D over 8" of compacted Flexible Base	8" of prepared subgrade (Section 5.4.1)

Portland-cement concrete should consist of City of Midland Class "C" fiber reinforced concrete, with a minimum compressive strength of 3,600 psi and should be designed with 5 ± 1 percent entrained air. Joints in concrete paving should not exceed 15 ft spacing. Reinforcing steel should consist of No. 3 bars placed at 18 inches on-center in two directions. Surface of the pavement (in both streets) should have a minimum slope of 2% away from the centerline. Pavements are subjected to the same level of subgrade movement of 1", as discussed above. Normal maintenance of pavement should be expected over the life of the structures.

As an alternative, cement modification can be replaced with an increased thickness of the flexible base layer. For South Midland Drive and West Industrial Avenue, the thickness of the flexible base should be increased to 10 inches and 12 inches, respectively, if it is opted not to perform the cement stabilization. If this option is selected, the grade should be prepared and proofrolled to locate any possible loose soils. The exposed subgrade should be scarified to a depth of 6 inches and compacted to a density of at least

95% of the maximum dry density with moisture content of -1 to +3 percentage points of the mixture's optimum moisture content. Sandier material may be compacted at moisture contents closer to optimum.

5.4.3 Recycled Asphalt Pavement

Since the majority of the pipeline alignment construction will require removing asphalt concrete sections, recycled asphalt pavement (RAP) can be considered for reuse as base or surface courses. RAP produced from the existing pavement section can consist of a thoroughly blended mixture of the existing asphalt concrete, the underlying base and/or soil materials, and Portland cement additive. Supplemental aggregate base material can be added as needed. The asphalt materials should be pulverized to a maximum nominal particle size of 1 inch and should be blended with a sufficient amount of the underlying soils and supplemental materials, such that the amount of pulverized asphalt concrete in the mixture is not more than 50 percent (by volume) of the total mix volume. Any clayey subgrade materials combined with the mix should be limited to not more than 70 percent by volume. Any imported aggregate base used as supplemental material should conform to TxDOT Standard Specification Item 247, Grade 1 or 2, Type A or D.

The asphalt-soil blended material should be mixed with a minimum of 5 percent Portland cement (by dry unit weight), in conformance with TxDOT Standard Specifications Item 275. The actual percent of cement should be determined once final RAP material proportions are finalized.

To reduce the risk of reflection cracking in new pavement sections, the recycled asphalt mix should be micro-cracked by making passes with a vibratory drum roller over the mix after the mix has cured.

The RAP can be produced by mixing the material in place or by removing the asphalt and processing it in staging areas. It can be very difficult to maintain and control uniform materials and proper grades when utilizing RAP materials. It may be necessary to process the RAP materials in a staging area to maintain uniformity and then spread the materials on the subgrade. The RAP mixture should be spread to a uniform thickness across the entire pavement area in maximum 6 inch lifts, with each lift compacted to a minimum of 95 percent of the material's maximum standard Proctor dry density (ASTM D 698) at a workable moisture content near optimum. The Contractor is responsible for both stockpiling RAP before use and protecting it from degradation.

5.4.4 Portland-Cement Concrete Pavement (Lift Station)

Pavement subjected exclusively to passenger vehicle traffic can consist of 5 inches of adequately reinforced PCC in areas. A minimum of 6 inches PCC is recommended in drive lanes, fire lanes and areas subject to light volume truck traffic. A minimum of 7 inches of PCC is recommended for dumpster traffic areas or pavement subject to moderate volume truck traffic. Portland-cement concrete should be City of Midland Class "C" fiber reinforced concrete and have a minimum compressive strength of 3,600 lbs per sq inch (psi) at 28 days. Concrete should be designed with 5 + 1 percent entrained air. Joints in concrete paving should not exceed 15 ft. Reinforcing steel should consist of No. 3 bars placed at 18 inches on-center in two directions.

Alternately, cement-stabilization of the subgrade could be eliminated by increasing the corresponding PCC thickness presented in the pavement sections by 1 inch. Prior to construction of pavement on untreated subgrade soil, the exposed subgrade should be scarified to a depth of at least 6 inches and

compacted to at least 95 percent of standard Proctor maximum dry density (ASTM D 698) and within the range of 0 to 2 percentage points above the material's optimum moisture content.

6.0 EARTHWORK AND OTHER CONSTRUCTION RECOMMENDATIONS

As encountered in the borings, caliche deposits containing very hard (highly cemented) and discontinuous sand seams, layers, and boulders can be present on site. This material could be encountered during general excavation and grading at this site and can be hard to excavate, and may require rock teeth, rippers, pneumatic hammers, or sawcutting. The earthwork contracts should contain provisions for removal of and penetration into hard materials.

6.1 PIPELINE SUBGRADE PREPARATION AND GRADING

The majority of the pipeline alignment (with exception of portion in vicinity of the railroad), will be installed at depths of up to about 11 ft below ground surface, using open-cut excavation. Review of the boring logs indicate the soils to be encountered within the upper 11 ft of material could consist of medium dense to very dense, moderately to highly-cemented silty sands and similar material. Trench excavation should be performed in accordance with the project plans, specifications, and all applicable OSHA requirements. The contractor should expect and consider the following during pipe installation:

- After completion of the necessary stripping, clearing, and excavating and prior to placing any required fill, the exposed subgrade should be carefully evaluated by probing and testing. Any undesirable material (organic material, wet, soft, or loose soil) still in place should be removed and replaced with well-compacted material. To avoid remolding of the native materials in the bottom of the excavation, a smooth-edge bucket may be needed to excavate the soils within 3 feet of the final excavation subgrade.

- Pipeline Subgrade: After excavating to the desired grade for the bottom of the trench, we recommend to over-excavate, replace and recompact the upper 6 inches of the subgrade to maintain a consistent bearing depth along the pipe alignment and to minimize differential vertical movement. Any undesirable material (organic material, wet, soft, or loose soil) still in place should be removed. Overexcavation of the trench is not required where competent Caliche is encountered at the bottom of the excavation.

  Groundwater seepage was observed as shallow as 8 ft in the borings, and it is possible that wet material is encountered during excavation. Where the excavation/compaction causes a yielding subgrade, groundwater or very moist soils (typically >15% moisture or more than 4% above optimum per ASTM 1557) are encountered, or the subgrade becomes disturbed due to localized seepage or surface water, the contractor should excavate these soils to a maximum depth of 2 feet and replace with dryer or more suitable materials to provide a stable bottom. Crushed rock (½-inch maximum size) may be used if found necessary to stabilize bottom of trench prior to placing bedding materials.

  In general, if the depth of unsuitable materials is greater than about two feet or if the affected length becomes excessive, the geotechnical engineer should be notified to evaluate the situation in the field.

- Bedding Materials: the bedding material should be planned and placed based on requirements of pipe designer. The bedding material usually is comprised of clean, granular material placed below the pipe and up to 6 inches above the pipe. Onsite soils are expected to be too silty to be considered for bedding.

- Trench Backfill: Native soils are generally considered suitable as backfill materials over the pipe bedding zone if they are free of organics, debris and other unsuitable material. The trench backfill material should be placed in 8-inch loose lifts and be compacted in accordance with recommendations displayed in Table 5. Pipe trench backfill above the embedment and beneath pavement sections and load bearing areas should consist of structural fill or flowable fill material. Some of the clayey sand overburden soils encountered in the borings may be suitable for re-use as structural fill material given they meet the material requirements in Table 5. Even if fill is properly compacted as recommended, clay fills in excess of about 10 ft are still subject to settlements over time of up to about 1 to 2 percent of the total fill thickness. This needs to be considered in the civil design.

6.2 TRENCHLESS CROSSING CONSIDERATIONS

The proposed water line in vicinity of the railroad will be installed using trenchless technology. The bore pit for construction will be about 10 ft below ground surface. Based on preliminary pipeline profiles along the proposed trenchless crossing section, the geotechnical borings indicate mostly silty sand to clayey sand within the pipe zone, with the potential for thin silty sand seams and layers. The sand material encountered in the borings were generally dense to very dense (moderately to highly cemented). Zones of medium dense (lightly cemented) sands were encountered within the lift station and can be encountered during trenchless coring. Presence of soft granular material especially in conjunction with water, may increase the potential for caving soils. The design and construction of the trenchless crossings will need to consider the possibility of the soft soils and the transition from dense to loose soils below the groundwater table, which may require modifications or provisions to accommodate installation.

6.3 EXCAVATIONS

The majority of the excavation (in association of the segments of the pipeline using open excavation) will be about 11 to 12 ft deep. The excavation will extend approximately half a foot below the flow line of the pipe to facilitate access and working space for personnel and equipment and for placement of the bedding material. To avoid remolding of the native materials in the bottom of the excavation, a smooth-edge bucket may be needed to excavate the soils within 3 feet of the final excavation subgrade.

Given that the depth of the proposed excavations will exceed 4 feet, the excavations should be configured to create a safe working condition. The design of the temporary excavation should be completed by an engineer licensed in the State of Texas, preferably a local engineer familiar with the soils in this area and will need to be provided as part of the contract documents. As required by Texas State law, the excavation design and maintenance are the sole responsibility of the Contractor. Attention is drawn to OSHA Standards 29 CFR – 1926 Subpart P for guidance in the design of such systems.

Walers and bracing may be required to limit horizontal deflections. Frequent monitoring of the horizontal movements of the shoring system will be required. The shoring system will need to extend a minimum of

1 foot above grade to prevent surface water runoff from entering the excavation. The design of the shoring system should account for surcharge loads from heavy equipment operating immediately adjacent to the excavation as discussed in Table 4.

Temporary shoring system could consist of cross-braced hydraulic shoring, conventional shields, sheet piles, and/or soldier piles and wood lagging. Choice of shoring system should be left to the contractor's judgment since scheduling, economic considerations and/or the individual contractor's construction experience may determine which method is more economical and/or appropriate. The contractor and shoring designer should also perform additional geotechnical studies as necessary to refine the means-and-methods of shoring construction. Shoring systems should be designed by a registered licensed civil or structural engineer. As preliminary design guidelines, we present the following geotechnical parameters for shoring design. The following lateral earth pressures are recommended for temporary shoring supporting encountered alignment soils with level ground behind the shoring. Passive pressure also may be used to compute lateral soil resistance, if necessary, for sheet piles. Earth pressures provided are ultimate values and a safety factor should be applied as appropriate.

Determination of appropriate design conditions (active or at-rest) depends on shoring flexibility. If a rotation of more than 0.001 radian (0.06 degrees) is allowed, active pressure conditions apply; otherwise, at-rest condition governs. Surcharge loads (dead or live) should be added to the indicated lateral earth pressures and should be applied uniformly, if such loads are within a horizontal distance that is less-than the exposed shoring height. The corresponding lateral earth pressure will approximately be 33 percent of the vertical surcharge for active conditions, and 50 percent for at-rest conditions. Surcharge pressures from concentrated loads should be evaluated after geometric constraints and loading conditions are determined on individual basis.

Table 4 – Lateral Earth Pressure Parameters

Material	Condition	Equivalent Fluid Pressure, pcf	
		Drained	Undrained including Hydrostatic Pressure
Free Draining Granular Soil $\Phi=35^{\circ}$, γ_T =125 pcf	At-Rest, ko=0.42	53	89
	Active, ka=0.27	34	79
Onsite Sandy/Silty Clay Soil, $\Phi=15^{\circ}$, γ_T =120 pcf	At-Rest, ko=0.74	---	105
	Active, ka=0.59	---	96
Flowable Fill $\phi=35^{\circ}$, γ_T =140 pcf	When fluid	--	140
	At-Rest, k_o=0.42	59	95

Note: At depths where the above parameters result in a calculated lateral earth pressure less than 400 pounds per square foot (psf), a minimum pressure of 400 psf should be assumed due to the effect of compaction.

Flowable fill will be placed as a fluid; therefore, it will apply hydrostatic pressure on the pump cans before it is set. During this time, the equivalent fluid pressure is estimated at 140 pcf. To limit the pressure, the

flowable fill should be placed in lifts with sufficient time in between the lifts to allow for the flowable fill to harden.

The base of the wet well will be constructed to an elevation of 2787.84', about 29 feet below existing ground surface. The magnitude of lateral earth pressure against below-grade walls is variable and depends on the method of backfill placement, type of backfill soil, and drainage conditions after placement of the backfill. In the case of the wet well, the top of the wall or encasement is connected to lifting trunnions. If the connection cannot "dampen" the applied pressure through movement, it needs to be designed against at-rest lateral earth pressure, k_o. If the connection allows for some movement, the encasement can be designed for active earth pressure, K_a. Walls should be designed using the equivalent fluid pressures provided in Table 4, considering a triangular stress distribution and assuming a horizontal ground surface extending backward from the top of the wall. The equivalent fluid pressures provided do not include a factor of safety.

Groundwater was observed in the borings and is likely to be encountered during excavation and following backfill of the wall. Leaks or pipe breaks could possibly saturate the soil up to the ground surface. We recommend designing the full embedded height of the wet well structure and any other structure that extend below exterior grade to resist lateral earth pressures generated by an equivalent fluid weighing 105 pcf.

The effects of surcharge loading must also be considered, although not included in the equivalent fluid pressure above. The surcharge load should be multiplied by the at-rest coefficient of earth pressure from Table 4, and the result applied as a uniform lateral pressure over the full height of the wall.

Lightweight, hand-controlled compactors are recommended for compaction of backfill adjacent to walls to reduce the possibility of increases in lateral pressures due to over-compaction. Heavy compaction equipment should not be operated within a distance equal to the width of the compaction equipment from the wall. Also, compaction of backfill soils behind walls should not exceed 100 percent standard Proctor maximum dry density (ASTM D 698) to further limit lateral earth pressures against walls.

6.4 GROUNDWATER MANAGEMENT DURING CONSTRUCTION

Installation of the pipelines will mostly utilize open excavations with vertical shoring and, at some locations, trench boxes. Groundwater was observed in Borings 1 through 5 at depths of between 8 and 11.5 ft below ground surface and may be encountered during excavation. The amount of water inflow at the time of construction is unknown, but given the permeability of the subsurface material, dewatering efforts may be required. Sumps and submersible pump may be needed for dewatering through the construction. The contractor should provide measures to control caving soils and groundwater seepage.

Given the groundwater levels encountered in the borings and the planned depth of excavation for the proposed pipeline, uplift due to buoyancy should be evaluated and analyzed, both for the short-term (during construction) and long-term. Given the proposed depth of the structures/pipeline, the potential of buoyancy failure becomes relatively small once the backfilling has been completed, due to the weight of backfill soils overlying the buried pipeline.

6.5 BACKFILL AND COMPACTION

Backfill material types and corresponding density and moisture requirements are provided in Table 5. Sandier material can be compacted at moisture contents closer to optimum.

Table 5 – Material and Compaction Requirements

Material Use	Material Requirements	Compaction or Strength Test Method	Density Requirement	Moisture Requirement
Pipeline Bedding	Granular Material	Standard (ASTM D4253)	95 to 100 % (1)	-- (2)
Flowable Fill	Max Permeability: $1x10^{-6}$ cm/sec Max Shrinkage: 1/8 inch per ft. 28-day UCS (3): 100 psi (+/- 50 psi) LL: ≤35, PI: 8 to 15	Standard (ASTM D4832)	--	--
Structural Fill, Select Fill/Flexible Base	No organics TxDOT Item 247, Types A or D, Grade 1 or 2	Standard (ASTM D698)	97 to 100%	0 to +3 %
Native Soils	LL<35, 4< PI<15	Standard (ASTM D698)	95 to 100%	-2 to +5 %
Soil-Cement Mixture		Standard (ASTM D698)	95 to 100%	-1 to +3 %

Notes: (1) Density requirement is a percentage of an established index density.
(2) Compact cohesionless fill at a moisture content within a range that accommodates consistent placement and compaction to the minimum index density.
(3) UCS = Unconfined compressive strength.

Compaction of each lift should be continuous over its entire area. Fill should be placed in loose horizontal lifts not exceeding about 8 inches, with the intent of providing a compacted lift thickness of 6 inches. The material should be consistent with regard to type and moisture content. Clods should be processed and mixed, and water should be evenly applied, so that each lift has a uniform moisture and density. Each lift should be tested to confirm it has the specified moisture and compaction. Subsequent lifts should not be placed until the exposed lift has the specified moisture and density. Lifts failing to meet the moisture and density requirements should be reworked to meet the required specifications. The lift thickness should be reduced, if necessary, to achieve the specified density.

The granular backfill materials should be placed in maximum 4-inch compacted lifts with vibratory rollers or vibratory plate power hand compactors. The compacted moisture content must be within a range that accommodates consistent placement and compaction to the minimum index density specified above.

7.0 ADDITIONAL CONSIDERATIONS

Sulfate testing was not performed on the soil or groundwater as part of this investigation. Concrete exposed to external sulfate attack can result in accelerated deterioration of the concrete, typically when the soluble sulfate content is more than 1,000 ppm. Some soils in this area have historically exhibited high levels of soluble sulfates; therefore, material provisions should be made to protect the concrete structures from attack. Resistance to sulfates is typically achieved by using a low water-to-cement ratio and a cement with a limited amount of tricalcium aluminates. Type II and Type V cements are typically used for moderate and severe degrees of sulfate attack, respectively. Cements meeting the ASTM C 1157

requirements of Type MS cement (moderate sulfate resistant) and Type HS cement (high sulfate resistant) can also be used to provide sulfate resistance, as well as moderate sulfate-resistant cements per ASTM C 595.

In addition to concrete deterioration, the soils at the project site may also exhibit high corrosion potential for buried steel. Any buried structural steel or steel associated with the piping should include sufficient corrosion protection to meet their design life. A corrosion specialist should be consulted if a detailed corrosion evaluation is necessary.

8.0 CONTINUITY

The geotechnical engineer should be requested to review the completed plans and specifications to confirm that the design is consistent with the subsurface conditions indicated by the investigation. The construction should be observed and tested by qualified personnel. The Geotechnical Engineer should be requested to visit the site periodically to observe subsurface conditions and construction procedures and to review the construction observation reports.

9.0 LIMITATIONS

This memorandum was prepared specifically for use by Freese and Nichols, Inc. and the City of Midland for this specific project and shall not be used for other projects or purposes. This work was performed in a manner consistent with the level of care and skill ordinarily exercised by other members of Freese and Nichols' profession practicing in the same locality, under similar conditions and at the date the services are provided. Freese and Nichols makes no other representation, guarantee or warranty, expressed or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided. Recommendations contained in this memorandum are based on our field observations, subsurface explorations, laboratory tests, and present knowledge of the proposed construction. It is possible that soil, rock or groundwater conditions could vary between or beyond the points explored. This memorandum has been prepared for use during design. Paragraphs, statements, test results, boring logs, figures, etc., should not be taken out of context, nor utilized without a knowledge and awareness of their intent within the purpose of this memorandum.

This memorandum, and any future addenda or reports regarding this site, may be made available to contractors/bidders to supply them with only the data contained in the memorandum regarding subsurface conditions and laboratory test results at the point and time noted. Contractors/bidders may not rely on interpretations, opinion, recommendations, or conclusions contained in the memorandum. Verification of the subsurface conditions for purposes of determining difficulty of excavation, trafficability, etc., is the responsibility of the contractors/bidders. Because of the limited nature of any subsurface study, the contractor may encounter conditions during construction which differ from those presented in this memorandum. In such event, the contractor should promptly notify the Owner so that Freese and Nichols can confirm those conditions.

APPENDIX A

GEOTECHNICAL DATA REPORT

November 18, 2022

Terracon

Freese and Nichols, Inc.
2711 N. Haskell Ave. Suite 3300
Dallas, Texas 75204

Attn: Ms. Mahsa Hedayati, Ph.D., P.E.
P: (817) 735-7216
E: Mahsa.Hedayati@freese.com

Re: Report of Geotechnical Field and Lab Services
Midland Drive Lift Station and Sewer Improvements
Midland Drive and Wall Street
Midland, Texas
Terracon Project No. A4225036

Dear Ms. Hedayati:

This letter report presents the results of the geotechnical field and lab services performed for the proposed sewer improvements located in Midland, Texas. The project scope was performed in general accordance with Terracon Proposal No. PA4225036, dated February 22, 2022.

Based on the information provided to us, we understand the project includes the construction of about 1,700 linear feet of 12-inch diameter gravity line, a lift station with a maximum wet well depth of 15 feet, and 2,175 linear feet of 8-inch diameter force main. The project is located along Midland Drive, south of Wall Street. We understand that only field and lab services are requested and that geotechnical engineering recommendations are not requested at this time. The Site Location Plan indicating the general location of the site is shown on Exhibit A-1, which is attached.

Field Exploration

As requested, subsurface conditions were evaluated by drilling seven test borings, designated B-1 through B-7, to depths that ranged from approximately 10 feet to 40 feet below existing grades at locations determined by the client. The borings were drilled with a truck-mounted drilling equipment using dry drilling techniques at the approximate locations shown on the Exploration Plan, which is attached. The approximate latitude and longitude of the borings were obtained by a hand-held GPS unit with an accuracy of +/- 25 feet and are shown on the boring logs. The boring depths were measured from existing grades at the time of our field program. The borings were backfilled with soil cuttings.

Samples were, visually classified, and appropriately sealed in sample containers to preserve their in-situ moisture contents and taken to our laboratory in Midland, Texas.

Terracon Consultants, Inc. 10400 State Highway 191 Midland, TX 79707
P [432] 684 9600 terracon.com

Groundwater Conditions

The borings were advanced in the dry using continuous-flight auger or air rotary drilling techniques that allow short-term groundwater observations to be made while drilling. Groundwater was observed at borings B-1 through B-5 at depths that ranged from 8 to 11 feet below existing grades. Groundwater seepage was not observed in borings B-6 or B-7 within drilling depths of exploration during or at the completion of drilling.

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. Therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than the levels indicated on the boring logs. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

Laboratory Testing

The project engineer reviewed the field data and assigned laboratory tests. The laboratory testing program included the following types of tests:

- ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
- ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- ASTM D422 Standard Test Method for Particle-Size Analysis of Soils

Our laboratory testing program often includes examination of soil samples by an engineer. Based on the material's texture and plasticity, we describe and classify soil samples in accordance with the Unified Soil Classification System (USCS).

Sample Disposal

Samples not tested in the laboratory will be stored for a period of 30 days subsequent to submittal of this report and will be discarded after this period, unless we are notified otherwise.

General Comments

The data presented in this report is based upon the field services from the boring performed at the indicated location and from other information discussed in this report. This report does not reflect variations that may occur across the site, between borings, or due to the modifying effects of weather.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, either express or implied, are intended or made. In the event that changes in the nature, design, or location of the project as outlined in this report are planned, the general comments in this report shall not be considered valid unless Terracon reviews the changes and either verifies or modifies the conclusions of this report in writing.

We trust that this letter is responsive to your needs at this time. If you have any questions regarding this letter or require additional services, please do not hesitate to contact us.

Sincerely,
Terracon Consultants, Inc.
TBPE Firm Registration TX F-3272

Andrew J Muras, P.E.
Senior Engineer

Jon Sheng, P.E.
Senior Principal/Office Manager

Attachments:

Site Location
Exploration Plan
Boring Logs
Atterberg Limits Test Results
Grain Size Distribution Test Results
General Notes
Unified Soil Classification System

SITE LOCATION

Midland Drive Lift Station and Sewer Improvements ■ Midland, TX

November 18, 2022 ■ Terracon Project No. A4225036

Terracon GeoReport

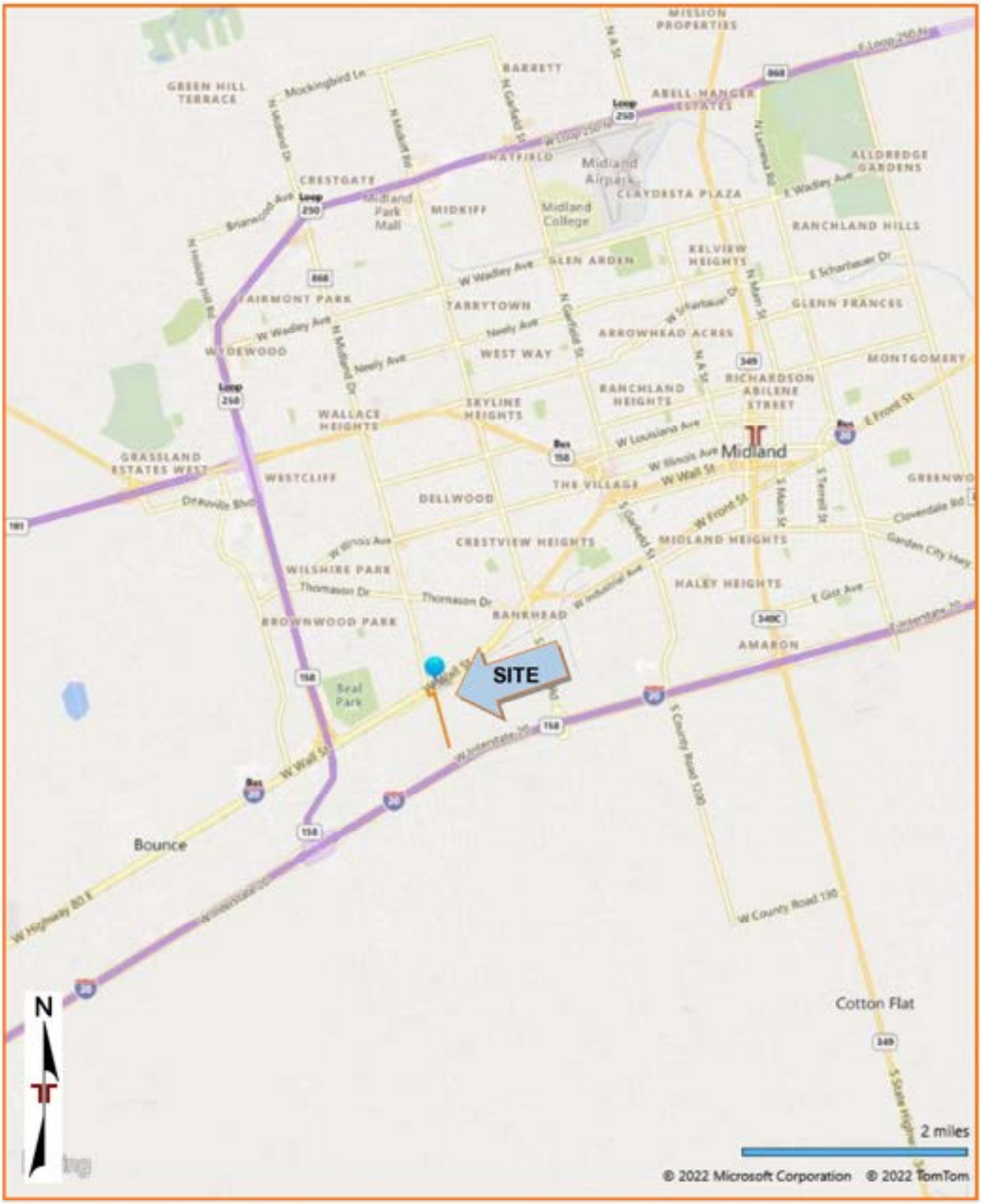


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY QUADRANGLES INCLUDE: SOUTH[illegible] AND SOUTHEAST MIDLAND, TX (1/1/1974)

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

BORING LOG NO. B-1

PROJECT: Midland Drive Lift Station and Sewer Improvements

CLIENT: Freese and Nichols, Inc. Dallas, TX

SITE: Intersection of Midland Drive and Wall Street Midland, TX

LOCATION See Exploration Plan

Latitude: 31.9688° Longitude: -102.1275°

Approximate Surface Elev.: 2819 (Ft.) +/-

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
0								
2.0	2817+/-					7.1	NP	21
					17-35-50/5"			
		5			17-17-32 N=49			
					27-41-31 N=72	10.7	NP	28
			▽		50/3"			
13.0	2806+/-	10						
					50/3"	13.5	NP	22
		15						
					50/2"			
		20						
					50/2"			
28.0	2791+/-	25						
					50/1"	17.6	NP	17
		30						
					50/1"			
		35						
					50/1"			
40.0	2779+/-	40						

Boring Terminated at 40 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Dry auger and air rotary

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from Google Earth.

Notes:

WATER LEVEL OBSERVATIONS

▽ While drilling

▽ At completion of drilling

Terracon
10400 State Highway 191
Midland, TX

Boring Started: 10-20-2022 | Boring Completed: 10-20-2022

Drill Rig: Truck | Driller: Local Support Services

Project No.: A4225036

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL A4225036 MIDLAND DRIVE LIF.GPJ TERRACON_DATATEMPLATE.GDT 11/18/22

BORING LOG NO. B-2

PROJECT: Midland Drive Lift Station and Sewer Improvements

CLIENT: Freese and Nichols, Inc. Dallas, TX

SITE: Intersection of Midland Drive and Wall Street Midland, TX

LOCATION See Exploration Plan

Latitude: 31.9684° Longitude: -102.1258°

Approximate Surface Elev.: 2817 (Ft.) +/-

DEPTH	ELEVATION (Ft.)	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
SANDY SILTY CLAY (CL-ML), brown, stiff to very stiff		4.5 (HP)			
		1.75 (HP)	13.7	24-20-4	55
6.0	2811+/-	2.25 (HP)			
SILTY CLAYEY GRAVEL WITH SAND (GC-GM), light gray, medium dense		5-10-17 N=27	11.0	27-21-6	34
- very dense 8 to 13 feet		27-37-50/6"			
13.0	2804+/-				
SILTY SAND (SM), tan, very dense, material locally called caliche		50/5"			
		50/5"	31.8	NP	33
		50/3"			
		50/2"			
		50/2"	28.5	NP	27
		50/2"			
40.0	2777+/-				
Boring Terminated at 40 Feet					

DEPTH (Ft.): 5, 10, 15, 20, 25, 30, 35, 40

WATER LEVEL OBSERVATIONS: ▽ While drilling; ▽ At completion of drilling

SAMPLE TYPE: ■ Shelby Tube; ⊠ Split Spoon

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Dry auger and air rotary

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from Google Earth.

Notes:

Terracon
10400 State Highway 191
Midland, TX

Boring Started: 10-20-2022 | Boring Completed: 10-20-2022

Drill Rig: Truck | Drilling Field Support Services

Project No.: A4225036

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL A4225036 MIDLAND DRIVE LIF.GPJ TERRACON_DATATEMPLATE.GDT 11/18/22

BORING LOG NO. B-3

PROJECT: Midland Drive Lift Station and Sewer Improvements

CLIENT: Freese and Nichols, Inc. Dallas, TX

SITE: Intersection of Midland Drive and Wall Street Midland, TX

LOCATION See Exploration Plan

Latitude: 31.9677° Longitude: -102.1257°

Approximate Surface Elev.: 2820 (Ft.) +/-

DEPTH	ELEVATION (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
0.0	2820+/-					
			10-13-17 N=30			
			9-11-21 N=32	5.5	22-17-5	33
			31-50/3"			
			38-50/6"			
8.0	2812+/-					
			50/6"	9.7	NP	43
			50/5"			
			9-9-8 N=17			
			15-14-21 N=35	13.2	NP	44
30.0	2790+/-					
			13-16-10 N=26			

SILTY CLAYEY SAND (SC-SM), gray, dense to very dense, with scattered gravel

- very dense material locally called caliche 4 to 8 feet

SILTY SAND (SM), light gray and tan, very dense

- very dense material locally called caliche 8 to 18 feet

- medium dense to dense below 18 feet

Boring Terminated at 30 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Dry auger and air rotary

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from Google Earth.

Notes:

WATER LEVEL OBSERVATIONS

While drilling

At completion of drilling

Terracon
10400 State Highway 191
Midland, TX

Boring Started: 10-21-2022 Boring Completed: 10-21-2022

Drill Rig: Truck Driller: Local Support Services

Project No.: A4225036

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL A4225036 MIDLAND DRIVE LIF.GPJ TERRACON_DATATEMPLATE.GDT 11/18/22

BORING LOG NO. B-4

PROJECT: Midland Drive Lift Station and Sewer Improvements

CLIENT: Freese and Nichols, Inc. Dallas, TX

SITE: Intersection of Midland Drive and Wall Street Midland, TX

LOCATION See Exploration Plan

Latitude: 31.9676° Longitude: -102.1255°

Approximate Surface Elev.: 2819 (Ft.) +/-

DEPTH	ELEVATION (Ft.)	DESCRIPTION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		SILTY SAND (SM), tan and light gray, medium dense to dense				9-9-13 N=22	10.8	NP	37
						8-15-16 N=31			
		- very dense material locally called caliche 4 to 18 feet				50/4"			
			5			50/6"	10.3	NP	48
						50/4"			
			10	▽					
						50/2"			
			15						
		- medium dense to dense below 18 feet				10-10-8 N=18	22.0	NP	42
			20						
						14-19-21 N=40			
			25						
30.0	2789+/-					7-7-9 N=16			
		Boring Terminated at 30 Feet	30						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Dry auger and air rotary

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from Google Earth.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

▽ *At completion of drilling*

Terracon
10400 State Highway 191
Midland, TX

Boring Started: 10-21-2022 | Boring Completed: 10-21-2022

Drill Rig: Truck | Driller: Local Support Services

Project No.: A4225036

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL A4225036 MIDLAND DRIVE LIF.GPJ TERRACON_DATATEMPLATE.GDT 11/18/22

BORING LOG NO. B-5

PROJECT: Midland Drive Lift Station and Sewer Improvements

CLIENT: Freese and Nichols, Inc. Dallas, TX

SITE: Intersection of Midland Drive and Wall Street Midland, TX

LOCATION See Exploration Plan

Latitude: 31.9677° Longitude: -102.1254°

Approximate Surface Elev.: 2817 (Ft.) +/-

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
					8-11-15 N=26			
					6-13-18 N=31			
					50/2"			
		5						
					29-50/3"	8.5	NP	40
8.0	2809+/-							
					50/6"			
		10						
					50/3"			
		15						
					6-6-7 N=13	29.7	NP	45
		20						
					13-13-18 N=31			
		25						
30.0	2787+/-				8-5-7 N=12	29.8	NP	46
		30						

SILTY SAND WITH GRAVEL (SM), tan, medium dense to dense

- very dense material locally called caliche 4 to 8 feet

SILTY SAND (SM), light gray and tan, very dense

- very dense material locally called caliche 8 to 18 feet

- medium dense to dense below 18 feet

Boring Terminated at 30 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Dry auger and air rotary

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from Google Earth.

Notes:

WATER LEVEL OBSERVATIONS

While drilling

At completion of drilling

Terracon
10400 State Highway 191
Midland, TX

Boring Started: 10-21-2022 Boring Completed: 10-21-2022

Drill Rig: Truck Driller: Local Support Services

Project No.: A4225036

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL A4225036 MIDLAND DRIVE LIF.GPJ TERRACON_DATATEMPLATE.GDT 11/18/22

BORING LOG NO. B-6

PROJECT: Midland Drive Lift Station and Sewer Improvements

CLIENT: Freese and Nichols, Inc. Dallas, TX

SITE: Intersection of Midland Drive and Wall Street Midland, TX

LOCATION See Exploration Plan

Latitude: 31.9616° Longitude: -102.1237°

Approximate Surface Elev.: 2827 (Ft.) +/-

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
					18-17-17 N=34			
					12-15-30 N=45	7.3	29-19-10	41
		5			50/4"			
6.0	2821+/-				50/2"			
					50/2"	4.5	22-17-5	28
		10						
		15			50/1"			
20.0	2807+/-	20			50/1"			

CLAYEY SAND (SC), reddish brown, dense to very dense

- very dense material locally called caliche 4 to 6 feet

SILTY CLAYEY SAND WITH GRAVEL (SC-SM), tan, very dense, material locally called caliche

Boring Terminated at 20 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Dry auger and air rotary

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from Google Earth.

Notes:

WATER LEVEL OBSERVATIONS

No free water observed

Terracon
10400 State Highway 191
Midland, TX

Boring Started: 11-10-2022 | Boring Completed: 11-10-2022

Drill Rig: Truck | Driller: Field Support Services

Project No.: A4225036

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL A4225036 MIDLAND DRIVE LIF.GPJ TERRACON_DATATEMPLATE.GDT 11/18/22

BORING LOG NO. B-7

PROJECT: Midland Drive Lift Station and Sewer Improvements

CLIENT: Freese and Nichols, Inc. Dallas, TX

SITE: Intersection of Midland Drive and Wall Street Midland, TX

LOCATION See Exploration Plan

Latitude: 31.9659° Longitude: -102.1253°

Approximate Surface Elev.: 2825 (Ft.) +/-

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
SILTY SAND (SM), tan and brown, dense to very dense					18-28-15 N=43	5.2	NP	36
					19-24-50/4"			
- material locally called caliche below 4 feet		5			50/3"			
					41-50/2"	6.5	NP	25
					50/2"			
10.0	2815+/-	10						
Boring Terminated at 10 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Dry auger and air rotary

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from Google Earth.

Notes:

WATER LEVEL OBSERVATIONS

No free water observed

Terracon
10400 State Highway 191
Midland, TX

Boring Started: 11-10-2022 | Boring Completed: 11-10-2022

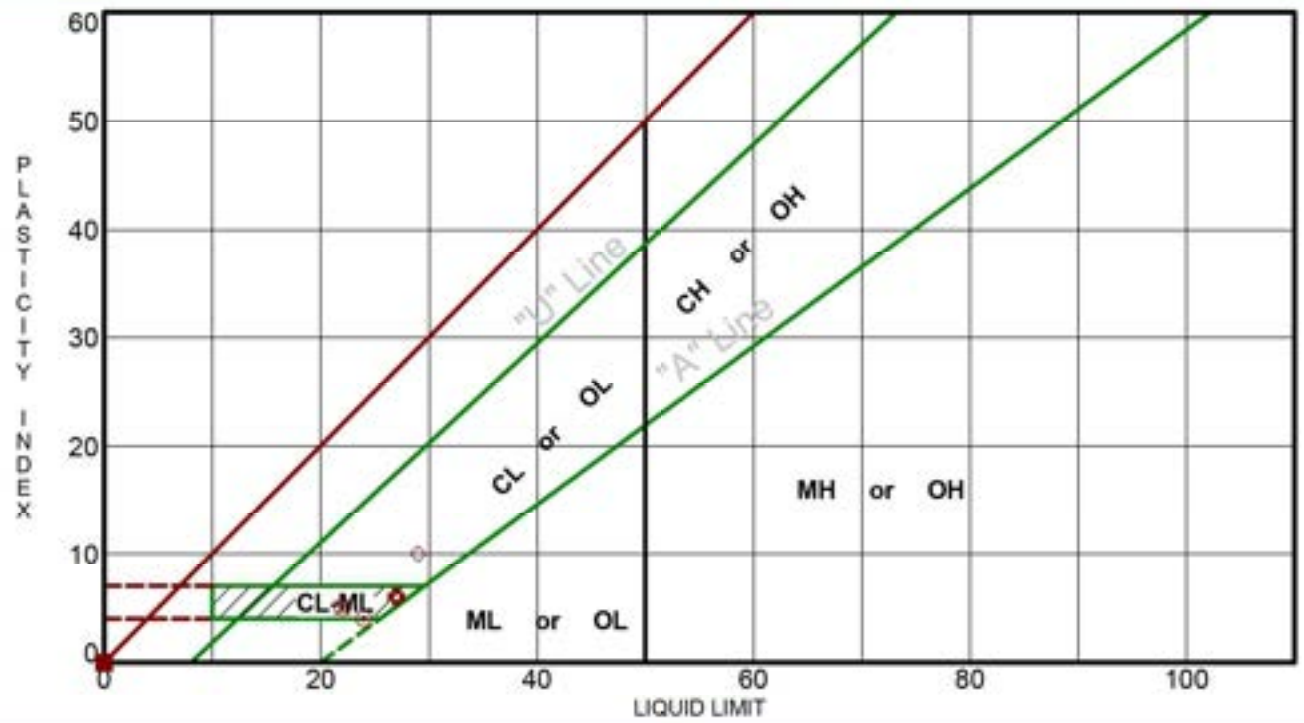
Drill Rig: Truck | Driller: Field Support Services

Project No.: A4225036

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL A4225036 MIDLAND DRIVE LIF.GPJ TERRACON_DATATEMPLATE.GDT 11/18/22

ATTERBERG LIMITS RESULTS

ASTM D4318



Boring ID		Depth (Ft)	LL	PL	PI	Fines	USCS	Description
●	B-1	0 - 2	NP	NP	NP	20.7	GM	SILTY GRAVEL with SAND
⧓	B-1	6 - 7.5	NP	NP	NP	28.4	SM	SILTY SAND with GRAVEL
▲	B-1	13.5 - 13.8	NP	NP	NP	22.1	SM	SILTY SAND
★	B-1	28.5 - 28.6	NP	NP	NP	16.7	SM	SILTY SAND with GRAVEL
⊙	B-2	2 - 4	24	20	4	54.6	CL-ML	SANDY SILTY CLAY
◈	B-2	6 - 7.5	27	21	6	33.6	GC-GM	SILTY, CLAYEY GRAVEL with SAND
○	B-2	18.5 - 18.9	NP	NP	NP	33.2	SM	SILTY SAND
△	B-2	33.5 - 33.7	NP	NP	NP	27.3	SM	SILTY SAND
⊗	B-3	2 - 3.5	22	17	5	33.1	SC-SM	SILTY, CLAYEY SAND
⊕	B-3	8.5 - 9	NP	NP	NP	42.5	SM	SILTY SAND
□	B-3	23.5 - 25	NP	NP	NP	44.1	SM	SILTY SAND
◍	B-4	0 - 1.5	NP	NP	NP	36.8	SM	SILTY SAND
◕	B-4	6 - 6.5	NP	NP	NP	47.6	SM	SILTY SAND
☆	B-4	18.5 - 20	NP	NP	NP	42.3	SM	SILTY SAND
⊠	B-5	6 - 6.8	NP	NP	NP	40.2	SM	SILTY SAND with GRAVEL
■	B-5	18.5 - 20	NP	NP	NP	44.5	SM	SILTY SAND
◆	B-5	28.5 - 30	NP	NP	NP	46.3	SM	SILTY SAND
◇	B-6	2 - 3.5	29	19	10	40.6	SC	CLAYEY SAND
×	B-6	8.5 - 8.7	22	17	5	27.9	SC-SM	SILTY, CLAYEY SAND with GRAVEL
■	B-7	0 - 1.5	NP	NP	NP	35.8	SM	SILTY SAND

PROJECT: Midland Drive Lift Station and Sewer Improvements

SITE: Intersection of Midland Drive and Wall Street
Midland, TX

Terracon
10400 State Highway 191
Midland, TX

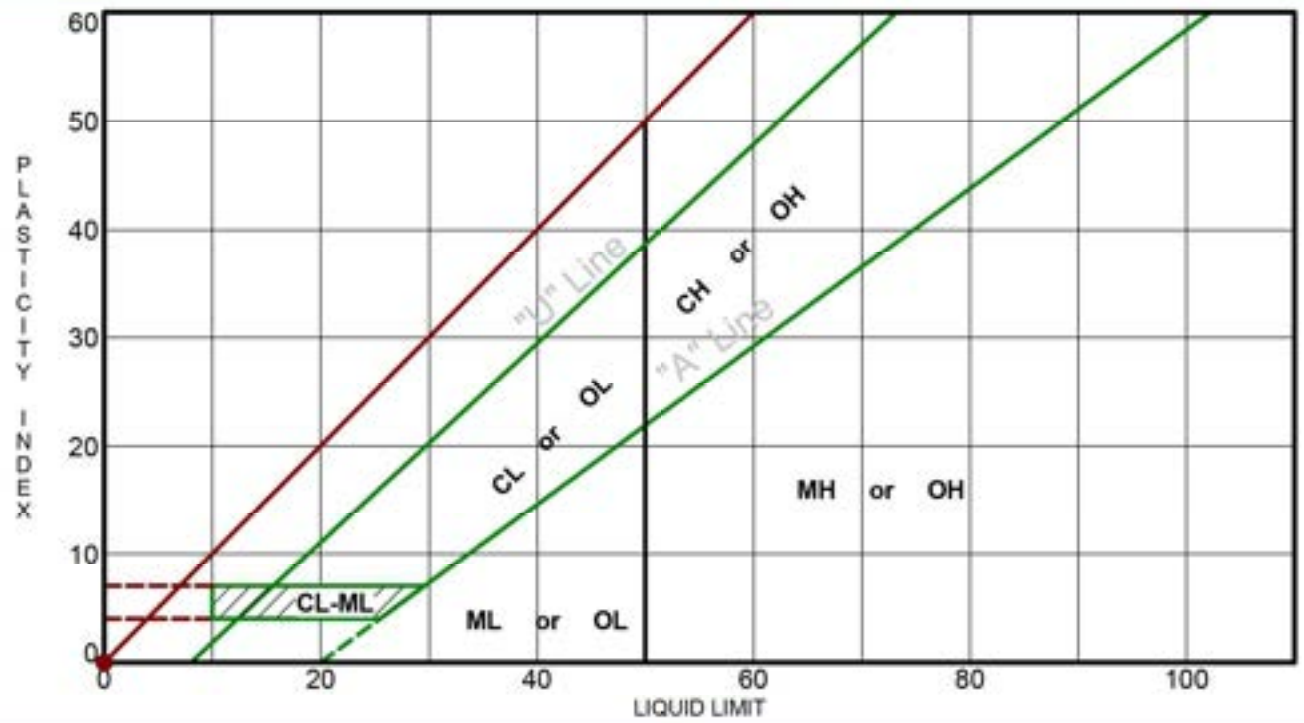
PROJECT NUMBER: A4225036

CLIENT: Freese and Nichols, Inc.
Dallas, TX

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ATTERBERG LIMITS A4225036 MIDLAND DRIVE LIF.GPJ TERRACON_DATATEMPLATE.GDT 11/13/22

ATTERBERG LIMITS RESULTS

ASTM D4318



Boring ID	Depth (Ft)	LL	PL	PI	Fines	USCS	Description
● B-7	6 - 6.7	NP	NP	NP	24.8	SM	SILTY SAND

PROJECT: Midland Drive Lift Station and Sewer Improvements

SITE: Intersection of Midland Drive and Wall Street
Midland, TX

Terracon
10400 State Highway 191
Midland, TX

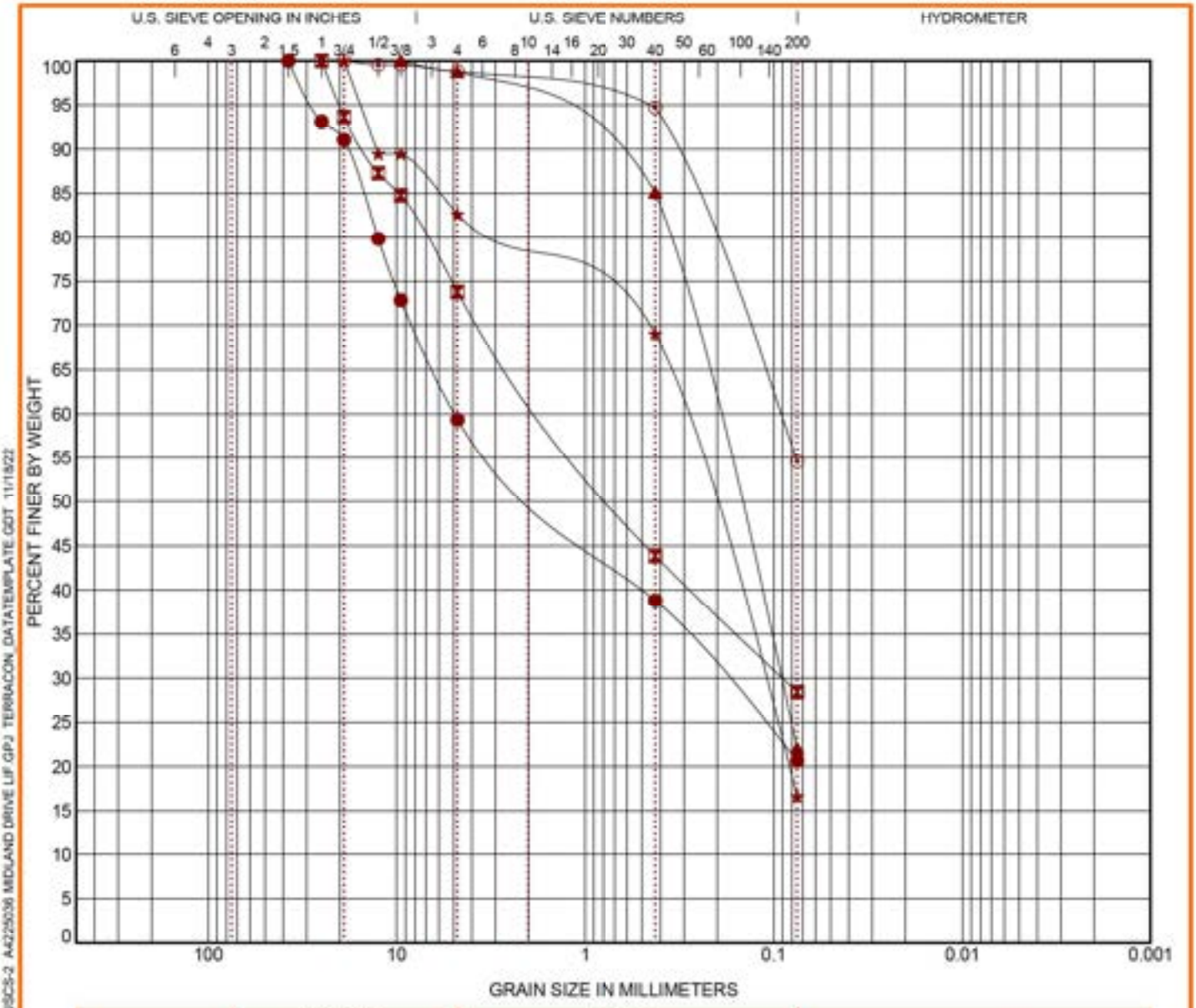
PROJECT NUMBER: A4225036

CLIENT: Freese and Nichols, Inc.
Dallas, TX

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ATTERBERG LIMITS A4225036 MIDLAND DRIVE LIF.GPJ TERRACON_DATATEMPLATE.GDT 11/15/22

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID		Depth (Ft)	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-1	0 - 2	SILTY GRAVEL with SAND (GM)	7.1	NP	NP	NP		
⊠	B-1	6 - 7.5	SILTY SAND with GRAVEL (SM)	10.7	NP	NP	NP		
▲	B-1	13.5 - 13.8	SILTY SAND (SM)	13.5	NP	NP	NP		
★	B-1	28.5 - 28.6	SILTY SAND with GRAVEL (SM)	17.6	NP	NP	NP		
⊙	B-2	2 - 4	SANDY SILTY CLAY (CL-ML)	13.7	24	20	4		

Boring ID		Depth (Ft)	D_{100}	D_{60}	D_{30}	D_{10}	%Cobbles	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-1	0 - 2	37.5	4.913	0.183		0.0	40.7	38.7		20.7	
⊠	B-1	6 - 7.5	25	1.56	0.089		0.0	26.2	45.4		28.4	
▲	B-1	13.5 - 13.8	9.5	0.213	0.093		0.0	1.3	76.7		22.1	
★	B-1	28.5 - 28.6	19	0.315	0.117		0.0	17.4	66.0		16.7	
⊙	B-2	2 - 4	19	0.095			0.0	1.2	44.3		54.6	

PROJECT: Midland Drive Lift Station and Sewer Improvements

SITE: Intersection of Midland Drive and Wall Street
Midland, TX

Terracon
10400 State Highway 191
Midland, TX

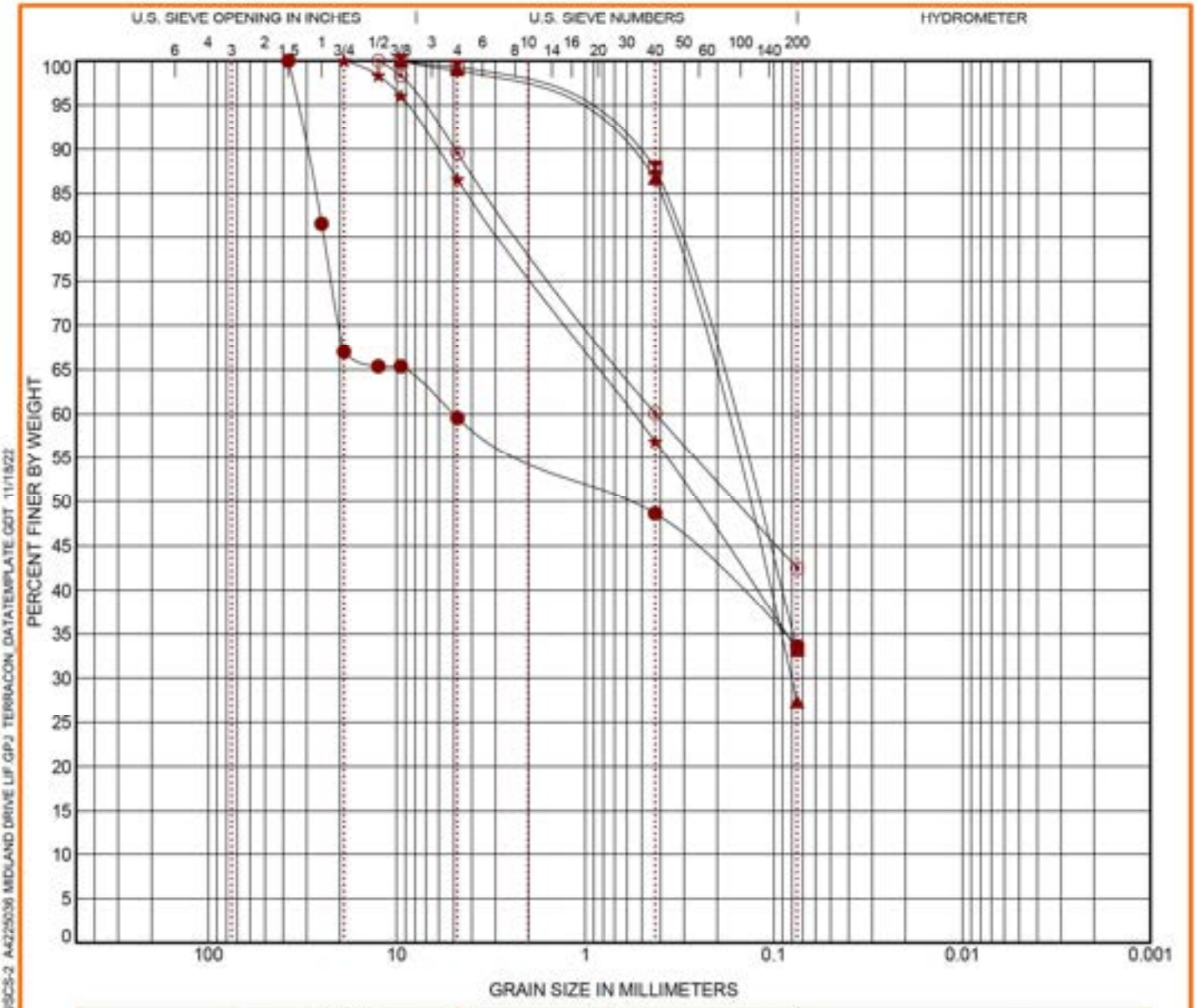
PROJECT NUMBER: A4225036

CLIENT: Freese and Nichols, Inc.
Dallas, TX

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS-2 A4225036 MIDLAND DRIVE LIF.GPJ TERRACON_DATATEMPLATE.GDT 11/18/22

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID		Depth (Ft)	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-2	6 - 7.5	SILTY, CLAYEY GRAVEL with SAND (GC-GM)	11.0	27	21	6		
⊠	B-2	18.5 - 18.9	SILTY SAND (SM)	31.8	NP	NP	NP		
▲	B-2	33.5 - 33.7	SILTY SAND (SM)	28.5	NP	NP	NP		
★	B-3	2 - 3.5	SILTY, CLAYEY SAND (SC-SM)	5.5	22	17	5		
⊙	B-3	8.5 - 9	SILTY SAND (SM)	9.7	NP	NP	NP		

Boring ID		Depth (Ft)	D_{100}	D_{60}	D_{30}	D_{10}	%Cobbles	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-2	6 - 7.5	37.5	5.023			0.0	40.5	25.9		33.6	
⊠	B-2	18.5 - 18.9	9.5	0.175			0.0	0.6	66.2		33.2	
▲	B-2	33.5 - 33.7	9.5	0.195	0.081		0.0	1.0	71.7		27.3	
★	B-3	2 - 3.5	19	0.547			0.0	13.4	53.4		33.1	
⊙	B-3	8.5 - 9	12.5	0.422			0.0	10.4	47.1		42.5	

PROJECT: Midland Drive Lift Station and Sewer Improvements

SITE: Intersection of Midland Drive and Wall Street
Midland, TX

Terracon
10400 State Highway 191
Midland, TX

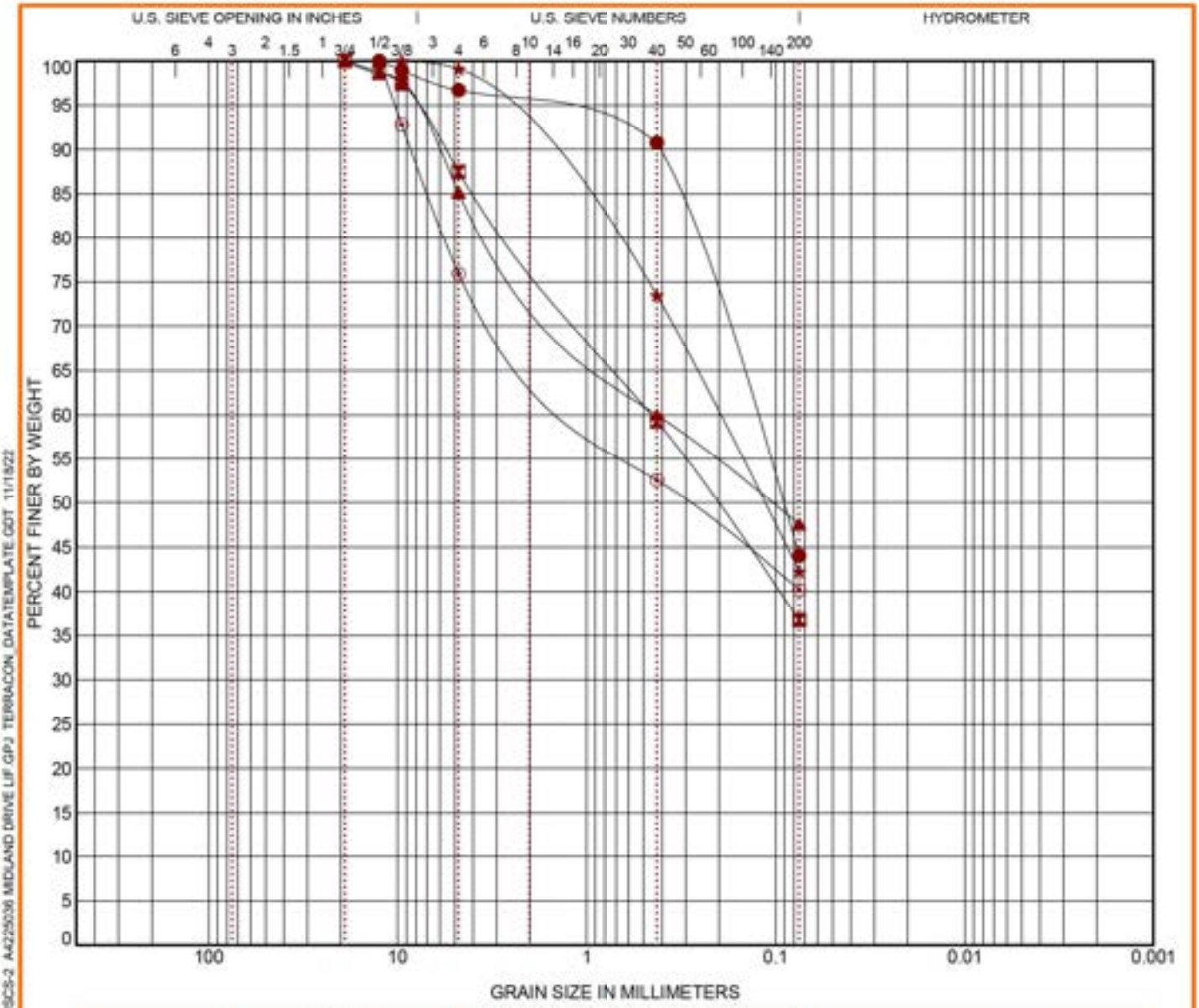
PROJECT NUMBER: A4225036

CLIENT: Freese and Nichols, Inc.
Dallas, TX

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS-2 A4225036 MIDLAND DRIVE LIF.GPJ TERRACON_DATATEMPLATE.GDT 11/18/22

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID		Depth (Ft)	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-3	23.5 - 25	SILTY SAND (SM)	13.2	NP	NP	NP		
⊠	B-4	0 - 1.5	SILTY SAND (SM)	10.8	NP	NP	NP		
▲	B-4	6 - 6.5	SILTY SAND (SM)	10.3	NP	NP	NP		
★	B-4	18.5 - 20	SILTY SAND (SM)	22.0	NP	NP	NP		
⊙	B-5	6 - 6.8	SILTY SAND with GRAVEL (SM)	8.5	NP	NP	NP		

Boring ID		Depth (Ft)	D_{100}	D_{60}	D_{30}	D_{10}	%Cobbles	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-3	23.5 - 25	12.5	0.136			0.0	3.3	52.7		44.1	
⊠	B-4	0 - 1.5	19	0.452			0.0	12.5	50.8		36.8	
▲	B-4	6 - 6.5	19	0.426			0.0	14.8	37.6		47.6	
★	B-4	18.5 - 20	9.5	0.201			0.0	0.9	56.8		42.3	
⊙	B-5	6 - 6.8	12.5	0.915			0.0	24.1	35.7		40.2	

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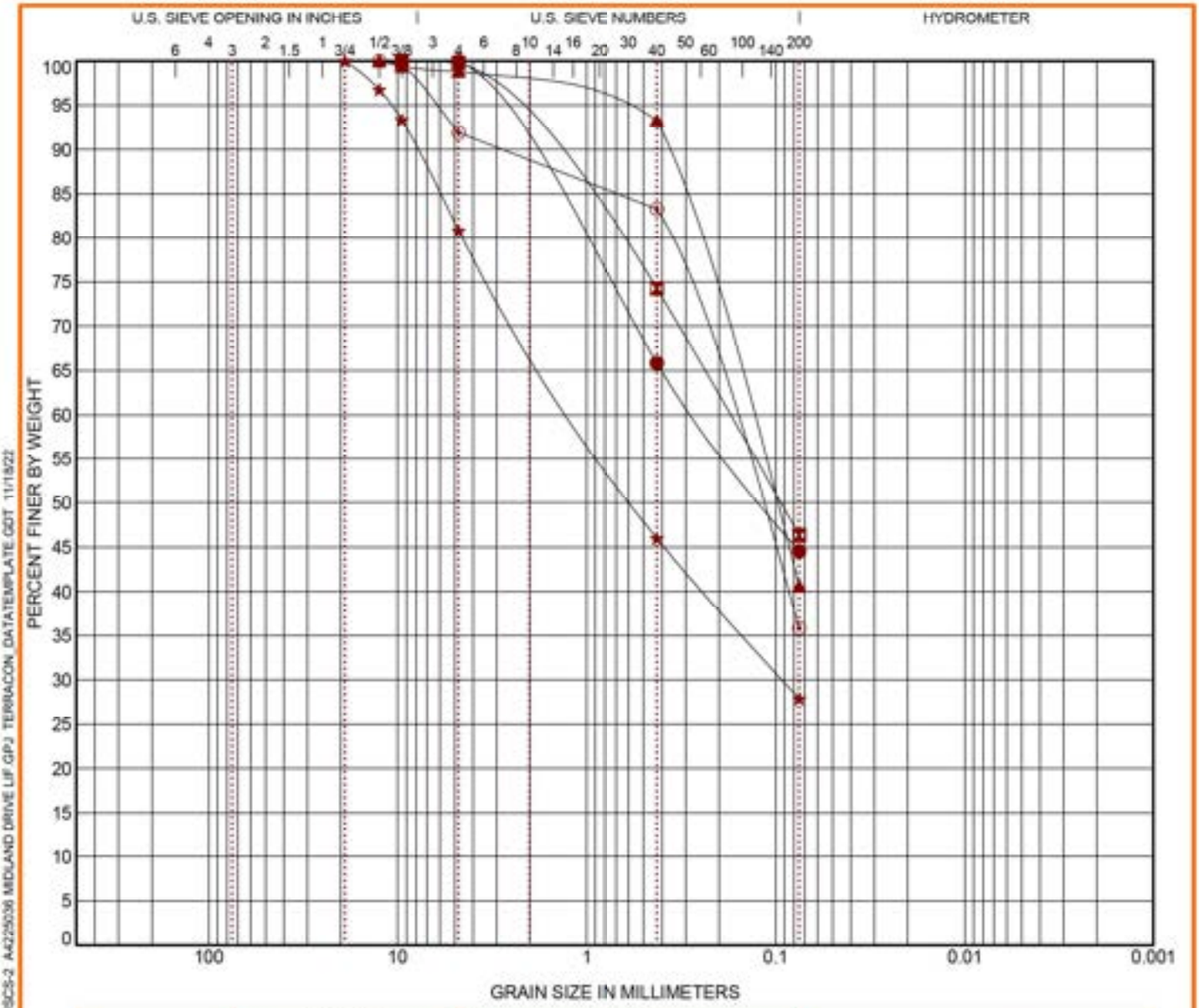
GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID		Depth (Ft)	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-5	18.5 - 20	SILTY SAND (SM)	29.7	NP	NP	NP		
⊠	B-5	28.5 - 30	SILTY SAND (SM)	29.8	NP	NP	NP		
▲	B-6	2 - 3.5	CLAYEY SAND (SC)	7.3	29	19	10		
★	B-6	8.5 - 8.7	SILTY, CLAYEY SAND with GRAVEL (SC-SM)	4.5	22	17	5		
⊙	B-7	0 - 1.5	SILTY SAND (SM)	5.2	NP	NP	NP		

Boring ID		Depth (Ft)	D_{100}	D_{60}	D_{30}	D_{10}	%Cobbles	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-5	18.5 - 20	9.5	0.264			0.0	0.0	55.4		44.5	
⊠	B-5	28.5 - 30	9.5	0.175			0.0	0.2	53.4		46.3	
▲	B-6	2 - 3.5	12.5	0.142			0.0	1.2	58.2		40.6	
★	B-6	8.5 - 8.7	19	1.121	0.092		0.0	19.1	53.0		27.9	
⊙	B-7	0 - 1.5	12.5	0.181			0.0	8.1	56.1		35.8	

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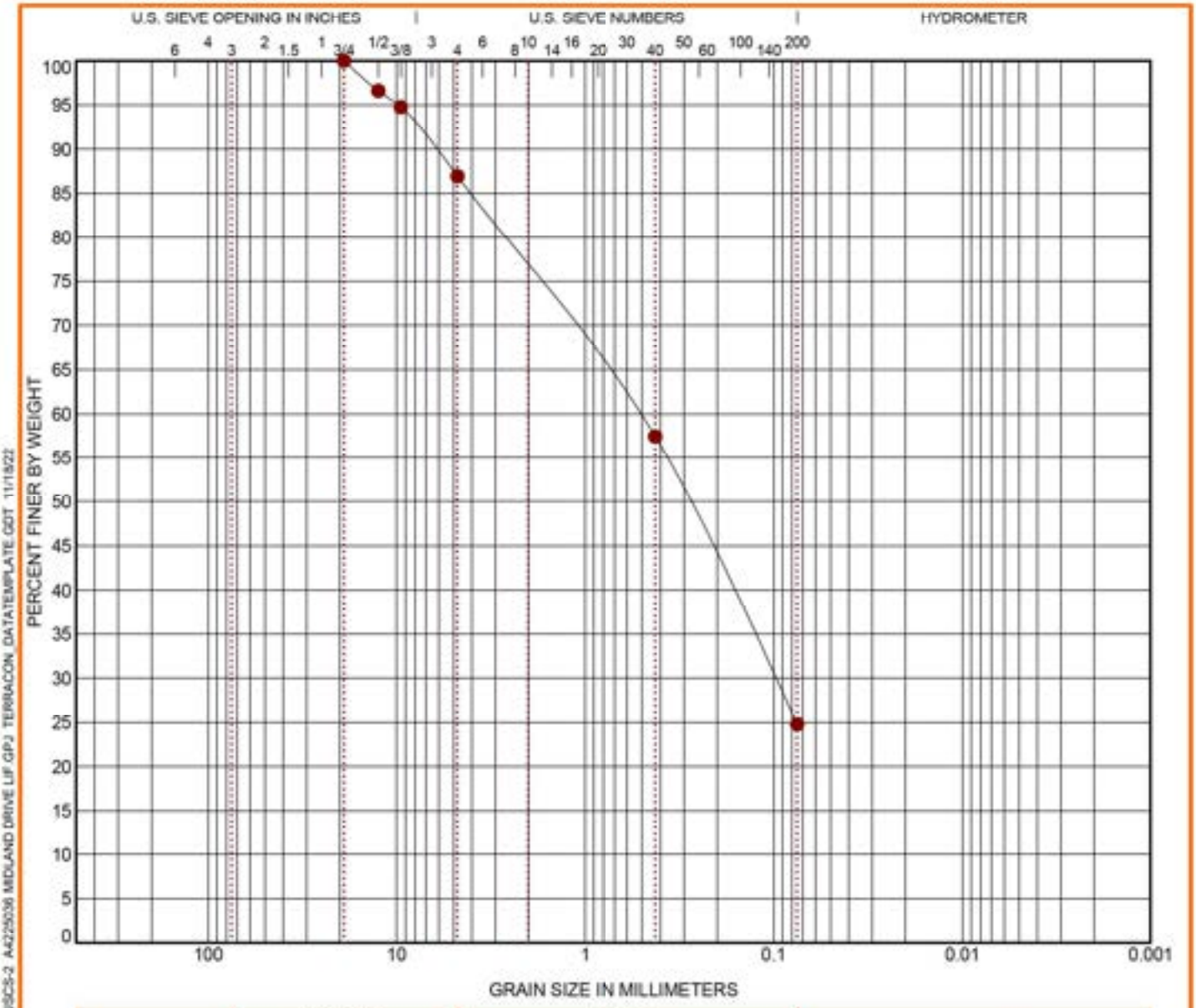
Dallas, TX

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS-2 A4225036 MIDLAND DRIVE LIF.GPJ TERRACON_DATATEMPLATE.GDT 11/18/22

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID	Depth (Ft)	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
B-7	6 - 6.7	SILTY SAND (SM)	6.5	NP	NP	NP		

Boring ID	Depth (Ft)	D_{100}	D_{60}	D_{30}	D_{10}	%Cobbles	%Gravel	%Sand	%Silt	%Fines	%Clay
B-7	6 - 6.7	19	0.524	0.099		0.0	13.0	62.2		24.8	

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CLIENT: Freese and Nichols, Inc.
Dallas, TX

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS-2 A4225036 MIDLAND DRIVE LIF.GPJ TERRACON_DATATEMPLATE.GDT 11/18/22

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

Midland Drive Lift Station and Sewer Improvements ■ Midland, TX

Terracon Project No. A4225036

Terracon GeoReport

SAMPLING	WATER LEVEL	FIELD TESTS
Shelby Tube Standard Penetration Test	Water Initially Encountered Water Level After a Specified Period of Time Water Level After a Specified Period of Time Cave In Encountered Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.	N Standard Penetration Test Resistance (Blows/Ft.) (HP) Hand Penetrometer (T) Torvane (DCP) Dynamic Cone Penetrometer UC Unconfined Compressive Strength (PID) Photo-Ionization Detector (OVA) Organic Vapor Analyzer

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification as noted on the soil boring logs is based Unified Soil Classification System. Where sufficient laboratory data exist to classify the soils consistent with ASTM D2487 "Classification of Soils for Engineering Purposes" this procedure is used. ASTM D2488 "Description and Identification of Soils (Visual-Manual Procedure)" is also used to classify the soils, particularly where insufficient laboratory data exist to classify the soils in accordance with ASTM D2487. In addition to USCS classification, coarse grained soils are classified on the basis of their in-place relative density, and fine-grained soils are classified on the basis of their consistency. See "Strength Terms" table below for details. The ASTM standards noted above are for reference to methodology in general. In some cases, variations to methods are applied as a result of local practice or professional judgment.

LOCATION AND ELEVATION NOTES

Exploration point locations as shown on the Exploration Plan and as noted on the soil boring logs in the form of Latitude and Longitude are approximate. See Exploration and Testing Procedures in the report for the methods used to locate the exploration points for this project. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength Qu, (tsf)	Standard Penetration or N-Value Blows/Ft.
Very Loose	0 - 3	Very Soft	less than 0.25	0 - 1
Loose	4 - 9	Soft	0.25 to 0.50	2 - 4
Medium Dense	10 - 29	Medium Stiff	0.50 to 1.00	4 - 8
Dense	30 - 50	Stiff	1.00 to 2.00	8 - 15
Very Dense	> 50	Very Stiff	2.00 to 4.00	15 - 30
		Hard	> 4.00	> 30

RELEVANCE OF SOIL BORING LOG

The soil boring logs contained within this document are intended for application to the project as described in this document. Use of these soil boring logs for any other purpose may not be appropriate.

GEOTECHNICAL REPORT

FREESE AND NICHOLS, INC.
2711 NORTH HASKELL AVENUE, SUITE 3300
DALLAS, TEXAS 75204
214-214-2200

www.freese.com

APPENDIX B

MIDLAND STANDARD DETAILS

CITY OF MIDLAND STANDARD DETAILS

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
MIDLAND Engineering Services	COVER SHEET		100

100 COVER SHEET

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300 MULTI-USE UTILITY DETAILS

400 STORM DRAIN DETAILS

500 WASTEWATER DETAILS

600 WATER DETAILS

700 EROSION CONTROL DETAILS

800 MISCELLANEOUS DETAILS

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
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CITY OF MIDLAND STANDARD DETAILS ARE TO SERVE AS THE TYPICAL STANDARDS FOR ALL PUBLIC INFRASTRUCTURE WITHIN THE MIDLAND CITY LIMITS AND EXTRATERRITORIAL JURISDICTION.

CITY OF MIDLAND STANDARD DETAILS ARE PUBLIC DETAILS, HOWEVER THE CITY OF MIDLAND ACCEPTS NO RESPONSIBILITY FOR THE USE OR MISUSE OF THESE DETAILS FOR ANY DESIGN OR CONSTRUCTION OF PRIVATE INFRASTRUCTURE OR PUBLIC INFRASTRUCTURE THAT IS NOT PART OF, OR TO BE ACCEPTED INTO, THE CITY OF MIDLAND'S PUBLIC INFRASTRUCTURE.

CITY OF MIDLAND STANDARD DETAILS HAVE BEEN CREATED WITH THE INTENT OF COMPLYING WITH ALL APPLICABLE FEDERAL AND STATE LAWS, STANDARDS, RULES, ETC. IF A DISCREPANCY EXISTS BETWEEN THE CITY OF MIDLAND STANDARD DETAILS AND FEDERAL OR STATE REQUIREMENTS THEN THE MORE RESTRICTIVE REQUIREMENT OR STANDARD WILL GOVERN.

DESIGN OR CONSTRUCTION ELEMENTS NOT COVERED BY THE CITY OF MIDLAND STANDARD DETAILS SHOULD BE ADDRESSED IN COMPLIANCE WITH ALL OTHER APPLICATION FEDERAL, STATE, AND CITY OF MIDLAND STANDARDS, SPECIFICATIONS, ORDINANCES, POLICIES, ETC.

ALL APPLICABLE CITY OF MIDLAND DETAILS ARE TO BE INCLUDED AS PART OF ANY DEVELOPMENT PLAN SET DESIGN SUBMITTED TO THE CITY FOR REVIEW. SUCH CITY DETAILS ARE TO BE SHOWN UNCHANGED AND TO THEIR FULL EXTENT ON THE DESIGN DRAWING SHEETS, INCLUDING THE DETAIL'S BORDER AND TITLEBLOCK.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	NOTES TO DESIGNER		102

MAIN - WHEN USED TO DESCRIBE A PUBLIC OR PRIVATE UTILITY THE TERM 'MAIN' REFERS TO A TRANSMISSION OR COLLECTION PIPE LINE SERVING ONE OR MORE SERVICE LATERALS.

SERVICE LATERAL - WHEN USED TO DESCRIBE A PUBLIC OR PRIVE UTILITY THE TERM 'SERVICE LATERAL' REFERS TO A PIPE LINE EXTENDING FROM A MAIN TO SERVE A SINGLE LOT OR PROPERTY.

DRY UTILITY - WHEN USED TO DESCRIBE A UTILITY THE TERM 'DRY UTILITY ' REFERS TO PRIVATE PIPE LINES, MAINS, AND LATERALS THAT ARE NOT PART OF THE PUBLIC UTILITY INFRASTRUCTURE (I.E. WATER, WASTEWATER, AND STORM DRAINS) AND THAT DO NOT CARRY NATURAL GAS OR PETROLEUM PRODUCTS.

PETROLEUM AND NATURAL GAS - WHEN USED TO DESCRIBE A UTILITY THE TERM 'PETROLEUM AND NATURAL GAS' REFERS TO PRIVATE PIPE LINES, MAINS, AND LATERALS THAT ARE NOT PART OF THE PUBLIC UTILITY INFRASTRUCTURE (I.E WATER, WASTEWATER, AND STORM DRAINS) AND THAT CARRY NATURAL GAS OR PETROLEUM PRODUCTS.

CONCRETE CLASSES - WHEN USED TO DESCRIBE CONCRETE CLASSES, CITY OF MIDLAND CONCRETE CLASSES ARE TO BE CONSIDERED THE SAME AS 2004 TXDOT CONCRETE CLASSES UNLESS SPECIFICALLY NOTED OTHERWISE.

FIBER REINFORCED CONCRETE - WHEN USED TO DESCRIBE CONCRETE ELEMENTS THE TERM 'FIBER REINFORCED CONCRETE' REFERS TO CONCRETE PAVEMENT WITH FIBER REINFORCEMENT RATHER THAN REBAR REINFORCEMENT. THE FIBER REINFORCEMENT USED IN THIS INSTANCE IS TO BE FIBERMESH OR EQUIVALENT AND IS TO BE PLACED IN A RATIO OF 1.5 POUNDS OF FIBER REINFORCEMENT PER CUBIC YARD OF CONCRETE MATERIAL.

TYP - TYPICAL

USU - USUAL

MAX. - MAXIMUM

MIN. - MINIMUM

ROW - RIGHT OF WAY

PSI - POUNDS PER SQUARE INCH

PVC - POLYVINYL CHLORIDE PIPE

DIP - DUCTILE IRON PIPE

CIP - CAST IRON PIPE

MJ - MECHANICAL JOINT

FL - FLANGE JOINT

PE - PLAIN END

PL - PLASTIC LIMIT

LL - LIQUID LIMIT

PI - PLASTICITY INDEX

TAC - TEXAS ADMINISTRATIVE CODE

ADA - AMERICANS WITH DISABILITIES ACT

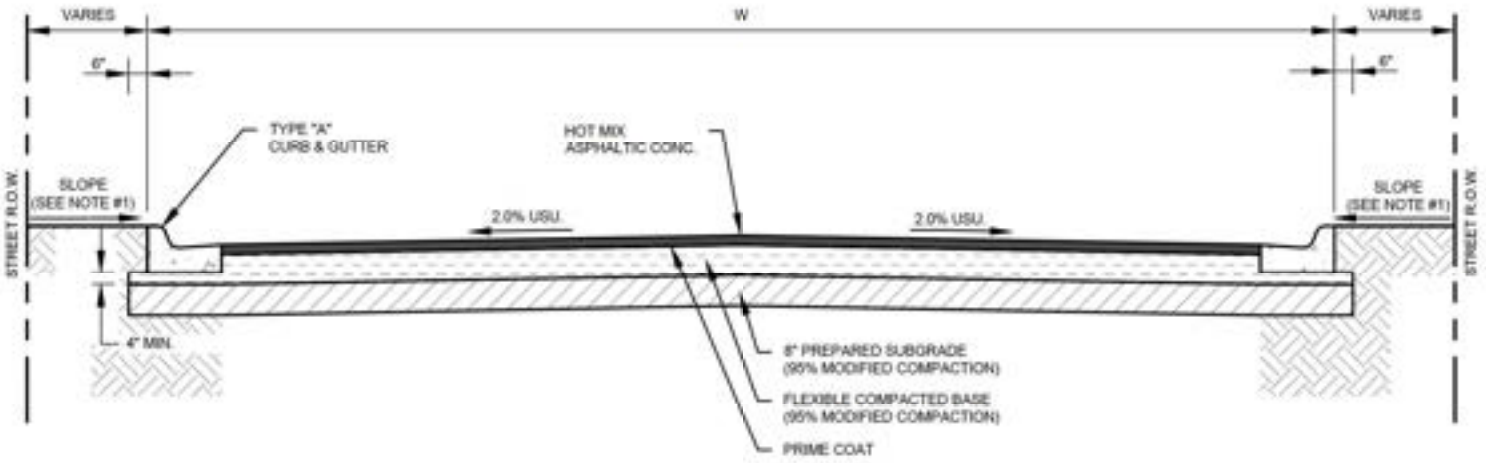
ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS

HMAC - HOT MIX ASPHALT CONCRETE

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	DEFINITIONS & ACRONYMS		103

PAVING DETAILS

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL: 200



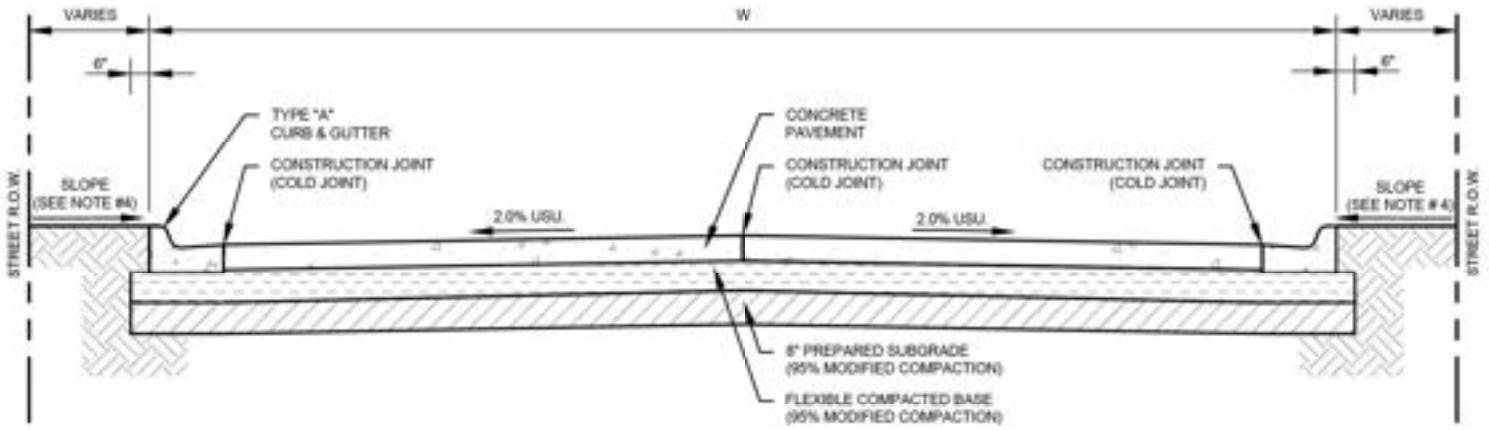
STREET DIMENSIONS			
W (FT)	ASPHALT THICKNESS (IN)	FLEXIBLE COMPACTED BASE THICKNESS (IN)	ASPHALT TYPE
*37	2D	8	TYPE "D"
*41	2D	8	
47	2D & 2C	8	TYPE "D" OVER TYPE "C"
77	2D & 3C	12	
79	2D & 3C	12	
113	2D & 3C	12	
TABLE THICKNESSES SHOWN ARE THE MINIMUM UNLESS OTHERWISE DIRECTED BY THE PLANS.			
* REGARDLESS OF WIDTH, ROADS CLASSIFIED AS COLLECTOR ROADS MUST HAVE 2" TYPE "D" OVER 2" TYPE "C" ASPHALT WITH 8" BASE AND ROADS CLASSIFIED AS ARTERIAL ROADS MUST HAVE 2" TYPE "D" OVER 3" TYPE "C" ASPHALT WITH 12" BASE.			

NOTES:

1. THE MAXIMUM SLOPE OF 1/4" / FT TO BE MEASURED FROM THE TOP OF CURB AND TO APPLY TO THE FULL WIDTH OF THE AREA BETWEEN THE BACK OF CURB AND THE R.O.W.
2. FLEXIBLE COMPACTED BASE TO BE PLACED IN LIFTS NO THICKER THAN 6".
3. WHEN MULTIPLE LAYERS OF ASPHALT ARE PLACED A TACK COAT MUST BE PLACED BETWEEN EACH PAIR OF ASPHALT LAYERS.
4. APPLY TACK COAT TO ALL CONCRETE SURFACES ADJACENT TO ASPHALT SURFACES AND TO ALL EXISTING ASPHALT SURFACES ADJACENT TO NEW ASPHALT SURFACES.
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE:	DETAIL:
CHECKED: JCF	STANDARD STREET CROWN CROSS SECTION		201
APPROVED: MCC			



STREET DIMENSIONS			
W (FT)	CONCRETE THICKNESS (IN)	FLEXIBLE COMPACTED BASE THICKNESS (IN)	CONCRETE TYPE
37	6	6	CLASS "C" 3600 PSI
41	7	6	
47	7	8	
77	8	12	
79	8	12	
113	8	12	
TABLE THICKNESSES SHOWN ARE THE MINIMUM UNLESS OTHERWISE DIRECTED BY THE PLANS.			

NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. TYPE "A" SAW-CUT JOINTS ARE TO BE LOCATED THROUGHOUT AT EQUIDISTANT SPACING TYPICALLY 10' x 10' OR NO GREATER THAN 15' x 15'. SEAL ALL CONCRETE JOINTS.
3. USE TYPE "B" CURB AND GUTTER WHEN CURB AND PAVEMENT ARE INTEGRAL.
4. THE MAXIMUM SLOPE OF 1/4" / FT TO BE MEASURED FROM THE TOP OF CURB AND TO APPLY TO THE FULL WIDTH OF THE AREA BETWEEN THE BACK OF CURB AND THE R.O.W.
5. FLEXIBLE COMPACTED BASE TO BE PLACED IN LIFTS NO THICKER THAN 6".
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

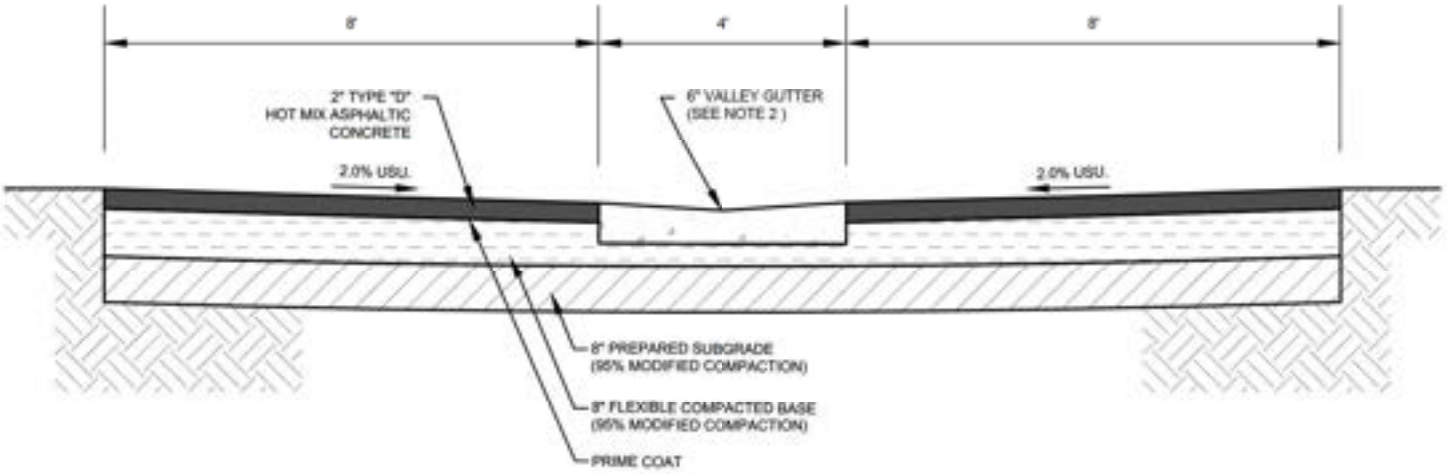
MIDLAND Engineering Services

DRAWN: DPM
CHECKED: JCF
APPROVED: MCC

EFFECTIVE DATE: 10/01/2018 | SCALE: NTS | DETAIL:

CONCRETE PAVEMENT STREET CROWN CROSS SECTION

202

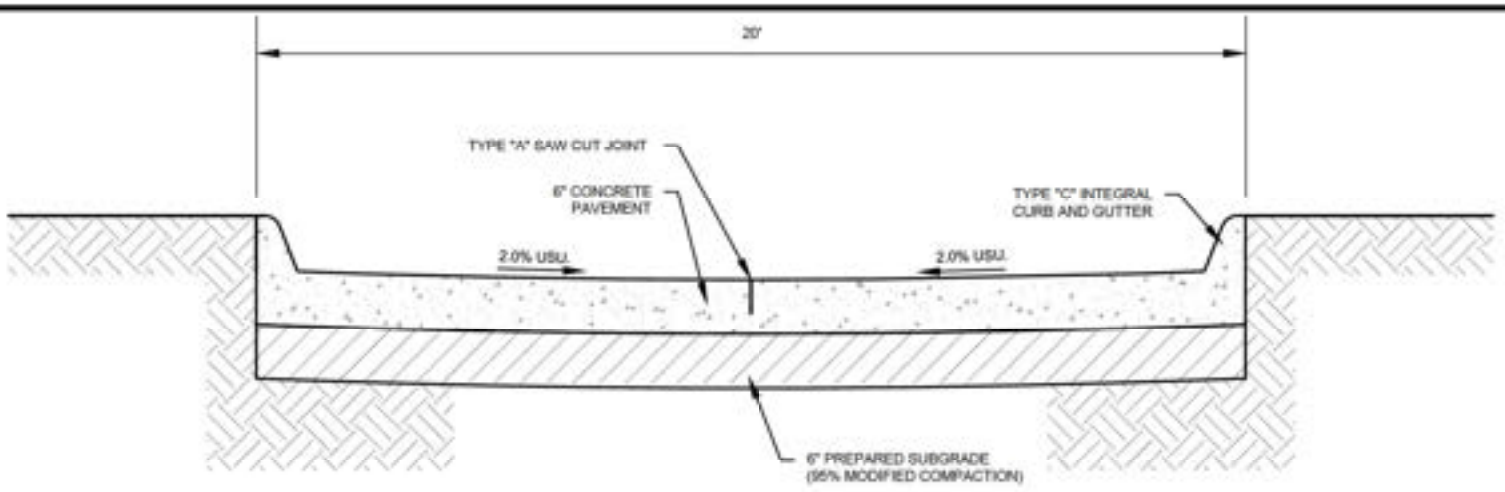


NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. WHERE LONGITUDINAL ALLEY GRADE IS LESS THAN 0.50%, CONSTRUCT A 4' WIDE CONCRETE VALLEY GUTTER ALONG THE CENTERLINE OF THE ALLEY. SEE DETAILS 218(A) AND 218(B).
3. SAW-CUT JOINTS ARE TO BE LOCATED AT EVERY 5' SPACING ALONG THE VALLEY GUTTER. SEAL ALL CONCRETE JOINTS.
4. EXPANSION JOINTS ARE TO BE LOCATED AT EVERY 200' SPACING ALONG THE VALLEY GUTTER. SEAL ALL CONCRETE JOINTS.
5. FLEXIBLE COMPACTED BASE TO BE PLACED IN LIFTS NO THICKER THAN 6".
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	STANDARD ASPHALT ALLEY CROSS SECTION		203
APPROVED: MCC			

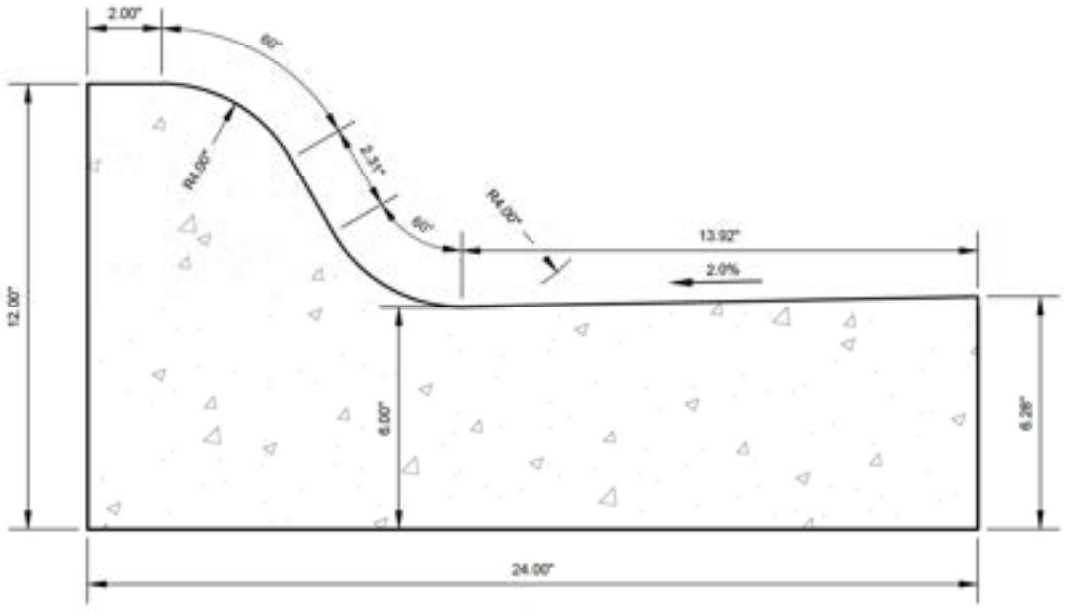


NOTES:

1. THIS DETAIL WILL BE THE STANDARD FOR ANY ALLEY ACCEPTING RUNOFF FROM A STREET, ROAD, OR DRAINAGE STRUCTURE.
2. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
3. SAW-CUT JOINTS ARE TO BE LOCATED AT EVERY 10' SPACING ALONG THE CONCRETE PAVEMENT. SEAL ALL CONCRETE JOINTS.
4. EXPANSION JOINTS ARE TO BE LOCATED AT EVERY 200' SPACING ALONG THE CONCRETE PAVEMENT. SEAL ALL CONCRETE JOINTS.
5. FLEXIBLE COMPACTED BASE TO BE PLACED IN LIFTS NO THICKER THAN 6".
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	TYPICAL DRAINAGE ALLEY CROSS SECTION		204
APPROVED: MCC			

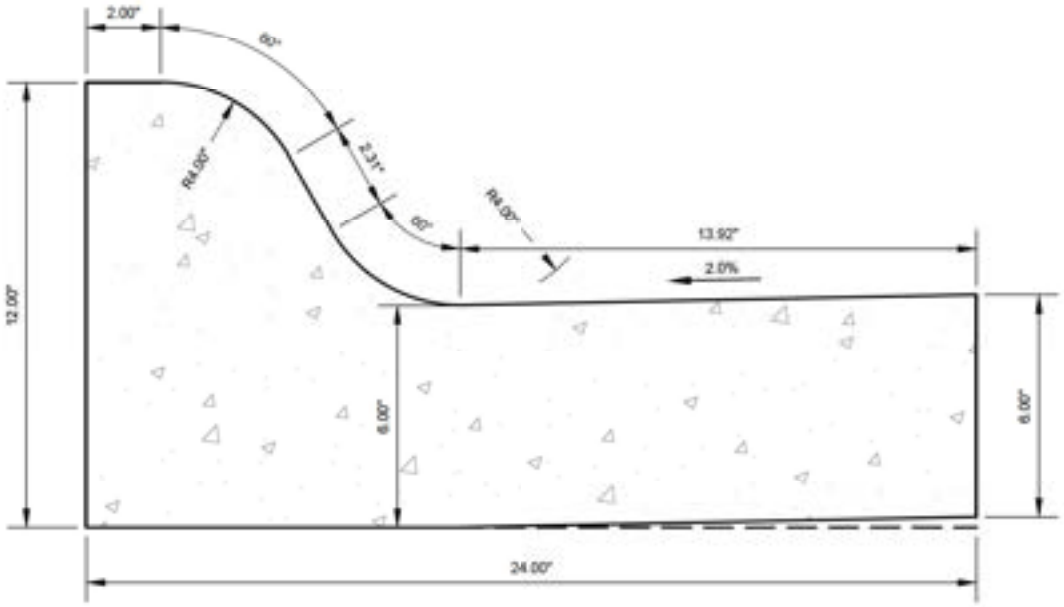


NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SEAL CONCRETE JOINT AT FACE OF CURB WHEN ADJACENT TO CONCRETE PAVEMENT AND NOT INTEGRAL WITH THAT PAVEMENT.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	TYPE A STANDARD CURB AND GUTTER		205
APPROVED: MCC			

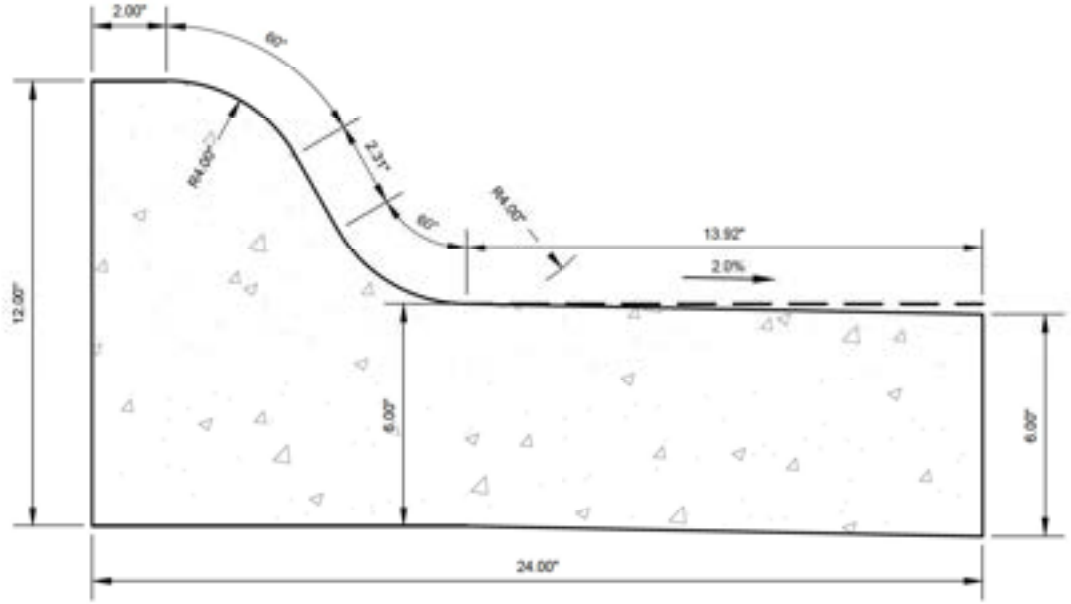


NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SEAL CONCRETE JOINT AT FACE OF CURB WHEN ADJACENT TO CONCRETE PAVEMENT AND NOT INTEGRAL WITH THAT PAVEMENT.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	TYPE B INTEGRAL CURB AND GUTTER		206
APPROVED: MCC			



NOTES:

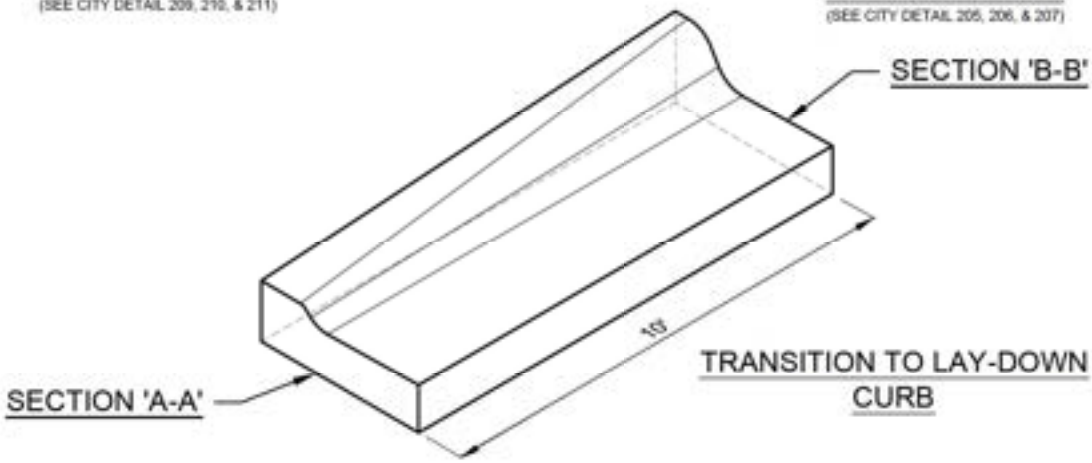
1. CONCRETE WILL BE THE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SEAL CONCRETE JOINT AT FACE OF CURB WHEN ADJACENT TO CONCRETE PAVEMENT AND NOT INTEGRAL WITH THAT PAVEMENT.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	TYPE C INVERT CURB AND GUTTER		207
APPROVED: MCC			

TYPE "D", "E" , OR "F" LAY-DOWN
CURB & GUTTER
(SEE CITY DETAIL 209, 210, & 211)

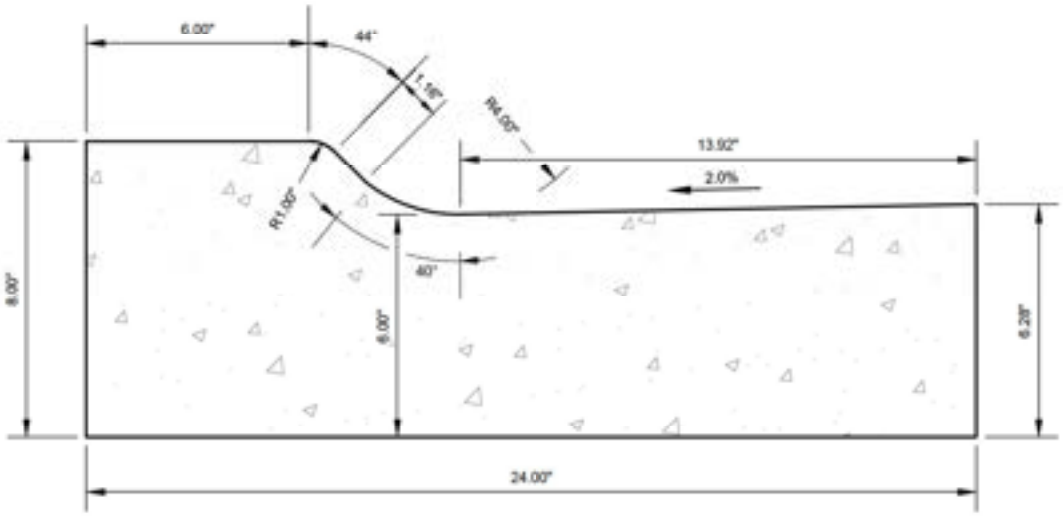
TYPE "A" , "B", OR "C"
CURB & GUTTER
(SEE CITY DETAIL 205, 206, & 207)



NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SEAL CONCRETE JOINT AT FACE OF CURB WHEN ADJACENT TO CONCRETE PAVEMENT AND NOT INTEGRAL WITH THAT PAVEMENT.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

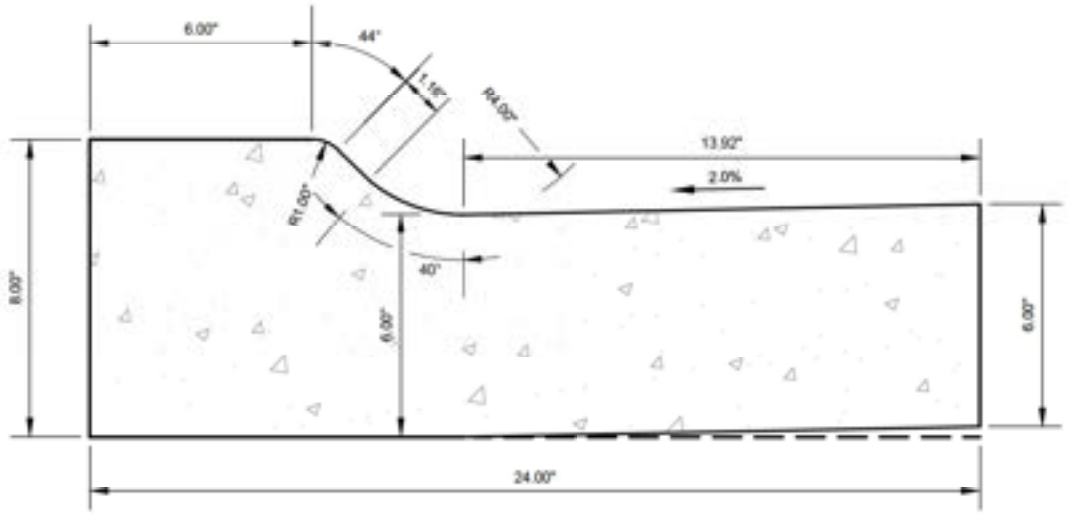
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		TRANSITION TO LAY-DOWN CURB		208



NOTES:

1. CONCRETE WILL BE THE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SEAL CONCRETE JOINT AT FACE OF CURB WHEN ADJACENT TO CONCRETE PAVEMENT AND NOT INTEGRAL WITH THAT PAVEMENT.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

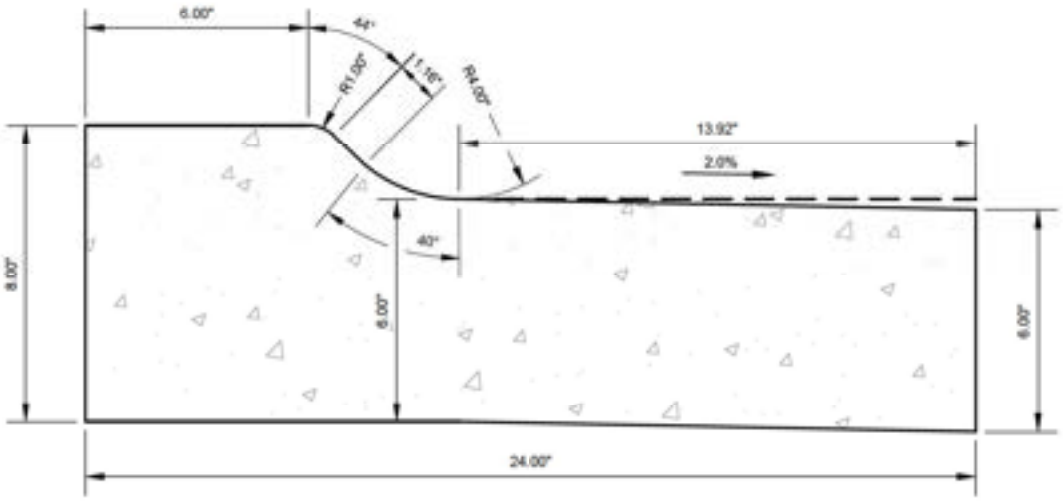
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		TYPE D LAY-DOWN CURB AND GUTTER		209



NOTES:

1. CONCRETE WILL BE THE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SEAL CONCRETE JOINT AT FACE OF CURB WHEN ADJACENT TO CONCRETE PAVEMENT AND NOT INTEGRAL WITH THAT PAVEMENT.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

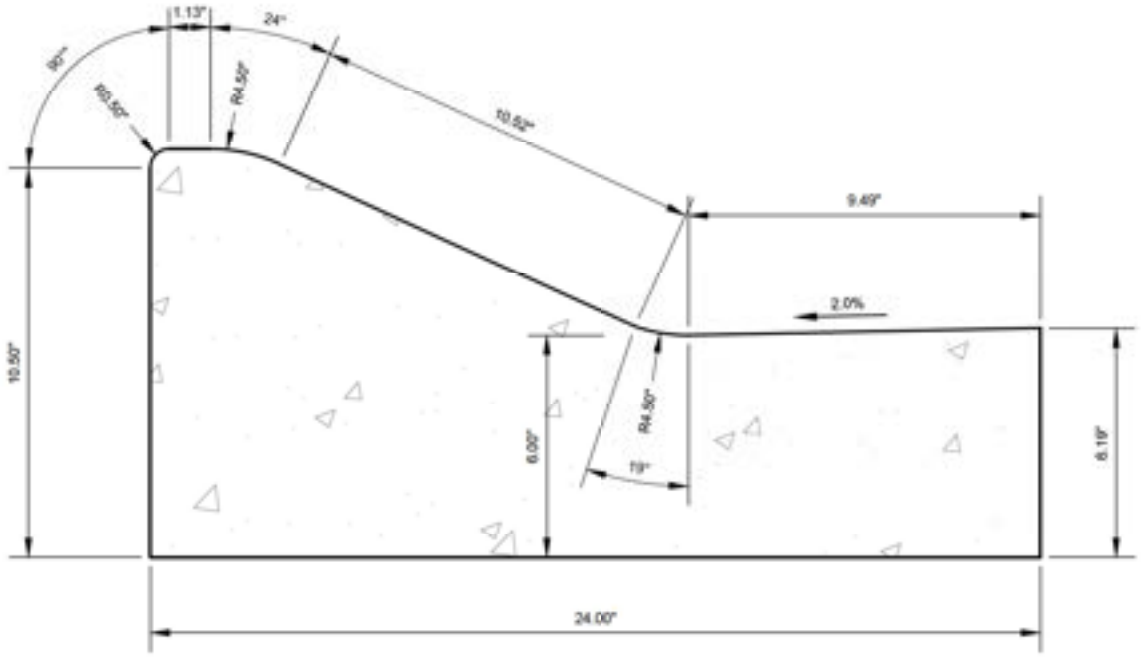
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		TYPE E INTEGRAL LAY-DOWN CURB AND GUTTER		210



NOTES:

1. CONCRETE WILL BE THE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SEAL CONCRETE JOINT AT FACE OF CURB WHEN ADJACENT TO CONCRETE PAVEMENT AND NOT INTEGRAL WITH THAT PAVEMENT.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

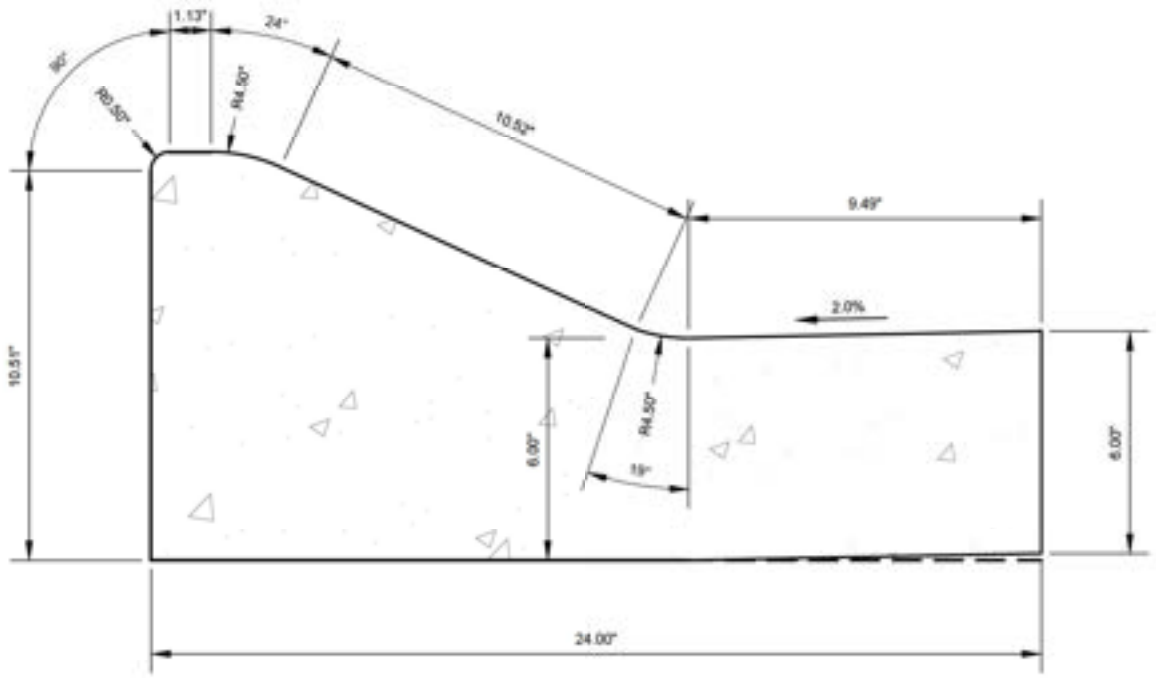
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		TYPE F INVERT LAY-DOWN CURB AND GUTTER		211



NOTES:

1. CONCRETE WILL BE THE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SEAL CONCRETE JOINT AT FACE OF CURB WHEN ADJACENT TO CONCRETE PAVEMENT AND NOT INTEGRAL WITH THAT PAVEMENT.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

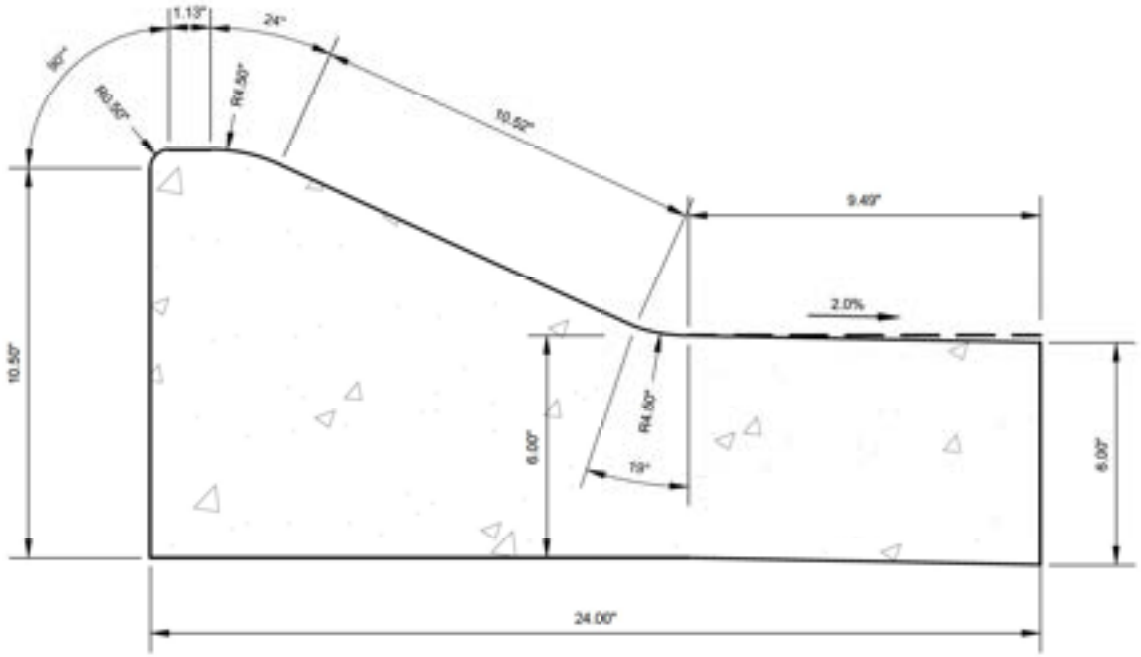
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		TYPE G MOUNTABLE CURB AND GUTTER		212



NOTES:

1. CONCRETE WILL BE THE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SEAL CONCRETE JOINT AT FACE OF CURB WHEN ADJACENT TO CONCRETE PAVEMENT AND NOT INTEGRAL WITH THAT PAVEMENT.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

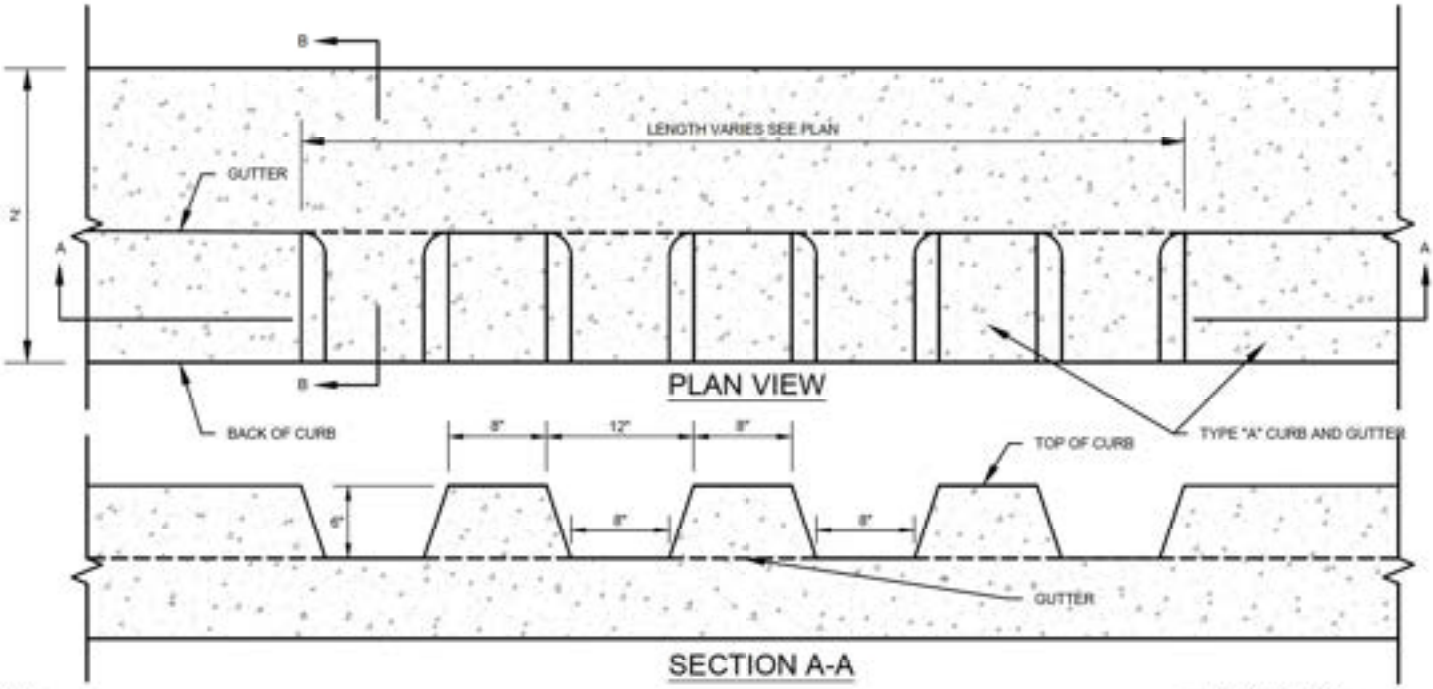
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		TYPE H INTEGRAL MOUNTABLE CURB AND GUTTER		213



NOTES:

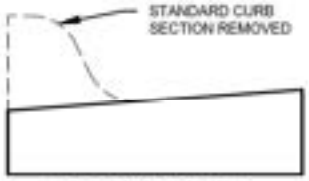
1. CONCRETE WILL BE THE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SEAL CONCRETE JOINT AT FACE OF CURB WHEN ADJACENT TO CONCRETE PAVEMENT AND NOT INTEGRAL WITH THAT PAVEMENT.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		TYPE G INVERT MOUNTABLE CURB AND GUTTER		214



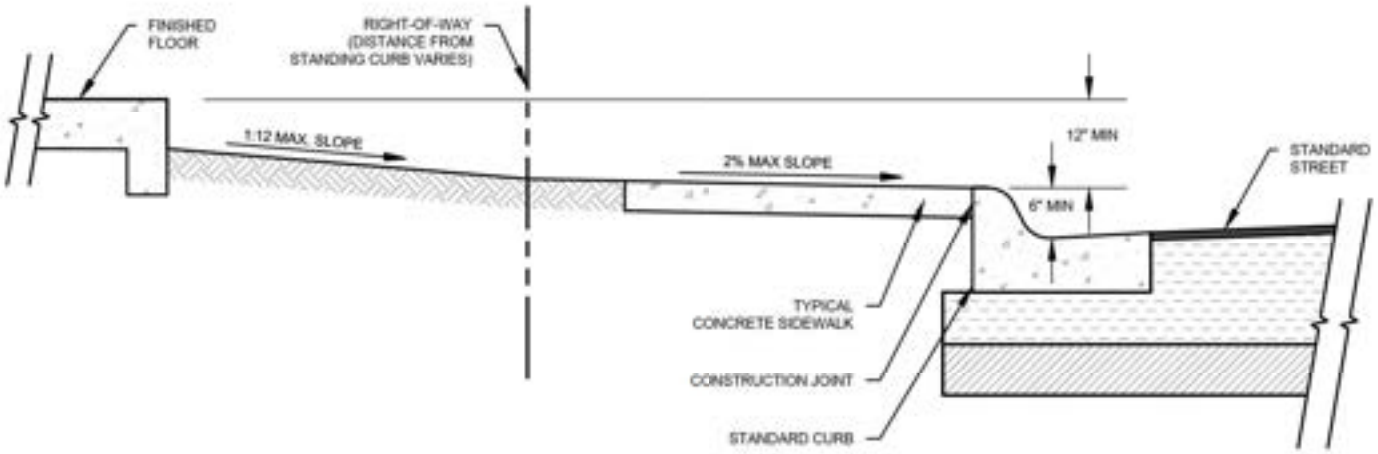
NOTES:

1. CONCRETE TO BE THE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SEAL CONCRETE JOINT AT FACE OF CURB WHEN ADJACENT TO CONCRETE PAVEMENT AND NOT INTEGRAL WITH THAT PAVEMENT.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.



SECTION B-B

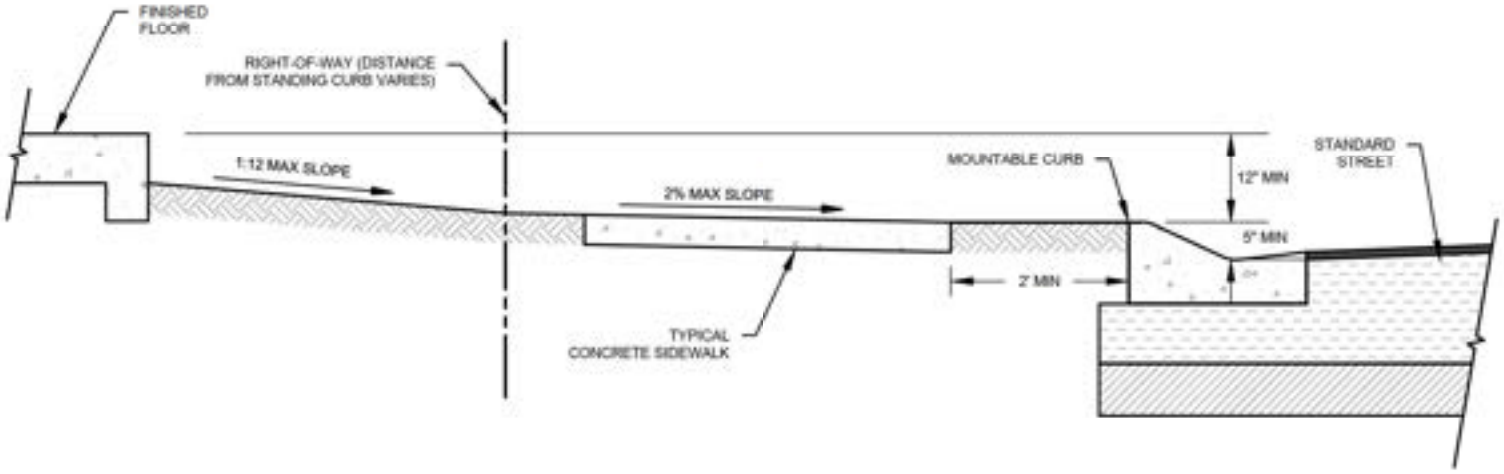
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
TYPE I SAW-TOOTH CURB AND GUTTER			DETAIL: 215



NOTES:

1. THE FINISHED FLOOR ELEVATION OF ANY BUILDING TO BE MINIMUM 12" ABOVE TOP OF CURB.
2. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
3. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

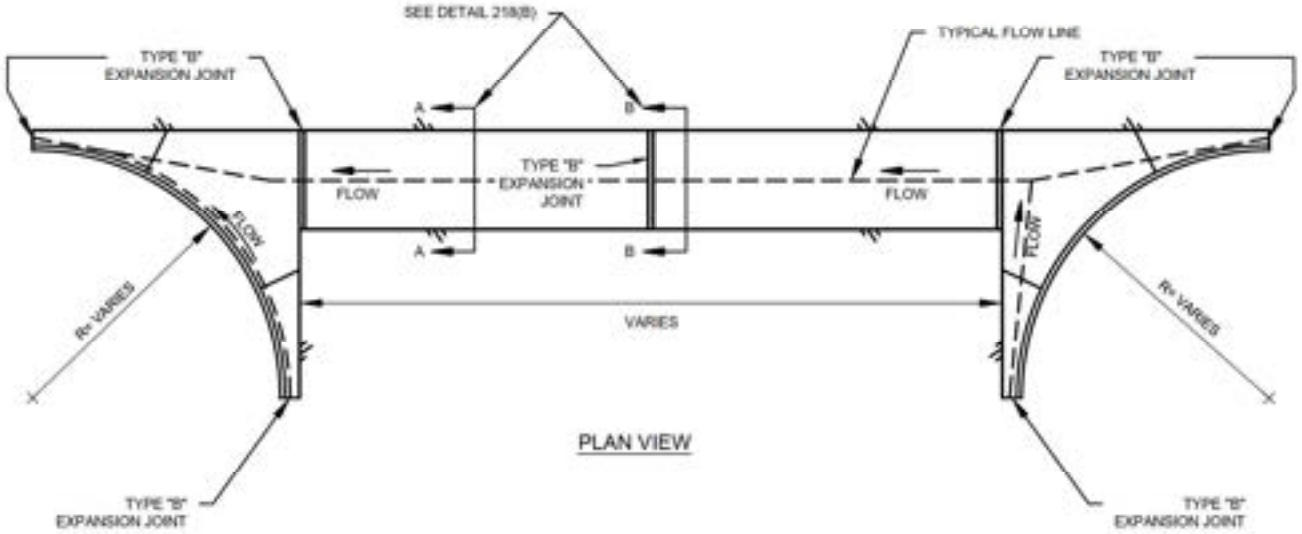
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		TYPICAL CURB, SIDEWALK, AND LOT CONFIGURATION		216



NOTES:

1. MINIMUM 2' SEPARATION DISTANCE BETWEEN MOUNTABLE CURB AND SIDEWALK.
2. FINISHED FLOOR ELEVATION OF ANY BUILDING TO BE MINIMUM 12" ABOVE TOP OF CURB.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		MOUNTABLE CURB, SIDEWALK AND LOT CONFIGURATION		217

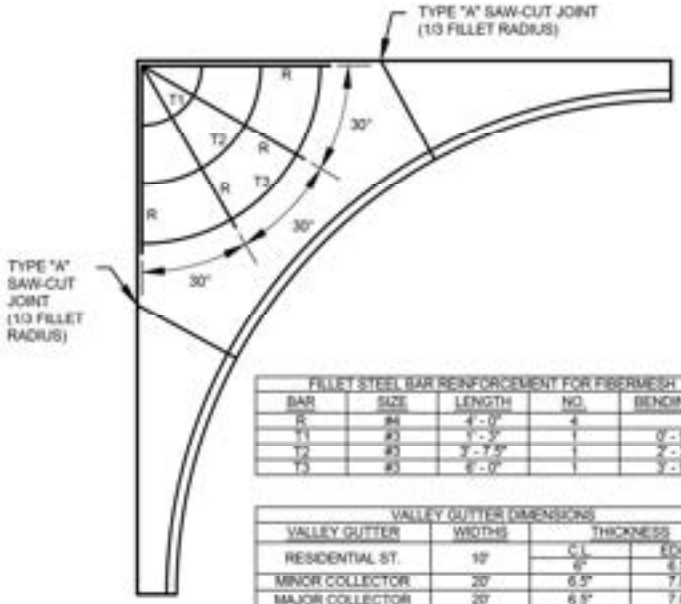


PLAN VIEW

NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. CONCRETE FILLET AREA TO BE PLACED WITH INTEGRAL CURB.
3. SEAL ALL CONCRETE JOINTS.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		FILLET AND VALLEY GUTTER		218(A)

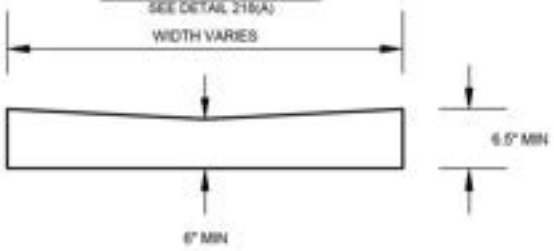


FILLET STEEL BAR REINFORCEMENT FOR FIBERMESH				
BAR	SIZE	LENGTH	NO.	BENDING R.
R	#4	4' - 0"	4	
T1	#3	1' - 3"	1	0' - 9"
T2	#3	3' - 7.5"	1	2' - 3"
T3	#3	6' - 0"	1	3' - 9"

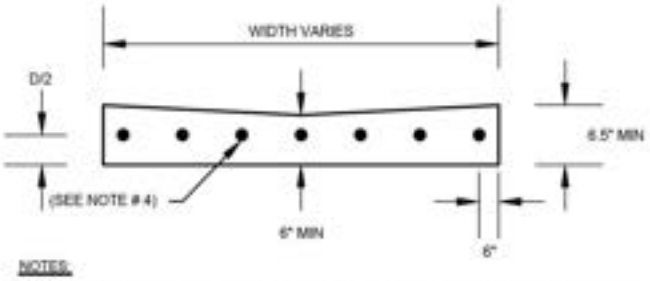
VALLEY GUTTER DIMENSIONS			
VALLEY GUTTER	WIDTHS	THICKNESS	
		C.L.	EDGE
RESIDENTIAL ST.	10'	6"	6.5"
MINOR COLLECTOR	20'	6.5"	7.0"
MAJOR COLLECTOR	20'	6.5"	7.0"
MINOR ARTERIAL	20'	7.5"	8.0"
MAJOR ARTERIAL	SEE PLANS		
VALLEY GUTTER WIDTH BASED ON CATEGORY OF STREET BEING CROSSED			

FILLET DIMENSIONS				
BACK OF CURB RADIUS	FILLET AREAS (90°)			CURB LENGTH
	COMPUTING R.	AREA S.F.	AREA S.Y.	L.F.
8	10	21.46	2.38	12.56
12	14	42.06	4.67	18.85
15	17	62.01	6.89	23.56
18	20	81.84	9.54	28.27
20	22	103.56	11.54	31.42
25	27	156.44	17.38	39.27
30	32	219.75	24.42	47.12
35	37	293.79	32.64	54.98
40	42	378.56	42.06	62.83
45	47	474.06	52.67	70.69
50	52	580.28	64.48	78.54

TYPICAL SECTION A - A
SEE DETAIL 218(A)



JOINT SECTION B - B
SEE DETAIL 218(A)

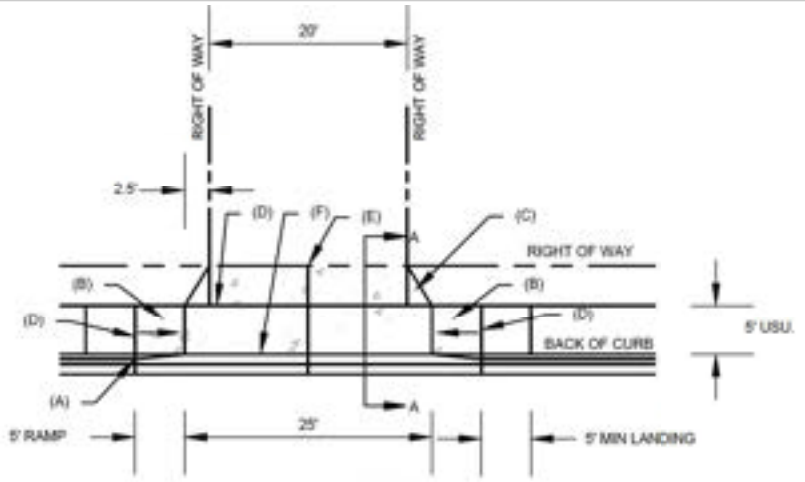


NOTES:

1. WHEN FILLET AREA IS TO BE PAVED WITH 8" THICK CONCRETE THE BOTTOM OF THE CURB AND GUTTER WILL BE EXTENDED TO MATCH THE FILLET THICKNESS.
2. USE FIBER REINFORCED CONCRETE THROUGHOUT VALLEY GUTTER.
3. STEEL BAR REINFORCEMENT TO BE USED IN FILLET, BUT NOT IN VALLEY GUTTER. STEEL BAR REINFORCEMENT TO BE PLACED AT THE BOTTOM 1/3 POINT OF SLAB CONCRETE ON GRADE AND TO HAVE A MINIMUM COVER OF 2" WHEN USED.
4. UTILIZE SMOOTH DOWEL RODS CENTERED ON THE VALLEY GUTTER JOINT, EVENLY SPACED AT 12" INTERVALS FOR THE FULL WIDTH OF THE VALLEY GUTTER.
5. SEAL ALL CONCRETE JOINTS.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

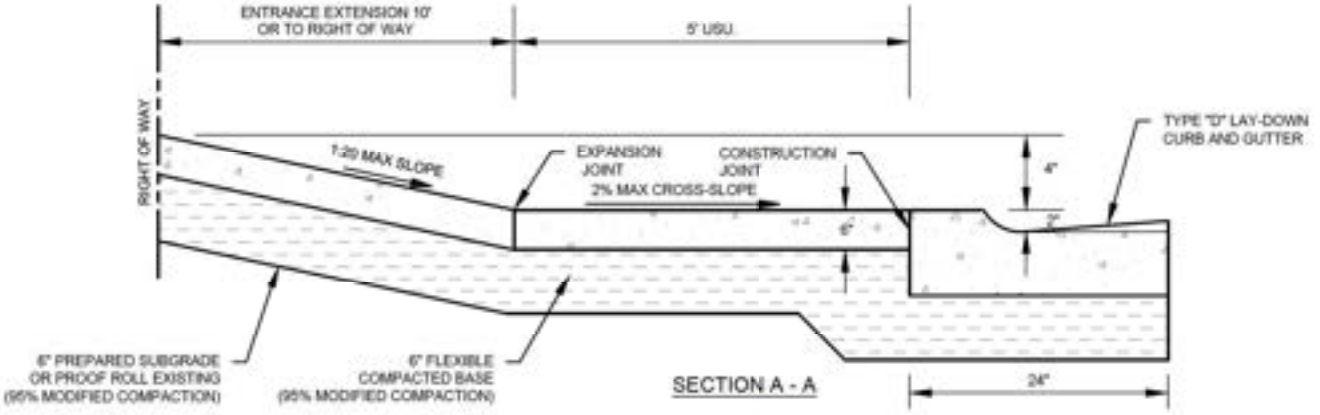
DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	FILLET AND VALLEY GUTTER		218(B)
APPROVED: MCC			



PLAN VIEW

NOTES:

1. (A) = MATCH GUTTER
2. (B) = DIRECTIONAL CURB RAMP DETAIL 231 (8.33% MAX FOR HANDICAP RAMP)
3. (C) = CONCRETE FLARE
4. (D) = TYPE B EXPANSION JOINT
5. (E) = TYPE A SAW-CUT JOINT
6. (F) = CONSTRUCTION JOINT (COLD JOINT)



SECTION A - A

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		STANDARD ALLEY APPROACH		219(A)

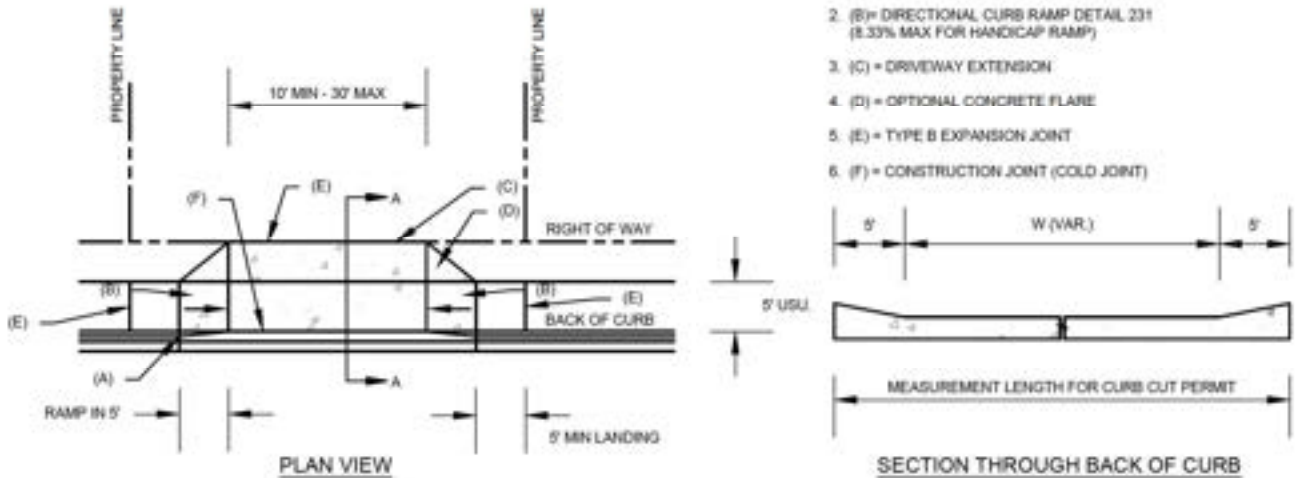
NOTES:

1. REMOVE AND REPLACE EXISTING CURB AND GUTTER TO NEAREST JOINT IF LESS THAN 4' SECTION OF EXISTING CURB AND GUTTER REMAINS AFTER ALLEY APPROACH IS PLACED.
2. MATCH GUTTER/FLOWLINE ELEVATION ON EACH END OF ALLEY APPROACH. WATER MUST FLOW IN GUTTER ACROSS THE ALLEY APPROACH.
3. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
4. 2" INVERT REQUIRED AT ALLEY APPROACH CENTER LINE WHEN ALLEY DRAINS TOWARDS STREET. IF ALLEY DRAINS AWAY FROM STREET THEN BACK OF APPROACH IS FLAT.
5. OVER-EXCAVATION BELOW THE GRADE REQUIRED TO BE CORRECTED BY PLACING EXTRA CONCRETE AT THE TIME THE ENTRANCE IS PLACED OR BY PLACING ADDITIONAL CITY STANDARD FLEXIBLE COMPACTED BASE.
6. FLEXIBLE COMPACTED BASE TO BE PLACED IN LIFTS NO THICKER THAN 6".
7. SIDEWALKS AND RAMPS TO HAVE COARSE BROOM FINISH.
8. SEAL ALL CONCRETE JOINTS.
9. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
10. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		STANDARD ALLEY APPROACH		219(B)

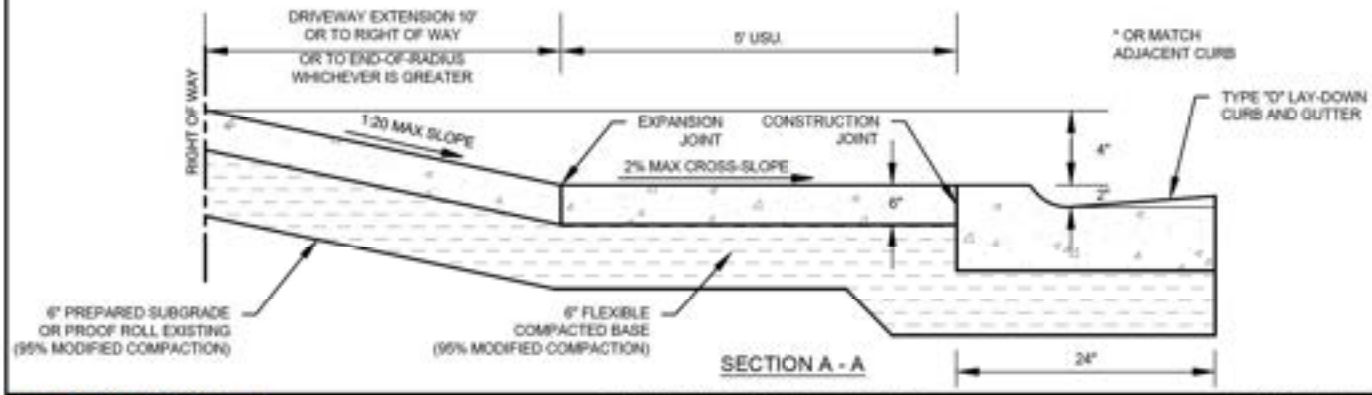
NOTES:

1. (A) = MATCH GUTTER
2. (B)= DIRECTIONAL CURB RAMP DETAIL 231 (8.33% MAX FOR HANDICAP RAMP)
3. (C) = DRIVEWAY EXTENSION
4. (D) = OPTIONAL CONCRETE FLARE
5. (E) = TYPE B EXPANSION JOINT
6. (F) = CONSTRUCTION JOINT (COLD JOINT)



PLAN VIEW

SECTION THROUGH BACK OF CURB



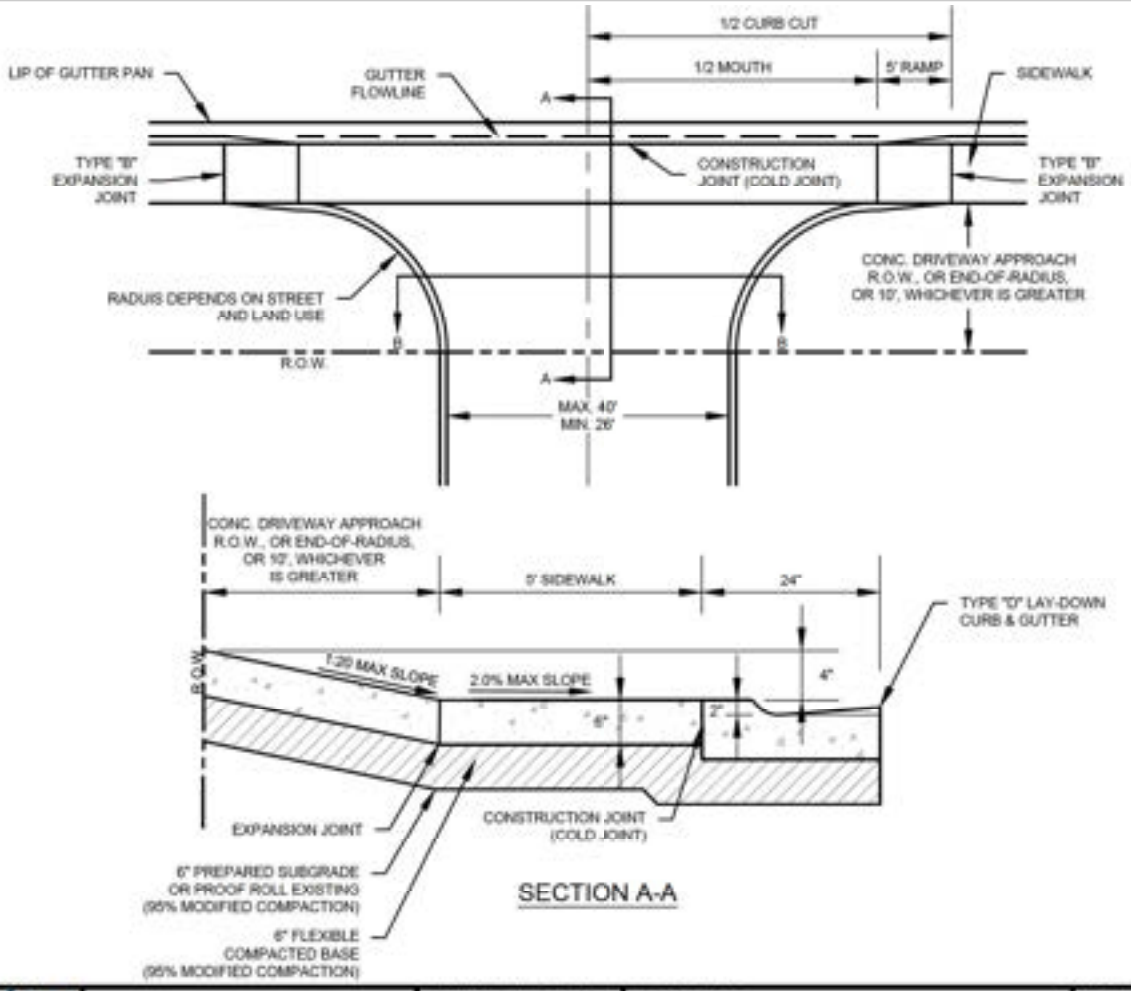
SECTION A - A

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		SINGLE FAMILY AND DUPLEX DRIVEWAY APPROACH		220(A)

NOTES:

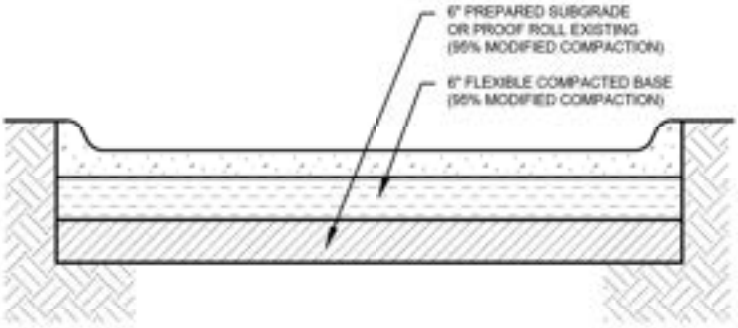
1. REMOVE AND REPLACE EXISTING CURB AND GUTTER TO NEAREST JOINT IF LESS THAN 4' SECTION OF EXISTING CURB AND GUTTER REMAINS AFTER DRIVEWAY APPROACH PLACED.
2. LANDING MAY BE CLOSER THAN 5' FROM PROPERTY LINE WITH ADJOINING PROPERTY OWNER'S CONSENT. CONSENT FORMS ARE AVALIABLE IN ENGINEERING SERVICES. APPROVAL FROM ADJOINING PROPERTY OWNER DOES NOT GUARANTEE ENGINEERING SERVICES APPROVAL.
3. THIS DETAIL ONLY APPLIES WHEN ADJACENT PROPERTY IS NOT AN ALLEY. A MINIMUM 10' IS REQUIRED BETWEEN DRIVEWAY CURB OPENING AND ALLEY PAVING.
4. MATCH GUTTER/FLOWLINE ELEVATION ON EACH END OF DRIVEWAY APPROACH. WATER MUST FLOW IN GUTTER ACROSS THE DRIVEWAY APPROACH.
5. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
6. CONTRACTOR, AT THEIR OPTION, MAY ELECT TO PLACE 8" CONCRETE PAVEMENT WITHOUT FLEXIBLE COMPACTED BASE RATHER THAN 6" CONCRETE PAVEMENT WITH COMPACTED FLEXIBLE BASE.
7. OVER-EXCAVATION BELOW THE GRADE REQUIRED TO BE CORRECTED BY PLACING EXTRA CONCRETE AT THE TIME THE DRIVEWAY IS PLACED OR BY PLACING ADDITIONAL CITY STANDARD FLEXIBLE COMPACTED BASE.
8. FLEXIBLE COMPACTED BASE TO BE PLACED IN LIFTS NO THICKER THAN 6".
9. SIDEWALKS AND RAMPS TO HAVE COARSE BROOM FINISH.
10. SEAL ALL CONCRETE JOINTS.
11. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
12. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE:	10/01/2018	SCALE: NTS	DETAIL:
		SINGLE FAMILY AND DUPLEX DRIVEWAY APPROACH			220(B)



MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	MULTI-FAMILY & COMMERCIAL DRIVEWAY		221(A)
APPROVED: MCC			

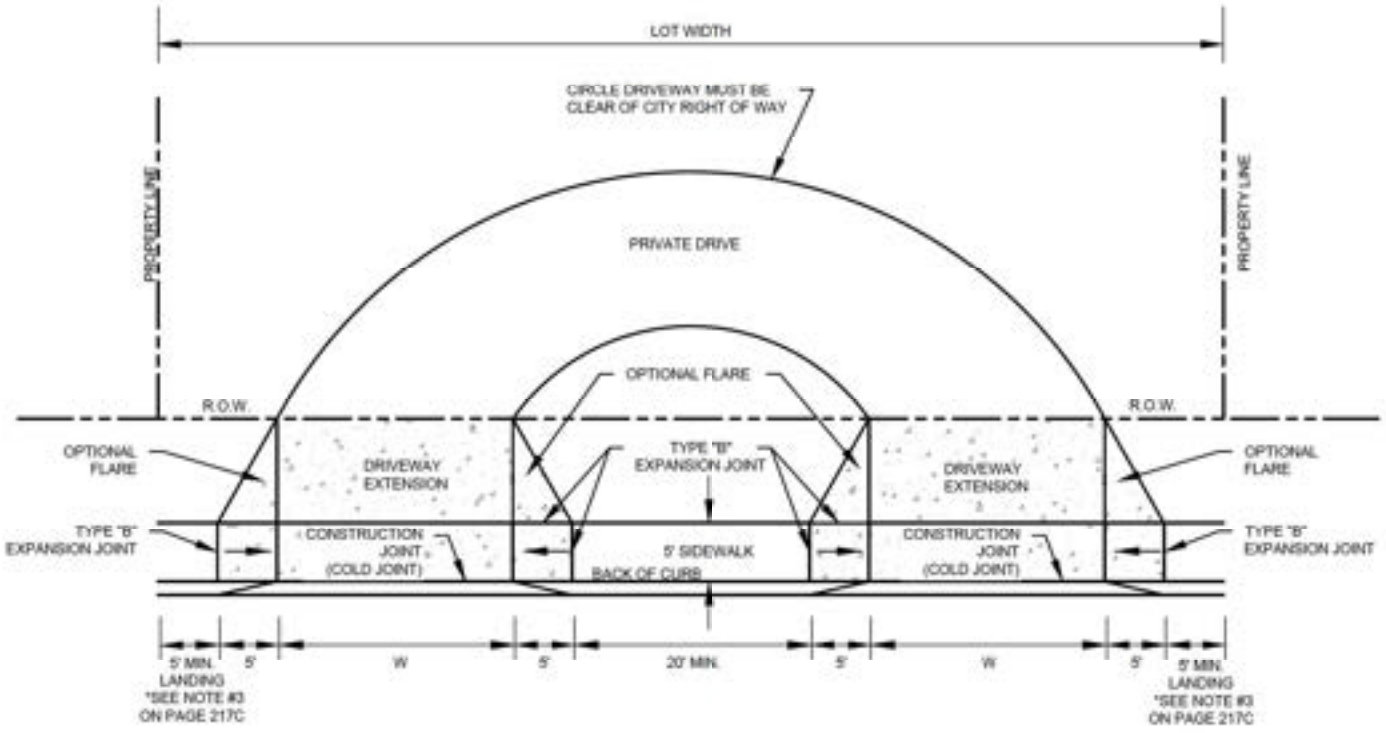


SECTION B-B

NOTES:

1. REMOVE AND REPLACE EXISTING CURB AND GUTTER TO NEAREST JOINT IF LESS THAN 4' SECTION OF EXISTING CURB AND GUTTER REMAINS AFTER DRIVEWAY APPROACH PLACED.
2. LANDING MAY BE CLOSER THAN 5' FROM PROPERTY LINE WITH ADJOINING PROPERTY OWNER'S CONSENT. CONSENT FORMS ARE AVAILABLE IN ENGINEERING SERVICES. APPROVAL FROM ADJOINING PROPERTY OWNER DOES NOT GUARANTEE ENGINEERING SERVICES APPROVAL.
3. THIS DETAIL ONLY APPLIES WHEN ADJACENT PROPERTY IS NOT AN ALLEY. A MINIMUM 10' IS REQUIRED BETWEEN DRIVEWAY CURB OPENING AND ALLEY PAVING.
4. MATCH GUTTER/ FLOWLINE ELEVATION ON EACH END OF DRIVEWAY APPROACH. WATER MUST FLOW IN GUTTER ACROSS THE DRIVEWAY APPROACH.
5. THE CITY ENGINEER OR TRAFFIC ENGINEER MAY APPROVE WIDER OPENINGS FOR COMMERCIAL DRIVES TO ACCOMMODATE DIVIDED ENTRY/EXIT AND ANGLED DRIVES OR HIGH VOLUME, HIGH SPEED STREETS.
6. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
7. CONTRACTOR, AT THEIR OPTION, MAY ELECT TO PLACE 8" CONCRETE PAVEMENT WITHOUT FLEXIBLE COMPACTED BASE RATHER THAN 6" CONCRETE PAVEMENT WITH COMPACTED FLEXIBLE BASE.
8. OVER-EXCAVATION BELOW THE GRADE REQUIRED TO BE CORRECTED BY PLACING EXTRA CONCRETE AT THE TIME THE DRIVEWAY IS PLACED OR BY PLACING ADDITIONAL CITY STANDARD FLEXIBLE COMPACTED BASE.
9. FLEXIBLE COMPACTED BASE TO BE PLACED IN LIFTS NO THICKER THAN 6".
10. SIDEWALKS AND RAMPS TO HAVE COURSE BROOM FINISH.
11. SEAL ALL CONCRETE JOINTS.
12. MATERIAL AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
13. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		MULTI-FAMILY & COMMERCIAL DRIVEWAY		221(B)



SINGLE FAMILY AND DUPLEX CIRCLE DRIVEWAY APPROACH

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		CIRCLE DRIVEWAY		222(A)

MINIMUM LOT WIDTH FOR CIRCLE DRIVEWAYS			
DRIVEWAY WIDTH (FT) (W)	LOT WIDTH (FT): NO STANDUP CURB WAIVER AGREEMENT	LOT WIDTH (FT): 1 STANDUP CURB WAIVER AGREEMENT	LOT WIDTH (FT): 2 STANDUP CURB WAIVER AGREEMENT
10	70	65	60
11	72	67	62
12	74	69	64
13	76	71	66
14	78	73	68
15	80	75	70
16	82	77	72
17	84	79	74
18	86	81	76
19	88	83	78
20	90	85	80
21	92	87	82
22	94	89	84
23	96	91	86
24	98	93	88
25	100	95	90
26	102	97	92
27	104	99	94
28	106	101	96
29	108	103	98
30	110	105	100

MIDLAND Engineering Services

DRAWN: DPM
CHECKED: JCF
APPROVED: MCC

EFFECTIVE DATE: 10/01/2018 | SCALE: NTS | DETAIL:

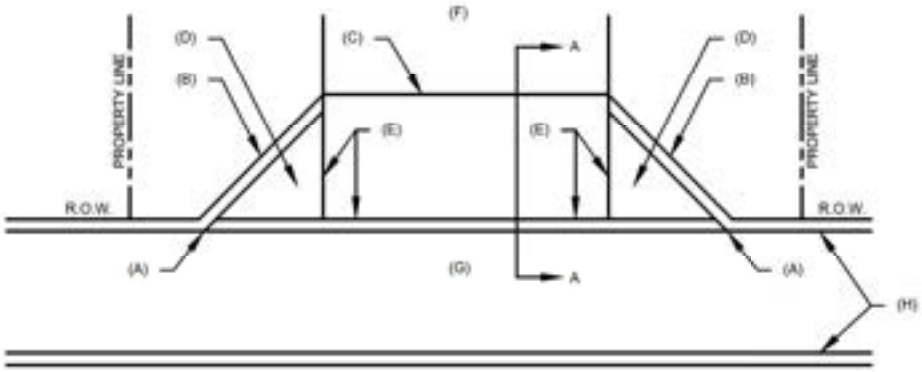
CIRCLE DRIVEWAY

222(B)

NOTES:

1. CONSTRUCT APPROACHES AS DETAILED ON SINGLE FAMILY & DUPLEX DRIVEWAY APPROACH DETAIL.
2. REMOVE AND REPLACE EXISTING CURB AND GUTTER TO NEAREST JOINT IF LESS THAN 4' SECTION OF EXISTING CURB AND GUTTER REMAIN AFTER DRIVEWAY APPROACH PLACED.
3. LANDING MAY BE CLOSER THAN 5' FROM PROPERTY LINE WITH ADJOINING PROPERTY OWNER'S CONSENT. CONSENT FORMS ARE AVAILABLE IN ENGINEERING SERVICES. APPROVAL FROM ADJOINING PROPERTY OWNER DOES NOT GUARANTEE ENGINEERING SERVICES APPROVAL.
4. THIS DETAIL ONLY APPLIES WHEN ADJACENT PROPERTY IS NOT AN ALLEY. A MINIMUM 10' IS REQUIRED BETWEEN DRIVEWAY CURB OPENING AND ALLEY PAVING.
5. MATCH GUTTER/FLOWLINE ELEVATION ON EACH END OF DRIVEWAY. WATER MUST FLOW IN GUTTER ACROSS THE DRIVEWAY APPROACH.
6. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
7. CONTRACTOR, AT THEIR OPTION, MAY ELECT TO PLACE 8" CONCRETE PAVEMENT WITHOUT FLEXIBLE COMPACTED BASE RATHER THAN 6" CONCRETE PAVEMENT WITH COMPACTED FLEXIBLE BASE.
8. OVER-EXCAVATION BELOW THE GRADE REQUIRED TO BE CORRECTED BY PLACING EXTRA CONCRETE AT THE TIME THE DRIVEWAY IS PLACED OR BY PLACING ADDITIONAL CITY STANDARD FLEXIBLE COMPACTED BASE.
9. FLEXIBLE COMPACTED BASE TO BE PLACED IN LIFTS NO THICKER THAN 6".
10. SIDEWALKS AND RAMPS TO HAVE COARSE BROOM FINISH.
11. SEAL ALL CONCRETE JOINTS.
12. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
13. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

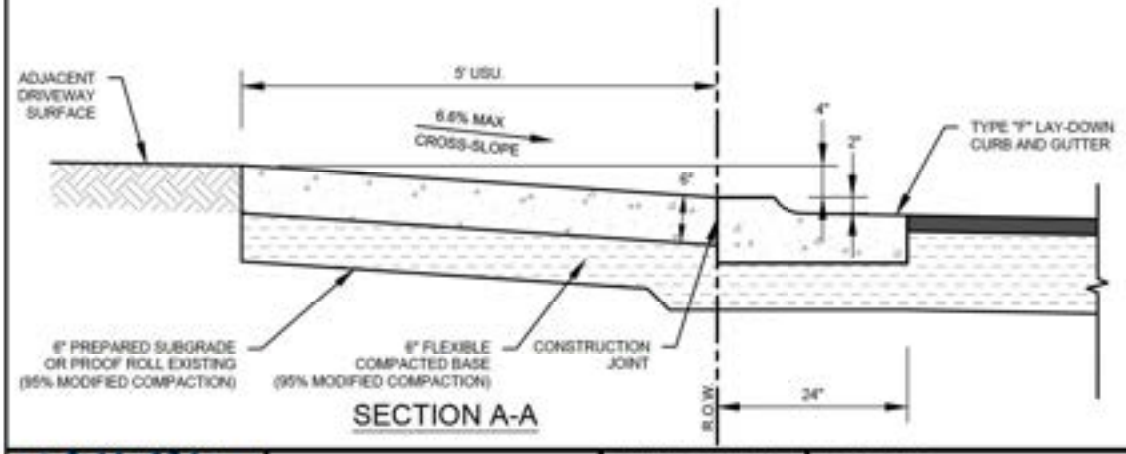
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		CIRCLE DRIVEWAY		222(C)



PLAN VIEW

NOTES:

1. (A) = MATCH ADJACENT CURB
2. (B) = TRANSITION CURB TO MATCH ADJACENT DRAINAGE ALLEY TOP OF CURB TO END OF DRIVEWAY EXTENSION.
3. (C) = DRIVEWAY EXTENSION TO BE MINIMUM LENGTH OF 5'.
4. (D) = CONCRETE FLARE, 5' x 5'
5. (E) = CONSTRUCTION JOINT (COLD JOINT)
6. (F) = ADJACENT DRIVEWAY SURFACE
7. (G) = DRAINAGE ALLEY
8. (H) = DRAINAGE ALLEY CURB



SECTION A-A

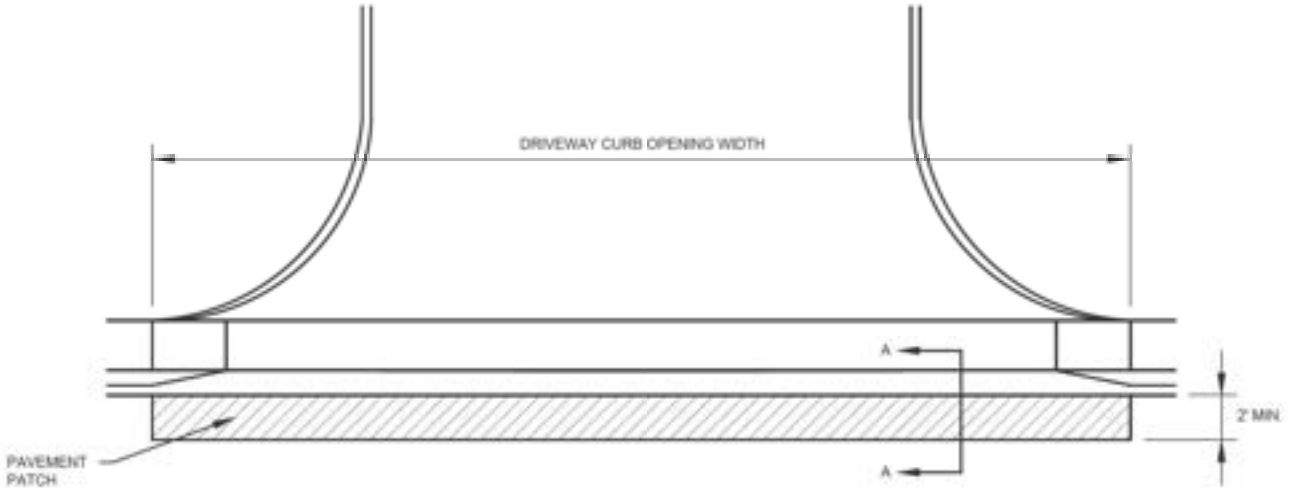
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		REAR YARD DRIVEWAY APPROACH TO TYPICAL DRAINAGE ALLEY		223(A)

NOTES:

1. REMOVE AND REPLACE EXISTING CURB AND GUTTER TO NEAREST JOINT IF LESS THAN 4' SECTION OF EXISTING CURB AND GUTTER REMAINS AFTER DRIVEWAY APPROACH PLACED.
2. DRIVEWAY CURB OPENING MAY BE CLOSER THAN 5' FROM PROPERTY LINE WITH ADJOINING PROPERTY OWNER'S CONSENT. CONSENT FORMS ARE AVAILABLE IN ENGINEERING SERVICES. APPROVAL FROM ADJOINING PROPERTY OWNER DOES NOT GUARANTEE ENGINEERING SERVICES APPROVAL.
3. THIS DETAIL ONLY APPLIES WHEN ADJACENT PROPERTY IS NOT RIGHT OF WAY. A MINIMUM 10' IS REQUIRED BETWEEN RIGHT OF WAY AND DRIVEWAY CURB OPENING.
4. MATCH CURB/PAVEMENT EDGE ELEVATION ON EACH END OF DRIVEWAY APPROACH.
5. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
6. CONTRACTOR, AT THEIR OPTION, MAY ELECT TO PLACE 8" CONCRETE PAVEMENT WITHOUT FLEXIBLE BASE RATHER THAN 6" CONCRETE WITH COMPACTED FLEXIBLE BASE.
7. OVER-EXCAVATION BELOW THE GRADE REQUIRED TO CORRECTED BY PLACING EXTRA CONCRETE AT THE TIME THE DRIVEWAY IS PLACED OR BY PLACING ADDITIONAL CITY STANDARD FLEXIBLE COMPACTED BASE.
8. FLEXIBLE COMPACTED BASE TO BE PLACE IN LIFTS NO THICKER THAN 6".
9. SEAL ALL CONCRETE JOINTS.
10. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
11. CONSTRUCT AS SHOWN UNLESS OTHER WISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

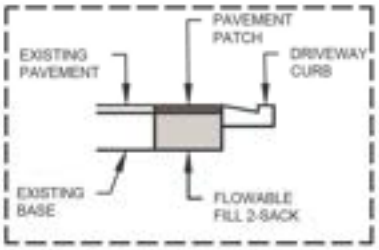
DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	REAR YARD DRIVEWAY APPROACH TO TYPICAL DRAINAGE ALLEY		223(B)
APPROVED: MCC			



PLAN VIEW

NOTES:

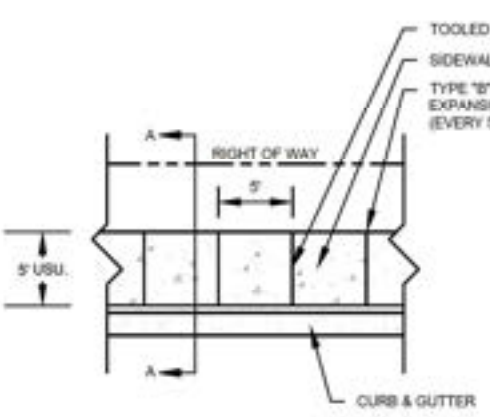
1. CLEANLY SAW-CUT PAVEMENT ACROSS FULL EXTENT OF DRIVEWAY CURB OPENING AND REMOVE.
2. ASPHALT PAVEMENT PATCHES TO BE MINIMUM OF 2" TYPE "D" HMAC OR MATCH EXISTING ASPHALT THICKNESS IF IT IS GREATER THAN 2" THICK, WITH 95% MODIFIED COMPACTION THROUGHOUT. TACK COAT ALL EXPOSED SURFACES PRIOR TO PLACING NEW ASPHALT PATCH.
3. CONCRETE PAVEMENT PATCHES TO BE MINIMUM OF 6" OR MATCH EXISTING CONCRETE THICKNESS IF IT IS GREATER THAN 6" THICK. CONCRETE PATCHES ARE TO EXTEND FROM JOINT-TO-JOINT IF EXISTING CONCRETE PAVEMENT IS JOINTED AND MATCH EXISTING PAVEMENT JOINTING. IF EXISTING CONCRETE PAVEMENT IS NOT JOINTED THEN CONCRETE PATCH IS TO BE JOINTED EVERY 10'. SEAL ALL CONCRETE JOINTS.
4. REMOVE AND REPLACE ALL BASE MATERIAL BENEATH PAVEMENT. PATCH WITH FLOWABLE FILL 2-SACK (2-SACK=188 LBS/CY, PORTLAND CEMENT). PLACE ALL FLOWABLE FILL 2-SACK AS A SINGLE CONTINUOUS POUR.
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

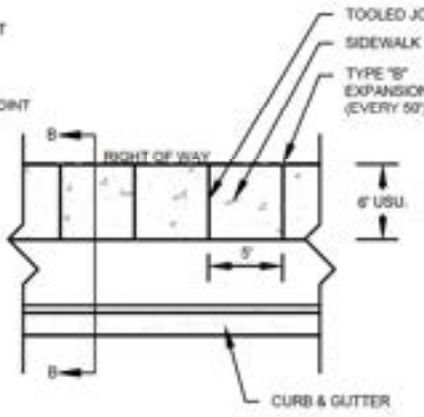


SECTION A-A

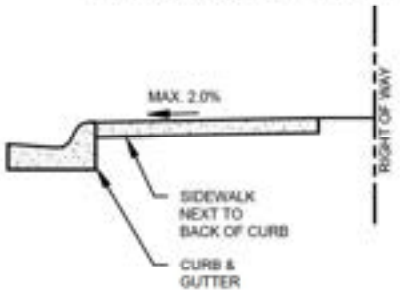
MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	PAVEMENT PATCH FOR NEW DRIVEWAYS		224
APPROVED: MCC			



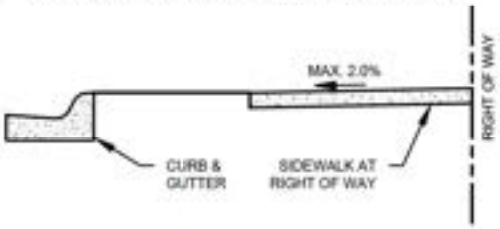


ATTACHED SIDEWALK PLACEMENT



SECTION A - A

DETACHED SIDEWALK PLACEMENT



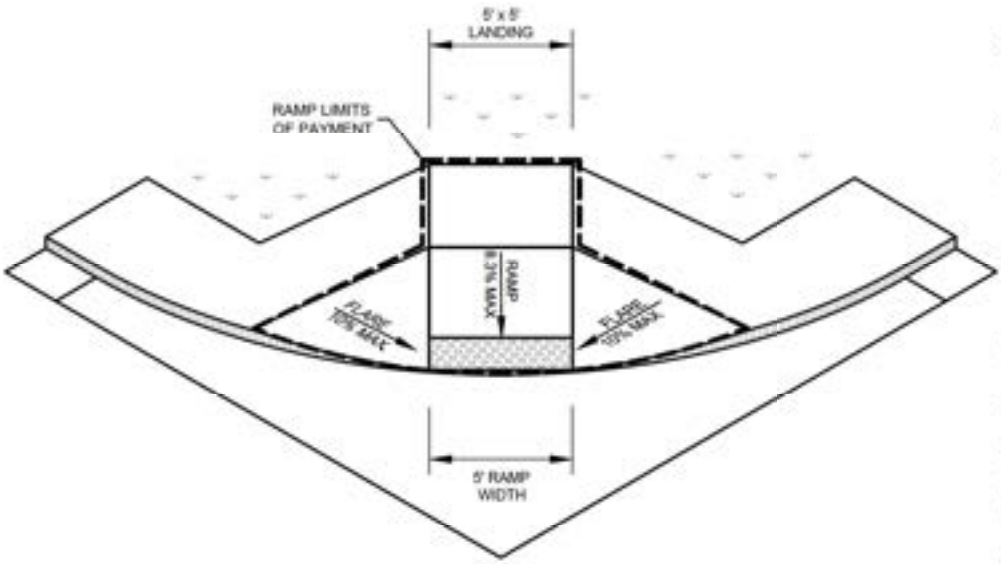
SECTION B - B

NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "A" AND HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SIDEWALK TO BE A MINIMUM OF 5' WIDE AND 4" THICK.
3. SIDEWALKS TO HAVE TYPE A SAWCUT JOINTS OR TOOLED JOINTS EVERY 5'.
4. TYPE "B" EXPANSION JOINTS TO BE LOCATED AT ALL PEDESTRIAN ACCESS RAMPS AND WHEREVER NEW SIDEWALK IS PLACED ADJACENT TO EXISTING CONCRETE.
5. ATTACHED SIDEWALK WILL BE LOCATED ADJACENT TO THE BACK OF CURB.
6. DETACHED SIDEWALK WILL BE LOCATED ADJACENT TO THE RIGHT-OF-WAY.
7. SIDEWALK CROSS-SLOPE MAY NOT EXCEED 2.0%.
8. ALL EXPOSED SIDEWALK EDGES TO HAVE A 1/2" RADIUS.
9. WHERE OBSTRUCTION IN SIDEWALK EXIST, THERE SHALL BE A 3' MINIMUM CLEARANCE. SIDEWALK LOCATION MAY BE SHIFTED WITH THE APPROVAL OF THE CITY ENGINEER.
10. ALL SIDEWALKS WITH A CONCRETE SURFACE SHALL HAVE A COURSE BROOM FINISH OR OTHER ROUGH NON-SKID TYPE FINISH AS APPROVED BY THE CITY ENGINEER.
11. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
12. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.
13. SIDEWALKS IN DOWNTOWN PER CENTRAL BUSINESS DISTRICT POLICY.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	STANDARD SIDEWALK		225
APPROVED: MCC			



TYPE 8
DIAGONAL CURB RAMP

CURB RAMP NOTES:

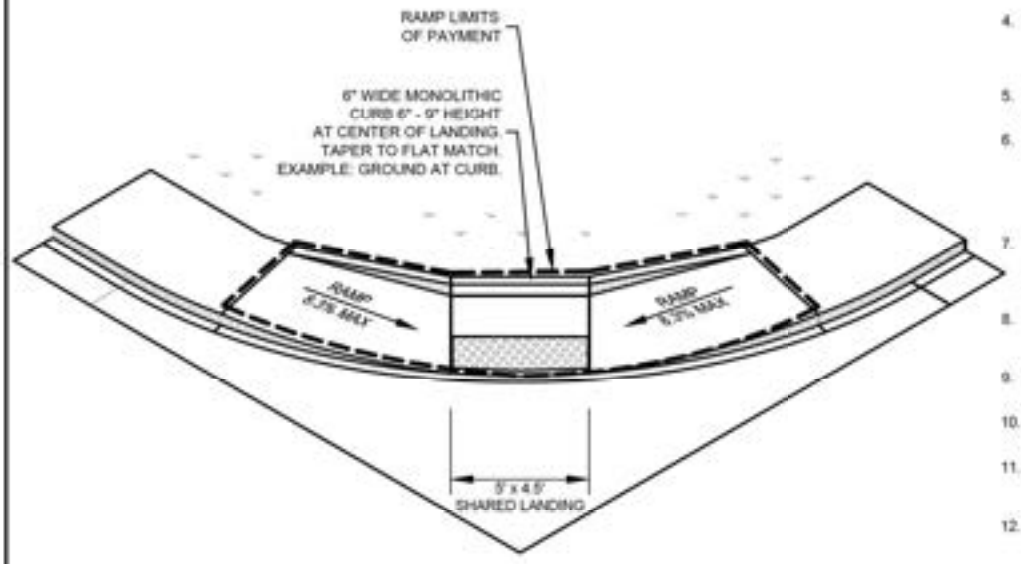
1. ADJUST CURB RAMP LOCATION AND OR TYPE SO THAT NO OBSTRUCTION IS LOCATED WITHIN THE LANDING AREA.
2. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED.
3. LANDINGS SHALL BE 5'X 5' MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION. WHERE OBSTRUCTIONS EXIST, THERE SHALL BE A 3' MINIMUM CLEARANCE IN WIDTH AND LENGTH OF THE LANDING.
4. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4'X4' WHOLLY CONTAINED WITHIN THE CROSSWALK AND TO THE ENTIRE OUTSIDE OF THE PARALLEL VEHICULAR TRAVEL PATH.
5. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP SURFACES IS 2%.
6. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP, EITHER BECAUSE THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR BECAUSE THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED. OTHERWISE, PROVIDE FLARED SIDES.
7. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT REFLECTIVE VALUE AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) AND 16 TAC 68.102.
8. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, CURB RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS,OR AS DIRECTED BY THE ENGINEER.
9. PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS CONNECT TO THE STREET.
10. FLARE SLOPE SHALL NOT EXCEED 10% MEASURED ALONG CURB LINE.
11. ALL RAMPS AND LANDINGS WITH A CONCRETE SURFACE SHALL HAVE A COURSE BROOM FINISH OR OTHER ROUGH NON-SKID TYPE FINISH AS APPROVED BY THE ENGINEER.
12. PLACE 6" OF CONCRETE IN RAMPS, LANDINGS, AND FLARES THAT ARE LOCATED AT THE RETURNS ADJACENT TO THE BACK OF CURB OF ARTERIAL STREETS AND COMMERCIAL SITES.

GENERAL NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "A" WITH A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 PSI. USE FIBER REINFORCED CONCRETE THROUGHOUT.
2. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE DIRECTED BY ADA STANDARDS AND RESOURCES.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	DIAGONAL CURB RAMP		226
APPROVED: MCC			



TYPE 12

DIAGONAL CURB RAMP

CURB RAMP NOTES:

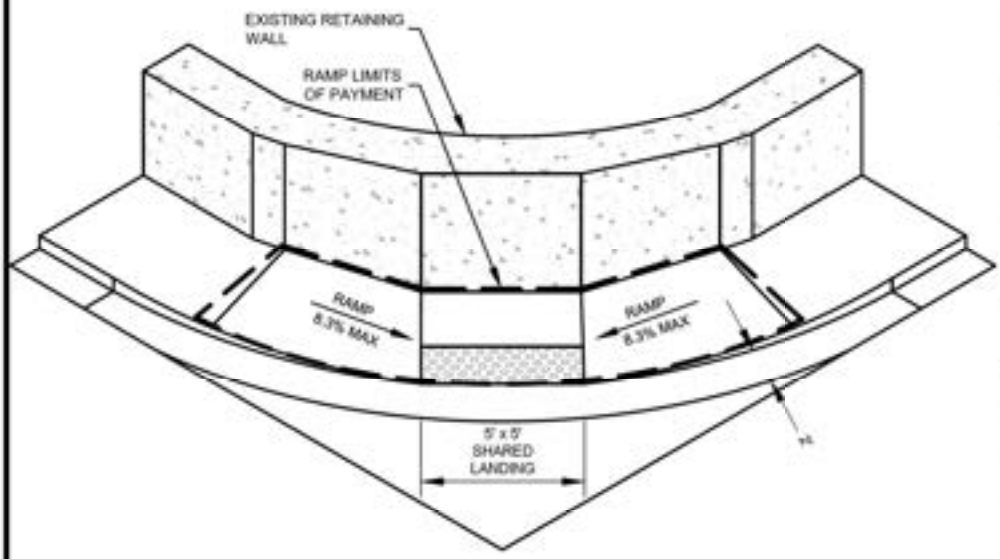
1. ADJUST CURB RAMP LOCATION AND OR TYPE SO THAT NO OBSTRUCTION IS LOCATED WITHIN THE LANDING AREA.
2. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED.
3. LANDINGS SHALL BE 5'X 5' MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION. WHERE OBSTRUCTIONS EXIST, THERE SHALL BE A 3' MINIMUM CLEARANCE IN WIDTH AND LENGTH OF THE LANDING.
4. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4'X4' WHOLLY CONTAINED WITHIN THE CROSSWALK AND TO THE ENTIRE OUTSIDE OF THE PARALLEL VEHICULAR TRAVEL PATH.
5. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP SURFACES IS 2%.
6. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP, EITHER BECAUSE THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR BECAUSE THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED. OTHERWISE, PROVIDE FLARED SIDES.
7. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT REFLECTIVE VALUE AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) AND 16 TAC 68.102.
8. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, CURB RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS,OR AS DIRECTED BY THE ENGINEER.
9. PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS CONNECT TO THE STREET.
10. FLARE SLOPE SHALL NOT EXCEED 10% MEASURED ALONG CURB LINE.
11. ALL RAMPS AND LANDINGS WITH A CONCRETE SURFACE SHALL HAVE A COURSE BROOM FINISH OR OTHER ROUGH NON-SKID TYPE FINISH AS APPROVED BY THE ENGINEER.
12. PLACE 6" OF CONCRETE IN RAMPS, LANDINGS, AND FLARES THAT ARE LOCATED AT THE RETURNS ADJACENT TO THE BACK OF CURB OF ARTERIAL STREETS AND COMMERCIAL SITES.

GENERAL NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "A" WITH A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 PSI. USE FIBER REINFORCED CONCRETE THROUGHOUT.
2. ALLOWED FOR NARROW OR CONSTRICTOR RIGHT OF WAY ONLY WITH PERMISSION OF CITY ENGINEER.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE DIRECTED BY ADA STANDARDS AND RESOURCES.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	DIAGONAL CURB RAMP		227
APPROVED: MCC			



TYPE 12A

DIAGONAL CURB RAMP
NARROW OR OBSTRUCTED R.O.W.

CURB RAMP NOTES:

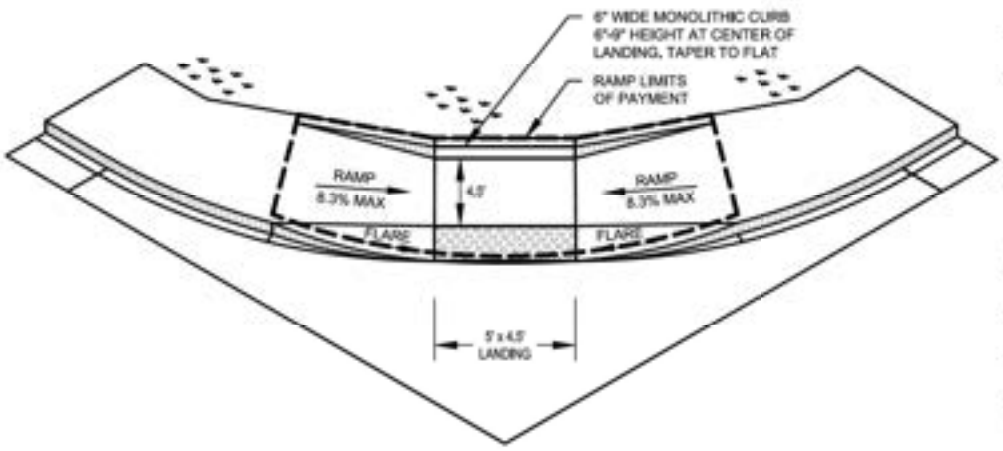
1. ADJUST CURB RAMP LOCATION AND OR TYPE SO THAT NO OBSTRUCTION IS LOCATED WITHIN THE LANDING AREA.
2. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED.
3. LANDINGS SHALL BE 5'X 5' MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION. WHERE OBSTRUCTIONS EXIST, THERE SHALL BE A 3' MINIMUM CLEARANCE IN WIDTH AND LENGTH OF THE LANDING.
4. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4'X4' WHOLLY CONTAINED WITHIN THE CROSSWALK AND TO THE ENTIRE OUTSIDE OF THE PARALLEL VEHICULAR TRAVEL PATH.
5. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP SURFACES IS 2%.
6. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP, EITHER BECAUSE THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR BECAUSE THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED. OTHERWISE, PROVIDE FLARED SIDES.
7. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT REFLECTIVE VALUE AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) AND 16 TAC 68.102.
8. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, CURB RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS OR AS DIRECTED BY THE ENGINEER.
9. PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS CONNECT TO THE STREET.
10. FLARE SLOPE SHALL NOT EXCEED 10% MEASURED ALONG CURB LINE.
11. ALL RAMPS AND LANDINGS WITH A CONCRETE SURFACE SHALL HAVE A COURSE BROOM FINISH OR OTHER ROUGH NON-SKID TYPE FINISH AS APPROVED BY THE ENGINEER.
12. PLACE 6" OF CONCRETE IN RAMPS, LANDINGS, AND FLARES THAT ARE LOCATED AT THE RETURNS ADJACENT TO THE BACK OF CURB OF ARTERIAL STREETS AND COMMERCIAL SITES.

GENERAL NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "A" WITH A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 PSI. USE FIBER REINFORCED CONCRETE THROUGHOUT.
2. ALLOWED FOR NARROW OR CONSTRICTOR RIGHT OF WAY ONLY WITH PERMISSION OF CITY ENGINEER.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE DIRECTED BY ADA STANDARDS AND RESOURCES.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	DIAGONAL CURB RAMP NARROW OR OBSTRUCTED R.O.W.		228
APPROVED: MCC			



TYPE 4:

DIAGONAL COMBINATION CURB RAMP

CURB RAMP NOTES:

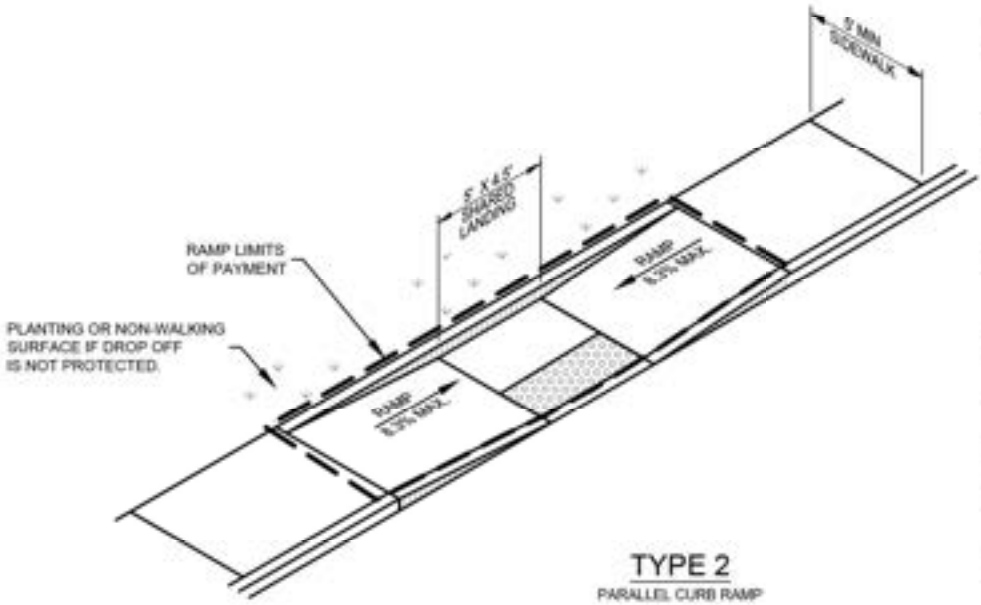
1. ADJUST CURB RAMP LOCATION AND OR TYPE SO THAT NO OBSTRUCTION IS LOCATED WITHIN THE LANDING AREA.
2. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED.
3. LANDINGS SHALL BE 5'X 5' MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION. WHERE OBSTRUCTIONS EXIST, THERE SHALL BE A 3' MINIMUM CLEARANCE IN WIDTH AND LENGTH OF THE LANDING.
4. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4'X4' WHOLLY CONTAINED WITHIN THE CROSSWALK AND TO THE ENTIRE OUTSIDE OF THE PARALLEL VEHICULAR TRAVEL PATH.
5. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP SURFACES IS 2%.
6. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP, EITHER BECAUSE THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR BECAUSE THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED. OTHERWISE, PROVIDE FLARED SIDES.
7. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT REFLECTIVE VALUE AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) AND 16 TAC 68.102.
8. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, CURB RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS,OR AS DIRECTED BY THE ENGINEER.
9. PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS CONNECT TO THE STREET.
10. FLARE SLOPE SHALL NOT EXCEED 10% MEASURED ALONG CURB LINE.
11. ALL RAMPS AND LANDINGS WITH A CONCRETE SURFACE SHALL HAVE A COURSE BROOM FINISH OR OTHER ROUGH NON-SKID TYPE FINISH AS APPROVED BY THE ENGINEER.
12. PLACE 6" OF CONCRETE IN RAMPS, LANDINGS, AND FLARES THAT ARE LOCATED AT THE RETURNS ADJACENT TO THE BACK OF CURB OF ARTERIAL STREETS AND COMMERCIAL SITES.

GENERAL NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "A" WITH A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 PSI. USE FIBER REINFORCED CONCRETE THROUGHOUT.
2. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE DIRECTED BY ADA STANDARDS AND RESOURCES.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	DIAGONAL COMBINATION CURB RAMP		229
APPROVED: MCC			



TYPE 2

PARALLEL CURB RAMP

CURB RAMP NOTES:

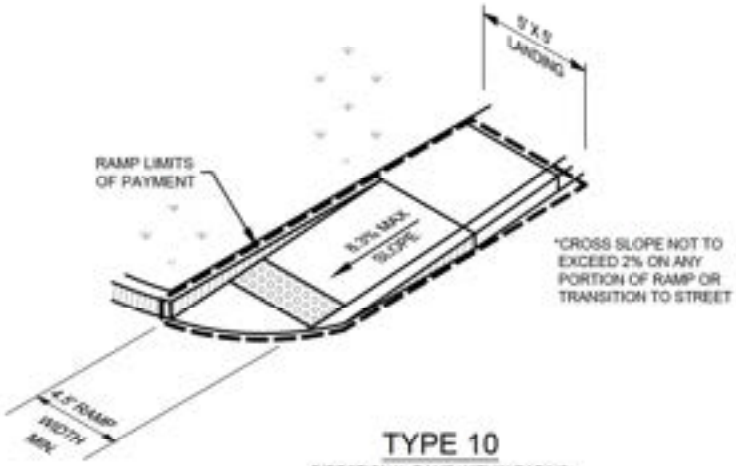
1. ADJUST CURB RAMP LOCATION AND OR TYPE SO THAT NO OBSTRUCTION IS LOCATED WITHIN THE LANDING AREA.
2. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED.
3. LANDINGS SHALL BE 5'X 5' MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION. WHERE OBSTRUCTIONS EXIST, THERE SHALL BE A 3' MINIMUM CLEARANCE IN WIDTH AND LENGTH OF THE LANDING.
4. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4'X4' WHOLLY CONTAINED WITHIN THE CROSSWALK AND TO THE ENTIRE OUTSIDE OF THE PARALLEL VEHICULAR TRAVEL PATH.
5. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP SURFACES IS 2%.
6. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP, EITHER BECAUSE THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR BECAUSE THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED. OTHERWISE, PROVIDE FLARED SIDES.
7. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT REFLECTIVE VALUE AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) AND 16 TAC 68.102.
8. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, CURB RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS,OR AS DIRECTED BY THE ENGINEER.
9. PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS CONNECT TO THE STREET.
10. FLARE SLOPE SHALL NOT EXCEED 10% MEASURED ALONG CURB LINE.
11. ALL RAMPS AND LANDINGS WITH A CONCRETE SURFACE SHALL HAVE A COURSE BROOM FINISH OR OTHER ROUGH NON-SKID TYPE FINISH AS APPROVED BY THE ENGINEER.
12. PLACE 6" OF CONCRETE IN RAMPS, LANDINGS, AND FLARES THAT ARE LOCATED AT THE RETURNS ADJACENT TO THE BACK OF CURB OF ARTERIAL STREETS AND COMMERCIAL SITES.

GENERAL NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "A" WITH A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 PSI. USE FIBER REINFORCED CONCRETE THROUGHOUT.
2. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE DIRECTED BY ADA STANDARDS AND RESOURCES.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	PARALLEL CURB RAMP		230
APPROVED: MCC			



TYPE 10

DIRECTIONAL RAMP WITHIN RADIUS

CURB RAMP NOTES:

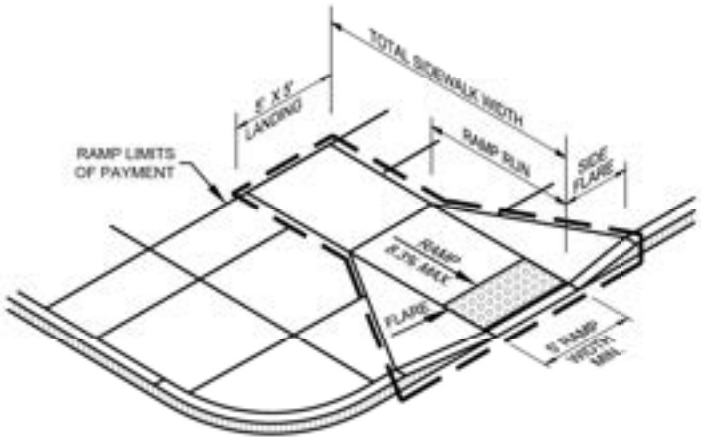
1. ADJUST CURB RAMP LOCATION AND OR TYPE SO THAT NO OBSTRUCTION IS LOCATED WITHIN THE LANDING AREA.
2. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED.
3. LANDINGS SHALL BE 5'X 5' MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION. WHERE OBSTRUCTIONS EXIST, THERE SHALL BE A 3' MINIMUM CLEARANCE IN WIDTH AND LENGTH OF THE LANDING.
4. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4'X4' WHOLLY CONTAINED WITHIN THE CROSSWALK AND TO THE ENTIRE OUTSIDE OF THE PARALLEL VEHICULAR TRAVEL PATH.
5. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP SURFACES IS 2%.
6. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP, EITHER BECAUSE THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR BECAUSE THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED. OTHERWISE, PROVIDE FLARED SIDES.
7. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT REFLECTIVE VALUE AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) AND 16 TAC 68.102.
8. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, CURB RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS,OR AS DIRECTED BY THE ENGINEER.
9. PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS CONNECT TO THE STREET.
10. FLARE SLOPE SHALL NOT EXCEED 10% MEASURED ALONG CURB LINE.
11. ALL RAMPS AND LANDINGS WITH A CONCRETE SURFACE SHALL HAVE A COURSE BROOM FINISH OR OTHER ROUGH NON-SKID TYPE FINISH AS APPROVED BY THE ENGINEER.
12. PLACE 6" OF CONCRETE IN RAMPS, LANDINGS, AND FLARES THAT ARE LOCATED AT THE RETURNS ADJACENT TO THE BACK OF CURB OF ARTERIAL STREETS AND COMMERCIAL SITES.

GENERAL NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "A" WITH A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 PSI. USE FIBER REINFORCED CONCRETE THROUGHOUT.
2. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE DIRECTED BY ADA STANDARDS AND RESOURCES.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	DIRECTIONAL RAMP WITHIN RADIUS		231
APPROVED: MCC			



TYPE 1

PERPENDICULAR CURB RAMP

CURB RAMP NOTES:

1. ADJUST CURB RAMP LOCATION AND OR TYPE SO THAT NO OBSTRUCTION IS LOCATED WITHIN THE LANDING AREA.
2. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED.
3. LANDINGS SHALL BE 5'X 5' MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION. WHERE OBSTRUCTIONS EXIST, THERE SHALL BE A 3' MINIMUM CLEARANCE IN WIDTH AND LENGTH OF THE LANDING.
4. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4'X4' WHOLLY CONTAINED WITHIN THE CROSSWALK AND TO THE ENTIRE OUTSIDE OF THE PARALLEL VEHICULAR TRAVEL PATH.
5. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP SURFACES IS 2%.
6. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP, EITHER BECAUSE THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR BECAUSE THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED. OTHERWISE, PROVIDE FLARED SIDES.
7. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT REFLECTIVE VALUE AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) AND 16 TAC 68.102.
8. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, CURB RAMPS SHALL BE ALIGNED WITH THECRETICAL CROSSWALKS,OR AS DIRECTED BY THE ENGINEER.
9. PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS CONNECT TO THE STREET.
10. FLARE SLOPE SHALL NOT EXCEED 10% MEASURED ALONG CURB LINE.
11. ALL RAMPS AND LANDINGS WITH A CONCRETE SURFACE SHALL HAVE A COURSE BROOM FINISH OR OTHER ROUGH NON-SKID TYPE FINISH AS APPROVED BY THE ENGINEER.
12. PLACE 6" OF CONCRETE IN RAMPS, LANDINGS, AND FLARES THAT ARE LOCATED AT THE RETURNS ADJACENT TO THE BACK OF CURB OF ARTERIAL STREETS AND COMMERCIAL SITES.

GENERAL NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "A" WITH A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 PSI. USE FIBER REINFORCED CONCRETE THROUGHOUT.
2. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE DIRECTED BY ADA STANDARDS AND RESOURCES.

MIDLAND Engineering Services

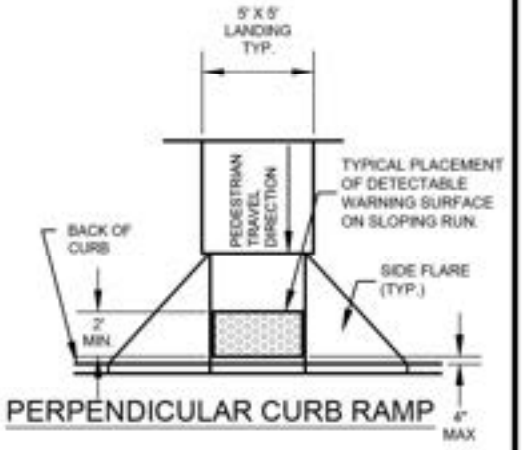
DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	PERPENDICULAR CURB RAMP		232
APPROVED: MCC			

DETECTABLE WARNING SURFACE NOTES:

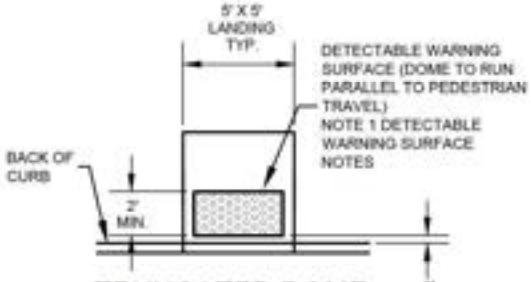
1. DETECTABLE WARNING SURFACE SUCH AS ARMOR-TILE ADA SOUND AMPLIFYING DETECTABLE/TACTILE WARNING SURFACE TILE OR EQUAL AND APPROVED BY THE ENGINEER AS MEETING ALL REQUIREMENTS OF ASTM C-936, C-33.
2. CURB RAMPS MUST CONTAIN A DETECTABLE WARNING SURFACE THAT CONSISTS OF RAISED TRUNCATED DOMES COMPLYING WITH SECTION 7.05 DETACHABLE WARNINGS OF THE TEXAS ACCESSIBILITY STANDARDS (TAS). THE SURFACE MUST CONTRAST VISUALLY WITH ADJOINING SURFACES, INCLUDING SIDE FLARES. FURNISH DARK BROWN OR DARK RED DETECTABLE WARNING SURFACE ADJACENT TO UNCOLORED CONCRETE.UNLESS SPECIFIED ELSEWHERE IN THE PLANS.
3. DETECTABLE WARNING SURFACES MUST BE SLIP RESISTANT AND NOT ALLOW WATER TO ACCUMULATE.
4. ALIGN TRUNCATED DOMES IN THE DIRECTION OF PEDESTRIAN TRAVEL WHEN ENTERING THE STREET.
5. SHADED AREAS INDICATE THE APPROXIMATE LOCATION FOR THE DETECTABLE WARNING SURFACE FOR EACH CURB RAMP TYPE.
6. DETECTABLE WARNING SURFACES SHALL BE A MINIMUM OF 24" IN DEPTH IN THE DIRECTION OF PEDESTRIAN TRAVEL.
7. DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS A MINIMUM OF 6" AND A MAXIMUM OF 10" FROM THE EXTENSION OF THE FACE OF CURB. DETECTABLE WARNING SURFACES MAY BE CURVED ALONG THE CORNER RADIUS.
8. SINGLE TILE PLATES COLONIAL RED COLOR.

GENERAL NOTES:

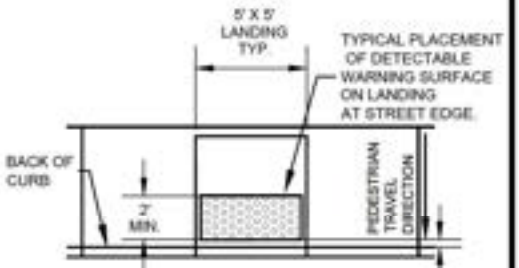
1. CONCRETE TO BE CITY OF MIDLAND CLASS "A" WITH A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 PSI. USE FIBER REINFORCED CONCRETE THROUGHOUT.
2. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE DIRECTED BY ADA STANDARDS AND RESOURCES.



PERPENDICULAR CURB RAMP

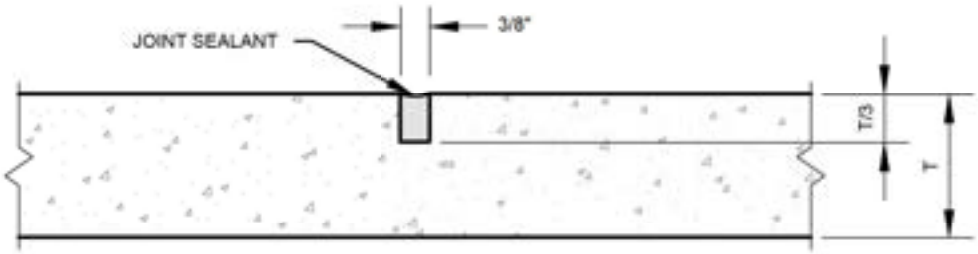


TRUNCATED DOME PATTERN

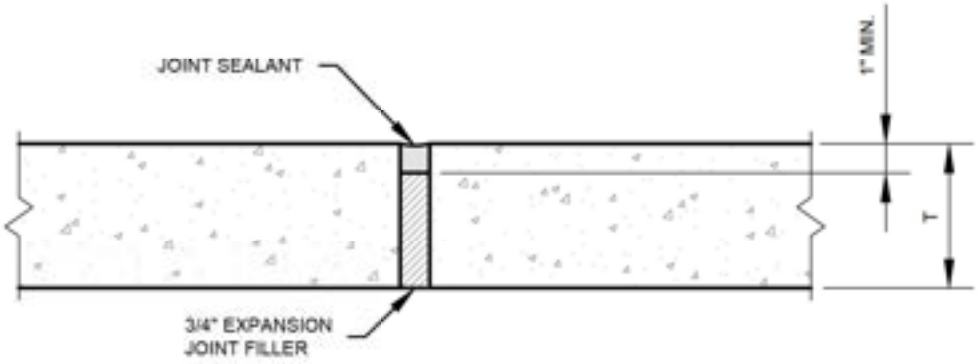


PARALLEL CURB RAMP

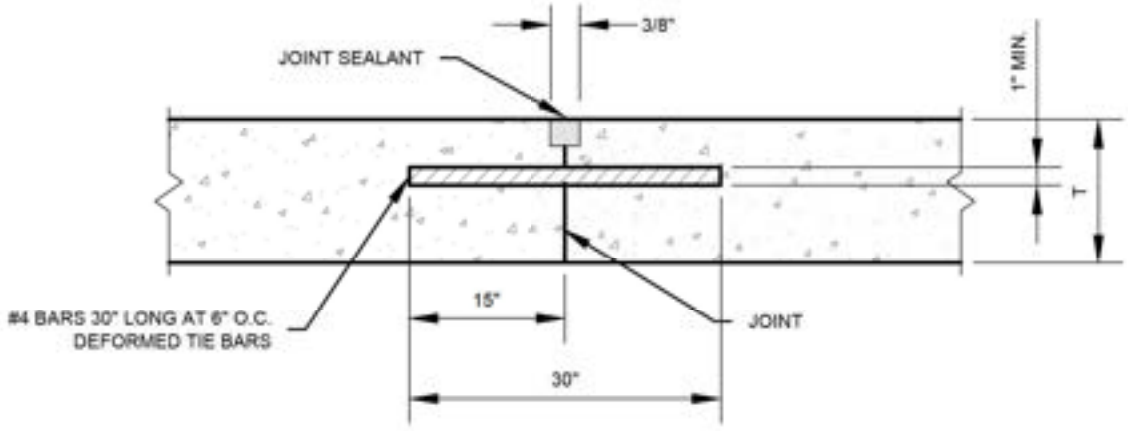
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
		DETECTABLE WARNING SURFACE	DETAIL: 233



TYPE "A" SAW-CUT JOINT

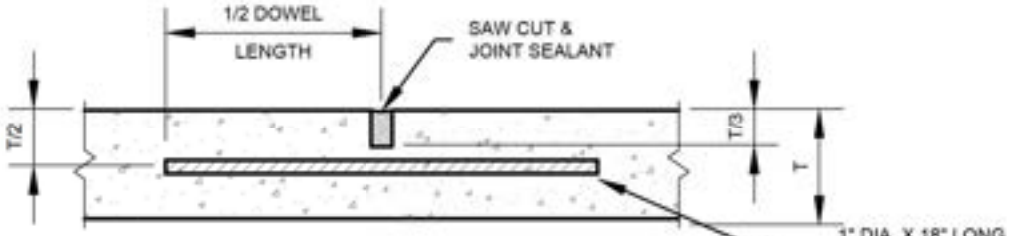


TYPE "B" DOWEL-LESS EXPANSION JOINT

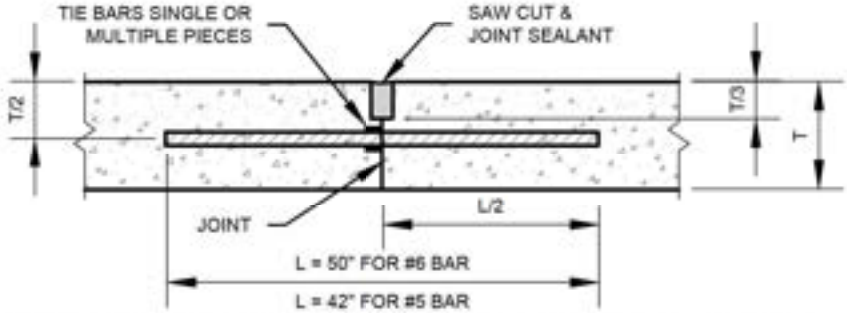


TYPE "C" CONSTRUCTION COLD JOINT

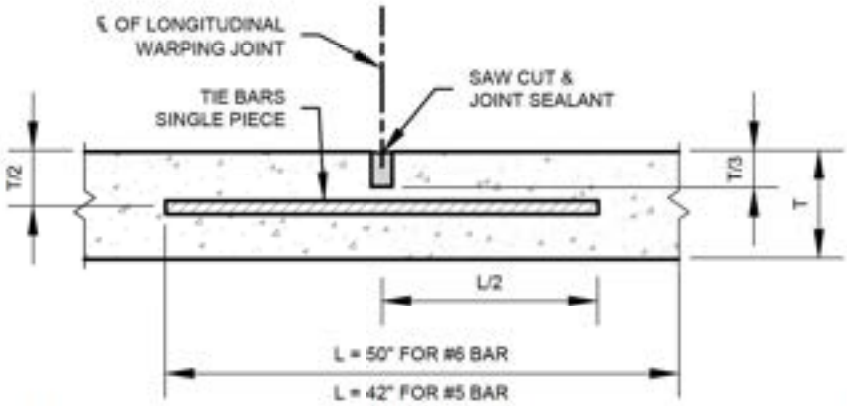
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	TYPICAL CONCRETE JOINTS		234(A)



TYPE "D" TRANSVERSE CONTRACTION JOINT



TYPE "E" LONGITUDINAL CONTRACTION JOINT

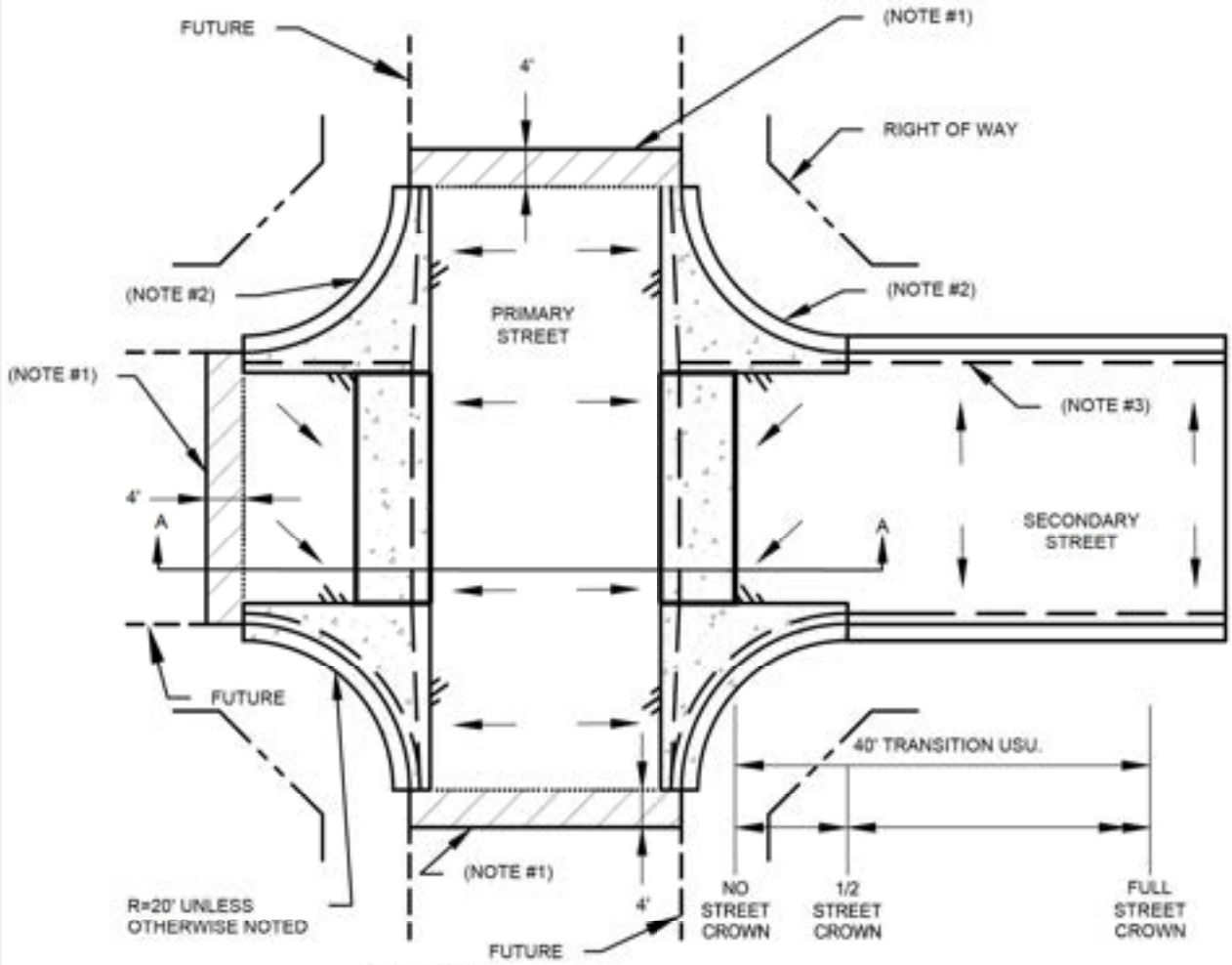


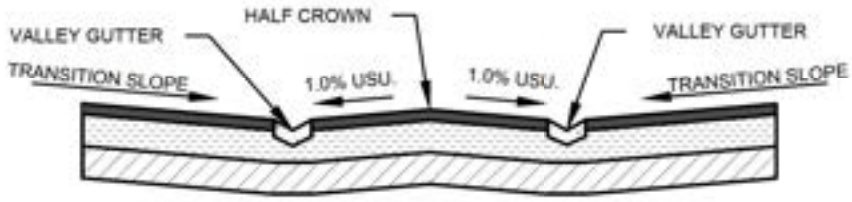
TYPE "F" LONGITUDINAL CONTRACTION SAW-CUT JOINT

NOTES:

1. JOINTING , DOWEL, AND TIE BAR DESIGN REQUIREMENTS ARE SUBJECT TO CHANGE FOR ARTERIAL OR HIGHER CLASSIFICATION ROADS IF DEEMED NECESSARY BY THE CITY ENGINEER.
2. TYPICAL CONCRETE PAVEMENT JOINT SPACING IS TO BE NO LESS THAN 10' X 10' AND NO MORE THAT 15' X 15'.
3. DOWELS ARE TO BE SPACED AT 12" INTERVALS WITH MINIMUM 18" SEPARATION FROM PARALLEL JOINTS OR EDGES OF PAVEMENT.
4. TIE BARS ARE TO BE SET AT 24" INTERVALS WITH MINIMUM 18" SEPARATION FROM PARALLEL JOINTS OR EDGES OF PAVEMENT.
5. ALL JOINT SEALANT TO BE TxDOT DMS-6310 SL-2 OR APPROVED EQUAL.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	TYPICAL CONCRETE JOINTS		234(B)



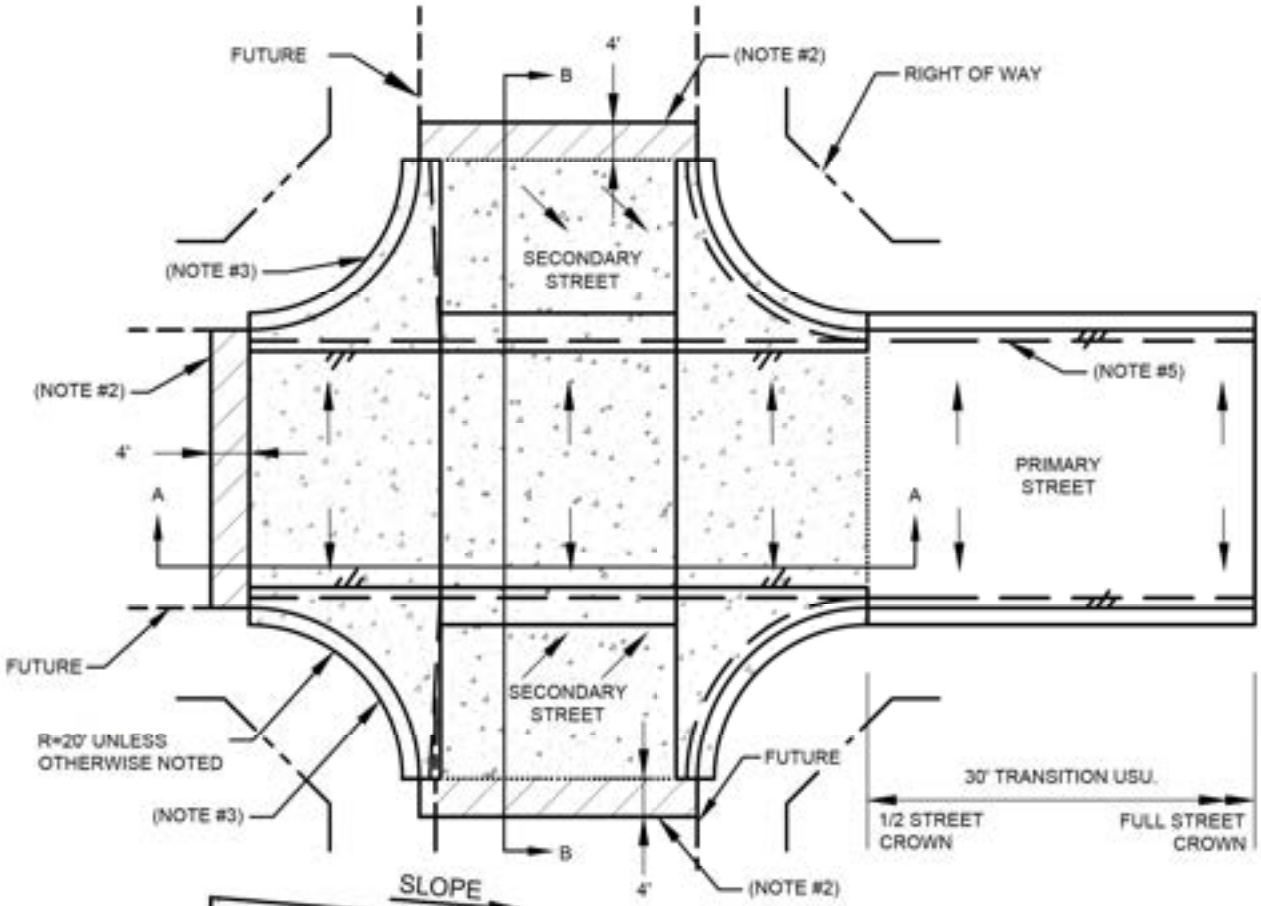


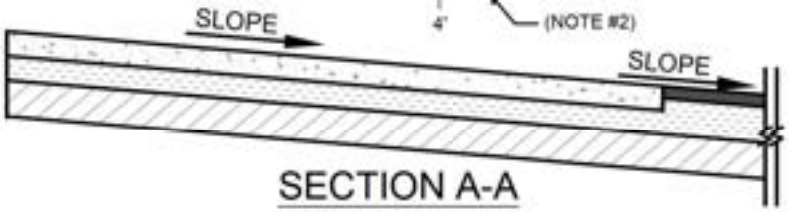
SECTION A-A
N.T.S.

NOTES:

1. NO HEADER WILL BE USED IF ROAD ENDS AT INTERSECTION. INSTEAD EXTEND BASE AND SURFACE 4' BEYOND END OF CURB.
2. WARP GUTTER SO THAT IT SLOPES TOWARDS THE VALLEY GUTTER.
3. FLOW PATH LINES
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

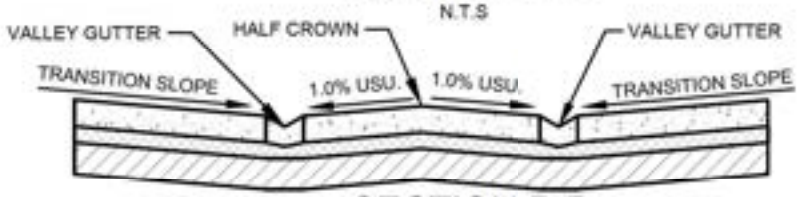
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
MIDLAND Engineering Services	TYPICAL LOCAL /COLLECTOR CROWN TRANSITION		235





SECTION A-A

N.T.S



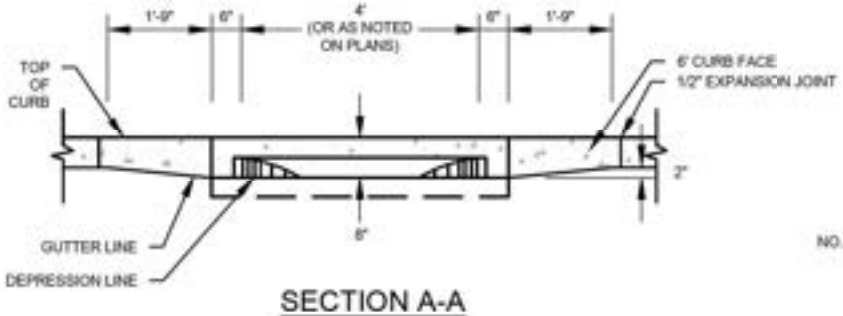
SECTION B-B

N.T.S

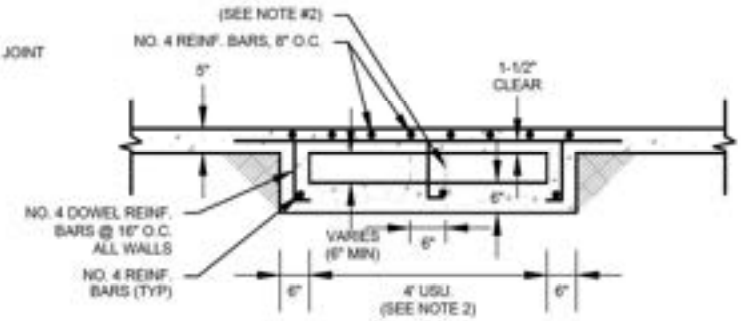
NOTES:

1. SAW-CUT JOINTS ARE TO LOCATED THROUGHOUT CONCRETE PAVEMENT AT EQUI-DISTANT SPACING TYPICALLY 10'x10' OR NO GREATER THAN 15'x15'.
2. NO HEADER WILL BE USED IF ROAD ENDS AT INTERSECTION. INSTEAD EXTEND BASE AND SURFACE 4' BEYOND END OF CURB.
3. WARP GUTTER SO THAT IT SLOPES TOWARDS THE VALLEY GUTTER.
4. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT THE INTERSECTION.
5. FLOW PATH LINES.
6. SEAL ALL CONCRETE JOINTS.
7. CONCRETE INTERSECTION PAVEMENT TO EXTEND TO THE FILLET END-OF-RADIUS.
8. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
9. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

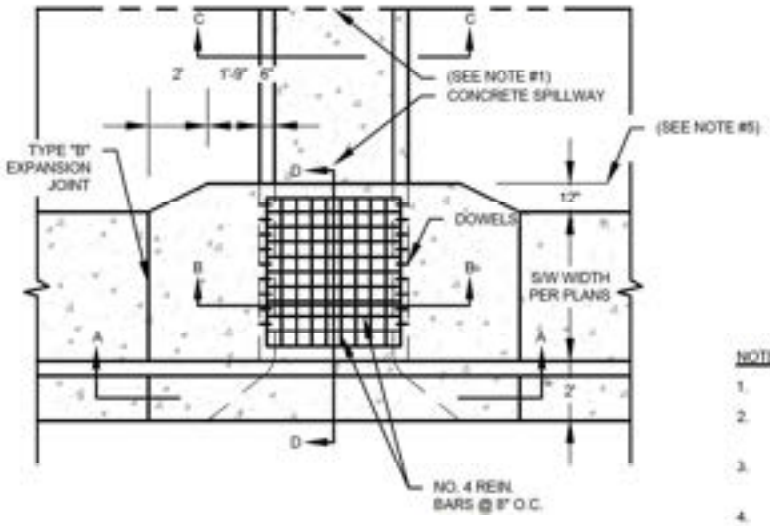
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	TYPICAL LOCAL/COLLECTOR CROWN TRANSITION		236



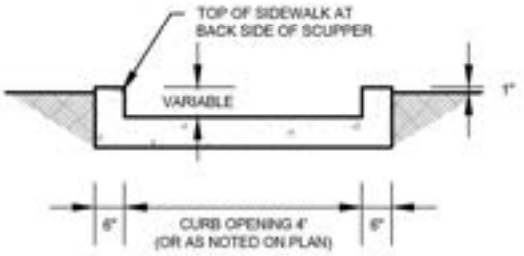
SECTION A-A



SECTION B-B



SCUPPER PLAN VIEW



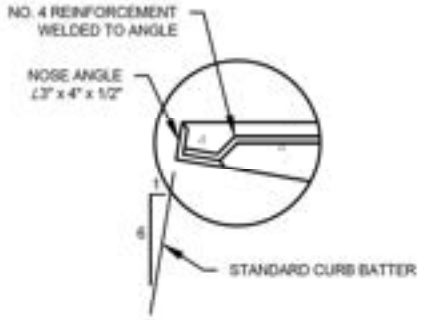
SECTION C-C SPILLWAY

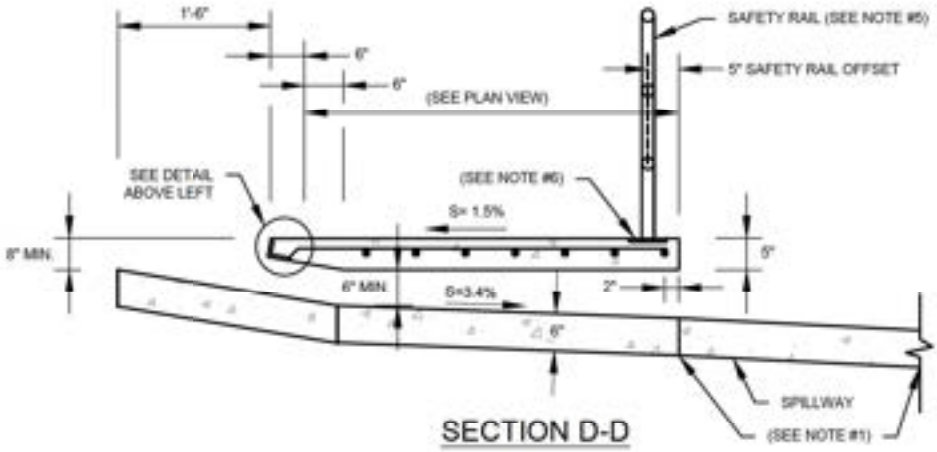
NOTES:

1. TRANSITION TO SPILLWAY/CHANNEL AS PER APPROVED PLANS.
2. A CENTER WALL SHALL BE INSTALLED IN SCUPPERS WIDER THAN 4' OR IF MORE THAN 1 SCUPPER IS BUILT IN SERIES.
3. EXPANSION JOINT FILLER SHALL BE 1/2 " BITUMINOUS TYPE PREFORMED EXPANSION JOINT, ASTM D-1751.
4. CONCRETE FOR THE SCUPPER SHALL BE CLASS "C", 3600 PSI. CONCRETE FOR THE SPILLWAY SHALL BE CLASS "C", 3600 PSI.
5. 12" OFFSET DISTANCE SHALL BE INCREASED TO 2'-6" FOR DESIGNATED BICYCLE PATHS.

MIDLAND Engineering Services

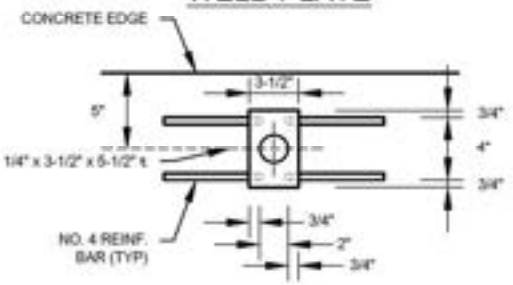
DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	CONCRETE SCUPPER		237(A)
APPROVED: MCC			

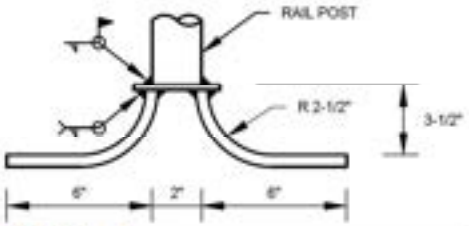




SECTION D-D

WELD PLATE



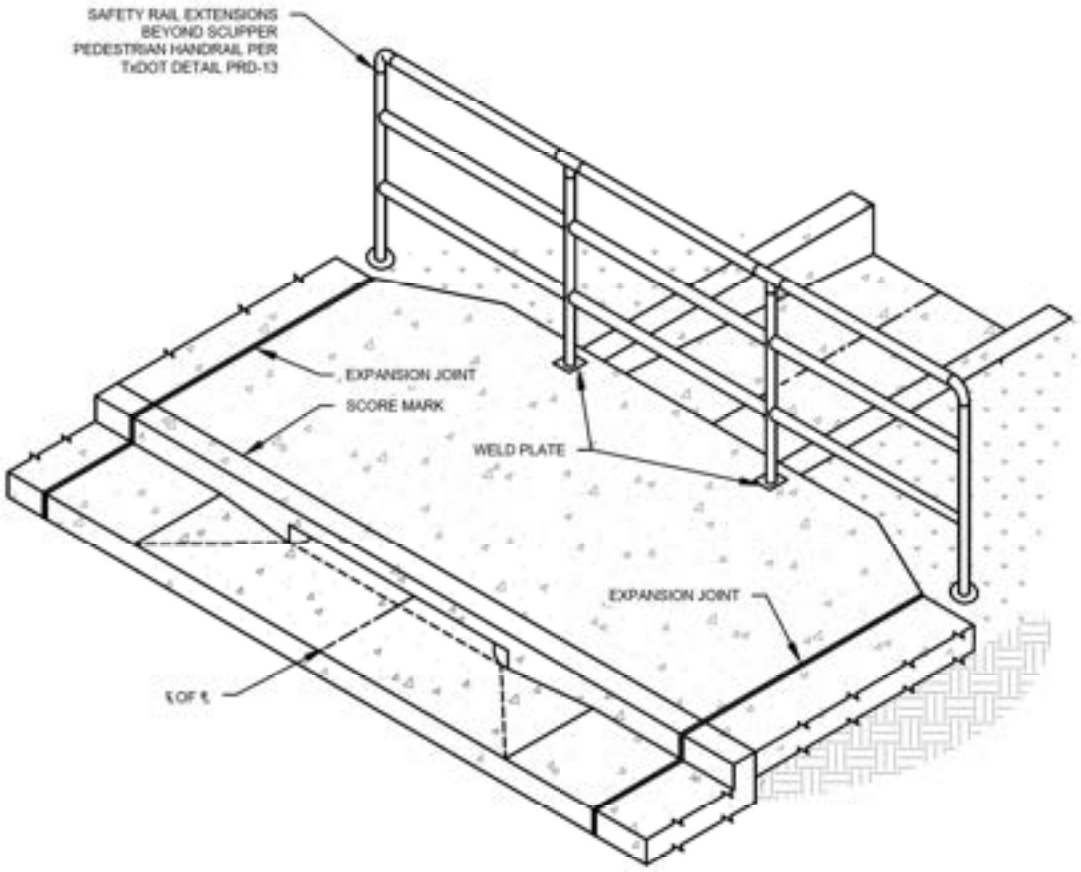


NOTES:

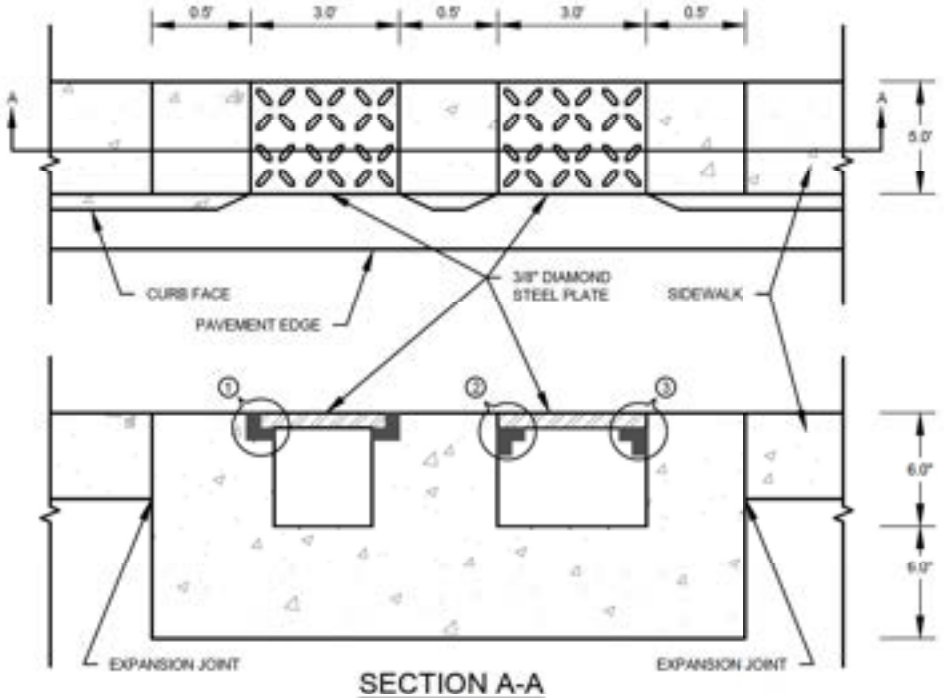
1. TRANSITION TO SPILLWAY/CHANNEL AS PER APPROVED PLANS.
2. A CENTER WALL SHALL BE INSTALLED IN SCUPPERS WIDER THAN 4' OR IF MORE THAN 1 SCUPPER IS BUILT IN SERIES.
3. EXPANSION JOINT FILLER SHALL BE 1/2 " BITUMINOUS TYPE PREFORMED EXPANSION JOINT, ASTM D-1751.
4. CONCRETE FOR THE SCUPPER AND SPILLWAY TO BE CLASS "C", 3600 PSI.
5. SAFETY RAIL SHALL BE CONTINUOUS BETWEEN THE SPILLWAY EXTERIOR WALLS. SAFETY RAIL TO BE USED ONLY WHEN VERTICAL DROP FROM SCUPPER PEDESTRIAN CROSSING TO SPILLWAY SURFACE EXCEEDS 18".
6. USE WELD PLATES FOR SAFETY RAIL ANCHORS LOCATED IN THE 5" THICK CONCRETE.
7. MATERIAL AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

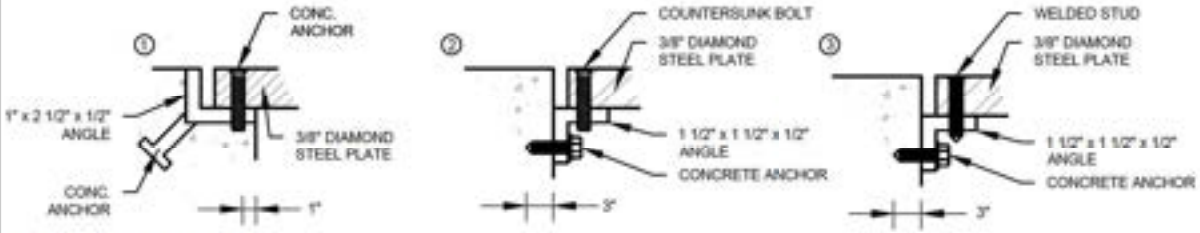
DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE:	DETAIL:
CHECKED: JCF	CONCRETE SCUPPER		237(B)
APPROVED: MCC			



MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		CONCRETE SCUPPER		237(C)



SECTION A-A

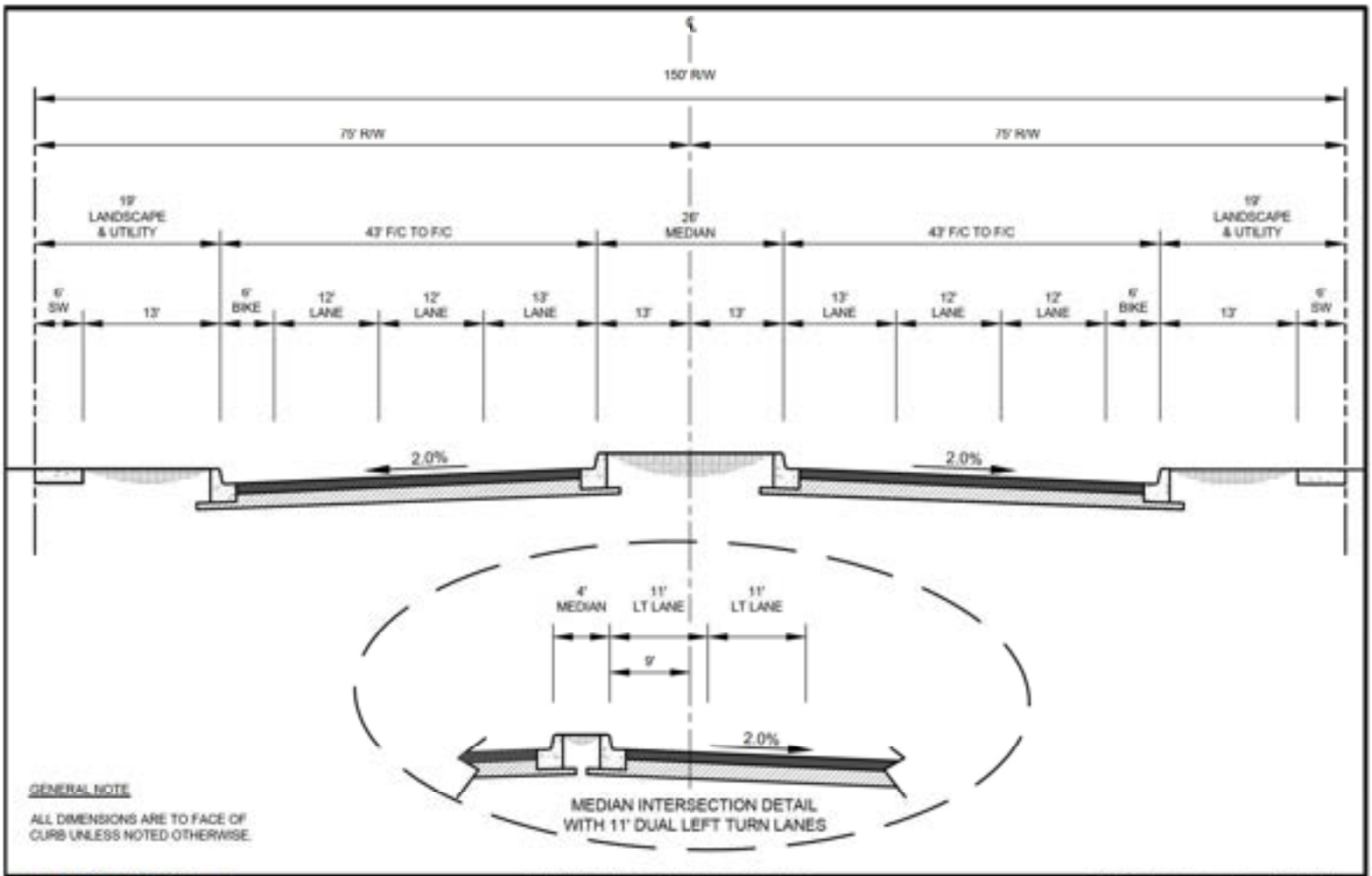


NOTES:

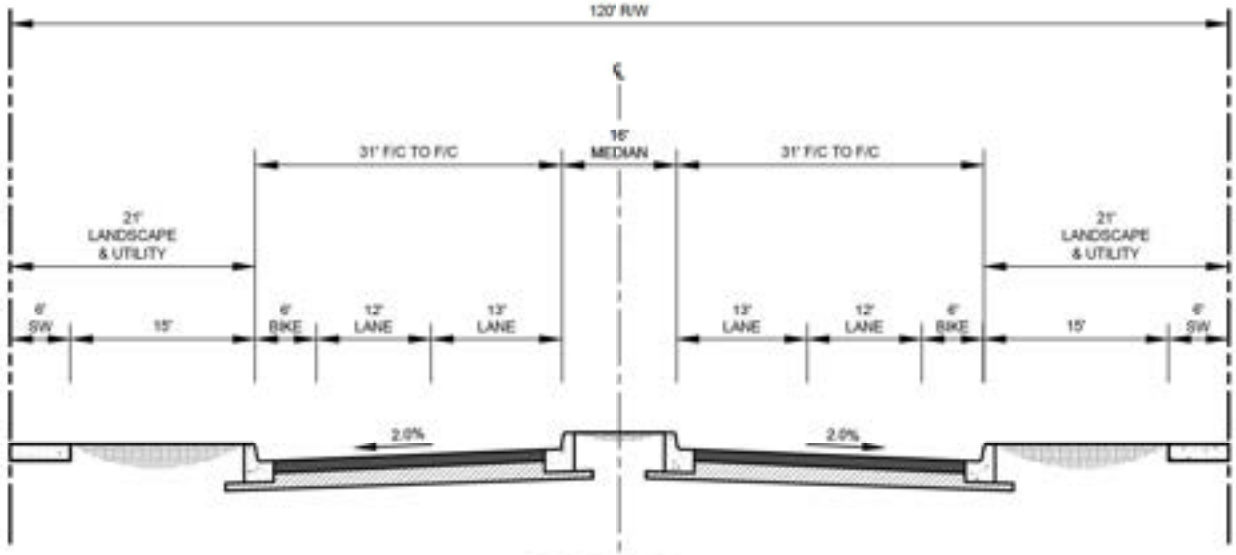
1. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. STEEL PLATE MUST BE FIXED UTILIZING ONE OF THE OPTIONS IN THIS DETAIL.
3. SEAL ALL CONCRETE JOINTS.
4. MATERIAL AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

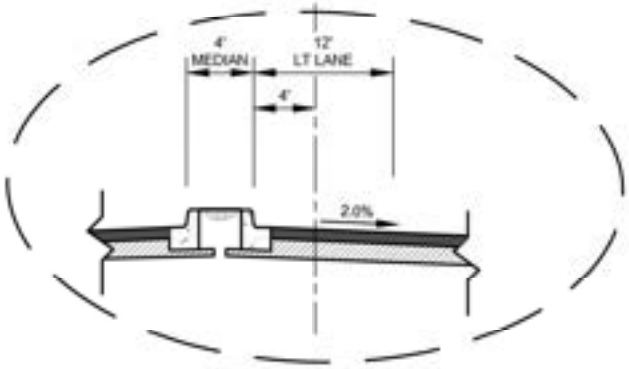
MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	ELEVATED PEDESTRIAN STEEL PLATE FLUME CROSSING		238
APPROVED: MCC			



MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		ROADWAY CROSS SECTION MAJOR ARTERIAL		T01





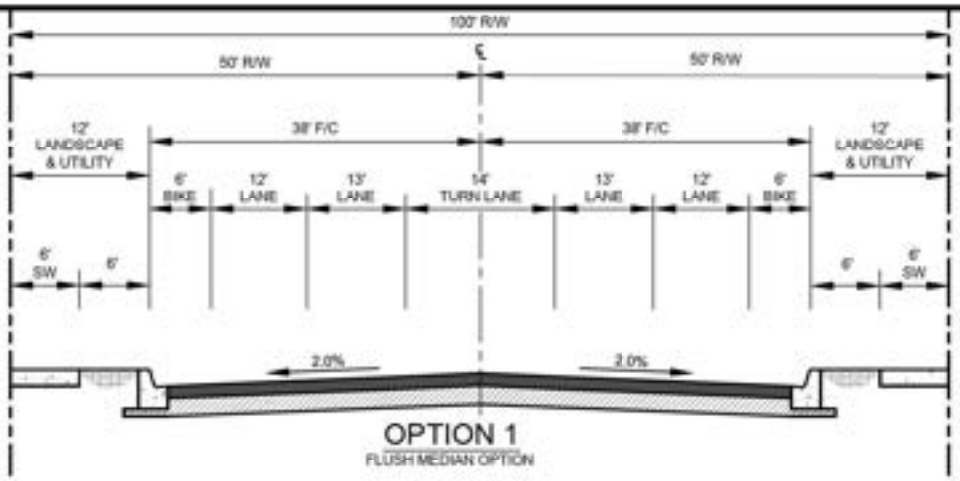
MEDIAN INTERSECTION DETAIL
WITH 12' LEFT TURN LANE

GENERAL NOTE

ALL DIMENSIONS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.

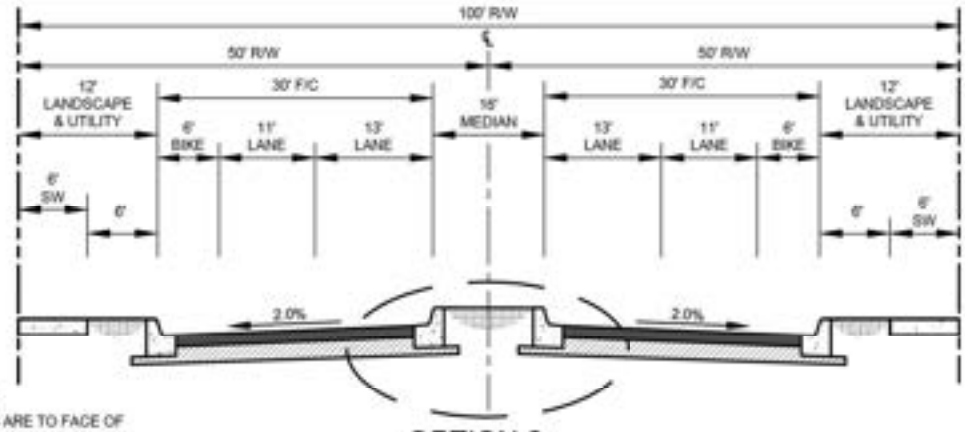
MIDLAND Engineering Services

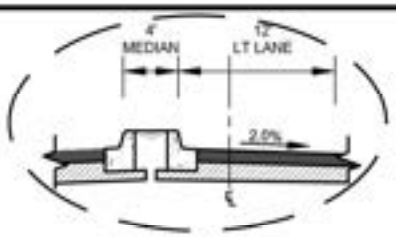
DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	ROADWAY CROSS SECTION MINOR ARTERIAL		T02
APPROVED: MCC			



OPTION 1

FLUSH MEDIAN OPTION





MEDIAN INTERSECTION DETAIL

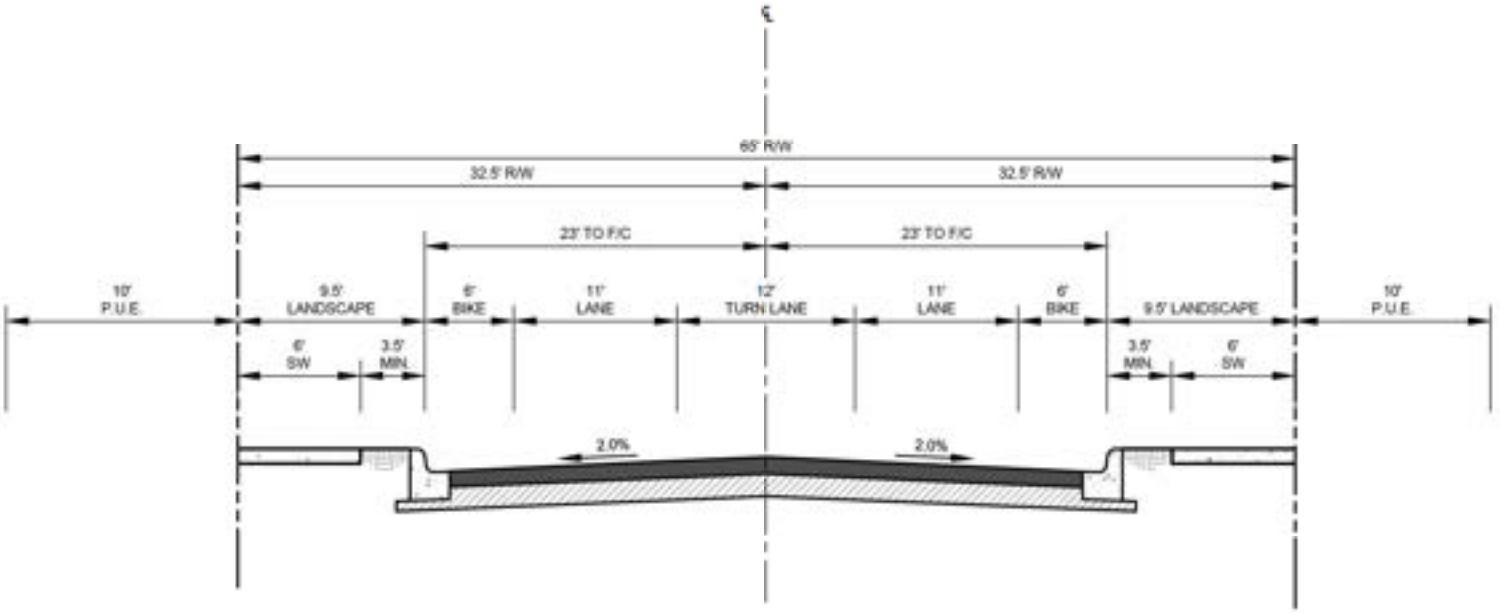
OPTION 2

RAISED MEDIAN OPTION

GENERAL NOTE

ALL DIMENSIONS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.

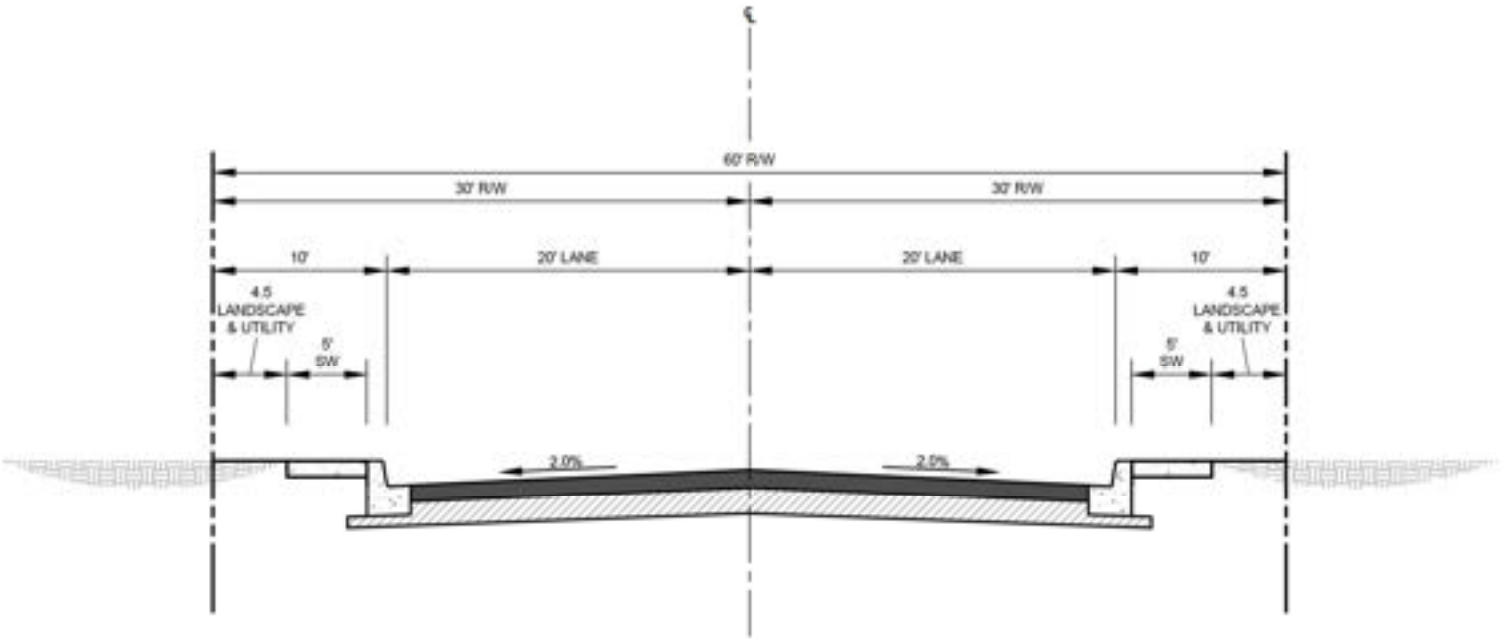
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		ROADWAY CROSS SECTION MAJOR COLLECTOR		T03



GENERAL NOTE

ALL DIMENSIONS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		ROADWAY CROSS SECTION MINOR COLLECTOR		T04



GENERAL NOTE

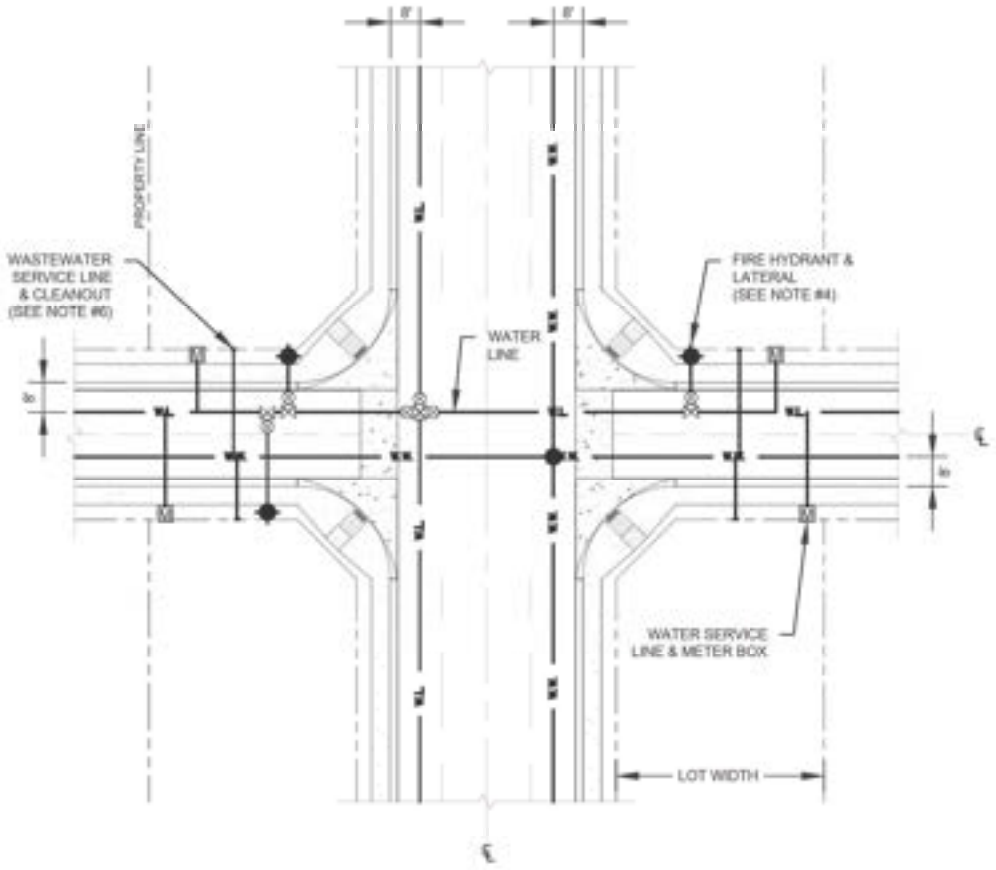
ALL DIMENSIONS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	ROADWAY CROSS SECTION LOCAL STREET		T05
APPROVED: MCC			

MULTI-USE UTILITY DETAILS

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL: 300



LEGEND

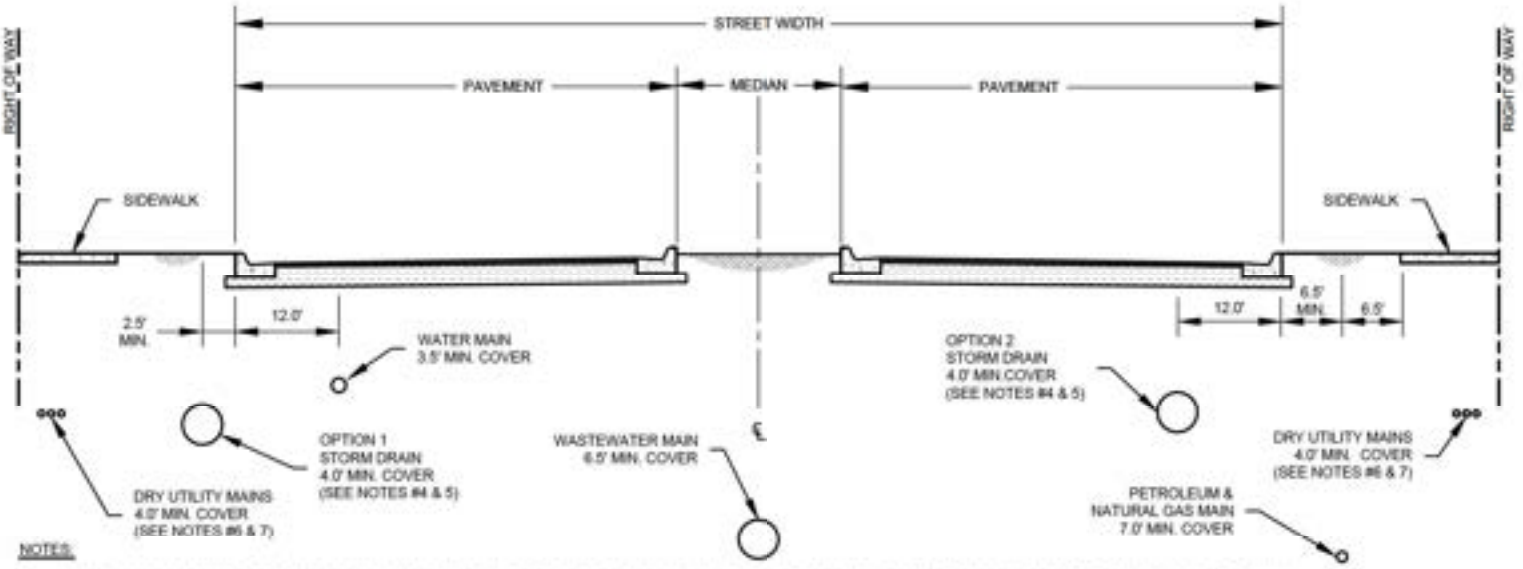
- WATER MAIN
- WASTE WATER MAIN
- GATE VALVE
- CROSS FITTING
- TEE FITTING
- FIRE HYDRANT
- WATER METER
- MANHOLE

NOTES:

1. IF A SITE INCLUDES ALLEYS, OR IS ADJACENT TO EXISTING ALLEYS, THEN THE WASTEWATER MAIN IS TO BE LOCATED IN THE ALLEY AND NOT THE STREET RIGHT OF WAY.
2. ALL DIMENSIONS SHOWN ARE FROM BACK OF CURB. WHEN BIKE LANES ARE PRESENT CENTER UTILITIES IN THE OUTER VEHICLE TRAVEL LANE.
3. FIRE HYDRANTS PLACED AT INTERSECTIONS TO BE PLACED IN LINE WITH A FILLET BEGINNING-OF-RADIUS OR A FILLET END-OF-RADIUS.
4. FIRE HYDRANTS PLACED AT MID-BLOCK TO BE PLACED IN LINE WITH A LOT LINE.
5. FIRE HYDRANT COVERAGE DOES NOT EXTEND ACROSS ARTERIALS OR MAJOR COLLECTORS. FIRE HYDRANTS MAY BE REQUIRED ON BOTH SIDES OF A STREET OR INTERSECTION AT THESE LOCATIONS.
6. CLEANOUTS ARE TO BE INSTALLED BY THE PROPERTY OWNER.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JDF	TYPICAL UTILITY LAYOUT		301
APPROVED: MCC			

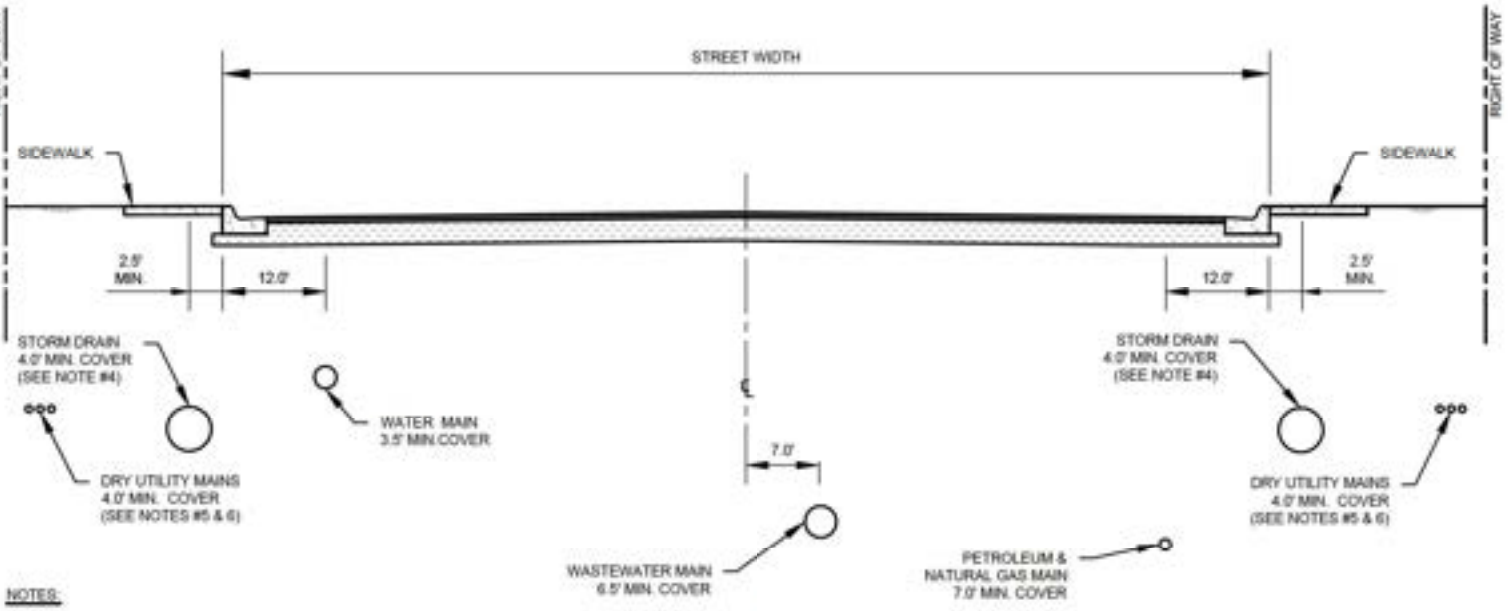


NOTES:

1. IF A SITE INCLUDES ALLEYS, OR IS ADJACENT TO EXISTING ALLEYS, THEN THE WASTEWATER MAIN IS TO BE LOCATED IN THE ALLEY AND NOT THE STREET RIGHT OF WAY.
2. ALL COVERS ARE FROM THE GUTTER FLOWLINE TO THE TOP OF PIPE.
3. ADDITIONAL UTILITY DEPTH MAY BE REQUIRED TO ACCOMMODATE LATERALS.
4. STORM DRAINS MAY BE LOCATED ON EITHER SIDE OR BOTH SIDES OF STREET AS NEEDED.
5. LOCATE STORM DRAIN BENEATH PAVEMENT IF ON SAME SIDE OF STREET AS PETROLEUM & NATURAL GAS MAIN, OTHERWISE LOCATE STORM DRAIN BEHIND BACK-OF-CURB.
6. DRY UTILITY MAINS MUST MAINTAIN 7.0' MINIMUM COVER WHEN CROSSING ULTIMATE STREET WIDTH. DRY UTILITY SERVICE LATERALS MUST MAINTAIN 2.0' MINIMUM COVER IN THE RIGHT OF WAY.
7. ALL DRY UTILITY MAINS AND SERVICE LATERALS MUST BORE TO CROSS EXISTING ARTERIAL PAVEMENT. NO OPEN TRENCHING.
8. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
9. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	ARTERIAL STREET UTILITY MAIN SPACING		302
APPROVED: MCC			

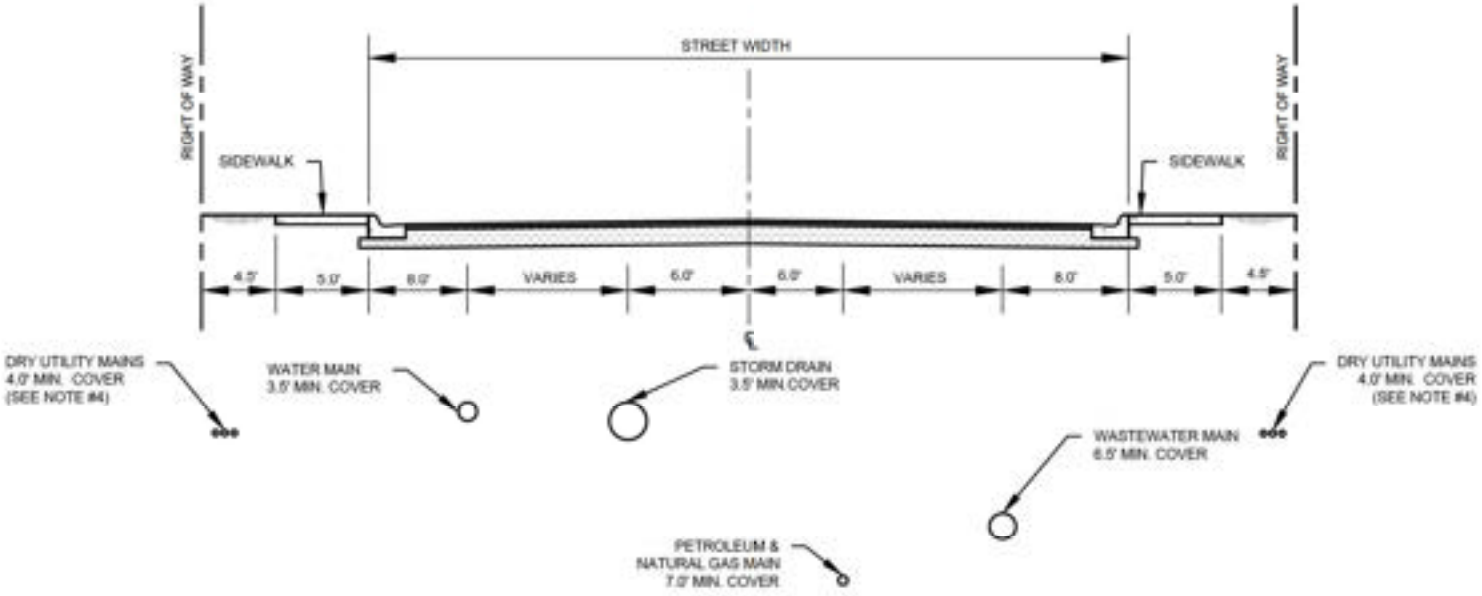


NOTES:

1. IF A SITE INCLUDES ALLEYS, OR IS ADJACENT TO EXISTING ALLEYS, THEN THE WASTEWATER MAIN IS TO BE LOCATED IN THE ALLEY AND NOT THE STREET RIGHT OF WAY.
2. ALL COVERS ARE FROM THE GUTTER FLOWLINE TO THE TOP OF PIPE.
3. ADDITIONAL UTILITY DEPTH MAY BE REQUIRED TO ACCOMMODATE LATERALS.
4. STORM DRAINS MAY BE LOCATED ON EITHER SIDE OR BOTH SIDES OF STREET AS NEEDED.
5. DRY UTILITY MAINS MUST MAINTAIN 7.0' MINIMUM COVER WHEN CROSSING RIGHT OF WAY. DRY UTILITY SERVICE LATERALS MUST MAINTAIN 2.0' MINIMUM COVER IN THE RIGHT OF WAY.
6. ALL DRY UTILITY MAINS AND SERVICE LATERALS MUST BORE TO CROSS EXISTING MAJOR COLLECTOR PAVEMENT. NO OPEN TRENCHING.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	COLLECTOR STREET UTILITY MAIN SPACING		303
APPROVED: MCC			

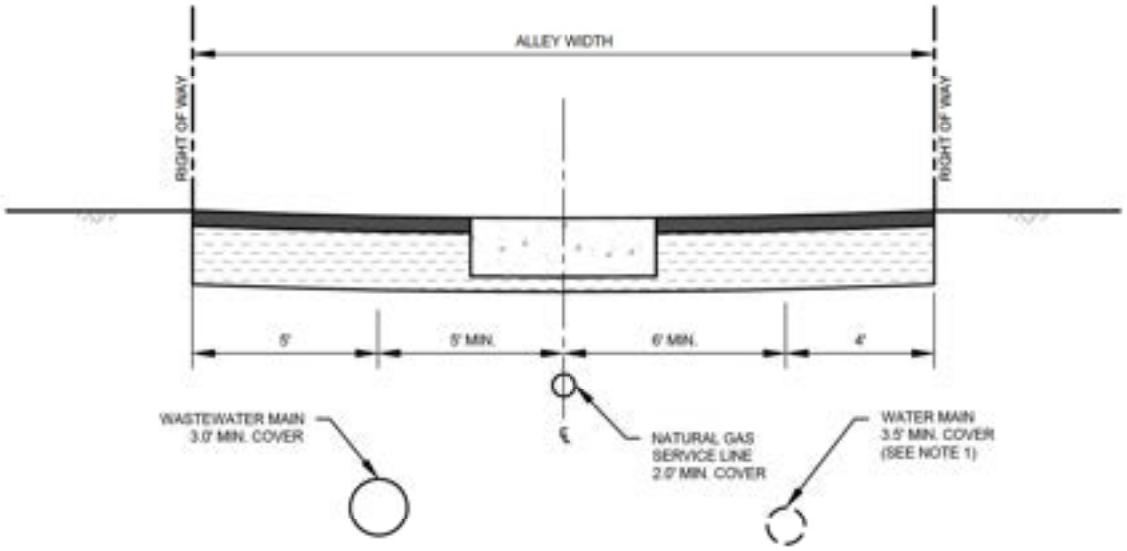


NOTES:

1. IF A SITE INCLUDES ALLEYS, OR IS ADJACENT TO EXISTING ALLEYS, THEN THE WASTEWATER MAIN IS TO BE LOCATED IN THE ALLEY AND NOT THE STREET RIGHT OF WAY.
2. ALL COVERS ARE FROM THE GUTTER FLOWLINE TO THE TOP OF PIPE.
3. ADDITIONAL UTILITY DEPTH MAY BE REQUIRED TO ACCOMMODATE LATERALS.
4. DRY UTILITY MAINS MUST MAINTAIN 7.0' MINIMUM COVER WHEN CROSSING RIGHT OF WAY. DRY UTILITY SERVICE LATERALS MUST MAINTAIN 2.0' MINIMUM COVER IN THE RIGHT OF WAY.
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

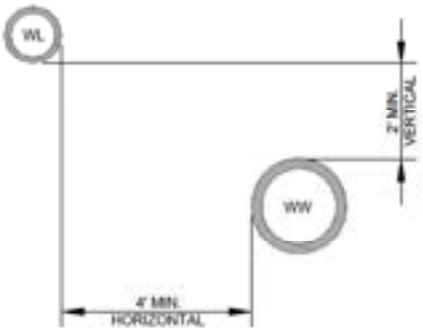
DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	LOCAL STREET UTILITY MAIN SPACING		304
APPROVED: MCC			



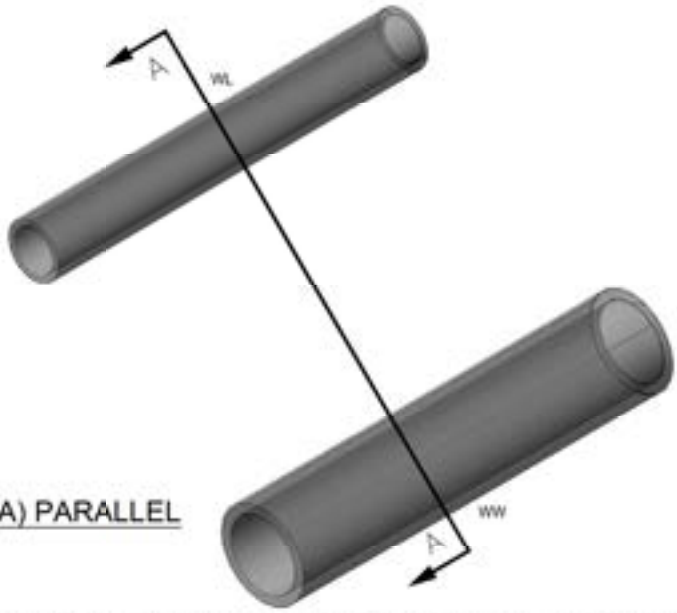
NOTES:

1. WATER MAIN LOCATION APPLIES FOR EXCEPTIONS ONLY. THE CITY STANDARD REMAINS LOCATING WATER MAINS IN STREETS. WHEN WATER MAINS ARE NOT EXISTING OR PROPOSED IN AN ALLEY THE EXPECTATION IS FOR DRY UTILITIES TO UTILIZE THIS ALIGNMENT LOCATION.
2. ALL COVERS ARE FROM THE ALLEY INVERT TO THE TOP OF PIPE.
3. ADDITIONAL UTILITY DEPTH MAY BE REQUIRED TO ACCOMMODATE LATERALS.
4. ALL DRY UTILITY LINES MUST MAINTAIN 2.0' MINIMUM COVER WHEN CROSSING RIGHT OF WAY, AND MUST MAINTAIN 5.0' MINIMUM HORIZONTAL SEPARATION DISTANCE FROM ALL PUBLIC UTILITY MAINS.
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		STANDARD ALLEY UTILITY MAIN SPACING		305



SECTION 'A-A'



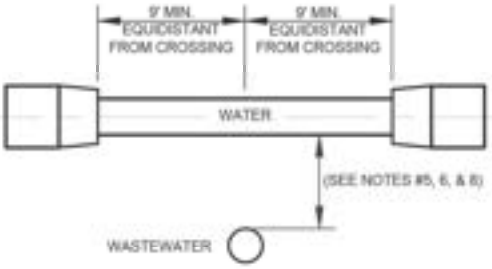
(A) PARALLEL

NOTES:

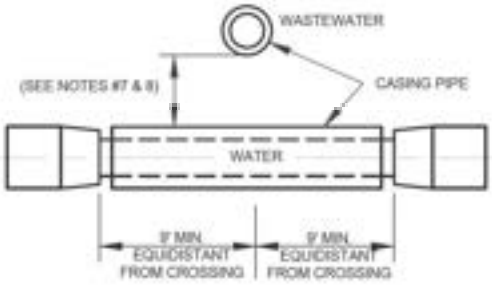
1. SEE CITY DETAIL 807 FOR NEW PETROLEUM OR NATURAL GAS LINE REQUIREMENTS WHEN IN PARALLEL WITH A WATER MAIN. REQUIREMENTS FOR WATER MAINS IN PARALLEL WITH PETROLEUM OR NATURAL GAS LINES ARE THE SAME AS WHEN THEY ARE PARALLEL WITH WASTEWATER MAINS UNLESS STATED OTHERWISE IN CITY DETAIL 807.
2. IF AN EXISTING PETROLEUM OR NATURAL GAS LINE PREDATES A PUBLIC ROW OR EASEMENT THAT THE WATER MAIN IS LOCATED IN THEN THE WATER MAIN DESIGN AND CONSTRUCTION MAY BE SUBJECT TO ADDITIONAL REQUIREMENTS AS PER THE PETROLEUM OR NATURAL GAS LINE OWNER'S STANDARDS.
3. WASTEWATER MAINS AND MANHOLES MUST BE LOCATED AT LEAST 9.0' FROM ALL WATER MAINS IN ALL DIRECTIONS. IF THIS IS NOT POSSIBLE THEN AN ENGINEERING REPORT IS REQUIRED PER TAC TO JUSTIFY WHY, AND THE REQUIREMENTS OF THIS DETAIL WILL APPLY. THIS DETAIL IS INTENDED TO COMPLY WITH TAC 217.53(d) AND TAC 290.44(e). IF TAC AND THIS DETAIL DIFFER THEN THE MORE RESTRICTIVE STANDARD GOVERNS.
4. WHERE WATER MAINS ARE LOCATED IN PARALLEL WITH NEW WASTEWATER MAINS, WASTEWATER MAINS MUST BE CONSTRUCTED AT LEAST 150 PSI PRESSURE CLASS, CORROSION RESISTANT, NON-BRITTLE PIPE SUCH AS CIP, DIP, OR PVC PIPE THAT IS DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE. EXISTING WASTEWATER MAINS IN PARALLEL THAT ARE LEAKING OR ARE DISTURBED AND THEN BEGIN TO LEAK MUST BE REPLACED WITH 150 PSI PRESSURE-RATED PIPE.
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		PARALLEL WATER & WASTEWATER SPACING		306

NEW WATER OVER WASTEWATER



NEW WATER UNDER WASTEWATER

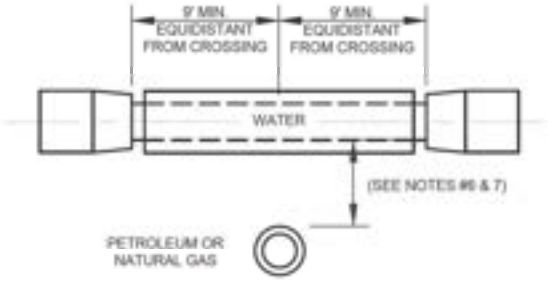


NOTES:

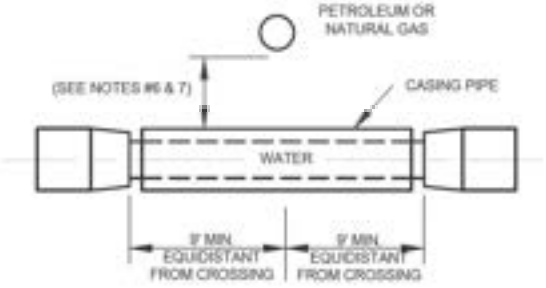
1. SEE CITY DETAIL 309 FOR NEW WASTEWATER MAIN REQUIREMENTS AT WATER MAIN CROSSINGS.
2. WASTEWATER MAINS AND MANHOLES MUST BE LOCATED AT LEAST 9.0' FROM ALL WATER MAINS IN ALL DIRECTIONS. IF THIS IS NOT POSSIBLE THEN AN ENGINEERING REPORT IS REQUIRED PER TAC TO JUSTIFY WHY, AND THE REQUIREMENTS OF THIS DETAIL WILL APPLY.
3. THIS DETAIL IS INTENDED TO COMPLY WITH TAC 217.53(d) AND TAC 290.44(e). IF TAC AND THIS DETAIL DIFFER THEN THE MORE RESTRICTIVE STANDARD GOVERNS.
4. CENTER NEW WATER MAIN PIPE SEGMENT ON CROSSING SO THAT ALL PIPE SEGMENT JOINTS ARE EQUIDISTANT AND AT LEAST 9.0' HORIZONTALLY FROM THE CENTERLINE OF THE CROSSING. NEW WATER MAIN IS TO CROSS WASTEWATER MAIN AT 90° ANGLE.
5. NEW WATER MAINS ARE TO HAVE NO LESS THAN 2.0' VERTICAL SEPARATION OVER THE OUTER EDGE OF ANY EXISTING NON-PRESSURE RATED WASTEWATER MAIN, AND NO LESS THAN 0.5' VERTICAL SEPARATION OVER THE OUTER EDGE OF ANY EXISTING PRESSURE-RATED (150 PSI) WASTEWATER MAIN.
6. VERTICAL SEPARATION DIMENSION REQUIREMENTS FOR NEW WATER MAINS CROSSING OVER NEW WASTEWATER MAINS ARE COVERED IN CITY DETAIL 309.
7. NEW WATER MAIN CROSSING BENEATH NEW OR EXISTING WASTEWATER MAIN TO HAVE NO LESS THAN 2.0' VERTICAL SEPARATION FROM WASTEWATER MAIN WITH MINIMUM 18.0' LONG PIPE ENCASEMENT CENTERED ON THE CROSSING. SEE CITY DETAIL 805 FOR PIPE CASING.
8. VERTICAL SEPARATION DIMENSIONS TO BE MEASURED FROM OUTER EDGE OF ALL PIPE ENCASEMENTS.
9. WHEN CROSSING AN EXISTING WASTEWATER MAIN AND IT IS DISTURBED OR SHOW SIGNS OF LEAKING, THE WASTEWATER MAIN MUST BE REPLACED AT LEAST 9.0' IN BOTH DIRECTIONS FROM THE CROSSING WITH AT LEAST 150 PSI PRESSURE-RATED PIPE EMBEDDED IN CEMENT STABILIZED SAND ENCASEMENT (2.5 SACKS / CUBIC YARD) FOR A TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 1.0' BEYOND THE JOINT ON EACH END.
10. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
11. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		NEW WATER MAIN CROSSING WASTEWATER MAIN		307

NEW WATER OVER PETROLEUM & NATURAL GAS



NEW WATER UNDER PETROLEUM & NATURAL GAS

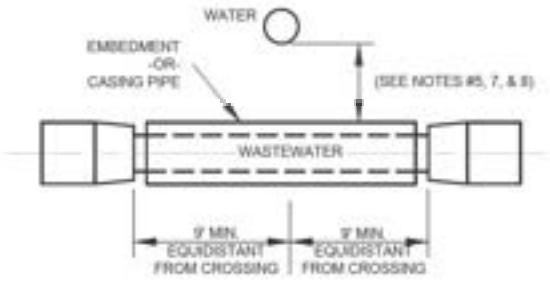


NOTES:

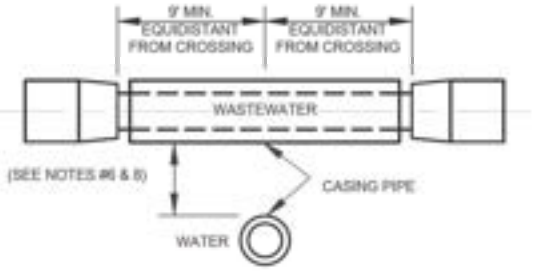
1. SEE CITY DETAIL 806 FOR NEW PETROLEUM OR NATURAL GAS LINE REQUIREMENTS AT WATER MAIN CROSSINGS. REQUIREMENTS FOR WATER MAINS CROSSING WITH PETROLEUM OR NATURAL GAS LINES ARE THE SAME AS WHEN THEY ARE CROSSING WASTEWATER MAINS UNLESS STATED OTHERWISE IN CITY DETAIL 806.
2. IF AN EXISTING PETROLEUM OR NATURAL GAS LINE PREDATES A PUBLIC ROW OR EASEMENT THAT THE WATER MAIN IS LOCATED IN THEN THE WATER MAIN DESIGN AND CONSTRUCTION MAY BE SUBJECT TO ADDITIONAL REQUIREMENTS AS PER THE PETROLEUM OR NATURAL GAS LINE OWNER'S STANDARDS.
3. PETROLEUM OR NATURAL GAS LINES AND MUST BE LOCATED AT LEAST 9.0' FROM ALL WATER MAINS IN ALL DIRECTIONS. IF THIS IS NOT POSSIBLE THEN AN ENGINEERING REPORT IS REQUIRED PER TAC TO JUSTIFY WHY, AND THE REQUIREMENTS OF THIS DETAIL WILL APPLY.
4. THIS DETAIL IS INTENDED TO COMPLY WITH TAC 217.53(d) AND TAC 290.44(e). IF TAC AND THIS DETAIL DIFFER THEN THE MORE RESTRICTIVE STANDARD GOVERNS.
5. CENTER NEW WATER MAIN PIPE SEGMENT ON CROSSING SO THAT ALL PIPE SEGMENT JOINTS ARE EQUIDISTANT AND AT LEAST 9.0' HORIZONTALLY FROM THE CENTERLINE OF THE CROSSING. WATER MAIN TO CROSS PETROLEUM OR NATURAL GAS LINE AT 90° ANGLE.
6. NEW WATER MAIN CROSSING OVER OR BENEATH NEW OR EXISTING PETROLEUM OR NATURAL GAS LINES TO BE ENCASED IN MINIMUM 18'.0' LONG PIPE ENCASEMENT CENTERED ON THE CROSSING. SEE CITY DETAIL 805 FOR PIPE CASING. VERTICAL SEPARATION FROM OUTER EDGE OF PETROLEUM OR NATURAL GAS LINES TO BE NO LESS THAN 2.0'.
7. VERTICAL SEPARATION DIMENSIONS TO BE MEASURED FROM OUTER EDGE OF ALL PIPE ENCASEMENTS.
8. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
9. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JDF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		NEW WATER MAIN CROSSING PETROLEUM AND NATURAL GAS LINE		308

NEW WASTEWATER UNDER WATER



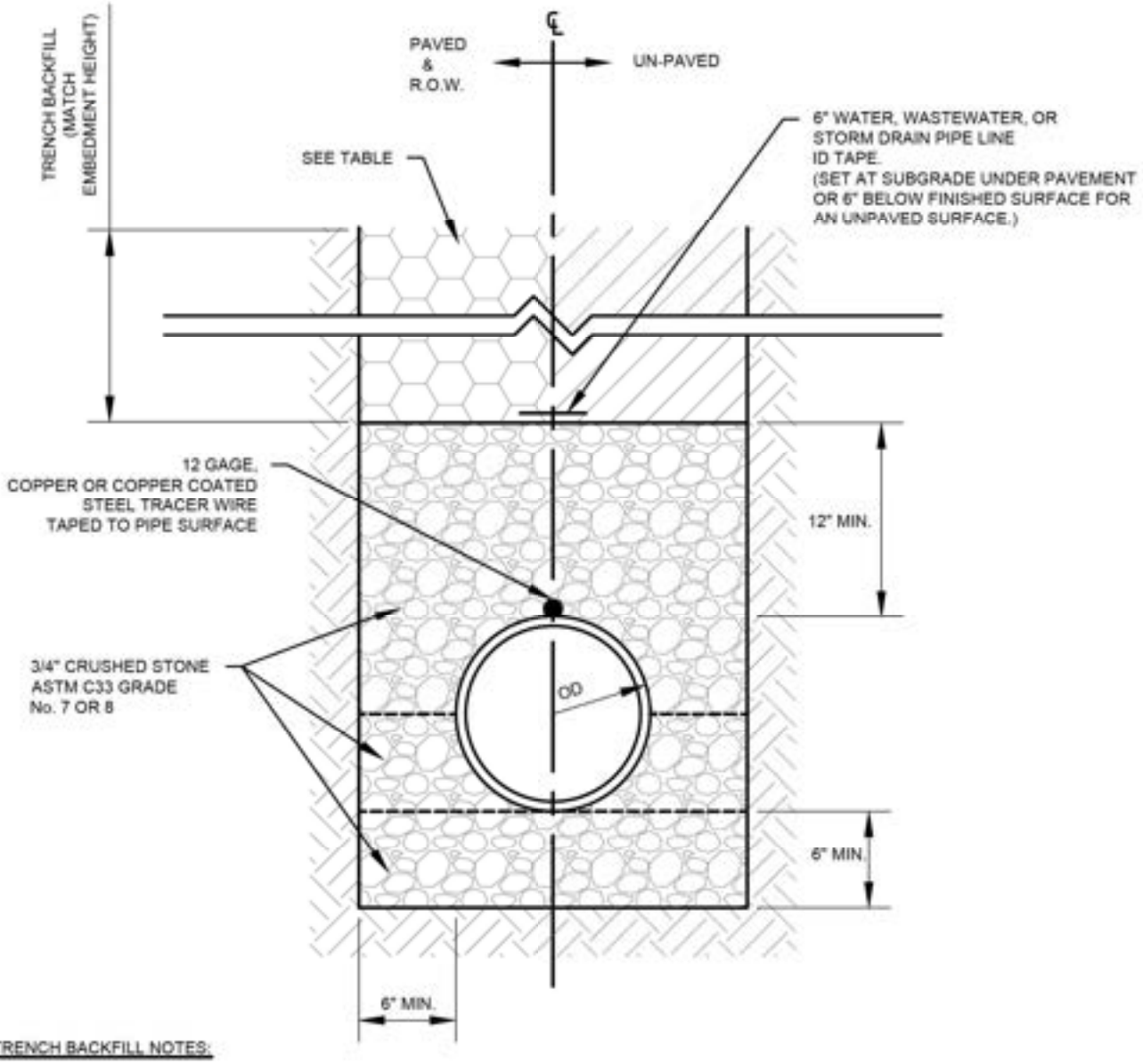
NEW WASTEWATER OVER WATER



NOTES:

1. SEE CITY DETAIL 307 FOR NEW WATER MAIN REQUIREMENTS AT WASTEWATER MAIN CROSSINGS.
2. WASTEWATER MAINS AND MANHOLES MUST BE LOCATED AT LEAST 9.0' FROM ALL WATER MAINS IN ALL DIRECTIONS. IF THIS IS NOT POSSIBLE THEN AN ENGINEERING REPORT IS REQUIRED PER TAC TO JUSTIFY WHY, AND THE REQUIREMENTS OF THIS DETAIL WILL APPLY.
3. THIS DETAIL IS INTENDED TO COMPLY WITH TAC 217.53(d) AND TAC 290.44(e). IF TAC AND THIS DETAIL DIFFER THEN THE MORE RESTRICTIVE STANDARD GOVERNS.
4. CENTER NEW WASTEWATER MAIN PIPE SEGMENT ON CROSSING SO THAT ALL PIPE SEGMENT JOINTS ARE EQUIDISTANT AND AT LEAST 9.0' HORIZONTALLY FROM THE CENTERLINE OF THE CROSSING. WASTEWATER MAIN IS TO CROSS WATER MAIN AT 90° ANGLE.
5. NEW WASTEWATER MAIN CROSSING BENEATH NEW OR EXISTING WATER MUST COMPLY WITH ONE OF THE FOLLOWING:
   A. WASTEWATER MAIN PIPE TO BE PRESSURE RATED SDR-26 D2241 PIPE OR APPROVED EQUAL FROM MANHOLE TO MANHOLE WITH MINIMUM 18.0' LONG CEMENT STABILIZED SAND ENCASEMENT (2.5 SACKS/CUBIC YARD) CENTERED ON THE CROSSING. VERTICAL SEPARATION FROM OUTER EDGE OF WATER MAIN TO BE NO LESS THAN 2.0'.
   B. WASTEWATER MAIN PIPE TO BE HEAVY-WALL GRAVITY PIPE SDR-26 D3034 OR APPROVED EQUAL FROM MANHOLE TO MANHOLE WITH MINIMUM 18.0' LONG PIPE ENCASEMENT CENTERED ON THE CROSSING. SEE CITY DETAIL 805 FOR PIPE CASING. VERTICAL SEPARATION FROM OUTER EDGE OF WATER MAIN TO BE NO LESS THAN 0.5'.
6. NEW WASTEWATER MAIN CROSSING OVER NEW OR EXISTING WATER MAIN TO BE PRESSURE RATED SDR-26 D2241 PIPE OR APPROVED EQUAL FROM MANHOLE TO MANHOLE WITH MINIMUM 18.0' LONG PIPE ENCASEMENT CENTERED ON THE CROSSING. SEE CITY DETAIL 805 FOR PIPE CASING. VERTICAL SEPARATION FROM OUTER EDGE OF WATER MAIN TO BE NO LESS THAN 2.0'.
7. NEW WATER MAINS CROSSING OVER EXISTING WASTEWATER MAINS ARE COVERED IN CITY DETAIL 307.
8. VERTICAL SEPARATION DIMENSIONS TO BE MEASURED FROM OUTER EDGE OF ALL PIPE ENCASEMENTS.
9. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
10. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

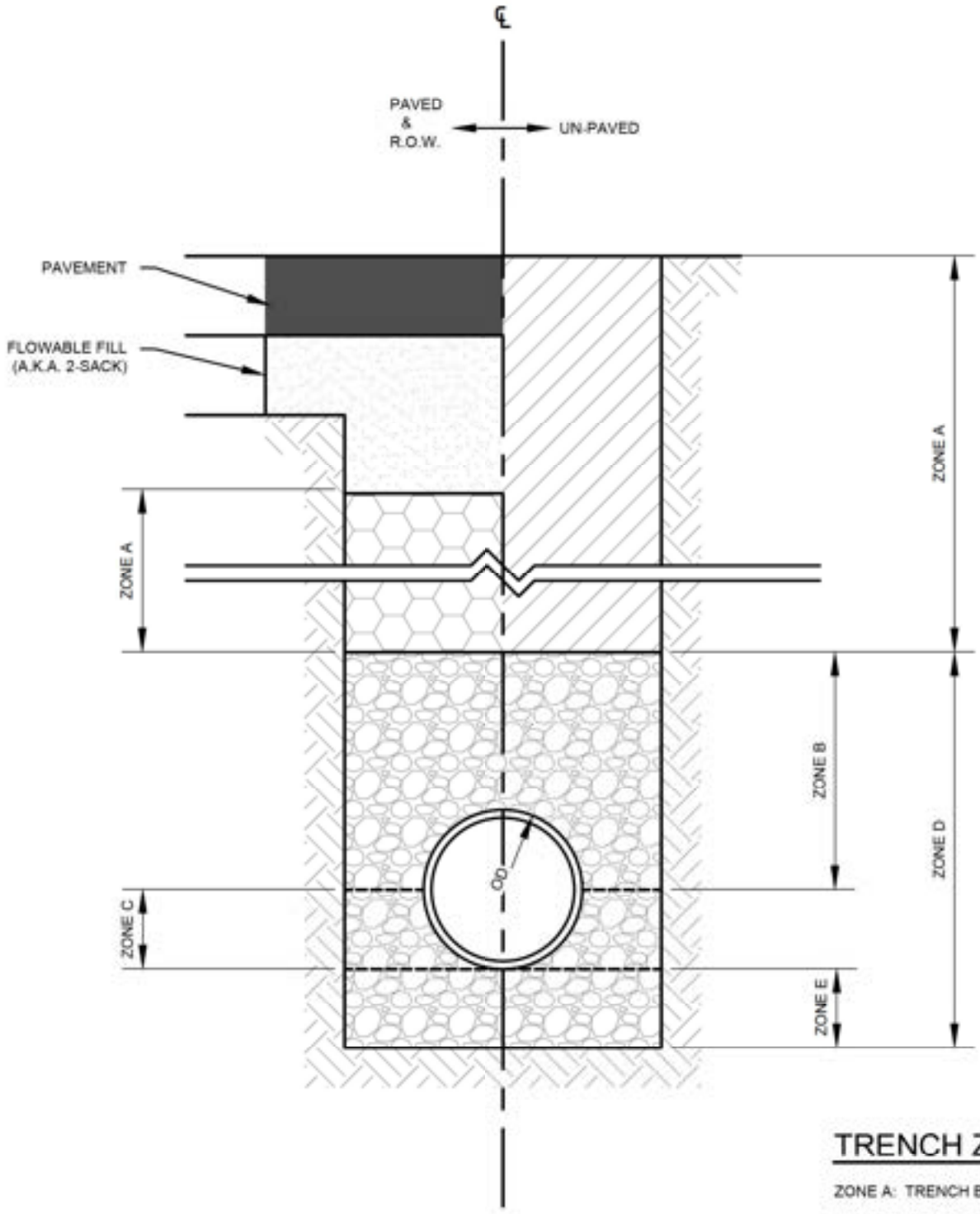
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		NEW WASTEWATER MAIN CROSSING WATER MAIN		309



TRENCH BACKFILL NOTES:

1. APPLIES TO ALL PIPE TYPES. (DUCTILE IRON, PVC, ETC.)
2. UTILIZE SELECT FILL BACKFILL BENEATH ALL PAVED SURFACES. NATIVE MATERIAL BACKFILL CAN ONLY BE USER FOR UNPAVED TRENCH CONDITIONS IF BACKFILL MATERIAL IS ≤ 30LL AND ≤ 15 PI.
3. NATIVE MATERIAL TO BE EXISTING EXCAVATED SOIL FROM TRENCH WITH ALL MATERIAL BROKEN DOWN ≤ 2".
4. MOISTURE CONDITION ALL BACKFILL MATERIAL PRIOR TO PLACING IN TRENCH.
5. PLACE TRENCH BACKFILL MATERIAL IN MAXIMUM 12" LOOSE LIFTS AND COMPACT TO MAXIMUM 8" COMPACTED LIFTS.
6. REFER TO CITY DETAILS 311 AND 312 FOR TRENCH PAVEMENT REPLACEMENT REQUIREMENTS.
7. PLACE LAYERS B, C, AND E FOUND ON CITY DETAIL 310(B) AS SEPARATE LAYERS.
8. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
9. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	TRENCHING AND BEDDING		310(A)



TRENCH ZONES:

ZONE A: TRENCH BACKFILL

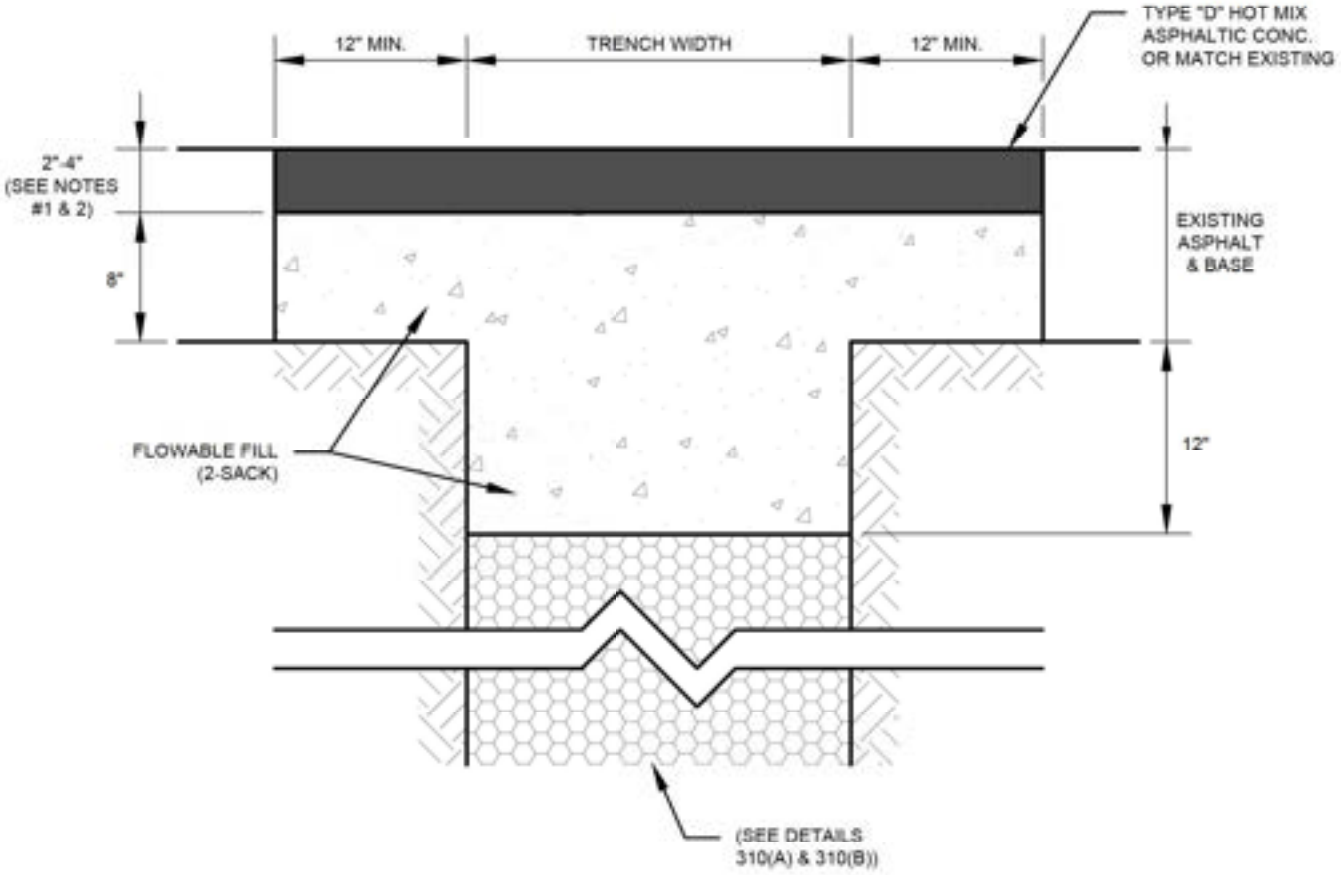
ZONE B: PIPE BACKFILL

ZONE C: HAUNCHING

ZONE D: PIPE EMBEDMENT

ZONE E: BEDDING

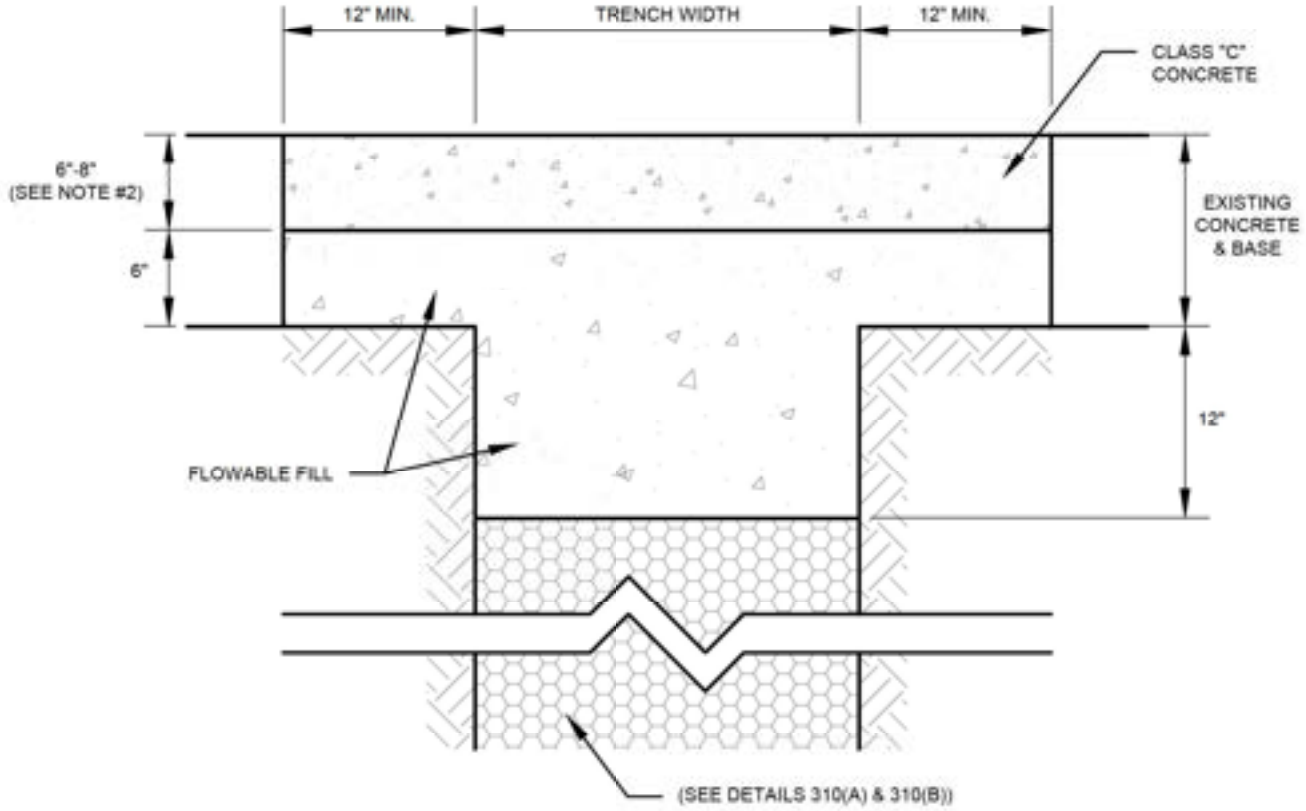
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	TRENCHING AND BEDDING		310(B)



NOTES:

1. ASPHALT PAVEMENT THICKNESS TO BE A MINIMUM OF 2" OR MATCH THE EXISTING ASPHALT THICKNESS IF IT IS GREATER THAN 2" THICK.
2. PLACE ASPHALT PAVEMENT IN MAXIMUM 2" LIFTS, 95% MODIFIED COMPACTION.
3. PLACE ALL FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT) AS A SINGLE CONTINUOUS POUR.
4. EXTEND BOTH ASPHALT AND FLOWABLE FILL 12" BEYOND THE EDGE OF THE TRENCH ON BOTH SIDES.
5. SEE DETAILS 310(A) AND 310(B) REGARDING TRENCH BACKFILL REQUIREMENTS BENEATH THE FLOWABLE FILL.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

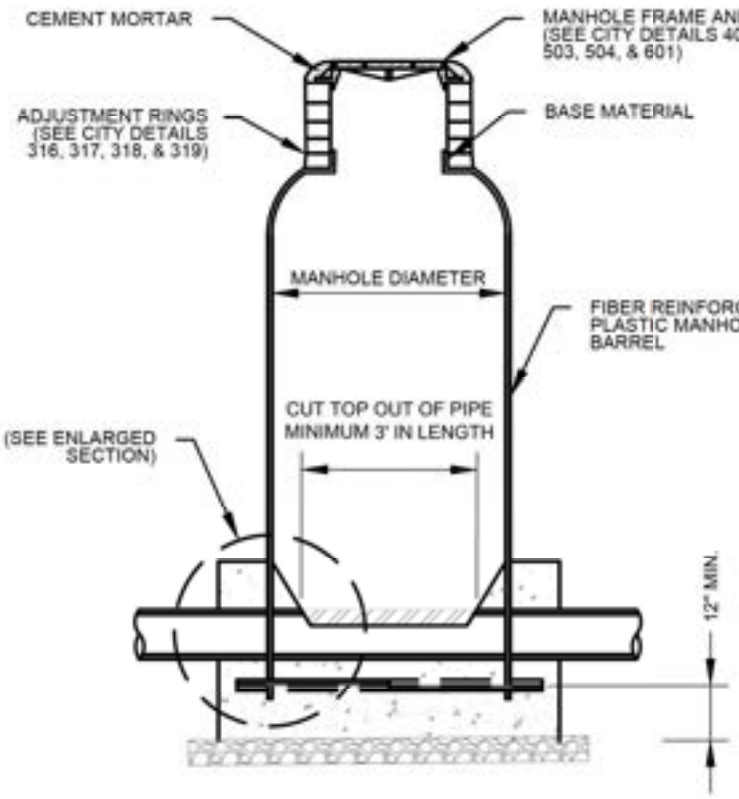
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	ASPHALT TRENCH PAVEMENT REPLACEMENT		311



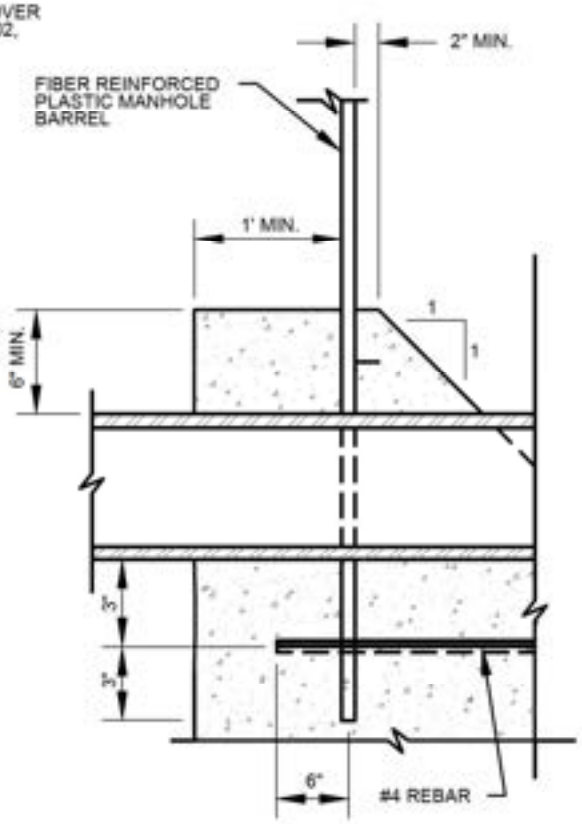
NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C" CONCRETE, 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. CONCRETE PAVEMENT THICKNESS TO BE A MINIMUM OF 6" OR MATCH THE EXISTING CONCRETE THICKNESS IF IT IS GREATER THAN 6" THICK. CONCRETE PAVEMENT THICKNESS TO BE MINIMUM 8" FOR ARTERIAL PAVEMENT.
3. PLACE ALL FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT) AS A SINGLE CONTINUOUS POUR.
4. EXTEND BOTH CONCRETE AND FLOWABLE FILL 12" BEYOND THE EDGE OF THE TRENCH ON BOTH SIDES.
5. SEE DETAILS 310(A) AND 310(B) REGARDING TRENCH BACKFILL REQUIREMENTS BENEATH THE FLOWABLE FILL.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

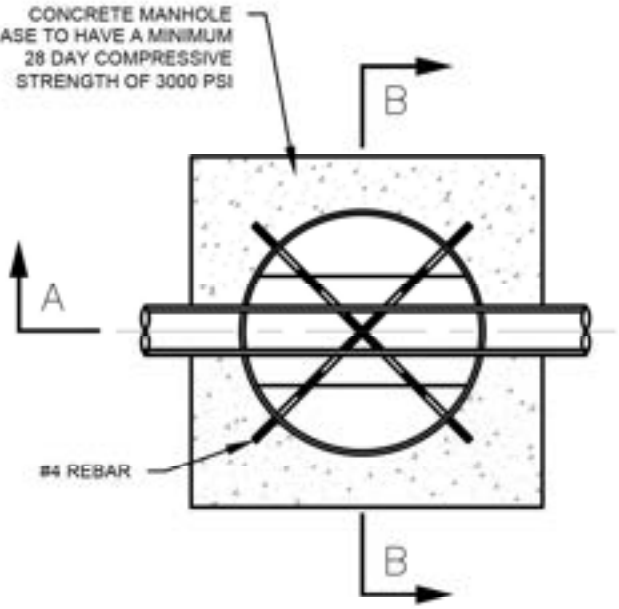
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	CONCRETE TRENCH PAVEMENT REPLACEMENT		312

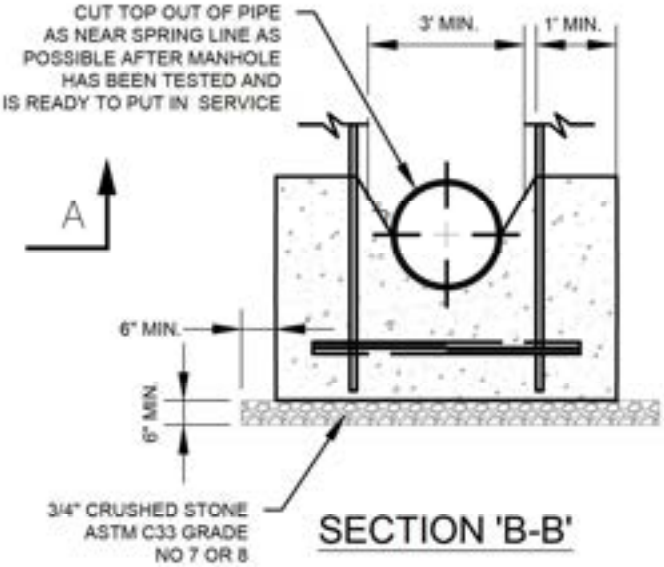


SECTION 'A-A"



ENLARGED SECTION





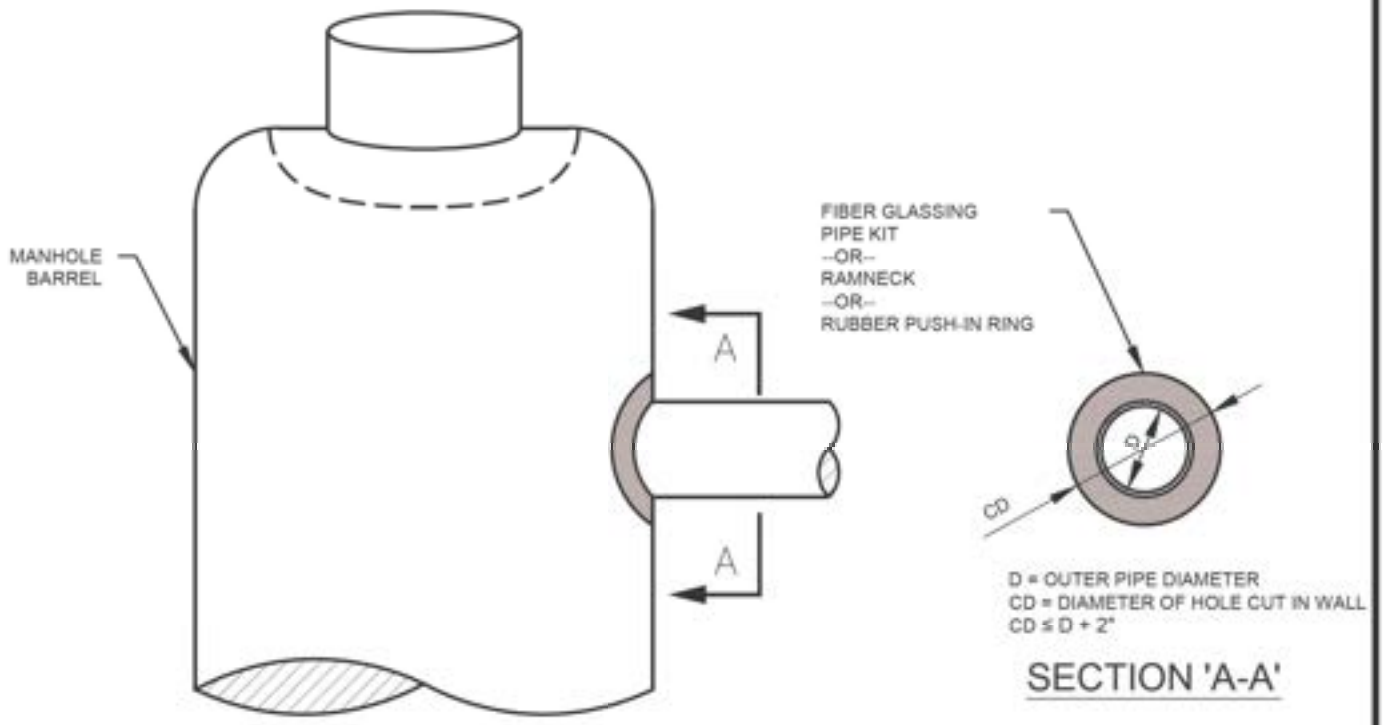
SECTION 'B-B'

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
MIDLAND Engineering Services	TYPICAL FIBERGLASS MANHOLE		313(A)

NOTES:

1. 48" DIAMETER MANHOLES TO BE USED FOR PIPE DIAMETERS OF 24" OR SMALLER ONLY.
2. INSTALL DROPS AND INTERSECTING PIPES ONLY WHEN CALLED FOR IN CONSTRUCTION DRAWINGS.
3. SET MANHOLE FRAME IN SEALANT PER CITY OF MIDLAND STANDARD SPECIFICATIONS.
4. NEW MANHOLE TO HAVE SEAMLESS AND CONTINUOUS NECK, SHOULDER, AND BARREL.
5. ALL CONCRETE TO BE CLASS "A" CONCRETE.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	TYPICAL FIBERGLASS MANHOLE		313(B)

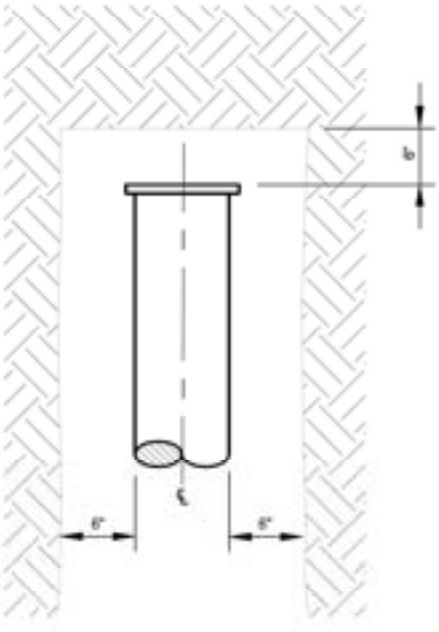


SECTION 'A-A'

NOTES:

1. THE DIAMETER OF THE CUTOUT IN THE MANHOLE BARREL IS TO BE NO MORE THAN 2.0" WIDER THAN THE OUTER WALL DIAMETER OF THE PENETRATING PIPE.
2. THE PENETRATING PIPE IS TO BE CENTERED IN THE MANHOLE BARREL CUTOUT.
3. PIPES PENETRATING MANHOLE MUST BE MINIMUM 6" DIAMETER, AND SERVICE LINES MUST BE CONSTRUCTED TO CITY WASTEWATER MAIN OR STORM DRAIN STANDARDS WITHIN PUBLIC RIGHT OF WAY OR EASEMENT.
4. FORM FLOW SURFACE AND MOUND CONCRETE AROUND PIPE PENETRATIONS, TO FORM A SEAL, IN ONE CONTINUOUS PLACEMENT OPERATION.
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE:	DETAIL:
	TYPICAL FIBERGLASS MANHOLE PIPE PENETRATION		314

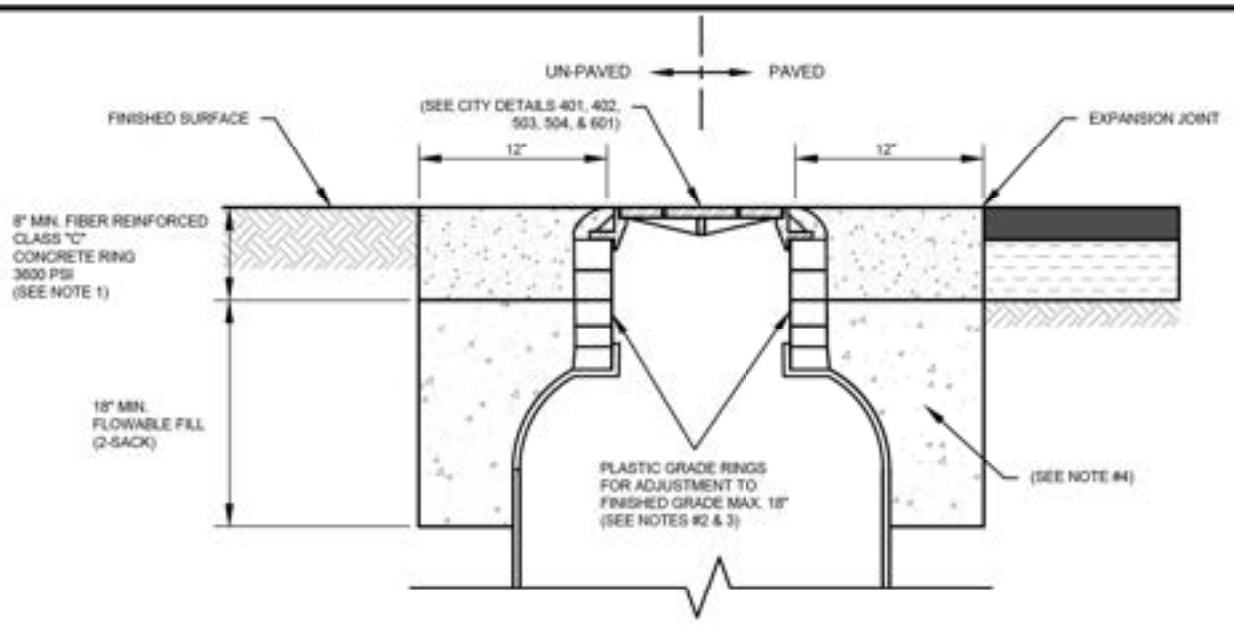


PLUG BLOCKING

NOTES:

1. PLUG ALL WASTEWATER MAIN AND STORM DRAIN STUB OUTS. SECURE PLASTIC PLUG TO END OF STORM DRAIN.
2. FITTINGS TO BE POLY WRAPPED BEFORE BACKFILLING.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		GRAVITY MAIN PLUG		315

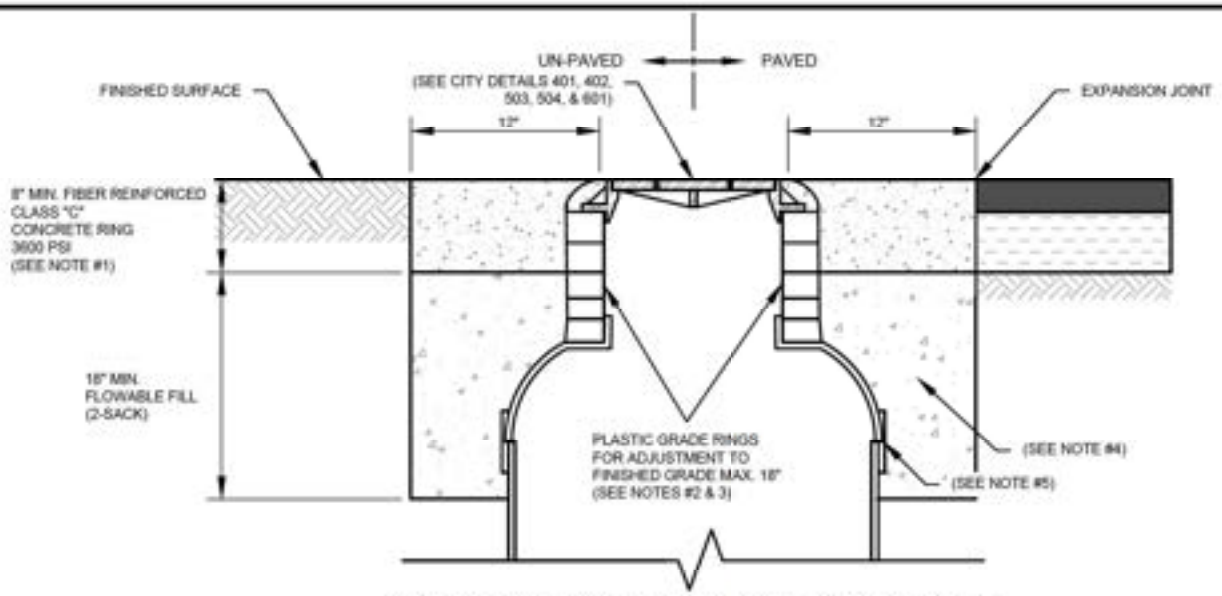


NEW MANHOLE ADJUSTMENT

NOTES:

1. INSTALL 12" MIN. FIBER REINFORCED CLASS "C" CONCRETE RING,3600 PSI, WHEN MANHOLE IS LOCATED IN AN ARTERIAL R.O.W.
2. GRADE RINGS TO MEET ASTM STANDARD A48 AND TO BE 2", 4", OR 6" THICKNESS AS REQUIRED. INSTALL ASPHALT TAR IN THICK, UNIFORM COATING OVER ALL OUTER ADJUSTMENT RING SURFACES AND JOINTS.
3. ENGINEERING SERVICES REPRESENTATIVE AND UTILITY SERVICES REPRESENTATIVE MAY ALLOW GREATER ADJUSTMENT RING DEPTH TO ACCOMMODATE PAVING STRUCTURES.
4. REMOVE ALL MATERIAL EXCAVATED FROM SITE AND EXCAVATION, AND FILL TO FINISHED BASE ELEVATION WITH FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT).
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		NEW MANHOLE ADJUSTMENT		316



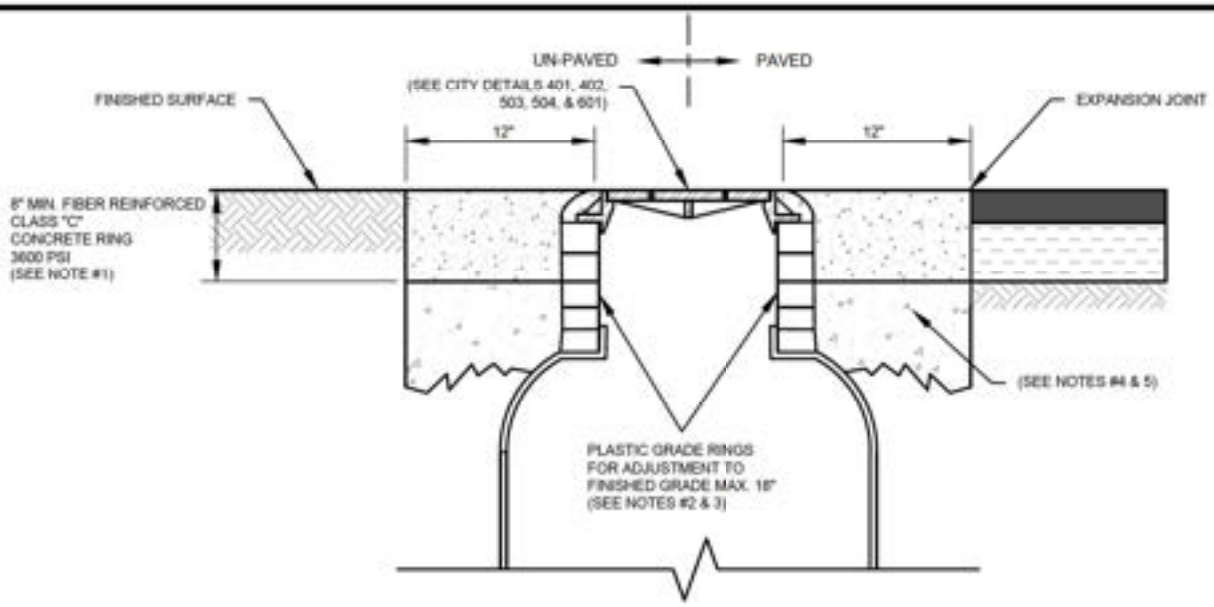
EXISTING MANHOLE BARREL ADJUSTMENT

NOTES:

1. INSTALL 12" MIN. FIBER REINFORCED CLASS "C" CONCRETE RING, 3600 PSI, WHEN MANHOLE IS LOCATED IN AN ARTERIAL R.O.W.
2. GRADE RINGS TO MEET ASTM STANDARD A48 AND TO BE 2", 4", OR 6" THICKNESS AS REQUIRED. INSTALL ASPHALT TAR IN THICK, UNIFORM COATING OVER ALL OUTER ADJUSTMENT RING SURFACES AND JOINTS.
3. ENGINEERING SERVICES REPRESENTATIVE AND UTILITY SERVICES REPRESENTATIVE MAY ALLOW GREATER ADJUSTMENT RING DEPTH TO ACCOMMODATE PAVING STRUCTURES.
4. REMOVE ALL MATERIAL EXCAVATED FROM SITE AND EXCAVATION, AND FILL TO FINISHED BASE ELEVATION WITH FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT).
5. MANUFACTURED WATERTIGHT CONNECTOR. CORE DRILL AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	EXISTING MANHOLE BARREL ADJUSTMENT		317
APPROVED: MCC			

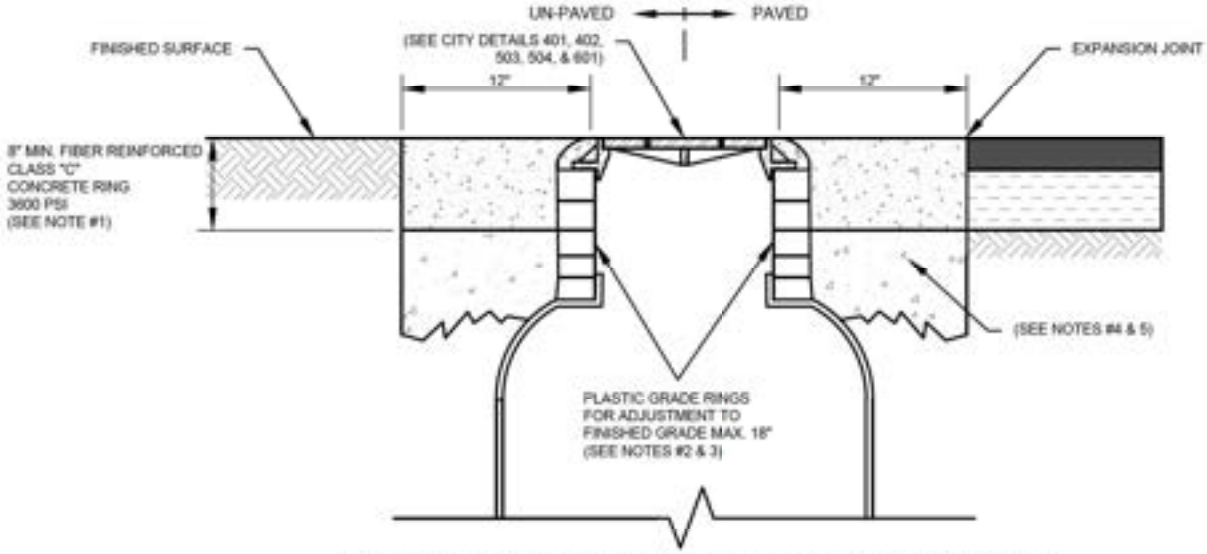


NEW MANHOLE RING & COVER ADJUSTMENT

NOTES:

1. INSTALL 12" MIN. FIBER REINFORCED CLASS "C" CONCRETE RING, 3600 PSI, WHEN MANHOLE IS LOCATED IN AN ARTERIAL R.O.W.
2. GRADE RINGS TO MEET ASTM STANDARD A48 AND TO BE 2", 4", OR 6" THICKNESS AS REQUIRED. INSTALL ASPHALT TAR IN THICK, UNIFORM COATING OVER ALL OUTER ADJUSTMENT RING SURFACES AND JOINTS.
3. ENGINEERING SERVICES REPRESENTATIVE AND UTILITY SERVICES REPRESENTATIVE MAY ALLOW GREATER ADJUSTMENT RING DEPTH TO ACCOMMODATE PAVING STRUCTURES.
4. REMOVE ALL MATERIAL EXCAVATED FROM SITE AND EXCAVATION.
5. FILL ANY OVER-EXCAVATION WITH FLOWABLE FILL 2-SACK (2-SACK = 188 LBS/CY, PORTLAND CEMENT).
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		NEW MANHOLE RING & COVER ADJUSTMENT		318

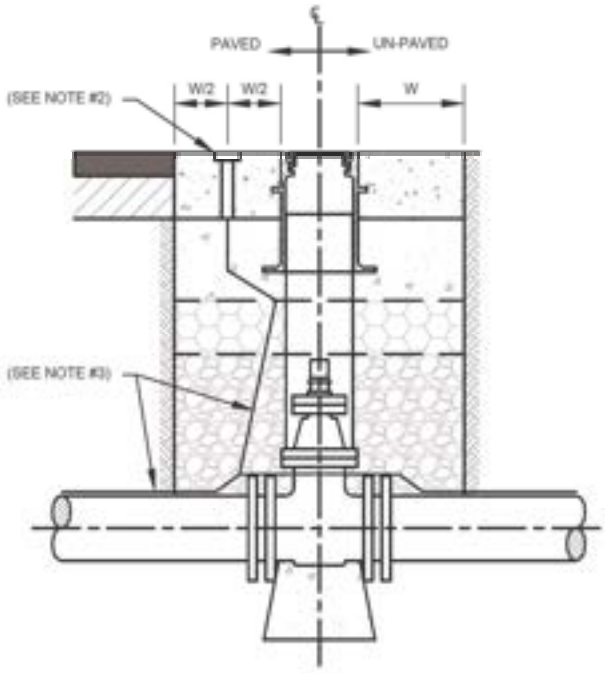


EXISTING MANHOLE RING & COVER ADJUSTMENT

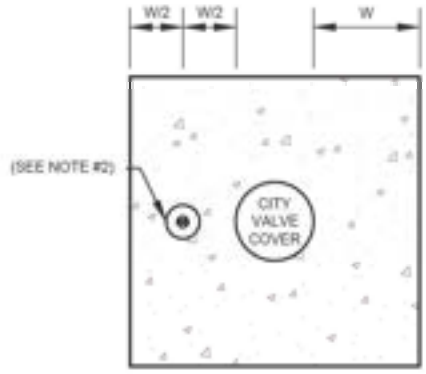
NOTES:

1. INSTALL 12" MIN. FIBER REINFORCED CLASS "C" CONCRETE RING, 3600 PSI, WHEN MANHOLE IS LOCATED IN AN ARTERIAL R.O.W.
2. GRADE RINGS TO MEET ASTM STANDARD A48 AND TO BE 2", 4", OR 6" THICKNESS AS REQUIRED. INSTALL ASPHALT TAR IN THICK, UNIFORM COATING OVER ALL OUTER ADJUSTMENT RING SURFACES AND JOINTS.
3. ENGINEERING SERVICES REPRESENTATIVE AND UTILITY SERVICES REPRESENTATIVE MAY ALLOW GREATER ADJUSTMENT RING DEPTH TO ACCOMMODATE PAVING STRUCTURES.
4. REMOVE ALL MATERIAL EXCAVATED FROM SITE AND EXCAVATION.
5. FILL ANY OVER-EXCAVATION WITH FLOWABLE FILL 2-SACK (2-SACK = 188 LBS/CY, PORTLAND CEMENT).
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL: 319
		EXISTING MANHOLE RING & COVER ADJUSTMENT		



CROSS SECTION VIEW



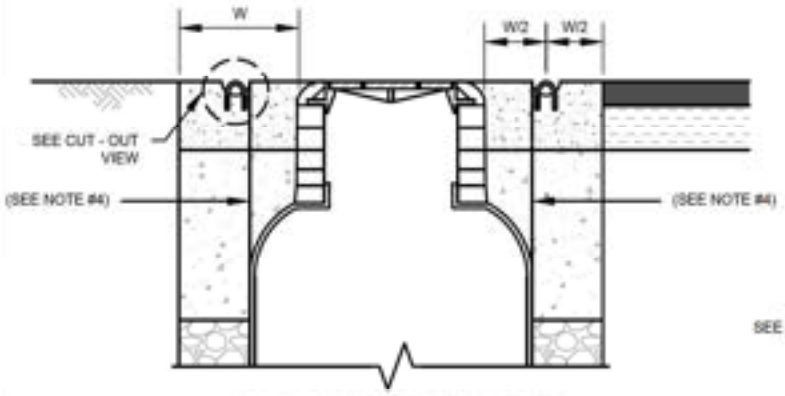
PLAN VIEW

NOTES:

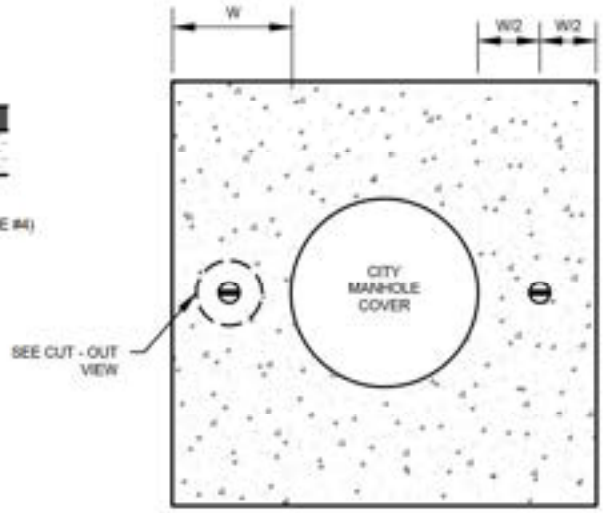
1. SEE OTHER CITY STANDARD DETAILS FOR INFORMATION REGARDING VALVES, COVERS, CONCRETE RINGS, ETC.
2. TRAFFIC RATED COPPERHEAD SNAKEPIT TEST STATION OR APPROVED EQUAL. SET FLUSH WITH FINISHED SURFACE OF CONCRETE RING.
3. TRACER WIRE PER DETAIL 310 (A) TO BE TAPED TO SIDE OF VALVE BOX AND FASTENED SECURELY TO END OF TEST STATION. TRACER WIRE TO REMAIN ENTIRELY COVERED.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

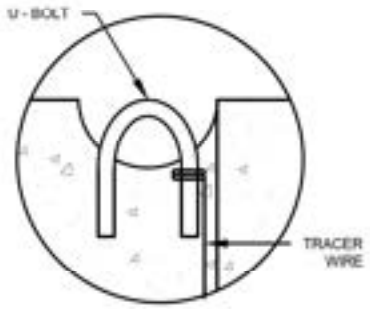
DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	VALVE DETECTOR WIRE END		320
APPROVED: MCC			



CROSS SECTION VIEW



PLAN VIEW



CUT - OUT VIEW

NOTES:

1. SEE OTHER CITY STANDARD DETAILS FOR INFORMATION REGUARDING MANHOLES, COVERS, CONCRETE RINGS, ETC.
2. U - BOLT IS TO BE GALVANIZED STEEL RATED FOR OUDOOR EXPOSURE, 1.0" DIAMETER.
3. U - BOLT IS TO BE SET FLUSH WITH FINISHED SURFACE OF CONCRETE RING. THERE IS TO BE A SMALL DEPRESSION IN THE CONCRETE SUFFICIENT TO ALLOW A CLAMP OR WIRE TO BE PLACED AROUND THE EXPOSED METAL.
4. TRACER WIRE PER DETAIL 310(A) TO BE TAPED TO SIDE OF MANHOLE AND WRAPPED SECURELY TO END OF U-BOLT WHEN INSTALLED. TRACER WIRE IS TO REMAIN ENTIRELY COVERED.
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

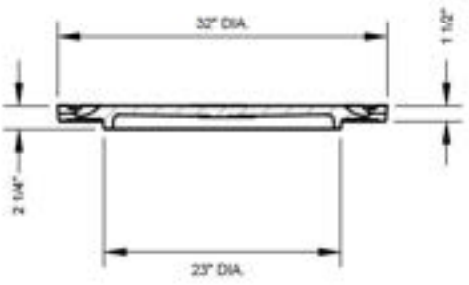
MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	MANHOLE DETECTOR WIRE END		321
APPROVED: MCC			

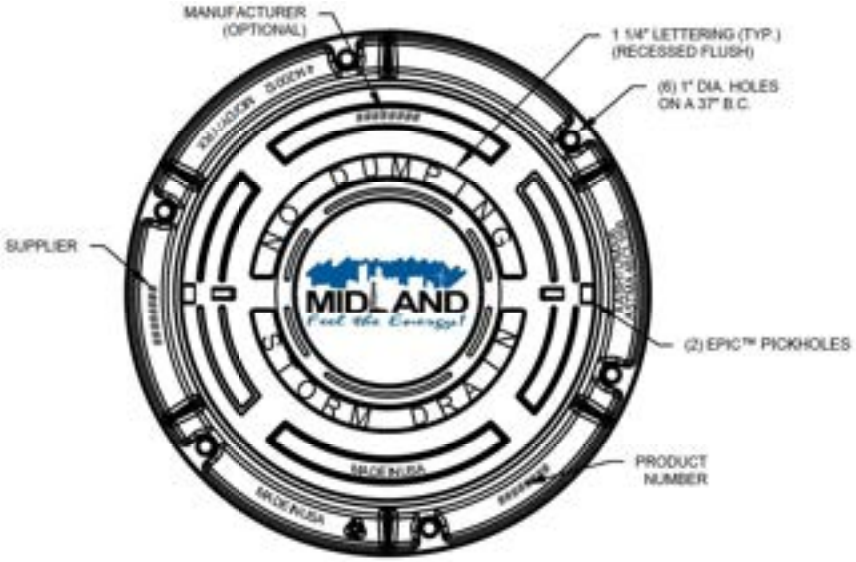
STORM DRAIN DETAILS

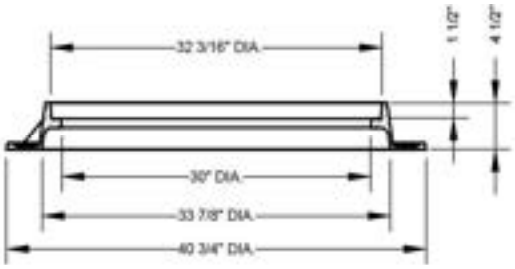
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
EFFECTIVE DATE: 10/01/2018		SCALE: NTS	DETAIL: 400

MIDLAND Engineering Services



COVER SECTION





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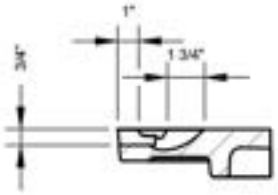


PICKHOLE DETAIL

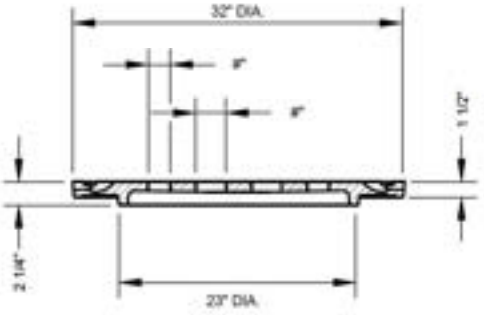
NOTES:

1. MANHOLE COVERS TO BE CAST WITH THE FOLLOWING:
   "NO DUMPING"
   CITY OF MIDLAND LOGO
   "STORM DRAIN"

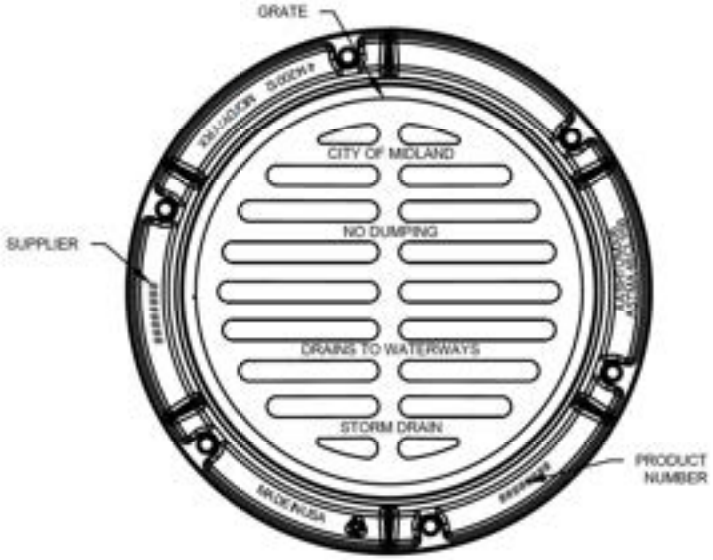
   EAST JORDAN V1420Z1/V1430A ASSEMBLY OR APPROVED EQUAL
2. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
3. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

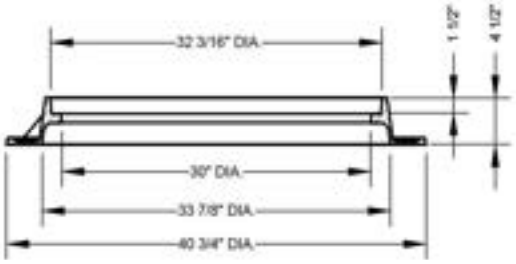
MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	TYPICAL STORM DRAIN COVER		401
APPROVED: MCC			



COVER SECTION





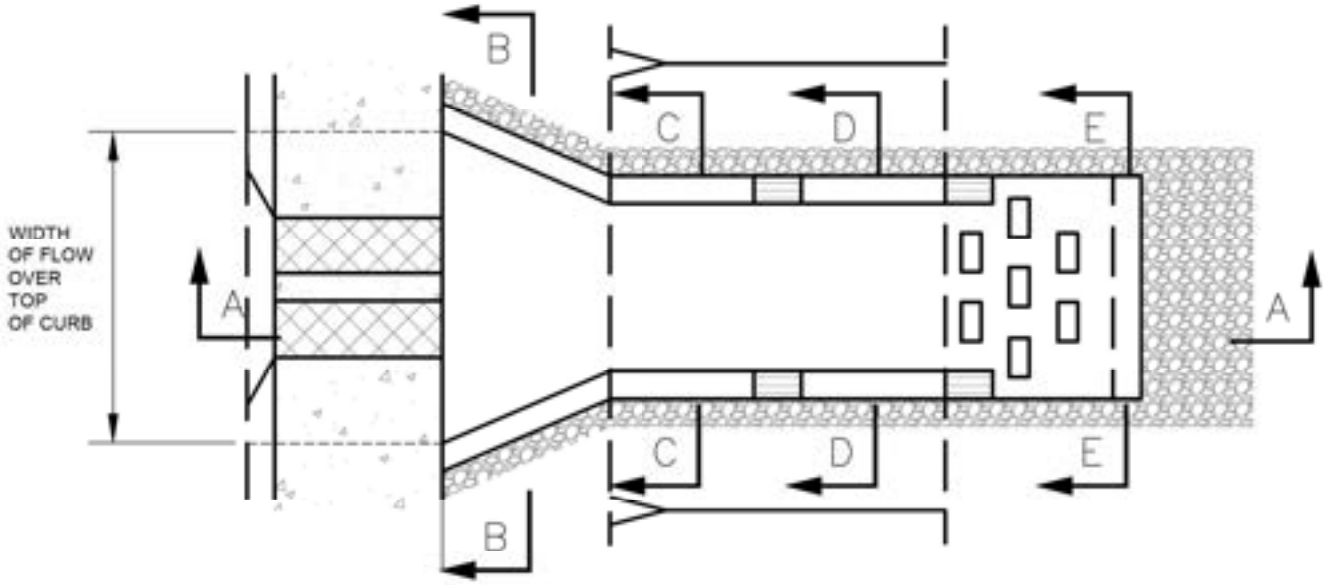
FRAME SECTION

NOTES:

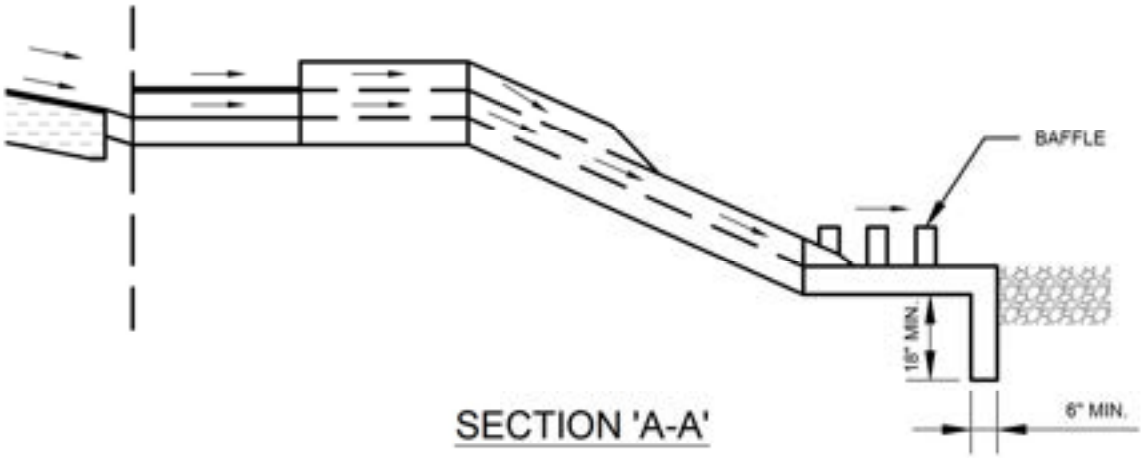
1. GRATED MANHOLE COVERS TO BE CAST WITH THE FOLLOWING:
   "CITY OF MIDLAND"
   "NO DUMPING"
   "DRAINS TO WATERWAYS"
   "STORM DRAIN"

   EAST JORDAN "STORM DRAIN"1040N ASSEMBLY OR APPROVED EQUAL
2. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
3. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		GRATED STORM DRAIN COVER		402



SIDEWALK/ SCUPPER/ ELEVATED CROSSING	FLARED FLUME	TALL CURB FLUME	STANDARD CURB FLUME	FLUME TOE	ROCK RIP-RAP
SLIGHT SLOPE (0.2% MIN.)	SLOPE (4:1 MAX.)	SLOPE (4:1 MAX.)	SLOPE (4:1 MAX.)	FLAT -OR- SLOPE	10' MIN.



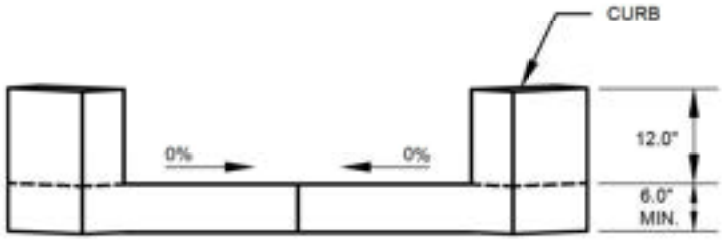
SECTION 'A-A'

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:

MIDLAND Engineering Services

TYPICAL CONCRETE DRAINAGE FLUME

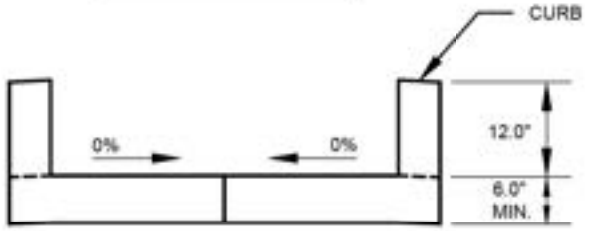
403(A)



SECTION 'B-B'

SECTION 'B-B' NOTES:

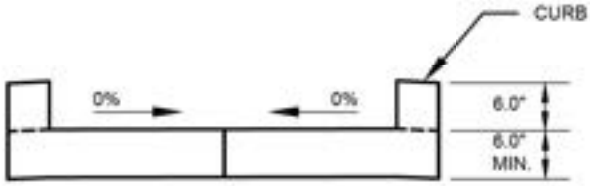
1. CURB TO BE 12.0" TALL.
2. PROVIDE SAW-CUT JOINTS.
3. PROVIDE TRANSVERSE SAW-CUT JOINTS EVERY 10.0'



SECTION 'C-C'

SECTION 'C-C' NOTES:

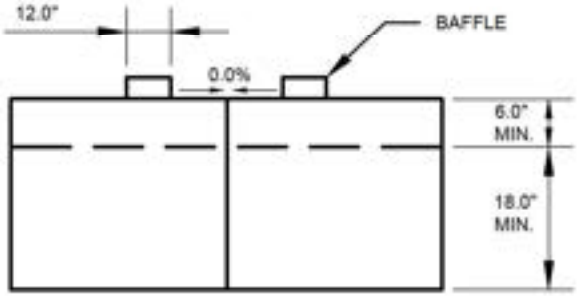
1. CURB TO BE 12.0" TALL.
2. PROVIDE SAW-CUT JOINTS.
3. PROVIDE TRANSVERSE SAW-CUT JOINTS EVERY 10.0'



SECTION 'D-D'

SECTION 'D-D' NOTES:

1. CURB TO BE NO LESS THAN 6.0" OR MATCH EXISTING STREET CURB HEIGHT.
2. PROVIDE SAW-CUT JOINTS.
3. PROVIDE TRANSVERSE SAW-CUT JOINTS EVERY 10.0'



SECTION 'E-E'

SECTION 'E-E' NOTES:

2. PROVIDE SAW-CUT JOINTS.
3. BAFFLES ARE TO BE 12.0" X 6.0" X 6.0" PLACED IN STAGGERED PATTERN NO FURTHER THAN 18.0" APART.

NOTES:

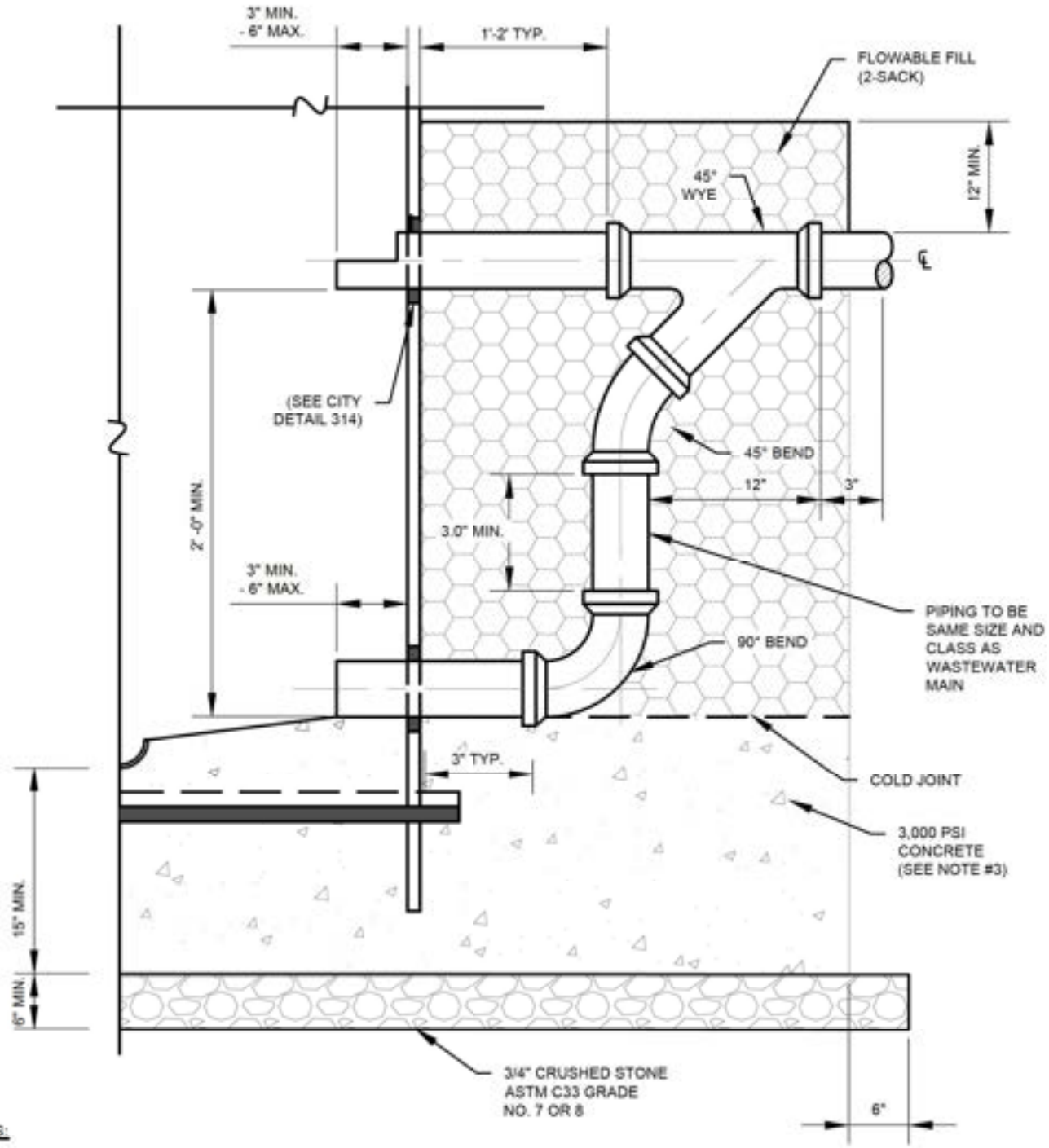
1. CONCRETE TO BE CITY OF MIDLAND CLASS "C" CONCRETE, 3600 PSI. USE REBAR REINFORCED OR FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT AS INDICATED BY THE DESIGN DRAWINGS. FLARED FLUME MOUTH TO BE NO LESS THAN DESIGN WIDTH OF RUNOFF PASSING OVER SCUPPER, ELEVATED CROSSING, OR SIDEWALK DURING THE 100-YR STORM EVENT.
2. SEAL ALL CONCRETE JOINTS.
3. FLARED FLUME AND TALL CURB FLUME SECTIONS NOT REQUIRED IF ALTERNATE DESIGN CAN BE PROVEN TO CONTAIN 100-YR RUNOFF WITHIN THE DRAINAGE EASEMENT LIMITS.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	TYPICAL CONCRETE DRAINAGE FLUME		403(B)

WASTEWATER DETAILS

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
EFFECTIVE DATE: 10/01/2018		SCALE: NTS	DETAIL: 500

MIDLAND Engineering Services

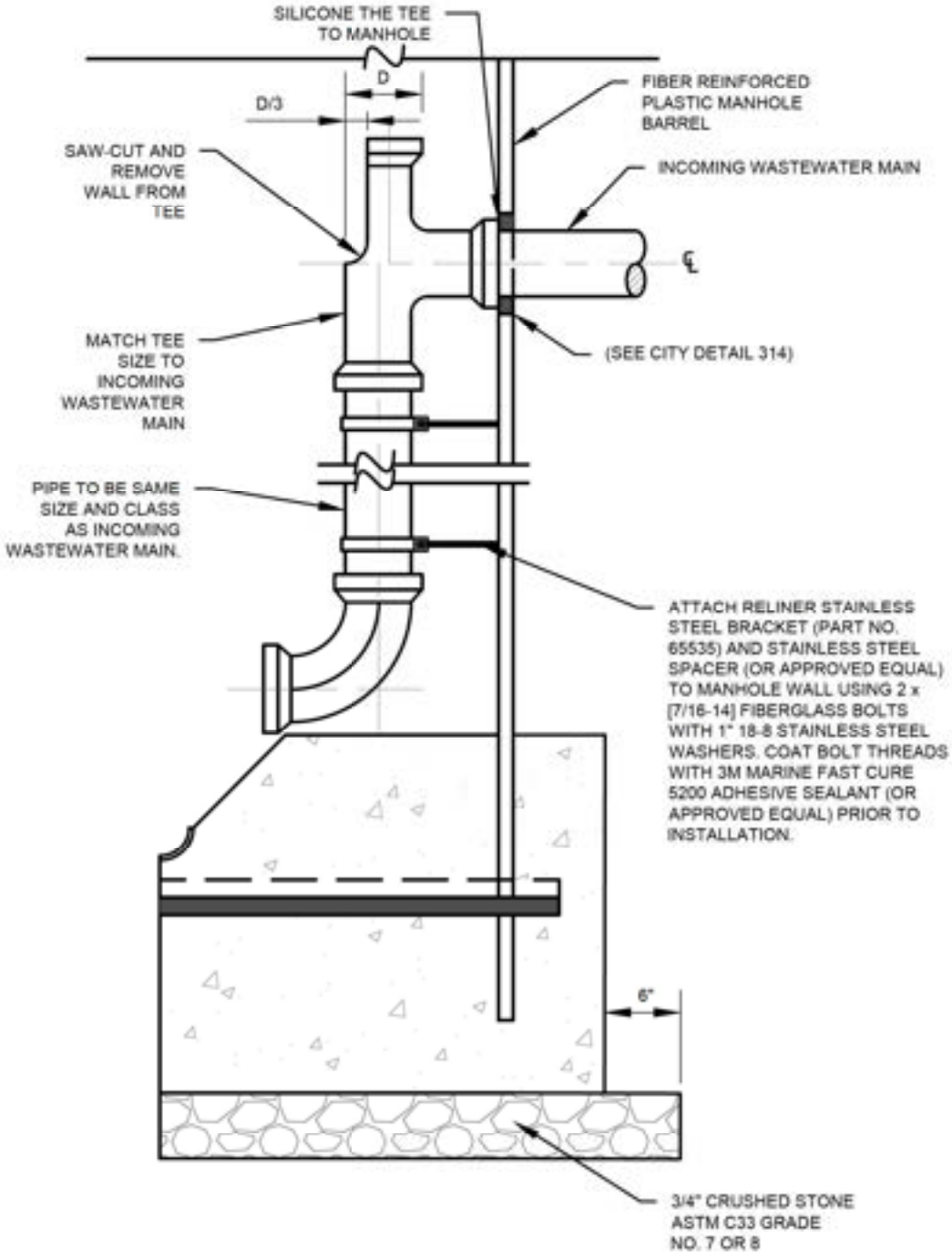


NOTES:

1. FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT). REQUIRED FOR ALL OVER EXCAVATION BACKFILL.
2. INSTALL BEND AND WYE AS NEAR TO MANHOLE WALL AS PRACTICAL, USUALLY 3"-4" FROM THE BEND AT THE BOTTOM.
3. ALL CONCRETE TO BE CLASS "A" CONCRETE.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL: 501

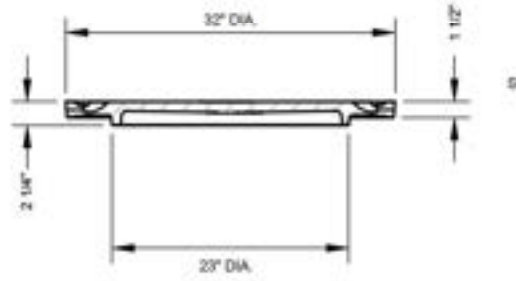
EXTERNAL DROP STRUCTURE



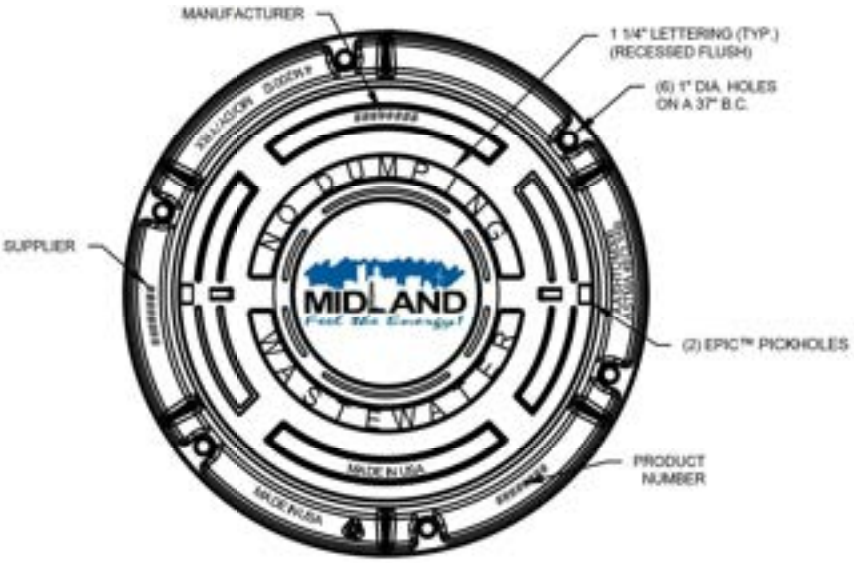
NOTES:

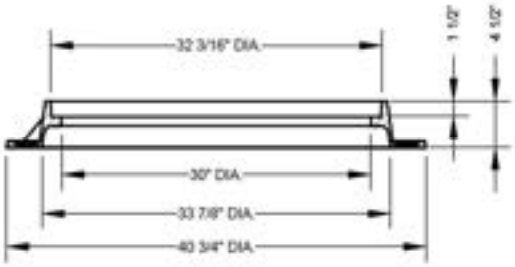
1. THIS DETAIL MAY ONLY BE USED WHEN CONNECTING TO AN EXISTING MANHOLE AND WITH THE PERMISSION OF BOTH THE CITY ENGINEER AND UTILITY DEPARTMENT REPRESENTATIVE.
2. FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT). REQUIRED FOR ALL OVER EXCAVATION BACKFILL.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE:	DETAIL:
	INTERNAL DROP STRUCTURE		502



COVER SECTION





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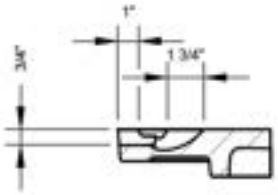


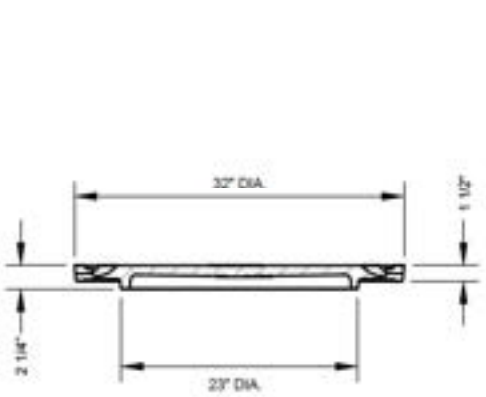
PICKHOLE DETAIL

NOTES:

1. MANHOLE COVERS TO BE CAST WITH THE FOLLOWING:
   "NO DUMPING"
   CITY OF MIDLAND LOGO
   "WASTEWATER"

   EAST JORDAN V1420Z1/V1430A ASSEMBLY OR APPROVED EQUAL
2. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
3. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
TYPICAL WASTEWATER MANHOLE COVER			DETAIL: 503



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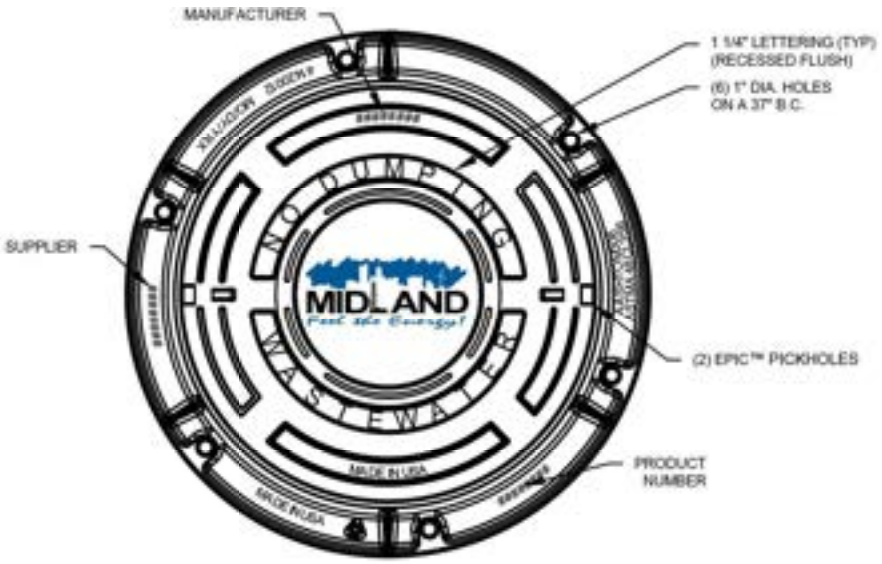

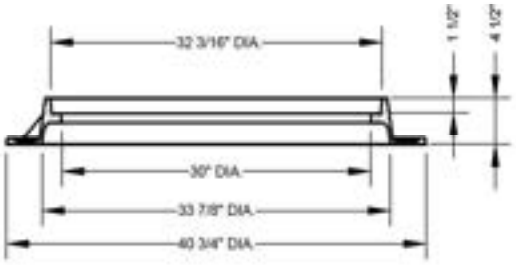

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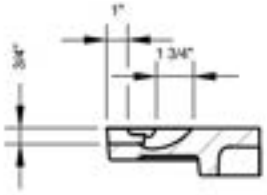


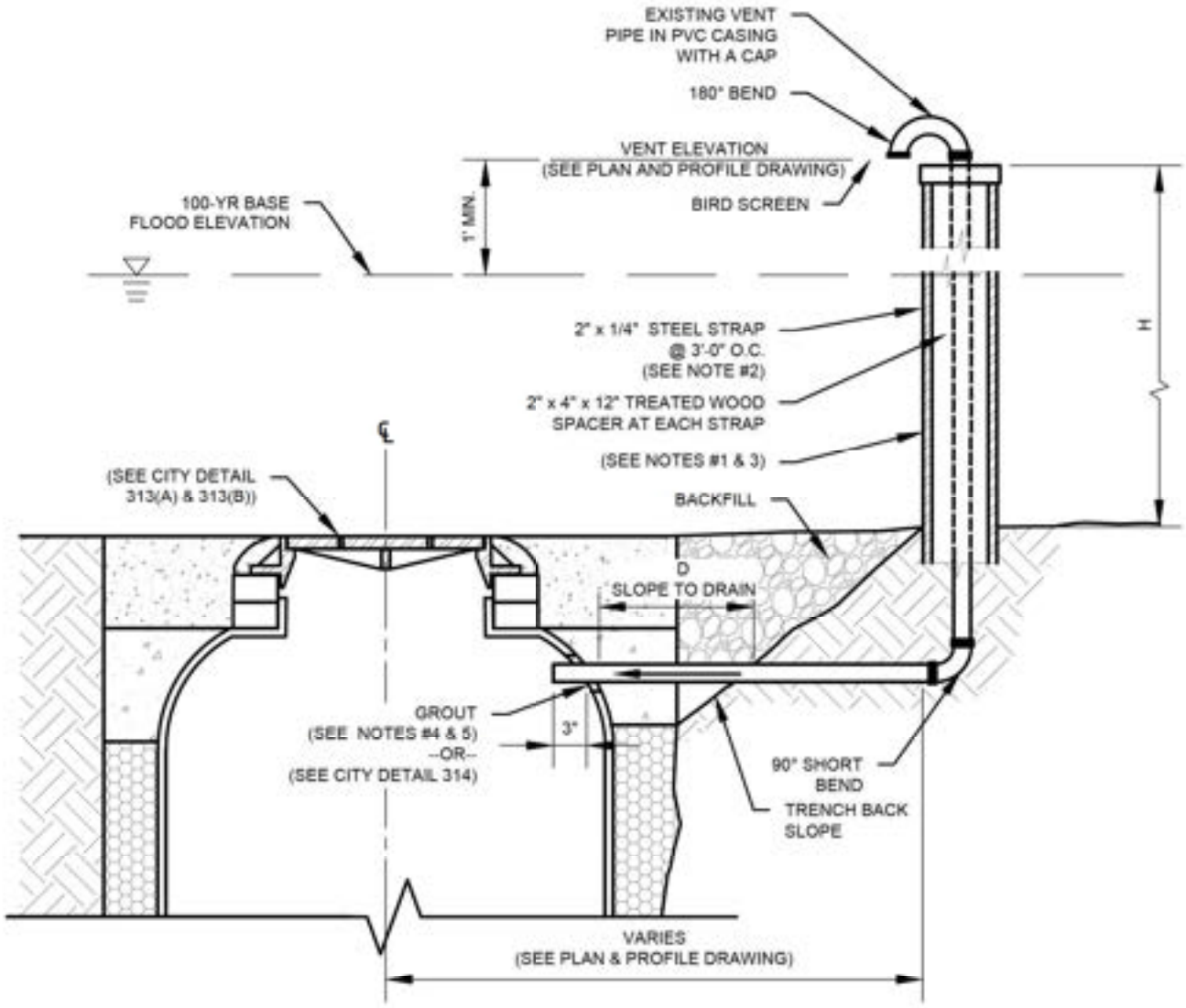
PICKHOLE DETAIL

NOTES:

1. MANHOLE COVERS TO BE CAST WITH THE FOLLOWING:
   "NO DUMPING"
   CITY OF MIDLAND LOGO
   "WASTEWATER"

   EAST JORDAN V1420ZPT/V1430APT ASSEMBLY OR APPROVED EQUAL
2. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
3. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		WATER TIGHT WASTEWATER MANHOLE COVER		504

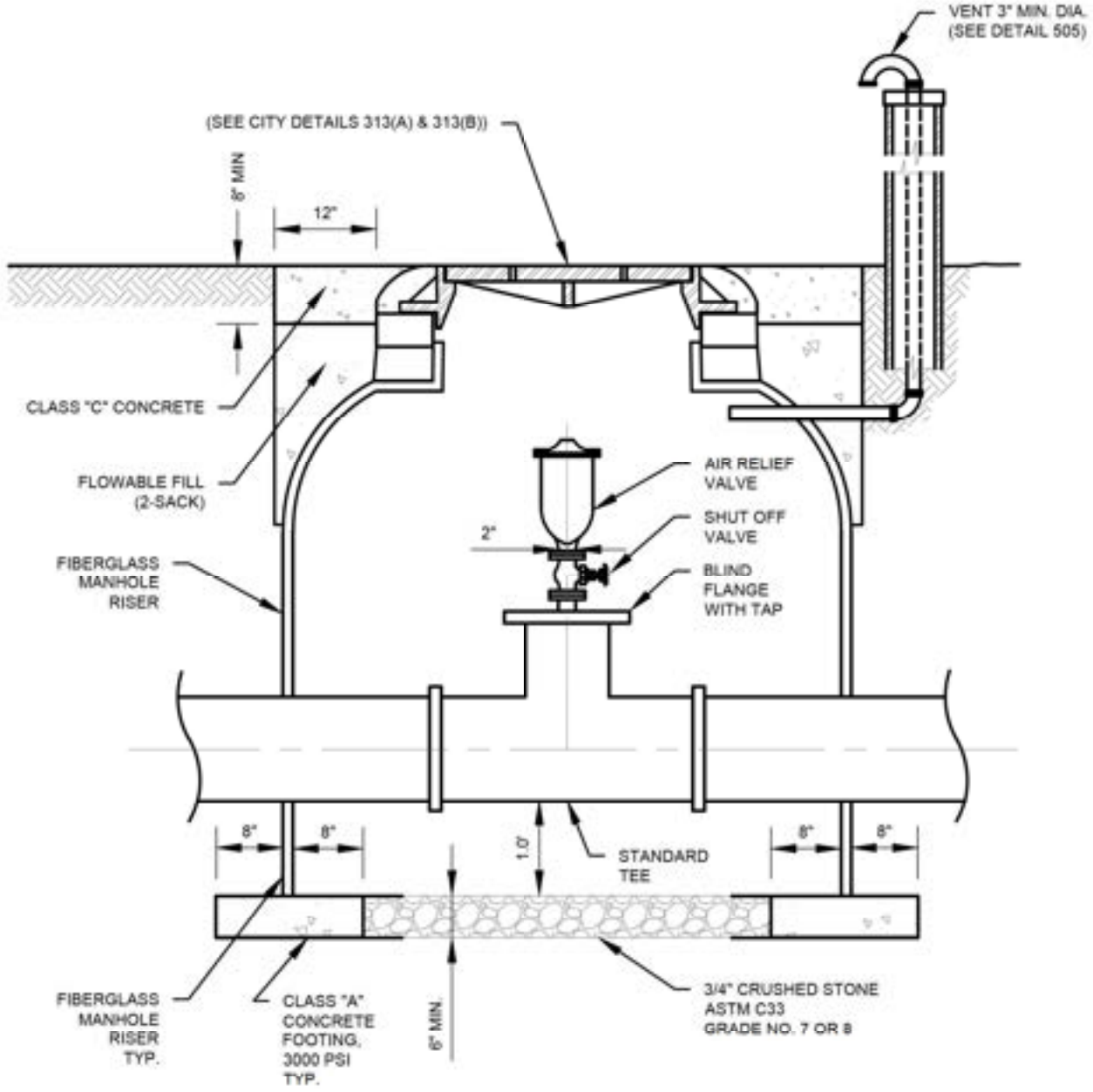


REMOTE VENT PIPE

NOTES:

1. ALL PIPING TO BE 3" DIA. DUCTILE IRON WITH FLANGED JOINTS COATED INSIDE AND OUTSIDE.
2. PAINT ALL STRAPPING WITH 2 COATS OF ALL WEATHER EPOXY.
3. PAINT ALL EXPOSED PIPING WITH 2 COATS OF ALL WEATHER EPOXY.
4. APPROVED WATER TIGHT MANHOLE CONNECTOR INSTALLED PER SPECIFICATION AND/OR MANUFACTURER'S INSTRUCTIONS.
5. GROUT TO BE APPROVED NON-SHRINK TYPE.
6. MANHOLE VENT TO BE USED IN CONJUNCTION WITH WATER TIGHT MANHOLE RINGS AND COVERS SPACED EVERY THIRD MANHOLE OR AS SHOWN ON THE PLANS.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

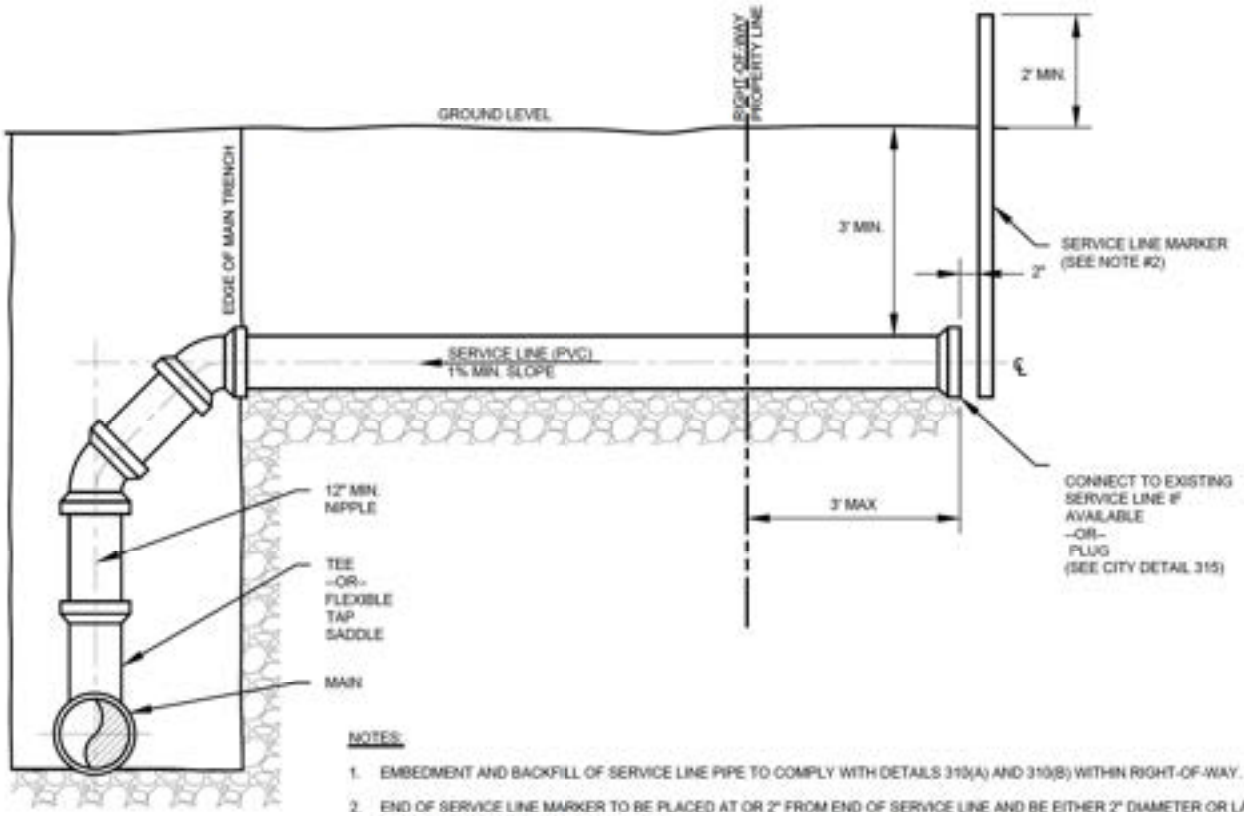
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	REMOTE VENT PIPE		505



NOTES:

1. IF AIR RELIEF VALVE IS LOCATED IN PAVEMENT THE COVER IS TO BE A GRATE COVER AND NO VENT PIPES ARE TO BE UTILIZED.
2. ALL CONCRETE PAVEMENT TO BE CLASS "C" CONCRETE, 3600 PSI.
3. PLACE ALL FLOWABLE FILL 2-SACK (2 - SACK = 188 LBS/CY, PORTLAND CEMENT) AS A SINGLE CONTINUOUS POUR.
4. MATERIAL AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	FORCE MAIN RELIEF VALVE		506

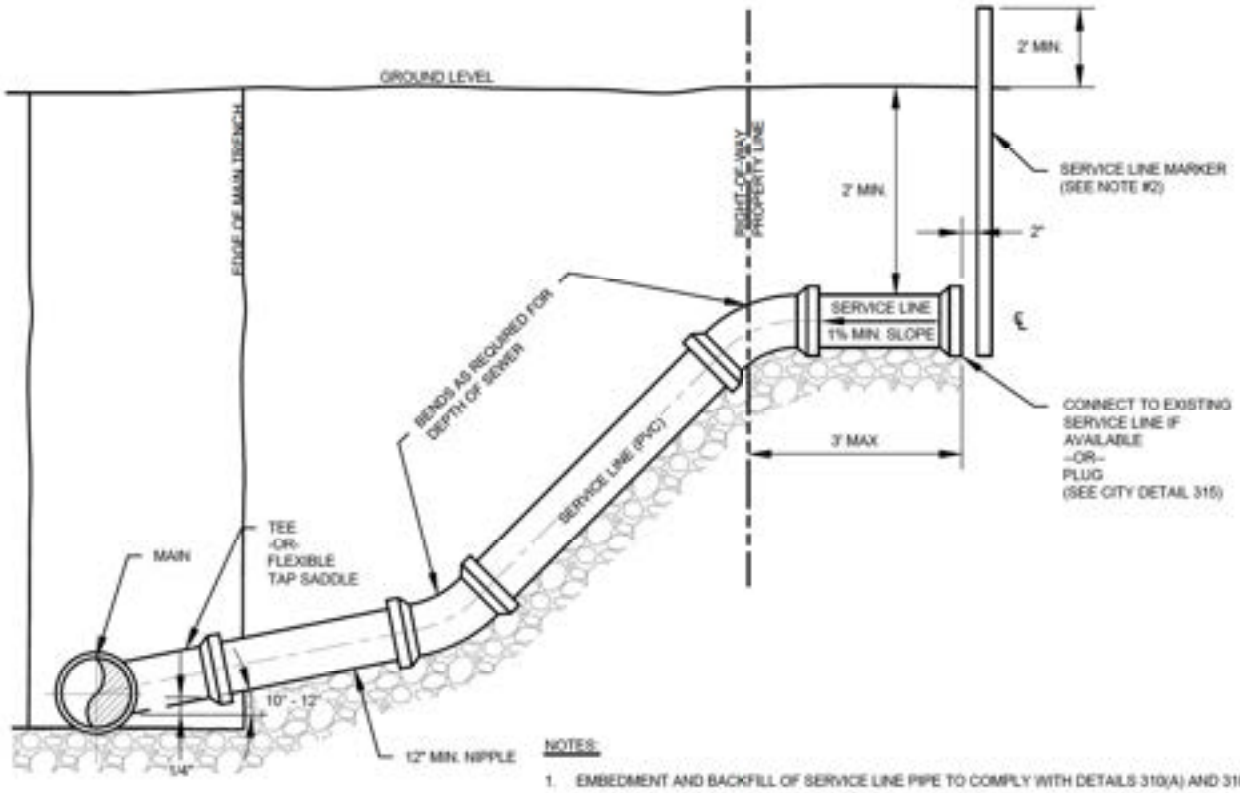


NOTES:

1. EMBEDMENT AND BACKFILL OF SERVICE LINE PIPE TO COMPLY WITH DETAILS 310(A) AND 310(B) WITHIN RIGHT-OF-WAY.
2. END OF SERVICE LINE MARKER TO BE PLACED AT OR 2" FROM END OF SERVICE LINE AND BE EITHER 2" DIAMETER OR LARGER PVC OR FLEXIBLE POLYETHYLENE PIPE.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHER WISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE:	DETAIL:
CHECKED: JCF	4" AND 6" WASTEWATER SERVICE LATERAL TAP OPTION 1		507
APPROVED: MCC			

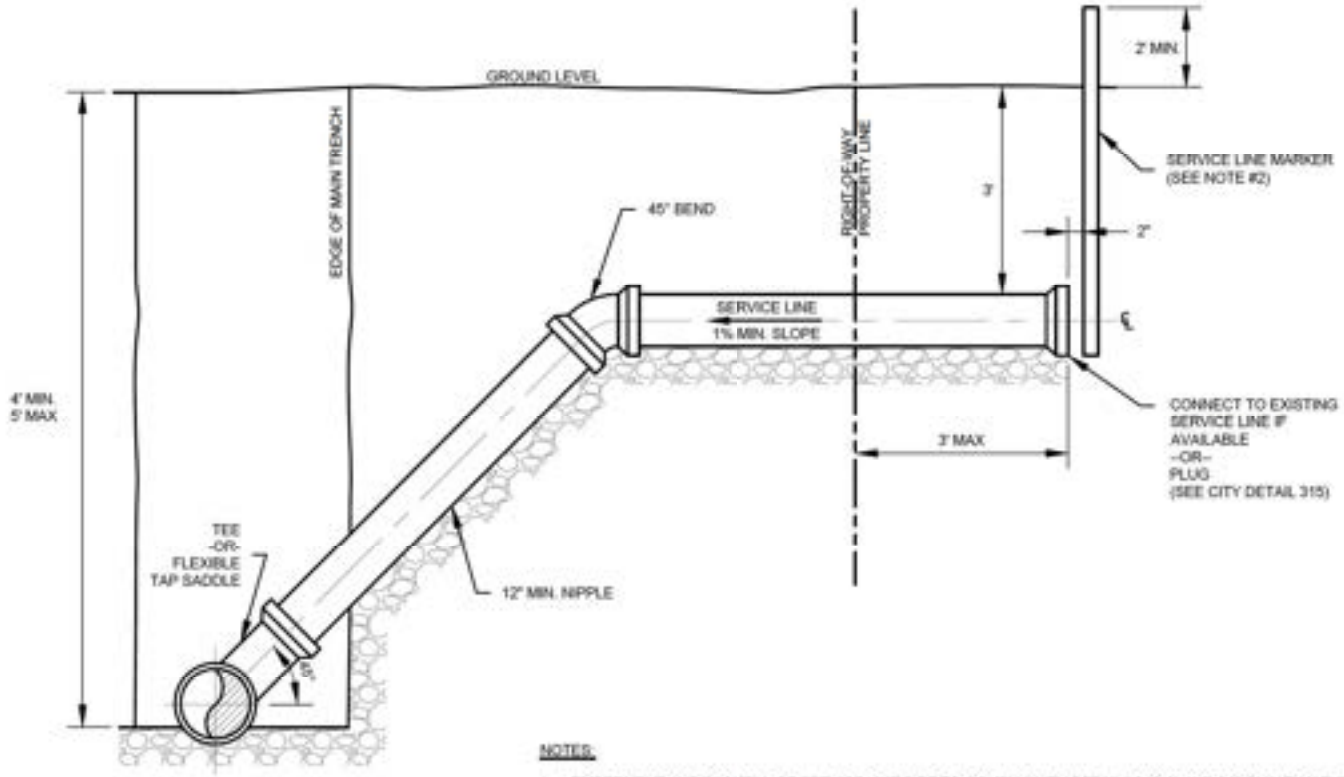


NOTES:

1. EMBEDMENT AND BACKFILL OF SERVICE LINE PIPE TO COMPLY WITH DETAILS 310(A) AND 310(B) WITHIN RIGHT-OF-WAY.
2. END OF SERCIVE LINE MARKER TO BE PLACED 2" FROM END OF SERVICE LINE AND BE EITHER 2" DIAMETER OR LARGER PVC OR FLEXIBLE POLYETHYLENE PIPE.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHER WISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	4" AND 6" WASTEWATER SERVICE LATERAL TAP OPTION 2		508
APPROVED: MCC			



NOTES:

1. EMBEDMENT AND BACKFILL OF SERVICE LINE PIPE TO COMPLY WITH DETAILS 310(A) AND 310(B) WITHIN RIGHT-OF-WAY.
2. END OF SERVICE LINE MARKER TO BE PLACED 2" FROM END OF SERVICE LINE AND BE EITHER 2" DIAMETER OR LARGER PVC OR FLEXIBLE POLYETHYLENE PIPE.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

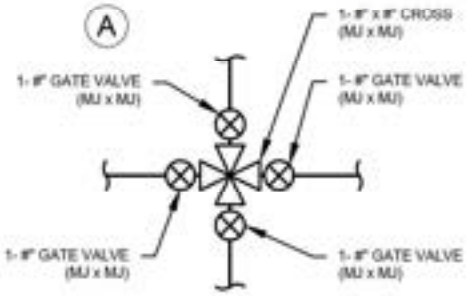
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		4" AND 6" WASTEWATER SERVICE LATERAL TAP OPTION 3		509

WATER
DETAILS

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL: 600

CROSS FITTING RESTRAINTS

A



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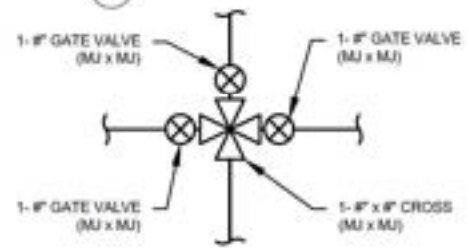
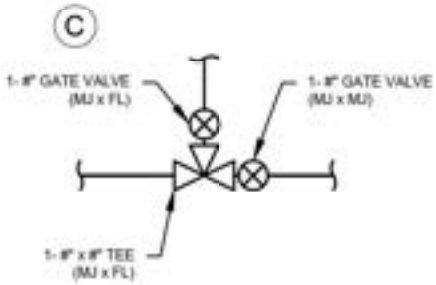


TEE FITTING RESTRAINTS

C



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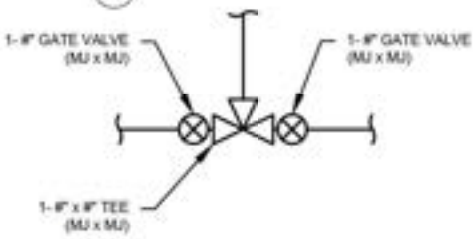
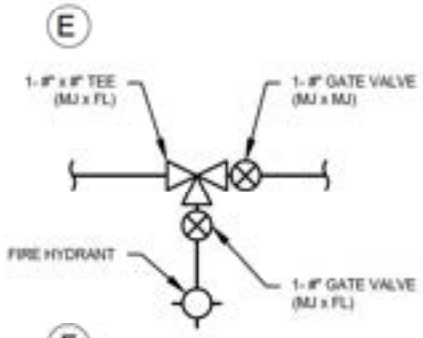


FIRE HYDRANT RESTRAINTS

E



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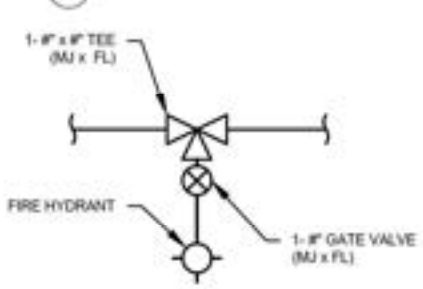
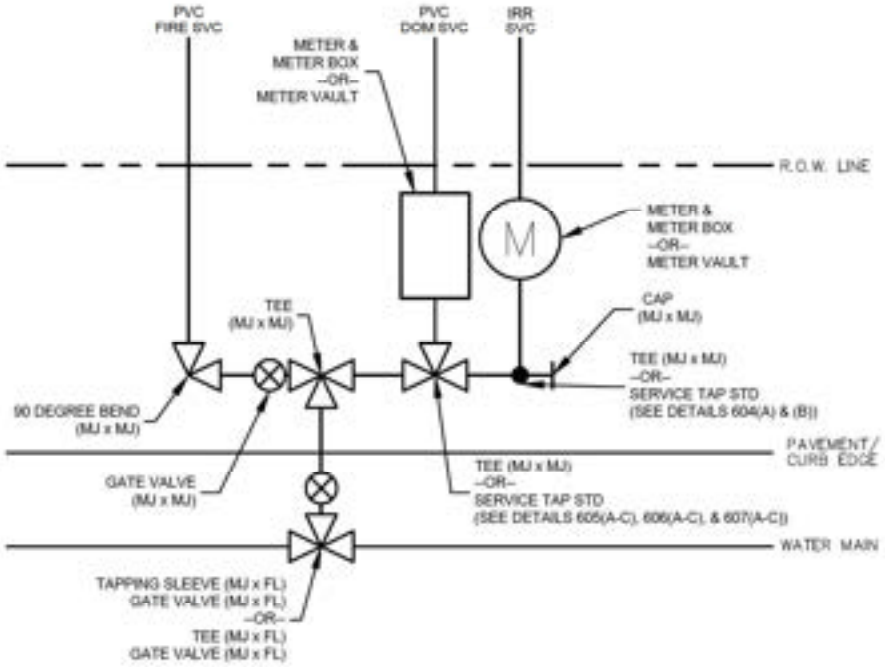


NOTES:

1. ALL MECHANICAL JOINT (MJ) FITTINGS TO BE RESTRAINED.
2. ALL FLANGES (FL) TO BE ON THE BRANCH SIDE OF TEE FITTINGS.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		TYPICAL FITTING RESTRAINT CONFIGURATIONS		601



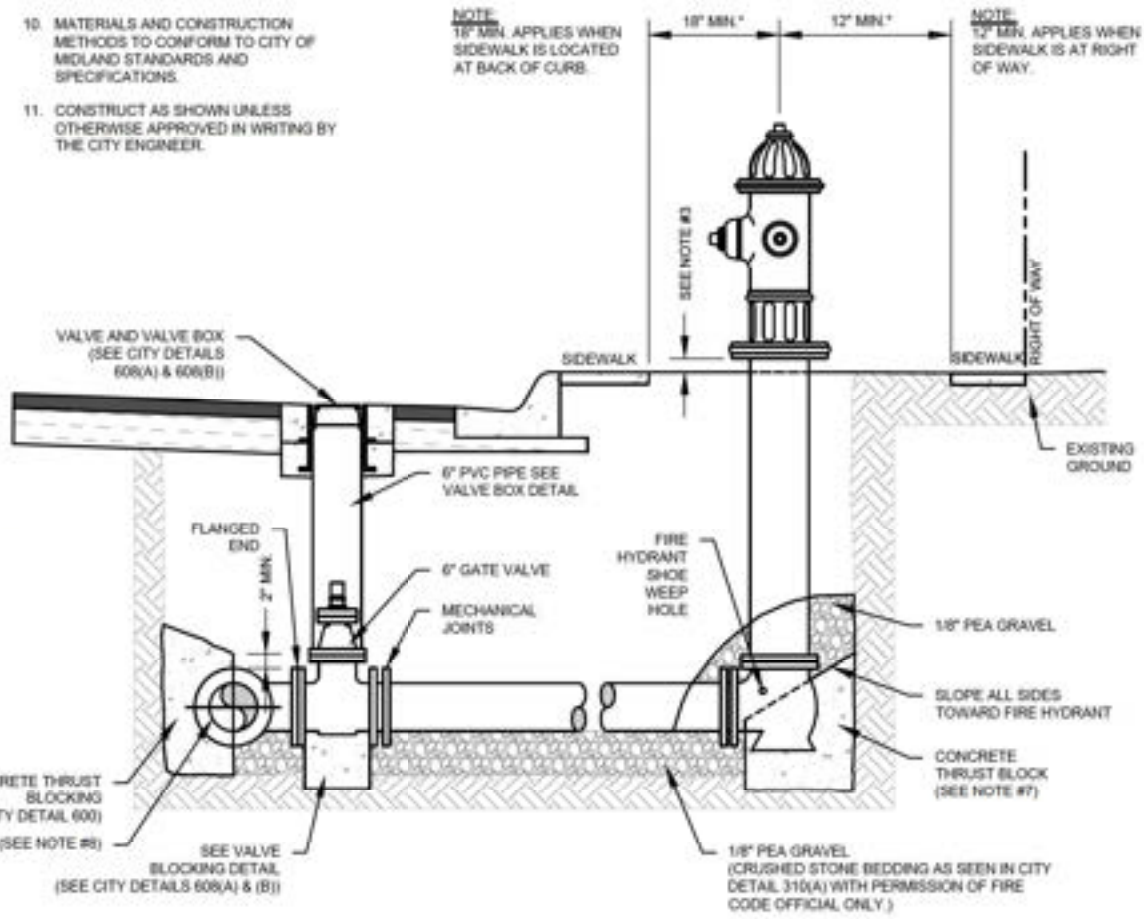
NOTES:

1. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
2. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE:	DETAIL:
		STANDARD MULTI-FAMILY & COMMERCIAL WATER SERVICE MANIFOLD		602

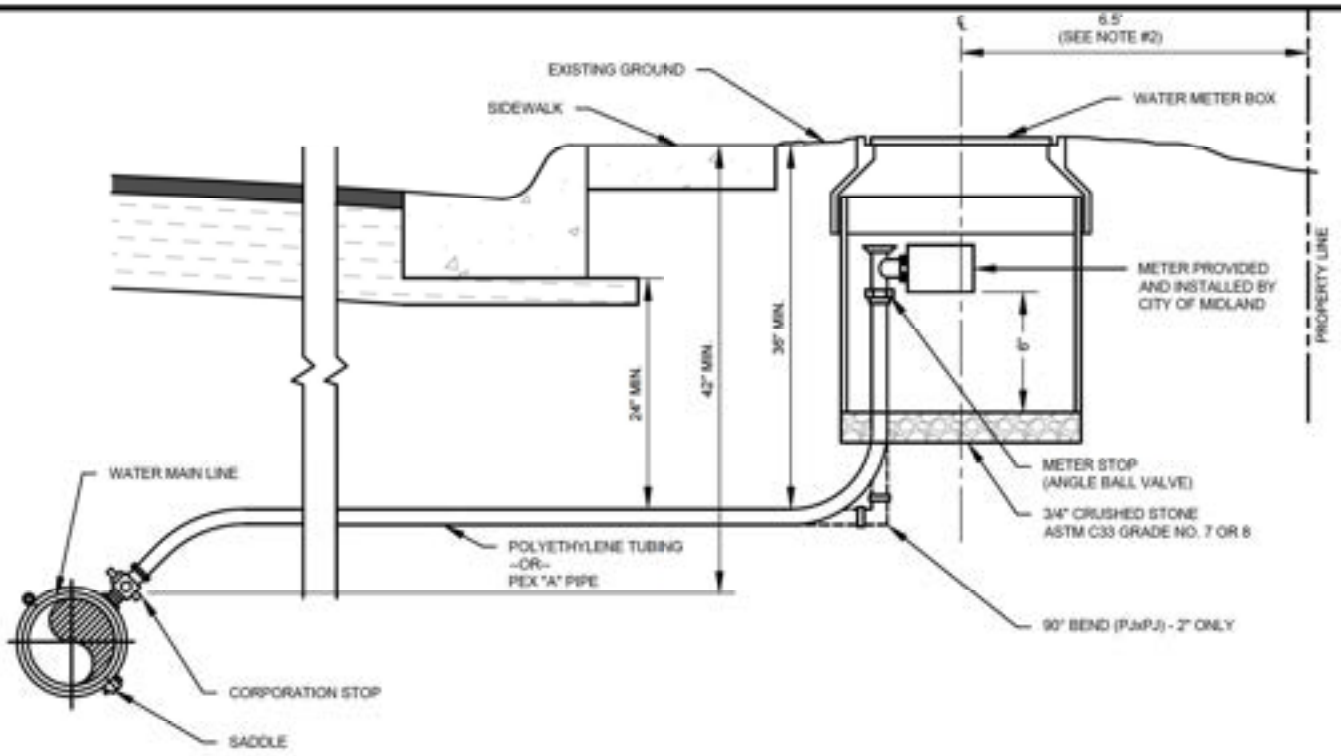
NOTES:

1. SET ALL VALVE BOXES IN A CONCRETE COLLAR WHEN PLACED AT THEIR FINAL GRADE. (SEE CITY DETAILS 608(A) & (B))
2. ALL CONCRETE PAVEMENT TO BE CLASS "C" CONCRETE, 3600 PSI.
3. LEAVE VALVE BOX 6" TO 10" ABOVE GRADE FOR NEW DEVELOPMENT AND OTHER STREETS AND ALLEYS SCHEDULED FOR IMMEDIATE PAVING UNTIL STREET WORK IS DONE. PAVING CONTRACTOR TO ADJUST VALVE BOX TO FINISHED GRADE BEFORE PLACING LAST COURSE OF HMAC SURFACE.
4. SET FRANGIBLE FLANGE OF FIRE HYDRANT A MINIMUM OF 2" AND A MAXIMUM OF 6" ABOVE SIDEWALK ELEVATION.
5. ON STREETS WHERE NO SIDEWALK IS TO BE CONSTRUCTED, SET CENTERLINE OF FIRE HYDRANT AT 3' FROM PROPERTY LINE WITHIN RIGHT OF WAY.
6. PLACE FIRE HYDRANT CUT-OFF VALVE A MINIMUM OF 3' FROM THE CENTER LINE OF THE FIRE HYDRANT. THIS MAY REQUIRE THE USE OF A 90° BEND TO OFFSET THE FIRE HYDRANT.
7. SHAPE CONCRETE THRUST BLOCKS SO THAT NO WATER DRAINS ARE BLOCKED.
8. A TEE FITTING IS REQUIRED FOR A CONNECTION TO A NEW WATER MAIN, AND A TAPPING SLEEVE IS REQUIRED FOR A CONNECTION TO AN EXISTING WATER MAIN.
9. DO NOT WRAP FIRE HYDRANT SHOE IN PLASTIC.
10. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
11. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.



MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	FIRE HYDRANT NEW WATER MAIN		603
APPROVED: MCC			



NOTES:

1. ALL WATER SERVICES TO BE 1" OR 2" DIAMETER.
2. THE DISTANCE FROM PROPERTY LINE SHOWN IS FOR 5' SIDEWALK AT THE PROPERTY LINE. WHEN 5' SIDEWALK IS PLACED AT THE BACK OF CURB, PLACE METER BOXES A MINIMUM OF 6.5' FROM THE BACK OF CURB.
3. TWO ADJACENT SERVICE LATERALS MAY BE PLACED IN THE SAME TRENCH. EACH TAP MUST BE SEPARATE AND HAVE BOTH A CORPORATION STOP AND A METER STOP. ("BULLHEAD TAPS ARE NOT PERMITTED".)
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		1" AND 2" WATER METER AND SERVICE CONNECTION		604(A)

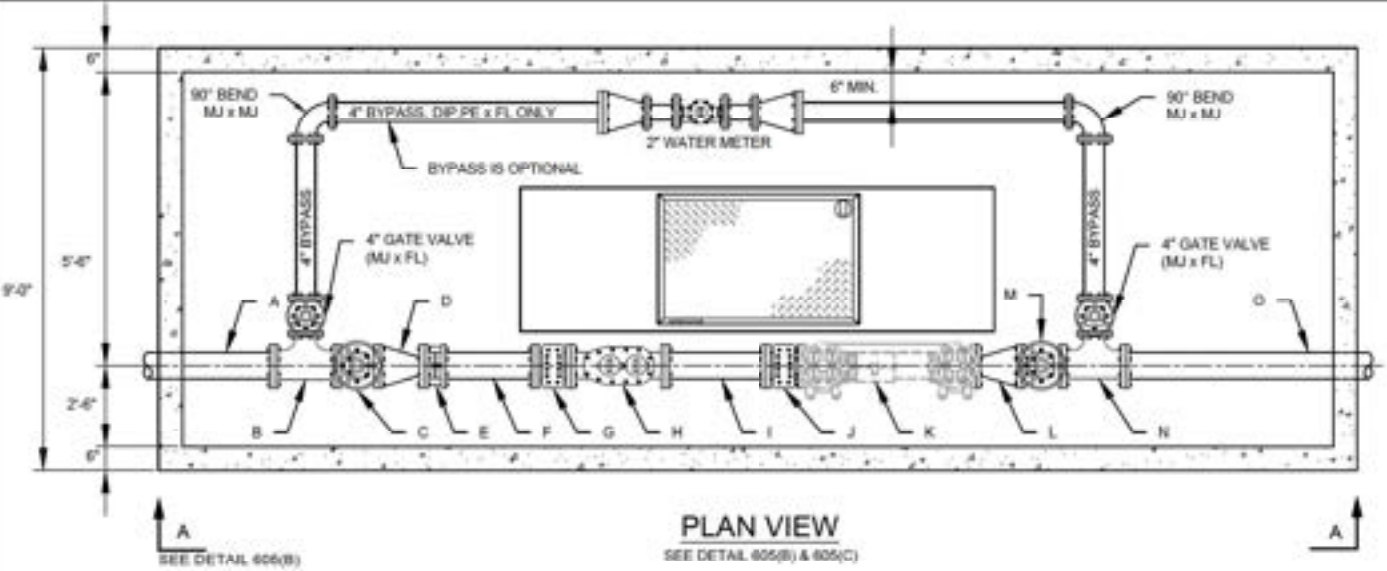
APPROVED COMPONENT LIST

1" WATER METER SERVICE	2" WATER METER SERVICE
SADDLE OPTION 1: DUCTILE IRON W/DUAL BAND CC THREAD STEEL STRAP 1. FORD FCD202 SADDLE 2. MUELLER DR 2 S SERIES 3. A.Y. MCDONALD SERIES 4855A 4. OR APPROVED EQUAL SADDLE OPTION 2: BRASS W/DUAL BAND CC THREAD STEEL STRAP 1. FORD 202BSD SADDLE 2. MUELLER BR 2 S SERIES 3. A.Y. MCDONALD SERIES 3855 4. OR APPROVED EQUAL	SADDLE OPTION 1: DUCTILE IRON W/DUAL BAND CC THREAD STEEL STRAP 1. FORD FCD202 SADDLE 2. MUELLER DR 2 S SERIES 3. A.Y. MCDONALD SERIES 4855A 4. OR APPROVED EQUAL SADDLE OPTION 2: BRASS W/DUAL BAND CC THREAD STEEL STRAP 1. FORD 202BSD SADDLE 2. MUELLER BR 2 S SERIES 3. A.Y. MCDONALD SERIES 3855 4. OR APPROVED EQUAL
CORPORATION STOP 1. FORD FB1000-4-G-NL 2. MUELLER B-25008N 3. A.Y. MCDONALD SERIES 74701B-22 1 4. OR APPROVED EQUAL	CORPORATION STOP 1. FORD FB1000-7-G-NL 2. MUELLER B-25008N 3. A.Y. MCDONALD SERIES 74701B-22 2 4. OR APPROVED EQUAL
CURB STOP METER VALVE 1. FORD BA43-444W-G-NL 2. MUELLER B-25172N 3. A.Y. MCDONALD SERIES 74602B-22 1 4. OR APPROVED EQUAL	CURB STOP METER VALVE 1. FORD BFA43-777W-G-NL 2. MUELLER B-25172N 3. A.Y. MCDONALD SERIES 74602B-22 2 4. OR APPROVED EQUAL
WATER METER BOX 1. EAST JORDAN 32197099A02 2. OR APPROVED EQUAL	WATER METER BOX 1. EAST JORDAN 32244000A01 2. OR APPROVED EQUAL
SERVICE LINE PIPE 1. ASTM D-2737 POLYETHYLENE TUBING 2. MUNICI PEX 'A' PIPE 3. OR APPROVED EQUAL	SERVICE LINE PIPE 1. ASTM D-2737 POLYETHYLENE TUBING 2. MUNICI PEX 'A' PIPE 3. OR APPROVED EQUAL

NOTES:

1. ALL COMPONENTS OF ANY WATER METER SERVICE LINE MUST COME FROM THE SAME BRAND WHENEVER POSSIBLE.
2. PLASTIC WRAP ALL SADDLES.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

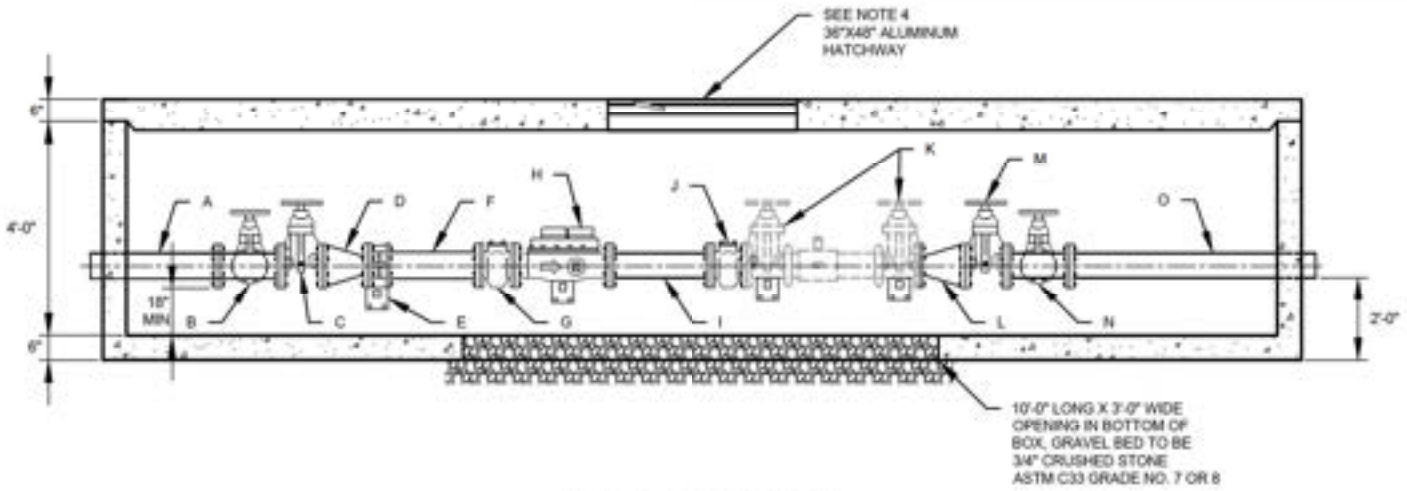
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	1" AND 2" WATER METER AND SERVICE CONNECTION		604(B)



NOTES:

1. ALL FITTINGS COMPACT OR STD DUCTILE IRON.
2. ALL MJ FITTING TO BE RESTRAINED.
3. CLASS I/II CONCRETE WITH DESIGN STRENGTH OF 4500 PSI AT 28 DAYS . UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED LENGTH.
4. GRADE 60 REINFORCED STEEL REBAR CONFORMING TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.
5. ALUMINUM DIAMOND PLATE COVER WITH EXTRUDED ALUMINUM FRAME. HATCH TO BE FURNISHED WITH STAINLESS STEEL SLAM LOCK AND HINGES. (300 P.S.F. LIVE LOAD)
6. UNISTRUT CHANNEL SUPPORT AND END BRACKET.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JHC APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		3 INCH DOMESTIC COMPOUND WATER METER ASSEMBLIES		605(A)



SECTION VIEW 'A-A'

SEE DETAIL 605(A) & 605(C)

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JHC APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		3 INCH DOMESTIC COMPOUND WATER METER ASSEMBLIES		605(B)

NO	DESCRIPTION	LENGTH
	VAULT WALL	
A	CLEARANCE SPACE	12"
B	TYLER UNION 4" x 4" TEE (MJ x FL)	8"
C	MUELLER 4" GATE VALVE (MJ x MJ)	8"
D	TYLER UNION 4" X 3" REDUCER (MJ X FL)	7"
E	JCM #304 3" DISMANTLING JOINT	12"
F	DUCTILE IRON PIPE SPOOL	12"
G	NEPTUNE 3" DIA. STRAINER	6"
H	NEPTUNE 3" TRU/FLO METER	17"
I	DUCTILE IRON PIPE SPOOL (FL x FL)	12"
J	WATTS #77F 3" DIA. STRAINER	10"
K	WATTS #757 3" DIA. DCVA	32"
L	TYLER UNION 4" X 3" REDUCER (MJ x FL)	7"
M	MUELLER 4" GATE VALVE (MJ x MJ)	8"
N	TYLER UNION 4" X 3" TEE (MJ x FL)	8"
O	CLEARANCE SPACE	12"
	VAULT WALL	

* THESE COMPONENTS ARE SET BY THE CITY

** DCVA - DOUBLE CHECK VALVE ASSEMBLY

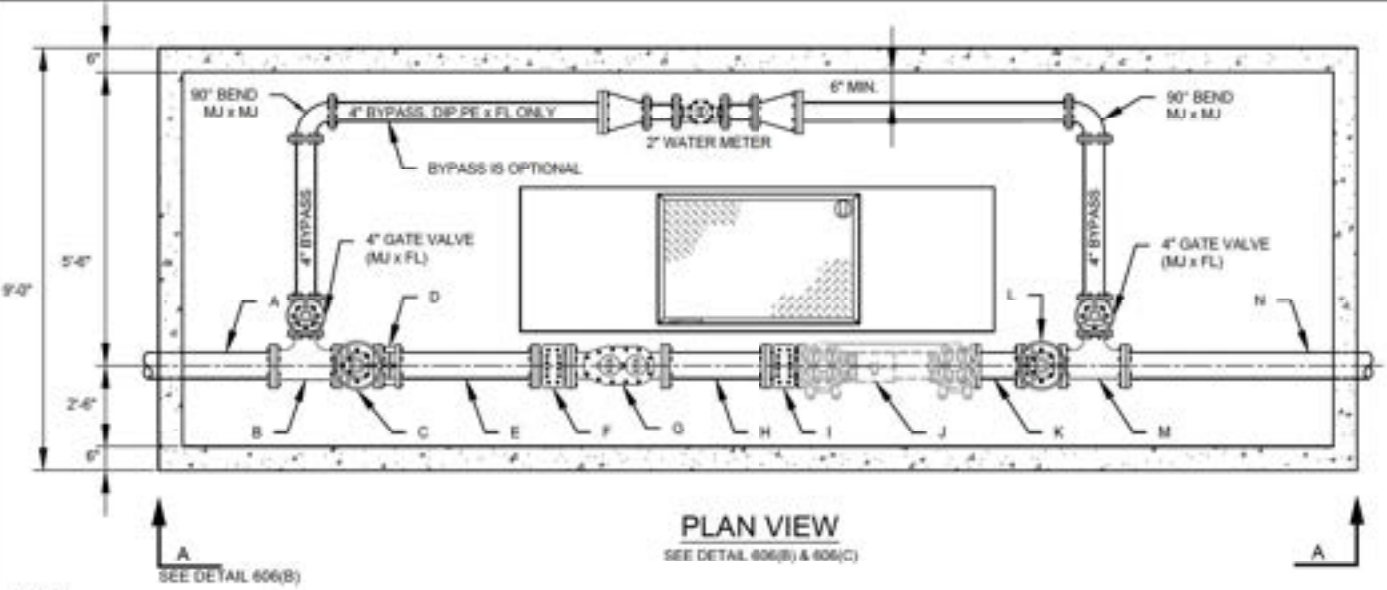
*** TOTAL INSIDE VAULT LENGTH WITH BACKFLOW PREVENTER = 171.0" - OR - 14.25'

**** TOTAL INSIDE VAULT LENGTH WITHOUT BACKFLOW PREVENTER = 129.0" - OR 10.75'

NOTES:

1. ALL PIPE WITHIN VAULT STRUCTURE TO BE DUCTILE IRON PIPE.
2. APPROVED EQUAL COMPONENTS MAY BE USED UNLESS OTHERWISE NOTED.
3. DOUBLE CHECK VALVE ASSEMBLY BACKFLOW PREVENTION ONLY REQUIRED FOR METER VAULTS ON LOOPED WATER MAIN/LINES.
4. BYPASS PIPE MAY BE LOCATED INSIDE VAULT STRUCTURE IF DESIRED. VAULT WALL TO BE LOCATED A MINIMUM 12" FROM INSIDE VAULT WALL EDGE TO OUTSIDE EDGE OF BYPASS PIPE, WITH NO CHANGE TO OTHER VAULT DETAIL DIMENSIONS.
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	3 - INCH COMPOUND METER & VAULT		605(C)



PLAN VIEW

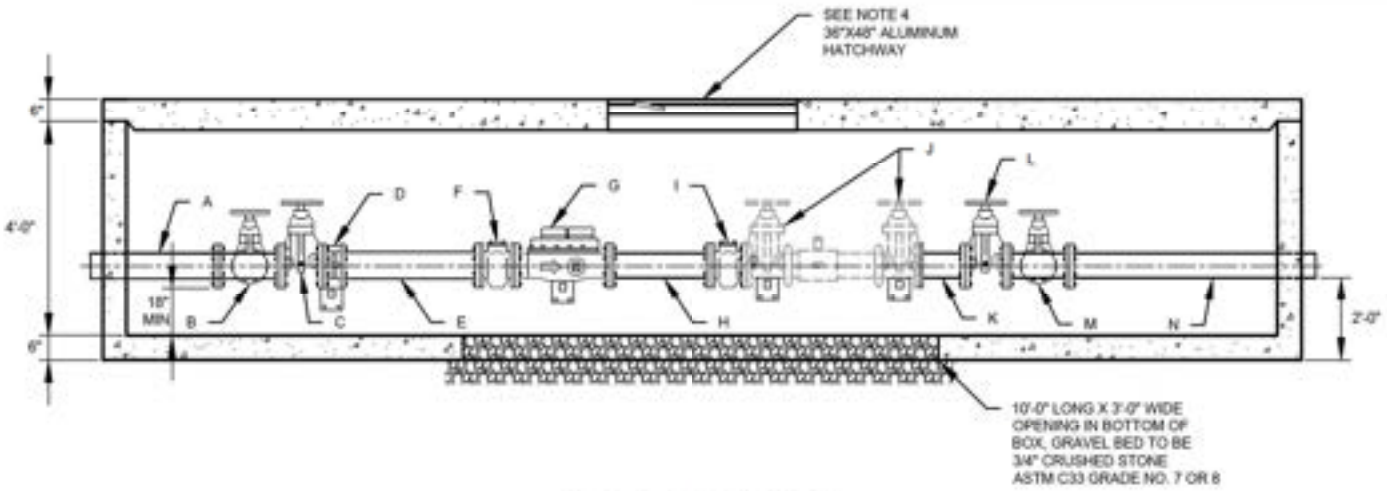
SEE DETAIL 606(B) & 606(C)

NOTES:

1. ALL FITTINGS COMPACT OR STD DUCTILE IRON.
2. ALL MJ FITTING TO BE RESTRAINED.
3. CLASS I/II CONCRETE WITH DESIGN STRENGTH OF 4500 PSI AT 28 DAYS . UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED LENGTH.
4. GRADE 60 REINFORCED STEEL REBAR CONFORMING TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.
5. ALUMINUM DIAMOND PLATE COVER WITH EXTRUDED ALUMINUM FRAME. HATCH TO BE FURNISHED WITH STAINLESS STEEL SLAM LOCK AND HINGES. (300 P.S.F. LIVE LOAD)
6. UNISTRUT CHANNEL SUPPORT AND END BRACKET.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JHC	4 INCH DOMESTIC COMPOUND WATER METER ASSEMBLIES		606(A)
APPROVED: MCC			



SECTION VIEW 'A-A'

SEE DETAIL 606(A) & 606(C)

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JHC APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		4 INCH DOMESTIC COMPOUND WATER METER ASSEMBLIES		606(B)

NO	DESCRIPTION	LENGTH
	VAULT WALL	
A	CLEARANCE SPACE	12"
B	TYLER UNION 4" x 4" TEE (MJ x FL)	8"
C	MUELLER 4" GATE VALVE (MJ x MJ)	9"
D	JCM #304 4" DISMANTLING JOINT	12"
E	DUCTILE IRON PIPE SPOOL	16"
F	NEPTUNE 4" DIA. STRAINER	8"
G	NEPTUNE 4" TRU/FLO METER	20"
H	DUCTILE IRON PIPE SPOOL (FL X FL)	16"
I	WATTS #77F 4" DIA. STRAINER	12"
J	WATTS #757 4" DIA. DCVA	34"
K	DUCTILE IRON PIPE SPOOL	12"
L	MUELLER 4" GATE VALVE (MJ X MJ)	9"
M	TYLER UNION 4" X 4" TEE (MJ x FL)	8"
N	CLEARANCE SPACE	12"
	VAULT WALL	

* THESE COMPONENTS ARE SET BY THE CITY

** DCVA - DOUBLE CHECK VALVE ASSEMBLY

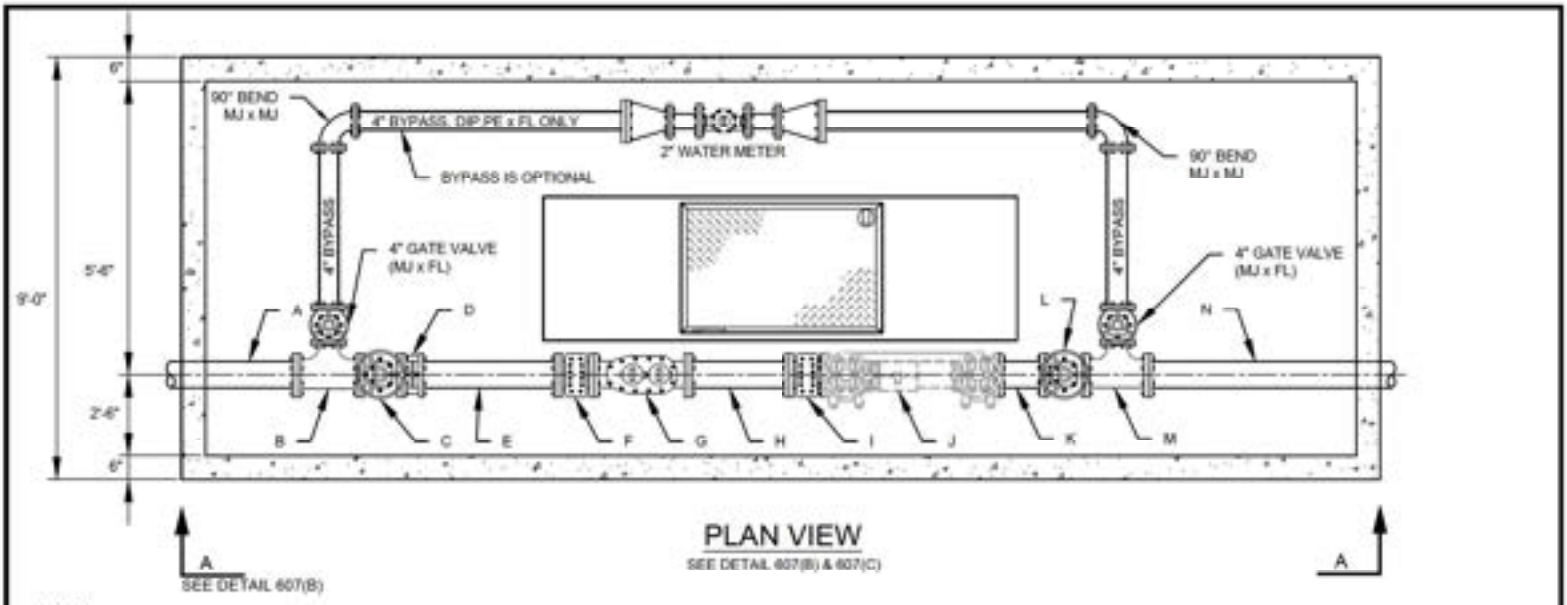
*** TOTAL INSIDE VAULT LENGTH WITH BACKFLOW PREVENTER = 188.0" - OR - 15.67'

**** TOTAL INSIDE VAULT LENGTH WITHOUT BACKFLOW PREVENTER = 142.0" - OR - 11.83'

NOTES:

1. ALL PIPE WITHIN VAULT STRUCTURE TO BE DUCTILE IRON PIPE.
2. APPROVED EQUAL COMPONENTS MAY BE USED UNLESS OTHERWISE NOTED.
3. DOUBLE CHECK VALVE ASSEMBLY BACKFLOW PREVENTION ONLY REQUIRED FOR METER VAULTS ON LOOPED WATER MAIN/LINES.
4. BYPASS PIPE MAY BE LOCATED INSIDE VAULT STRUCTURE IF DESIRED. VAULT WALL TO BE LOCATED A MINIMUM 12" FROM INSIDE VAULT WALL EDGE TO OUTSIDE EDGE OF BYPASS PIPE, WITH NO CHANGE TO OTHER VAULT DETAIL DIMENSIONS.
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	4 - INCH COMPOUND METER & VAULT		606(C)



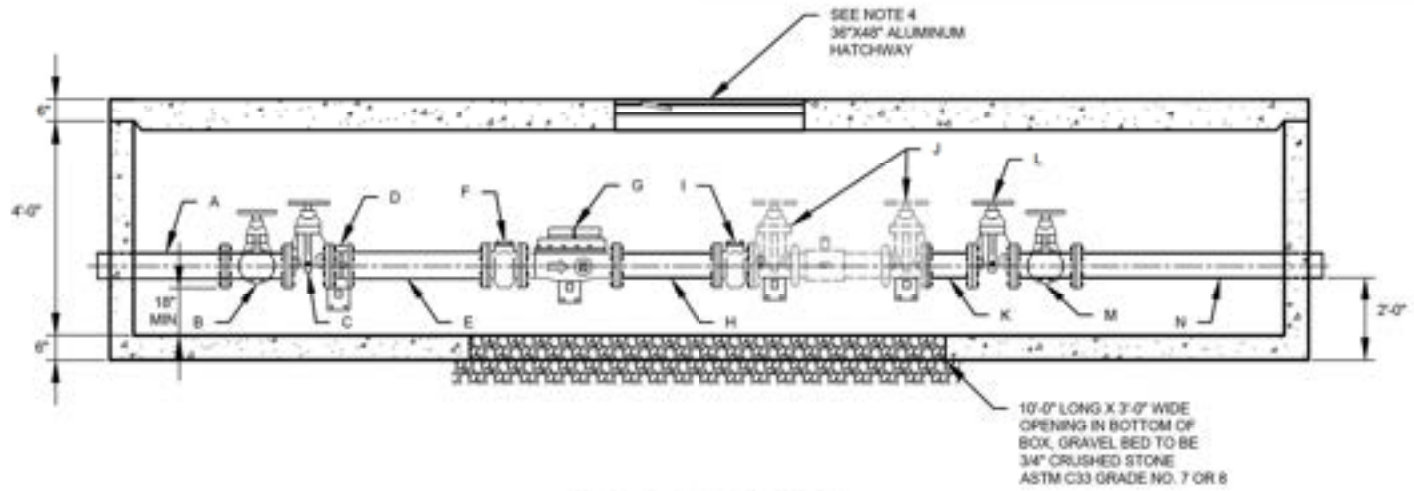
PLAN VIEW

SEE DETAIL 607(B) & 607(C)

NOTES:

1. ALL FITTINGS COMPACT OR STD DUCTILE IRON.
2. ALL MJ FITTING TO BE RESTRAINED.
3. CLASS I/II CONCRETE WITH DESIGN STRENGTH OF 4500 PSI AT 28 DAYS . UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED LENGTH.
4. GRADE 60 REINFORCED STEEL REBAR CONFORMING TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.
5. ALUMINUM DIAMOND PLATE COVER WITH EXTRUDED ALUMINUM FRAME. HATCH TO BE FURNISHED WITH STAINLESS STEEL SLAM LOCK AND HINGES. (300 P.S.F. LIVE LOAD)
6. UNISTRUT CHANNEL SUPPORT AND END BRACKET.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JHC APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		6 INCH DOMESTIC COMPOUND WATER METER ASSEMBLIES		607(A)



SECTION VIEW 'A-A'

SEE DETAIL 607(B) & 607(C)

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JHC APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		6 INCH DOMESTIC COMPOUND WATER METER ASSEMBLIES		607(B)

NO	DESCRIPTION	LENGTH
	VAULT WALL	
A	CLEARANCE SPACE	12"
B	TYLER UNION 6" x 4" TEE (MJ x FL)	8"
C	MUELLER 6" GATE VALVE (MJ x MJ)	10.5"
D	JCM #304 4" DISMANTLING JOINT	16"
E	DUCTILE IRON PIPE SPOOL	24"
F	NEPTUNE 6" DIA. STRAINER	9"
G	NEPTUNE 6" TRU/FLO METER	24"
H	DUCTILE IRON PIPE SPOOL (FL X FL)	24"
I	WATTS #77F 6" DIA. STRAINER	16.5"
J	WATTS #757 6" DIA. DCVA	44"
K	DUCTILE IRON PIPE SPOOL	12"
L	MUELLER 6" GATE VALVE (MJ X MJ)	10.5"
M	TYLER UNION 6" X 4" TEE (MJ x FL)	8"
N	CLEARANCE SPACE	12"
	VAULT WALL	

* THESE COMPONENTS ARE SET BY THE CITY

** DCVA - DOUBLE CHECK VALVE ASSEMBLY

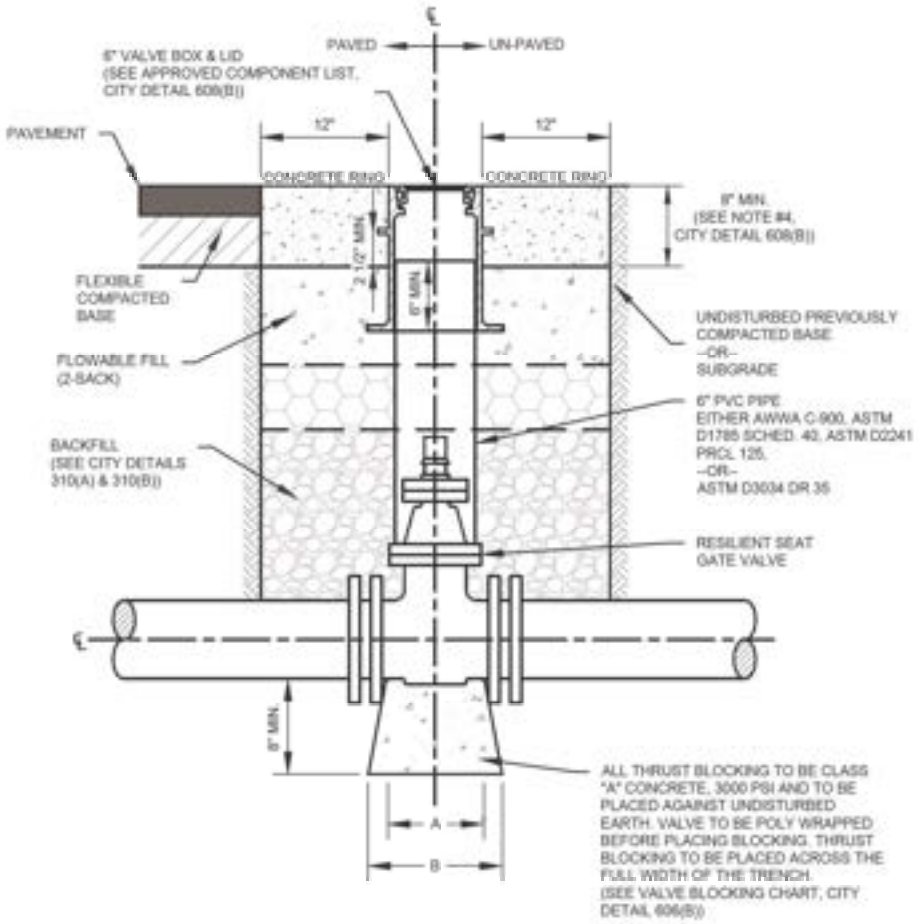
*** TOTAL INSIDE VAULT LENGTH WITH BACKFLOW PREVENTER = 232.5" - OR - 19.38'

**** TOTAL INSIDE VAULT LENGTH WITHOUT BACKFLOW PREVENTER = 170.0" - OR - 14.17'

NOTES:

1. ALL PIPE WITHIN VAULT STRUCTURE TO BE DUCTILE IRON PIPE.
2. APPROVED EQUAL COMPONENTS MAY BE USED UNLESS OTHERWISE NOTED.
3. DOUBLE CHECK VALVE ASSEMBLY BACKFLOW PREVENTION ONLY REQUIRED FOR METER VAULTS ON LOOPED WATER MAIN/LINES.
4. BYPASS PIPE MAY BE LOCATED INSIDE VAULT STRUCTURE IF DESIRED. VAULT WALL TO BE LOCATED A MINIMUM 12" FROM INSIDE VAULT WALL EDGE TO OUTSIDE EDGE OF BYPASS PIPE, WITH NO CHANGE TO OTHER VAULT DETAIL DIMENSIONS.
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	6 - INCH COMPOUND METER & VAULT		607(C)



MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		TYPICAL VALVE AND VALVE BOX		608(A)

APPROVED COMPONENT LIST			
NO.	VALVES	VALVE COVERS	VALVE BOX
1	MUELLER 2360 M/J	MUELLER 2360 FL X FL	BASS & HAYS STANDARD 390-1 "SHORTY"
2	M & H 4067 M/J	M & H 4067-0	OR APPROVED EQUAL
3	CLOW 2838 M/J	CLOW 2840 FL X FL	
4	OR APPROVED EQUAL	OR APPROVED EQUAL	

VALVE BLOCKING CHART		
PIPE SIZE	A	B
4"	5.0"	10.5"
6"	6.5"	1'-0"
8"	6.5"	1'-0"
10"	8.0"	1'-1.0"
12"	8.5"	1'-2.0"

NOTES:

1. FOR VALVES ON WATER MAIN PIPES LARGER THAN 12" SEE CITY DETAIL 609.
2. SETTING VALVE BOX TO GRADE MAY REQUIRE ADDING PVC PIPE. IF ADDITIONAL PIPE IS REQUIRED, USE BELL SECTION WITH GASKET AND SET BELL DOWN OVER EXISTING PIPE RISER. A GASKETED SELF CENTERING COLLAR MAY BE USED IN LIEU OF THE BELL SECTION.
3. CONCRETE RING TO BE CITY OF MIDLAND CLASS "C", 3600 PSI, UNLESS OTHERWISE NOTED.
4. USE FIBER REINFORCEMENT FOR ALL CONCRETE , WHETHER PAVEMENT OR THRUST BLOCKING.
5. 12" MINIMUM FOR CONCRETE RING IN AN ARTERIAL ROADWAY.
6. FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT) REQUIRED BENEATH ALL CONCRETE RINGS.
7. FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT) REQUIRED FOR ALL OVER EXCAVATION BACKFILL.
8. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
9. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

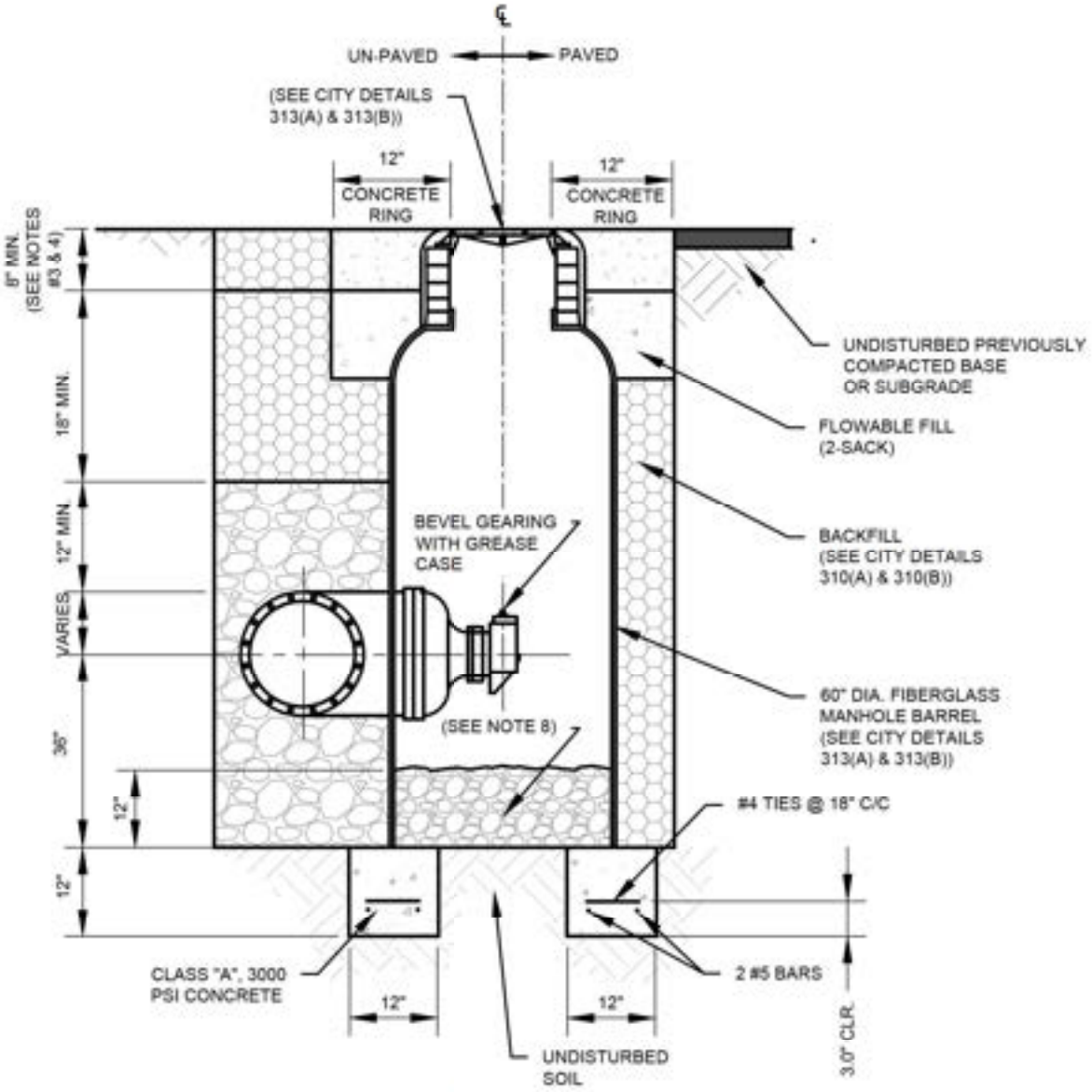
MIDLAND Engineering Services

DRAWN: DPM
CHECKED: JCF
APPROVED: MCC

EFFECTIVE DATE: 10/01/2018 | SCALE: NTS | DETAIL:

TYPICAL VALVE AND VALVE BOX DETAILS

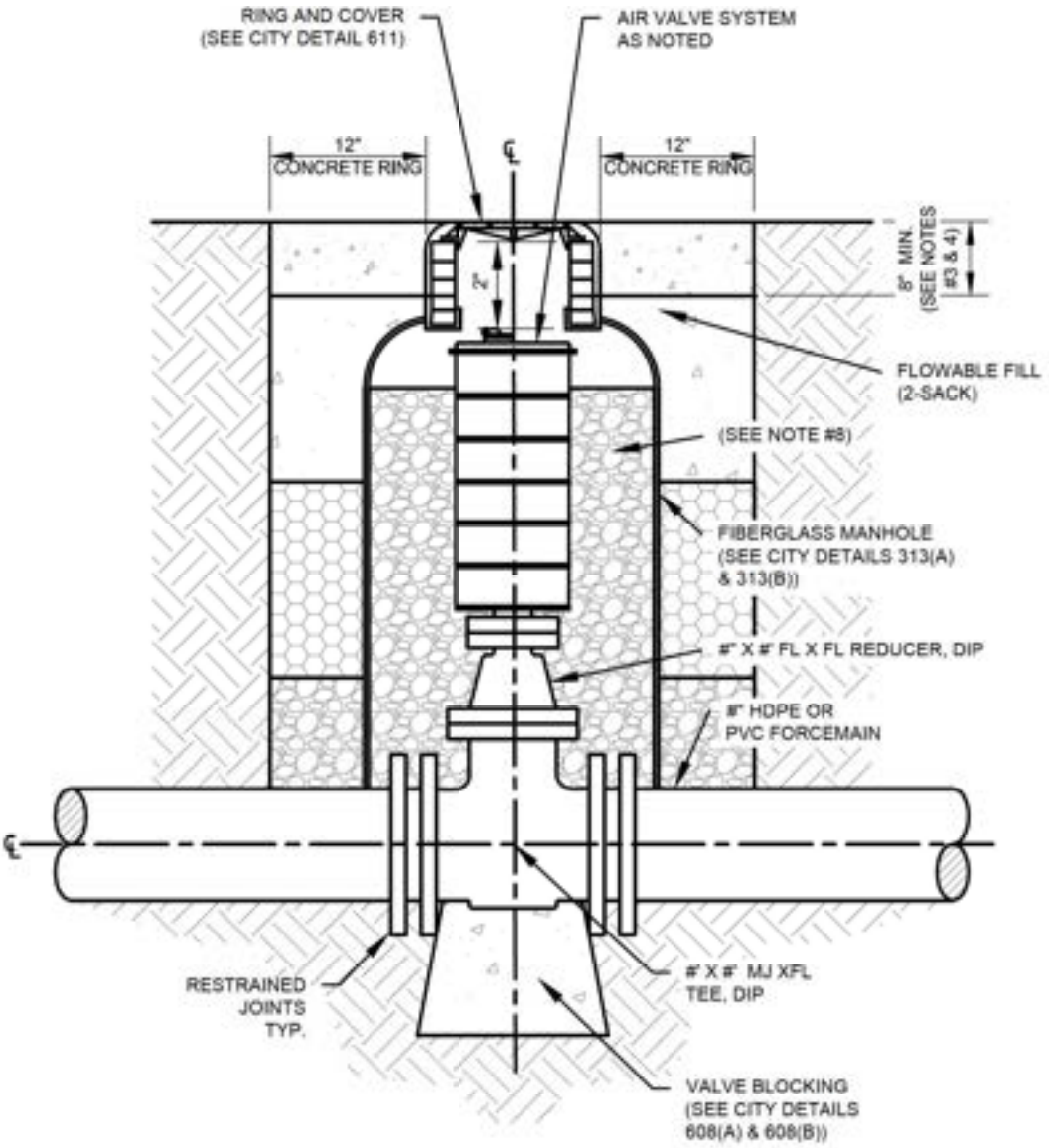
608(B)



NOTES:

1. THIS DETAIL IS FOR 16" GATE VALVES AND LARGER. SEPARATE DESIGN FOR GATE VALVES LARGER THAT 16" MUST BE PROVIDED AT THE DISCRETION OF THE CITY ENGINEER.
2. ALL GATE VALVES ARE TO BE RESILIENT WEDGE TYPE, HORIZONTAL MOUNTED, MECHANICAL JOINT, BEVEL GEAR OPERATOR. ALL FITTINGS ARE TO BE RESTRAINED JOINTS.
3. CONCRETE RING TO BE CITY OF MIDLAND CLASS "C" CONCRETE, 3600 PSI.
4. 12" MINIMUM FOR CONCRETE RING IN AN ARTERIAL ROADWAY.
5. USE FIBER REINFORCEMENT FOR ALL CONCRETE. WHETHER PAVEMENT OR THRUST BLOCKING.
6. FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT). REQUIRED BENEATH ALL CONCRETE RINGS.
7. FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT). REQUIRED FOR ALL OVER EXCAVATION BACKFILL.
8. WASHED PEA GRAVEL OR WASHED 3/4" CRUSHED STONE ASTM C33 GRADE NO. 7 OR 8.
9. MATERIAL AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
10. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

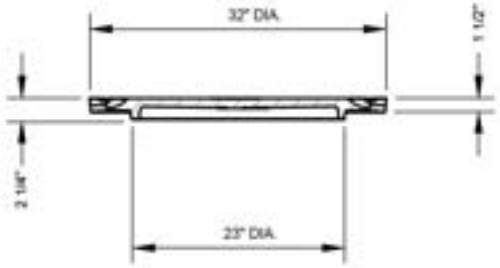
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL: 609
	HORIZONTAL GATE VALVE AND VAULT		



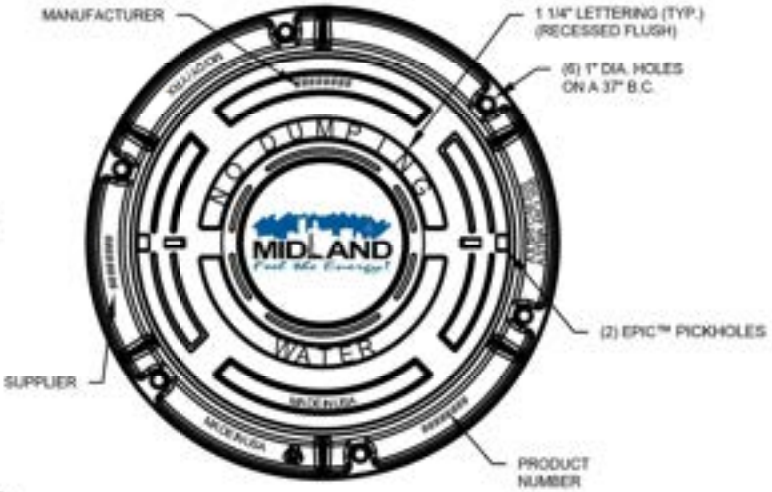
NOTES:

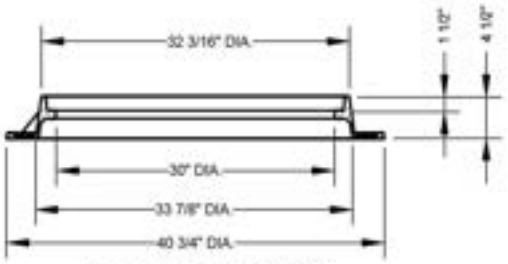
1. USE AN A.R.I. D-025 SB WITH A 4" TUBE LENGTH OR APPROVED EQUAL FOR ALL AIR VALVE INSTALLATIONS.
2. EQUIP EACH AIR VALVE SYSTEM WITH A NON-SLAM, DISCHARGE THROTTLING ATTACHMENT (SLOW RELEASE ONE WAY ATTACHMENT).
3. CONCRETE RING TO BE CITY OF MIDLAND CLASS "C" CONCRETE, 3600 PSI.
4. 12" MINIMUM FOR CONCRETE RING IN AN ARTERIAL ROADWAY.
5. USE FIBER REINFORCEMENT FOR ALL CONCRETE, WHETHER PAVEMENT OR THRUST BLOCKING.
6. FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT). REQUIRED BENEATH ALL CONCRETE RINGS.
7. FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT). REQUIRED FOR ALL OVER EXCAVATION BACKFILL.
8. MAY BE EITHER PEA GRAVEL OR 3/4" CRUSHED STONE ASTM C33 GRADE N. 7 OR 8
9. MATERIAL AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
10. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	WATER AIR RELIEF VALVE		610

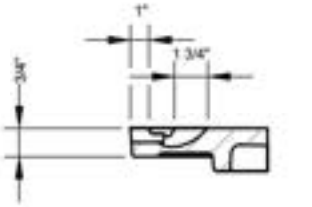


COVER SECTION





FRAME SECTION



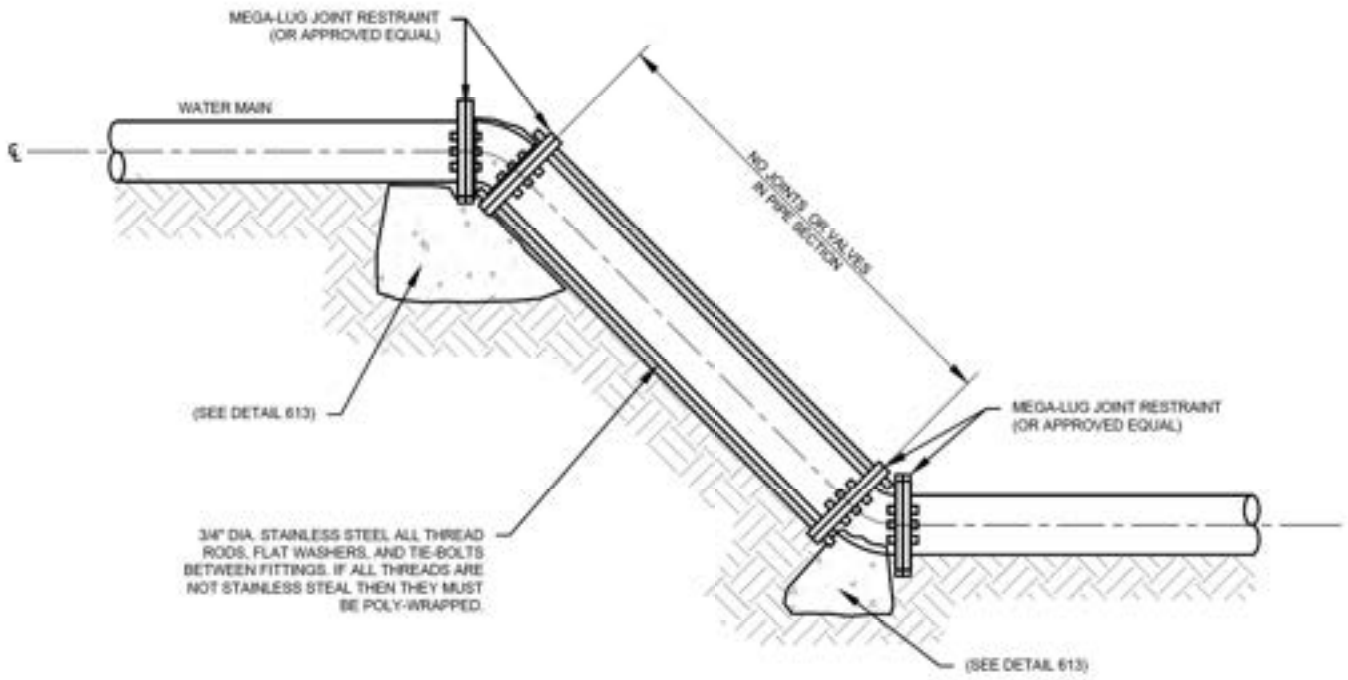
PICKHOLE DETAIL

NOTES:

1. MANHOLE COVERS TO BE CAST WITH THE FOLLOWING:
   "NO DUMPING"
   CITY OF MIDLAND LOGO
   "WATER"

   EAST JORDAN V1420Z1/V1430A ASSEMBLY OR APPROVED EQUAL
2. MATERIAL AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
3. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		WATER HORIZONTAL & AIR RELIEF VALVE COVER		611



NOTES:

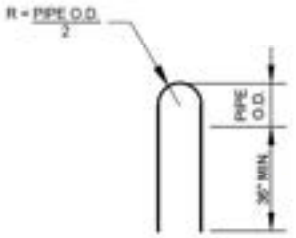
1. FORM ALL CONCRETE THRUST BLOCKING. DO NOT PLACE UN-FORMED THRUST BLOCKING.
2. ALL THRUST BLOCKING TO BE CLASS "A" CONCRETE, 3000 PSI, AND TO BE PLACED AGAINST UNDISTURBED EARTH. USE FIBER REINFORCEMENT THROUGHOUT.
3. FITTINGS TO BE POLY WRAPPED BEFORE BLOCKING IS PLACED.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		WATER MAIN VERTICAL OFFSET		612

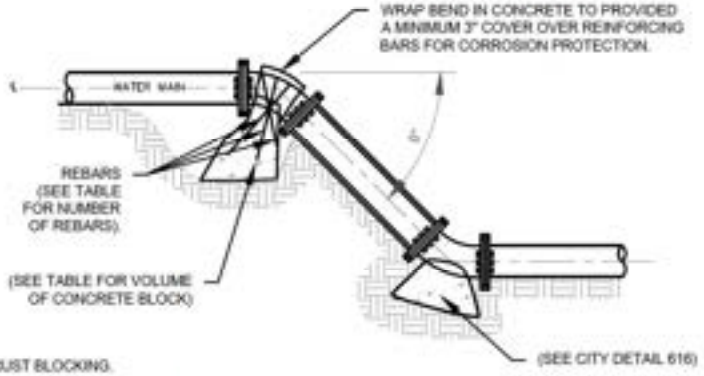
DIA. OF PIPE	DEGREE OF BEND θ							
	11 1/4°		22 1/2°		45°		90°	
	VOLUME BLOCK	REBAR NO. SIZE	VOLUME BLOCK	REBAR NO. SIZE	VOLUME BLOCK	REBAR NO. SIZE	VOLUME BLOCK	REBAR NO. SIZE
4"	3 C.F.	2-#3	6 C.F.	2-#3	12 C.F.	2-#3	22 C.F.	2-#3
6"	7 C.F.	2-#3	13 C.F.	2-#3	26 C.F.	2-#3	1.0 C.Y.	2-#3
8"	12 C.F.	2-#3	24 C.F.	2-#3	2.0 C.Y.	2-#4	3.0 C.Y.	2-#4
10"	19 C.F.	2-#3	1.5 C.Y.	2-#4	3.0 C.Y.	2-#4	5.0 C.Y.	2-#6
12"	1.0 C.Y.	2-#3	2.0 C.Y.	2-#4	4.0 C.Y.	2-#6	7.0 C.Y.	2-#8
14"	1.5 C.Y.	2-#4	3.0 C.Y.	2-#4	5.5 C.Y.	2-#6	*	*
16"	2.0 C.Y.	2-#4	3.5 C.Y.	2-#4	7.0 C.Y.	2-#7	*	*

BLOCK FOR EXTERNAL VERTICAL BENDS
DESIGN PRESSURE 180 PSI

* BLOCKING FOR 14" AND 16" 90° BENDS AND FOR ALL BENDS LARGER THAN 16" WILL BE SHOWN ON THE PLANS.



BAR BEND DETAIL

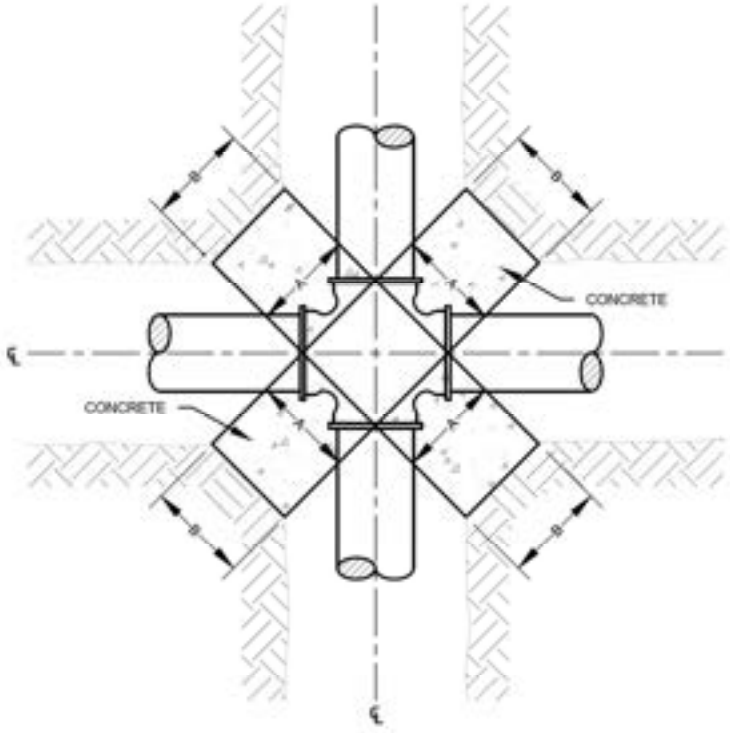


NOTES:

1. FORM ALL CONCRETE THRUST BLOCKING. DO NOT PLACE UN-FORMED THRUST BLOCKING.
2. ALL THRUST BLOCKING TO BE CLASS "A" CONCRETE, 3000 PSI, AND TO BE PLACED AGAINST UNDISTURBED EARTH. USE FIBER REINFORCEMENT THROUGHOUT.
3. FITTINGS TO BE POLY WRAPPED BEFORE BLOCKING IS PLACED.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	BLOCKING FOR VERTICAL BEND		613
APPROVED: MCC			



CROSS BLOCKING

CROSS BLOCKING
DESIGN 180 PSI LINE PRESSURE
SOIL BEARING CAP 2K/SF

CROSS DIA.	BLOCKING DIMENSIONS		
	A	B	*C
4"x 4"	0'-11"	1'-0"	1'-0"
6"x 6"	1'-2"	1'-7"	1'-0"
8"x 8"	1'-4"	2'-2"	2'-2"
10"x 10"	1'-8"	2'-6"	2'-6"
12"x 12"	1'-10"	3'-2"	3'-2"
14"x 14"	2'-2"	3'-6"	3'-6"
16"x 16"	2'-4"	4'-3"	4'-3"

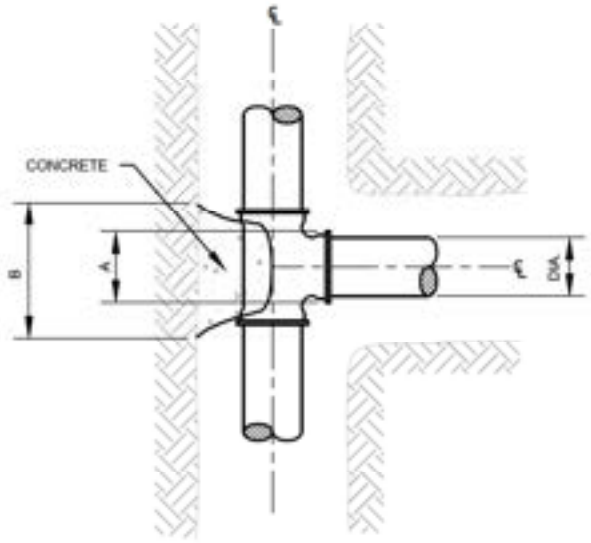
*C - VERTICAL DEPTH OF CONCRETE BEARING ON UNDISTURBED EARTH

NOTES:

1. FORM ALL CONCRETE THRUST BLOCKING. DO NOT PLACE UN-FORMED THRUST BLOCKING
2. BLOCK CROSSES WITH DIFFERENT SIZE RUNS FOR THE LARGER RUN IN ALL DIRECTIONS.
3. BLOCKING FOR CROSSES LARGER THAN 16" WILL BE AS SHOWN ON THE PLANS.
4. ALL THRUST BLOCKING TO BE CLASS "A" CONCRETE, 3000 PSI, AND TO BE PLACED AGAINST UNDISTURBED EARTH. USE FIBER REINFORCEMENT THROUGHOUT.
5. FITTINGS TO BE POLY WRAPPED BEFORE BLOCKING IS PLACED.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	BLOCKING FOR CROSS		614
APPROVED: MCC			



TEE

"T" BLOCKING
DESIGN 180 PSI LINE PRESSURE
SOIL BEARING CAP 2K/SF

"T" RUN DIA.	STEM DIA.	BLOCKING DIMENSIONS		
		A	B	*C
TEE				
4"	ALL	11"	1'-0"	1'-0"
6"	ALL	1'-2"	1'-7"	1'-0"
8"	ALL	1'-4"	2'-2"	2'-2"
10"	ALL	1'-8"	2'-8"	2'-8"
1'-0"	THRU 6"	1'-10"	1'-10"	1'-8"
1'-0"	OVER 6"	1'-10"	3'-2"	3'-2"
1'-2"	THRU 8"	2'-2"	2'-2"	1'-11"
1'-2"	OVER 8"	2'-2"	3'-8"	3'-8"
1'-4"	THRU 8"	2'-4"	2'-4"	2'-2"
1'-4"	OVER 8"	2'-4"	4'-3"	4'-3"

*C - VERTICAL DEPTH OF CONCRETE BEARING ON UNDISTURBED EARTH

NOTE:

1. FORM ALL CONCRETE THRUST BLOCKING. DO NO PLACE UN-FORMED THRUST BLOCKING.
2. BLOCKING FOR TEES LARGER THAN 16" RUN TO BE SHOWN ON THE PLANS.
3. ALL THRUST BLOCKING TO BE CLASS "A" CONCRETE, 3000 PSI, AND TO BE PLACED AGAINST UNDISTURBED EARTH. USE FIBER REINFORCEMENT THROUGHOUT.
4. FITTING TO BE POLY WRAPPED BEFORE BLOCKING IS PLACED.
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

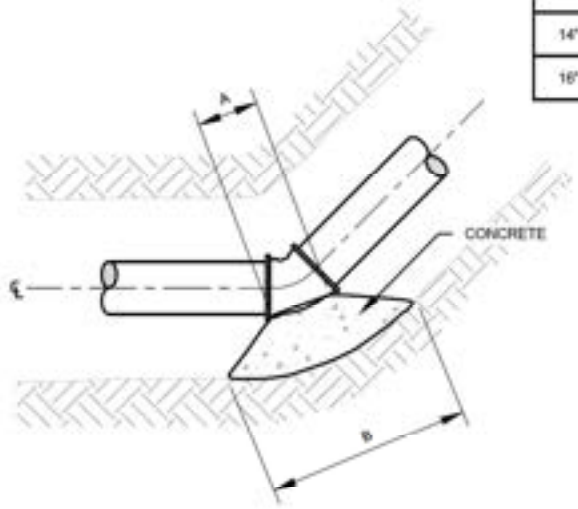
MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	BLOCKING FOR TEE		615
APPROVED: MCC			

BLOCKING FOR HORIZONTAL BENDS
DESIGN 180 PSI LINE PRESSURE
SOIL BEARING CAP 2K/SF

DIA. OF PIPE	DEGREE OF BEND											
	11 1/4°			22 1/2°			45°			90°		
	A	B	°C	A	B	°C	A	B	°C	A	B	°C
4"	0'-4"	1'-0"	1'-0"	0'-5"	1'-0"	1'-0"	0'-6"	1'-0"	1'-0"	0'-11"	1'-3"	1'-3"
6"	0'-7"	1'-0"	1'-0"	0'-7"	1'-0"	1'-0"	0'-8"	1'-5"	1'-5"	1'-3"	1'-11"	1'-11"
8"	0'-8"	0'-10"	1'-2"	0'-9"	1'-4"	1'-4"	0'-10"	1'-10"	1'-10"	1'-6"	2'-6"	2'-6"
10"	0'-10"	1'-0"	1'-5"	0'-11"	1'-8"	1'-8"	1'-1"	2'-4"	2'-4"	1'-11"	3'-2"	3'-2"
12"	1'-0"	1'-3"	1'-8"	1'-1"	2'-0"	2'-0"	1'-3"	2'-10"	2'-10"	2'-2"	3'-10"	3'-10"
14"	0'-11"	1'-5"	1'-11"	1'-1"	2'-4"	2'-4"	1'-3"	3'-3"	3'-3"			
16"	1'-1"	1'-8"	2'-2"	1'-2"	2'-8"	2'-8"	1'-5"	3'-9"	3'-9"			

°C - VERTICAL DEPTH OF CONCRETE
BEARING ON UNDISTURBED EARTH



NOTES:

1. FORM ALL CONCRETE THRUST BLOCKING. DO NOT PLACE UN-FORMED THRUST BLOCKING.
2. ALL THRUST BLOCKING TO BE CLASS "A" CONCRETE, 3000 PSI, AND TO BE PLACED AGAINST UNDISTURBED EARTH. USE FIBER REINFORCEMENT THROUGHOUT.
3. FITTING TO BE POLY WRAPPED BEFORE BLOCKING IS PLACED.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

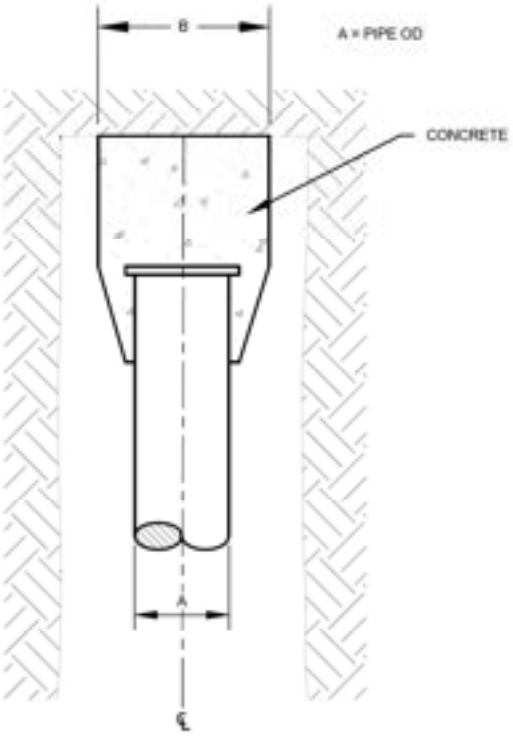
MIDLAND Engineering Services

DRAWN: DPM
CHECKED: JCF
APPROVED: MCC

EFFECTIVE DATE: 10/01/2018 | SCALE: NTS | DETAIL:

BLOCKING FOR HORIZONTAL BENDS

616



CAP BLOCKING

PIPE OD A	BLOCKING DIMENSIONS	
	B	*C
4"	1'-6"	1'-0"
6"	1'-7"	1'-0"
8"	2'-2"	2'-2"
10"	2'-8"	2'-8"
12"	3'-2"	3'-2"
14"	3'-8"	3'-8"
16"	4'-3"	4'-3"

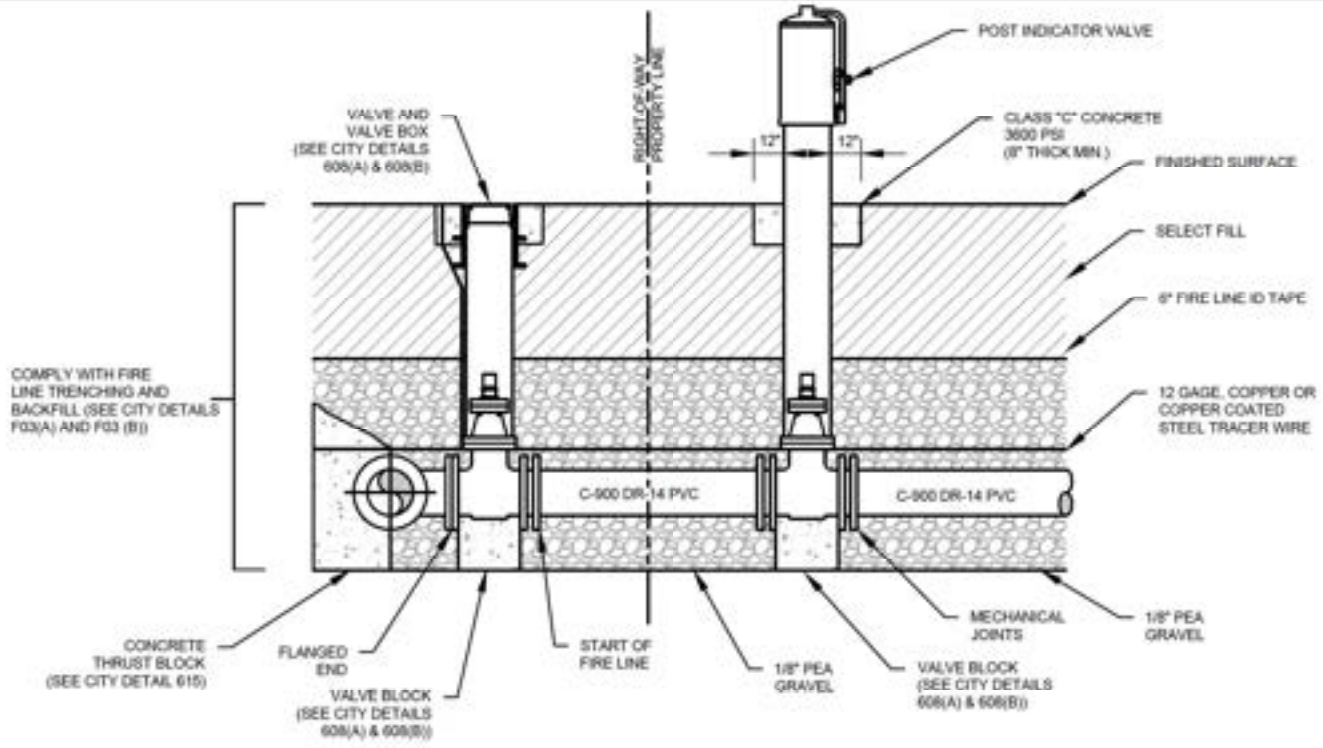
*C - VERTICAL DEPTH OF CONCRETE BEARING ON UNDISTURBED EARTH

NOTES:

1. CAP ALL WATER MAIN STUB OUTS.
2. FORM ALL CONCRETE THRUST BLOCKING . DO NOT PLACE UN-FORMED THRUST BLOCKING.
3. ALL THRUST BLOCKING TO BE CLASS "A" CONCRETE, 3000 PSI, AND TO BE PLACED AGAINST UNDISTURBED EARTH. USE FIBER REINFORCEMENT THROUGHOUT.
4. FITTINGS TO BE POLY WRAPPED BEFORE BLOCKING IS PLACED.
5. THRUST BLOCKING DESIGN TO BE PROVIDED IN CONSTRUCTION DRAWINGS FOR PIPES LARGER THAN 16" DIAMETER.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

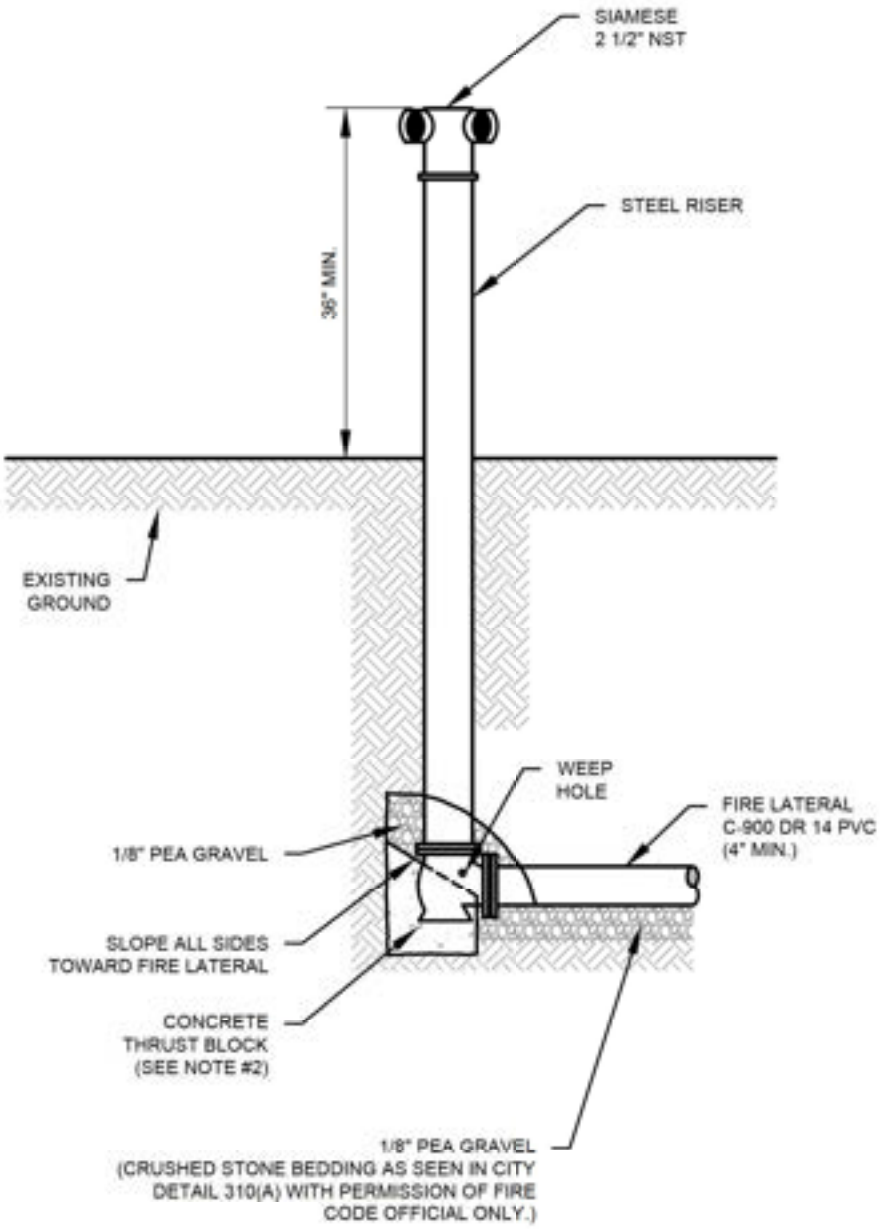
DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	BLOCKING FOR CAP		617
APPROVED: MCC			



NOTES:

1. ALL VALVE BOXES TO BE SET IN CONCRETE COLLARS AND BE FLUSH WITH THE FINAL SURFACE GRADE.
2. A TEE FITTING IS REQUIRED FOR A CONNECTION TO A NEW WATER MAIN, AND A TAPPING SLEEVE IS REQUIRED FOR A CONNECTION TO AN EXISTING WATER MAIN.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE FIRE CODE OFFICIAL.

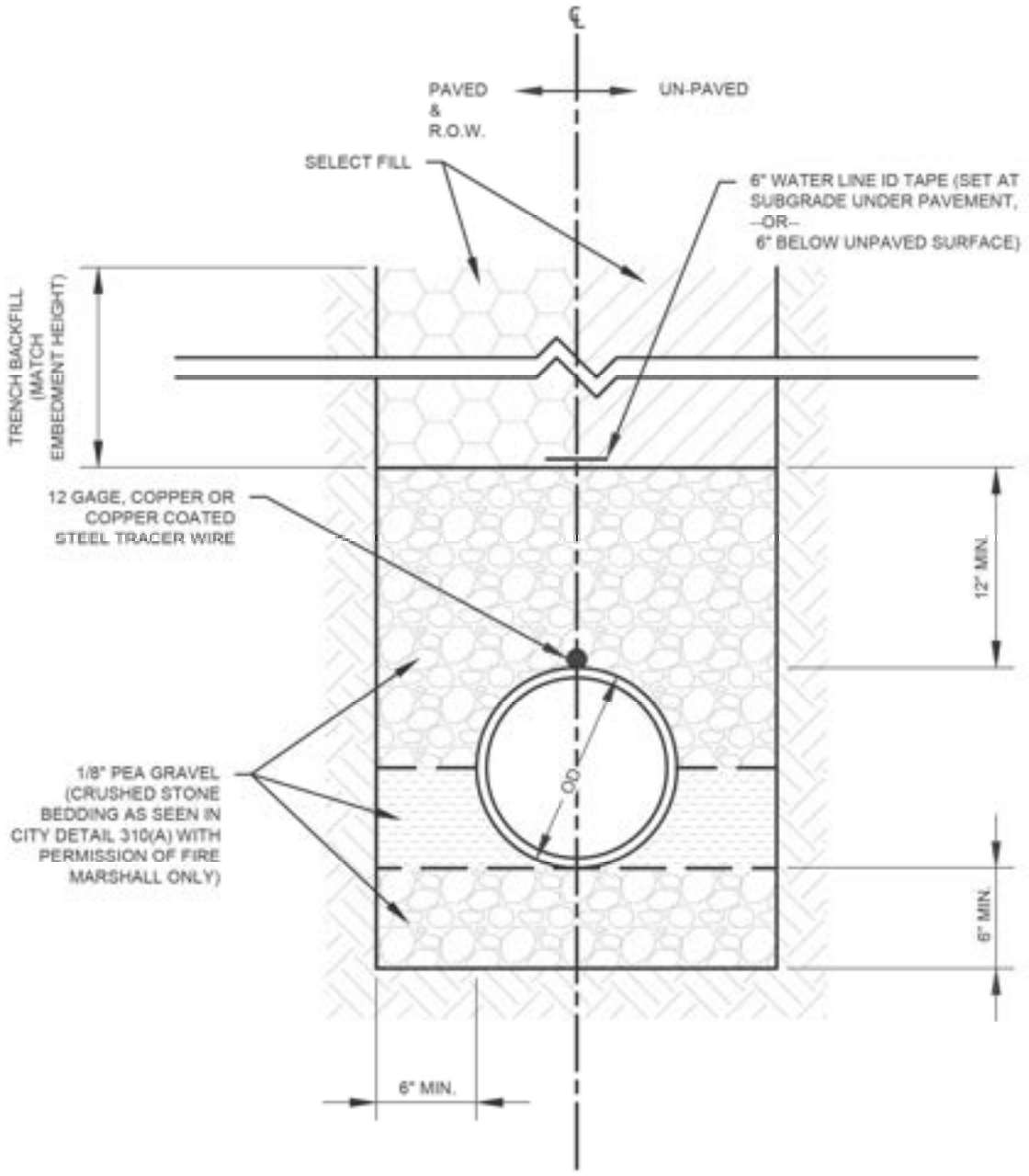
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		FIRE SERVICE LINE		F01



NOTES:

1. FDC SHOE TO BE SAME AS TYPICAL FIRE HYDRANT SHOE. DO NOT WRAP SHOE IN PLASTIC.
2. SHAPE CONCRETE THRUST BLOCKS SO THAT NO WATER DRAINS ARE BLOCKED.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE FIRE CODE OFFICIAL.

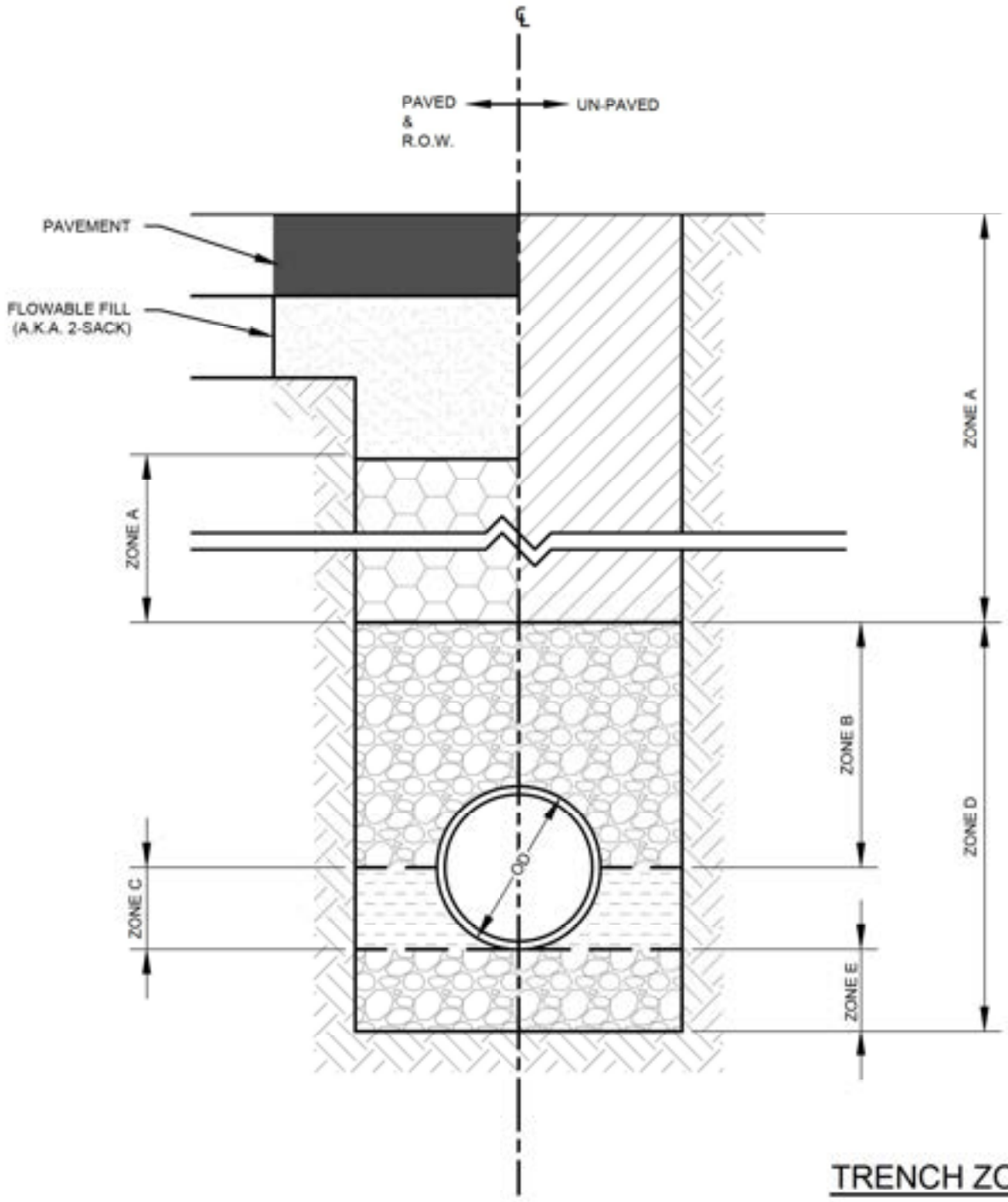
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	REMOTE FDC		F02



NOTES:

1. APPLIES TO ALL PIPE TYPES. (DUCTILE IRON, PVC, ETC.)
2. USE SELECT FILL FOR ALL BACKFILL MATERIAL.
3. MOISTURE CONDITION ALL BACKFILL MATERIAL PRIOR TO PLACING IN TRENCH.
4. PLACE BACKFILL MATERIAL IN MAXIMUM 12" LOOSE LIFTS AND COMPACT TO MAXIMUM 8" COMPACTED LIFTS.
5. REFER TO CITY DETAILS 311 AND 312 FOR TRENCH PAVEMENT REPLACEMENT REQUIREMENTS
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE FIRE CODE OFFICIAL.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	FIRE LINE TRENCHING AND BEDDING		F03(A)



TRENCH ZONES:

ZONE A: TRENCH BACKFILL

ZONE B: PIPE BACKFILL

ZONE C: HAUNCHING

ZONE D: PIPE EMBEDMENT

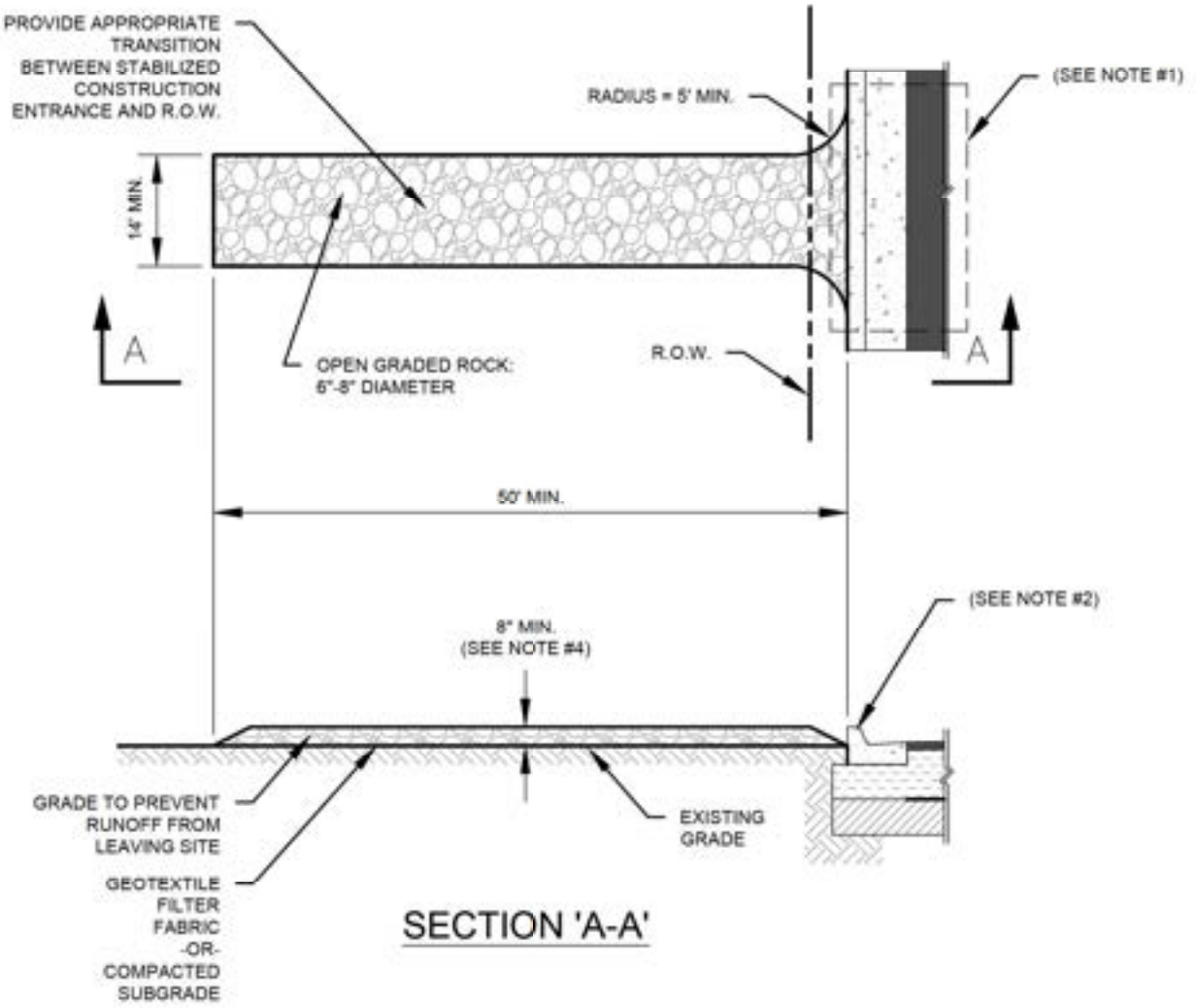
ZONE E: BEDDING

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	FIRE LINE TRENCHING AND BEDDING		F03(B)

EROSION CONTROL DETAILS

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
EFFECTIVE DATE: 10/01/2018		SCALE: NTS	DETAIL: 700

MIDLAND Engineering Services

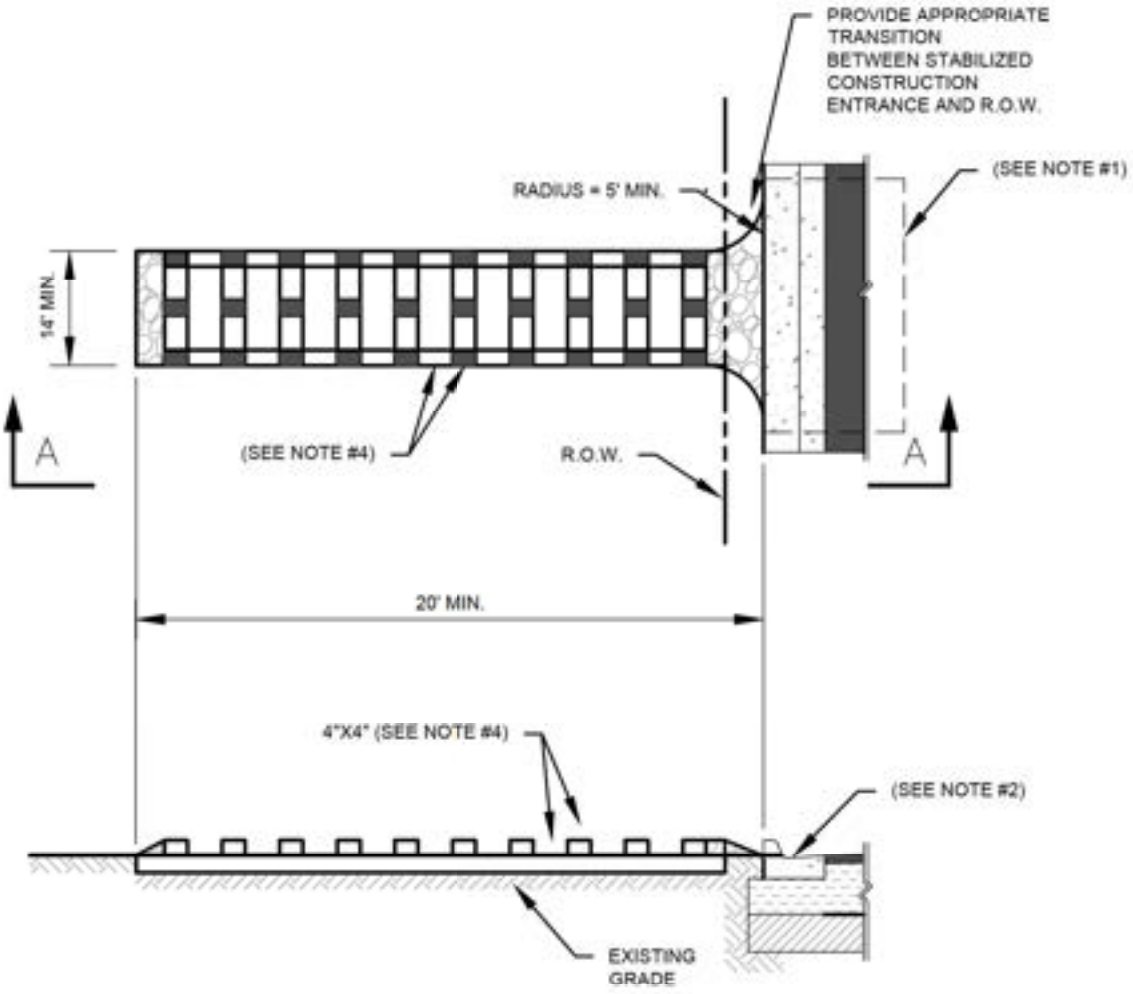


SECTION 'A-A'

NOTES:

1. IF CURB DOES NOT EXIST OR IF EXISTING CURB IS REMOVED DURING CONSTRUCTION THEN STABILIZED CONSTRUCTION ENTRANCE IS TO EXTEND TO THE EDGE OF PAVEMENT.
2. IF CURB IS LEFT IN PLACE DURING CONSTRUCTION THEN INSTALL TEMPORARY CURB PROTECTION AS PER CITY DETAIL 713.
3. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN FIFTY (50) FEET.
4. THICKNESS OF OPEN GRADED ROCK TO BE NO LESS THAN EIGHT (8) INCHES.
5. WIDTH SHALL BE NO LESS THAN FOURTEEN (14) FEET OR THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS, WHICHEVER IS WIDER.
6. STABILIZED CONSTRUCTION ENTRANCE TO BE REMOVED UPON COMPLETION OF CONSTRUCTION.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	STABILIZED CONSTRUCTION ENTRANCE OPTION 1		701

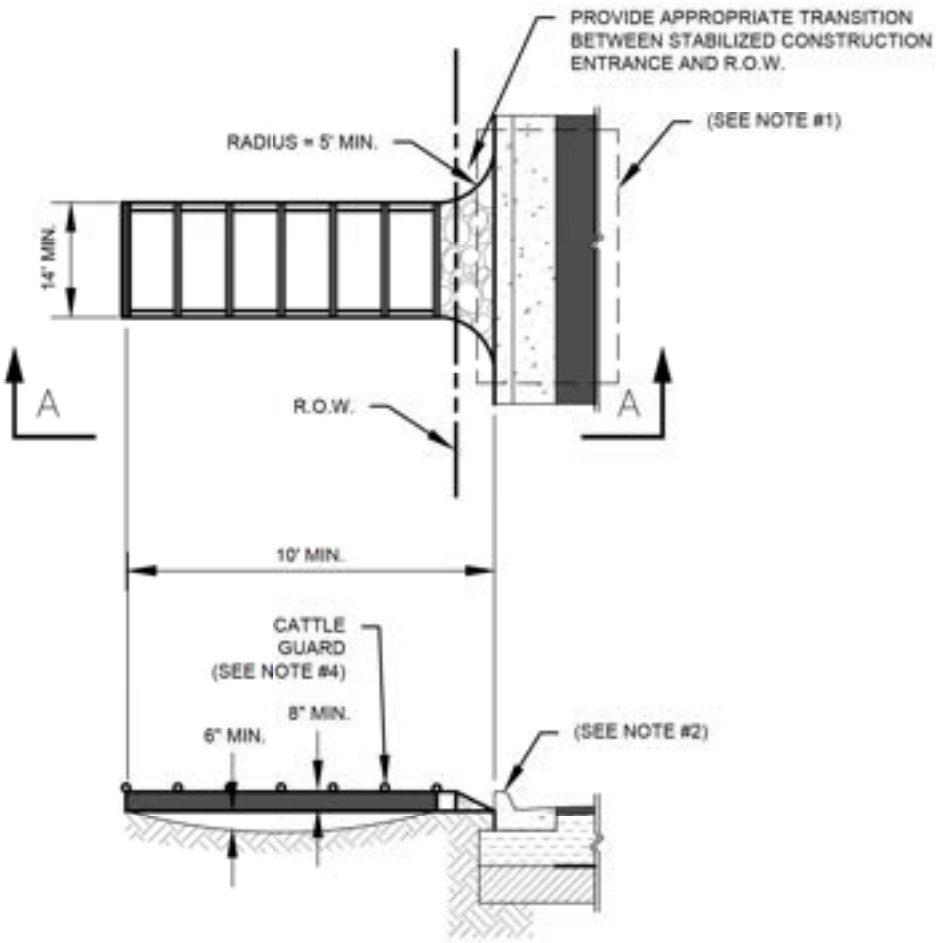


SECTION 'A-A'

NOTES:

1. IF CURB DOES NOT EXIST OR IF EXISTING CURB IS REMOVED DURING CONSTRUCTION THEN STABILIZED CONSTRUCTION ENTRANCE IS TO EXTEND TO THE EDGE OF PAVEMENT.
2. IF CURB IS LEFT IN PLACE DURING CONSTRUCTION THEN INSTALL TEMPORARY CURB PROTECTION AS PER CITY DETAIL 713.
3. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN TWENTY (20) FEET.
4. BOARDS TO ALL BE 4"X4" WOOD BOARDS IN GOOD CONDITION. PLACE BOARDS ON BOTTOM LAYER TO RUN ALONG ENTRYWAY WITH 2.0' SPACING BETWEEN BOARDS. PLACE BOARDS ON TOP LAYER TO RUN ACROSS ENTRYWAY WITH 4.0" SPACING BETWEEN BOARDS. BOLT BOARDS ON TOP LAYER TO BOARDS ON BOTTOM LAYER.
5. WIDTH SHALL BE NO LESS THAN FOURTEEN (14) FEET OR THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS, WHICHEVER IS WIDER.
6. STABILIZED CONSTRUCTION ENTRANCE TO BE REMOVED UPON COMPLETION OF CONSTRUCTION.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	STABILIZED CONSTRUCTION ENTRANCE OPTION 2		702

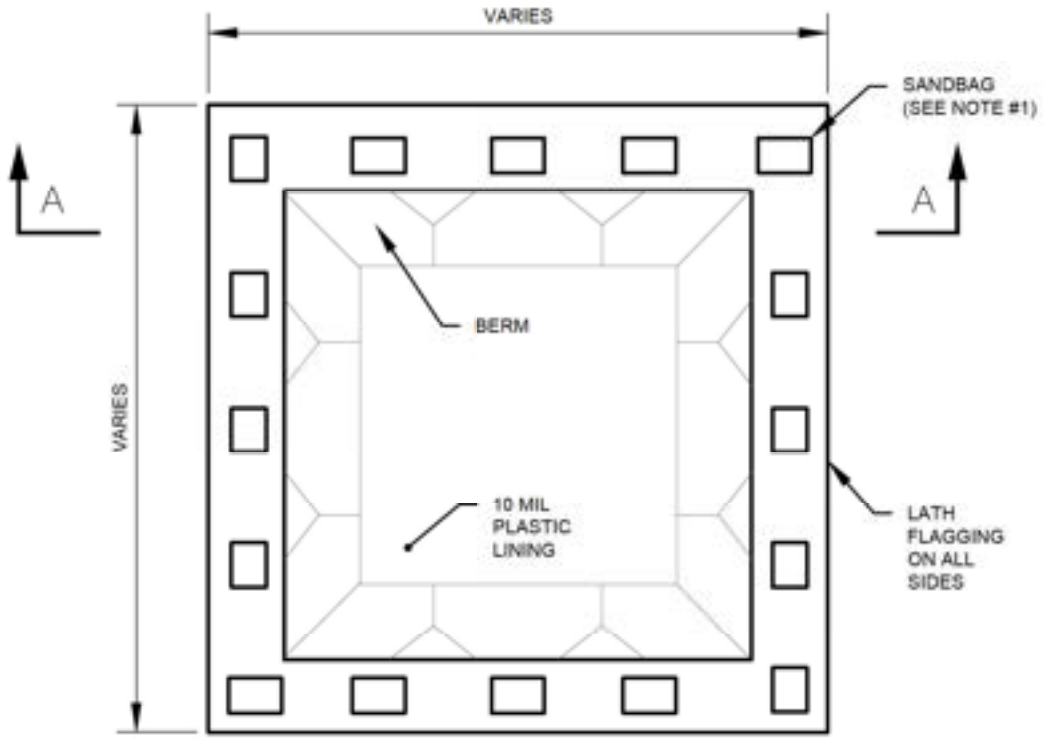


SECTION 'A-A'

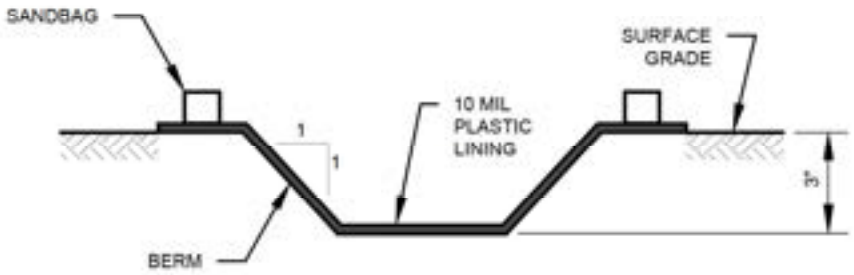
NOTES:

1. IF CURB DOES NOT EXIST OR IF EXISTING CURB IS REMOVED DURING CONSTRUCTION THEN STABILIZED CONSTRUCTION ENTRANCE IS TO EXTEND TO THE EDGE OF PAVEMENT.
2. IF CURB IS LEFT IN PLACE DURING CONSTRUCTION THEN INSTALL TEMPORARY CURB PROTECTION AS PER CITY DETAIL 713.
3. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN TEN (10) FEET.
4. CATTLE GUARD TO BE STEEL, HEAVY VEHICLE LOAD RATED, AND UTILIZE TOP LEVEL BEAM OR PIPE CROSSINGS OF 4"-6" DIAMETER SPACED NO MORE THAN 8.0" APART. STRUCTURE MAY BE PRE-FABRICATED.
5. WIDTH SHALL BE NO LESS THAN FOURTEEN (14) FEET OR THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS, WHICHEVER IS WIDER.
6. STABILIZED CONSTRUCTION ENTRANCE TO BE REMOVED UPON COMPLETION OF CONSTRUCTION.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	STABILIZED CONSTRUCTION ENTRANCE OPTION 3		703



DEPRESSED WASHOUT

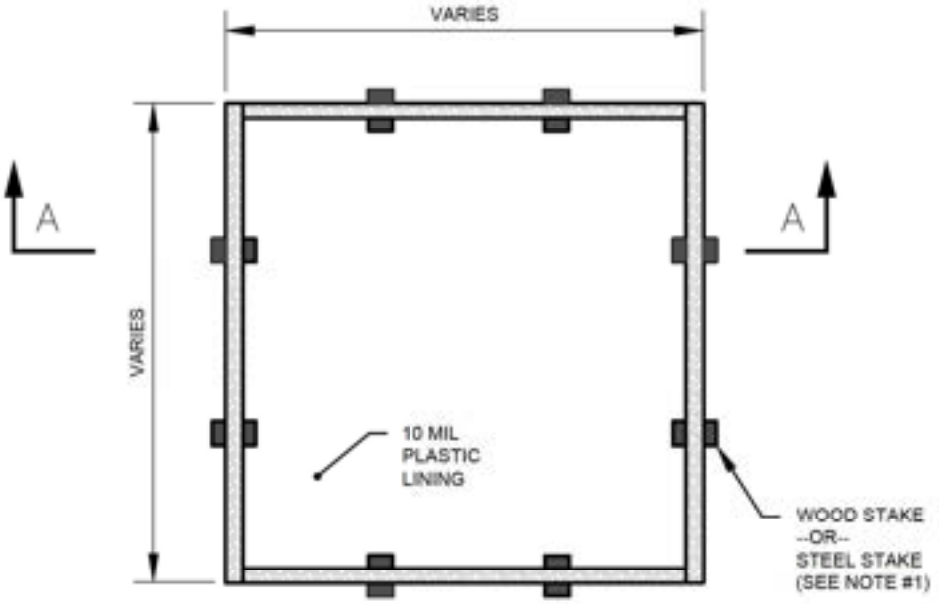


SECTION 'A-A'

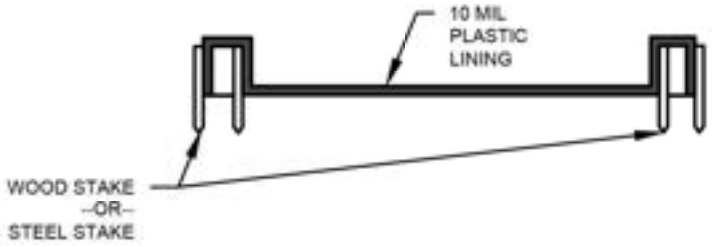
NOTES:

1. SECURE WASHOUT STRUCTURES AND LININGS WITH SANDBAGS OR TWO SECURELY FASTENED STAKES AROUND ENTIRE WASHOUT PERIMETER.
2. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
3. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	CONCRETE WASHOUT OPTION 1		704



ELEVATED WASHOUT

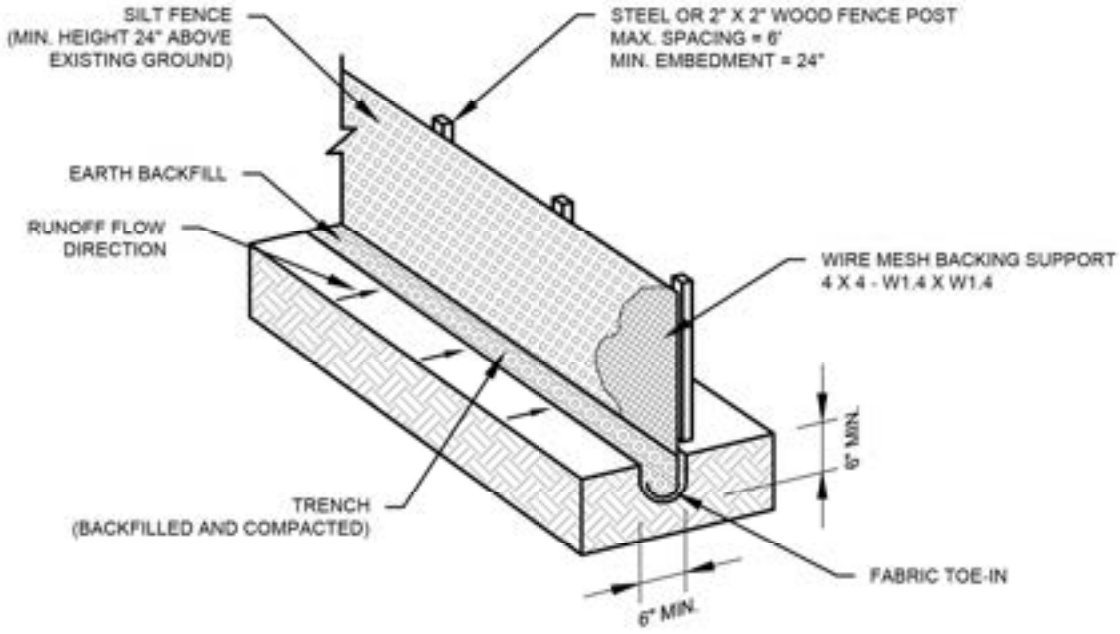


SECTION 'A-A'

NOTES:

1. THIS WASHOUT CONFIGURATION MAY NOT BE USED IN PAVED AREAS.
2. WOOD FRAME IS TO BE EQUAL TO OR BETTER THAN TWO-STACKED 2X12 ROUGH WOOD FRAME.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEERING.

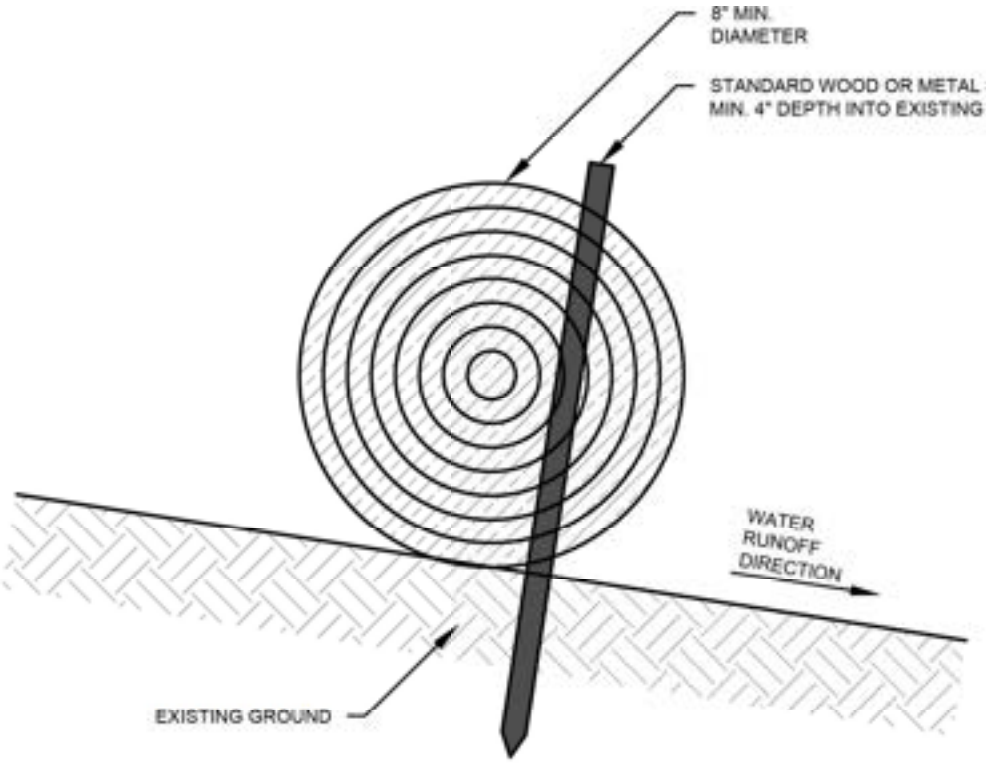
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	CONCRETE WASHOUT OPTION 2		705



NOTES:

1. THIS DETAIL IS TO BE USED FOR SHEET FLOW CONDITIONS ONLY. DO NOT USE SILT FENCE FOR POINT FLOW OR CONCENTRATED FLOW CONDITIONS.
2. INSTALL STEEL OR WOOD POSTS, WHICH SUPPORT THE SILT FENCE, WITH A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF ONE (1) FOOT.
3. TRENCH THE TOE OF THE SILT FENCE IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE THE FENCE CANNOT BE TRENCHED IN (E.G.PAVEMENT), WEIGHT DOWN FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
4. THE TRENCH MUST BE A MINIMUM OF SIX (6) INCHES DEEP AND SIX (6) INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
5. SECURELY FASTEN SILT FENCE TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS TO BE ATTACHED TO THE STEEL OR WOOD FENCE POST. INCLUDE A SIX (6) INCH DOUBLE OVERLAP, SECURELY FASTENED, WHERE ENDS OF FABRIC MEET.
6. REMOVE SILT FENCE WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. REMOVE ACCUMULATED SILT WHEN IT REACHES A DEPTH OF SIX (6) INCHES. DISPOSE OF THE SILT ONSITE IN AN APPROVED LOCATION AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
9. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

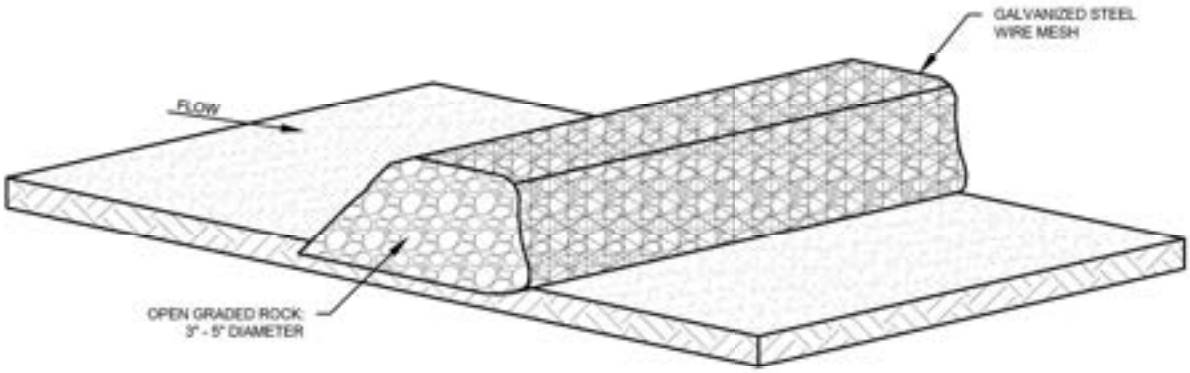
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	SILT FENCE		706



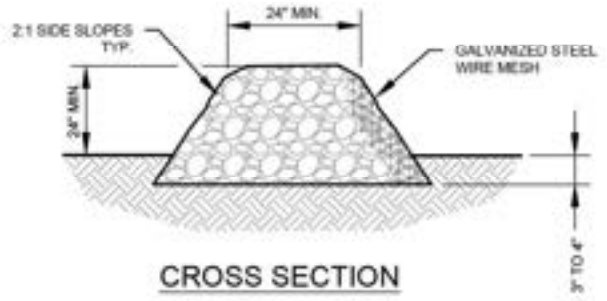
NOTES:

1. THIS DETAIL IS TO USED FOR SHEET FLOW CONDITIONS ONLY. DO NOT USE FILTER SOCK FOR POINT FLOW OR CONCENTRATED FLOW CONDITIONS.
2. DO NOT USE FILTER SOCK FOR SHEET FLOW WATERSHEDS LARGER THAN ONE (1) ACRE.
3. USE POLYPROPYLENE NETTING, BURLAP, OR JUTE FABRIC TO CONSTRUCT THE FILTER SOCK.
4. FILL FILTER SOCK WITH STRAW, HAY, COCONUT FIBER, OR COMPOSITE MATERIAL.
5. PLACE STAKING EVERY THREE (3) TO FOUR (4) FEET AT A MINIMUM.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	FILTER SOCK		707



ISOMETRIC VIEW

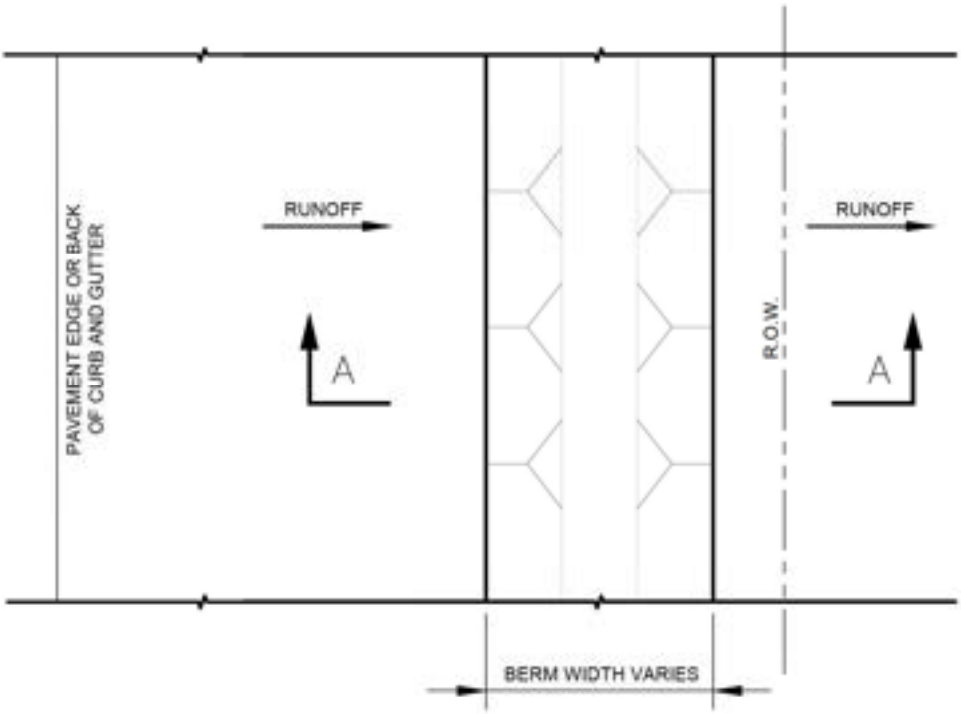


CROSS SECTION

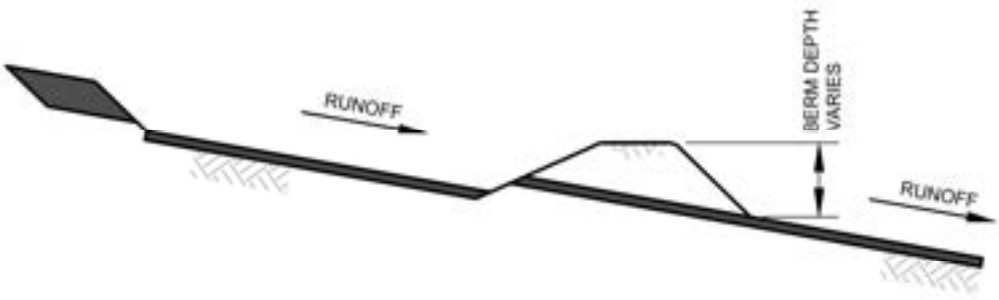
NOTES:

1. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
2. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		ROCK FILTER DAM		708



PLAN

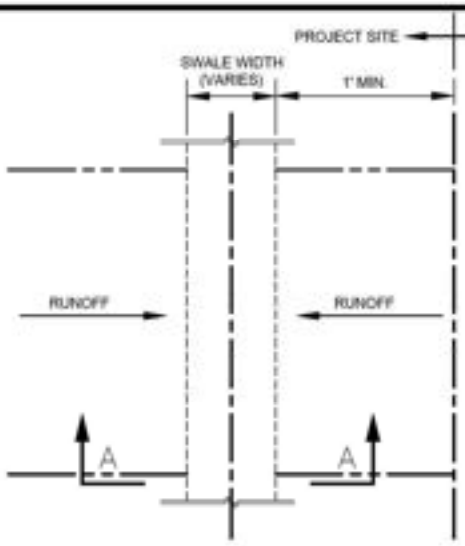


SECTION 'A-A'

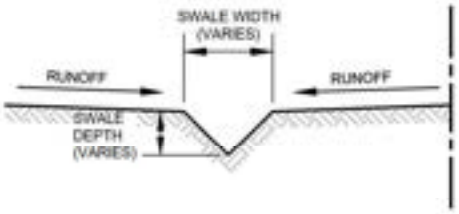
NOTES:

1. CONSTRUCT WIND ROW BERM FROM EXISTING TOPSOIL (4" TO 6" USUAL) TO INTERCEPT RUNOFF.
2. WHERE OVERTOPPING OF BERM OCCURS, PLACE ADDITIONAL EROSION CONTROL DEVICES AS REQUIRED BY THE ENGINEER.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	WIND ROW BERM		709



DRAINAGE SWALE BUFFER

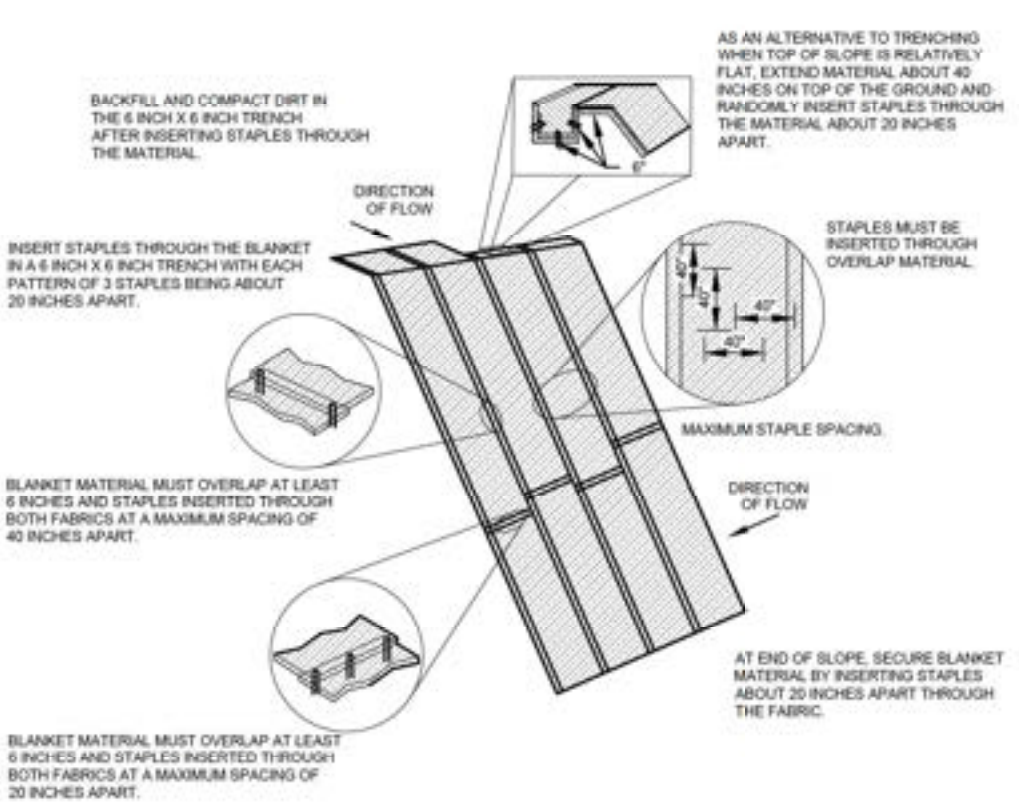


SECTION 'A-A'

NOTES:

1. SIZE DRAINAGE SWALE BUFFER TO CONTAIN ALL RUNOFF DIRECTED TOWARDS IT SO THAT NO OVERTOPPING OF SWALE OCCURS.
2. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
3. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		DRAINAGE SWALE BUFFER		710

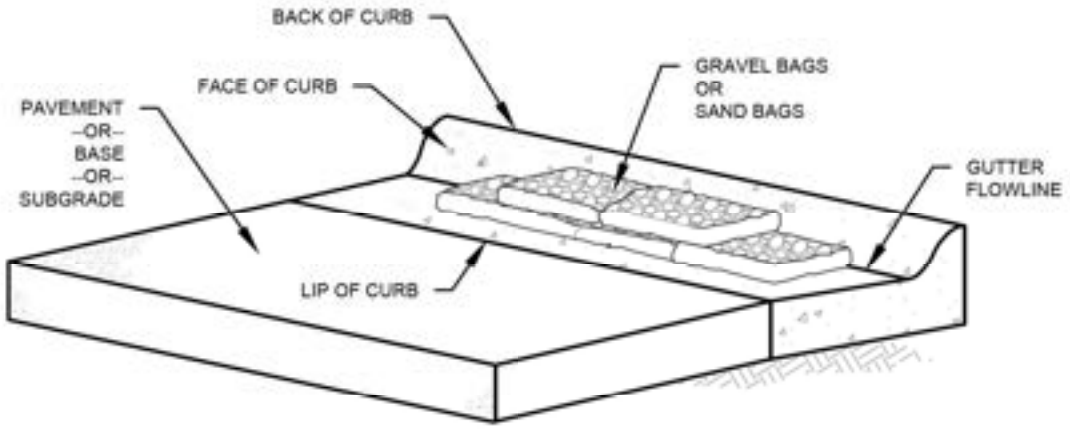


NOTES:

1. THE FOLLOWING PRODUCTS, OR AN EQUAL APPROVED BY THE ENGINEERING SERVICES REPRESENTATIVE MAY BE USED:
   ECS 6-1 STANDARD STRAW
   ECS HIGH VELOCITY STRAW
   LANDLOK BON-TERRA S2, ENS2 OR ENCS2
   NORTH AMERICAN GREEN S75, S75BN, S150, S150BN, OR SC150
2. APPLY SEED AS RECOMMENDED BY MANUFACTURER'S SPECIFICATIONS.
3. LAY BLANKETS PARALLEL TO THE DIRECTION OF WATER FLOW. SPREAD BLANKETS EVENLY WITHOUT STRETCHING SO FIBERS ARE IN DIRECT CONTACT WITH THE SOIL.
4. BURY THE UPSLOPE END OF EACH BLANKET AT LEAST 6 INCHES IN A VERTICAL TRENCH WITH THE SOIL PRESSED FIRMLY AGAINST THE EMBEDDED MAT. ADDITIONAL CHECK TRENCHES AT 50 FEET INTERVALS MAY BE DESIRABLE ON STEEP GRADES OR LONG FLOW AREAS.
5. STAPLE STRIP ENDS AND END OVERLAPS WITH NOT MORE THAN 20 INCHES BETWEEN STAPLES. STAPLE ALL OTHER JOINTS AND EDGES AT 40 INCH INTERVALS.
6. USE U-SHAPED STAPLES TO ANCHOR BLANKETS THAT ARE 11 GAUGE OR HEAVIER STEEL WIRE HAVING A SPAN WIDTH OF 1 INCH AND A LENGTH OF 6 INCHES OR MORE FROM TOP TO BOTTOM AFTER BENDING.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

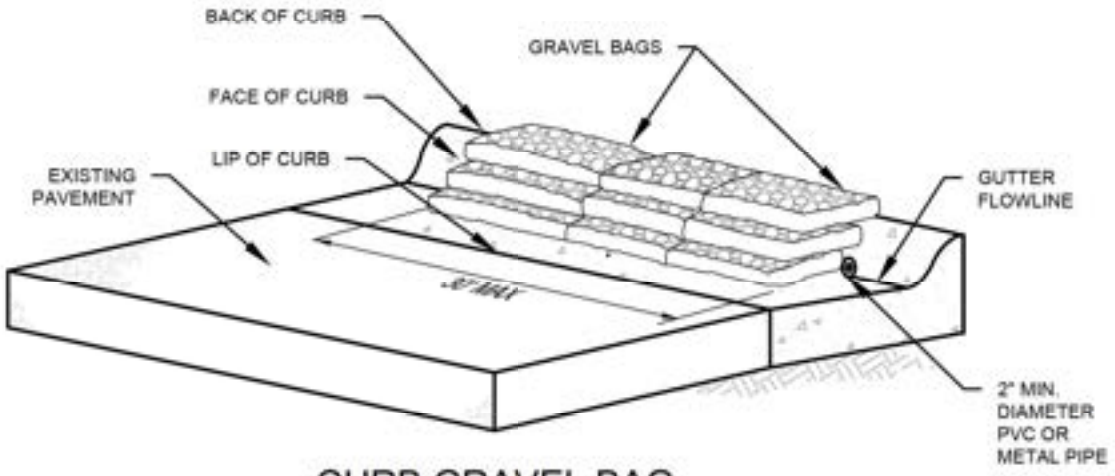
DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	EROSION CONTROL BLANKET AND VEGETATION		711
APPROVED: MCC			



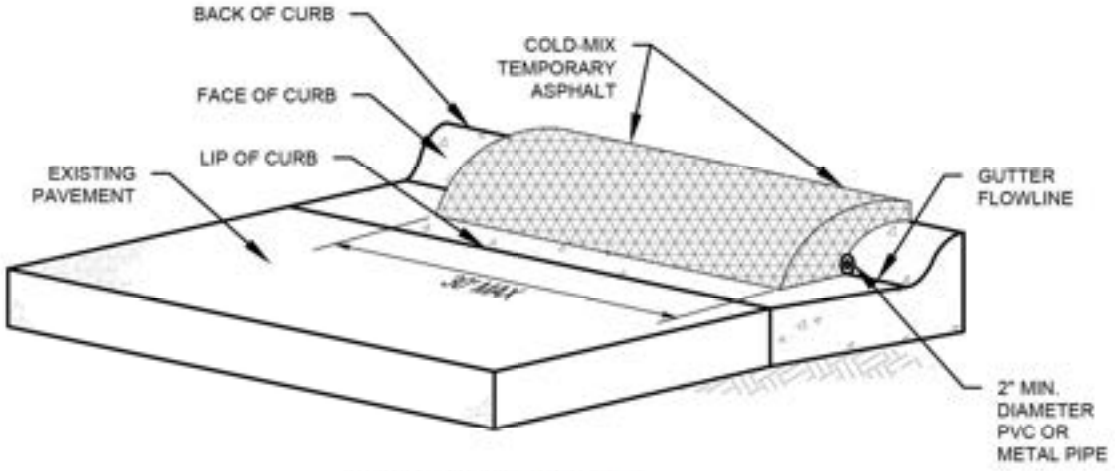
NOTES:

1. FILL BAGS TO 60% CAPACITY WITH EITHER CLEAN GRAVEL OR CLEAN SAND.
2. GRAVEL TO BE NO LESS THAN 1" DIAMETER OR GREATER THAN 2" DIAMETER.
3. PLACE BAGS WITH BAG OPENINGS SECURED AND FACE UP, AND SO THAT EACH BAG IS FLAT AND HAS THE GREATEST POSSIBLE SURFACE AREA CONTACT WITH THE CURB.
4. PLACE BAGS AGAINST THE FACE-OF-CURB AND DO NOT PLACE BAGS BEYOND THE LIP-OF-CURB.
5. DO NOT BLOCK ADA RAMPS OR WALKWAYS WITH BAGS.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	CURB GRAVEL OR SAND BAGS		712



CURB GRAVEL BAG

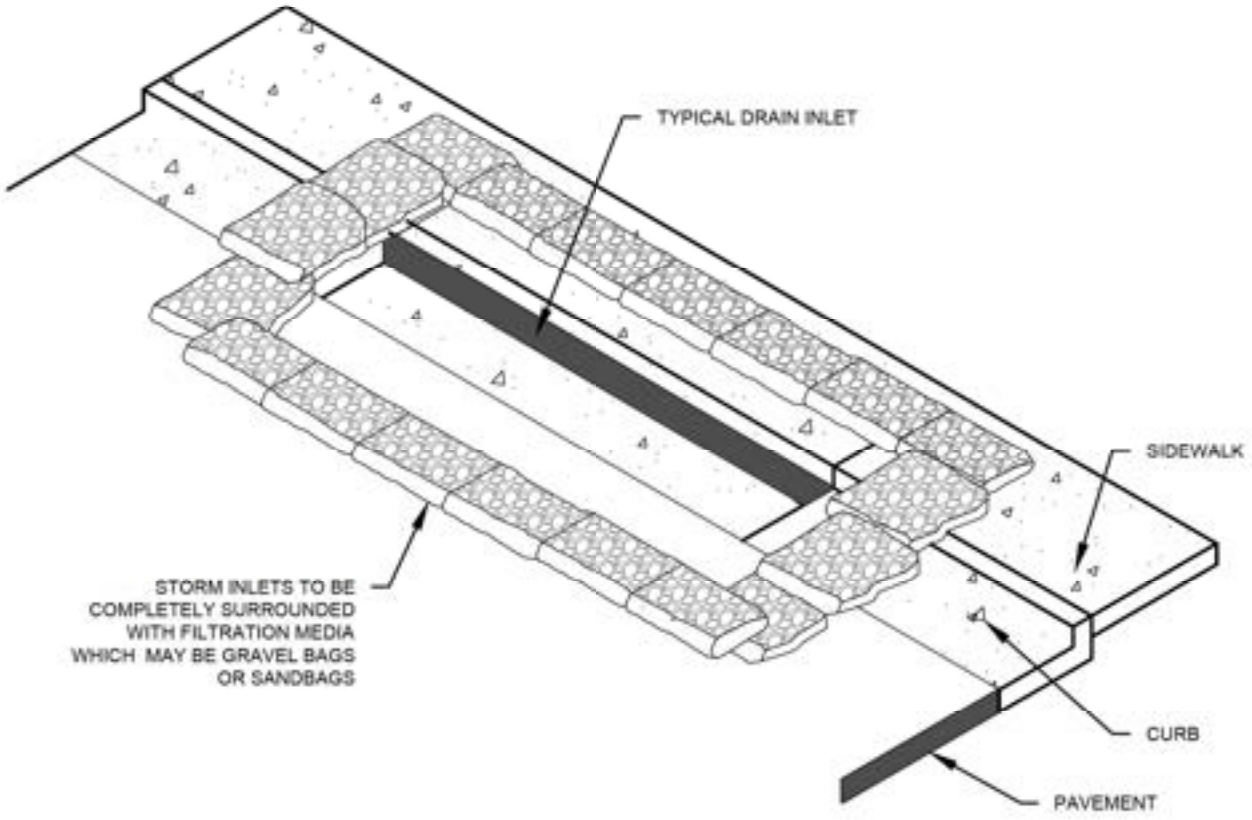


CURB COLD-MIX TEMPORARY ASPHALT

NOTES:

1. UTILIZE THIS DETAIL WHEN ACCESSING PROJECT SITE OVER EXISTING CURB ONLY IF NO USABLE CURB OPENING EXISTS.
2. FILL BAGS TO 60% CAPACITY WITH CLEAN GRAVEL NO LESS THAN 1" DIAMETER AND NO GREATER THAN 2" DIAMETER.
3. PLACE BAGS WITH BAG OPENINGS SECURED AND FACE UP, AND SO THAT EACH BAG IS FLAT AND HAS THE GREATEST POSSIBLE SURFACE AREA CONTACT WITH THE CURB.
4. PLACE BAGS AGAINST THE PIPE AND FACE-OF-CURB . DO NOT PLACE BAGS BEYOND THE LIP-OF-CURB.
5. DO NOT BLOCK ADA RAMPS OR WALKWAYS WITH BAGS.
6. DO NOT PLACE TEMPORARY ASPHALT BEYOND LIP-OF-CURB.
7. PIPE MUST EXTEND ACROSS FULL LENGTH OF TEMPORARY CURB PROTECTION AND BE COMPLETELY EXPOSED AT BOTH ENDS.
8. MINIMUM 4" THICK LAYER OF GRAVEL OR ASPHALT REQUIRED OVER ALL PARTS OF AFFECTED CURB.
9. MAXIMUM WIDTH OF CURB PROTECTION IS 30'.
10. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
11. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	TEMPORARY CURB PROTECTION		713



GRAVEL BAGS OR SANDBAGS

NOTES:

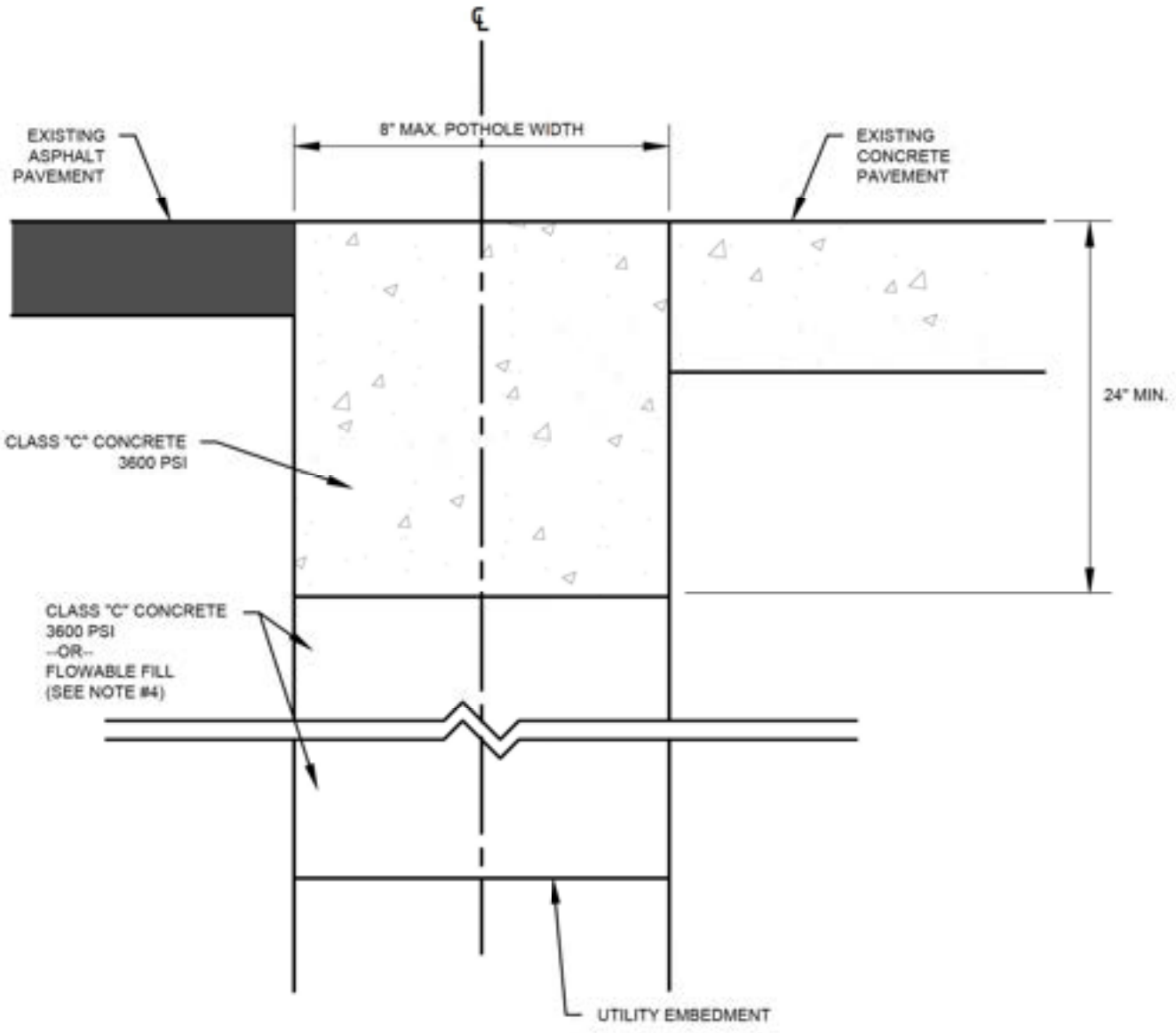
1. FILL BAGS TO 60% CAPACITY WITH CLEAN GRAVEL OR CLEAN SAND.
2. PLACE BAGS WITH BAG OPENINGS SECURED AND FACE UP, AND SO THAT EACH BAG IS FLAT AND HAS THE GREATEST POSSIBLE SURFACE AREA CONTACT WITH THE SURFACE.
3. GRAVEL TO BE NO LESS THAN 1" DIAMETER OR GREATER THAN 2" DIAMETER.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	CURB INLET PROTECTION		714

MISCELLANEOUS DETAILS

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
EFFECTIVE DATE: 10/01/2018		SCALE: NTS	DETAIL: 800

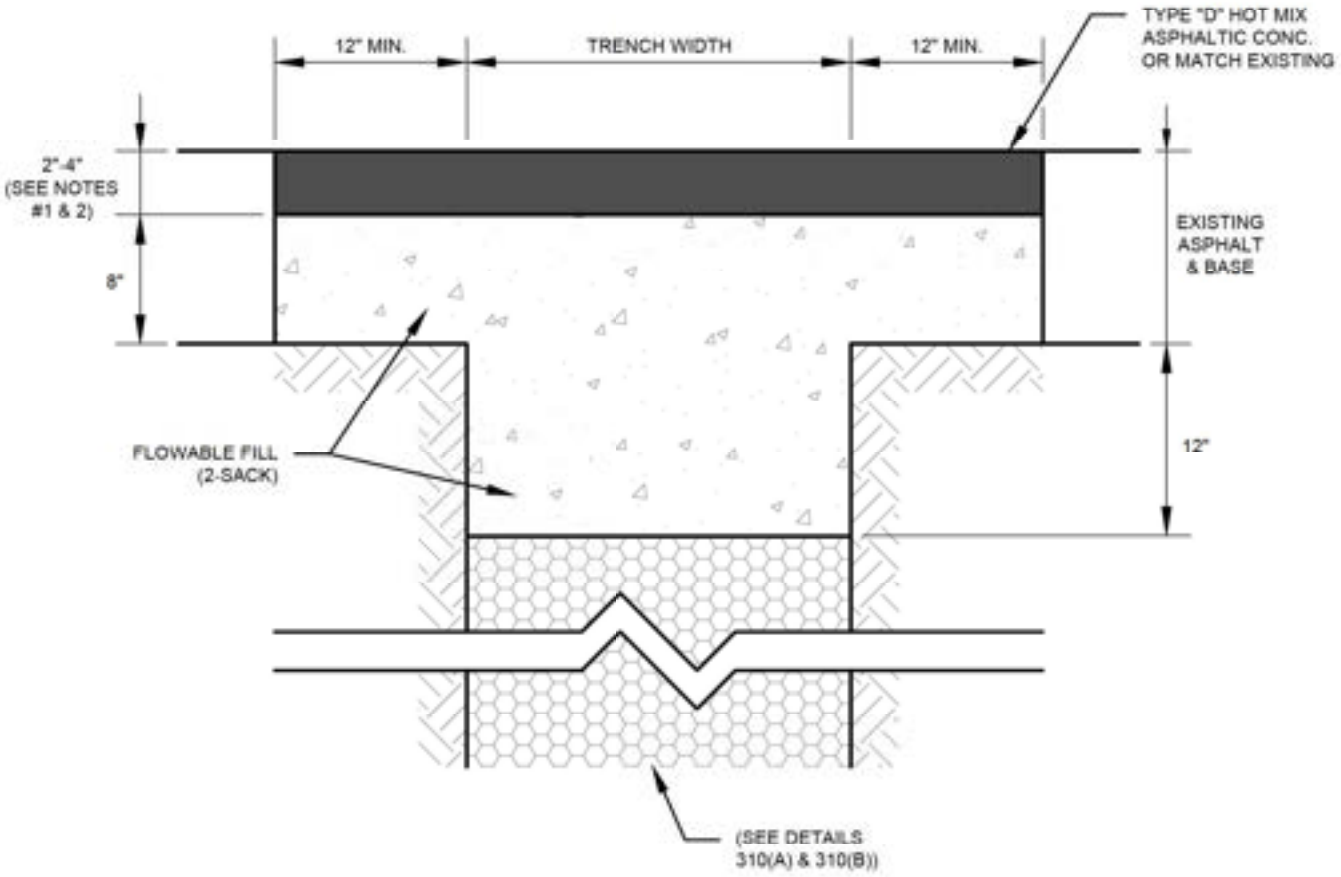
MIDLAND Engineering Services



NOTES:

1. UTILITY EMBEDMENT TO BE REPLACED TO ORIGINAL CONDITION AND DEPTH OVER UTILITY.
2. PLACE ALL CONCRETE AS A SINGLE CONTINUOUS POUR. PLACE CONCRETE SEPARATELY FROM FLOWABLE FILL.
3. CONCRETE TO BE CITY OF MIDLAND CLASS "C" CONCRETE, 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
4. PLACE ALL FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT) AS A SINGLE CONTINUOUS POUR. FLOWABLE FILL MUST CURE FOR MINIMUM OF ONE (1) DAY PRIOR TO PLACING CONCRETE PAVEMENT OVER IT.
5. ALL CUT OR EXCAVATED MATERIAL MUST BE REMOVED FROM SITE AND MUST NOT BE USED FOR BACKFILL OR PAVEMENT REPAIR.
6. ALL POTHOLE PAVEMENT CUTS MUST BE CLEANLY CUT.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

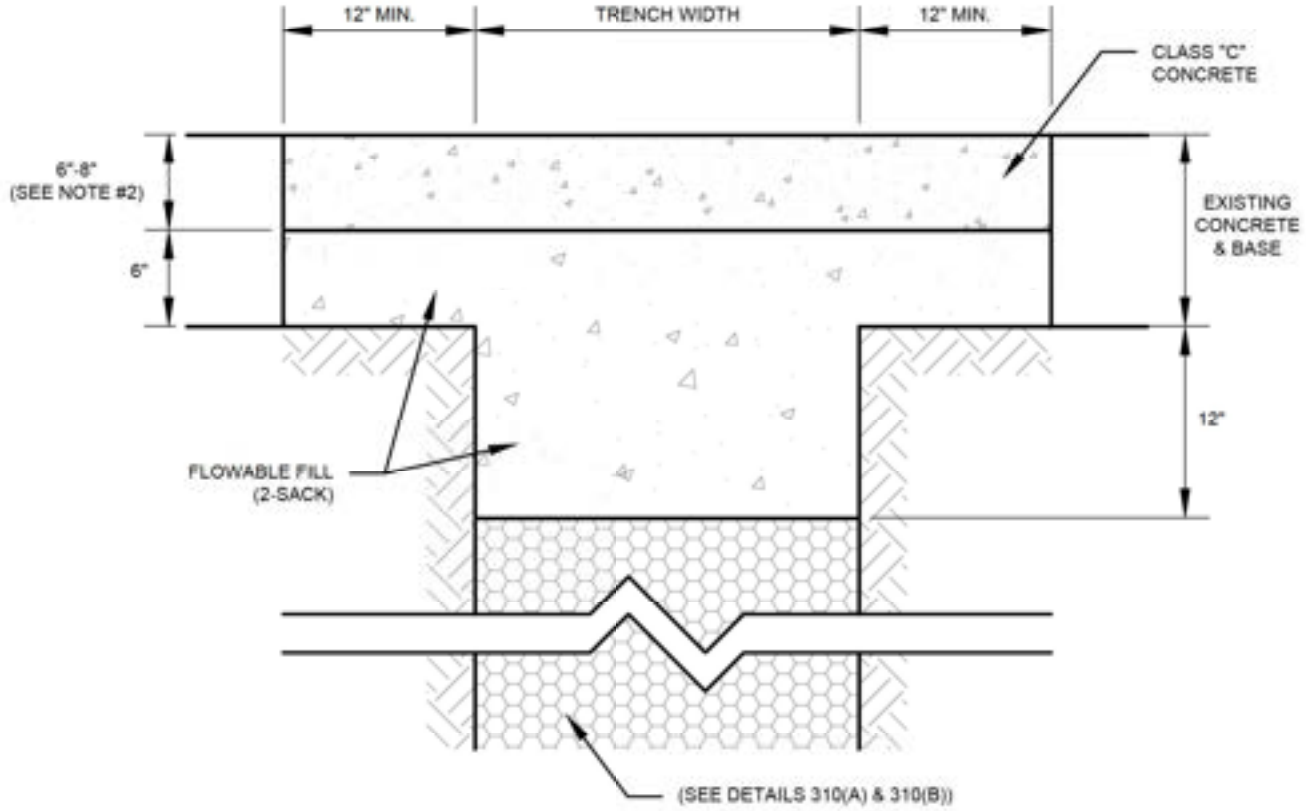
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	DRY UTILITY POTHOLE REPAIR DETAIL		801



NOTES:

1. ASPHALT PAVEMENT THICKNESS TO BE A MINIMUM OF 2" OR MATCH THE EXISTING ASPHALT THICKNESS IF IT IS GREATER THAN 2" THICK.
2. PLACE ASPHALT PAVEMENT IN MAXIMUM 2" LIFTS, 95% MODIFIED COMPACTION.
3. PLACE ALL FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT) AS A SINGLE CONTINUOUS POUR.
4. EXTEND BOTH ASPHALT AND FLOWABLE FILL 12" BEYOND THE EDGE OF THE TRENCH ON BOTH SIDES.
5. SEE DETAILS 310(A) AND 310(B) REGARDING TRENCH BACKFILL REQUIREMENTS BENEATH THE FLOWABLE FILL.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

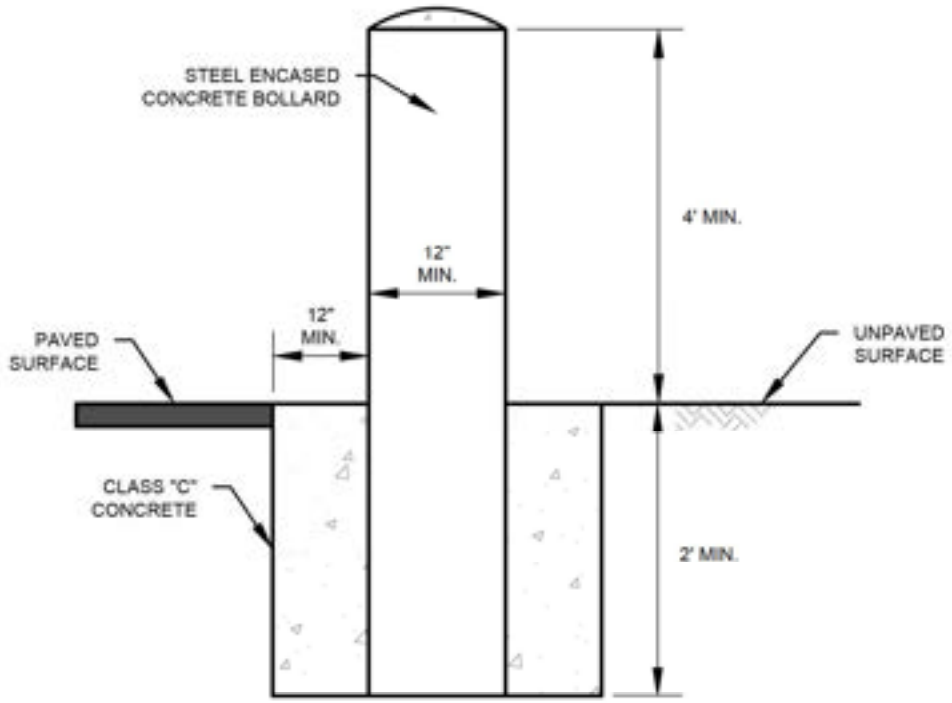
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
DRY UTILITY ASPHALT TRENCH PAVEMENT REPLACEMENT			802



NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C" CONCRETE, 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. CONCRETE PAVEMENT THICKNESS TO BE A MINIMUM OF 6" OR MATCH THE EXISTING CONCRETE THICKNESS IF IT IS GREATER THAN 6" THICK. CONCRETE PAVEMENT THICKNESS TO BE MINIMUM 8" FOR ARTERIAL PAVEMENT.
3. PLACE ALL FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT) AS A SINGLE CONTINUOUS POUR.
4. EXTEND BOTH CONCRETE AND FLOWABLE FILL 12" BEYOND THE EDGE OF THE TRENCH ON BOTH SIDES.
5. SEE DETAILS 310(A) AND 310(B) REGARDING TRENCH BACKFILL REQUIREMENTS BENEATH THE FLOWABLE FILL.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

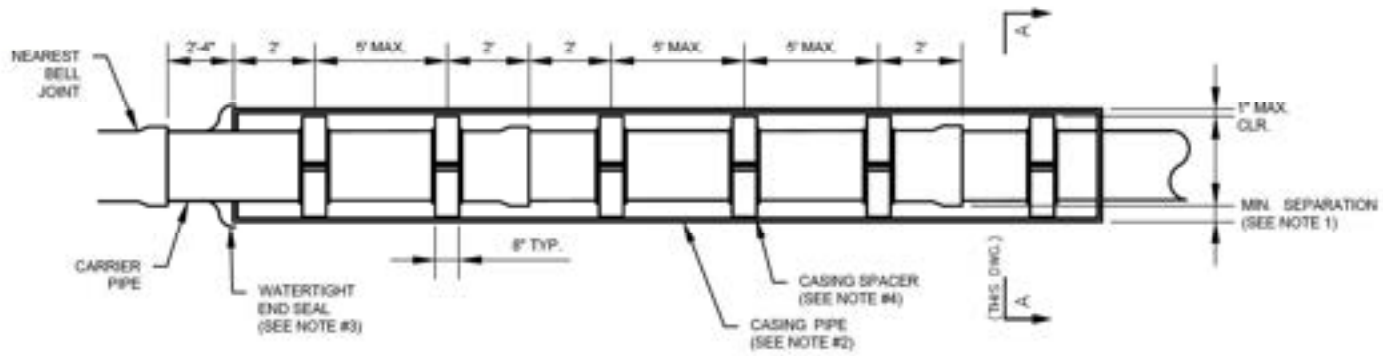
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
DRY UTILITY CONCRETE TRENCH PAVEMENT REPLACEMENT			803



NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C" CONCRETE, 3600 PSI, USE FIBER RENFORCED CONRETE PAVEMENT THROUGHOUT.
2. PAINT BOLLARD YELLOW.
3. BOLLARDS PLACED IN SERIES TO BE SPACED FIVE (5) FEET APART MEASURED FROM BOLLARD CENTER TO CENTER.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

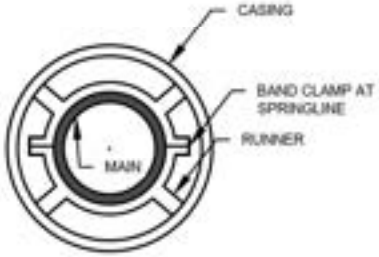
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	TYPICAL BOLLARD		804



CROSS SECTION VIEW

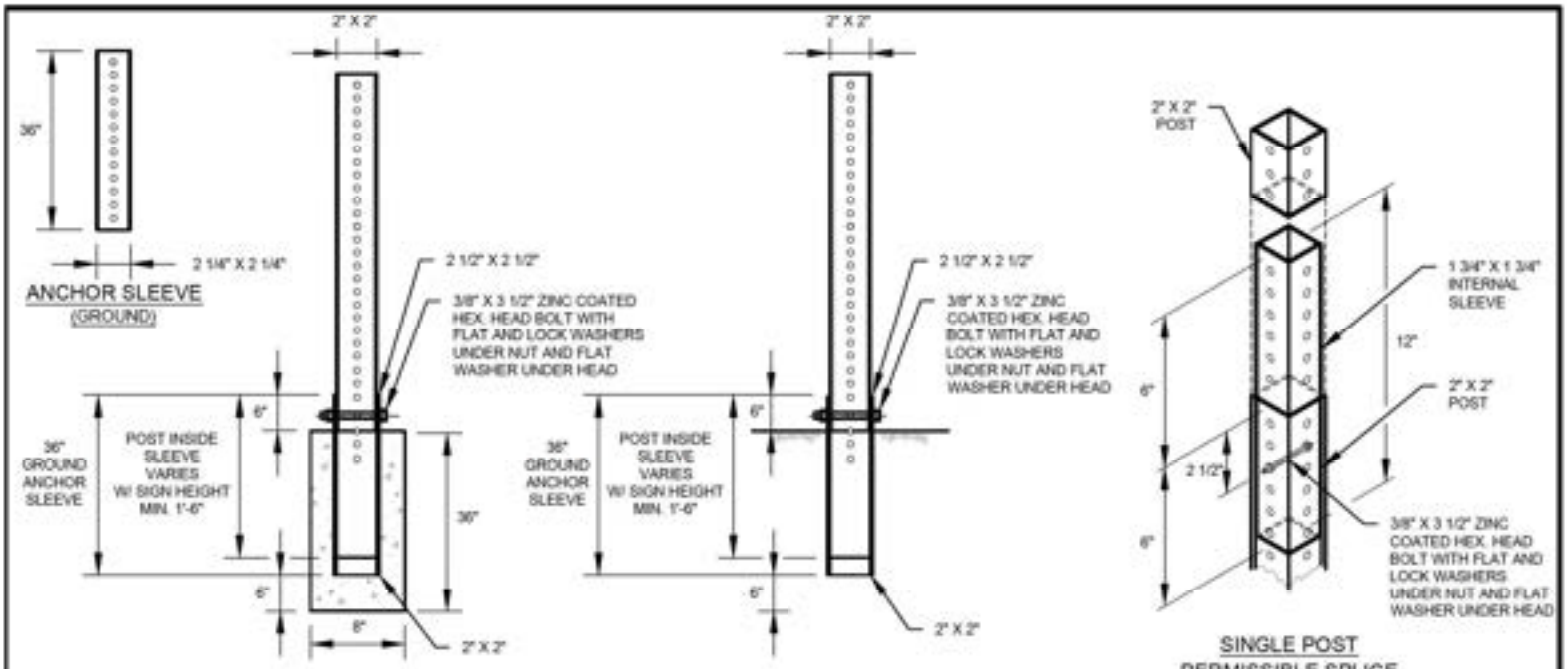
NOTES:

1. CASING PIPE TO BE MINIMUM TWO (2) NOMINAL SIZES LARGER IN DIAMETER THAN CARRIER PIPE.
2. CASING PIPE TO BE NO LESS THAN 12" DIAMETER PIPE. 12"-16" DIAMETER CASING PIPE MAY BE STEEL OR PVC PIPE. CASING PIPE LARGER THAN 16" DIAMETER MUST BE STEEL PIPE. STEEL CASING PIPE TO BE MINIMUM 1/4" WALL THICKNESS. PVC CASING PIPE TO BE SDR-26 D2241 OR C-900.
3. CASING PIPE TO BE STEEL OR PVC.
4. WATER TIGHT END SEAL TO BE GROUT OR APPROVED MANUFACTURED SEAL.
5. CASING SPACERS TO BE HDPE OR APPROVED EQUAL, MINIMUM FOUR (4) EQUALLY SPACED RUNNERS, WITH BAND CLAMP JOINT LOCATED AT SPRINGLINE. SPACERS FOR CASING PIPE LARGER THAN 24" DIAMETER REQUIRE MINIMUM SIX (6) EQUALLY SPACED RUNNERS.
6. CASING INSTALLED IN OPEN TRENCH IS TO BE BACKFILLED PER CURRENT CITY STANDARDS FOR AN UN-ENCASED MAIN.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.



SECTION 'A-A'

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
TYPICAL PIPE CASING DETAIL			DETAIL: 805



NOTES:

1. ALL DIMENSIONS ARE IN INCHES, EXCEPT AS NOTED.
2. ALL SQUARE PERFORATED POSTS SHALL BE 2" X 2" TYPICALLY 12' LONG.
3. FOR ESTIMATING PURPOSES, CONCRETE QUANTITY PER POST IS 1.0 CU/FT.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

NOTES:

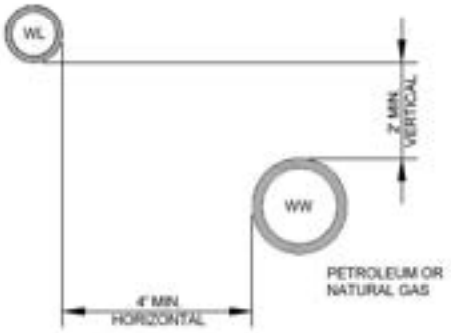
1. ALL DIMENSIONS ARE IN INCHES, EXCEPT AS NOTED.
2. ALL SQUARE PERFORATED POSTS SHALL BE 2" X 2" TYPICALLY 12' LONG.
3. FOR ESTIMATING PURPOSES, CONCRETE QUANTITY PER POST IS 1.0 CU/FT.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

NOTES:

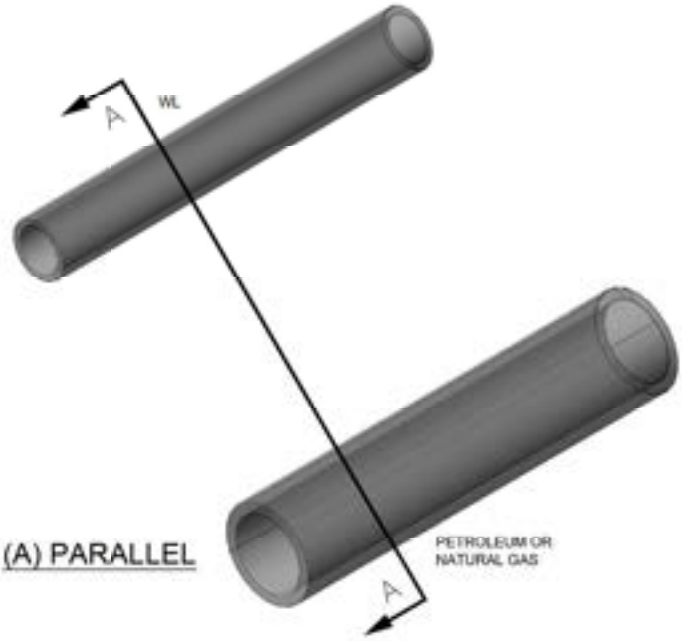
1. IF ANY POST SECTION IS SHORTER THAN THE PANEL HEIGHT, THE FIELD SPLICE SHALL BE BEHIND THE PANEL.
2. FIELD SPLICES ARE NOT PERMITTED ON TELESCOPING POSTS.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	SQUARE PERFORATED SIGN POST, FOUNDATION, & SPLICE DETAILS		806
APPROVED: MCC			



SECTION 'A-A'



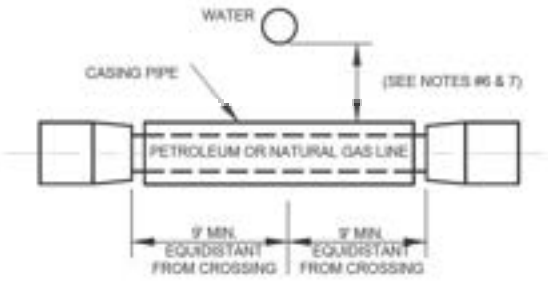
(A) PARALLEL

NOTES:

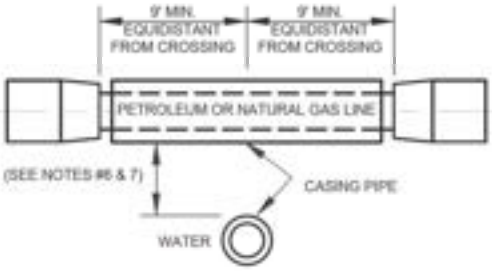
1. SEE CITY DETAIL 306 FOR NEW WATER MAIN LINE REQUIREMENTS WHEN IN PARALLEL WITH PETROLEUM OR NATURAL GAS LINES.
2. MUST COMPLETE AND FOLLOW CONSENT AND CROSSING AGREEMENT FOR CROSSING CITY OF MIDLAND UTILITY LINES, AS PER ROW MANAGER.
3. PETROLEUM OR NATURAL GAS LINES MUST BE LOCATED AT LEAST 9.0' FROM ALL WATER MAINS IN ALL DIRECTIONS. IF THIS IS NOT POSSIBLE THEN AN ENGINEERING REPORT IS REQUIRED PER TAC TO JUSTIFY WHY, AND THE REQUIREMENTS OF THIS DETAIL WILL APPLY. THIS DETAIL IS INTENDED TO COMPLY WITH TAC 217.53(d) AND TAC 290.44(e). IF TAC AND THIS DETAIL DIFFER THEN THE MORE RESTRICTIVE STANDARD GOVERNS.
4. PETROLEUM OR NATURAL GAS LINES RUNNING IN PARALLEL TO A WATER MAIN MUST BE LOCATED BELOW THE WATER MAIN ELEVATION AND MAINTAIN THE MINIMUM SEPARATION DISTANCES SHOWN ON THIS DETAIL.
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		PETROLEUM AND NATURAL GAS LINES PARALLEL WATER MAIN		807

NEW PETROLEUM OR NATURAL GAS UNDER WATER



NEW PETROLEUM OR NATURAL GAS OVER WATER



NOTES:

1. SEE CITY DETAIL 308 FOR NEW WATER MAIN REQUIREMENTS AT PETROLEUM OR NATURAL GAS CROSSINGS.
2. MUST COMPLETE AND FOLLOW CONSENT AND CROSSING AGREEMENT FOR CROSSING CITY OF MIDLAND UTILITY LINES, AS PER ROW MANAGER.
3. PETROLEUM OR NATURAL GAS LINES MUST BE LOCATED AT LEAST 9.0' FROM ALL WATER MAINS IN ALL DIRECTIONS. IF THIS IS NOT POSSIBLE THEN AN ENGINEERING REPORT IS REQUIRED PER TAC TO JUSTIFY WHY, AND THE REQUIREMENTS OF THIS DETAIL WILL APPLY.
4. THIS DETAIL IS INTENDED TO COMPLY WITH TAC 217.53(d) AND TAC 290.44(e). IF TAC AND THIS DETAIL DIFFER THEN THE MORE RESTRICTIVE STANDARD GOVERNS.
5. CENTER NEW PETROLEUM OR NATURAL GAS PIPE SEGMENT ON CROSSING SO THAT ALL PIPE SEGMENT JOINTS ARE EQUIDISTANT AND AT LEAST 9.0' HORIZONTALLY FROM THE CENTERLINE OF THE CROSSING. PETROLEUM OR NATURAL GAS LINE TO CROSS WATER MAIN AT 90° ANGLE.
6. NEW PETROLEUM OR NATURAL GAS LINE CROSSING OVER OR BENEATH WATER MAIN TO BE ENCASED IN MINIMUM 18'.0' LONG PIPE ENCASEMENT CENTERED ON THE CROSSING. SEE CITY DETAIL 805 FOR PIPE CASING. VERTICAL SEPARATION FROM OUTER EDGE OF WATER MAIN TO BE NO LESS THAN 2.0'.
7. VERTICAL SEPARATION DIMENSIONS TO BE MEASURED FROM OUTER EDGE OF ALL PIPE ENCASEMENTS.
8. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
9. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		PETROLEUM AND NATURAL GAS LINES CROSSING WATER MAIN		808

THE CITY OF MIDLAND, TEXAS

WALL STREET SEWER DIVERSION LIFT STATION

Midland, Texas

MIDLAND
Feel the Energy!

OCTOBER 2023

LOCATION MAP
N.T.S.

COUNCIL DISTRICT NO: 2

LORI BLONG
MAYOR

TOMMY GONZALEZ
CITY MANAGER

DAN CORRALES
AT-LARGE

ROBIN POOLE
AT-LARGE

SCOTT DUFFORD
DISTRICT ONE

JOHN NORMAN
DISTRICT TWO

JACK LADD
DISTRICT THREE

AMY STRECHER BURKES
DISTRICT FOUR

DESIGNER: Jillian Nava

STATE OF TEXAS
JILLIAN L. NAVA
136235
LICENSED
PROFESSIONAL ENGINEER
10/9/2023

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

FREESE AND NICHOLS
1500 Broadway Street
Suite 1150
Lubbock, Texas 79401
Phone - (806) 686-2700
Web - www.freese.com

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Last Saved: 10/9/2023 10:39 AM Saved By: 03671

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NO	DESCRIPTION
-	COVER
GENERAL	
G-1	SHEET INDEX AND VICINITY MAP
G-2	GENERAL NOTES I
G-3	UPRR AND TXDOT GENERAL NOTES
G-4	LEGEND AND ABBREVIATIONS
CIVIL	
C-1	PROJECT LAYOUT & SURVEY CONTROL
C-2	LIFT STATION SITE PLAN
C-3	PAVING PLAN AND GRADING
C-4	STA 1+00 TO STA 4+00
C-5	STA 4+00 TO STA 8+00
C-6	STA 8+00 TO END
C-7	STA 0+00 TO STA 4+00
C-8	STA 4+00 TO STA 8+50
C-9	STA 8+50 TO STA 13+00
C-10	STA 13+00 TO STA 17+50
C-11	STA 17+50 TO STA 22+00
C-12	STA 22+00 TO STA 26+50
C-13	STA 26+50 TO STA END
DETAILS	
DT-1	PROPOSED LIFT STATION AND VALVE VAULT
DT-2	TRENCH AND YARD PIPING DETAILS
DT-3	FENCE AND GATE DETAILS
DT-4	DOGHOUSE MANHOLE DETAIL
DT-5	MISCELLANEOUS DETAILS
DT-6	MIDLAND STANDARD DETAILS I
DT-7	MIDLAND STANDARD DETAILS II
DT-8	MIDLAND STANDARD DETAILS III
DT-9	MIDLAND STANDARD DETAILS IV
DT-10	MIDLAND STANDARD DETAILS V
DT-11	MIDLAND STANDARD DETAILS VI
DT-12	MIDLAND STANDARD DETAILS VII
DT-13	MIDLAND STANDARD DETAILS VIII
DT-14	MIDLAND STANDARD DETAILS IX
DT-15	MIDLAND STANDARD DETAILS X
DT-16	MIDLAND STANDARD DETAILS XI
DT-17	MIDLAND STANDARD DETAILS XII
DT-18	MIDLAND STANDARD DETAILS XIII
DT-19	MIDLAND STANDARD DETAILS XIV
DT-20	MIDLAND STANDARD DETAILS XV
ELECTRICAL	
E1	ELECTRICAL LEGENDS SCHEDULES & NOTES
E2	ELECTRICAL SITE PLAN
E3	ELECTRICAL WET WELL PLAN AND ELEVATION
E4	ELECTRICAL ONE-LINE DIAGRAM
E5	ELECTRICAL CONTROL DIAGRAM SHEET 1 OF 3
E6	ELECTRICAL CONTROL DIAGRAM SHEET 2 OF 3
E7	ELECTRICAL CONTROL DIAGRAM SHEET 3 OF 3
E8	ELECTRICAL DETAIL SHEET 1 OF 3
E9	ELECTRICAL DETAIL SHEET 2 OF 3
E10	ELECTRICAL DETAIL SHEET 3 OF 3
TRAFFIC CONTROL PLAN	
TCP-1	CONVENTIONAL ROAD SHOULDER WORK (TxDot)
EROSION CONTROL DETAIL	
EC-1	SEDIMENTATION AND EROSION CONTROL DETAILS I
EC-2	SEDIMENTATION AND EROSION CONTROL DETAILS II

NORTH

0 5000' 10000'
SCALE IN FEET

Private information not
Texas Public Information Act P.2.5.

LEILANI L. MAES
136235
LICENSED
PROFESSIONAL
ENGINEER
STATE OF TEXAS

FREESE NICHOLS

1500 Broadway Street
Suite 1150
Lubbock, Texas 79401
Phone - (806) 686-2700
Web- www.freese.com

CITY OF MIDLAND, TEXAS

WALL STREET SEWER DIVERSION

GENERAL

SHEET INDEX AND VICINITY MAP

NO.	ISSUE	BY	DATE

FNI JOB NO. 84057.23466
DATE 4/14/2023
DESIGNED LEM
DRAWN AL
REVIEWED
CHECKED RMO
FILE NAME GN-ALL-VICMAP.dwg

VERIFY SCALE
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SHEET G-1
SEQ. 1

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GENERAL NOTES

1. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF EXISTING UNDERGROUND AND OTHER UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF ALL UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL CONTACT THE FOLLOWING AT LEAST 72 HOURS PRIOR TO EXCAVATION:

ATMOS (CESAR PADILLA)	(432) 488-8691
ONE CALL	(800) DIG-TESS
TEXAS 811	811
CITY OF MIDLAND ENGINEERING	(432) 685-7288
CITY OF MIDLAND UTILITIES DEPARTMENT	(432) 685-7260
CITY OF MIDLAND INSPECTION	(432)685-7288

GENERAL NOTES:

1. LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS AND OWNERSHIP OF ALL EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY COMPANIES OR OWNERS A MINIMUM OF FORTY-EIGHT (48) HOURS BEFORE PERFORMING ANY WORK IN THIS AREA.
2. CONTROL POINTS HAVE BEEN ESTABLISHED BY THE ENGINEER. CONTRACTOR SHALL PROTECT THESE CONTROL POINTS. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL STAKING AND CONTROL TO CONSTRUCT THE WORK, AT NO EXTRA COST TO THE OWNER.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN NEAT AND ACCURATE PLANS OF RECORD.
4. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ADEQUATE SITE DRAINAGE THROUGHOUT THE DURATION OF THIS PROJECT.
5. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS BEFORE CONSTRUCTION BEGINS.
6. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ELECTRIC POWER, TELEPHONE POLES AND SERVICES DURING CONSTRUCTION. ALL COSTS INCURRED FOR SUPPORTING OR MOVING ELECTRIC POWER AND TELEPHONE POLES SHALL BE INCLUDED IN THE PRICE BID FOR THE SEWER LINE.
7. THE CONTRACTOR SHALL PROTECT AND SUPPORT EXISTING UTILITIES IN ACCORDANCE WITH STANDARDS, PROCEDURES, POLICIES AND REQUIREMENTS OF THE OWNERS OF THE UTILITIES. PROTECTION AND SUPPORT OF EXISTING UTILITIES SHALL INCLUDE PROTECTION AND SUPPORT OF UTILITIES LINES, VAULTS, BOXES, VALVES AND POLES.
8. PRIOR TO EXCAVATION FOR NEW PIPING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING PIPING AND UTILITIES IN THE CONSTRUCTION AREA(S). CONTRACTOR SHALL TEMPORARILY RELOCATE, SUPPORT EXISTING UTILITIES AS REQUIRED FOR CONSTRUCTION OF NEW ITEMS AND REINSTALL THEM AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
9. THE CONTRACTOR SHALL NOT PLACE FILL OR WASTE MATERIAL ON ANY PRIVATE PROPERTY WITHOUT PRIOR WRITTEN PERMISSION FROM THE PROPERTY OWNER. NO EXCESS EXCAVATED MATERIAL SHALL BE DEPOSITED IN LOW AREAS OR ALONG NATURAL DRAINAGE WAYS THAT WILL RESTRICT THE NATURAL FLOW OF WATER. IF THE CONTRACTOR PLACES EXCAVATED MATERIAL IN LOW AREAS THAT WILL CAUSE FLOOD DAMAGE, HE WILL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM SUCH FILL AND HE SHALL REMOVE THE FILL AT HIS EXPENSE. WRITTEN APPROVAL SHALL BE PROVIDED TO THE OWNER.
10. THE CONTRACTOR SHALL REMOVE FROM THE SITE ALL EXCESS CONSTRUCTION MATERIALS AND DEBRIS AT THE END OF THE PROJECT. CONTRACTOR SHALL PLACE IMPERMEABLE TARP OVER STOCKPILES STORED DURING NON-WORKING HOURS.
11. ALL STREETS WITHIN THE SCOPE OF THE CONTRACT SHALL BE KEPT ACCESSIBLE TO FIRE TRUCKS, AMBULANCES AND OTHER EMERGENCY VEHICLES.
12. THE CONTRACTOR SHALL MAINTAIN SUITABLE ACCESS TO PRIVATE PROPERTY OWNERS, THE ENGINEER AND THE CITY AT ALL TIMES DURING CONSTRUCTION.
13. THE CONTRACTOR SHALL USE EXISTING RIGHT-OF-WAYS FOR ACCESS TO THE JOB SITE.
14. THE CONTRACTOR WILL BE RESPONSIBLE FOR PREPARATION, IMPLEMENTATION AND MAINTENANCE OF THE SWPPP. THE INSPECTION AND MAINTENANCE OF THE EROSION PREVENTION MEASURES SHALL BE THE CONTRACTOR'S RESPONSIBILITY THROUGHOUT ALL PHASES OF CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE EPA'S NPDES REGULATIONS 40-CFR-122, 123, 124 CONCERNING EROSION AND SEDIMENT CONTROL. CONTRACTOR TO SUBMIT SWPPP/EROSION CONTROL PLAN[S] TO ENGINEER AND CITY FOR REVIEW AND APPROVAL.
15. THE CONTRACTOR WILL BE RESPONSIBLE FOR SUBMITTING A NOTICE OF INTENT "NOI" TO TCEQ 72 HOURS PRIOR TO BEGINNING CONSTRUCTION AND NOTICE OF TERMINATION "NOT" TO TCEQ UPON COMPLETION OF THE PROJECT.
16. CONTRACTOR SHALL PROVIDE PROTECTION FOR NEAREST DOWNSTREAM INLET OF ANY CONSTRUCTION ACTIVITY PER BEST MANAGEMENT PRACTICE GUIDANCE IN THE SWPPP.
17. FOR ROAD DRAINAGE BAR DITCHES OR SIMILAR, INSTALL CHECK DAMS DOWNSTREAM OF CONSTRUCTION ACTIVITY PER BEST MANAGEMENT PRACTICE GUIDANCE IN THE SWPPP.
18. THE CONTRACTOR SHALL EXCAVATE THE TOP 12 INCHES OF TOPSOIL AND STOCKPILE IT SEPARATELY FROM THE GENERAL EXCAVATION. A SUITABLE VOLUME OF TOPSOIL SHALL BE EXCAVATED TO PLACE THE MINIMUM AMOUNT SHOWN IN THE DRAWINGS OVER ALL EXCAVATED OR BACKFILLED AREAS. TOPSOILING IS NOT REQUIRED WHERE PAVEMENT, CONCRETE CAP, RIPRAP, OR OTHER FACILITIES ARE REQUIRED AT THE SURFACE.
19. WHERE GRASS IS REMOVED FOR INSTALLATION OF PIPELINE, OR OTHER IMPROVEMENTS REQUIRED BY THIS PROJECT, CONTRACTOR SHALL REPLACE GRASS SUCH THAT THE GRASS THAT WAS PRESENT IN PRE-CONSTRUCTION CONDITIONS IS REPLACED AND/OR RESTORED, WITH THE SAME TYPE GRASS, IN AS GOOD OR BETTER CONDITION THAN PRIOR TO CONSTRUCTION. COST FOR ALL RE-GRASSING SHALL BE INCLUDED IN THE HYDROMULCH SEEDING BID ITEM. CONTRACTOR SHALL WATER THE PLANTED AREA FOR A PERIOD OF 1 YEAR FOLLOWING FINAL ACCEPTANCE.
20. UNLESS SPECIFICALLY STATED ON A DRAWING, THE CONTRACTOR SHALL NOT REMOVE, CUT OR DAMAGE TREES OR LIMBS 15 FEET OR MORE OUTSIDE CENTERLINE OF PIPELINE WITHOUT WRITTEN APPROVAL OF OWNER. ANY TREE REMOVED DUE TO CONSTRUCTION SHALL BE INCIDENTAL TO THE PIPELINE PROJECT. CONTRACTOR SHALL FLAG ALL TREES TO BE REMOVED OR TRIMMED AND SHALL REVIEW THESE WITH THE LANDOWNER AND CITY OF MIDLAND PRIOR TO CONSTRUCTION.
21. CONTRACTOR SHALL REPAIR OR REPLACE EXISTING MAILBOXES, CULVERTS, AND ALL OTHER EXISTING FEATURES AND STRUCTURES TO THEIR EXISTING CONDITION OR BETTER THAT ARE DAMAGED OR REMOVED IN CONNECTION WITH THIS PROJECT AT NO ADDITIONAL COST TO THE OWNER.
22. THE CONTRACTOR SHALL AVOID DAMAGING ANY EXISTING WATER SPRINKLER SYSTEM THAT MAY BE IN THE CONSTRUCTION AREA AND WILL BE RESPONSIBLE FOR REPAIRS TO ANY HEADS OR LINES DAMAGED. REPLACEMENT, AS NECESSARY, SHALL BE AT LIKE OR BETTER MATERIAL AND INSTALLED BY A LICENSED IRRIGATOR, AT THE CONTRACTOR'S EXPENSE. DAMAGED SPRINKLERS SHALL BE REPLACED THE SAME DAY THEY ARE DAMAGED.
23. EXISTING IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO, FENCES, DRIVEWAYS, SIDEWALKS, PAVEMENT, CURBS, UTILITY PIPELINES AND DRAINAGE STRUCTURES WHICH ARE DAMAGED, REMOVED OR ALTERED TO PERMIT INSTALLATION OF THE WORK SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR IN THE SAME LOCATION AND IN CONDITION AS GOOD AS OR BETTER THAN THEY WERE FOUND, AT NO ADDITIONAL COST TO THE OWNER.
24. MAINTAIN 11' CLEARANCE BETWEEN WATER AND SANITARY SEWER LINES.
25. ALL TRENCH EXCAVATION SHALL BE IN ACCORDANCE WITH THE U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATOR'S STANDARDS. CONTRACTOR IS RESPONSIBLE FOR ALL TRENCH SAFETY. THE CONTRACTOR SHALL CONSTRUCT THE PROPOSED WORK UTILIZING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL ENGINEER FOR THIS PROJECT.
26. THE CONTRACTOR SHALL REMOVE ALL FENCES LOCATED WITHIN EASEMENTS OR INTERFERING WITH CONSTRUCTION OPERATION AND PROVIDE TEMPORARY FENCING DURING CONSTRUCTION. REMOVED FENCES SHALL BE REPLACED WITH A NEW FENCE WITH SAME TYPE MATERIAL AS ORIGINAL FENCE OR UNDAMAGED ORIGINAL FENCING. ALL AFFECTED PROPERTY OWNERS SHALL BE NOTIFIED 48 HOURS PRIOR TO CONSTRUCTION. REMOVAL AND REPLACEMENT OF EXISTING AND TEMPORARY FENCES SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST.
27. ALL DRIVEWAYS, WHICH ARE OPEN CUT, SHALL HAVE ACCESS PROVIDED AT ALL TIMES WHEN CONSTRUCTION IS NOT ON-GOING.
28. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS, DRIVEWAYS, PARKING LOTS, AND SIDEWALKS ADJACENT TO PROJECT FREE OF MUD AND DEBRIS FROM THE CONSTRUCTION.
29. THE CONTRACTOR SHALL DISTRIBUTE LETTERS TO ALL AFFECTED PROPERTY OWNERS ONE WEEK PRIOR TO BEGINNING WORK ON EACH PROPERTY. THIS LETTER SHALL INCLUDE NAMES AND TELEPHONE NUMBERS OF CONTRACTOR CONTACTS, A DESCRIPTION OF WORK TO BE DONE, AND THE TIME FRAME FOR DOING THE WORK. COPIES OF THE LETTER SHALL BE FORWARDED TO THE CITY OF MIDLAND. THE CONTRACTOR SHALL NOTIFY RESIDENTS 48 HOURS IN ADVANCE OF PERFORMING ANY WORK ON PRIVATE PROPERTY. DISTRIBUTION OF LETTERS SHALL BE CONSIDERED AN INCIDENTAL COST TO PROJECT.
30. THE CONTRACTOR SHALL VIDEO ENTIRE PROJECT LIMITS PRIOR TO WORK. VIDEOS SHALL INCLUDE DATE NOTATION AND AUDIO IDENTIFICATION OF PROPERTY ADDRESS AND MAIN/LATERAL NAME. THIS PRE-CONSTRUCTION VIDEO SHALL BE CONSIDERED SUBSIDIARY WORK AND SUBMITTED TO THE CITY PRIOR TO CONSTRUCTION. VIDEO SHALL BE PROVIDED IN USB FORMAT.
31. CONTRACTOR SHALL INSTALL TEMPORARY BACKFILL AS REQUIRED FOR OPEN TRENCH IN ESTABLISHED ROADWAYS. NO OPEN TRENCH WILL BE ALLOWED IN EXISTING PAVEMENT EXCEPT DURING DAYLIGHT HOURS DURING CONSTRUCTION OPERATIONS. ALL OPEN PITS MUST BE PROTECTED ON ALL SIDES WITH CONCRETE BARRIERS OR BACKFILLED FOR PUBLIC SAFETY. TEMPORARY BACKFILL SHALL BE INSTALLED TO THE FINISHED GRADE OF THE EXISTING PAVEMENT AND SHALL BE MAINTAINED BY THE CONTRACTOR TO ENSURE A SMOOTH DRIVING SURFACE FREE OF RUTTING AND POTHOLES. REPAIR DAMAGED PAVEMENT IN ACCORDANCE WITH SPECIFICATIONS.
32. THE MAXIMUM OPEN TRENCH LENGTH IS 100 FEET AT ANY ONE TIME.
33. PI'S AND VPI'S ARE SHOWN IN THE PLANS FOR ALIGNMENT PURPOSES. CONTRACTOR SHALL USE STANDARD FITTINGS AND DEFLECTED PIPE JOINTS, NO GREATER THAN 75% OF THE MANUFACTURER'S RECOMMENDATIONS, TO ACHIEVE THE ALIGNMENT SHOWN IN THE PLANS.
34. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SEWER CONNECTIONS TO ALL HOMES AND BUSINESSES IN WORKING ORDER AT ALL TIMES, EXCEPT FOR BRIEF PRE-NOTIFIED INTERRUPTIONS IN SEWER SERVICES. IN NO CASE SHALL SERVICES BE ALLOWED TO REMAIN UNREINSTATED OVERNIGHT.
35. CONTRACTOR SHALL MAKE CONNECTIONS TO EXISTING PIPE, STRUCTURES, EQUIPMENT, ETC. AS REQUIRED AND SHALL PROVIDE ALL FITTINGS, ADAPTERS AND APPURTENANCES REQUIRED TO MAKE THE CONNECTIONS. PROVIDE ALL SUPPORTS REQUIRED FOR A RIGID INSTALLATION AND TO HAVE A COMPLETE AND WORKING SYSTEM.
36. COAT BURIED FITTINGS, VALVES, BOLTS, NUTS, GASKETS, AND APPURTENANCES WITH AN EPOXY OR BITUMASTIC COATING. WRAP VALVES, DI PIPE, AND PLUGS IN POLYETHYLENE ENCASEMENT IN ACCORDANCE WITH AWWA C105.
37. PROTECT MJ HARDWARE FROM BEING ENCASED OR COVERED WITH CONCRETE ENCASEMENT DURING INSTALLATION OF CONCRETE THRUST BLOCKS.
38. ALL PENETRATIONS (EXISTING AND PROPOSED) OF THE WALLS SHALL BE SEALED PER TYPICAL/STANDARD DETAILS OR AS DIRECTED BY ENGINEER.
39. THE CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS IN THE VICINITY OF ANY OVERHEAD ELECTRIC LINES. CONTRACTOR SHALL ABIDE BY NATIONAL ELECTRIC CODE AND ANY REQUIREMENT BY OWNER OF ELECTRIC LINES.
40. PROVIDE ALL SHEETING/SHORING REQUIRED TO PROTECT EXIST. STRUCTURES, PIPES AND FACILITIES.
41. PRIOR TO MOBILIZING TO THE SITE, THE CONTRACTOR SHALL COORDINATE THE LIMITS OF THE LAYDOWN AND STAGING AREAS WITH THE OWNER.
42. CONTRACTOR SHALL COORDINATE WITH THE OWNER ALL SITE ACCESS AND SECURITY REQUIREMENTS.
43. THIS ORGANIZED SEWAGE COLLECTION SYSTEM MUST BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH TEXAS COMMISSION ON ENVIRONMENTAL EQUALITY'S (TCEQ) 217.51-217.70 AND 30 TAC CHAPTER 217, SUBCHAPTER C, AND THE CITY OF MIDLAND STANDARD SPECIFICATION. IF NOTES ARE IN CONFLICT WITH THE DRAWINGS AND SPECIFICATIONS, THE MOST STRINGENT REQUIREMENT WILL APPLY AS DETERMINED BY THE ENGINEER.

ENVIRONMENTAL NOTES:

1. PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT, THE CONTRACTOR MUST COMPLY WITH ALL TERMS AND CONDITIONS OF THE NATIONWIDE PERMIT 58, UTILITY LINE ACTIVITIES FOR WATER AND OTHER SUBSTANCES (USACE PROJECT SWF-2019-00398). THIS INCLUDES, BUT IS NOT LIMITED TO, IMPLEMENTATION OF THE BEST MANAGEMENT PRACTICES (BMPS) FOR SOIL EROSION CONTROL, SEDIMENT CONTROL, AND POST-CONSTRUCTION TOTAL SUSPENDED SOLIDS (TSS) CONTROL IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY SECTION 401 WATER QUALITY CERTIFICATION FOR NATIONWIDE PERMITS.
2. IN ORDER TO COMPLY WITH REQUIREMENTS OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY REGARDING IMPLEMENTATION OF THE FLOOD INSURANCE ACT, FLOOD DISASTER PROTECTION ACT, NATIONAL FLOOD INSURANCE REFORM ACT, FEDERAL EXECUTIVE ORDERS 11988 AND 11990, AND TO COMPLY WITH RELATED STATE STATUTES, PROPONENTS OF CONSTRUCTION PROJECTS IN SPECIAL FLOOD HAZARD AREAS MUST COORDINATE IN ADVANCE WITH THE LOCAL FLOODPLAIN ADMINISTRATOR AND OBTAIN A FLOODPLAIN DEVELOPMENT PERMIT PRIOR TO DESIGN APPROVAL.
3. PROJECT ACTIVITIES MUST COMPLY WITH THE STANDARD EMERGENCY CONDITION FOR THE DISCOVERY OF THREATENED AND ENDANGERED SPECIES.
4. PROJECT ACTIVITIES MUST COMPLY WITH THE STANDARD EMERGENCY CONDITION FOR THE DISCOVERY OF CULTURAL RESOURCES.

SEQUENCE OF CONSTRUCTION NOTES:

1. INSTALL LIFT STATION AND OFF-SITE SEWER LINES UP TO THE CONNECTIONS TO THE EXISTING SYSTEM.
2. ONCE LIFT STATION IS READY TO START-UP, BEGIN BYPASS PUMPING OPERATIONS (IF NECESSARY) AND CONNECT PROPOSED GRAVITY SEWER LINE TO THE EXISTING SYSTEM. REFER TO 02 96 00 SPECIFICATION FOR TEMPORARY BY-PASS PUMPING REQUIREMENTS AND COORDINATION WITH THE CITY OF MIDLAND OPERATIONS.

Prepared with Precision, Inc.
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LICENSED PROFESSIONAL ENGINEER
10/20/23

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
GENERAL
GENERAL NOTES I

NO.	ISSUE	BY	DATE

FNI JOB NO. MIDCC20486
DATE 10/20/2023
DESIGNED JLM
DRAWN AL
REVIEWED
CHECKED RMO

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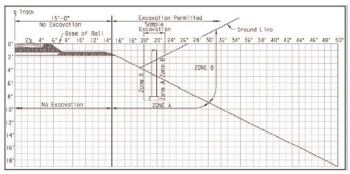
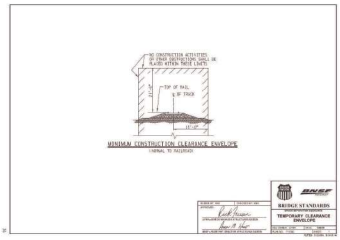
RAILROAD PIPELINE OR CULVERT ACCOMMODATION NOTES (ADD VERBATIM TO PLAN SET)

1. THE CONTRACTOR MUST SUBMIT A PROPOSED METHOD OF EROSION AND SEDIMENT CONTROL AND HAVE THE METHOD APPROVED BY THE RAILROAD
2. REGARDLESS OF UNDERLYING LAND OWNERSHIP, ALL SHORING SYSTEMS WITHIN RAILROAD RIGHT-OF-WAY OR THAT MAY IMPACT THE RAILROAD'S OPERATIONS AND/OR SUPPORTS THE RAILROAD'S EMBANKMENT SHALL BE DESIGNED AND CONSTRUCTED PER CURRENT RAILROAD GUIDELINES FOR TEMPORARY SHORING.
3. THE CONTRACTOR MUST SUBMIT AND PROVIDE SUFFICIENT SAFETY MEASURES TO PROTECT UNATTENDED EXCAVATIONS TO THE RAILROAD FOR APPROVAL.
4. ALL DEMOLITIONS/REMOVALS WITHIN THE RAILROAD'S RIGHT-OF-WAY AND/OR THAT MAY IMPACT THE RAILROAD'S TRACKS OR OPERATIONS SHALL BE IN COMPLIANCE WITH THE CURRENT RAILROAD'S DEMOLITION GUIDELINES.
5. RAILROAD REQUIREMENTS DO NOT ALLOW WORK WITHIN 50 FEET OF TRACK CENTERLINE WHEN A TRAIN PASSES THE WORK SITE AND ALL PERSONNEL MUST CLEAR THE AREA WITHIN 25 FEET OF THE TRACK CENTERLINE AND SECURE ALL EQUIPMENT.
6. THE CONTRACTOR SHALL ADHERE TO THE FOLLOWING CULVERT AND PIPELINE CONSTRUCTION REQUIREMENTS WHILE WITHIN THE RAILROAD'S RIGHT-OF-WAY.
   a. THE BORING OPERATION SHALL BE PROGRESSED ON A CONTINUOUS (24/7) BASIS WITHOUT STOPPAGE UNTIL THE LEADING EDGE OF THE PIPE HAS COMPLETELY PASSED UNDER ALL TRACK AND THROUGH ZONE A ON EACH SIDE AS SHOWN BELOW



   b. THE FRONT OF THE PIPE SHALL BE PROVIDED WITH MECHANICAL ARRANGEMENTS OR DEVICES THAT WILL POSITIVELY PREVENT THE AUGER FROM LEADING THE PIPE SO THAT NO UNSUPPORTED EXCAVATION IS AHEAD OF THE PIPE WHILE WITHIN ZONE A AND UNDER THE TRACKS.
   c. THE AUGER AND CUTTING HEAD ARRANGEMENT SHALL BE REMOVABLE FROM THE WITHIN THE PIPE IN THE EVENT AN OBSTRUCTION IS ENCOUNTERED AND NEEDS TO BE REMOVED.
   d. THE OVER-CUT BY THE CUTTING HEAD SHALL NOT EXCEED THE OUTSIDE DIAMETER OF THE PIPE (PLUS COATING) BY THAT APPROXIMATELY 1 INCH, GROUTING OR OTHER METHODS APPROVED BY THE RAILROAD, SHALL BE EMPLOYED TO FILL SUCH VOIDS.
   e. THE FACE OF THE CUTTING EDGE SHALL BE ARRANGED TO RESTRICT AN OTHERWISE FREE FLOW MATERIAL LEADING TO OVEREXCAVATING MATERIAL AHEAD/ABOVE THE PIPE.
   f. WORK PLANS AND DESCRIPTION OF THE EQUIPMENT TO BE USED SHALL BE SUBMITTED TO THE RAILROAD FOR APPROVAL AND NO WORK SHALL PROCEED UNTIL SUCH APPROVAL IS OBTAINED.
7. THE CONTRACTOR MUST SUBMIT A TRACK AND GROUND MONITORING PLAN FOR RAILROAD REVIEW. SEE SECTION 3 IN THE LINK BELOW. THE ELEVATION OF THE EXISTING TOP-OF-RAIL PROFILE SHALL BE VERIFIED BEFORE BEGINNING CONSTRUCTION AND AT PROJECT CLOSING. AS DEEMED NECESSARY BY THE RAILROAD, CONTINUOUS MONITORING MAY BE REQUIRED AS WELL AS MONITORING FOR 14 DAYS AFTER THE INSTALLATION. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH MONITORING AND RESTORING THE TRACK PROFILE AS NECESSARY. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE RAILROAD.
   HTTPS://WWW.UP.COM/CS/GROUPS/PUBLIC/@UPRR/@REALESTATE/DOCUMENTS/UP_PDF_NATIVEDOCS/PDF_UP_UTIL_ABAN.PDF.
8. WHEN ABANDONING UTILITIES (LEAVE IN-PLACE OR REMOVE), THE CONTRACTOR MUST SUBMIT THEIR PLAN TO THE RAILROAD FOR PRIOR REVIEW. SEE THE UPRR ABANDONMENT GUIDELINES.
   HTTPS://WWW.UP.COM/CS/GROUPS/PUBLIC/@UPRR/@REALESTATE/DOCUMENTS/UP_PDF_NATIVEDOCS/PDF_UP_UTIL_ABAN.PDF.
9. CALL BEFORE YOU DIG. PRIOR TO EXCAVATION, DISRUPTING, OR WORKING ON THE RAILROAD PROPERTY THE CONTRACTOR SHALL LOCATE AND PROTECT UPRR FACILITIES BY CALLING THE UPRR "CALL BEFORE YOU DIG" (CBYD) PHONE NUMBER: 1-800-336-9193.
10. CONSTRUCTION ACTIVITIES ARE NOT ALLOWED WITHIN THE "MINIMUM CONSTRUCTION CLEARANCE ENVELOPE" AS THEY WOULD OTHERWISE DISRUPT RAILROAD OPERATIONS.



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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
GENERAL
UPRR AND TXDOT GENERAL NOTES

NO.	ISSUE	BY	DATE	FAR JOB NO. A00122486
			DATE	4/14/2023
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LEGEND

EXISTING	PLAN VIEW	PROPOSED/FUTURE
	AIR RELEASE/VACUUM VALVE	
	BLOW OFF & SUMP MANHOLE	
CITY MON. #1170	CITY OR HWY. MON.	
	CONCRETE DRIVEWAY & SIDEWALK	
W	6" WATER LINE	
SS	8" SEWER LINE	
SS	12" SEWER LINE	
SS	15" SEWER LINE	
	EASEMENT	
	EDGE of ASPHALT	
F/O F/O	FIBER OPTICS	
	FIRE HYDRANT	
	FENCE (CHAIN LINK)	
	FENCE (WOOD)	
	FENCE (OTHER) (NAME)	
FM	FORCE MAIN	
G	GAS LINE	
	GATE VALVE	
	GRAVEL DRIVEWAY	
	LOT LINE/PROPERTY LINE	
	METERS	
	MAILBOX	
OHE OHE	OVERHEAD ELECTRIC	
	PLUG	
	POWER POLE	
	SANITARY SEWER M. H.	
RIM ELEV. INVERT ELEV.	SEWER MANHOLE PROFILE	RIM ELEV. INVERT ELEV.
SS	SEWER LINE	
	STREET ℄	
SD	STORM DRAIN	
SD	STORM DRAIN M.H.	
T	TELEPHONE PEDESTAL	
UT UT	UNDERGROUND TELEPHONE CABLE	
	VAULT	
W	WATER LINE UNKNOWN	
	SURVEY CONTROL POINT	

ABBREVIATIONS

ABBRE	ABBREVIATION
AH	AHEAD
@	AT
APPROX	APPROXIMATE
ARV	AIR RELEASE VALVE
AVE	AVENUE
BK	BACK
B/L	BASE LINE
BM	BENCHMARK
BLDG	BUILDING
BLK	BLOCK
BRD	BURIED
CI	CAST IRON
℄ OR CL	CENTERLINE
CONC	CONCRETE
CY	CUBIC YARD
DWY	DRIVE WAY
DI	DUCTILE IRON
E	EAST
ELEV OR EL	ELEVATION
EST	ELEVATED STORAGE TANK
FV	FIELD VERIFY
FH OR FIRE HYD	FIRE HYDRANT
FLG X MJ	FLANGED BY MECH. JOINTS
FLG	FLANGED
FLEX. BASE	FLEXIBLE BASE
FL	FLOW LINE
GALV	GALVANIZED
GMH	GAS MANHOLE
GM	GAS METER
G SIGN	GAS SIGN
GV'S	GATE VALVES
GV	GATE VALVE
GND	GROUND
HDPE	HIGH DENSITY POLYETHYLENE
HDWL	HEADWALL
HMAC	HOT MIX ASPHALTIC CONC.
HORZ	HORIZONTAL
HWY	HIGHWAY
INS	INCHES
IRF	IRON ROD FOUND
IRS	IRON ROD SET
JTS	JOINTS
JBT	JUNCTION BOX TELEPHONE
LT	LEFT
LP	LIGHT POLE
MH	MANHOLE
MAX	MAXIMUM
MJ	MECHANICAL JOINT
MIN	MINIMUM
N	NORTH
OH	OVERHEAD
PVMT	PAVEMENT
PED	PEDESTAL
PE LINE	PETROLEUM LINE
PE	PLAIN END
PVC	POLYVINYL CHLORIDE PIPE
PP	POWER POLE
PCCP	PRETENSIONED CONC CYLINDER PIPE
PI	POINT OF INTERSECTION
PROP	PROPOSED
RR	RAILROAD
REHAB	REHABILITATE
REM	REMOVE
RCP	REINFORCED CONC. PIPE
RT	RIGHT
ROW	RIGHT-OF-WAY
SIG BOX	TRAFFIC SIGNAL BOX
S	SOUTH
STD	STANDARD
STA	STATION
ST	STREET
SL	STREET LIGHT
SD	STORM DRAIN
SQ FT	SQUARE FOOT
SURF	SURFACE
TOP	TOP OF PIPE
TPED	TELEPHONE PEDESTAL
T SIGN	TRAFFIC SIGN
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VPI	VERTICAL POINT OF INTERSECTION
W	WEST
W/	WITH
WL	WATER LINE
WM	WATER METER
WV	WATER VALVE
WV'S	WATER VALVES

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
GENERAL
LEGEND AND ABBREVIATIONS

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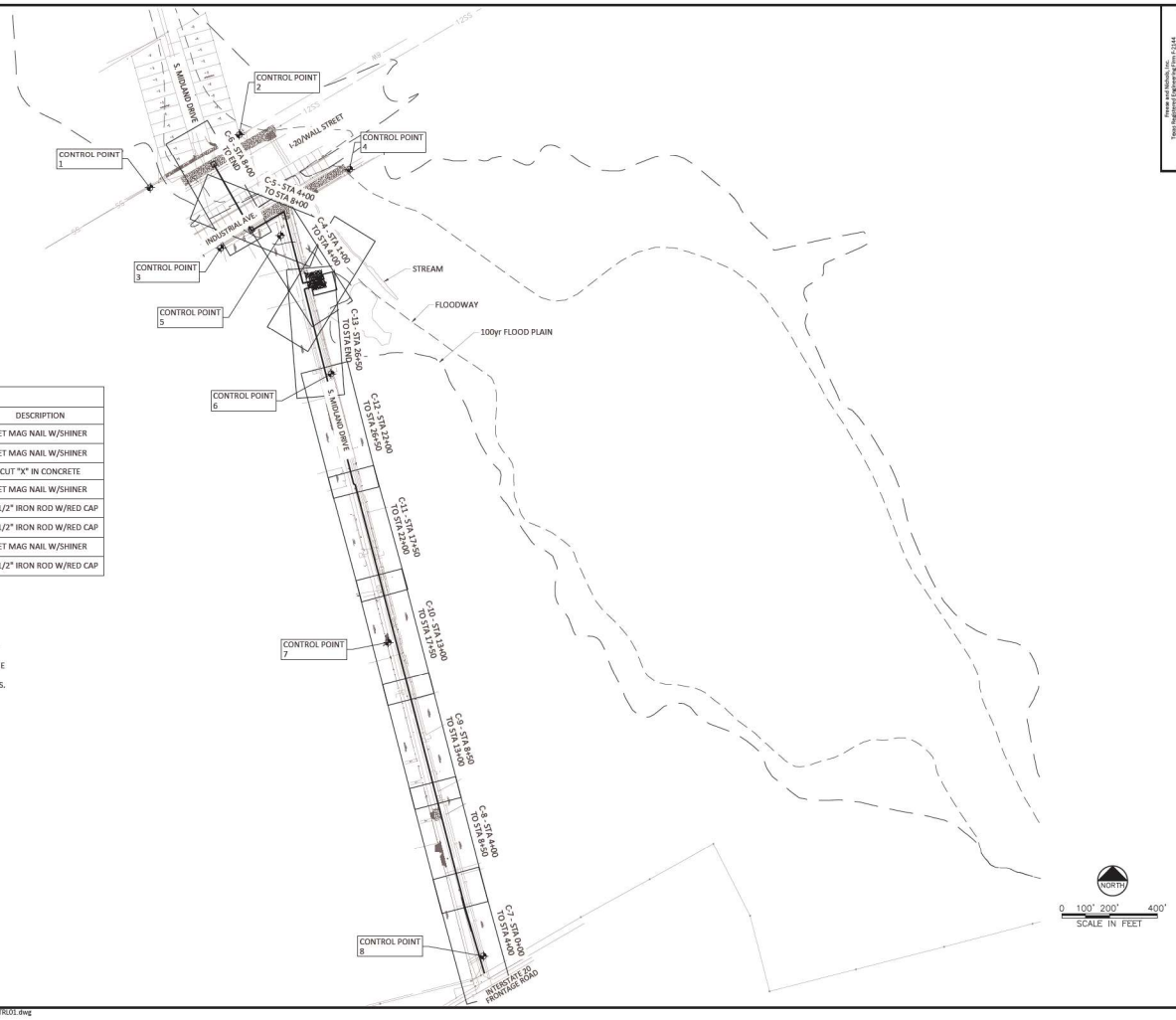

CONTROL POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	10685463.98	1740260.11	2819.14	SET MAG NAIL W/SHINER
2	10685689.54	1740634.44	2815.34	SET MAG NAIL W/SHINER
3	10685212.81	1740556.02	2818.64	CUT "X" IN CONCRETE
4	10685540.95	1741097.17	2813.84	SET MAG NAIL W/SHINER
5	10685264.73	1740807.33	2814.86	SET 1/2" IRON ROD W/RED CAP
6	10684687.41	1741019.51	2821.36	SET 1/2" IRON ROD W/RED CAP
7	10683562.13	1741258.83	2823.61	SET MAG NAIL W/SHINER
8	10682247.28	1741657.26	2823.11	SET 1/2" IRON ROD W/RED CAP

NOTES:

1. SURVEY WAS PERFORMED BY HUGO REED AND ASSOCIATES ON JULY 2022.
2. HEAVY LINES INDICATE PLAT LIMITS.COORDINATES ARE BASED ON THE TEXAS COORDINATE SYSTEM OF 1983, CENTRAL ZONE, PROJECTED TO SURFACE BY A COMBINE SCALE FACTOR OF 1.00011 ELEVATIONS ARE NAVD88 (GEOID18) COORDINATES ARE LOCAL SITE COORDINATES. CONTOUR INTERVAL = 1.0 DISTANCES ARE SURFACE DISTANCES. ADD 2800 TO ALL SPOT ELEVATIONS TO OBTAIN ACTUAL NAVD ELEVATIONS.

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

FREESE AND NICHOLS
1500 Broadway Street
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Lubbock, Texas 79401
Phone - (806) 686-2700
Web - www.freese.com

CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
CIVIL
PROJECT LAYOUT & SURVEY CONTROL

NO.	ISSUE	BY	DATE

PROJ. NO. MOD22466
DATE 4/14/2023
DESIGNED JLN
DRAWN AL
REVIEWED AL
CHECKED RMO
FILE NAME CV-ALL-PL-CTRL01.dwg

VERIFY SCALE 0 1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET C-1
SEQ. 5

ACAD Ref: 24.2s (LMS Tech)
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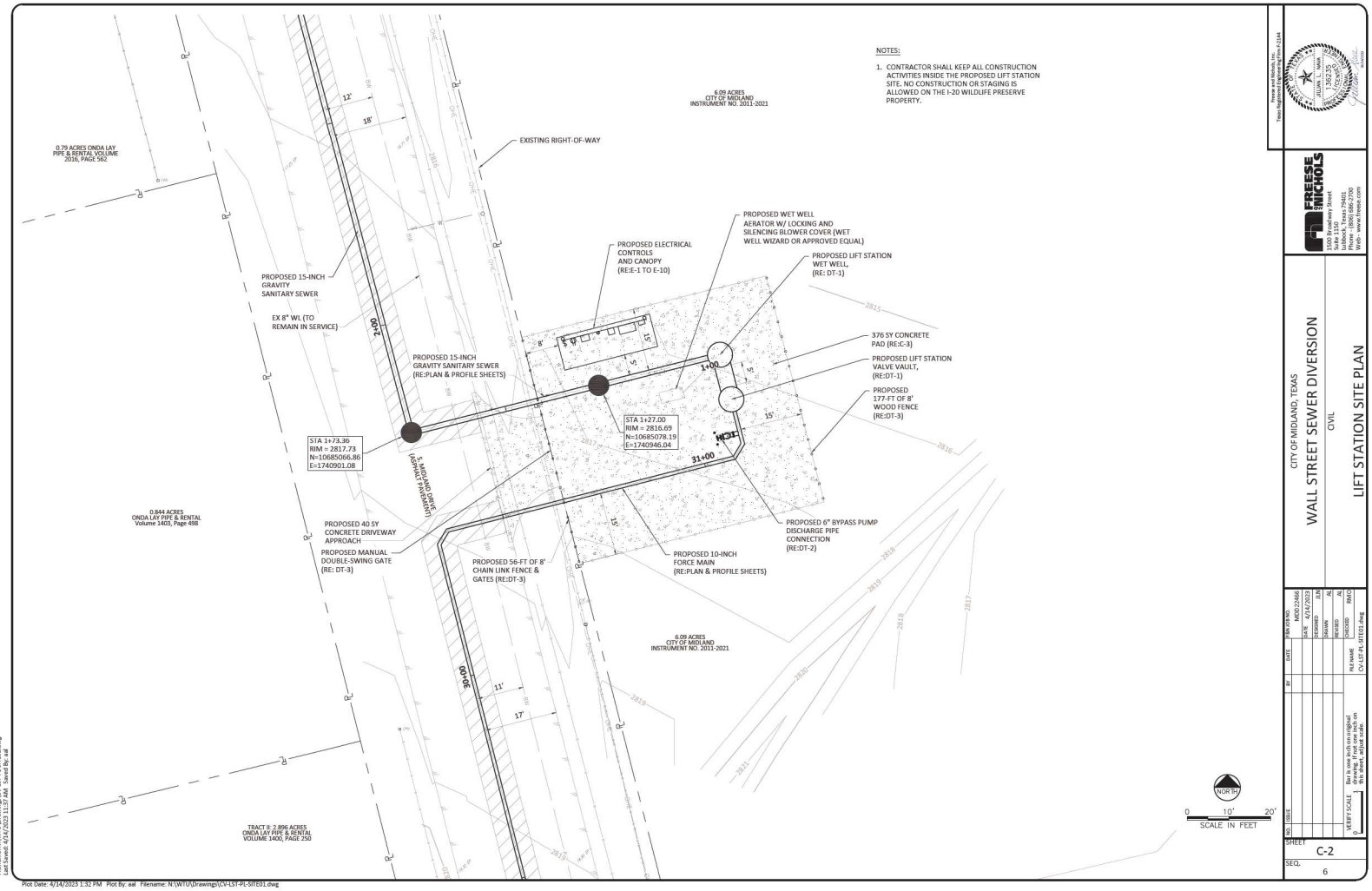
NOTES:
1. CONTRACTOR SHALL KEEP ALL CONSTRUCTION ACTIVITIES INSIDE THE PROPOSED LIFT STATION SITE. NO CONSTRUCTION OR STAGING IS ALLOWED ON THE I-20 WILDLIFE PRESERVE PROPERTY.
6.09 ACRES
CITY OF MIDLAND
INSTRUMENT NO. 2011-2021
0.79 ACRES ONDA LAY PIPE & RENTAL VOLUME 2016, PAGE 562
EXISTING RIGHT-OF-WAY
PROPOSED WET WELL AERATOR W/ LOCKING AND SILENCING BLOWER COVER (WET WELL WIZARD OR APPROVED EQUAL)
PROPOSED ELECTRICAL CONTROLS AND CANOPY (RE:E-1 TO E-10)
PROPOSED LIFT STATION WET WELL, (RE: DT-1)
PROPOSED 15-INCH GRAVITY SANITARY SEWER
EX 8" WL (TO REMAIN IN SERVICE)
376 SY CONCRETE PAD (RE:C-3)
PROPOSED LIFT STATION VALVE VAULT, (RE:DT-1)
PROPOSED 15-INCH GRAVITY SANITARY SEWER (RE:PLAN & PROFILE SHEETS)
PROPOSED 177-FT OF 8' WOOD FENCE (RE:DT-3)
STA 1+27.00
RIM = 2816.69
N=10685078.19
E=1740946.04
STA 1+73.36
RIM = 2817.73
N=10685066.86
E=1740901.08
S. MIDLAND DRIVE (ASPHALT PAVEMENT)
0.844 ACRES
ONDA LAY PIPE & RENTAL
Volume 1403, Page 498
PROPOSED 40 SY CONCRETE DRIVEWAY APPROACH
PROPOSED MANUAL DOUBLE-SWING GATE (RE: DT-3)
PROPOSED 56-FT OF 8' CHAIN LINK FENCE & GATES (RE:DT-3)
PROPOSED 10-INCH FORCE MAIN (RE:PLAN & PROFILE SHEETS)
PROPOSED 6" BYPASS PUMP DISCHARGE PIPE CONNECTION (RE:DT-2)
6.09 ACRES
CITY OF MIDLAND
INSTRUMENT NO. 2011-2021
TRACT II: 2.896 ACRES
ONDA LAY PIPE & RENTAL
VOLUME 1400, PAGE 250
2+00
1+00
31+00
30+00
NORTH
0 10' 20'
SCALE IN FEET
Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144
FREESE AND NICHOLS
1500 Broadway Street
Suite 1150
Lubbock, Texas 79401
Phone - (806) 686-2700
Web - www.freese.com
CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
CIVIL
LIFT STATION SITE PLAN
SHEET
C-2
SEQ.
6
ACAD Rel: 24.2s (LMS Tech)
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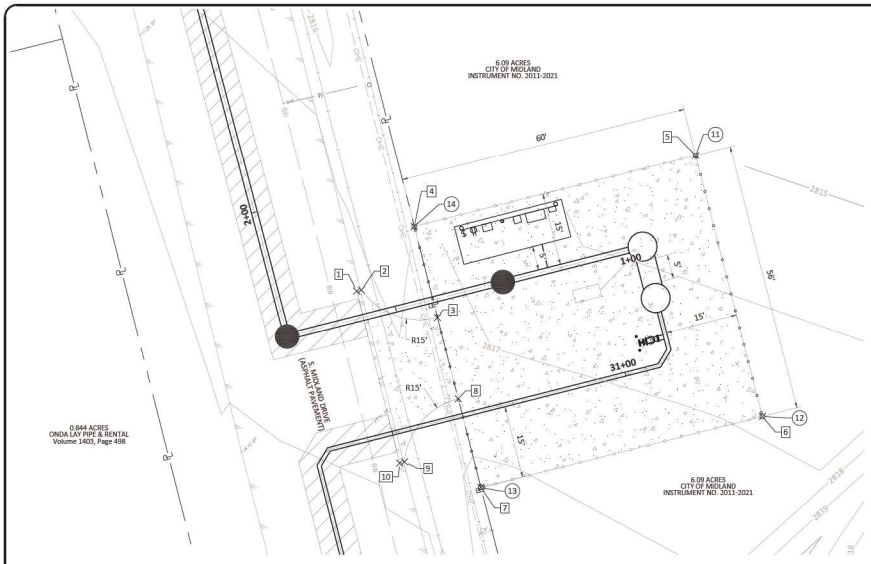
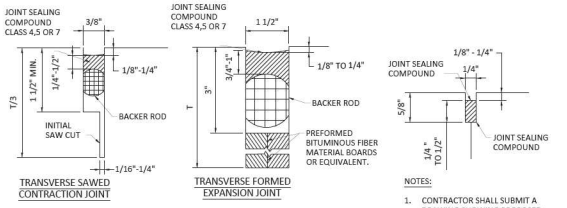


PAVING TABLE □		
POINT NO.	NORTHING	EASTING
1	10685076.32	1740915.58
2	10685076.57	1740916.55
3	10685070.84	1740932.40
4	10685089.70	1740927.58
5	10685104.47	1740986.18
6	10685050.22	1741000.10
7	10685035.45	1740941.44
8	10685053.90	1740936.72
9	10685040.77	1740925.51
10	10685040.52	1740924.54

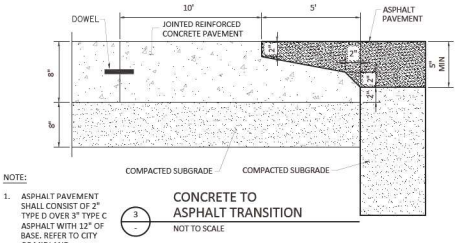
FENCE TABLE ○			
POINT NO.	NORTHING	EASTING	POINT DESCRIPTION
11	10685104.47	1740986.18	FENCE
12	10685050.22	1741000.10	FENCE
13	10685035.45	1740941.44	FENCE
14	10685089.70	1740927.58	FENCE



1 - CONCRETE JOINT DETAILS
NOT TO SCALE

NOTES:

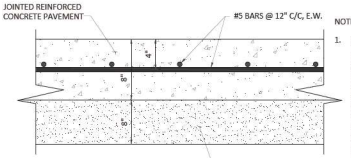
1. CONTRACTOR SHALL SUBMIT A DRAWING SHOWING PROPOSED PAVEMENT JOINTS TO ENGINEER FOR REVIEW PRIOR TO PAVEMENT CONSTRUCTION. ALL NEW PERMANENT PAVEMENT SHALL BE CONCRETE PAVEMENT. REFER TO GENERAL STANDARD DETAILS FOR CONCRETE PAVEMENT DETAILS. INSTALL EXPANSION JOINT PER X/DT-X AROUND ALL ABOVE GROUND PADS AND STRUCTURES AND @ 20' MAX C/C ELSEWHERE. INSTALL CONTACTION JOINTS PER X/DT-X BETWEEN EXPANSION JOINTS.



NOTE:

1. ASPHALT PAVEMENT SHALL CONSIST OF 2" TYPE D OVER 3" TYPE C ASPHALT WITH 12" OF BASE. REFER TO CITY OF MIDLAND STANDARD DETAIL 201.

3 - CONCRETE TO ASPHALT TRANSITION
NOT TO SCALE



NOTE:

1. SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF 8" AND RE-COMPACTED TO 95% STANDARD PROCTOR DENSITY (ASTM D-698), WHERE P.I. OF SUBGRADE MATERIAL IS 20 OR GREATER, SUBGRADE SHALL BE STABILIZED WITH A MINIMUM OF 6% BY WEIGHT OF HYDRATED LIME (27 POUNDS PER S.Y.). STABILIZATION SHALL EXTEND TO 1' BEYOND EDGE OF PAVEMENT. AS AS ALTERNATIVE, 10" OF FLEX BASE MAY BE USED IN LIEU OF LIME STABILIZATION.

4 - CONCRETE PAVEMENT DETAIL
NOT TO SCALE

NORTH

0 10' 20'
SCALE IN FEET

Private Information, Inc
Texas Registered Engineering Firm F-2144

JULIE L. MAY
136235
LICENSED
PROFESSIONAL
ENGINEER
STATE OF TEXAS

FREESE NICHOLS
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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
CIVIL
PAVING PLAN AND GRADING

NO.	ISSUE	BY	DATE	FILE NAME
				CV-ALL-PL-PVMT01.dwg

AWD JOB NO.	AWD-224606
DATE	4/14/2023
DESIGNED	LEM
DRAWN	AL
REVIEWED	
CHECKED	RMO

VERIFY SCALE
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SHEET C-3
SEQ.

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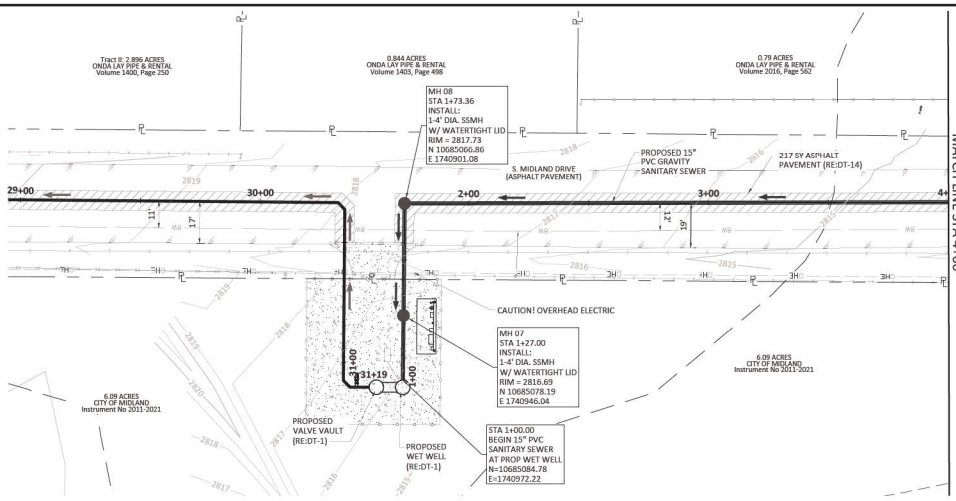

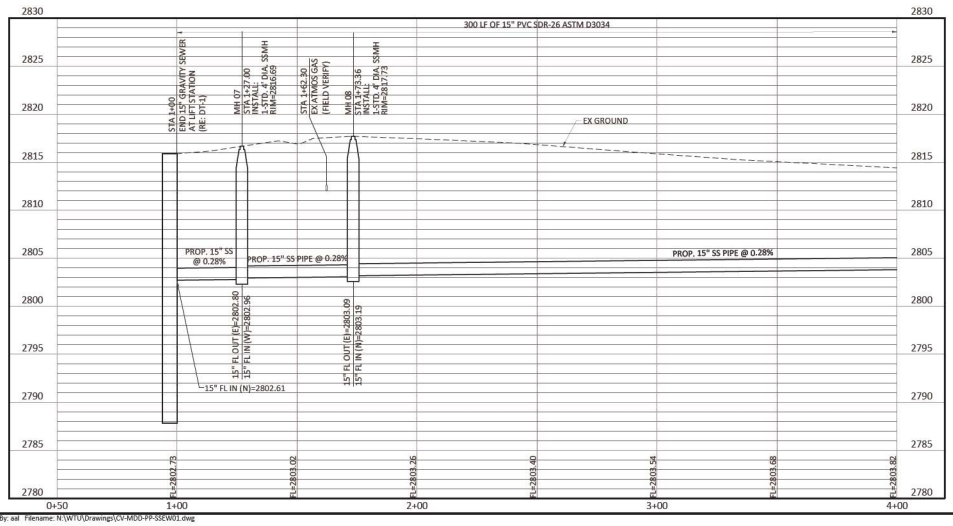

CAUTION!!!
EXISTING UNDERGROUND AND OVERHEAD UTILITIES IN THE AREA. CONTACT UTILITIES 48 HOURS PRIOR TO CONSTRUCTION.

NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. CONTRACTOR SHALL KEEP ALL CONSTRUCTION ACTIVITIES INSIDE THE PROPOSED LIFT STATION SITE. NO CONSTRUCTION OR STAGING IS ALLOWED ON THE I-20 WILDLIFE PRESERVE PROPERTY.

SCALE IN FEET HORIZONTAL
0 20' 40'
SCALE IN FEET VERTICAL
0 5' 10'

Texas Registered Engineering Firm F-2144
FREESE NICHOLS
Consultants
1500 Broadway Street
Suite 1150
Lubbock, Texas 79401
Phone - (806) 686-2700
Web- www.freese.com

CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
CIVIL
STA 1+00 TO STA 4+00

NO.	ISSUE	BY	DATE	PAR JOB NO.
				18002724B
			4/14/2023	DESIGNED LLM
				DRAWN AL
				REVIEWED
				CHECKED RMO

FILE NAME: CV-MDD-PP-SSEW01.dwg

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SHEET C-4
SEQ. 8

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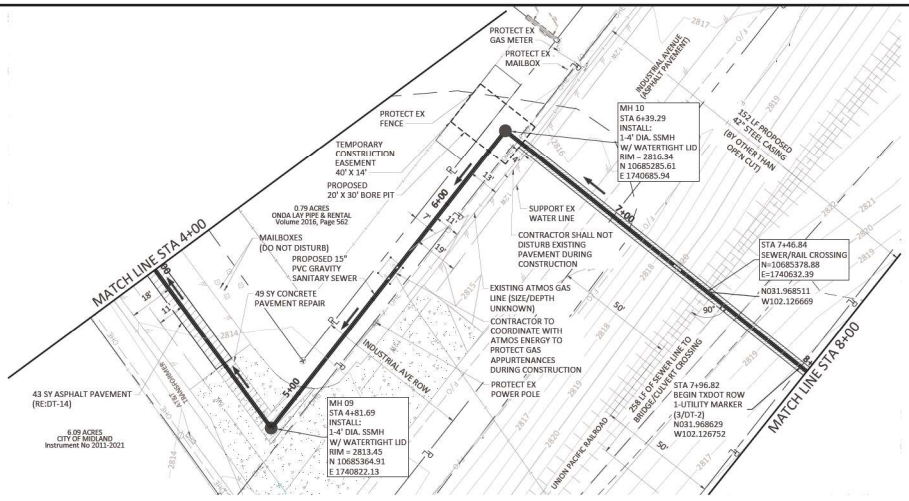

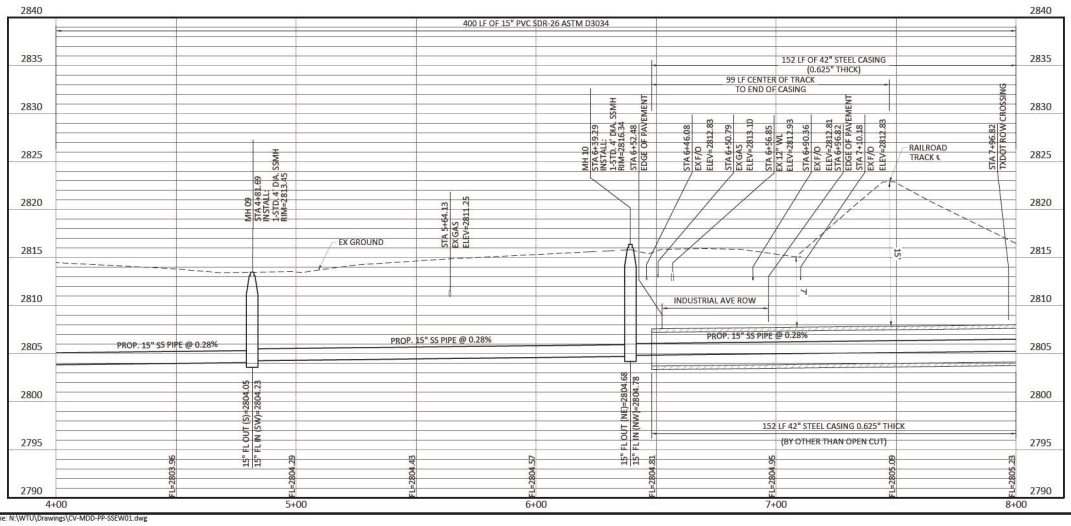

CAUTION!!!
EXISTING UNDERGROUND AND OVERHEAD UTILITIES IN THE AREA. CONTACT UTILITIES 48 HOURS PRIOR TO CONSTRUCTION.

NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. CONTRACTOR TO REFER TO G-3 FOR UPRR CONSTRUCTION NOTES.
3. THE MAXIMUM ALLOWABLE OPERATING PRESSURE FOR CARRIER PIPE IN RAILROAD ROW IS 100 PSI.
4. STEEL CASING SHALL BE OF LEAK-PROOF CONSTRUCTION WITH A SMYS OF 35 KSI CASING PIPE WALL THICKNESS SHALL BE A MINIMUM OF 0.531" IN ACCORDANCE WITH AREMA.

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

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CITY OF MIDLAND, TEXAS

WALL STREET SEWER DIVERSION

CIVIL

STA 4+00 TO STA 8+00

NO.	ISSUE	BY	DATE

FAIR JOB NO. 44001724606
DATE 7/12/2023
DESIGNED LMM
DRAWN AL
REVIEWED AL
CHECKED RMO
FILE NAME CV-MIDD-PP-SSEW01.dwg

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SHEET C-5
SEQ. 9

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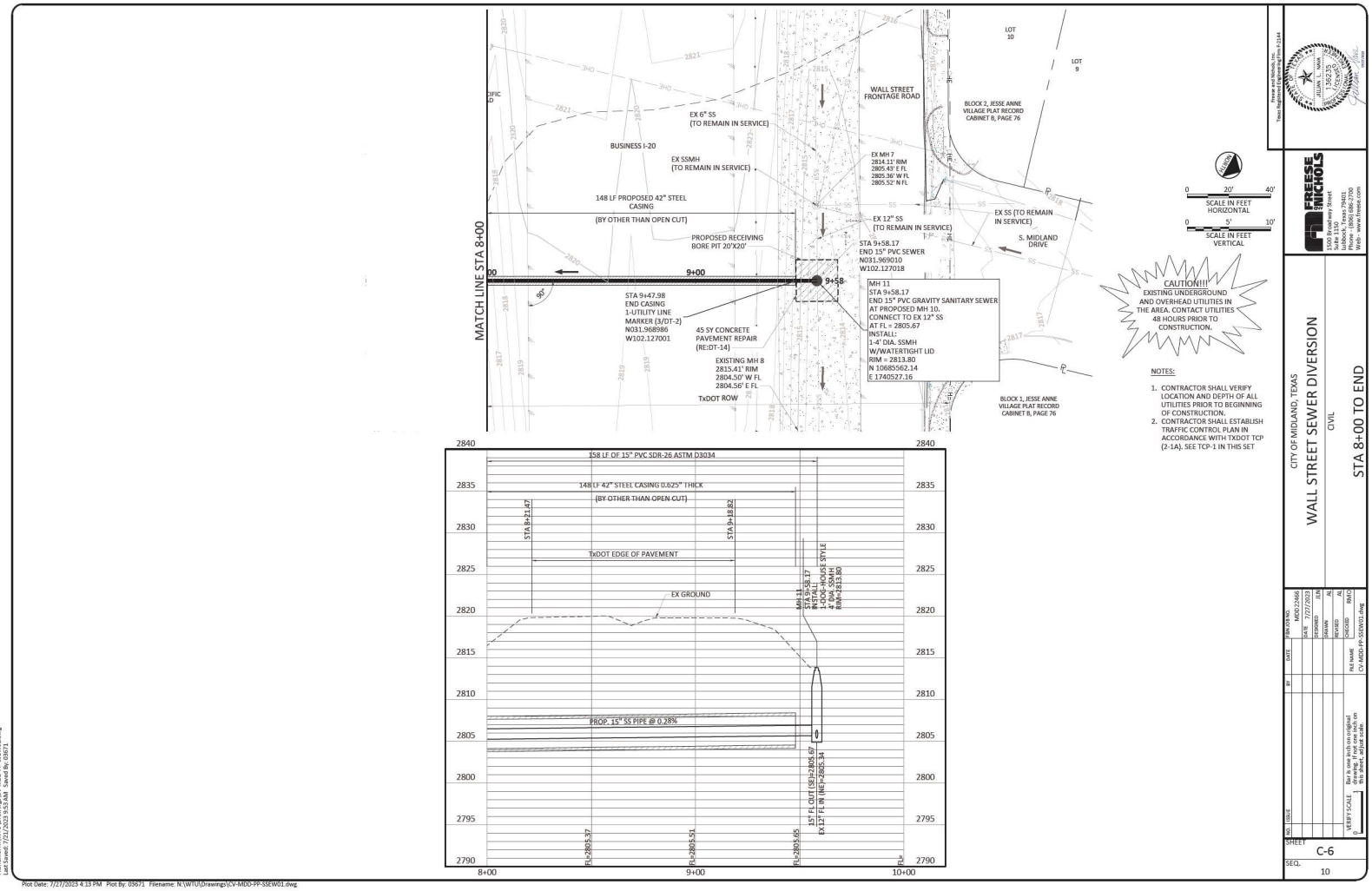
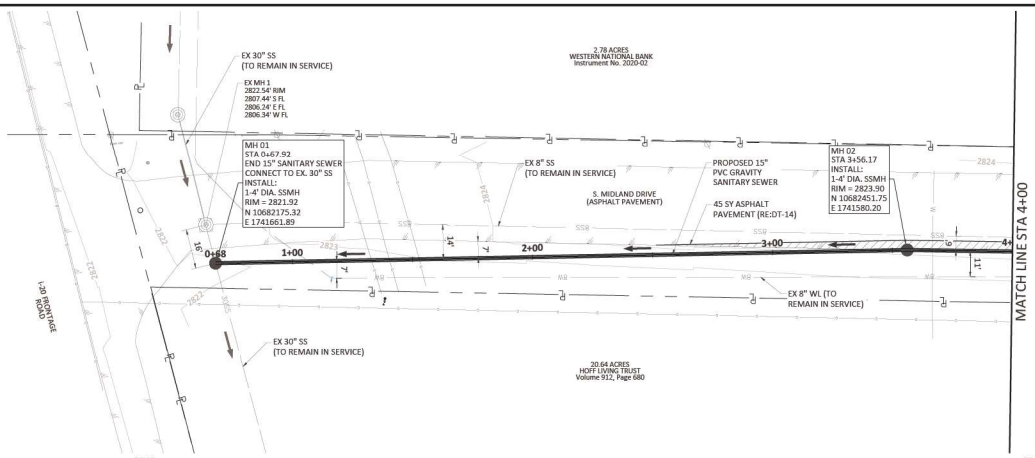
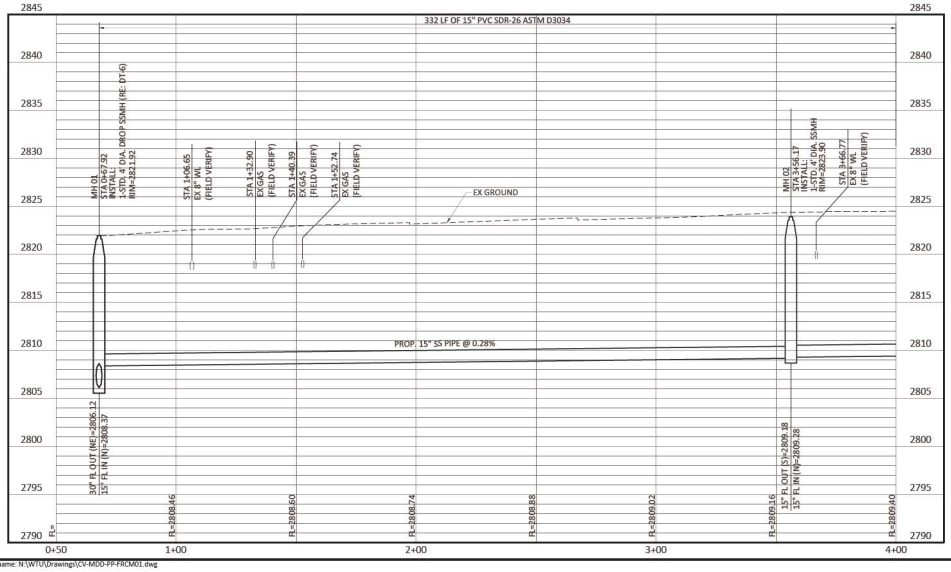

MATCH LINE STA 8+00
WALL STREET FRONTAGE ROAD
BUSINESS I-20
EX 6" SS (TO REMAIN IN SERVICE)
EX SSMH (TO REMAIN IN SERVICE)
148 LF PROPOSED 42" STEEL CASING (BY OTHER THAN OPEN CUT)
PROPOSED RECEIVING BORE PIT 20'X20'
EX MH 7 2814.11' RIM 2805.43' E FL 2805.36' W FL 2805.52' N FL
EX 12" SS (TO REMAIN IN SERVICE)
STA 9+58.17 END 15" PVC SEWER N031.969010 W102.127018
MH 11 STA 9+58.17 END 15" PVC GRAVITY SANITARY SEWER AT PROPOSED MH 10. CONNECT TO EX 12" SS AT FL = 2805.67 INSTALL: 1-4' DIA. SSMH W/WATERTIGHT LID RIM = 2813.80 N 10685562.14 E 1740527.16
STA 9+47.98 END CASING 1-UTILITY LINE MARKER (3/DT-2) N031.968986 W102.127001
45 SY CONCRETE PAVEMENT REPAIR (RE:DT-14)
EXISTING MH 8 2815.41' RIM 2804.50' W FL 2804.56' E FL
TxDOT ROW
LOT 10
LOT 9
BLOCK 2, JESSE ANNE VILLAGE PLAT RECORD CABINET B, PAGE 76
BLOCK 1, JESSE ANNE VILLAGE PLAT RECORD CABINET B, PAGE 76
EX SS (TO REMAIN IN SERVICE)
S. MIDLAND DRIVE
SCALE IN FEET HORIZONTAL
SCALE IN FEET VERTICAL
CAUTION!!! EXISTING UNDERGROUND AND OVERHEAD UTILITIES IN THE AREA. CONTACT UTILITIES 48 HOURS PRIOR TO CONSTRUCTION.
NOTES:
1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. CONTRACTOR SHALL ESTABLISH TRAFFIC CONTROL PLAN IN ACCORDANCE WITH TXDOT TCP (2-1A). SEE TCP-1 IN THIS SET
158 LF OF 15" PVC SDR-26 ASTM D3034
148 LF 42" STEEL CASING 0.625" THICK (BY OTHER THAN OPEN CUT)
STA 8+21.47
STA 9+18.82
TxDOT EDGE OF PAVEMENT
EX GROUND
MH 11 STA 9+58.17 INSTALL: 1-DOG-HOUSE STYLE 4' DIA. SSMH RIM=2813.80
PROP. 15" SS PIPE @ 0.28%
15" FL OUT (SE)=2805.67 EX 12" FL IN (NE)=2805.34
FL=2805.37
FL=2805.51
FL=2805.65
8+00
9+00
10+00
CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
CIVIL
STA 8+00 TO END
FREESE AND NICHOLS
1500 Broadway Street Suite 1150 Lubbock, Texas 79401 Phone: (806) 686-2700 Web: www.freese.com
SHEET C-6
SEQ. 10
Plot Date: 7/27/2023 4:13 PM Plot By: 03671 Filename: N:\WTU\Drawings\CV-MDD-PP-SSEW01.dwg





CAUTION!!!
EXISTING UNDERGROUND AND OVERHEAD UTILITIES IN THE AREA. CONTACT UTILITIES 48 HOURS PRIOR TO CONSTRUCTION.

NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. NOTIFY ENDEAVOR ENERGY 48 HOURS IN ADVANCE BEFORE ANY WORK TAKES PLACE IN THE AREA. NO MECHANICAL DIGGING SHALL BE COMPLETED WITHIN A 30-FOOT RADIUS OF MARKED UNDERGROUND GAS LINES. IF DIGGING IS REQUIRED WITHIN THE REQUESTED RADIUS, CONTRACTOR MUST HYDRO-EXCAVATE OR HAND SPOT ENDEAVOR GAS LINE(S) PRIOR TO ANY MECHANICAL DIGGING TAKES PLACE. NEW SEWER LINE SHALL CROSS UNDER EXISTING GAS LINE(S) AND MAINTAIN A MINIMUM 3-FOOT CLEARANCE. CONTACT ENDEAVOR ENERGY AT 432-266-1924.

SCALE IN FEET HORIZONTAL
0 20' 40'
SCALE IN FEET VERTICAL
0 5' 10'

Private Information Use
Texas Board of Professional Engineers Firm # 2144

FREESE NICHOLS
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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
CIVIL
STA 0+00 TO STA 4+00

NO.	ISSUE	BY	DATE	PAR JOB NO. 84001726B
				DATE 4/14/2023
				DESIGNED LMM
				DRAWN AL
				REVIEWED
				CHECKED RMO
				FILE NAME CV-MOD-PP-FRCM01.dwg

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SHEET C-7
SEQ. 11

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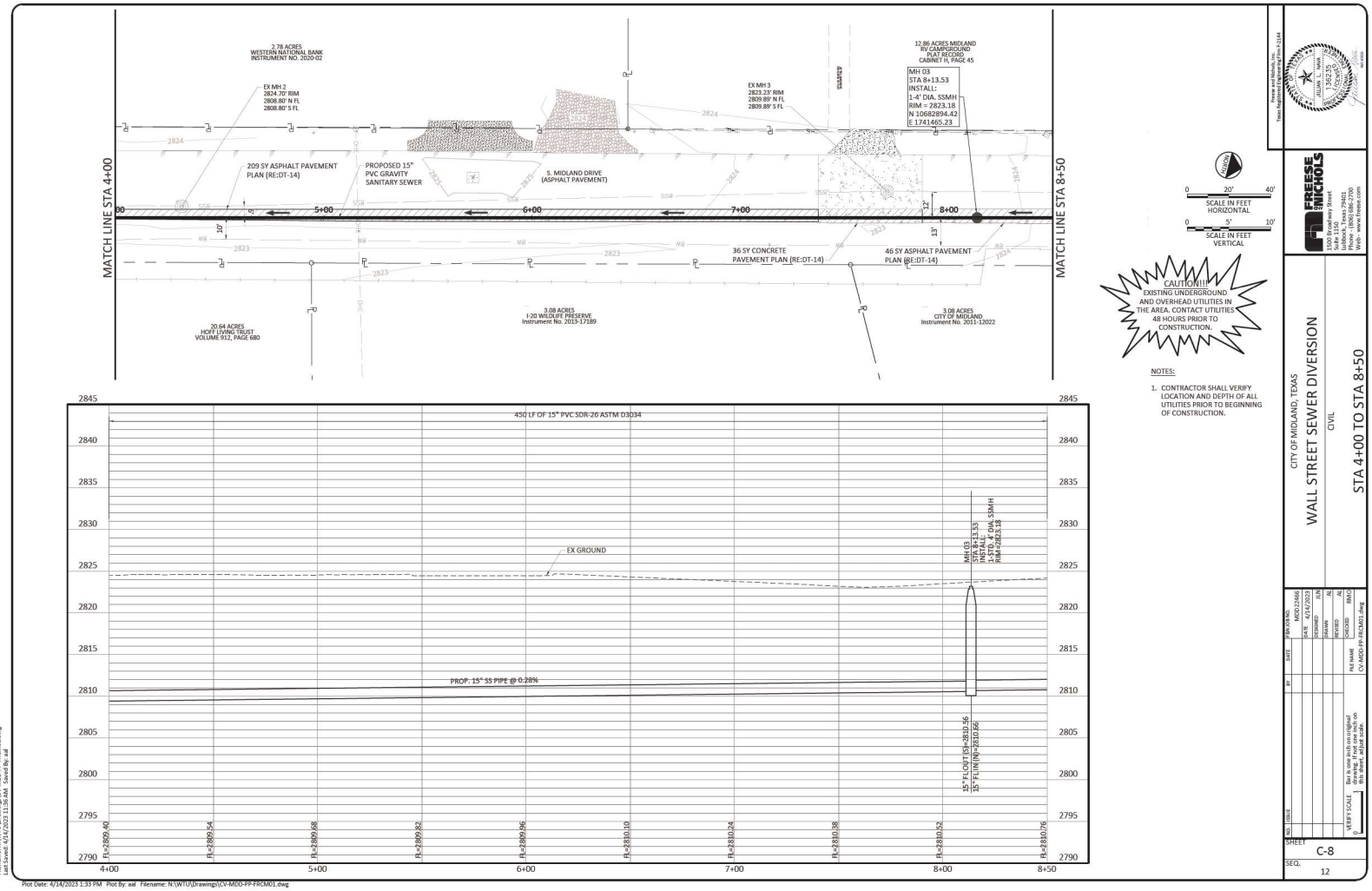

MATCH LINE STA 4+00
MATCH LINE STA 8+50
2.78 ACRES
WESTERN NATIONAL BANK
INSTRUMENT NO. 2020-02
EX MH 2
2824.70' RIM
2808.80' N FL
2808.80' S FL
209 SY ASPHALT PAVEMENT
PLAN (RE:DT-14)
PROPOSED 15"
PVC GRAVITY
SANITARY SEWER
S. MIDLAND DRIVE
(ASPHALT PAVEMENT)
EX MH 3
2823.23' RIM
2809.89' N FL
2809.89' S FL
12.86 ACRES MIDLAND
RV CAMPGROUND
PLAT RECORD
CABINET H, PAGE 45
MH 03
STA 8+13.53
INSTALL:
1-4' DIA. SSMH
RIM = 2823.18
N 10682894.42
E 1741465.23
36 SY CONCRETE
PAVEMENT PLAN (RE:DT-14)
46 SY ASPHALT PAVEMENT
PLAN (RE:DT-14)
20.64 ACRES
HOFF LIVING TRUST
VOLUME 912, PAGE 680
3.08 ACRES
I-20 WILDLIFE PRESERVE
Instrument No. 2013-17189
3.08 ACRES
CITY OF MIDLAND
Instrument No. 2011-12022
450 LF OF 15" PVC SDR-26 ASTM D3034
EX GROUND
PROP. 15" SS PIPE @ 0.28%
MH 03
STA 8+13.53
INSTALL:
1-STD. 4' DIA. SSMH
RIM=2823.18
15" FLOUT (S)=2810.56
15" FLIN (N)=2810.66
FL=2809.40
FL=2809.54
FL=2809.68
FL=2809.82
FL=2809.96
FL=2810.10
FL=2810.24
FL=2810.38
FL=2810.52
FL=2810.76
4+00
5+00
6+00
7+00
8+00
8+50
2845
2840
2835
2830
2825
2820
2815
2810
2805
2800
2795
2790
SCALE IN FEET
HORIZONTAL
SCALE IN FEET
VERTICAL
CAUTION!!!
EXISTING UNDERGROUND
AND OVERHEAD UTILITIES IN
THE AREA. CONTACT UTILITIES
48 HOURS PRIOR TO
CONSTRUCTION.
NOTES:
1. CONTRACTOR SHALL VERIFY
LOCATION AND DEPTH OF ALL
UTILITIES PRIOR TO BEGINNING
OF CONSTRUCTION.
FREESE AND NICHOLS
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Lubbock, Texas 79401
Phone - (806) 686-2700
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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
CIVIL
STA 4+00 TO STA 8+50
SHEET
C-8
SEQ.
12
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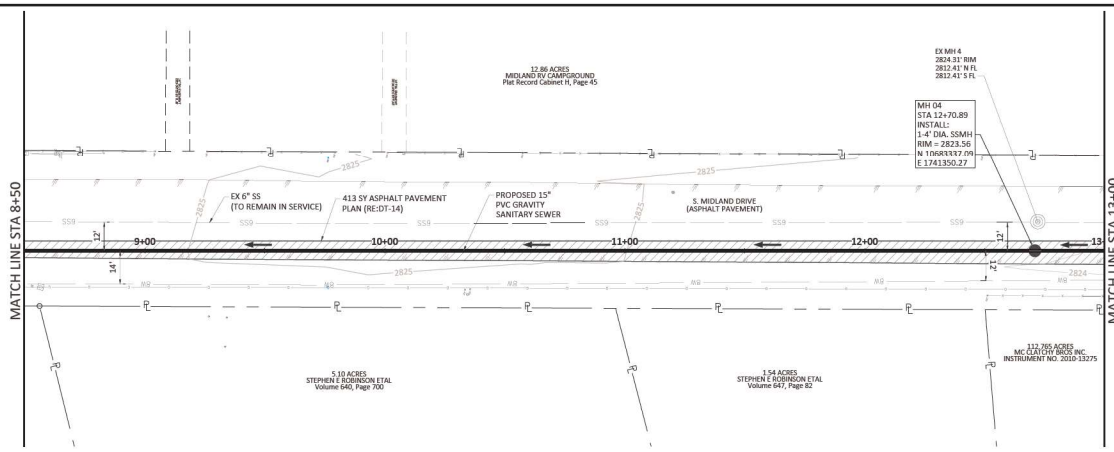

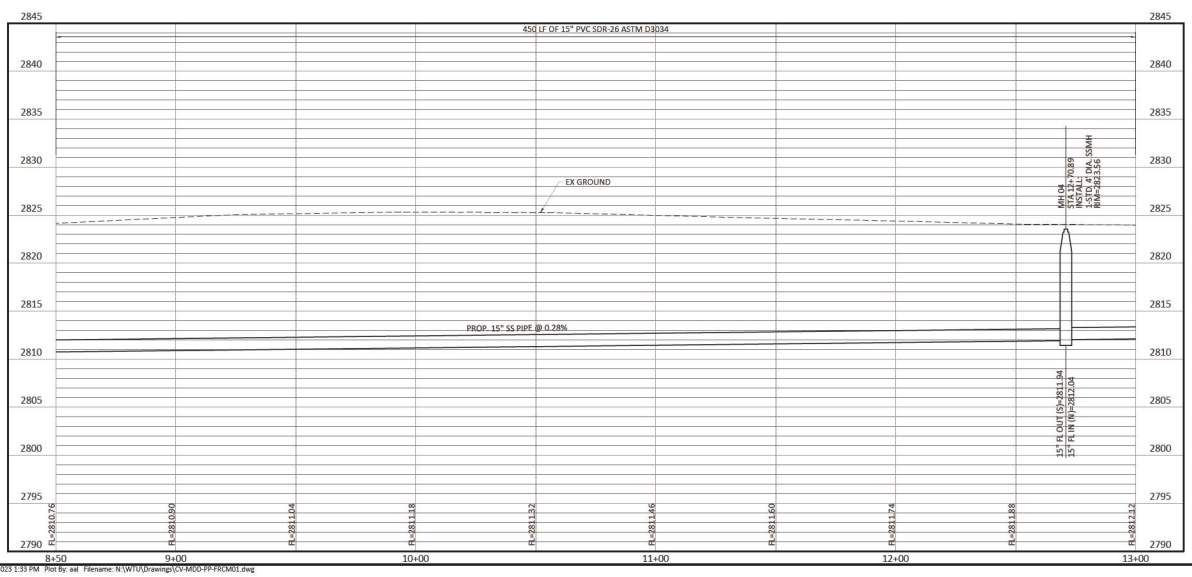

SCALE IN FEET
HORIZONTAL
0 20' 40'

SCALE IN FEET
VERTICAL
0 5' 10'

CAUTION!!!
EXISTING UNDERGROUND AND OVERHEAD UTILITIES IN THE AREA. CONTACT UTILITIES 48 HOURS PRIOR TO CONSTRUCTION.

NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

Private Information, Inc
Texas Registered Engineering Firm F-2344

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1500 Broadway Street
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Web- www.freese.com

CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
CIVIL
STA 8+50 TO STA 13+00

NO.	ISSUE	BY	DATE

JOB NO. 18007.23466
DATE 4/14/2023
DESIGNED LMM
DRAWN AL
CHECKED AL
RECVED RMO
FILE NAME CV-MOD-PP-FRCM01.dwg

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET C-9
SEQ. 13

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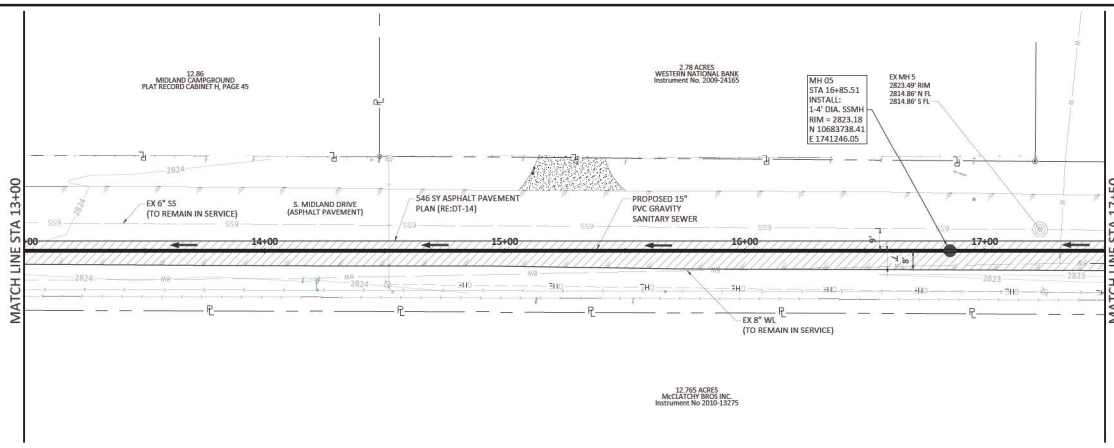

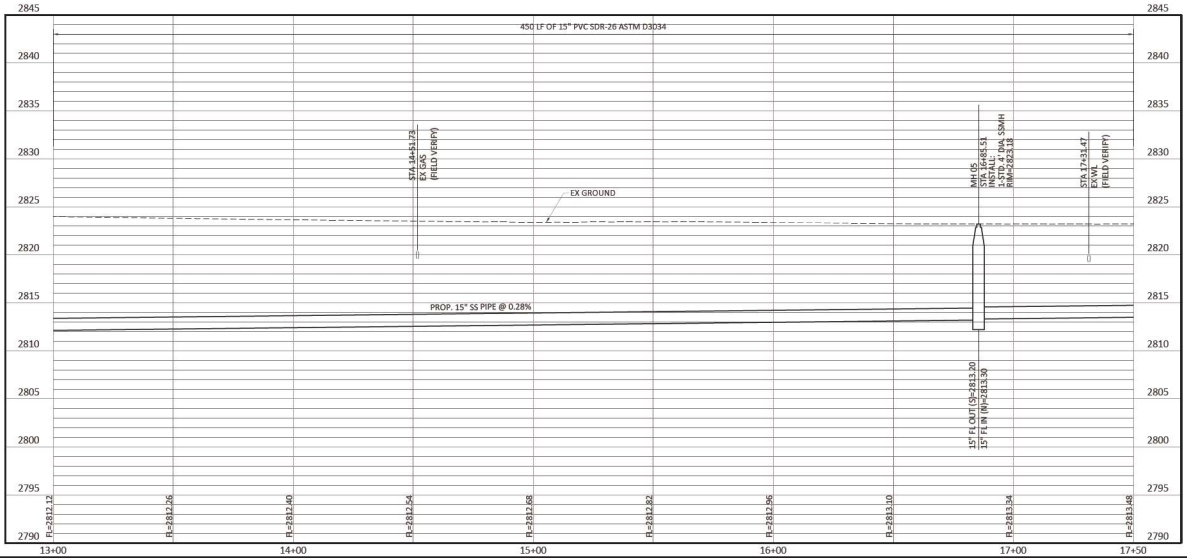

SCALE IN FEET
HORIZONTAL
0 20' 40'

SCALE IN FEET
VERTICAL
0 5' 10'

CAUTION!!!
EXISTING UNDERGROUND AND OVERHEAD UTILITIES IN THE AREA. CONTACT UTILITIES 48 HOURS PRIOR TO CONSTRUCTION.

NOTES:

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Prepared electronically by:
Freese and Nichols, Inc.
Texas Registration No. F-2144

ANDREW L. MAY
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CITY OF MIDLAND, TEXAS

WALL STREET SEWER DIVERSION

CIVIL

STA 13+00 TO STA 17+50

NO.	ISSUE	BY	DATE	FAR JOB NO.
				44007.22466
			04/14/2023	DESIGNED: LEM
				DRAWN: AL
				REVIEWED:
				CHECKED: RMO

FILE NAME: CV-MDD-PP-FRCM01.dwg

VERIFY SCALE
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SHEET: C-10

SEQ. 14

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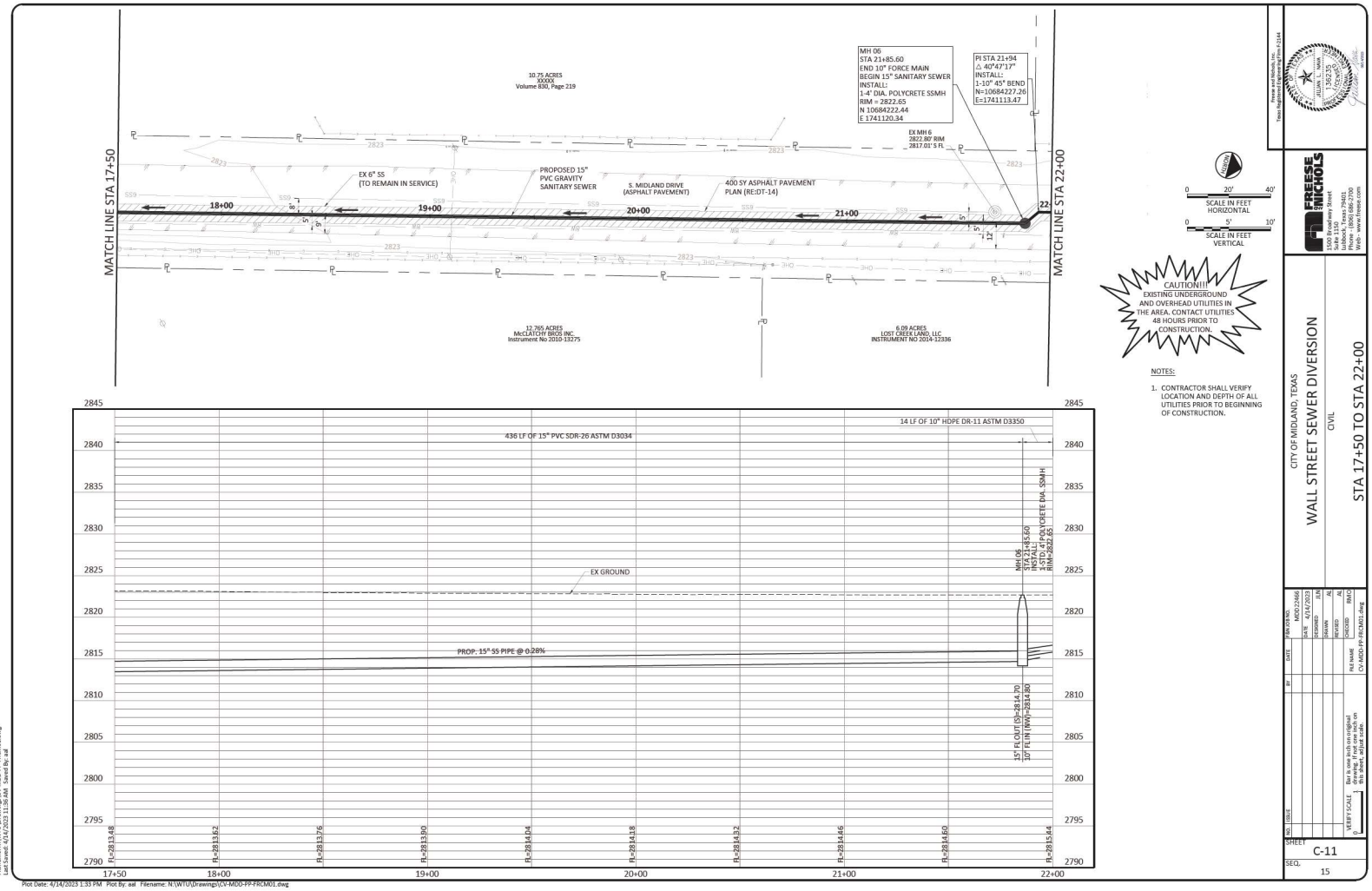
MATCH LINE STA 17+50
MATCH LINE STA 22+00
10.75 ACRES
XXXXX
Volume 830, Page 219
MH 06
STA 21+85.60
END 10" FORCE MAIN
BEGIN 15" SANITARY SEWER
INSTALL:
1-4' DIA. POLYCRETE SSMH
RIM = 2822.65
N 10684222.44
E 1741120.34
PI STA 21+94
△ 40°47'17"
INSTALL:
1-10" 45° BEND
N=10684227.26
E=1741113.47
EX MH 6
2822.80' RIM
2817.01' S FL
EX 6" SS
(TO REMAIN IN SERVICE)
PROPOSED 15"
PVC GRAVITY
SANITARY SEWER
S. MIDLAND DRIVE
(ASPHALT PAVEMENT)
400 SY ASPHALT PAVEMENT
PLAN (RE:DT-14)
18+00
19+00
20+00
21+00
12.765 ACRES
McCLATCHY BROS INC.
Instrument No 2010-13275
6.09 ACRES
LOST CREEK LAND, LLC
INSTRUMENT NO 2014-12336
SCALE IN FEET
HORIZONTAL
SCALE IN FEET
VERTICAL
CAUTION!!!
EXISTING UNDERGROUND
AND OVERHEAD UTILITIES IN
THE AREA. CONTACT UTILITIES
48 HOURS PRIOR TO
CONSTRUCTION.
NOTES:
1. CONTRACTOR SHALL VERIFY
LOCATION AND DEPTH OF ALL
UTILITIES PRIOR TO BEGINNING
OF CONSTRUCTION.
14 LF OF 10" HDPE DR-11 ASTM D3350
436 LF OF 15" PVC SDR-26 ASTM D3034
EX GROUND
PROP. 15" SS PIPE @ 0.28%
MH 06
STA 21+85.60
INSTALL:
1-STD. 4' POLYCRETE DIA. SSMH
RIM=2822.65
15' FL OUT (S)=2814.70
10' FL IN (NW)=2814.80
17+50
18+00
19+00
20+00
21+00
22+00
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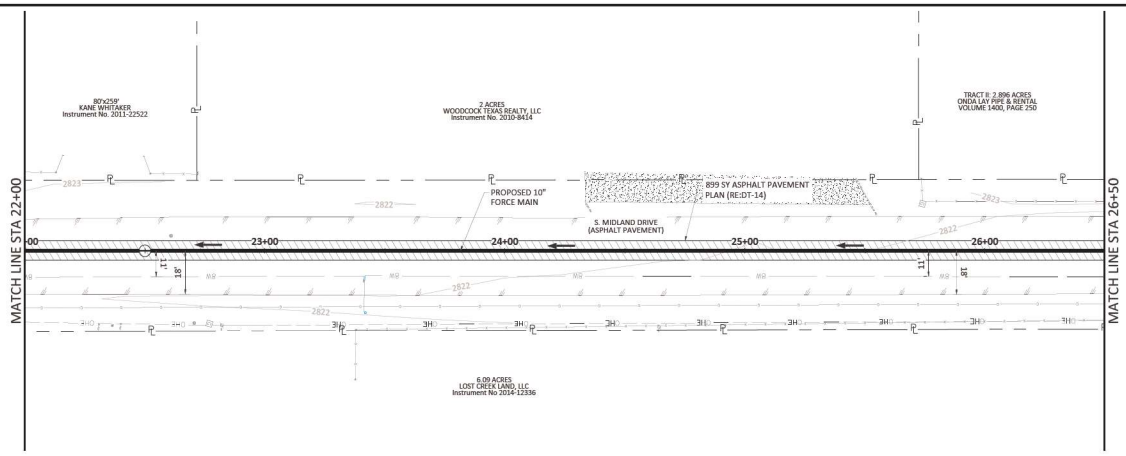
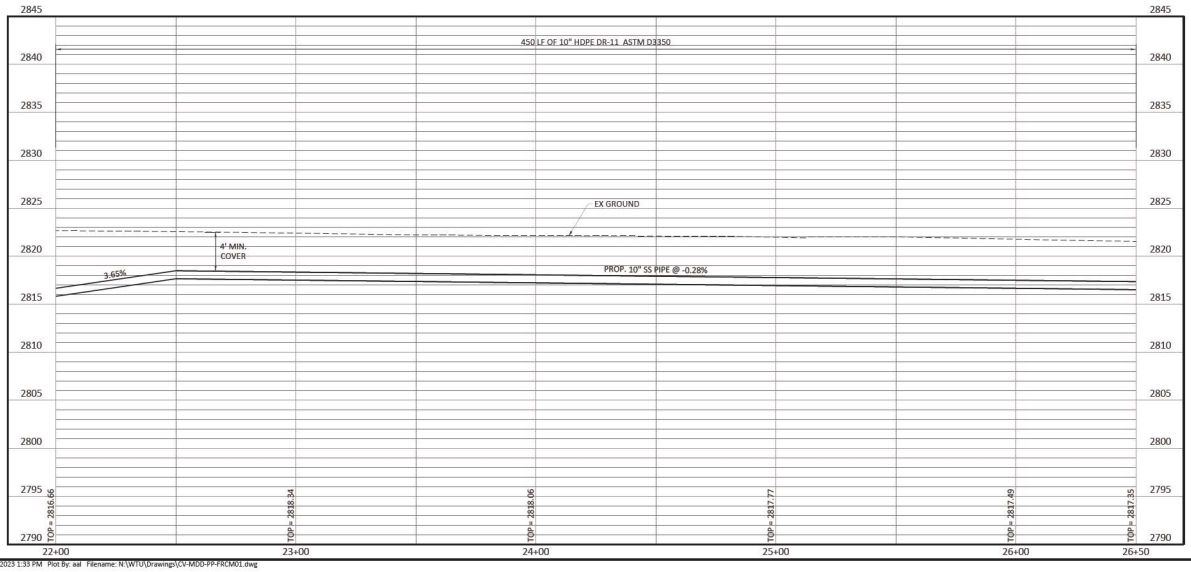
CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
CIVIL
STA 17+50 TO STA 22+00
SHEET
C-11
SEQ.
15
Plot Date: 4/14/2023 1:33 PM Plot By: aal Filename: N:\WTU\Drawings\CV-MDD-PP-FRCM01.dwg





SCALE IN FEET
HORIZONTAL
0 20' 40'

SCALE IN FEET
VERTICAL
0 5' 10'

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Texas Registered Engineering Firm F-2344

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
CIVIL
STA 22+00 TO STA 26+50

NO.	ISSUE	BY	DATE

JOB NO. 14007.22466
DATE 4/14/2023
DESIGNED LLM
DRAWN AL
REVIEWED AL
CHECKED RMO
FILE NAME CV-MDD-PP-FRCM01.dwg

VERIFY SCALE
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SHEET C-12
SEQ. 16

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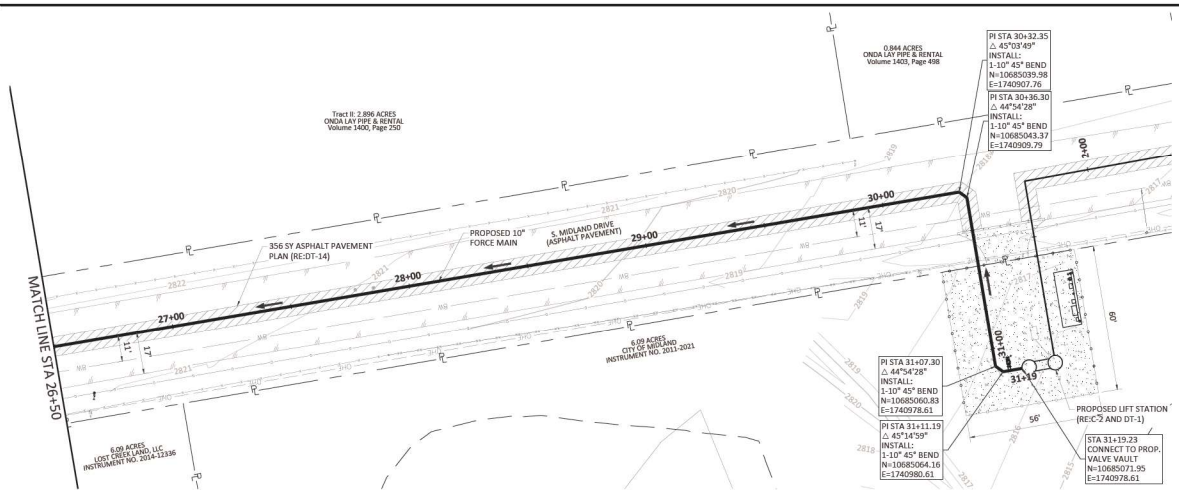

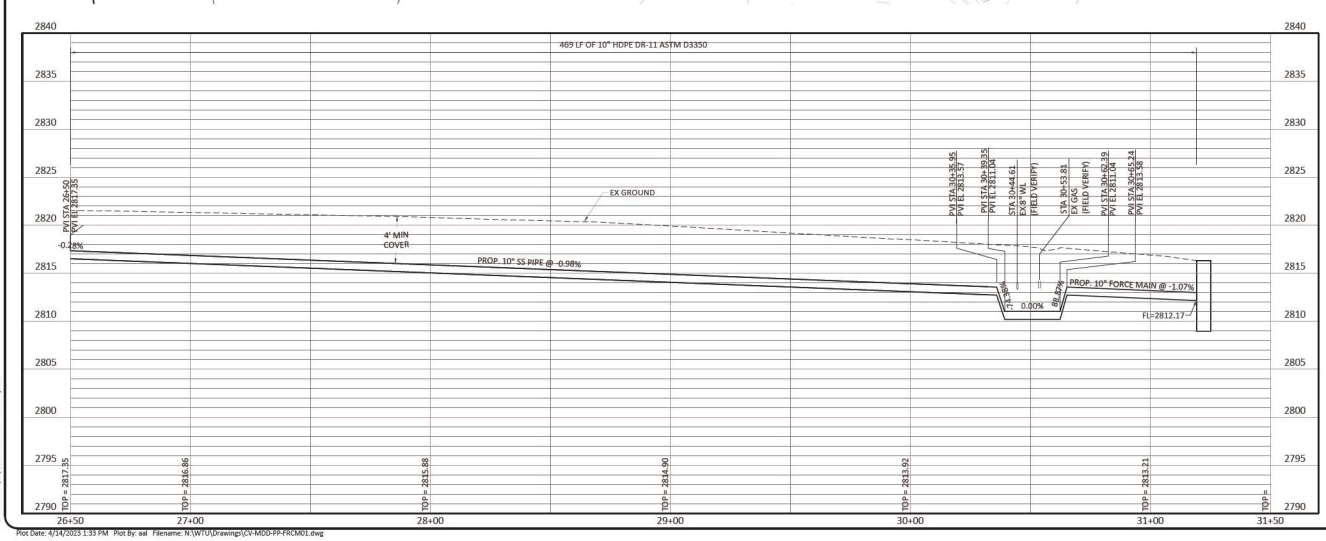

SCALE IN FEET HORIZONTAL
0 20' 40'
SCALE IN FEET VERTICAL
0 5' 10'

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
CIVIL
STA 26+50 TO STA END

NO.	ISSUE	BY	DATE

FAR JOB NO. FW22266
DATE 4/14/2023
DESIGNED LLM
DRAWN AL
REVIEWED AL
CHECKED RMO
FILE NAME CV-MDD-PP-FRCM01.dwg

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SHEET C-13
SEQ. 17

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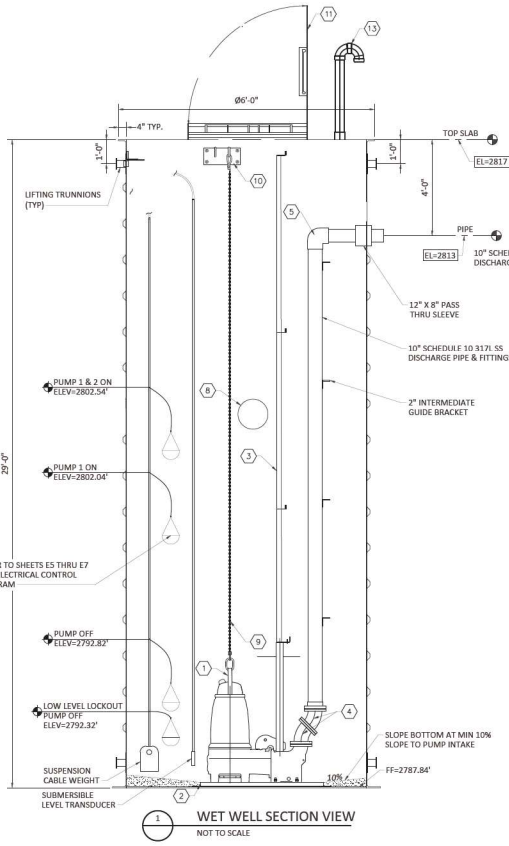
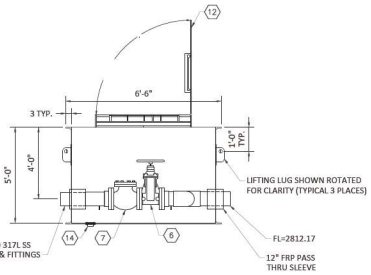
Plot Date: 4/14/2023 1:33 PM Plot By: aal Filename: N:\WTU\Drawings\CV-MDD-PP-FRCM01.dwg

NOTES BY SYMBOL:

1. SUBMERSIBLE PUMP AND MOTOR (NP 3153 MT 3 OR APPROVED EQUAL)
2. PUMP STAND
3. 2" 316 SS GUIDE RAIL BY PUMP MANUFACTURER
4. 45° 10" BEND (FL X FL) 317 SS, SCHEDULE 10
5. 90° 10" BEND (FL X FL) 317 SS, SCHEDULE 10
6. 10" GATE VALVE (FL X FL) W/HANDWHEEL
7. 10" CHECK VALVE (FL X FL)
8. 15" INFLUENT PIPE PENETRATION, SEE WALL PENETRATION SCHEDULE.
9. PUMP LIFTING CABLE (317 STAINLESS STEEL)
10. CABLE HOLDER (317 STAINLESS STEEL)
11. 72" x 60" DOUBLE-LEAF ALUMINUM ACCESS HATCH W/ SAFETY GRATE
12. 48" x 48" SINGLE DOOR ALUMINUM ACCESS HATCH W/ SAFETY GRATE
13. 4" PVC GOOSENECK VENT
14. 2" FLOOR DRAIN, SEE NOTE 7

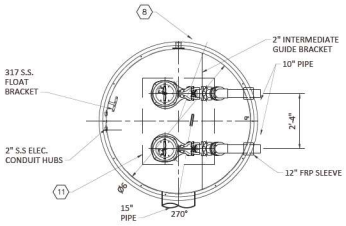


1 WET WELL SECTION VIEW
NOT TO SCALE

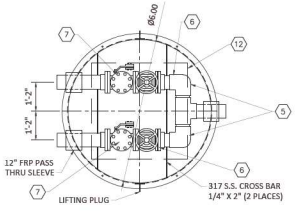


2 VALVE VAULT SECTION VIEW
NOT TO SCALE

WALL PENETRATION SCHEDULE				
NO.	PIPE OD	PIPE SCH	DEPTH	ANGLE
8	15.8"	SDR-26 PVC	2802.61	270°



WET WELL PLAN VIEW

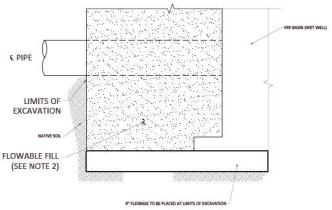


VALVE VAULT PLAN VIEW

3 LIFT STATION PLAN VIEW
NOT TO SCALE

GENERAL NOTES:

1. REFER TO THE SPECIFICATIONS FOR SUBMERSIBLE PUMP PERFORMANCE REQUIREMENTS.
2. WET WELL AND VALVE VAULT SHALL BE FIBERGLASS REINFORCED PLASTIC. FLOAT BRACKETS, LIFTING LUGS, CONDUIT HUBS AND OTHER APPURTENANCES SHALL BE 317L STAINLESS STEEL.
3. REFER TO WALL PENETRATION SCHEDULE FOR PIPE PENETRATION LOCATIONS.
4. HATCH AND FRAME WILL BE ALUMINUM CAPABLE OF WITHSTANDING 150 PSI AND BOLTED DIRECTLY TO THE FRP WET WELL. ACCESS COVER SHALL BE PROVIDED BY THE FRP MANUFACTURER.
5. LIFTING CHAIN MUST NOT INTERFERE WITH FLOAT MECHANISM.
6. STATION SHALL INCLUDE A 4" PVC GOOSENECK VENT THROUGH THE FRP COVER.
7. VALVE VAULT SHALL INCLUDE A 2" FLOOR DRAIN FROM THE VALVE VAULT TO THE WET WELL WITH A 2" STAINLESS STEEL FLAP VALVE.
8. GAS SEALS ARE REQUIRED ON ELECTRICAL CONDUIT PENETRATIONS AND CONTROL PANELS.
9. ELECTRICAL POWER SHALL BE 480Y/277V, 3-PHASE. COORDINATE POWER DELIVERY WITH ONCOR AS NEEDED. REFER TO E-5.
10. BACKFILL REQUIREMENTS AS SHOWN BELOW:



DETAIL NOTES:

1. WET WELL EXCAVATION AREA TO BE SHORED.
2. FLOWABLE FILL SHALL EXTEND TO THE LIMITS OF THE EXCAVATION. FLOWABLE FILL WILL EXTEND TO 2 FEET BELOW PROPOSED GRADE.
3. DO NOT ENCASE RESTRAINED OR UNRESTRAINED COUPLINGS.
4. COORDINATE WITH SEAL MANUFACTURER FOR SIZE OF FRP SLEEVE.
5. INSTALL PIPE IN A WAY SUCH THAT SEAL WILL NOT BE COMPRESSED BY WEIGHT OF PIPE.
6. INSTALL SEAL PER MANUFACTURER'S INSTRUCTIONS.

Private Information Use Texas Engineering Firm F-2144

FREESE NICHOLS
Fort Worth, Texas 76102
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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
PROPOSED LIFT STATION AND VALVE VAULT

NO.	ISSUE	BY	DATE

FAR JOB NO. R#057246
DATE 04/07/2023
DESIGNED LMM
DRAWN AL
REVIEWED AL
CHECKED RMO
FILE NAME CV-ALL-LS-DET01.dwg

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET DT-1
SEQ. 18

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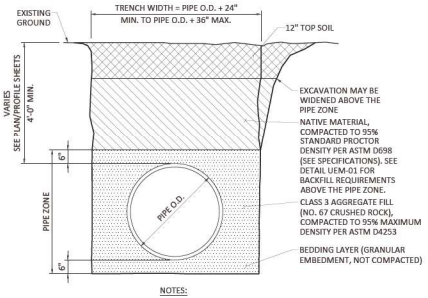
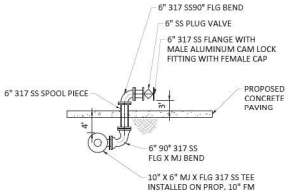


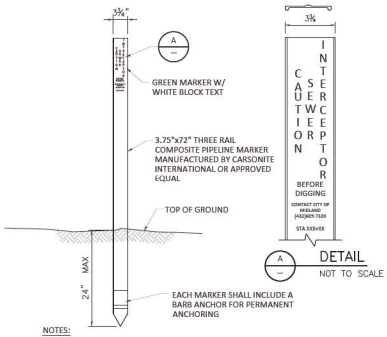
NOTES:

1. TRACER WIRE SHALL BE INSTALLED 6" ABOVE FORCE MAIN PIPE.

1 GRAVITY AND FORCE MAIN TYPICAL TRENCH SECTION
NOT TO SCALE



2 EMERGENCY BY-PASS DISCHARGE PIPING
NOT TO SCALE



A DETAIL
NOT TO SCALE

NOTES:

1. MARKER SHALL BE PLACED ABOVE SEWER LINE OUTSIDE OF ROW AT ALL RAILROAD AND HIGHWAY CROSSINGS.
2. EACH MARKER SHALL HAVE A STICKER WITH THE FOLLOWING INFORMATION "CAUTION WATER PIPELINE BEFORE DIGGING CONTACT CITY OF MIDLAND (432)685-7320 STA. XX+XX" ALL INFORMATION MUST BE TYPED OR STAMPED WITH NON-FADING INK, NOT HAND WRITTEN.

3 PIPELINE MARKER
NOT TO SCALE

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Last Saved: 4/14/2023 12:03 PM Saved By: aal

Plot Date: 4/14/2023 1:33 PM Plot By: aal Filename: N:\WTU\Drawings\CV-ALL-LS-DET01.dwg

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
TRENCH AND YARD PIPING DETAILS

NO.	ISSUE	BY	DATE

PROJECT NO. MDD22466
DATE 4/14/2023
DESIGNED JLN
DRAWN AL
REVISED AL
CHECKED RMO
FILE NAME CV-ALL-LS-DET01.dwg

VERIFY SCALE 0 1
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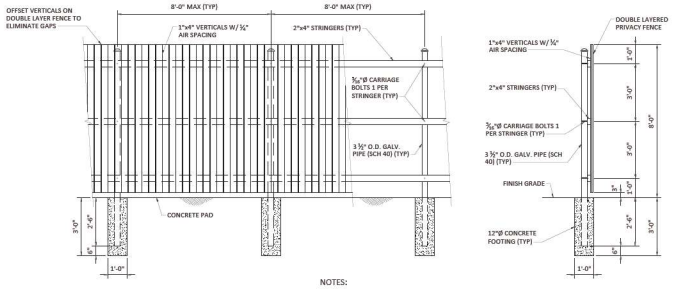
SHEET DT-2
SEQ. 19

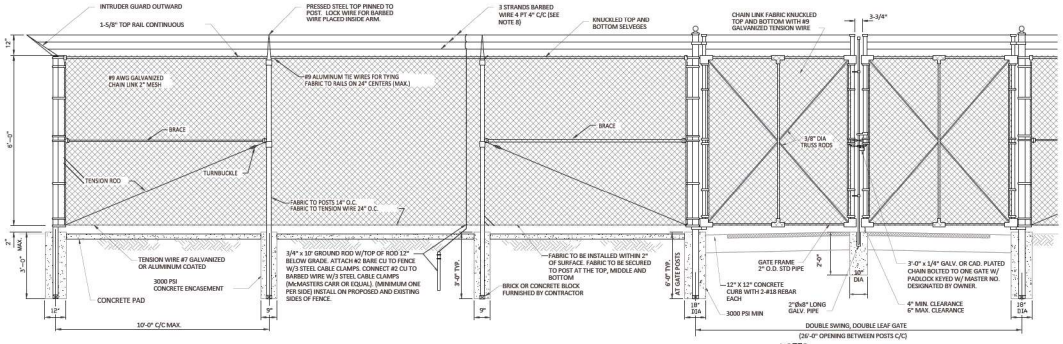


ELEVATION SECTION

NOTES:

1. WOOD MEMBERS ARE TO BE MADE OUT OF TREATED AND STAINED #1 GRADE WESTERN RED CEDAR MATERIAL. ALL HARDWARE TO BE GALVANIZED.
2. CONCRETE FOOTING TO BE 2000 PSI CONCRETE MINIMUM.
3. PRIVACY FENCE SHALL BE BOARD ON BOARD, WITH VERTICAL OFFSETS OF 1/4" TO 1/2" TO ELIMINATE GAPS.

1 – 8' HIGH WOOD PANEL FENCE
NOT TO SCALE



END POST (OR CORNER) 2-7/8" O.D. STD PIPE

LINE POST 2-3/8" O.D. STD PIPE

TYPICAL POST EMBEDMENT

GATE POST 6 5/8" O.D. STD PIPE

2 – ELEVATION OF CHAIN LINK FENCE AND GATES
NOT TO SCALE

NOTES:

1. ALL CHAIN LINK FENCE METAL PARTS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
2. FENCES AND GATES SHALL BE FURNISHED COMPLETE WITH ALL NECESSARY FITTINGS AND HARDWARE.
3. FOR GATES, SIZES OF PIPE, SAG RODS AND TURNBUCKLES SHALL BE MANUFACTURER'S STANDARD WHICH ALSO MEET THE REQUIREMENTS OF THIS DRAWING.
4. POSTS SHALL BE ROLLED OR EXTRUDED SECTIONS OR TUBING OF STEEL OR ALUMINUM CAPABLE OF WITHSTANDING A LATERAL FORCE OF 100 POUNDS APPLIED AT THE TOP. ALL HOLLOW POSTS SHALL BE CAPPED.
5. STANDARD PIPE SIZES INDICATED ARE NOMINAL DIAMETER, SCHEDULE 40, PER AMERICAN STANDARDS ASSOCIATION (ASA) B 36.10.
6. PROVIDE PLUNGE ROD AND CATCHES FOR ALL GATES IN OPEN AND CLOSED POSITION.
7. FENCE FABRIC SHALL MEET THE REQUIREMENTS OF ASTM A392. IT SHALL BE ONE PIECE AND COATED WITH ZINC OR PVC.
8. CONCERTINA WIRE OR RAZOR WIRE SHALL BE INSTALLED ANYTIME THERE IS A CORNER, CHANGE IN FENCE DIRECTION, AND AT ALL "H" BRACES AND GATES. THE WIRE SHALL BE 18"-24" LOOP, .0025" THICK x1 ¾" WIDE WITH A MINIMUM OF THREE ATTACHMENTS PER LOOP.

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
FENCE AND GATE DETAILS

NO.	ISSUE	BY	DATE	FNI JOB NO. 84007.23466
			4/14/2023	DESIGNED LJM
				DRAWN AL
				REVIEWED
				CHECKED RMO

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FILE NAME CV-ALL-LS-DET01.dwg

SHEET DT-3
SEQ. 20

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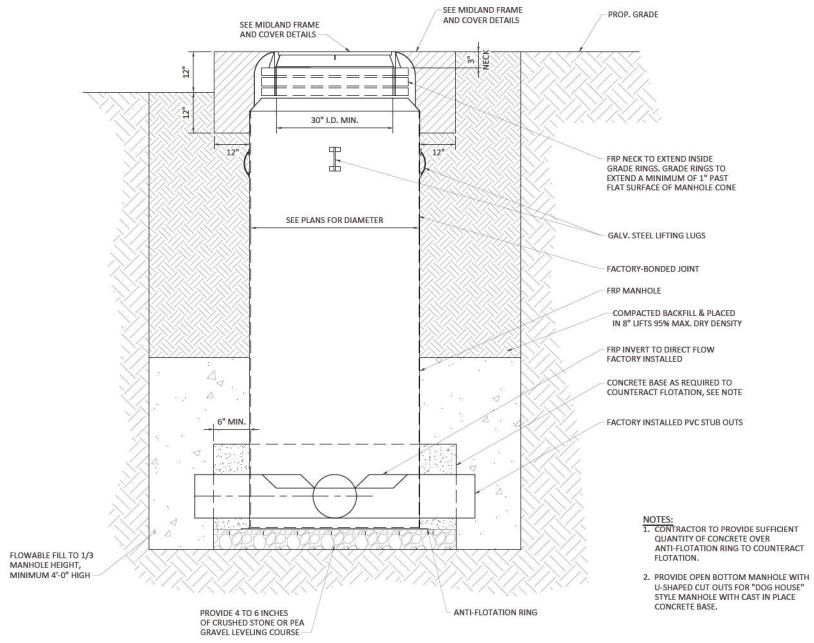

NOTES:
1. CONTRACTOR TO PROVIDE SUFFICIENT QUANTITY OF CONCRETE OVER ANTI-FLOTATION RING TO COUNTERACT FLOTATION.
2. PROVIDE OPEN BOTTOM MANHOLE WITH U-SHAPED CUT OUTS FOR "DOG HOUSE" STYLE MANHOLE WITH CAST IN PLACE CONCRETE BASE.

1 / –
FIBERGLASS WATERTIGHT DOGHOUSE MANHOLE
NOT TO SCALE

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
DOGHOUSE MANHOLE DETAIL

NO.	ISSUE	BY	DATE

FAN JOB NO. MOD22466
DATE 4/14/2023
DESIGNED LLN
DRAWN AL
REVISED AL
CHECKED RMO
FILE NAME CV-ALL-LS-DET01.dwg

VERIFY SCALE 0 1
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SHEET DT-4
SEQ. 21

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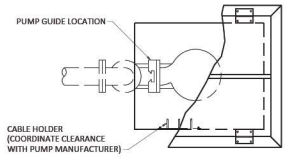
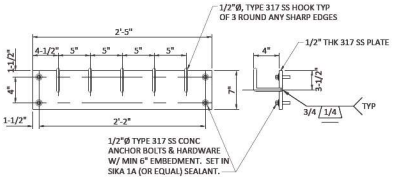
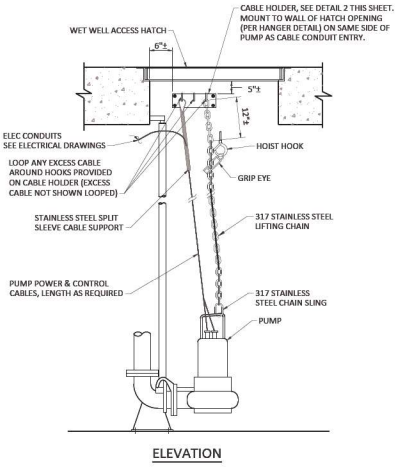


PLAN

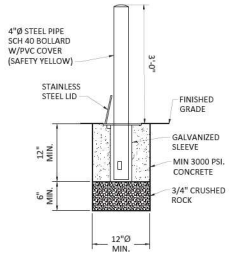


2 CABLE HOLDER
NOT TO SCALE



ELEVATION

1 TYPICAL PUMP LIFITNG AND CABLING DETAIL
NOT TO SCALE



3 REMOVABLE BOLLARD DETAIL
NOT TO SCALE

Freese and Nichols, Inc.
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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
MISCELLANEOUS DETAILS

NO.	ISSUE	BY	DATE

PROJ. NO. MOD22466
DATE 4/14/2023
DESIGNED JLN
DRAWN AL
REVISED AL
CHECKED RMO
FILE NAME CV-ALL-LS-DET01.dwg

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SHEET DT-5
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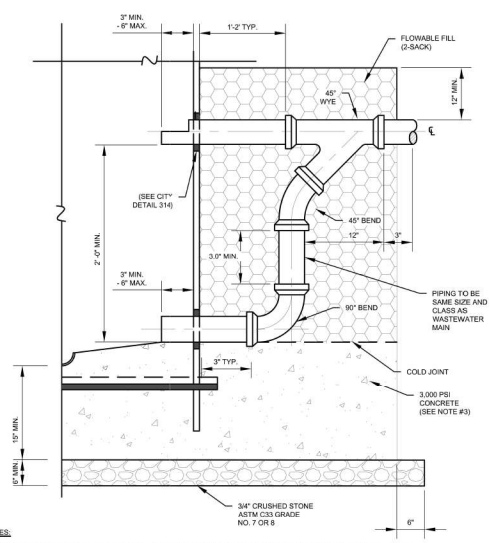

NOTES:

1. FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT). REQUIRED FOR ALL OVER EXCAVATION BACKFILL.
2. INSTALL BEND AND WYE AS NEAR TO MANHOLE WALL AS PRACTICAL, USUALLY 3"-4" FROM THE BEND AT THE BOTTOM.
3. ALL CONCRETE TO BE CLASS "A" CONCRETE.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	EXTERNAL DROP STRUCTURE		501

Freese and Nichols, Inc.
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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
MIDLAND STANDARD DETAILS I

NO.	ISSUE	BY	DATE

FAN JOB NO. MDD22466
DATE 4/14/2023
DESIGNED JLN
DRAWN AL
REVISED AL
CHECKED RMO
FILE NAME CV-MDD-DT-DTL501.dwg

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SHEET DT-6
SEQ. 23

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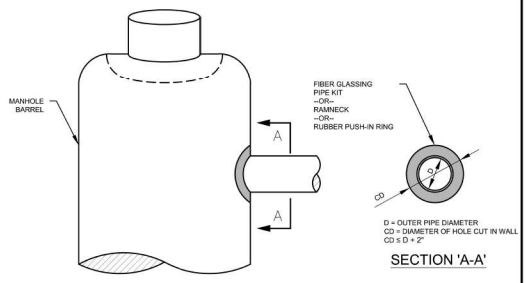
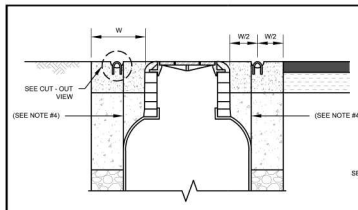


SECTION 'A-A'

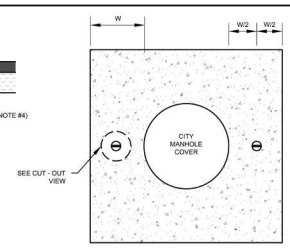
NOTES:

1. THE DIAMETER OF THE CUTOUT IN THE MANHOLE BARREL IS TO BE NO MORE THAN 2.0" WIDER THAN THE OUTER WALL DIAMETER OF THE PENETRATING PIPE.
2. THE PENETRATING PIPE IS TO BE CENTERED IN THE MANHOLE BARREL CUTOUT.
3. PIPES PENETRATING MANHOLE MUST BE MINIMUM 6" DIAMETER, AND SERVICE LINES MUST BE CONSTRUCTED TO CITY WASTEWATER MAIN OR STORM DRAIN STANDARDS WITHIN PUBLIC FIGHT OF WAY OR EASEMENT.
4. FORM FLOW SURFACE AND MOUND CONCRETE AROUND PIPE PENETRATIONS, TO FORM A SEAL, IN ONE CONTINUOUS PLACEMENT OPERATION.
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

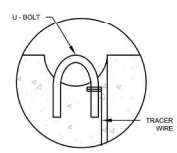
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE:	DETAIL:
	TYPICAL FIBERGLASS MANHOLE PIPE PENETRATION		314



CROSS SECTION VIEW



PLAN VIEW



CUT - OUT VIEW

NOTES:

1. SEE OTHER CITY STANDARD DETAILS FOR INFORMATION REGUARDING MANHOLES, COVERS, CONCRETE RINGS, ETC.
2. U - BOLT IS TO BE GALVANIZED STEEL RATED FOR OUDOOR EXPOSURE, 1.0" DIAMETER.
3. U - BOLT IS TO BE SET FLUSH WITH FINISHED SURFACE OF CONCRETE RING. THERE IS TO BE A SMALL DEPRESSION IN THE CONCRETE SUFFICIENT TO ALLOW A CLAMP OR WIRE TO BE PLACED AROUND THE EXPOSED METAL.
4. TRACER WIRE PER DETAIL 310(A) TO BE TAPED TO SIDE OF MANHOLE AND WRAPPED SECURELY TO END OF U-BOLT WHEN INSTALLED. TRACER WIRE IS TO REMAIN ENTIRELY COVERED.
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		MANHOLE DETECTOR WIRE END		321

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
MIDLAND STANDARD DETAILS II

NO.	ISSUE	BY	DATE

FAN JOB NO.	MDD22466
DATE	4/14/2023
DESIGNED	LM
DRAWN	AL
REVISED	AL
CHECKED	RMO
FILE NAME	CV-MDD-DT-DTLS01.dwg

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SHEET DT-7
SEQ. 24

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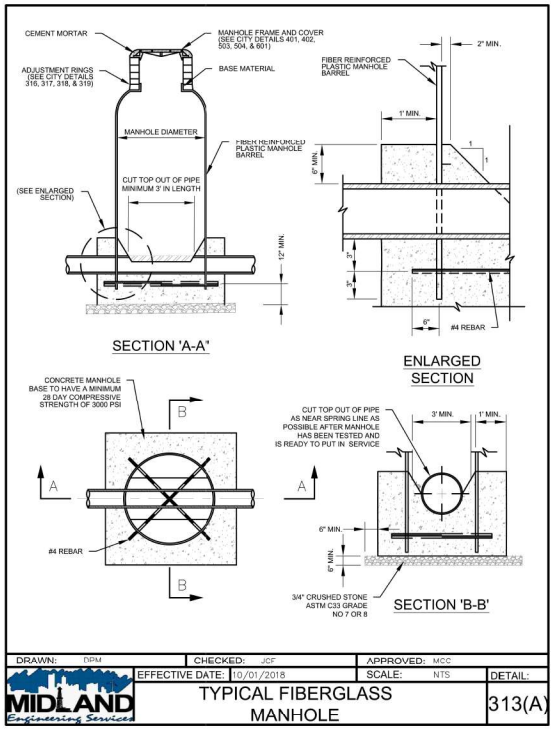

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
MIDLAND Engineering Services	TYPICAL FIBERGLASS MANHOLE		313(A)

NOTES:

1. 48" DIAMETER MANHOLES TO BE USED FOR PIPE DIAMETERS OF 24" OR SMALLER ONLY.
2. INSTALL DROPS AND INTERSECTING PIPES ONLY WHEN CALLED FOR IN CONSTRUCTION DRAWINGS.
3. SET MANHOLE FRAME IN SEALANT PER CITY OF MIDLAND STANDARD SPECIFICATIONS.
4. NEW MANHOLE TO HAVE SEAMLESS AND CONTINUOUS NECK, SHOULDER, AND BARREL.
5. ALL CONCRETE TO BE CLASS "A" CONCRETE.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
MIDLAND Engineering Services	TYPICAL FIBERGLASS MANHOLE		313(B)

Freese and Nichols, Inc
Texas Registered Engineering Firm F-2144

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136235
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PROFESSIONAL
ENGINEER

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Abilene, Texas 79601
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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
MIDLAND STANDARD DETAILS III

NO.	BY	DATE	REVISIONS

FAR JOB NO. MDD22466
DATE 4/14/2023
DESIGNED JJM
DRAWN AL
REVIEWED
CHECKED RMO
FILE NAME CV-MDD-DT-DTL503.dwg

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET DT-8
SEQ. 25

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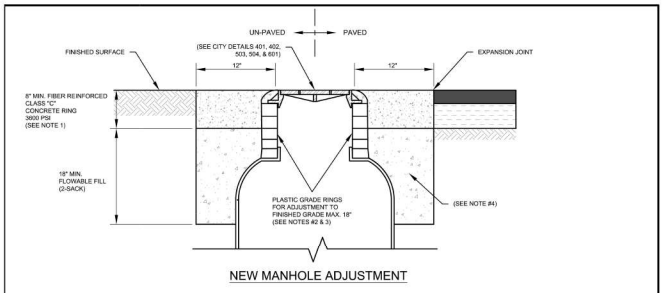
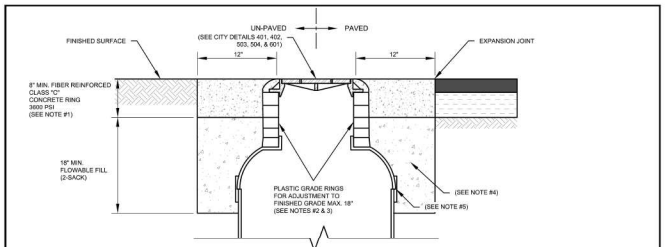


NEW MANHOLE ADJUSTMENT

NOTES:

1. INSTALL 12" MIN. FIBER REINFORCED CLASS "C" CONCRETE RING,3600 PSI, WHEN MANHOLE IS LOCATED IN AN ARTERIAL R.O.W.
2. GRADE RINGS TO MEET ASTM STANDARD A48 AND TO BE 2", 4", OR 6" THICKNESS AS REQUIRED. INSTALL ASPHALT TAR IN THICK, UNIFORM COATING OVER ALL OUTER ADJUSTMENT RING SURFACES AND JOINTS.
3. ENGINEERING SERVICES REPRESENTATIVE AND UTILITY SERVICES REPRESENTATIVE MAY ALLOW GREATER ADJUSTMENT RING DEPTH TO ACCOMMODATE PAVING STRUCTURES.
4. REMOVE ALL MATERIAL EXCAVATED FROM SITE AND EXCAVATION, AND FILL TO FINISHED BASE ELEVATION WITH FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT).
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	NEW MANHOLE ADJUSTMENT		316
APPROVED: MCC			



EXISTING MANHOLE BARREL ADJUSTMENT

NOTES:

1. INSTALL 12" MIN. FIBER REINFORCED CLASS "C" CONCRETE RING, 3600 PSI, WHEN MANHOLE IS LOCATED IN AN ARTERIAL R.O.W.
2. GRADE RINGS TO MEET ASTM STANDARD A48 AND TO BE 2", 4", OR 6" THICKNESS AS REQUIRED. INSTALL ASPHALT TAR IN THICK, UNIFORM COATING OVER ALL OUTER ADJUSTMENT RING SURFACES AND JOINTS.
3. ENGINEERING SERVICES REPRESENTATIVE AND UTILITY SERVICES REPRESENTATIVE MAY ALLOW GREATER ADJUSTMENT RING DEPTH TO ACCOMMODATE PAVING STRUCTURES.
4. REMOVE ALL MATERIAL EXCAVATED FROM SITE AND EXCAVATION, AND FILL TO FINISHED BASE ELEVATION WITH FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT).
5. MANUFACTURED WATERTIGHT CONNECTOR, CORE DRILL AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	EXISTING MANHOLE BARREL ADJUSTMENT		317
APPROVED: MCC			

Freese and Nichols, Inc
Texas Registered Engineering Firm F-2144

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PROFESSIONAL
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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
MIDLAND STANDARD DETAILS IV

NO.	BY	DATE	REVISION
1			

PROJECT NO. MDD22466
DATE 10/2023
DESIGNED JJM
DRAWN AL
REVIEWED
CHECKED RMO
FILE NAME CV-MDD-DT-DTL503.dwg

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SHEET DT-9
SEQ. 26

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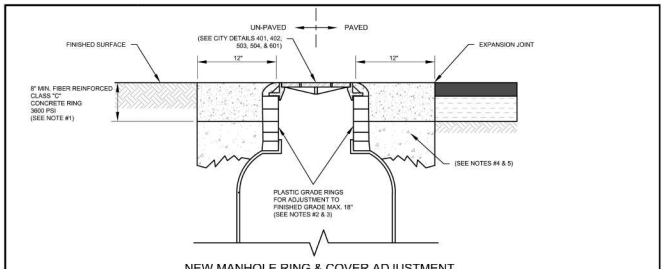
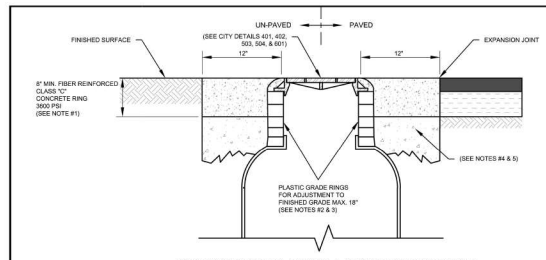


NEW MANHOLE RING & COVER ADJUSTMENT

NOTES:

1. INSTALL 12" MIN. FIBER REINFORCED CLASS "C" CONCRETE RING, 3600 PSI, WHEN MANHOLE IS LOCATED IN AN ARTERIAL R.O.W.
2. GRADE RINGS TO MEET ASTM STANDARD A48 AND TO BE 2", 4", OR 6" THICKNESS AS REQUIRED. INSTALL ASPHALT TAR IN THICK, UNIFORM COATING OVER ALL OUTER ADJUSTMENT RING SURFACES AND JOINTS.
3. ENGINEERING SERVICES REPRESENTATIVE AND UTILITY SERVICES REPRESENTATIVE MAY ALLOW GREATER ADJUSTMENT RING DEPTH TO ACCOMMODATE PAVING STRUCTURES.
4. REMOVE ALL MATERIAL EXCAVATED FROM SITE AND EXCAVATION.
5. FILL ANY OVER-EXCAVATION WITH FLOWABLE FILL 2-SACK (2-SACK = 188 LBS/CY, PORTLAND CEMENT).
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	CHECKED: JCF	NEW MANHOLE RING & COVER ADJUSTMENT		318
	APPROVED: MCC			



EXISTING MANHOLE RING & COVER ADJUSTMENT

NOTES:

1. INSTALL 12" MIN. FIBER REINFORCED CLASS "C" CONCRETE RING, 3600 PSI, WHEN MANHOLE IS LOCATED IN AN ARTERIAL R.O.W.
2. GRADE RINGS TO MEET ASTM STANDARD A48 AND TO BE 2", 4", OR 6" THICKNESS AS REQUIRED. INSTALL ASPHALT TAR IN THICK, UNIFORM COATING OVER ALL OUTER ADJUSTMENT RING SURFACES AND JOINTS.
3. ENGINEERING SERVICES REPRESENTATIVE AND UTILITY SERVICES REPRESENTATIVE MAY ALLOW GREATER ADJUSTMENT RING DEPTH TO ACCOMMODATE PAVING STRUCTURES.
4. REMOVE ALL MATERIAL EXCAVATED FROM SITE AND EXCAVATION.
5. FILL ANY OVER-EXCAVATION WITH FLOWABLE FILL 2-SACK (2-SACK = 188 LBS/CY, PORTLAND CEMENT).
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	CHECKED: JCF	EXISTING MANHOLE RING & COVER ADJUSTMENT		319
	APPROVED: MCC			

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

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136235
Licensed
Professional Engineer
Texas

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
MIDLAND STANDARD DETAILS V

NO.	ISSUE	BY	DATE

FAN JOB NO. MDD22466
DATE 4/14/2023
DESIGNED JLN
DRAWN AL
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CHECKED RMO
FILE NAME CV-MDD-DT-DTLS01.dwg

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SHEET DT-10
SEQ. 27

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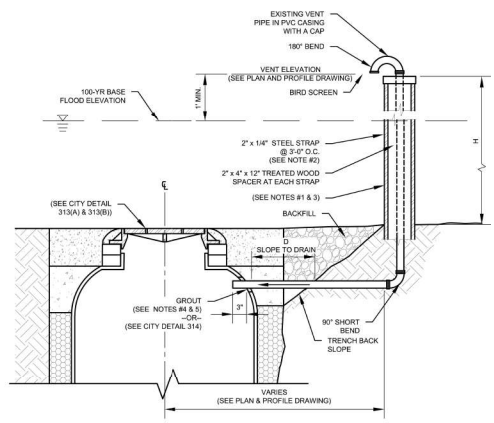
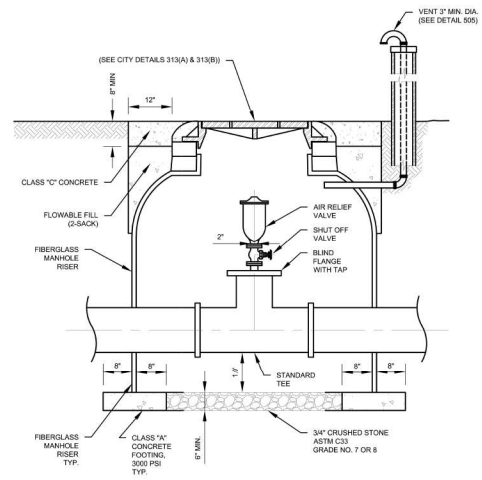


REMOTE VENT PIPE

NOTES:

1. ALL PIPING TO BE 3" DIA. DUCTILE IRON WITH FLANGED JOINTS COATED INSIDE AND OUTSIDE.
2. PAINT ALL STRAPPING WITH 2 COATS OF ALL WEATHER EPOXY.
3. PAINT ALL EXPOSED PIPING WITH 2 COATS OF ALL WEATHER EPOXY.
4. APPROVED WATER TIGHT MANHOLE CONNECTOR INSTALLED PER SPECIFICATION AND/OR MANUFACTURER'S INSTRUCTIONS.
5. GROUT TO BE APPROVED NON-SHRINK TYPE.
6. MANHOLE VENT TO BE USED IN CONJUNCTION WITH WATER TIGHT MANHOLE RINGS AND COVERS SPACED EVERY THIRD MANHOLE OR AS SHOWN ON THE PLANS.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	REMOTE VENT PIPE		505



NOTES:

1. IF AIR RELIEF VALVE IS LOCATED IN PAVEMENT THE COVER IS TO BE A GRATE COVER AND NO VENT PIPES ARE TO BE UTILIZED.
2. ALL CONCRETE PAVEMENT TO BE CLASS "C" CONCRETE, 3600 PSI.
3. PLACE ALL FLOWABLE FILL 2-SACK (2 - SACK = 188 LBS/CY, PORTLAND CEMENT) AS A SINGLE CONTINUOUS POUR.
4. MATERIAL AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	FORCE MAIN RELIEF VALVE		506

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Texas Registered Engineering Firm F-2144

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
MIDLAND STANDARD DETAILS VI

NO.	ISSUE	BY	DATE

FAN JOB NO. MDD22466
DATE 4/14/2023
DESIGNED JLN
DRAWN AL
REVISED AL
CHECKED RMO
FILE NAME CV-MDD-DT-DTL501.dwg

VERIFY SCALE 0 1
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SHEET DT-11
SEQ. 28

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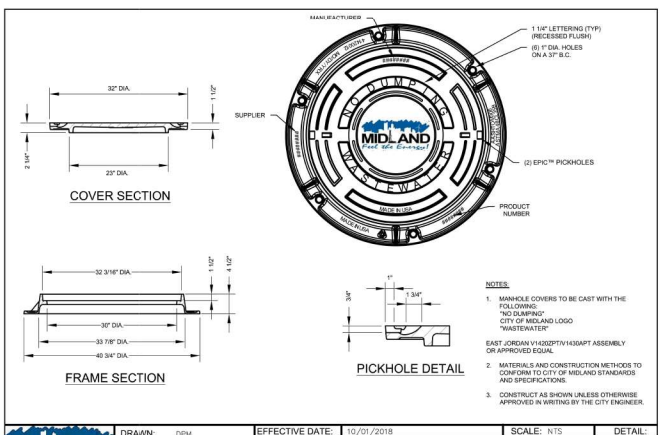

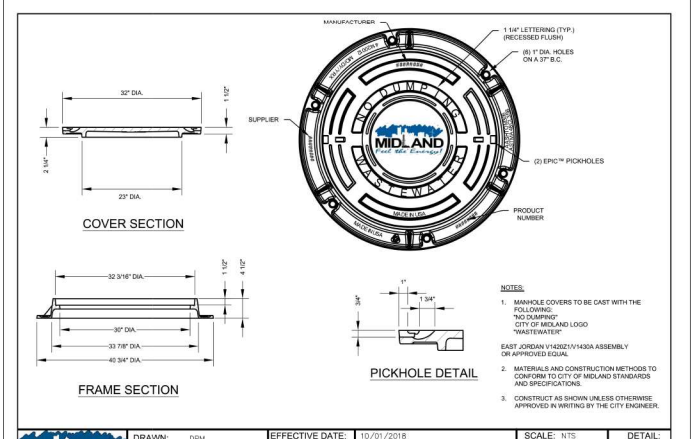

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
MIDLAND STANDARD DETAILS VII

NO.	ISSUE	BY	DATE

DESIGN JOB NO.	MDD22466
DATE	4/14/2023
DESIGNED	JLN
DRAWN	AL
REVISED	AL
CHECKED	RMO
FILE NAME	CV-MDD-DT-DTLS01.dwg

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SHEET DT-12
SEQ. 29

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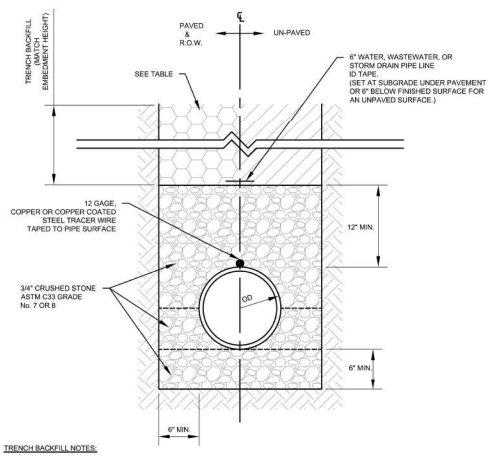
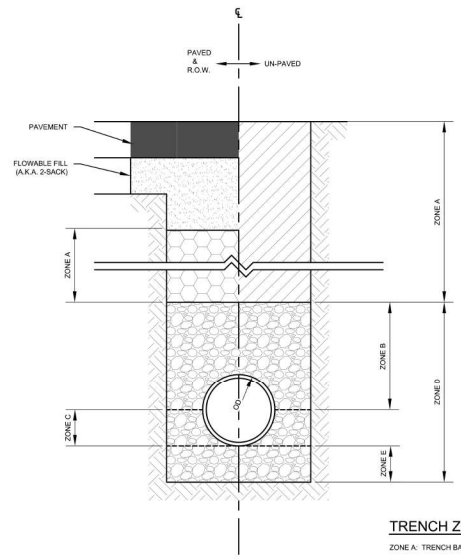


TRENCH BACKFILL NOTES:

1. APPLIES TO ALL PIPE TYPES. (DUCTILE IRON, PVC, ETC.)
2. UTILIZE SELECT FILL BACKFILL BENEATH ALL PAVED SURFACES. NATIVE MATERIAL BACKFILL CAN ONLY BE USER FOR UNPAVED TRENCH CONDITIONS IF BACKFILL MATERIAL IS ≤ 30LL AND ≤ 15 PI.
3. NATIVE MATERIAL TO BE EXISTING EXCAVATED SOIL FROM TRENCH WITH ALL MATERIAL BROKEN DOWN ≤ 2".
4. MOISTURE CONDITION ALL BACKFILL MATERIAL PRIOR TO PLACING IN TRENCH.
5. PLACE TRENCH BACKFILL MATERIAL IN MAXIMUM 12" LOOSE LIFTS AND COMPACT TO MAXIMUM 8" COMPACTED LIFTS.
6. REFER TO CITY DETAILS 311 AND 312 FOR TRENCH PAVEMENT REPLACEMENT REQUIREMENTS.
7. PLACE LAYERS B, C, AND E FOUND ON CITY DETAIL 310(B) AS SEPARATE LAYERS.
8. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
9. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	TRENCHING AND BEDDING		310(A)



TRENCH ZONES:

ZONE A: TRENCH BACKFILL
ZONE B: PIPE BACKFILL
ZONE C: HAUNCHING
ZONE D: PIPE EMBEDMENT
ZONE E: BEDDING

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	TRENCHING AND BEDDING		310(B)

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
MIDLAND STANDARD DETAILS VIII

NO.	ISSUE	BY	DATE	FAN JOB NO. MDD22466
				DATE 4/14/2023
				DESIGNED JLN
				DRAWN AL
				REVIEWED AL
				CHECKED RMO

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SHEET DT-13
SEQ. 30

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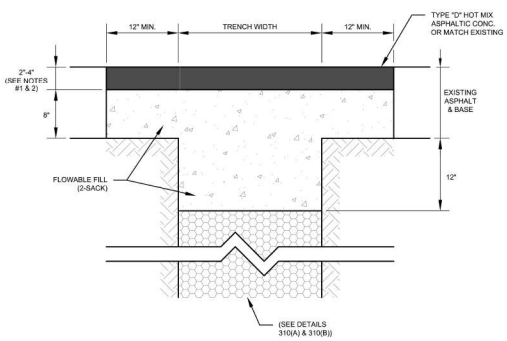
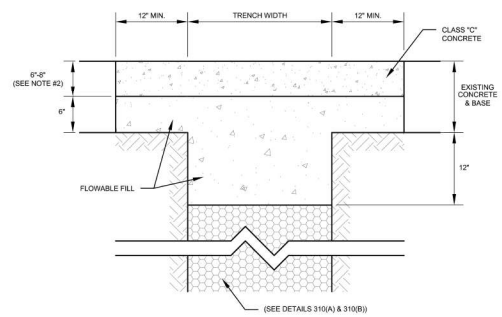


NOTES:

1. ASPHALT PAVEMENT THICKNESS TO BE A MINIMUM OF 2" OR MATCH THE EXISTING ASPHALT THICKNESS IF IT IS GREATER THAN 2" THICK.
2. PLACE ASPHALT PAVEMENT IN MAXIMUM 2" LIFTS, 95% MODIFIED COMPACTION.
3. PLACE ALL FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT) AS A SINGLE CONTINUOUS POUR.
4. EXTEND BOTH ASPHALT AND FLOWABLE FILL 12" BEYOND THE EDGE OF THE TRENCH ON BOTH SIDES.
5. SEE DETAILS 310(A) AND 310(B) REGARDING TRENCH BACKFILL REQUIREMENTS BENEATH THE FLOWABLE FILL.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	ASPHALT TRENCH PAVEMENT REPLACEMENT		311



NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C" CONCRETE, 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. CONCRETE PAVEMENT THICKNESS TO BE A MINIMUM OF 6" OR MATCH THE EXISTING CONCRETE THICKNESS IF IT IS GREATER THAN 6" THICK. CONCRETE PAVEMENT THICKNESS TO BE MINIMUM 8" FOR ARTERIAL PAVEMENT.
3. PLACE ALL FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT) AS A SINGLE CONTINUOUS POUR.
4. EXTEND BOTH CONCRETE AND FLOWABLE FILL 12" BEYOND THE EDGE OF THE TRENCH ON BOTH SIDES.
5. SEE DETAILS 310(A) AND 310(B) REGARDING TRENCH BACKFILL REQUIREMENTS BENEATH THE FLOWABLE FILL.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	CONCRETE TRENCH PAVEMENT REPLACEMENT		312

Freese and Nichols, Inc.
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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
MIDLAND STANDARD DETAILS IX

NO.	ISSUE	BY	DATE

FAN JOB NO. MDD22466
DATE 4/14/2023
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SEQ. 31

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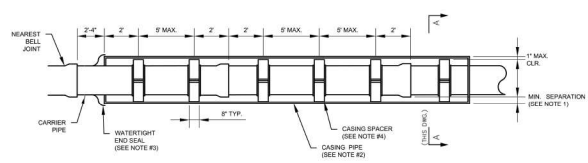
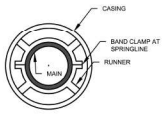


CROSS SECTION VIEW

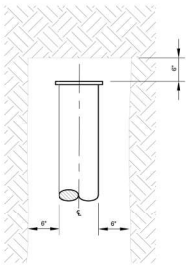
NOTES:

1. CASING PIPE TO BE MINIMUM TWO (2) NOMINAL SIZES LARGER IN DIAMETER THAN CARRIER PIPE.
2. CASING PIPE TO BE NO LESS THAN 12" DIAMETER PIPE. 12"-16" DIAMETER CASING PIPE MAY BE STEEL OR PVC PIPE. CASING PIPE LARGER THAN 16" DIAMETER MUST BE STEEL PIPE. STEEL CASING PIPE TO BE MINIMUM 1/4" WALL THICKNESS. PVC CASING PIPE TO BE SDR-26 D2241 OR C-900.
3. CASING PIPE TO BE STEEL OR PVC.
4. WATER TIGHT END SEAL TO BE GROUT OR APPROVED MANUFACTURED SEAL.
5. CASING SPACERS TO BE HDPE OR APPROVED EQUAL, MINIMUM FOUR (4) EQUALLY SPACED RUNNERS, WITH BAND CLAMP JOINT LOCATED AT SPRINGLINE. SPACERS FOR CASING PIPE LARGER THAN 24" DIAMETER REQUIRE MINIMUM SIX (6) EQUALLY SPACED RUNNERS.
6. CASING INSTALLED IN OPEN TRENCH IS TO BE BACKFILLED PER CURRENT CITY STANDARDS FOR AN UN-ENCASED MAIN.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.



SECTION 'A-A'

MIDLAND Engineering Services	DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	CHECKED: JCF	TYPICAL PIPE CASING DETAIL		805
	APPROVED: MCC			



PLUG BLOCKING

NOTES:

1. PLUG ALL WASTEWATER MAIN AND STORM DRAIN STUB OUTS. SECURE PLASTIC PLUG TO END OF STORM DRAIN.
2. FITTINGS TO BE POLY WRAPPED BEFORE BACKFILLING.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	CHECKED: JCF	GRAVITY MAIN PLUG		315
	APPROVED: MCC			

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

JEAN-PAUL MAIN
13625
Licensed
Professional Engineer
Texas

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
MIDLAND STANDARD DETAILS X

NO.	ISSUE	BY	DATE

FAN JOB NO. MDD22466
DATE 4/14/2023
DESIGNED JLN
DRAWN AL
REVISED AL
CHECKED RMO
FILE NAME CV-MDD-DT-DTLS01.dwg

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SEQ. 32

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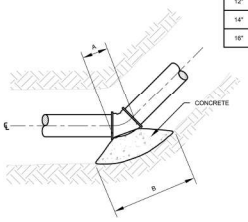
BLOCKING FOR HORIZONTAL BENDS
DESIGN 180 PSI LINE PRESSURE
SOIL BEARING CAP 2KSF

DIA. OF PIPE	DEGREE OF BEND											
	11 1/4°			22 1/2°			45°			90°		
	A	B	°C	A	B	°C	A	B	°C	A	B	°C
4"	0'-4"	1'-0"	1'-0"	0'-5"	1'-0"	1'-0"	0'-6"	1'-0"	1'-0"	0'-11"	1'-3"	1'-3"
6"	0'-7"	1'-0"	1'-0"	0'-7"	1'-0"	1'-0"	0'-8"	1'-0"	1'-0"	1'-3"	1'-11"	1'-11"
8"	0'-8"	0'-10"	1'-2"	0'-9"	1'-4"	1'-4"	0'-10"	1'-10"	1'-10"	1'-6"	2'-6"	2'-6"
10"	0'-10"	1'-0"	1'-5"	0'-11"	1'-8"	1'-8"	1'-1"	2'-4"	2'-4"	1'-11"	3'-2"	3'-2"
12"	1'-0"	1'-3"	1'-8"	1'-1"	2'-0"	2'-0"	1'-3"	2'-10"	2'-10"	2'-2"	3'-10"	3'-10"
14"	0'-11"	1'-5"	1'-11"	1'-1"	2'-4"	2'-4"	1'-3"	3'-3"	3'-3"			
16"	1'-1"	1'-8"	2'-2"	1'-2"	2'-8"	2'-8"	1'-5"	3'-9"	3'-9"			

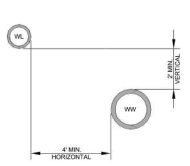
°C - VERTICAL DEPTH OF CONCRETE BEARING ON UNDISTURBED EARTH



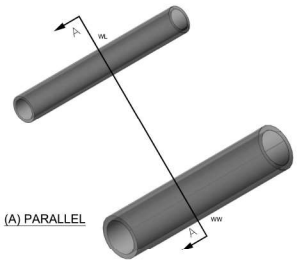
NOTES:

1. FORM ALL CONCRETE THRUST BLOCKING. DO NOT PLACE UN-FORMED THRUST BLOCKING.
2. ALL THRUST BLOCKING TO BE CLASS "A" CONCRETE, 3000 PSI, AND TO BE PLACED AGAINST UNDISTURBED EARTH. USE FIBER REINFORCEMENT THROUGHOUT.
3. FITTING TO BE POLY WRAPPED BEFORE BLOCKING IS PLACED.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
BLOCKING FOR HORIZONTAL BENDS			DETAIL: 616



SECTION 'A-A'



(A) PARALLEL

NOTES:

1. SEE CITY DETAIL 807 FOR NEW PETROLEUM OR NATURAL GAS LINE REQUIREMENTS WHEN IN PARALLEL WITH A WATER MAIN. REQUIREMENTS FOR WATER MAINS IN PARALLEL WITH PETROLEUM OR NATURAL GAS LINES ARE THE SAME AS WHEN THEY ARE PARALLEL WITH WASTEWATER MAINS UNLESS STATED OTHERWISE IN CITY DETAIL 807.
2. IF AN EXISTING PETROLEUM OR NATURAL GAS LINE PREDATES A PUBLIC ROW OR EASEMENT THAT THE WATER MAIN IS LOCATED IN THEN THE WATER MAIN DESIGN AND CONSTRUCTION MAY BE SUBJECT TO ADDITIONAL REQUIREMENTS AS PER THE PETROLEUM OR NATURAL GAS LINE OWNER'S STANDARDS.
3. WASTEWATER MAINS AND MANHOLES MUST BE LOCATED AT LEAST 9.0' FROM ALL WATER MAINS IN ALL DIRECTIONS. IF THIS IS NOT POSSIBLE THEN AN ENGINEERING REPORT IS REQUIRED PER TAC TO JUSTIFY WHY, AND THE REQUIREMENTS OF THIS DETAIL WILL APPLY. THIS DETAIL IS INTENDED TO COMPLY WITH TAC 217.53(d) AND TAC 290.44(e). IF TAC AND THIS DETAIL DIFFER THEN THE MORE RESTRICTIVE STANDARD GOVERNS.
4. WHERE WATER MAINS ARE LOCATED IN PARALLEL WITH NEW WASTEWATER MAINS, WASTEWATER MAINS MUST BE CONSTRUCTED AT LEAST 150 PSI PRESSURE-CLASS, CORROSION RESISTANT, NON-BRITTLE PIPE SUCH AS CIP, DIP, OR PVC PIPE THAT IS DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE. EXISTING WASTEWATER MAINS IN PARALLEL THAT ARE LEAKING OR ARE DISTURBED AND THEN BEGIN TO LEAK MUST BE REPLACED WITH 150 PSI PRESSURE-RATED PIPE.
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
PARALLEL WATER & WASTEWATER SPACING			DETAIL: 306

Freese and Nichols, Inc
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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
MIDLAND STANDARD DETAILS XI

NO.	ISSUE	BY	DATE

PROJECT NO. MDD122466
DATE 4/14/2023
DESIGNED JLM
DRAWN AL
REVISED AL
CHECKED RMO
FILE NAME CV-MDD-DT-DTL503.dwg

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SHEET DT-16
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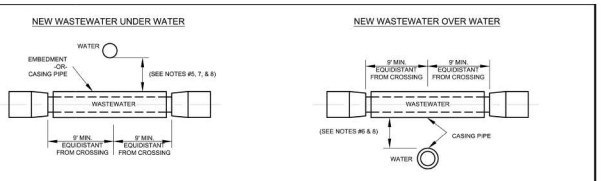
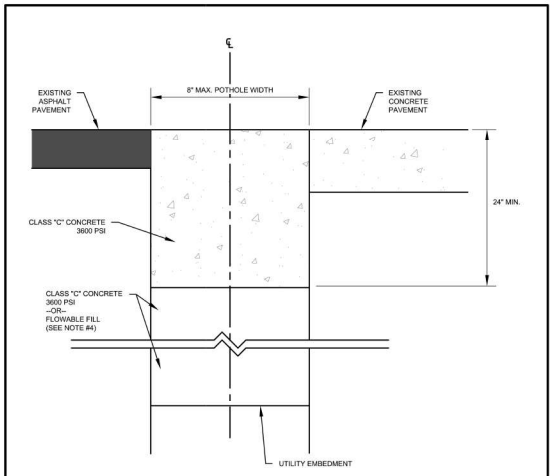


NOTES:

1. SEE CITY DETAIL 307 FOR NEW WATER MAIN REQUIREMENTS AT WASTEWATER MAIN CROSSINGS.
2. WASTEWATER MAINS AND MANHOLES MUST BE LOCATED AT LEAST 9.0' FROM ALL WATER MAINS IN ALL DIRECTIONS. IF THIS IS NOT POSSIBLE THEN AN ENGINEERING REPORT IS REQUIRED PER TAC TO JUSTIFY WHY, AND THE REQUIREMENTS OF THIS DETAIL WILL APPLY.
3. THIS DETAIL IS INTENDED TO COMPLY WITH TAC 217.53(d) AND TAC 290.44(e). IF TAC AND THIS DETAIL DIFFER THEN THE MORE RESTRICTIVE STANDARD GOVERNS.
4. CENTER NEW WASTEWATER MAIN PIPE SEGMENT ON CROSSING SO THAT ALL PIPE SEGMENT JOINTS ARE EQUIDISTANT AND AT LEAST 9.0' HORIZONTALLY FROM THE CENTERLINE OF THE CROSSING. WASTEWATER MAIN IS TO CROSS WATER MAIN AT 90° ANGLE.
5. NEW WASTEWATER MAIN CROSSING BENEATH NEW OR EXISTING WATER MUST COMPLY WITH ONE OF THE FOLLOWING:
   A. WASTEWATER MAIN PIPE TO BE PRESSURE RATED SDR-26 D2241 PIPE OR APPROVED EQUAL FROM MANHOLE TO MANHOLE WITH MINIMUM 18.0' LONG CEMENT STABILIZED SAND ENCASEMENT (2.5 SACKS/CUBIC YARD) CENTERED ON THE CROSSING. VERTICAL SEPARATION FROM OUTER EDGE OF WATER MAIN TO BE NO LESS THAN 2.0'.
   B. WASTEWATER MAIN PIPE TO BE HEAVY-WALL GRAVITY PIPE SDR-26 D3034 OR APPROVED EQUAL FROM MANHOLE TO MANHOLE WITH MINIMUM 18.0' LONG PIPE ENCASEMENT CENTERED ON THE CROSSING. SEE CITY DETAIL 805 FOR PIPE CASING. VERTICAL SEPARATION FROM OUTER EDGE OF WATER MAIN TO BE NO LESS THAN 0.5'.
6. NEW WASTEWATER MAIN CROSSING OVER NEW OR EXISTING WATER MAIN TO BE PRESSURE RATED SDR-26 D2241 PIPE OR APPROVED EQUAL FROM MANHOLE TO MANHOLE WITH MINIMUM 18.0' LONG PIPE ENCASEMENT CENTERED ON THE CROSSING. SEE CITY DETAIL 805 FOR PIPE CASING. VERTICAL SEPARATION FROM OUTER EDGE OF WATER MAIN TO BE NO LESS THAN 2.0'.
7. NEW WATER MAINS CROSSING OVER EXISTING WASTEWATER MAINS ARE COVERED IN CITY DETAIL 307.
8. VERTICAL SEPARATION DIMENSIONS TO BE MEASURED FROM OUTER EDGE OF ALL PIPE ENCASEMENTS.
9. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
10. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
	CHECKED: JCF	NEW WASTEWATER MAIN CROSSING WATER MAIN	DETAIL: 309
	APPROVED: MCC		



NOTES:

1. UTILITY EMBEDMENT TO BE REPLACED TO ORIGINAL CONDITION AND DEPTH OVER UTILITY.
2. PLACE ALL CONCRETE AS A SINGLE CONTINUOUS POUR. PLACE CONCRETE SEPARATELY FROM FLOWABLE FILL.
3. CONCRETE TO BE CITY OF MIDLAND CLASS "C" CONCRETE, 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
4. PLACE ALL FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT) AS A SINGLE CONTINUOUS POUR. FLOWABLE FILL MUST CURE FOR MINIMUM OF ONE (1) DAY PRIOR TO PLACING CONCRETE PAVEMENT OVER IT.
5. ALL CUT OR EXCAVATED MATERIAL MUST BE REMOVED FROM SITE AND MUST NOT BE USED FOR BACKFILL OR PAVEMENT REPAIR.
6. ALL POTHOLE PAVEMENT CUTS MUST BE CLEANLY CUT.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM	CHECKED: JCF	APPROVED: MCC
	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	DRY UTILITY POTHOLE REPAIR DETAIL		801

Freese and Nichols, Inc
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136235
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PROFESSIONAL
ENGINEER

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
MIDLAND STANDARD DETAILS XII

NO.	BY	DATE	REVISIONS

PROJECT NO. 4400122466
DATE 4/14/2023
DESIGNED JLM
DRAWN AL
REVIEWED AL
CHECKED RMO
FILE NAME CV-MDD-DT-DTL503.dwg

VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET DT-17
SEQ. 34

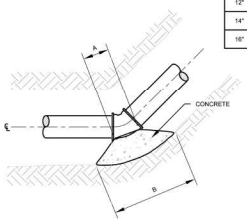
ACAD Rel 24.2s (LMS Tech)
Filename: N:\WTU\Drawings\CV-MDD-DT-DTL503.dwg
Last saved: 4/14/2023 2:04 PM Saved By: aal

Plot Date: 4/14/2023 1:34 PM Plot By: aal Filename: N:\WTU\Drawings\CV-MDD-DT-DTL501.dwg

BLOCKING FOR HORIZONTAL BENDS
DESIGN 180 PSI LINE PRESSURE
SOIL BEARING CAP 2K/SF

DIA. OF PIPE	DEGREE OF BEND											
	11 1/4"			22 1/2"			45"			90"		
	A	B	*C	A	B	*C	A	B	*C	A	B	*C
4"	0'-4"	1'-0"	1'-0"	0'-5"	1'-0"	1'-0"	0'-6"	1'-0"	1'-0"	0'-11"	1'-3"	1'-3"
6"	0'-7"	1'-0"	1'-0"	0'-7"	1'-0"	1'-0"	0'-8"	1'-5"	1'-5"	1'-3"	1'-11"	1'-11"
8"	0'-8"	0'-10"	1'-2"	0'-9"	1'-4"	1'-4"	0'-10"	1'-10"	1'-10"	1'-6"	2'-6"	2'-6"
10"	0'-10"	1'-0"	1'-5"	0'-11"	1'-8"	1'-8"	1'-1"	2'-4"	2'-4"	1'-11"	3'-2"	3'-2"
12"	1'-0"	1'-3"	1'-8"	1'-1"	2'-0"	2'-0"	1'-3"	2'-10"	2'-10"	2'-2"	3'-10"	3'-10"
14"	0'-11"	1'-5"	1'-11"	1'-1"	2'-4"	2'-4"	1'-3"	3'-3"	3'-3"			
16"	1'-1"	1'-8"	2'-2"	1'-2"	2'-8"	2'-8"	1'-5"	3'-9"	3'-9"			

*C - VERTICAL DEPTH OF CONCRETE BEARING ON UNDISTURBED EARTH



NOTES:

1. FORM ALL CONCRETE THRUST BLOCKING. DO NOT PLACE UN-FORMED THRUST BLOCKING.
2. ALL THRUST BLOCKING TO BE CLASS "A" CONCRETE, 3000 PSI, AND TO BE PLACED AGAINST UNDISTURBED EARTH. USE FIBER REINFORCEMENT THROUGHOUT.
3. FITTING TO BE POLY WRAPPED BEFORE BLOCKING IS PLACED.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	BLOCKING FOR HORIZONTAL BENDS		616
APPROVED: MCC			

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JEAN F. MANN 136235 Licensed Professional Engineer

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
MIDLAND STANDARD DETAILS XIII

NO.	ISSUE	BY	DATE

FAN JOB NO. MDD22466
DATE 4/14/2023
DESIGNED JLN
DRAWN AL
REVISED AL
CHECKED RMO
FILE NAME CV-MDD-DT-DTLS01.dwg

VERIFY SCALE 0 1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET DT-18
SEQ. 35

ACAD Rel: 24.2s (LMS Tech)
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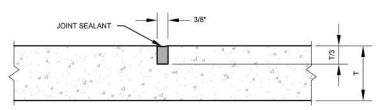
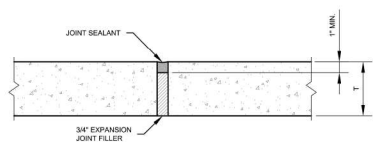
Last Saved: 4/14/2023 10:48 AM Saved By: aal

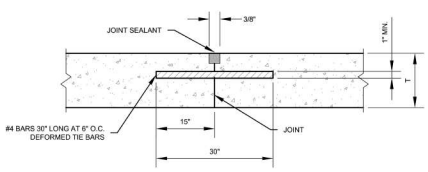
Plot Date: 4/14/2023 1:34 PM Plot By: aal Filename: N:\WTU\Drawings\CV-MDD-DT-DTLS01.dwg



TYPE "A" SAW-CUT JOINT

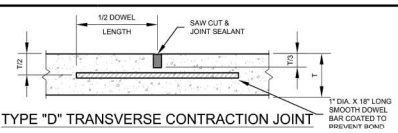


TYPE "B" DOWEL-LESS EXPANSION JOINT

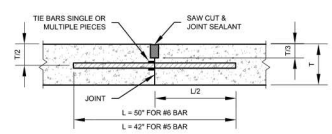


TYPE "C" CONSTRUCTION COLD JOINT

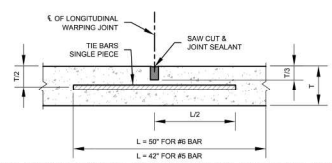
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	TYPICAL CONCRETE JOINTS		234(A)



TYPE "D" TRANSVERSE CONTRACTION JOINT



TYPE "E" LONGITUDINAL CONTRACTION JOINT



TYPE "F" LONGITUDINAL CONTRACTION SAW-CUT JOINT

NOTES:

1. JOINTING , DOWEL, AND TIE BAR DESIGN REQUIREMENTS ARE SUBJECT TO CHANGE FOR ARTERIAL OR HIGHER CLASSIFICATION ROADS IF DEEMED NECESSARY BY THE CITY ENGINEER.
2. TYPICAL CONCRETE PAVEMENT JOINT SPACING IS TO BE NO LESS THAN 10' X 10' AND NO MORE THAT 15' X 15'.
3. DOWELS ARE TO BE SPACED AT 12" INTERVALS WITH MINIMUM 18" SEPARATION FROM PARALLEL JOINTS OR EDGES OF PAVEMENT.
4. TIE BARS ARE TO BE SET AT 24" INTERVALS WITH MINIMUM 18" SEPARATION FROM PARALLEL JOINTS OR EDGES OF PAVEMENT.
5. ALL JOINT SEALANT TO BE TxDOT DMS-6310 SL-2 OR APPROVED EQUAL.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	TYPICAL CONCRETE JOINTS		234(B)

Freese and Nichols, Inc.
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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
MIDLAND STANDARD DETAILS XIV

NO.	ISSUE	BY	DATE

FAR JOB NO. MDD22466
DATE 4/14/2023
DESIGNED JLN
DRAWN AL
REVISED AL
CHECKED RMO
FILE NAME CV-MDD-DT-DTL501.dwg

VERIFY SCALE 0 1
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SHEET DT-19
SEQ. 36

ACAD Ref: 24.2s (LMS Tech)
Filename: N:\WTU\Drawings\CV-MDD-DT-DTL501.dwg
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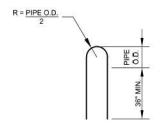
Plot Date: 4/14/2023 1:34 PM Plot By: aal Filename: N:\WTU\Drawings\CV-MDD-DT-DTL501.dwg

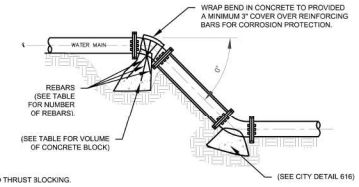
DIA. OF PIPE	DEGREE OF BEND θ							
	11 1/4°		22 1/2°		45°		90°	
	VOLUME BLOCK	REBAR NO. SIZE	VOLUME BLOCK	REBAR NO. SIZE	VOLUME BLOCK	REBAR NO. SIZE	VOLUME BLOCK	REBAR NO. SIZE
4"	3 C.F.	2-#3	6 C.F.	2-#3	12 C.F.	2-#3	22 C.F.	2-#3
6"	7 C.F.	2-#3	13 C.F.	2-#3	26 C.F.	2-#3	1.0 C.Y.	2-#3
8"	12 C.F.	2-#3	24 C.F.	2-#3	2.0 C.Y.	2-#4	3.0 C.Y.	2-#4
10"	19 C.F.	2-#3	1.5 C.Y.	2-#4	3.0 C.Y.	2-#4	5.0 C.Y.	2-#6
12"	1.0 C.Y.	2-#3	2.0 C.Y.	2-#4	4.0 C.Y.	2-#6	7.0 C.Y.	2-#8
14"	1.5 C.Y.	2-#4	3.0 C.Y.	2-#4	5.5 C.Y.	2-#6	*	*
16"	2.0 C.Y.	2-#4	3.5 C.Y.	2-#4	7.0 C.Y.	2-#7	*	*

BLOCK FOR EXTERNAL VERTICAL BENDS
DESIGN PRESSURE 180 PSI

* BLOCKING FOR 14" AND 16" 90° BENDS AND FOR ALL BENDS LARGER THAN 16" WILL BE SHOWN ON THE PLANS.



BAR BEND DETAIL



NOTES:

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MIDLAND Engineering Services

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	BLOCKING FOR VERTICAL BEND		613
APPROVED: MCC			

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
DETAILS
MIDLAND STANDARD DETAILS XV

NO.	ISSUE	BY	DATE

VERIFY SCALE 0 1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

FAN JOB NO. MDD22466
DATE 4/14/2023
DESIGNED JLN
DRAWN AL
REVISED AL
CHECKED RMO
FILE NAME CV-MDD-DT-DTL501.dwg

SHEET DT-20
SEQ. 37

ACAD Rel: 24.2s (LMS Tech)
Filename: N:\WTU\Drawings\CV-MDD-DT-DTL501.dwg
Last Saved: 4/14/2023 10:48 AM Saved By: aal

Plot Date: 4/14/2023 1:34 PM Plot By: aal Filename: N:\WTU\Drawings\CV-MDD-DT-DTL501.dwg

ELECTRICAL PLAN LEGEND

SYMBOL	DESCRIPTION
———	ABOVE GROUND CONDUIT
– – – – –	UNDERGROUND CONDUIT
GND	GROUND CONDUCTOR
	GROUND WELL
	FLOODLIGHT
$	20A, LIGHT SWITCH IN WEATHER-PROOF FS BOX
PE	PHOTO ELECTRIC SWITCH
PS	PRESSURE SWITCH
PIT	FLOW INDICATING TRANSMITTER
TIT	TEMPERATURE INDICATING TRANSMITTER
WP GFCI	20A, 125V, GFI RECEPTACLE IN METAL-CLAD WEATHER PROOF WHILE-IN-USE COVER
J	JUNCTION BOX
B	ALARM BEACON
	WEATHERHEAD
XXX-XXX	CONDUIT MARKER (SEE CONDUIT SCHEDULE THIS SHEET)

ONE-LINE DIAGRAM LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
100AF 2P 50AT	MOLDED CASE CIRCUIT BREAKER		OILER HEATER WITH THERMOSTAT
	STARTER (SIZE NOTED)	MTS	MOTOR WINDING THERMOSTAT
HP	THREE-PHASE MOTOR (HORSEPOWER NOTED)		POWER FACTOR CORRECTION CAPACITOR
	ELECTRICAL GROUND	M	POWER QUALITY MONITOR
PFR	PHASE FAILURE RELAY	N/G	NEUTRAL/GROUND BOND
PS	PRESSURE SWITCH	ETM	ELAPSED TIME METER
OS	OILER SOLENOID		INDICATING LIGHT (COLOR AS SHOWN: G=GREEN, R=RED, A=AMBER, B=BLUE, W=WHITE
TIT	TEMPERATURE INDICATING TRANSMITTER		HAND-OFF-AUTO SWITCH
LSC	LOCAL LOCK STOP	HOA	
TS	TEMPERATURE SWITCH	OAS	OFF-AUTO SWITCH
VSC	VIBRATION SWITCH		
	FLOW METER	TD	TIME DELAY RELAY
SPD	SURGE PROTECTIVE DEVICE	XXX-XXX	CONDUIT MARKER (SEE CONDUIT SCHEDULE THIS SHEET)
	MOTOR SPACE HEATER	▲	ITEM LOCATED ON CONTROL PANEL SWING-OUT PANEL
A	SPECIAL DEVICE (SEE SCHEDULE THIS SHEET)		
SSOL	SOLID STATE OVERLOAD		

CONTROL DIAGRAM LEGEND

SYMBOL	DESCRIPTION
100AF 2P 50AT	MOLDED CASE CIRCUIT BREAKER
	SELECTOR SWITCH
	PUSH BUTTON
CR/TD	CONTROL/ TIME-DELAY RELAY – PLUG IN
CR CR	RELAY CONTACT (NORMALLY OPEN – NORMALLY CLOSED)
TD	TIME-DELAY RELAY CONTACT
M	MOTOR STARTER COIL
OL	MOTOR OVERLOAD
ETM	ELAPSED TIME METER
	INDICATING LIGHT – LED TYPE – PUSH-TO-TEST (COLOR AS SHOWN: G=GREEN, R=RED, A=AMBER, B=BLUE, W=WHITE
	MOTOR SPACE HEATER
TS	TEMPERATURE SWITCH
FS	FLOAT SWITCH
A	SPECIAL DEVICE (SEE SCHEDULE THIS SHEET)
▲	ITEM LOCATED ON CONTROL PANEL SWING-OUT PANEL

SPECIAL DEVICE SCHEDULE

ITEM	DESCRIPTION	ITEM	DESCRIPTION
AD	AUTODIALER – CATTRON(W) MESSENGER MODEL #W – 4199-4110-0030, WITH 3 DIGITAL INPUTS, 1 ANALOG INPUT, 1 DIGITAL OUTPUT (WITH CUBED RELAY), LTE/4G VERIZON MODEM, 40W INTERNALLY MOUNTED POWER SUPPLY, MODEM ACTIVATION, BACKUP BATTERY, STUBBY LTE ANTENNA AND WIRING KIT IN A DIN RAIL MOUNT, NO EXCEPTIONS. INCLUDE REMOTE IO STANDARD PLAN – P/N 1600-3000 COORDINATE WITH CITY	LT	LED PUSH-TO-TEST INDICATING LIGHT – 30MM HEAVY DUTY OILTIGHT/WATERTIGHT, VOLTAGE AS REQUIRED, 60HZ – COLOR AS INDICATED
		PC	PUMP CONTROLLER – MULTITRODE MULTISMART PUMP STATION MANAGER & RTU, W/OPERATOR INTERFACE, LOGIC ENGINE, FLOW CONTROL, DNP3, MODBUS TCP/IP
CF	CABINET FAN – HOFFMAN CAT NO. A-PA4AXFN, 21 WATT, 120V (WITH RAIN SHIELD GRILLE)	PE	PHOTOELECTRIC SWITCH – INTERMATIC SERIES K1100, 120V – MODEL NO. K1121 – MOUNT TO CONTROL PANEL
CH	CABINET HEATER – HOFFMAN CAT NO. DAH1001A, 115 VAC, 100 WATT	PFR	PHASE FAILURE RELAY – DIVERSIFIED ELECTRONICS MODEL NO. SLD-440-ALE, 480 VOLT, THREE-PHASE
CR	CONTROL RELAY – WITH 4 S.P.D.T. SWITCHES RATED 10 AMPS AT 120 VOLT, COIL VOLTAGE AS REQUIRED, PLUG IN BASE AND SOCKET	PPM	PUMP PROTECTION MODULE – SEAL LEAK AND WINDING OVERTEMP ALARM, INDICATION, AND PROTECTION AS SHOWN AND PER MANUFACTURER'S REQUIREMENTS
		PS	24 VDC POWER SUPPLY WITH UPS – PHOENIX CONTACT TRIO SERIES W/QUINT-BAT – SIZE POWER SUPPLY FOR 50% GREATER THAN LOAD AND BATTERY FOR 15 MIN
PSP	PUMP CONTROLLER DISPLAY – MULTITRODE MULTISMART	PSP	PRESSURE SWITCH – MERCOID SERIES DA, MODEL NO. DAW-33-153-7, 5-150 PSI RANGE, NEMA 4 WEATHER-PROOF ENCLOSURE, SPDT MERCURY SWITCH RATED 4 AMPS AT 120 VOLTS
EG	EXHAUST GRILLE – HOFFMAN CAT NO. A-VK66 LOUVER WITH CAT NO. A-FLT66 FILTER K.T. (WITH RAIN SHIELD GRILLE)	SPD	SURGE PROTECTION DEVICE – UL 1449 4TH EDITION CERTIFIED, 240 KA PEAK SURGE CURRENT, INTERNAL DISCONNECT, LED PHASE STATUS INDICATION, EATON SPD-250-480Y-3-M OR EQUAL
ETM	ELAPSED TIME METER – CRAMER #6535, 120 VOLT	SPD	SURGE PROTECTIVE DEVICE – UL 1449 4TH EDITION, NOMINAL 120V, DIN RAIL MOUNTED; PHOENIX CONTACT MODEL PT2-PE/S-120 AC/FM PART #2856812 APPROVED EQUAL
FB	FLASHING BEACON – LED, 65FPM, 120V, RED POLYCARBONATE LENS, EDWARDS #48XBRMR120A	TD	TIME DELAY RELAY – WITH 2 S.P.D.T. SWITCHES RATED 7 AMPS AT 120 VOLT, CONTACTS AND COIL, PLUG IN BASE AND SOCKET, 3 RANGES, 0.1 TO 100 SEC, ATC MODEL No. 319D-134
H	VIBRATING PANEL MOUNT HORN – NEMA 4X, 120 VOLT – EDWARDS MODEL NO. 870P-N5		
LP	LEVEL PROBE – 10 SENSOR, FOGROD OR PRE-APPROVED EQUAL WITH MOUNTING BRACKET		

CONDUIT SCHEDULE

NO.	SIZE & CONDUCTORS	FROM	TO	HP/AMP	DESCRIPTION
FL-100	1" C, W/4-#12 + #12 GND	PUMP CONTROL PANEL	AREA LIGHT	-	AREA LIGHT
FS-100	2" C, W/10-#14 + #12 GND	PUMP CONTROL PANEL	FLOATS/TRANSDUCER TERMINAL BOX	-	FLOAT SWITCHES
FS-101	2" C, W/MANUFACTURER'S CABLES	FLOATS	FLOATS/TRANSDUCER TERMINAL BOX	-	FLOAT SWITCHES
LP-100	1 1/2" C, W/3-#8 + #10 GND + 4-#14	PUMP CONTROL PANEL	LIFT PUMP NO. 1 TERMINAL BOX	25 HP	LIFT PUMP NO. 1 POWER & ALARMS
LP-101	3" C, W/MANUFACTURER'S PUMP CABLE	LIFT PUMP NO. 1	LIFT PUMP NO. 1 TERMINAL BOX		LIFT PUMP NO. 1 POWER & ALARMS
LP-102	1 1/2" E.C.	PUMP CONTROL PANEL	LIFT PUMP NO. 1 TERMINAL BOX	-	SPARE
LP-200	1 1/2" C, W/3-#8 + #10 GND + 4-#14	PUMP CONTROL PANEL	LIFT PUMP NO. 2 TERMINAL BOX	25 HP	LIFT PUMP NO. 2 POWER & ALARMS
LP-201	3" C, W/MANUFACTURER'S PUMP CABLE	LIFT PUMP NO. 2	LIFT PUMP NO. 2 TERMINAL BOX		LIFT PUMP NO. 2 POWER & ALARMS
LP-202	1 1/2" E.C.	PUMP CONTROL PANEL	LIFT PUMP NO. 2 TERMINAL BOX	-	SPARE
LT-100	1" C, W/#18 SHIELDED PAIR CABLE	PUMP CONTROL PANEL	FLOATS/TRANSDUCER TERMINAL BOX	-	LEVEL TRANSDUCER
LT-101	2" C, W/MANUFACTURER'S CABLES	FLOATS/TRANSDUCER	FLOATS/TRANSDUCER TERMINAL BOX	-	LEVEL TRANSDUCER
PWR-001	2 1/2" C, W/3-#4/0 + #2 NEU + #2 GND	POWER COMPANY	METER	200A	UTILITY POWER
PWR-002	2 1/2" C, W/3-#4/0 + #2 NEU + #2 GND	METER	MAIN DISCONNECT	200A	UTILITY POWER
PWR-003	2 1/2" C, W/3-#4/0 + #2 NEU + #2 GND	MAIN DISCONNECT	MANUAL TRANSFER SWITCH	200A	UTILITY POWER
PWR-004	2 1/2" C, W/3-#4/0 + #2 GND	MANUAL TRANSFER SWITCH	PUMP CONTROL PANEL	200A	CONTROL PANEL POWER
PWR-005	2 1/2" E.C.	POWER COMPANY	UTILITY TRANSFORMER	-	UTILITY PRIMARY FEEDER
WWA-100	1 1/2" C, W/3-#8 + #10 GND	PUMP CONTROL PANEL	WET WELL AERATION SYSTEM	-	WET WELL AERATION SYSTEM
WWA-101	3" C, W/4-#14 + #13 GND	PUMP CONTROL PANEL	WET WELL AERATION SYSTEM	-	WET WELL AERATION SYSTEM
WWA-102	1" E.C.	PUMP CONTROL PANEL	WET WELL AERATION SYSTEM	-	WET WELL AERATION SYSTEM

ABBREVIATIONS

#PDT – # POLE, DOUBLE THROW; WHERE # IS # OF POLES (S=SINGLE, D=DOUBLE)
A – AMPS OR AMPERES
ASP – AUTOSENSORY PANEL
BC – BARE COPPER
C – CONDUIT
CC – COPPER CLAD
CGB – CABLE GLAND BUSHING
CLR – CLEARANCE
CR – CONTROL RELAY
DTL – DETAIL
E.C. – EMPTY CONDUIT
ETM – ELAPSED TIME METER
EW – EACH WAY
FG – FINISHED GRADE
FIN – FINISHED (AS IN FINISHED GRADE)
G, GND – GROUND
HDG – HOT DIPPED GALVANIZED
HTR – HEATER
M – MOTOR
MIN – MINIMUM
MLO – MAIN LUGS ONLY
MSH – MOTOR SPACE HEATER
NEMA – NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N; NEU – NEUTRAL
NG – NEUTRAL/GROUND BOND
NTS – NOT TO SCALE
OC – OFF CENTER
OL – OVERLOAD
P – POLES
PFCC – POWER FACTOR CORRECTION CAPACITOR
PROP – PROPOSED
PVC – POLYVINYL CHLORIDE
RGS – RIGID GALVANIZED STEEL
SCH – SCHEDULE
SHT – SHEET
SPD – SURGE PROTECTIVE DEVICE
S.S.; STN STL – STAINLESS STEEL
TD – TIME DELAY RELAY
TYP – TYPICAL
V – VOLT/VOLTAGE
W/ – WITH
WU – WHILE IN USE
WP – WEATHERPROOF OR WEATHER PROTECTED
GFCI – GROUND FAULT CIRCUIT INTERRUPTER

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL COMPLY WITH LOCAL AND NATIONAL CODES AND REQUIREMENTS.
2. CONDUITS SHALL NOT BE ROUTED ACROSS WALKWAYS, PATHS OF ACCESS, TRAVEL, OR EGRESS. ROUTE BENEATH GRATINGS, IN CONCRETE STRUCTURES, OR AROUND EQUIPMENT. DO NOT ROUTE IN CONFLICT WITH OTHER PIPING, CONDUITS, EQUIPMENT, OR STRUCTURES.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY AND ALL PERMITS ASSOCIATED WITH THE WORK. THE COSTS OF THE PERMITS, IF ANY, SHALL BE BORNE BY THE CONTRACTOR.
4. VERIFY BY FIELD INVESTIGATION THE LOCATIONS OF ALL UTILITY FACILITIES WITHIN AND ADJACENT TO THE LIMITS OF THE WORK THAT MAY BE AFFECTED BY THE WORK. CONFLICTS WHICH ARISE DUE TO THE NEGLIGENCE OF THE CONTRACTOR TO LOCATE, HORIZONTALLY AND VERTICALLY, EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL ASPECTS OF THIS INSTALLATION MUST COMPLY WITH THE LATEST UTILITY CO. STANDARDS. REVIEW THIS PROJECT'S SERVICE REQUIREMENTS OF LOCATION, RATINGS, AND METHODS WITH POWER COMPANY PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH UTILITY COMPANY.
6. ALL POWER AND ANALOG INSTRUMENTATION CONDUCTORS SHALL BE INSTALLED IN SEPARATE CONDUITS.
7. ALL RECEPTACLES INSTALLED OUTDOORS AND INDOOR RECEPTACLES MARKED AS "WP/WU" ON THE PLANS SHALL BE GFI TYPE WITH METAL WEATHERPROOF WHILE-IN-USE COVERS.
8. ALL EXTERIOR ABOVE GRADE CONDUIT INSTALLED OUTDOORS AND OTHER WET AND OR CORROSIVE AREAS SHALL BE RIGID PVC COATED GALVANIZED STEEL CONDUIT WITH STAINLESS STEEL MOUNTING HARDWARE.
9. PROVIDE TRADITIONAL "NEMA" DEVICES AS DEFINED IN NEMA STANDARDS PUBLICATION NO. ICS 2-A.2003. IEC COMPONENTS ARE NOT ALLOWED.
10. ELECTRICAL DEVICE ENCLOSURES AND MOUNTING HARDWARE TO BE 317 STAINLESS STEEL PER CITY REQUIREMENTS.

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CHRISTOPHER A. DIXON
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January 26, 2023

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
ELECTRICAL LEGENDS SCHEDULES & NOTES

BY	DATE	NO.	ISSUE

FREESE NICHOLS JOB NO. MID21366
DATE 1/26/2023
DESIGNED JAG
DRAWN TJJ
REVIEWED TJJ
CHECKED MEL
FILE NAME 197-0005 Elec.dwg
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

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SEQ.

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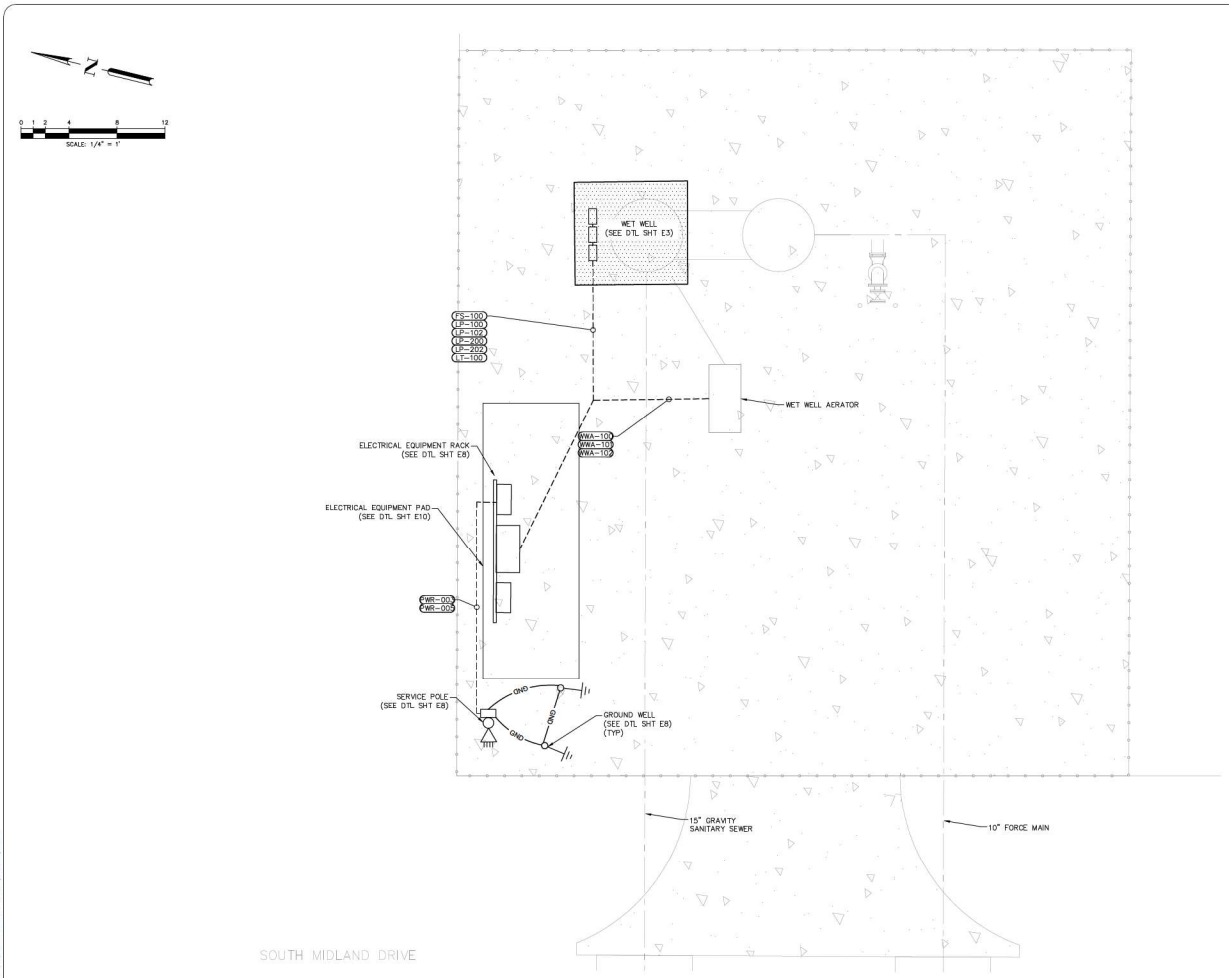

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Bldg. 103, #200
Stillwater, Oklahoma 74074
(405) 624-8300
(405) 624-8301 (fax)
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ENGINEER
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CITY OF MIDLAND, TEXAS

WALL STREET SEWER DIVERSION

ELECTRICAL SITE PLAN

NO.	ISSUE	BY	DATE

FNI JOB NO.
C-0021466
DATE 1/26/2023
DESIGNED JAD
DRAWN TJJ
REVIEWED TJJ
CHECKED NEL
FILE NAME 197-0005 Elec.dwg

VERIFY SCALE
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SHEET
E2

SEQ.

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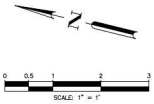
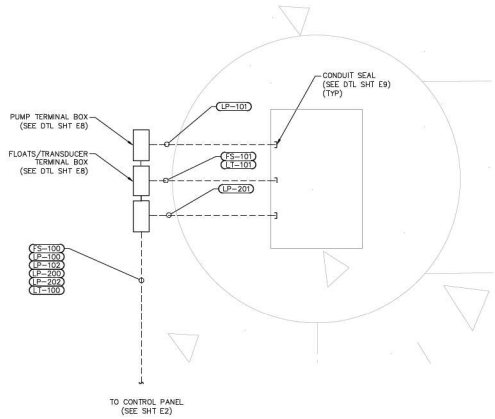
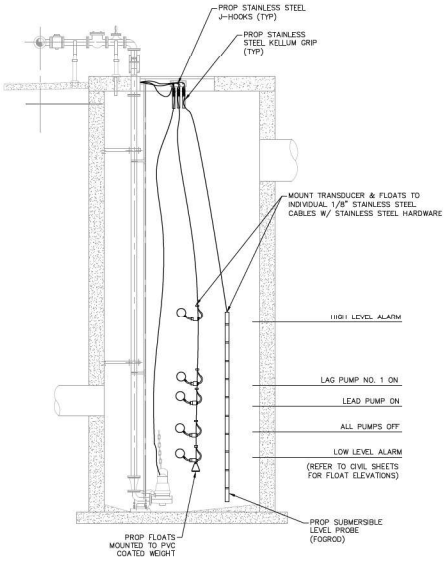




LIFT STATION WET WELL PLAN VIEW



LIFT STATION WET WELL PROFILE DETAIL
NOT TO SCALE

NOTES:

1. REFER TO CIVIL DRAWINGS FOR FLOAT SWITCH ELEVATIONS.
2. GROUNDING SHALL BE PER N.E.C. MINIMUM REQUIREMENTS.
3. THE ELECTRICAL INSTALLATION WITHIN THE WET WELL SHALL BE EXPLOSION PROOF IN ACCORDANCE WITH ARTICLE 510 OF THE NEC FOR CLASS I, DIVISION 1, GROUP C & D.
4. WHERE JUNCTION BOXES ARE SHOWN, THEY SHALL BE USED FOR PULLING OR TERMINATION PURPOSES ONLY. SPLICES WILL NOT BE ALLOWED.
5. FOR MOTOR FEEDER AND CONTROL CABLES, INSTALL TYPE CSBE CABLE SEALING FITTING AT JUNCTION BOX ENTRANCE AND EXPLOSION PROOF SEAL IN CONDUITS TO CONTROL PANEL.
6. ALL MOUNTING HARDWARE SHALL BE 317 STAINLESS STEEL PER CITY REQUIREMENTS.
7. ALL PUMP POWER AND CONTROL CABLE LEADS MUST BE THE SAME LENGTH REGARDLESS OF PUMP LOCATION FROM TERMINAL/JUNCTION BOX.
8. CONTRACTOR TO VERIFY CONDUIT ENTRIES AND ADJUST AS REQUIRED TO AVOID CONFLICT WITH PUMP GUIDE RAILS.

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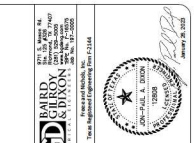
Job No. 197-0005
Firm Registered Engineering Firm F-2144
Texas Registered Engineering Firm F-2144



January 26, 2023

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CITY OF MIDLAND, TEXAS

WALL STREET SEWER DIVERSION

ELECTRICAL WET WELL
PLAN AND ELEVATION

NO.	ISSUE	BY	DATE

FILE NAME: 197-0005 Elec.dwg
FILE NAME: M0022466
DATE: 1/26/2023
DESIGNED: JAD
DRAWN: TU
REVISED: TU
CHECKED: NEL

VERIFY SCALE 0 1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET E3

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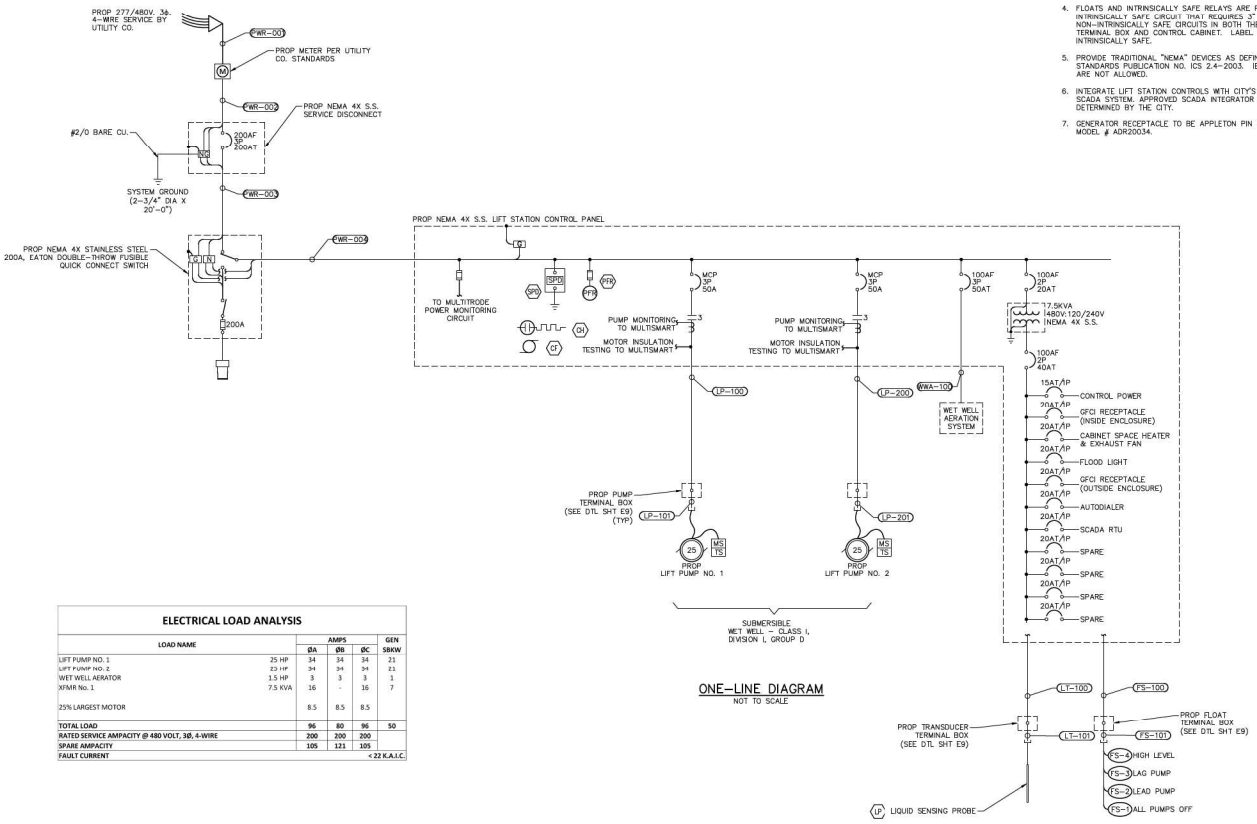
Plot Date: 1/26/2023 1:35 PM Plot By: Tammy Jordan Filename: P:\Projects\197-Freese and Nichols\0005-Midland Lift Station\03 CAD\197-0005 Elec.dwg

NOTES:

1. ADJUST MCP FOR MOTOR LOAD.
2. VERIFY PUMP PROTECTION CONDUCTOR REQUIREMENTS. FURNISH ACCORDINGLY. IF PUMP IS SUPPLIED WITH SEPARATE CABLE FOR PROTECTION CIRCUITS, THEN PROVIDE ADDITIONAL CONDUIT INTO TERMINAL BOX AND CONTROL PANEL. VERIFY PUMP CABLE DIAMETER FOR INSERTION IN 3" CONDUIT SHOWN; INCREASE CONDUIT SIZE AS REQUIRED.
3. ALL ENCLOSURES TO BE NEMA 4X STAINLESS STEEL AND MOUNTED A MINIMUM OF 24" ABOVE GRADE.
4. FLOATS AND INTRINSICALLY SAFE RELAYS ARE PART OF AN INTRINSICALLY SAFE CIRCUIT THAT REQUIRES 3" SPACING FROM NON-INTRINSICALLY SAFE CIRCUITS IN BOTH THE FIELD TERMINAL BOX AND CONTROL CABINET. LABEL CIRCUITS AS INTRINSICALLY SAFE.
5. PROVIDE TRADITIONAL "NEMA" DEVICES AS DEFINED IN NEMA STANDARDS PUBLICATION NO. ICS 2.4-2003. IEC COMPONENTS ARE NOT ALLOWED.
6. INTEGRATE LIFT STATION CONTROLS WITH CITY'S EXISTING SCADA SYSTEM. APPROVED SCADA INTEGRATOR SHALL BE DETERMINED BY THE CITY.
7. GENERATOR RECEPTACLE TO BE APPLETON PIN & SLEEVE, MODEL # AOR20034.



ONE-LINE DIAGRAM
NOT TO SCALE

ELECTRICAL LOAD ANALYSIS

LOAD NAME		AMPS ØA	AMPS ØB	AMPS ØC	GEN SBKW
LIFT PUMP NO. 1	25 HP	34	34	34	21
LIFT PUMP NO. 2	25 HP	34	34	34	21
WET WELL AERATOR	1.5 HP	3	3	3	1
XFMR No. 1	7.5 KVA	16	-	16	7
25% LARGEST MOTOR		8.5	8.5	8.5	
TOTAL LOAD		**96**	**80**	**96**	**50**
RATED SERVICE AMPACITY @ 480 VOLT, 3ø, 4-WIRE		**200**	**200**	**200**	
SPARE AMPACITY		**105**	**121**	**105**	
FAULT CURRENT				**< 22 K.A.I.C.**	

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
ELECTRICAL ONE-LINE DIAGRAM

FNA JOB NO. M0022466
DATE 1/26/2023
DESIGNED JAD
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REVIEWED TJJ
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SHEET E4
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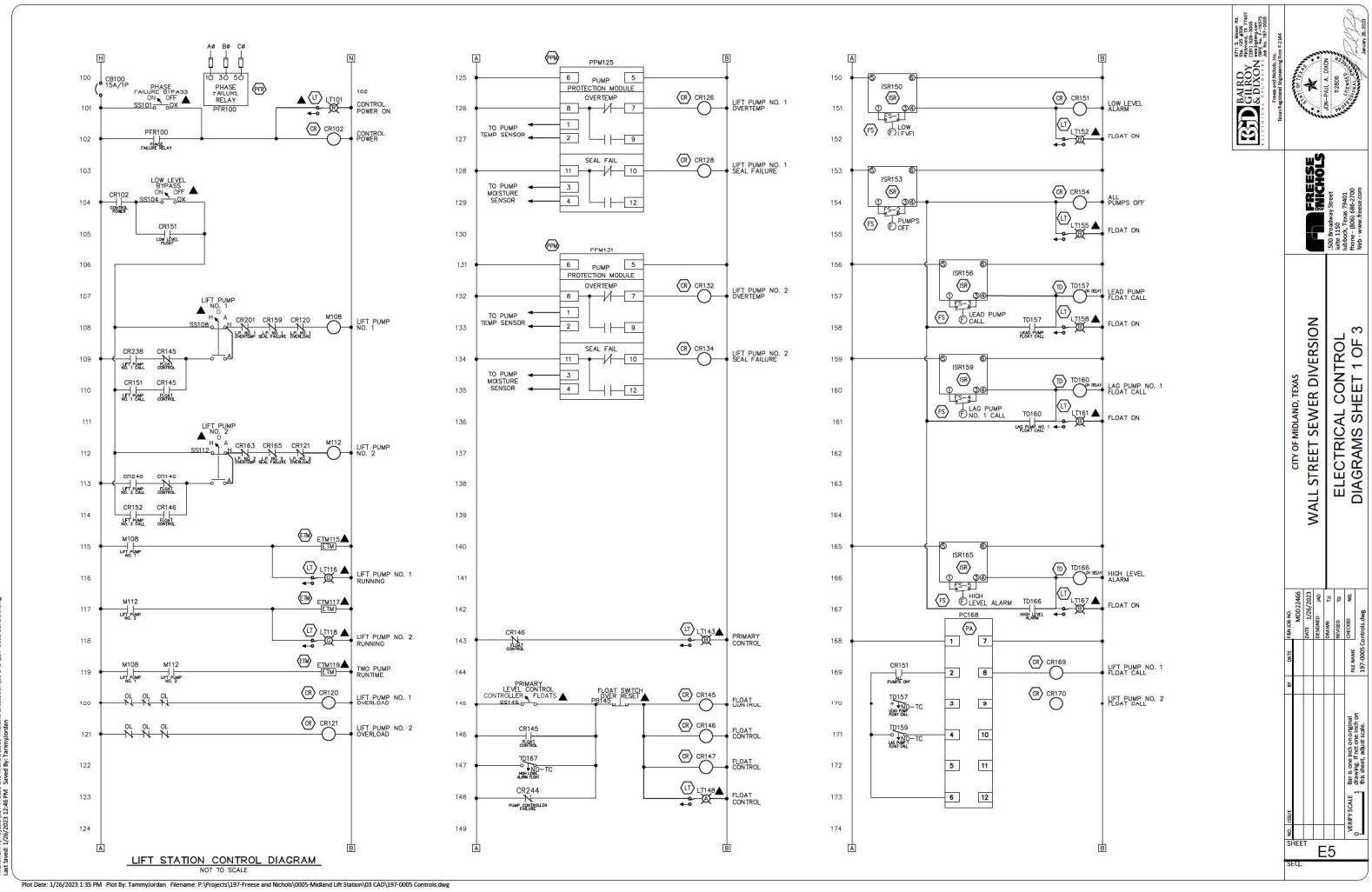
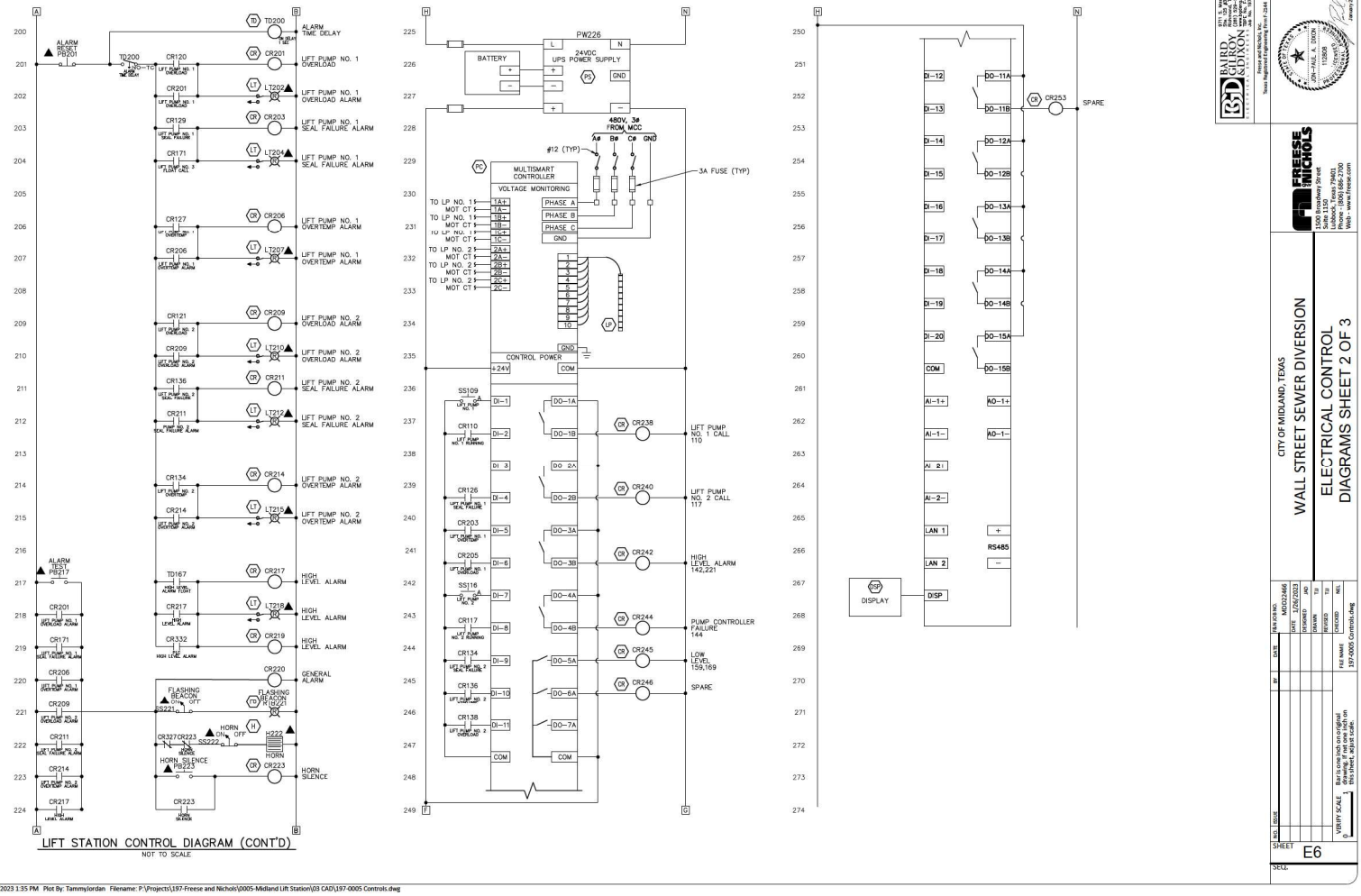

LIFT STATION CONTROL DIAGRAM
NOT TO SCALE
CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
ELECTRICAL CONTROL
DIAGRAMS SHEET 1 OF 3
SHEET
E5
Plot Date: 1/26/2023 1:35 PM Plot By: TammyJordan Filename: P:\Projects\197-Freese and Nichols\0005-Midland Lift Station\03 CAD\197-0005 Controls.dwg



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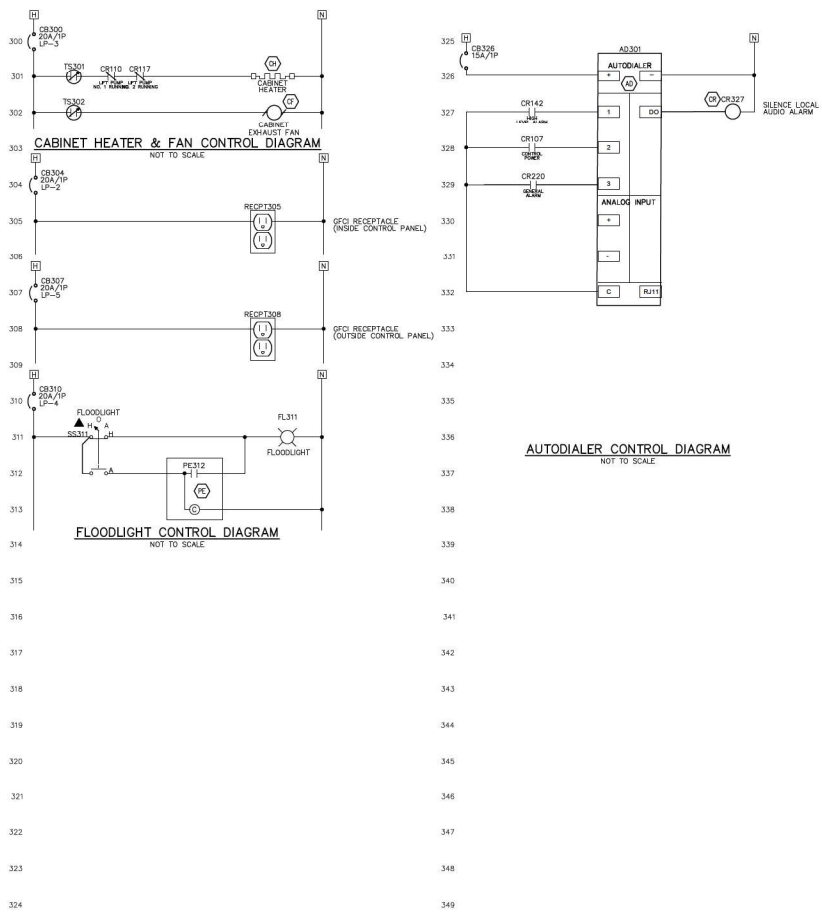

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Phone - (806) 866-2700
Web - www.freese.com

CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
ELECTRICAL CONTROL
DIAGRAMS SHEET 3 OF 3

NO.	ISSUE	BY	DATE

FILE NAME: 197-0005 Controls.dwg
CHECKED: TJJ
DRAWN: TJJ
REVIEWED: TJJ
DATE: 1/26/2023
FILE NAME: MDD22466

SHEET E7
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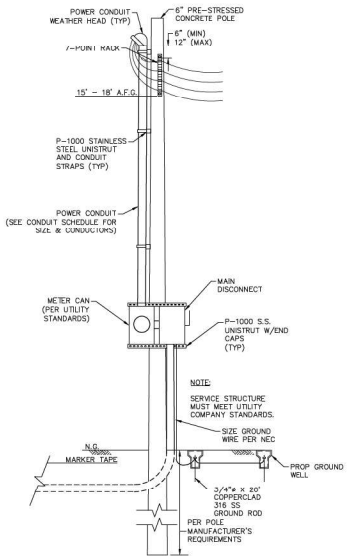
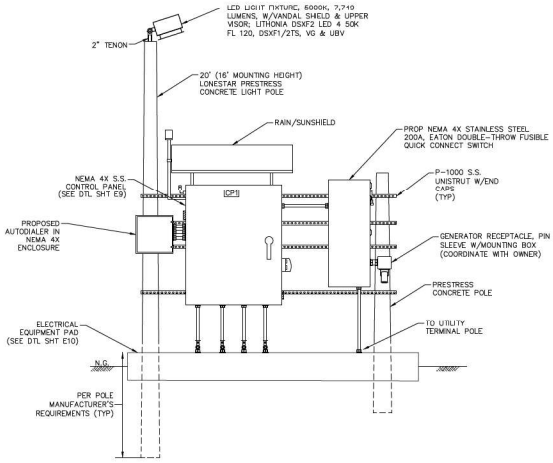
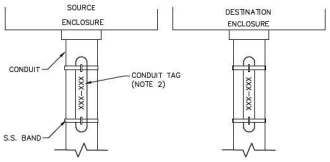


SERVICE POLE DETAIL
NOT TO SCALE



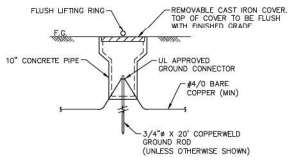
ELECTRICAL EQUIPMENT RACK DETAIL
NOT TO SCALE



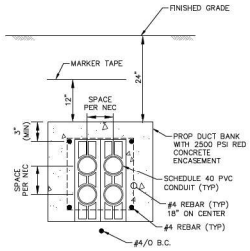
NOTES

1. ALL POWER, INSTRUMENTATION, AND CONTROL CONDUITS SHALL HAVE STAINLESS STEEL IDENTIFICATION TAGS. ALL EXPOSED CONDUITS INSTALLED SHALL HAVE TAGS ATTACH AT THE SOURCE AND DESIGNATION.
2. CONDUIT TAGS SHALL BE S.S. WITH THE TAG NUMBER ENGRAVED OR EMBOSSED PERMANENTLY INTO THE TAG. TAGS SHALL BE SECURED WITH S.S STRAPS AS SHOWN.
3. PROVIDE PANDUIT MMP OR APPROVED EQUAL.

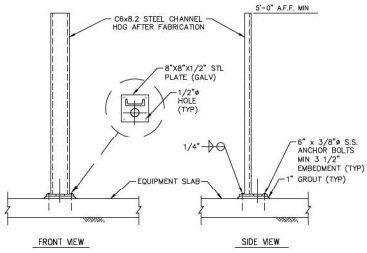
CONDUIT TAG DETAIL
NOT TO SCALE



GROUND WELL DETAIL
NOT TO SCALE



TYPICAL DUCT BANK CONSTRUCTION
NOT TO SCALE



DEVICE MOUNTING POST DETAIL
NOT TO SCALE

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
ELECTRICAL DETAILS
SHEET 1 OF 3

NO.	ISSUE	BY	DATE

BAIRD HOLM NO. 221466
DATE 1/26/2023
DESIGNED JAO
DRAWN TSJ
REVIEWED TDJ
CHECKED MDL
FILE NAME 197-0005 Elec.dwg

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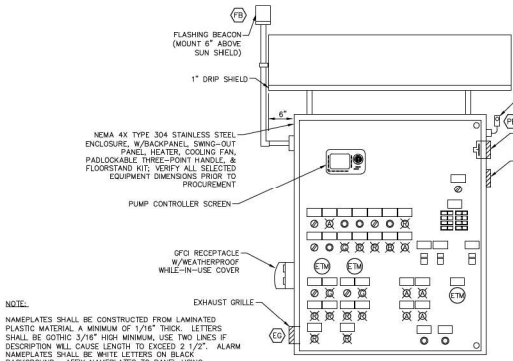
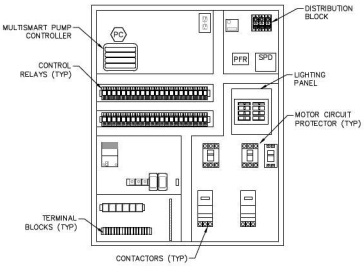


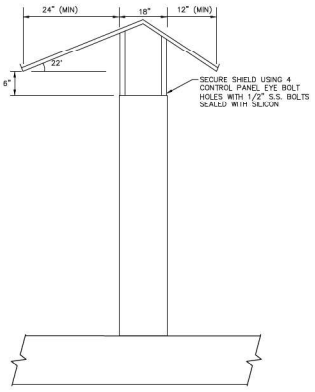
NOTE:

NAMEPLATES SHALL BE CONSTRUCTED FROM LAMINATED PLASTIC MATERIAL A MINIMUM OF 1/16" THICK. LETTERS SHALL BE GOTHIC 3/16" HIGH MINIMUM, USE TWO LINES IF DESCRIPTION WILL CAUSE LENGTH TO EXCEED 2 1/2". ALARM NAMEPLATES SHALL BE WHITE LETTERS ON BLACK BACKGROUND. AFFIX NAMEPLATES TO PANEL USING SELF-TAPPING STAINLESS STEEL SCREWS. SUBMIT DETAILS WITH SHOP DRAWINGS.

SWING-OUT PANEL ARRANGEMENT
NOT TO SCALE

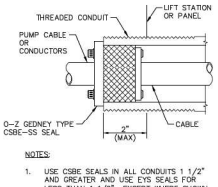


BACK PANEL ARRANGEMENT
NOT TO SCALE



SIDE PANEL ARRANGEMENT
NOT TO SCALE

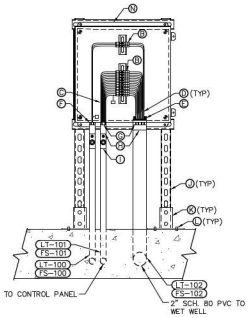
CONTROL PANEL DETAIL
(SHOWN WITH OUTER DOOR REMOVED)
NOT TO SCALE



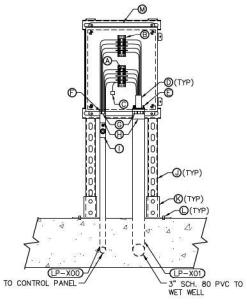
NOTES:

1. USE CSBE SEALS IN ALL CONDUITS 1 1/2" AND GREATER AND USE EYS SEALS FOR LESS THAN 1 1/2" EXCEPT WHERE SHOWN OTHERWISE.

CONDUIT SEAL DETAIL



TRANSDUCER/FLOATS TERMINAL BOX DETAIL
NOT TO SCALE



LIFT PUMP TERMINAL BOX DETAIL
NOT TO SCALE
(TYP OF 2)

TERMINAL BOX EQUIPMENT SCHEDULE:

A. TERMINAL BLOCK (RATED FOR PUMP HP).
B. 30A, CONTROL TERMINAL BLOCK.
C. GROUND LUG.
D. SUBMERSIBLE PUMP CABLE.
E. OZ-GEDNEY CSBE TYPE CONDUIT SEALING BUSHING OR APPROVED EQUAL.
F. DUCT SEAL.
G. MYERS HUB.
H. RIGID TO PVC ADAPTER.
I. CLASS 1, DIV 1, EXPLOSION PROOF SEAL INSTALLED PER NEC DIV 501. EYD TYPE WITH DRAIN, SEAL WITH CHICO.
J. P1000 STAINLESS STEEL UNISTRUT.
K. P2072A STAINLESS STEEL UNISTRUT POST BASE.
L. STAINLESS STEEL EXPANSION TYPE ANCHOR BOLTS.
M. HOFFMAN NEMA 4X STAINLESS STEEL ENCLOSURE, NO. A-1412CHNFSS (14"X12"X8") W/NO. A-14P12 PANEL & STAINLESS STEEL PADLOCK KIT NO. APLKJIC6SS
N. HOFFMAN NEMA 4X STAINLESS STEEL ENCLOSURE, NO. A 16116H0606SLP (16"x16"x6") W/NO. A 16P16 PANEL & STAINLESS STEEL PADLOCK KIT NO. APLKJIC6SS

TERMINAL BOX NOTES:

1. ALL TERMINAL BOXES SHALL BE NEMA 4X STAINLESS STEEL.
2. PROVIDE TERMINAL BOXES WITH NAMEPLATES CONSTRUCTED FROM LAMINATED PLASTIC A MINIMUM OF 1/16" THICK. LETTERS SHALL BE GOTHIC 3/16" HIGH MINIMUM, USE TWO LINES IF DESCRIPTION WILL CAUSE LENGTH TO EXCEED 2-1/2". NAMEPLATES SHALL BE WHITE LETTERS ON BLACK BACKGROUND. AFFIX NAMEPLATES TO FACE OF TERMINAL BOX, USING SELF-TAPING STAINLESS STEEL SCREWS.

BAIRD HOLM McEDONALD SIDION
Texas Registered Engineering Firm F-2344

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500 Broadway Street
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Fort Worth, Texas 76102
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Web - www.freese.com

CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
ELECTRICAL DETAILS
SHEET 2 OF 3

NO.	ISSUE	BY	DATE

FNI JOB NO. 42422466
DATE 1/26/2023
DESIGNED JMD
DRAWN TJJ
REVIEWED TJJ
CHECKED NEL
FILENAME 197-0005 Elec.dwg

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET E9
SEQ.

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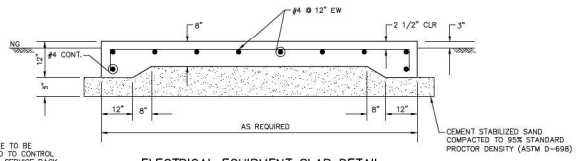

NOTE:

SLAB SIZE TO BE ADJUSTED TO CONTROL PANEL & SERVICE RACK PROVIDED.

ELECTRICAL EQUIPMENT SLAB DETAIL

NOT TO SCALE

SUBGRADE NOTES:

1. PRIOR TO PLACING OF CONCRETE PAD, OR BEFORE ANY FILL IS PLACED, ALL TRACES OF ORGANIC, LOOSE OR OBVIOUSLY COMPRESSIBLE MATERIAL MUST BE REMOVED. TREE ROOTS GREATER THAN 0.5 INCHES SHOULD BE ALSO REMOVED. THE SUBGRADE SHOULD BE PROOF ROLLED UNTIL THE GRADE OFFERS A RELATIVELY UNYIELDING SURFACE AND THE SPECIFIED DEGREE OF COMPACTION HAS BEEN ACHIEVED. AREAS OF EXCESSIVE YIELDING SHOULD BE EXCAVATED AND BACKFILLED WITH A CLEAN COMPACTED SOIL. SPECIFIED COMPACTION: NINETY-FIVE PERCENT (95%) OF MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST (ASTM D-698).
2. ANY ADDITIONAL MATERIAL USED TO INCREASE THE ELEVATION OF THE SITE SHOULD BE RELATIVELY NONEXPANSIVE SANDY CLAY MATERIAL WITH A LIQUID LIMIT OF 28 OR MORE, PLASTICITY INDEX IN THE RANGE OF 10 TO 20, AND SHOULD BE PLACED IN LAYERS OF NOT MORE THAN EIGHT (8) INCHES IN THICKNESS, AT MOISTURE CONTENTS AT OR ABOVE OPTIMUM, AND COMPACTED TO DENSITIES OF AT LEAST NINETY-FIVE PERCENT (95%) OF STANDARD PROCTOR DENSITY ASTM D-698.

STRUCTURAL NOTES:

1. ALL CONCRETE SHALL TEST 3,000 PSI AT 28 DAYS.
2. ALL CONCRETE REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60.
3. DETAILING AND FABRICATION OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI-315 LATEST EDITION.
4. LAP ALL CONTINUOUS REINFORCING BARS 36 DIAMETERS AT SPLICES, TEES, AND CORNERS.
5. THE USE OF HEAT TO FACILITATE THE BENDING OF REINFORCING BARS WILL NOT BE PERMITTED.
6. NO ENGINEERING DRAWING MAY BE REPRODUCED FOR USE AS SHOP DRAWINGS.

NOTES:

1. MINIMUM SLAB DIMENSIONS ARE 3' x 6'. CONTRACTOR SHALL VERIFY SLAB DIMENSIONS WITH THE SELECTED EQUIPMENT MANUFACTURER. REQUIRED ADJUSTMENTS TO THE SLAB DIMENSIONS SHALL BE MADE AT NO COST TO THE OWNER AND SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO COMMENCING CONSTRUCTION.
2. TURNDOWN IS CONTINUOUS AROUND PERIMETER OF SLAB, WIDTH VARIES (SEE PLAN VIEW).D.
3. SLOPE CONCRETE SIDEWALK 1/4" PER FOOT TO DRAIN TOWARDS EXISTING INLET LOCATED AT CURVE OF ACCESS DRIVEWAY.

BAIRD DIXON & DIXON
ENGINEERING CONSULTANTS
Texas Registered Engineering Firm F-2144

CITY OF MIDLAND, TEXAS

WALL STREET SEWER DIVERSION

ELECTRICAL DETAILS
SHEET 3 OF 3

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Web - www.freese.com

NO.	ISSUE	BY	DATE

FILE NAME: 197-0005 Elec.dwg

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SHEET E10

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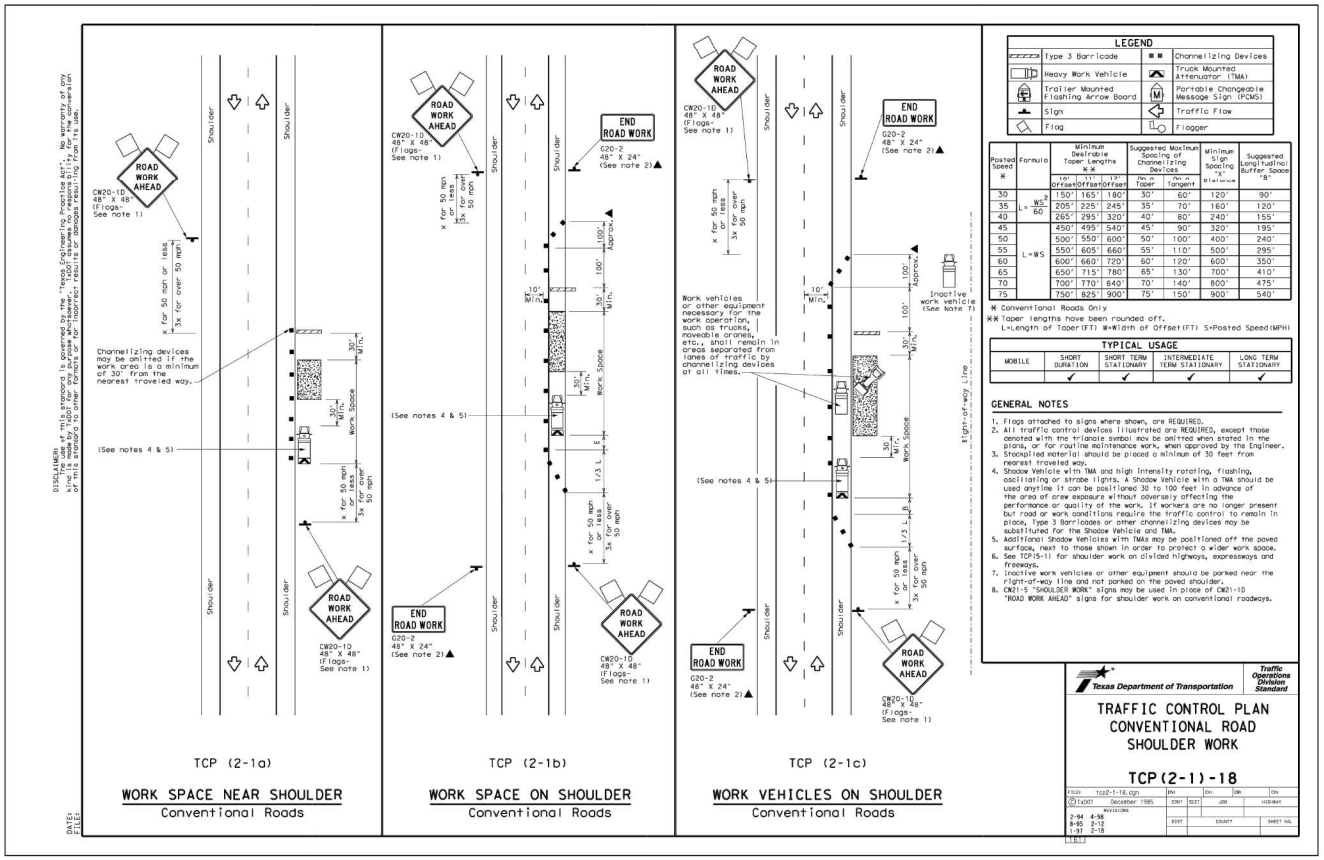

Professional Engineer, Texas Registration Number 92354

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

JEAN L. MAY
136235
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
TRAFFIC CONTROL PLAN
CONVENTIONAL ROAD SHOULDER WORK (TxDot)

NO.	BY	DATE	REVISIONS

PROJECT NO. MIDD22466
DATE 4/14/2023
DESIGNED JLM
DRAWN AL
REVISED AL
CHECKED RMO
FILE NAME CV-MDD-DT-DTL501.dwg

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SHEET TCP-1
SEQ. 38

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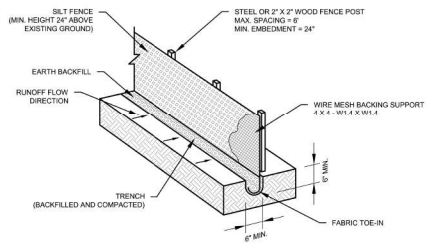
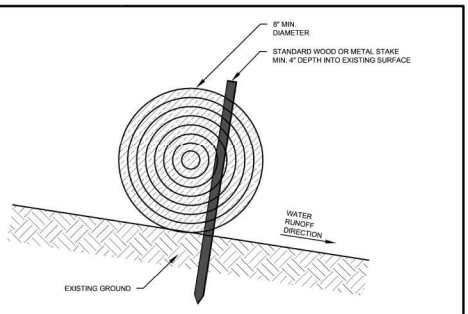


NOTES:

1. THIS DETAIL IS TO BE USED FOR SHEET FLOW CONDITIONS ONLY. DO NOT USE SILT FENCE FOR POINT FLOW OR CONCENTRATED FLOW CONDITIONS.
2. INSTALL STEEL OR WOOD POSTS, WHICH SUPPORT THE SILT FENCE, WITH A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF ONE (1) FOOT.
3. TRENCH THE TOE OF THE SILT FENCE IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE THE FENCE CANNOT BE TRENCHED IN (E.G.PAVEMENT), WEIGHT DOWN FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
4. THE TRENCH MUST BE A MINIMUM OF SIX (6) INCHES DEEP AND SIX (6) INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
5. SECURELY FASTEN SILT FENCE TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS TO BE ATTACHED TO THE STEEL OR WOOD FENCE POST. INCLUDE A SIX (6) INCH DOUBLE OVERLAP, SECURELY FASTENED, WHERE ENDS OF FABRIC MEET.
6. REMOVE SILT FENCE WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. REMOVE ACCUMULATED SILT WHEN IT REACHES A DEPTH OF SIX (6) INCHES. DISPOSE OF THE SILT ONSITE IN AN APPROVED LOCATION AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
9. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL: 706
	SILT FENCE		



NOTES:

1. THIS DETAIL IS TO USED FOR SHEET FLOW CONDITIONS ONLY. DO NOT USE FILTER SOCK FOR POINT FLOW OR CONCENTRATED FLOW CONDITIONS.
2. DO NOT USE FILTER SOCK FOR SHEET FLOW WATERSHEDS LARGER THAN ONE (1) ACRE.
3. USE POLYPROPYLENE NETTING, BURLAP, OR JUTE FABRIC TO CONSTRUCT THE FILTER SOCK.
4. FILL FILTER SOCK WITH STRAW, HAY, COCONUT FIBER, OR COMPOSITE MATERIAL.
5. PLACE STAKING EVERY THREE (3) TO FOUR (4) FEET AT A MINIMUM.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL: 707
	FILTER SOCK		

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
EROSION CONTROL DETAIL
SEDIMENTATION & EROSION CONTROL DETAILS I

NO.	ISSUE	BY	DATE

FNI JOB NO. MIDD22466
DATE 4/14/2023
DESIGNED JLM
DRAWN AL
REVISED AL
CHECKED RMO
FILE NAME CV-MDD-DT-DTL501.dwg
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SHEET EC-1
SEQ. 35

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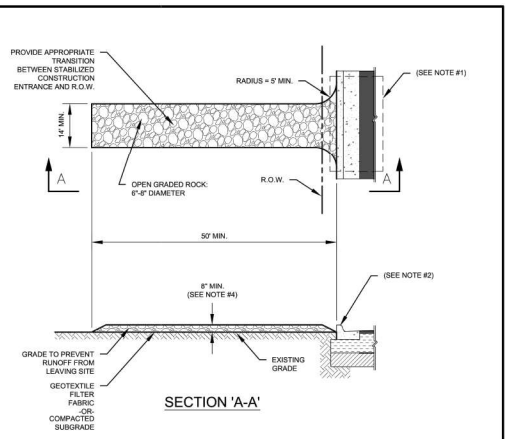
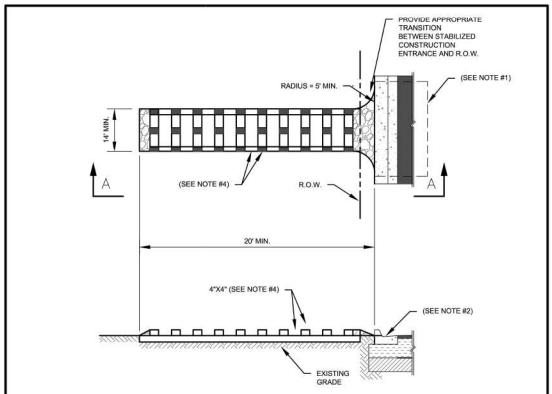


NOTES:

1. IF CURB DOES NOT EXIST OR IF EXISTING CURB IS REMOVED DURING CONSTRUCTION THEN STABILIZED CONSTRUCTION ENTRANCE IS TO EXTEND TO THE EDGE OF PAVEMENT.
2. IF CURB IS LEFT IN PLACE DURING CONSTRUCTION THEN INSTALL TEMPORARY CURB PROTECTION AS PER CITY DETAIL 713.
3. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN FIFTY (50) FEET.
4. THICKNESS OF OPEN GRADED ROCK TO BE NO LESS THAN EIGHT (8) INCHES.
5. WIDTH SHALL BE NO LESS THAN FOURTEEN (14) FEET OR THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS, WHICHEVER IS WIDER.
6. STABILIZED CONSTRUCTION ENTRANCE TO BE REMOVED UPON COMPLETION OF CONSTRUCTION.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2010	SCALE: NTS	DETAIL:
STABILIZED CONSTRUCTION ENTRANCE OPTION 1			701



NOTES:

1. IF CURB DOES NOT EXIST OR IF EXISTING CURB IS REMOVED DURING CONSTRUCTION THEN STABILIZED CONSTRUCTION ENTRANCE IS TO EXTEND TO THE EDGE OF PAVEMENT.
2. IF CURB IS LEFT IN PLACE DURING CONSTRUCTION THEN INSTALL TEMPORARY CURB PROTECTION AS PER CITY DETAIL 713.
3. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN TWENTY (20) FEET.
4. BOARDS TO ALL BE 4"X4" WOOD BOARDS IN GOOD CONDITION. PLACE BOARDS ON BOTTOM LAYER TO RUN ALONG ENTRYWAY WITH 2.0' SPACING BETWEEN BOARDS. PLACE BOARDS ON TOP LAYER TO RUN ACROSS ENTRYWAY WITH 4.0" SPACING BETWEEN BOARDS. BOLT BOARDS ON TOP LAYER TO BOARDS ON BOTTOM LAYER.
5. WIDTH SHALL BE NO LESS THAN FOURTEEN (14) FEET OR THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS, WHICHEVER IS WIDER.
6. STABILIZED CONSTRUCTION ENTRANCE TO BE REMOVED UPON COMPLETION OF CONSTRUCTION.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
STABILIZED CONSTRUCTION ENTRANCE OPTION 2			702

Freese and Nichols, Inc
Texas Registration No. F-2144

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10/13/23

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CITY OF MIDLAND, TEXAS
WALL STREET SEWER DIVERSION
EROSION CONTROL DETAIL
SEDIMENTATION & EROSION CONTROL DETAILS II

NO.	ISSUE	BY	DATE

PROJ.NO. MDD22466
DATE 10/13/2023
DESIGNED JLM
DRAWN AL
REVISED AL
CHECKED RMO
FILE NAME CV-MDD-DT-DTL503.dwg

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET EC-2
SEQ. 35

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City Council Meeting

Item Number: 15

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Tina Jauz, Assistant City Manager

Subject: MOTION APPROVING AN ECONOMIC DEVELOPMENT AGREEMENT BETWEEN THE MIDLAND DEVELOPMENT CORPORATION AND MOTRAN ALLIANCE, INC. (DISTRICT: ALL) (CITY MANAGER)

Purpose:

The Board of Directors of the Midland Development Corporation approved at a regular meeting on October 2, 2023 a resolution authorizing the execution of an economic development agreement with MOTRAN Alliance, Inc.

Recommended City Council Action:

Approve

Fiscal Impact:

$142,500.00

Discussion:

Commits $142,500.00 to MOTRAN for fiscal year 2024 to secure additional infrastructure funding for Midland and aggressively pursue the development and improvement of transportation corridors connecting Midland with domestic and international markets. The MDC has been supporting MOTRAN financially since 2010.

Morris Williams Jr.

City Manager's Office

ECONOMIC DEVELOPMENT AGREEMENT BETWEEN THE MIDLAND DEVELOPMENT CORPORATION AND MOTRAN ALLIANCE, INC.

WHEREAS, Motran Alliance, Inc., submitted a proposal to the Midland Development Corporation for economic development purposes and the funds for such proposal can be appropriated by the Midland Development Corporation for fiscal year 2023-2024; and

WHEREAS, the primary purpose of Motran Alliance, Inc., is to raise funds for and improve the infrastructure of the Permian Basin area; and

WHEREAS, such activities will create the groundwork for developing new and expanded enterprises in the Midland/Odessa area; and

WHEREAS, the parties have agreed on the terms and conditions and have set forth such terms and conditions in this Agreement;

NOW, THEREFORE, the Midland Development Corporation, hereinafter referred to as the "MDC", and Motran Alliance, Inc., a Texas non-profit corporation, hereinafter referred to as "MOTRAN", do hereby contract and agree as follows:

I. Economic Development Program

MOTRAN shall provide the economic development services as provided in the proposal attached hereto as **Exhibit A**, which is incorporated herein for all purposes. The services provided by MOTRAN shall be referred to herein as the "Economic Development Program."

II. Funding

The MDC shall pay to MOTRAN the total sum of One Hundred Forty-Two Thousand, Five Hundred Dollars ($142,500.00), for the MDC fiscal year, said funds to be used solely for the purpose of conducting the Economic Development Program as delineated in **Exhibit A**. The MDC shall dispense funds to MOTRAN by paying one-half of the total on or before December 1, 2023, and one-

half on or before April 1, 2024. It is understood and agreed that MOTRAN will obtain the remaining necessary funds for completion of the Program from other sources. MOTRAN may perform services that are not eligible for expenditure of funds by the MDC, but the percentage of Economic Development Corporation funds received must not exceed the percentage of eligible services performed by MOTRAN.

III. Budget and Financial Reporting

MOTRAN shall comply with the budget showing the revenues and expenses, a copy of which is attached as **Exhibit B**, to be received and incurred during the term of this Agreement. The hereinafter required financial reports shall, in each case, show the relationship of actual expenses to the authorized expenses shown in said budget.

On or before the 25th day of each month during the term of this Agreement, MOTRAN shall make and send to the MDC, and file with the City Secretary of the City of Midland, a report showing an accounting of all funds received and expended during the preceding month. Said report shall also show the cumulative expenses and revenues for the preceding month together with all prior months covered by this Agreement.

MOTRAN shall maintain complete and accurate financial records of each expenditure of Economic Development Program funds made by it. The general method of financial record keeping and reporting proposed by MOTRAN to be used in complying with the requirements of this Agreement shall be submitted to and approved by the MDC. The sufficiency of detail of any activity or financial report required by this Agreement shall be determined by the MDC. All MOTRAN's records pertaining and related to the activities and funds under the Agreement shall be available for inspection by the MDC or MDC's representatives at any time during MOTRAN's normal office hours. The revenue provided by the MDC under this Agreement must be maintained by MOTRAN in a separate account

established for that purpose and may not be co-mingled with any other money or maintained in any other account.

IV. Informal Reporting

The Activity Reporting Requirements outlined in Article V are for the purpose of providing information to meet the very basic exchange of information. However, to be efficient in the use of economic development funds, to compete in the open market for jobs, to be able to respond to issues and economic development opportunities in a timely manner, to make decisions regarding goals, objectives and priorities and to foster the necessary teamwork between the MDC and MOTRAN, it is necessary to plan and to implement certain informal reporting and interactions which could occur on a frequent basis. For these purposes, the parties agree to engage in certain interaction and interoffice communications.

1. When decisions need to be made regarding negotiations or strategy, MOTRAN will meet with those persons designated by the MDC to develop a plan.
2. MOTRAN will meet with the MDC whenever necessary and also develop and distribute in writing or by oral presentation, reports when needed over and above those required in Article V.

V. Activity Reporting Requirements

MOTRAN will provide quarterly activity reports in writing to the MDC and City Secretary of Midland that will provide a current status report of MOTRAN's ongoing activities pursuant to this Agreement. This report will provide hard data when available.

VI. Audit

In addition to the heretofore required reports covering activities and expenditures under the Economic Development Program, a certified audit of the funds and activities of such Economic

Development Program shall be made annually. The costs of making the audit shall be paid by MOTRAN but MOTRAN may use MDC funds. The auditors performing the above described audit shall have access to and the right to examine all records and accounts directly related to the Economic Development Program and such other MOTRAN records and accounts as may be reasonably necessary to conduct and complete its audit of the Economic Development Program funds.

VII. Independent Contractor

It is expressly understood and agreed that as to any and all of the services tendered by MOTRAN in conducting the Economic Development Program under this contract, MOTRAN shall be considered an independent contractor insofar as its relationship to the MDC. Accordingly, the officers and employees of MOTRAN used or involved in the Economic Development Program under this Agreement shall not be considered, for any purpose, to be the officers and employees of the MDC.

It is expressly understood and agreed that MOTRAN shall perform all work and services described herein as an independent contractor and not as an officer, agent, servant or employee of the MDC; that MOTRAN shall have exclusive control of and the exclusive right to control the details of the services and work performed hereunder, and all persons performing the same; and shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors and subcontractors; that the doctrine of respondeat superior shall not apply as between MDC and MOTRAN, its officers, agents, employees, contractors and subcontractors; and that nothing herein shall be construed as creating a partnership or joint enterprise between MDC and MOTRAN**.** No person performing any of the work and services described hereunder shall be considered an officer, agent, servant or employee of the MDC. Further, it is specifically understood and agreed that nothing in this Agreement is intended or shall be construed as creating a "Community of Pecuniary Interest" or "An Equal Right of Control". MOTRAN shall be an independent contractor under this Agreement

and shall assume all of the rights, obligations and liabilities, applicable to MOTRAN as such independent contractor hereunder. The MDC does not have the right to control the means, methods or details of MOTRAN's work. The MDC does not have the power to direct the order in which MOTRAN's work should be done. MOTRAN shall assume exclusive responsibility for the work hereunder. MOTRAN is entirely free to do the work in its own way.

VIII. Agreement Period

This Agreement shall become effective on October 24, 2023 and shall terminate on September 30, 2024. In the event that MOTRAN violates the terms or conditions of this Agreement, or fails to provide the agreed services, the MDC may terminate this Agreement under the following conditions. The MDC shall provide written notice of the violations or failures to MOTRAN. MOTRAN shall have thirty (30) days to cure the violations or failures or to file a written response with the MDC. If MOTRAN fails to cure or to file a written response within such 30-day period, the MDC may terminate this Agreement immediately. If a written response is filed, the MDC shall set a hearing before the MDC's Board of Directors and provide notice to MOTRAN. After consideration of the response and the testimony at the hearing, the MDC may declare if there has or has not occurred the stated violations or failures. If the Board finds that such violations or failures have occurred, it shall give MOTRAN thirty (30) days written notice and an opportunity to cure. If not cured within such period, the MDC may terminate this Agreement immediately.

IX. Civil Rights

MOTRAN agrees that as to all of its programs and activities, it will fully comply with all Civil Rights Acts and specifically will not discriminate against any person on the basis of race, color, national original, sex or disability.

X. Indemnity

MOTRAN SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND MDC AND ALL OF MDC'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, PROPERTY DAMAGE, LOSSES, AND EXPENSE OF ANY CHARACTER WHATSOEVER INCLUDING REASONABLE ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF MDC, MDC'S OFFICERS, AGENTS AND EMPLOYEES, WHETHER SUCH NEGLIGENT ACT WAS THE SOLE PROXIMATE CAUSE OF THE INJURY OR DAMAGE OR A PROXIMATE CAUSE JOINTLY AND CONCURRENTLY WITH MOTRAN OR MOTRAN'S EMPLOYEES, AGENTS OR SUBCONTRACTORS NEGLIGENCE IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS AGREEMENT, AND CONTRACTOR WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST CITY OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.

XI. Excess MDC Funds

Any funds that are paid by the MDC to MOTRAN pursuant to this Agreement, not expended by the end of the term of this Agreement shall be refunded to the MDC within thirty (30) days after the end of the term of this Agreement, unless MOTRAN can provide the MDC with written notice as to the funds that have not been expended but have been committed, and such commitment is supported by contracts or other written documentation.

XII. Property

Any records and documents that are developed for the purpose of accomplishing services on behalf of the MDC by MOTRAN, and necessary to continue to provide such services, or to show the rights or responsibilities of the MDC, shall be the joint property of the MDC and MOTRAN with equal rights of use and access.

XIII. Project

The parties agree that this Agreement is an eligible "Project" as defined in Chapter 501 of the Texas Local Government Code, as amended.

XIV. Assignment

The parties hereto shall not assign or subcontract this Agreement, in whole or in part, any such assignment or subcontract being void.

XV. Notice

Any notice or report which may or shall be given under the provisions of this Agreement shall, unless otherwise provided herein, be in writing and shall be either delivered via email or sent by United States Mail:

If to MDC:
Midland Development Corporation
200 N. Loraine St., Suite 610
Midland, Texas 79701

If to MOTRAN:
Motran Alliance, Inc.
P.O. Box 60816
Midland, Texas 79711

with copy to:
City Manager
P.O. Box 1152
Midland, TX 79702

XVI. Severability

This Agreement shall be construed in accordance with the laws of the State of Texas. If any clause or provision of this Agreement is illegal, invalid, or unenforceable under present or future

laws effective during the term hereof, then it is the intention of the parties hereto that the remainder of this Agreement shall not be affected thereby, and it is also the intention of both parties that in lieu of each clause or provision that is illegal, invalid or unenforceable, there be added as a part of this Agreement a clause or provision as similar in meaning to such illegal, invalid or unenforceable clause or provision as may be possible and be legal, valid and enforceable.

XVII. Alteration

This Agreement may not be altered, changed or amended, except by an instrument in writing signed by both parties hereto.

XVIII. Entire Agreement and Binding Effect

This Agreement constitutes the entire agreement between the MDC and MOTRAN. No prior written or prior or contemporaneous oral promises or representations shall be binding. The provisions of this Agreement shall be binding upon and inure to the benefit of the successors and assigns of the parties.

XIX. Governing Law and Venue

This Agreement shall be governed by the laws of the State of Texas. The obligations and undertakings of each of the parties to this Agreement shall be deemed to have occurred in Midland County, Texas. All performance and payment made pursuant to this Agreement shall be deemed to have occurred in Midland County, Texas. Exclusive venue for any claims, suits or any other action arising from or connected in any way to this Agreement or the performance of this Agreement shall be in Midland County, Texas.

XX. Compliance with Laws

In the payment and employment of people to serve as employees pursuant to this Agreement, MOTRAN shall comply with all federal, state and local laws, rules, regulations and ordinances with

respect to payment of minimum wages. MOTRAN shall not discriminate against people on the basis of race, sex, age, religion, national origin, or mental or physical disability in the application, hiring, termination, evaluation, or compensation of people assigned to work under this Agreement, and shall further comply with all laws, rules and regulations prohibiting such discrimination including but not limited to, the Civil Rights Act of 1964, the Civil Rights Act of 1991, the Age Discrimination in Employment Act, and the Americans With Disabilities Act.

XXI. Governmental Immunity

By executing this Agreement, the MDC is not waiving its right of governmental immunity. The MDC is not granting consent to be sued by legislative resolution or action.

THERE IS NOWAIVER OF GOVERNMENTAL IMMUNITY.

XXII. Governmental Immunity

BY EXECUTING THIS AGREEMENT, MOTRAN AGREES TO WAIVE AND DOES HEREBY WAIVE ANY CLAIM IT HAS OR MAY HAVE AGAINST THE MDC, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THE AGREEMENT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE AGREEMENT. MOTRAN SPECIFICALLY AGREES THAT IF MOTRAN BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS AGREEMENT, THE CONS1RUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS AGREEMENT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET SEQ., AS AMENDED), MOTRAN AGREES TO WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH MOTRAN MIGHT

OTHERWISE BE ENTITLED.

MOTRAN agrees that this is the intentional relinquishment of a presently existing known right. MOTRAN acknowledges that it understands all terms and conditions of the Agreement. By execution of the Agreement MOTRAN hereby represents and warrants to the MDC that MOTRAN has read and understood the Agreement.

XXIII. Release

NOTWITHSTANDING ANY OTHER PROVISION HEREIN, MOTRAN HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES MDC, MDC'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS CLAIMS OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH MOTRAN HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF AGREEMENT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, OR MDC'S NEGLIGENCE.

XXIV. Third-Party Beneficiary

The MDC's approval of this Agreement does not create a third-party beneficiary. There is no third-party beneficiary to this Agreement. No person or entity who is not a party to this Agreement shall have any third-party beneficiary or other rights hereunder.

[Signature Pages Follow]

EXECUTED by the duly authorized officials of the Parties this _____ day of _____, 2023.

MIDLAND DEVELOPMENT CORPORATION

_____
Chase Gardaphe, Chairman

ATTEST:

_____
Jill Pennington, Secretary

[Signature Page Follows]

MOTRAN ALLIANCE, INC.

By_____

Name _____

Title _____

THE STATE OF TEXAS §
§
COUNTY OF MIDLAND §

BEFORE ME, the undersigned authority, on this day personally appeared _____, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged that he/she executed and delivered the foregoing instrument for the purposes and consideration therein expressed on behalf of MOTRAN ALLIANCE, INC.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this _____ day of _____, 2023.

_____
Notary Public, State of Texas

MOTRAN
MIDLAND-ODESSA TRANSPORTATION ALLIANCE, INC.

MOTRAN PROPOSAL TO MDC

SCOPE OF SERVICES – FY 2023-2024 (Attachment A)

PURPOSE: SECURE ADDITIONAL AREA INFRASTRUCTURE FUNDING

Additional transportation funding helps facilitate necessary improvements related to maximizing current economic opportunities, as well as, providing the additional capacity in our infrastructure system to accommodate new development (housing, retail, commercial) and lays the groundwork necessary to support developments that would allow economic diversification.

Work to help increase telecommunications infrastructure and investment in the area through increased broadband deployment to gaps in current service and higher levels of service, improved cellular communications, and facilitating a more competitive market.

ENERGY SECTOR IMPROVEMENTS

- MOTRAN will continue to work the department on the Permian Basin Regional Freight Study to develop a list of energy sector projects for the area, that facilitate short and long-term freight needs and economic development opportunities.
- MOTRAN will continue to work for additional capacity/levels of service improvements in the Delaware Basin region, especially as it relates to the build out to standard of the SH 302 between Odessa and Kermit/Mentone and SH 349 from Midland to Rankin to facilitate economic growth along these critical workforce and freight corridors.
- MOTRAN will continue to push priorities in the Central Permian Basin, especially related to connectivity to and from the Midland-Odessa area, that are currently overlooked in the Permian Promise.

PROJECT SPECIFIC IMPROVEMENTS ALONG I-20, LP 338, US 385, SH 349, SH 158, and the South Midland Loop (Extension of Loop 250 South of I-20 to SH 349 and ultimately SH 158), and SH 191 between Midland and Odessa.

- Support development of Loop 338 in Odessa and capacity improvements to the Interstate 20 Corridor in Odessa.
- Development of a connection of US 385 to I-10 as a freeway design (4 lane divided)
- Development of SH 349 South of I-20 to 4 lane divided
- Continuing to work with Midland County on the South Midland Loop to facilitate future I-14
- Capacity Improvements to SH 191
- Completion and Extension of the Craddick Reliever Route West to Odessa and East to I-20

INTERSTATES 14 & 27

• MOTRAN will continue efforts aimed at the development of the western segment of I- 14 to the US 87/SH158/I-20 corridor, and a routing of I-27 which honors the original concept where the route serves both Midland and Odessa.

TRUCK PARKING

- Work with TXDOT and local truck stop owners to facilitate opportunities for enhanced truck parking to facilitate transportation and driver needs without creating problems for residential areas and other area businesses.

LOCAL LEVERAGE OPPORTUNITIES

- Work to recruit private sector investments in area infrastructure that can leverage additional state and federal investment.

BROADBAND AND TELECOM INFRASTRUCTURE

- Continue discussions with providers and promoting area growth and new market opportunities to potential providers

INCREASED TRANSMISSION CAPABILITIES

- Continue to support critical infrastructure like pipelines and election transmission necessary to support population growth and economic development activities

COMMERCIAL AIR SERVICE

- Continue discussions with carriers and promoting area growth and new market opportunities to potential providers

TELLING THE STORY OF THE PERMIAN BASIN

• Through our Permian Basin Coalition efforts, continue to provide demographic and economic data highlighting the needs and impact of the Permian Basin both to regional leaders and state leaders. In 2020-2021, we expanded our current network to begin communicating this same data on the national/federal level as well.

MOTRAN, INC.	APPROVED 2022-23	PROPOSED 2023-24	DIFFERENCE 22-23 VS 23-24
REVENUES			
Founding Members Dues	20,000.00	20,000.00	
Members Dues	75,000.00	75,000.00	
Grants	15,000.00	15,000.00	
Interest Earned	500.00	5,500.00	$5,000.00
Midland Development Corp.	142,500.00	142,500.00	
Odessa Development Corp.	142,500.00	142,500.00	
PBC Reserve Funds	10,000.00	25,000.00	$15,000.00
Misc. Income	0.00	0.00	
TOTAL REVENUES	**$405,500.00**	**$425,500.00**	**$20,000.00**
EXPENSES			
Bank Fees	100.00	100.00	
Dues & Subscriptions	1,800.00	1,500.00	-$300.00
Events	20,000.00	32,000.00	$12,000.00
Food & Entertainment	5,500.00	5,500.00	
Gifts	1,400.00	1,400.00	
Health Ins. Reimbursement	11,500.00	11,500.00	
Insurance	4,000.00	4,000.00	
I-14 Initiative	12,500.00	12,500.00	
Miscellaneous Expenses	100.00	100.00	
Office Lease	11,000.00	11,000.00	
Office Supplies	6,000.00	5,500.00	-$500.00
Payroll-Salaries	238,000.00	240,000.00	$2,000.00
Payroll-Service Fee	1,600.00	1,700.00	$100.00
Payroll Taxes	17,500.00	17,500.00	
401 K Contributions	8,000.00	8,800.00	$800.00
401 K Fees		1,200.00	$1,200.00
Postage	2,500.00	2,200.00	-$300.00
Marketing	27,000.00	29,000.00	$2,000.00
Program Supplies	2,500.00	3,000.00	$500.00
Telephone	4,000.00	4,000.00	
Travel Expenses	17,000.00	17,000.00	
Professional Services	13,500.00	13,500.00	
ODC Wifi/Broadband			
Wesbite Updates		2,500.00	$2,500.00
Contingency			
Remittance			
TOTAL EXPENSES	**$405,500.00**	**$425,500.00**	**$20,000.00**

Exhibit B

MOTRAN, INC.	PROPOSED 2023-24	PROPOSED MDC	PROPOSED ODC
REVENUES			
Founding Members Dues	20,000.00		
Members Dues	75,000.00		
Grants	15,000.00		
Interest Earned	5,500.00		
Midland Development Corp.	142,500.00	$142,500.00	
Odessa Development Corp.	142,500.00		$142,500.00
PBC Reserve Funds	25,000.00		
Misc. Income	0.00		
TOTAL REVENUES	**$425,500.00**	**$142,500.00**	**$142,500.00**
EXPENSES			
Bank Fees	100.00		
Dues & Subscriptions	1,500.00		
Events	32,000.00		
Food & Entertainment	5,500.00		
Gifts	1,400.00		
Health Ins. Reimbursement	11,500.00	$2,500.00	$2,500.00
Insurance	4,000.00		
I-14 Initiative	12,500.00	$2,500.00	$2,500.00
Miscellaneous Expenses	100.00		
Office Lease	11,000.00		
Office Supplies	5,500.00		
Payroll-Salaries	240,000.00	$110,000.00	$110,000.00
Payroll-Service Fee	1,700.00		
Payroll Taxes	17,500.00	$8,000.00	$8,000.00
401 K Contributions	8,800.00		
401 K Fees	1,200.00		
Postage	2,200.00		
Marketing	29,000.00	$8,000.00	$8,000.00
Program Supplies	3,000.00		
Telephone	4,000.00		
Travel Expenses	17,000.00	$5,500.00	$5,500.00
Professional Services	13,500.00	$6,000.00	$6,000.00
ODC Wifi/Broadband			
Wesbite Updates	2,500.00		
Contingency			
Remittance			
TOTAL EXPENSES	**$425,500.00**	**$142,500.00**	**$142,500.00**

City Council Meeting

Item Number: 16

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Tina Jauz, Assistant City Manager

Subject: MOTION APPROVING AN ECONOMIC DEVELOPMENT AGREEMENT BETWEEN THE MIDLAND DEVELOPMENT CORPORATION AND KLJ ENGINEERING, LLC (DISTRICT: ALL) (CITY MANAGER)

Purpose:

The Board of Directors of the Midland Development Corporation approved at a regular meeting on October 2, 2023 a resolution authorizing the execution of an economic development agreement with KLJ Engineering, LLC.

Recommended City Council Action:

Approve

Fiscal Impact:

$1,125,000.00

Discussion:

This agreement has been approved by the Office of the Governor for the Texas Enterprise Fund. Under the terms of the agreement, KLJ will establish regional headquarters and create 75 new engineering and surveying jobs in Midland, with an average annual gross compensation of $79,892 per job (this number will increase each year of the agreement). KLJ will be eligible for a job creation incentive from the MDC of $15,000 per new job. This incentive is contingent upon jobs being maintained over the term of the agreement, which is 10 years.

Morris Williams Jr.

City Manager's Office

ECONOMIC DEVELOPMENT AGREEMENT

THIS AGREEMENT is entered into by and between the MIDLAND DEVELOPMENT CORPORATION ("*MDC*"), a Type A corporation pursuant to Chapter 504 of the Texas Local Government Code, as amended, and KLJ ENGINEERING LLC., a North Dakota corporation licensed to do business in Texas ("*Company*").

I.
Recitals

A. Company is currently headquartered in Bismarck, North Dakota, and is in the business of providing certain engineering services related to aviation, environmental matters, funding resources, land development, energy, public works, rights-of-way, structural matters, surveys, telecommunications, transportation, and water.

B. MDC and Company desire to set forth the terms and conditions upon which incentives will be provided to Company as consideration for Company's (i) establishment of a regional headquarters in the City of Midland, Texas, (ii) creation and retention of primary jobs and payroll, and (iii) Company's real property, personal property, and capital expenditure investments located in the City of Midland, Texas.

C. Company shall exercise reasonable efforts to employ residents of the City of Midland and to advertise the availability of job openings in the City of Midland, Texas. Additionally, when it is not possible to hire residents of the City of Midland, Company shall exercise its best commercially reasonable efforts to recruit new residents to live within the corporate limits of the City of Midland, Texas, and to advertise the availability of job openings in the corporate limits of the City of Midland, Texas.

D. Company anticipates creating, relocating, and maintaining seventy-five (75) Full-Time Jobs (as defined herein) at the Business by December 31, 2032.

E. In addition to relocating existing and creating said Full-Time Jobs, Company anticipates that it will provide for at least $3,500,000.00 in real property, personal property, and capital expenditure investments located in the City of Midland, Texas.

NOW, THEREFORE, in consideration of the premises and mutual covenants and agreements contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, MDC and Company hereby agree as follows:

II.
Definitions

When used in this Agreement, capitalized terms not otherwise defined shall have the meanings set forth below:

A. *"Affiliate"* Affiliate shall mean any entity controlling, controlled by, or under common control with Company.

B. *"Business"* means Company's commercial operations located in the City of Midland, Texas.

C. "*Business Day*" Business Day shall mean each day, Monday through Friday, except to the extent any day is a holiday recognized by the Federal government of the United States or a state holiday recognized by the State of Texas.

D. *"Effective Date"* means October 25, 2023.

E. *"Full-Time Job"* means a position of employment that requires an individual to: (i) work 1,820 hours per year, including allowance for vacation, sick leave, earned time off, or other of Company's policies and practices; and (ii) spend a majority of his or her time performing job duties while the individual is physically located at the Business or, due to the nature of engineering, survey, environmental, or consulting work, performing job duties (e.g. like field work, sales, project management, construction monitoring), or similar, elsewhere but still reports to the Business.

III.
Obligations of the Company

A. **Full-Time Jobs and Payroll Obligations.** Company shall create and maintain new Full-Time Jobs in accordance with the following schedule:

Grant Payment	Compliance Year	Created Full-Time Job Target	Incremental Full-Time Job Increase for Compliance Year	More Than 50% of the Incremental Full-Time Job Increase	Minimum Created Full-Time Jobs Required to Receive Grant Payment	Maximum Created Full-Time Jobs Allowed to Receive Grant Payment	Minimum Amount Available for Grant Payment	Maximum Amount Available for Grant Payment
1st	2023	7	7	4	4	7	$60,000	$105,000
2nd	2024	14	7	4	11	14	$60,000	$105,000
3rd	2025	22	8	5	19	22	$75,000	$120,000
4th	2026	32	10	6	28	32	$90,000	$150,000
5th	2027	40	8	5	37	40	$75,000	$120,000
6th	2028	48	8	5	45	48	$75,000	$120,000
7th	2029	58	10	6	54	58	$90,000	$150,000

8th	2030	65	7	4	62	65	$60,000	$105,000
9th	2031	70	5	3	68	70	$45,000	$75,000
10th	2032	75	5	3	73	75	$45,000	$75,000

Company shall maintain said Full-Time Jobs for the duration of the term of this Agreement. For the purpose of computing Full-Time Jobs created and maintained by Company, and notwithstanding any other contrary provision contained herein, employees referred to on **Exhibit A** shall qualify as a Full-Time Jobs provided that each such employee: (i) was hired or transferred to the state of Texas prior to the Effective Date and after the date of the letter attached as **Exhibit B**; and (ii) meets all other criteria in the definition of Full-Time Job contained in Article II.A. **Exhibit A** and **Exhibit B** are attached hereto and incorporated herein for all purposes.

B. **Annual Compliance Certifications.** Beginning for the time period spanning from the Effective Date to December 31, 2023, and every subsequent calendar year thereafter during the term of this Agreement (each a "*Compliance Year*"), Company shall submit a compliance certification to MDC, as described in Article IX.B below (each an "*Annual Certification*"). Each Annual Certification shall detail the Full-Time Jobs created and maintained during the previous Compliance Year. Company shall submit an Annual Certification within sixty (60) days from the end of every Compliance Year.

IV.
Obligation of MDC

On or before thirty (30) days following Company's submission of an Annual Compliance Certification to MDC, MDC shall provide Company incentive funds in the amount of Fifteen Thousand and No/100 Dollars ($15,000.00) for each new Full-Time Job created and maintained by Company during the previous Compliance Year as shown on the Annual Compliance Certification; provided, however, that MDC's obligation to provide said funds shall: (i) be subject to Company's successful completion of its obligations contained in Article III.A; and (ii) be limited by the Incremental Full-Time Job Increase for the previous Compliance Year. Notwithstanding any contrary provision contained herein, the incentive funds provided by MDC to Company for any Compliance Year pursuant to this Article shall not exceed the product of: (i) Fifteen Thousand and No/100 Dollars ($15,000.00); and (ii) the Incremental Full-Time Job Increase for the Compliance Year.

Notwithstanding the foregoing, if Company creates Full-Time Jobs equal to or exceeding the "Minimum Created Full-Time Jobs Required to Receive Grant Payment" referenced in the schedule contained in Article III.A, and assuming all other obligations for receiving payment are met by Company, MDC shall provide Company incentive funds in the amount of Fifteen Thousand and No/100 Dollars ($15,000.00) for each new Full-Time Job created and maintained by Company during the previous Compliance Year as shown on the Annual Compliance Certification. In such an event, the incentive funds provided by MDC to Company shall not exceed the product of: (i) Fifteen Thousand and No/100 Dollars ($15,000.00); and (ii) the number listed under "More than

50% of the Incremental Full-Time Job Increase" in the schedule contained in Article III.A for any Compliance Year.

If an Annual Compliance Certification shows Company to be deficient in its obligations contained in Article III.A, MDC shall be relieved of its obligation to provide further incentive funds unless/until Company satisfies its obligations in accordance with the schedule set forth in Article III.A.

Notwithstanding any contrary provision contained herein, MDC shall have no obligation to provide Company incentive funds for Company's creation of a job that does not qualify as a Full-Time Job pursuant to Article II.E.

V.
Repayment Provisions; Remedies Upon Default

A. If an Annual Compliance Certification demonstrates that Company has not created and maintained Full-Time Jobs in accordance with Article III.A.

B. If Company is in default of this Agreement due to its failure to make and maintain Full-Time Jobs in accordance with the schedule contained in Section III.A, and if MDC previously disbursed incentive funds pursuant to Article IV that have not been previously repaid to MDC, then Company shall repay to MDC the amount of Fifteen Thousand and No/100 Dollars ($15,000.00) for each Full-Time Job that Company failed to make or maintain during the previous Compliance Year.

C. The parties agree that in the event of Company's default of this Agreement, MDC shall be entitled to the remedies referenced in this Agreement in addition to any other remedy to which it may be entitled at law or in equity.

VI.
Cure Period

In lieu of exercising the right and remedies contained in Article V after MDC gives Company written notice of its default as set forth in this Agreement, MDC may, in its sole and absolute discretion, elect to allow Company a period not less than thirty (30) days, but not more than sixty (60) days to cure any such default. Any such election by MDC to allow Company to cure such a default shall in no way be construed as, or operate as, a waiver of any of MDC's rights contained in this Agreement.

VII.
Term

Upon execution by all of the parties, this Agreement becomes effective on the Effective Date and shall terminate on September 30, 2034, or when terminated by mutual agreement of the parties, or when terminated as set forth in Article X.E.

VIII.
Law

The parties acknowledge and agree that the incentive funds provided to Company under this Agreement shall be utilized solely for purposes authorized under this Agreement and Chapter 501 of the Texas Local Government Code, as applicable.

IX.
Special Conditions

A. **Total Financial Commitment.** Notwithstanding any other provision hereof that may be interpreted otherwise, MDC's total financial commitment during the term of this Agreement shall not exceed One Million One Hundred Twenty-Five Thousand and No/100 Dollars ($1,125,000.00) in the aggregate.

B. **Certifications.** Company agrees to the following certification requirements:

1. As to the certifications required in Article III.A, Company shall provide supplemental evidence or supporting documentation in a form acceptable to MDC; said supplemental evidence or supporting documentation may include, but shall not limited to, Texas Workforce Commission Employer Quarterly Reports, certified employee rosters that include hours worked and positions filled, or any other such documents requested by MDC.

2. Company shall allow MDC reasonable access to the Business, for purpose of determining Company's compliance with the employment certifications given by Company. Such access shall be granted so long as (i) MDC requests access by giving Company three (3) Business Days' prior written notice; (ii) MDC is accompanied by representatives of Company during such access; and (iii) such access occurs during normal business hours.

3. When requested in writing by MDC to do so, Company will provide a notarized statement in a form acceptable to MDC that, to Company's knowledge, Company is in compliance with each applicable material term of this Agreement.

4. All certifications required under this Agreement shall be signed and sworn to by Company's chief executive officer and chief financial officer before a notary and shall contain an appropriate jurat and a statement that the information contained in the certification is true and correct.

5. Company shall maintain, during the term of this Agreement and for a period of three (3) years following expiration of the term, all records necessary to confirm that the Company has met or is capable of meeting its obligations under this Agreement, including such records maintained by Company and any Affiliate. Such records shall include, but not be limited to, payroll records, daily time sheets, records of personnel utilization on work activities at the Business (including records on an hourly basis for personnel), and other records demonstrating that the Full-Time Jobs created by

Company meet all requirements set forth in this Agreement. Upon receiving three (3) Business Days' prior written notice issued by MDC at any time during the term of this Agreement, Company shall make all such documents available to MDC to audit and inspect, regardless of whether a dispute is then pending between the parties. Company shall provide MDC or an accounting firm designated by MDC with prompt access to said records so that MDC or its designated accounting form can perform such audit/inspection during normal business hours in an adequate workspace provided by Company. Upon receipt of a written request made by MDC, Company shall reimburse all reasonable costs incurred by MDC relating to the audit and inspection of said records.

C. **Covenants.** Company makes the following covenants to MDC and agrees that in the event of failure of Company to comply with such covenants, the breach of any one of which shall constitute an event of default, MDC may terminate this Agreement, at its sole and absolute discretion:

1. Company is a legal entity duly organized, validly existing and in good standing and is duly authorized to do business in the State of Texas.

2. The execution of this Agreement has been duly authorized by Company's board of directors or other governing body, or by officers empowered to execute such agreements and bind Company, and is not in contravention of the provisions of Company's articles of incorporation or bylaws, or of any agreement or instrument to which Company is a party to or by which it may be bound, the breach of which would have a material, adverse effect on Company and its operations.

3. There are no bankruptcy proceedings currently pending by or against Company.

4. None of Company's assets are subject to any material lien, security interest or other encumbrance, except as reflected in writing and furnished to MDC prior to the Effective Date.

5. No certificate or statement delivered or to be delivered by Company to MDC under this Agreement or in connection with any transaction contemplated hereby contains any untrue statement of a material fact or fails to state any material fact necessary to keep the statements contained therein from being misleading in any material respect by reason of any omission.

D. **Suspension.** MDC, under the following circumstances and at its sole discretion, may terminate this Agreement:

1. The insolvency of Company. "Insolvency" shall have the meaning set forth in federal bankruptcy law.

2. The appointment of a receiver of Company, or of all or any substantial part of their property, and the failure of such receiver to be discharged within sixty (60) days thereafter.

3. The adjudication of Company as bankrupt, the filing by Company of a petition to be adjudged bankrupt, or a petition or answer seeking reorganization or admitting the material allegations of a petition filed against Company in any bankruptcy or reorganization proceeding.

E. **Additional Covenants.** If Company should fail to comply with any of the following provisions, and such failure continues for sixty (60) days following written notice to Company (each, an event of default), MDC may terminate this Agreement.

1. Company, or any affiliate of, or successor to Company, shall continue its fulltime commercial operations in accordance with Company's obligations set forth in this Agreement at all times during the period of this Agreement.

2. Company shall pay, or cause to be paid, before delinquent all ad valorem taxes assessed and owed to the taxing authorities having jurisdiction, as may be set forth in the Sublease. In addition, Company shall pay before delinquent all employment, income, franchise and all other taxes to all local, state and federal entities.

3. Company shall, on a yearly basis during the term of this Agreement, provide MDC with tax certificates from Midland Central Appraisal District demonstrating that all taxes on Company's capital and property investments have been paid in full to the current tax year.

4. Company shall obtain and maintain all necessary rights, licenses, and permits to carry on its Business.

5. Company agrees that, as to all of the programs and activities arising out of this Agreement, it shall comply in all material respects with all Civil Rights Acts and specifically will not discriminate against any person on the basis of race, color, national origin, religion, age, sex or by reason of being disabled.

6. Company agrees that it shall comply with Texas Government Code Section 2264.001 *et seq*., as amended.

F. **Interpretation of Terms & Obligations.** The parties acknowledge and agree that the canon of construction that "any ambiguities are to be construed against the drafter" shall not be employed in the interpretation of this Agreement. Notwithstanding any other provision contained herein to the contrary, the parties agree that in the event that there is a dispute regarding whether a particular item falls within the definition of Full-Time Jobs, MDC shall make such determination in its sole and absolute discretion and such determination shall be final and binding on Company.

X.
General Terms

A. **Entire Agreement.** This Agreement embodies the complete agreement of the parties hereto, superseding all oral or written, previous and contemporary agreements between the parties relating to matters in this Agreement; and except as otherwise provided herein, this Agreement shall not be modified or amended without a written agreement of the parties.

B. **Legal Relationships.** The parties are not, and shall not be considered as, joint venturers, partners, or agents of each other and no party shall have the power to bind or obligate another, except as set forth in this Agreement. The parties agree not to represent to anyone that they are agents of one another or have any authority to act on behalf of one another. It is mutually understood and agreed that nothing in this Agreement is intended or shall be construed as in any way creating or establishing any partnership, joint venture, or agency between MDC and Company. Further, it is specifically understood and agreed that nothing in this Agreement is intended or shall be construed as creating a community of pecuniary interest or an equal right of control that would give rise to vicarious liability.

C. **No Third-Party Beneficiary.** The parties' approval of the Agreement does not create a third-party beneficiary. There is no third-party beneficiary to this Agreement. No person or entity that is not a party to this Agreement shall have any third-party beneficiary or other rights hereunder.

D. **Independent Contractor.** It is expressly understood and agreed that Company shall perform all work and services described herein as an independent contractor and not as an officer, agent, servant or employee of MDC; that Company shall have exclusive control of and the exclusive right to control the details of the services and work performed hereunder, and all persons performing the same; and shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors and subcontractors; that the doctrine of *respondeat superior* shall not apply as between MDC and Company, its officers, agents, employees, contractors and subcontractors; and that nothing herein shall be construed as creating a partnership or joint enterprise between MDC and Company. No person performing any of the work and services described hereunder shall be considered an officer, agent, servant or employee of MDC. Company shall be independent contractors under this Agreement and shall assume all rights, obligations and liabilities applicable to it as an independent contractor. MDC does not have the power to direct the order in which the work is done. MDC shall not have the right to control the means, methods or details of Company's work. Company shall assume exclusive responsibility for the work. Company is entirely free to do the work in its own way.

E. **Termination.** This Agreement may be terminated by mutual agreement of the parties or by any party upon the failure of another party to fulfill an obligation as set forth herein if the default is not cured within sixty (60) days after written notice from the other party reasonably specifying such breach, or such longer period as may be reasonably necessary so long as such party has commenced the cure within such thirty (30) day period, and thereafter is diligently pursuing such cure.

F. **Counterparts.** This Agreement may be executed in one or more counterparts, each of which will be deemed to be an original copy of this Agreement and all of which, when taken together, will be deemed to constitute one and the same agreement. The exchange of copies of the Agreement, and of the signature pages, by facsimile or electronic transmission shall constitute effective execution and delivery of this Agreement as to the Parties and may be used in lieu of the original Agreement for all purposes. Signatures of the Parties transmitted by facsimile or electronic mail (i.e., .pdf format) shall be deemed to be original signatures for any purpose(s) whatsoever.

G. **Governing Law & Venue.** The laws of the State of Texas shall govern, construe and enforce all the rights and duties of the parties, including but not limited to tort claims and any and all contractual claims or disputes, arising from or relating in any way to the subject matter of this Agreement, without regard to conflict of laws and rules that would direct application of the laws of another jurisdiction. All performance and payments made pursuant to this Agreement shall be deemed to have occurred in Midland County, Texas. All payments under this Agreement are deemed to have taken place in Midland County, Texas. The sole, exclusive, and mandatory venue for any claims, suits, disputes or any other action arising from, relating to or concerning in any way this Agreement or the performance of this Agreement shall be in Midland County, Texas.

H. **Legal Construction.** In case one or more of the provisions contained in this Agreement shall for any reason be held invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions hereof and this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein.

I. **Law.** This Agreement is subject to all applicable municipal, county, state and federal laws, regulations, orders and rules and Company agrees that it will comply in all material respects with all such applicable laws, regulations, orders and rules of the State of Texas and other such governmental agencies. As used in this Agreement, the phrase "applicable law" is deemed to include the foregoing.

J. **Assignment.** This Agreement shall be binding upon the parties hereto and their successors and assigns. This Agreement may not be assigned by a party without the prior written consent of the other party.

XI.
Miscellaneous

A. Certification Regarding Undocumented Workers: Company certifies that it and its Affiliates do not and will not knowingly employ an Undocumented Worker, as defined below, during the term of this Agreement, "Undocumented Worker" shall mean an individual who, at any time during employment, is not (i) lawfully admitted for permanent residence to the United States or (ii) otherwise authorized under applicable law to be employed, on any basis or under any program in the United States. Company shall

immediately notify MDC if (i) Company becomes aware of it or its Affiliate employs or has employed an Undocumented Worker, (ii) Company becomes aware or receives notice that it or its Affiliated is alleged to have employed an Undocumented Worker, or (iii) Company or its Affiliate is convicted of a violation under the following paragraph.

If during the term of this Agreement, Company or any of its Affiliates knowingly employ any Undocumented Worker and is convicted of a violation under 8 U.S.C. § 1324a(f), Company shall forfeit its claim to any incentives owed to it by MDC under this Agreement and MDC shall be fully and completely discharged from any and all obligations due hereunder.

B. Severability. If any provision of this Agreement is held invalid or otherwise unenforceable by any court of competent jurisdiction, the remaining provisions of the Agreement will remain in full force and effect. Any provision of this Agreement held invalid or otherwise unenforceable only in part or degree will remain in full force and effect to the extent not held invalid or unenforceable.

C. Notices. All notices permitted or required hereunder shall be in writing, signed by the party giving such notice and delivered either (i) personally; (ii) by certified mail, return receipt requested, postage prepaid addressed to the party at the address listed below; (iii) delivered by a nationally recognized courier service; or (iv) via email or fax, provided that concurrent notice is delivered by any other approved method of delivery outlined in subsections (i) – (iii) above. Notices under this paragraph will be deemed effective if sent to the party or person identified below:

If to MDC:

Midland Development Corp.
Attn: MDC Chairman
Attn: Executive Director
200 N. Loraine St., Suite 610
Midland, Texas 79701

If to Company:

KLJ Engineering LLC
P.O. Box 4130
Bismarck, ND 58502

With Copy To:

City Attorney's Office
City Hall
300 Loraine St., Suite 320
Midland, Texas 79701

D. Paragraph Headings. The paragraph headings inserted in this Agreement are for convenience only and in no way define, limit or otherwise describe the scope or intent of this Agreement or any provisions hereof, or in any way affect the interpretation of this Agreement.

E. Binding Effect. This Agreement shall inure to the benefit of, and shall be legally binding upon, the parties hereto and their respective heirs, successors, assigns and legal representatives.

F. Findings Incorporated. The recitals are hereby incorporated into the body of this Agreement for all rights and purposes, and shall be considered part of the mutual covenants, consideration and promises that bind the parties in the same manner as the material terms and provisions hereof.

G. Waiver of Attorney Fees. BY EXECUTING THIS AGREEMENT, COMPANY AGREES TO WAIVE AND DOES HEREBY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST MDC REGARDING THE AWARD OF ATTORNEY FEES THAT IS IN ANY WAY RELATED TO THIS AGREEMENT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THIS AGREEMENT. COMPANY AGREES THAT IF COMPANY BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS AGREEMENT, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS AGREEMENT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET SEQ., AS AMENDED), THAT COMPANY AGREES TO (i) WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY FEES TO WHICH IT MIGHT OTHERWISE BE ENTITLED AND (ii) ASSUME COMPLETE FINANCIAL RESPONSIBILITY FOR AND PAY ALL ATTORNEY FEES AND ASSOCIATED COSTS INCURRED IN GOOD FAITH BY MDC IN MDC'S CONTESTING OF THE LEGAL ACTION OR PROCEEDING BROUGHT BY COMPANY.

COMPANY AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT AND THE ASSUMPTION OF A FUTURE OBLIGATION IN THE EVENT THAT LESSEE BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING AGAINST MDC RELATED TO THIS AGREEMENT, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS AGREEMENT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGEMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET SEQ., AS AMENDED). COMPANY ACKNOWLEDGES THAT COMPANY UNDERSTANDS ALL TERMS AND CONDITIONS OF THE AGREEMENT. COMPANY FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN COMPANY AND MDC. THIS ARTICLE SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF GOVERNMENTAL IMMUNITY.

COMPANY IS RELYING ON ITS OWN JUDGMENT. COMPANY ACKNOWLEDGES THAT COMPANY HAD THE OPPORTUNITY TO DISCUSS THIS AGREEMENT WITH LEGAL COUNSEL PRIOR TO ITS EXECUTION.

H. Amendment. This Agreement may only be amended by written instrument executed by both parties expressly stating the intention to amend this Agreement. No amendment shall be effective unless approved by a resolution duly passed by the MDC Board of Directors and the Midland City Council.

I. Release. COMPANY HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES MDC, MDC'S BOARD MEMBERS, ATTORNEYS, EMPLOYEES, AND OFFICERS, FROM ANY AND ALL DEMANDS CLAIMS, DAMAGES, OR CAUSES OF ACTION OF ANY KIND WHATSOEVER THAT COMPANY HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, MDC'S NEGLIGENCE.

J. Consideration. MDC and Company hereby agree and acknowledge that this Agreement is supported by good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the parties.

K. Governmental Immunity. By executing this Agreement, MDC is not waiving its right of governmental immunity. MDC is not granting consent to be sued by legislative resolution or action. **THERE IS NO WAIVER OF GOVERNMENTAL IMMUNITY**.

L. Governmental Function. MDC AND COMPANY HEREBY ACKNOWLEDGE AND AGREE THAT THE ENTIRETY OF MDC'S PERFORMANCE AND OBLIGATIONS UNDER THIS AGREEMENT ARE GOVERNMENTAL FUNCTIONS. BY ENTERING INTO THIS AGREEMENT, COMPANY RELEASES MDC FROM ANY PRESENT OR FUTURE CLAIMS ASSERTING MDC'S PERFORMANCE AND OBLIGATIONS UNDER THIS AGREEMENT ARE NOT GOVERNMENTAL FUNCTIONS. MDC AND COMPANY ACKNOWLEDGE AND AGREE THAT THIS AGREEMENT IS IN THE PUBLIC INTEREST AND SERVES A PUBLIC PURPOSE OF THE STATE OF TEXAS AND CITY OF MIDLAND IN PROMOTING THE WELFARE OF THE GENERAL PUBLIC ECONOMICALLY BY SECURING AND RETAINING BUSINESS ENTERPRISES AND AS A RESULT OF MAINTAINING A HIGHER LEVEL OF EMPLOYMENT, ECONOMIC ACTIVITY, AND STABILITY.

M. No Disparity of Bargaining Position. MDC and Company agree that there was no disparity of bargaining power between the parties in the negotiation and execution of this Agreement. MDC and Company acknowledge and agree that they were represented by legal counsel. MDC and Company acknowledge and agree that they read and understood the entire Agreement prior to its execution. MDC and Company acknowledge and agree

that there were numerous compromises and concessions made by the parties resulting in the agreed-upon terms of this Agreement.

N. Notice of Alleged Breach; Statutory Prerequisites. As a condition precedent to filing suit for alleged damages incurred by an alleged breach of an express or implied provision of this Agreement, Company or its legal representatives shall give the MDC Chairman notice in writing (consisting of one original and two copies of notice attached to a copy of this Agreement) of such damages, duly verified, within one hundred twenty (120) days after the same has been sustained. The discovery rule does not apply to the giving of this notice. The notice shall include when, where and how the damages occurred, the apparent extent thereof, the amount of damages sustained, the amount for which Company will settle, the physical and mailing addresses of Company at the time and date the claim was presented and the physical and mailing addresses of Company for the six (6) months immediately preceding the occurrence of such damages, and the names and addresses of the witnesses upon whom Company relies to establish its claims. Failure to so notify the MDC Chairman within the time and manner provided herein shall exonerate, excuse and except MDC from any liability whatsoever. MDC is under no obligation to provide notice to Company that Company's notice is insufficient. MDC reserves the right to request reasonable additional information regarding the claim. Said additional information shall be supplied within thirty (30) days after receipt of notice.

The statutory prerequisites outlined herein constitute jurisdictional requirements pursuant to Texas law. Notwithstanding any other provision, Company's failure to comply with the requirements herein shall perpetually bar Company's claim for damages regardless of if MDC has actual or constructive notice or knowledge of said claim or alleged damages. Company agrees that the requirements of this Article are reasonable.

O. Approval Required. This Agreement shall not become effective until approved by a resolution of the Midland City Council.

THERE ARE NO UNWRITTEN ORAL AGREEMENTS BETWEEN THE PARTIES. TIME IS OF THE ESSENCE WITH REGARDS TO ALL DEADLINES IN THIS AGREEMENT.

REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK
SIGNATURE PAGES TO FOLLOW

IN WITNESS WHEREOF, MDC and Company have executed this Agreement as of the Effective Date.

MIDLAND DEVELOPMENT CORPORATION

_____
Chase Gardaphe, Chairman

ATTEST:

_____
Jill Pennington, Secretary

KLJ ENGINEERING LLC

By: _____

Name: _____

Title: _____

THE STATE OF _____ §
§
COUNTY OF _____ §

BEFORE ME, _____, a notary public, on this day personally appeared _____, _____ of KLJ Engineering LLC, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same as the act and deed of said Company for the purposes and consideration therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ day of _____, A.D., 2023.

_____
Notary Public, in and for
the State of _____

LETTER FROM OFFICE OF THE GOVERNOR REGARDING UNANIMOUS APPROVAL OF GRANT TO THE COMPANY FROM THE TEXAS ENTERPRISE FUND

GOVERNOR GREG ABBOTT
ECONOMIC DEVELOPMENT & TOURISM

May 16, 2022

Martin Fritz
Chief Administrative Officer
KLJ Engineering LLC
P.O. Box 1157
Bismarck, ND 58502

Dear Mr. Fritz:

After reviewing your application, Governor Greg Abbott, Lieutenant Governor Dan Patrick, and Speaker of the House of Representatives Dade Phelan are pleased to conditionally offer a Texas Enterprise Fund Award of $656,250 to KLJ Engineering LLC for the investment in Midland County, Texas. In addition to the Texas Enterprise Award, KLJ Engineering LLC is being offered a $7,000 Veteran Created Job Bonus.

Texas Enterprise Fund awards support the creation of quality jobs and leverage private investment for business activities designed to strengthen the economic future of the state. We are delighted KLJ Engineering LLC is considering making an investment in our state, and we are confident you will find Texas to be an ideal location for your business.

This award is contingent upon, among other things, execution of a formal Economic Development Grant Contract, which will be developed between the State and your company. It is critical to execute the Economic Development Grant Contract within 180 calendar days of the date of this letter. Staff at the Governor's Office of Economic Development and Tourism will initiate work on this Contract immediately. For additional assistance, please contact William Jackson (william.jackson@gov.texas.gov) or Haileigh Meyers (Haileigh.Meyers@gov.texas.gov) via email or 512-936-0100.

We look forward to working with you to help your firm find success in Texas!

Sincerely,

Adriana Cruz
Executive Director

cc: Sara Harris, Midland Development Corporation
Chris Sterner, Office of the Lieutenant Governor
Andrew Blifford, Office of the Speaker of the House of Representatives
AC:wj

Employees Hired or Transferred Prior to the Effective Date of the Economic Development Agreement and After the Date of the Letter Attached as Exhibit A

Company hired or transferred from out of state six (6) employees prior to the Effective Date of this Agreement and after the date of the letter attached as **Exhibit A**. By the Effective Date, Company shall submit to the Office of the Governor a list containing the full names of said employees.

City Council Meeting

Item Number: 17

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Cristina Odenborg Burns, Director of Community Services

Subject: MOTION AUTHORIZING THE CITY MANAGER TO NEGOTIATE AND EXECUTE AN AGREEMENT WITH SPECIAL OLYMPICS TEXAS, INC., TO HOST FALL CLASSIC EVENTS IN THE CITY OF MIDLAND BEGINNING IN OCTOBER 2024; PROVIDED, HOWEVER, THAT SAID AGREEMENT SHALL NOT BECOME EFFECTIVE UNTIL APPROVED BY THE CITY COUNCIL (DISTRICT: ALL) (COMMUNITY SERVICES)

Purpose:

Motion authorizing the City Manager to negotiate and execute an agreement with Special Olympics Texas, Inc. to host Fall Classic events in the City of Midland beginning in October 2024; provided, however, that said agreement shall not become effective until approved by the City Council.

Recommended City Council Action:

Approve

Fiscal Impact:

Special Olympics Texas is requesting $250,000 for each year the Fall Classic event is held in Midland.

Discussion:

Midland and Odessa representatives met with Special Olympics on September 20, 2023, to discuss the possibility of bringing their Fall Classic event to West Texas beginning in October 2024. The Fall Classic includes competitions in swimming, golf, equestrian, bocce, and softball, and Special Olympics Texas has identified Hogan Park Golf Course as an ideal location for the golf competitions. Other competitions that will take place in Midland are swimming at COM Aquatics, equestrian events and opening ceremonies for 2025 and 2027 at

the Midland County Horseshoe Arena, and FUNdamental sports at the YoungLife facility. Odessa will be hosting bocce and softball competitions and equestrian and opening ceremonies for 2024, 2026, and 2028. The Fall Classic event is expected to attract 2500 athletes and 5,000 spectators to West Texas.

In order to move the Fall Classic from the Bryan/College Station area to West Texas, Special Olympics has asked for a $500,000 commitment to offset event expenses as well as to help cover some travel expenses for participants and their families. Of this, the City of Midland has been asked to contribute $250,000.

This motion will authorize the City Manager to negotiate and execute an agreement with Special Olympics to formalize the City's commitment to hosting the Fall Classic event in Midland beginning in October 2024.

City Manager's Office

City Council Meeting

Item Number: **18**

Meeting Date: **October 24, 2023**

To: **City Council / City Manager**

From: **Isaac Garnett, Manager, Community Development**

Subject: RESOLUTION AUTHORIZING THE EXECUTION OF COMMUNITY DEVELOPMENT BLOCK GRANT CONTRACTS WITH CASA DE AMIGOS OF MIDLAND, TEXAS, INCORPORATED, THE SALVATION ARMY OF MIDLAND, THE MIDLAND COUNTY HOSPITAL DISTRICT, SENIOR LIFE MIDLAND, INC., MISSION HEALTH CARE, INC., HELLINGHAUSEN HOPE, INC., THRIVING UNITED, INC., AND CHURCH ON WHEELS, INC.; AUTHORIZING THE FUNDING OF COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAMS FOR A TOTAL COST OF $1,268,782.00; AND APPROPRIATING AND ALLOCATING FUNDS **(DISTRICT: ALL) (DEVELOPMENT SERVICES)**

Purpose:

Resolution Authorizing the Execution of Community Development Block Grant Contracts and appropriating CDBG Block Grant Funds (060) for Stated Purposes.

Recommended City Council Action:

Approve

Fiscal Impact:

Funds in the amount of $1,364,883 will be appropriated to the 2023-2024 CDBG Block Grant (060) for stated purposes, and $198,823 will be allocated from the 2020-2021 CDBG CARES CV19 Block Grant Project (700299) Community Development Block Grant Fund (060) for the stated purposes.

Discussion:

Authorize the execution of Community Development Block Grant contracts with Casa de Amigos Home Cleaning Program in the amount of $45,000.00; Mission Health Care, Inc. Take

Home Terrific Meal Program in the amount of $38,000.00; Casa de Amigos Senior Nutrition Program in the amount of $66,000.00; Casa de Amigos Senior Resiliency Program CV19 in the amount of $46,000.00; The Salvation Army of Midland Homeless Nutrition CV19 Programs in the amount of $100,000.00; Midland County Hospital District (Mental Health & Wellness (CRISP) CV19 Program in the amount of $20,000.00; Senior Life Midland (SLM) Meals on Wheels CV19 Program in the amount of $17,823.00; Breaking Bread Ministries Commercial Refrigerator in the amount of $15,000.00; Thriving United Inc. Peer Support/Homeless Outreach in the amount of $83,00.00; Hellinghausen Hope Inc. Parking Lot Infrastructure in the amount of $50,000; and appropriating CDBG Block Grant funds (060) for stated purposes to OHAP Major-Down Payment Assistance in the amount of $150,000.00; OHAP Minor Repair in the amount of $50,000.00; Development Services Demolition in the Amount of $50,000.00; Engineering Department Benton St./Camp St. Infrastructure in the amount $450,000.00; and contingencies in the amount of $231,982.82

City Manager's Office

RESOLUTION NO. _____

RESOLUTION AUTHORIZING THE EXECUTION OF COMMUNITY DEVELOPMENT BLOCK GRANT CONTRACTS WITH CASA DE AMIGOS OF MIDLAND, TEXAS, INCORPORATED, THE SALVATION ARMY OF MIDLAND, THE MIDLAND COUNTY HOSPITAL DISTRICT, SENIOR LIFE MIDLAND, INC., MISSION HEALTH CARE, INC., HELLINGHAUSEN HOPE, INC., THRIVING UNITED, INC., AND CHURCH ON WHEELS, INC.; AUTHORIZING THE FUNDING OF COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAMS FOR A TOTAL COST OF $1,268,782.00; AND APPROPRIATING AND ALLOCATING FUNDS

WHEREAS, Casa de Amigos of Midland, Texas, Incorporated, has agreed to provide services for the Case de Amigos Home Cleaning Program for $45,000.00; and

WHEREAS, Casa de Amigos of Midland, Texas, Incorporated, has agreed to provide services for the SE Senior Center Nutrition Program for $66,000.00; and

WHEREAS, Casa de Amigos of Midland, Texas, Incorporated, has agreed to provide services for the Casa de Amigos Senior Resiliency CV19 Program for $46,000.00; and

WHEREAS, the Salvation Army of Midland has agreed to provide services for the Homeless Nutrition CV19 Program for $100,000.00; and

WHEREAS, the Midland County Hospital District has agreed to provide services for the Community Referral and Indigent Services CV19 Program for $20,000.00; and

WHEREAS, Senior Life Midland, Inc. has agreed to provide services for the Senior Life Midland Meals on Wheels CV19 Program for $17,823.00; and

WHEREAS, Mission Health Care, Inc., has agreed to provide services for the Mission Center Take Home Terrific Meal Program for $38,000.00; and

WHEREAS, Hellinghausen Hope, Inc., has agreed to provide services for the Parking Lot Rehabilitation Program for $50,000.00; and

WHEREAS, Thriving United, Inc., has agreed to provide services for the Peer Support Specialist Program for $83,000.00; and

WHEREAS, Church on Wheels, Inc., has agreed to provide services for the

Commercial Refrigerator Replacement Program for $15,000.00; and

WHEREAS, the City Council finds it to be in the public interest to enter into contracts with said entities for said services; and

WHEREAS, the City Council finds it to be in the public interest to allocate funds in the amount of $150,000.00 to the OHAP Major-Down Payment Assistance Program; and

WHEREAS, the City Council finds it to be in the public interest to allocate funds in the amount of $50,000.00 to the OHAP-Minor Home Repairs Program; and

WHEREAS, the City Council finds it to be in the public interest to allocate funds in the amount of $450,000.00 to the City of Midland Engineering Department South Benton Street sidewalks/ Camp Street infrastructure improvements; and

WHEREAS, the City Council finds it to be in the public interest to allocate funds in the amount of $50,000.00 to the City of Midland Development Services Department Demolition Substandard Housing Program;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the Mayor and City Secretary are hereby authorized and directed to execute and attest, respectively, on behalf of the City of Midland, Texas, Community Development Block Grant contracts with Casa de Amigos of Midland, Texas, Incorporated, The Salvation Army of Midland, The Midland County Hospital District, Senior Life Midland, Inc., Mission Health Care, Inc., Hellinghausen Hope, Inc., Thriving United, Inc., and Church on Wheels, Inc., to provide community relief services with grant funds received from the United States Department of Housing and Urban Development. Said contracts to be kept on file in the office of the City Secretary, referenced by the date and number of this Resolution.

SECTION TWO. That the City Council hereby authorizes and approves the allocation of funds to the OHAP Major-Down Payment Assistance Program, the OHAP-

Minor Home Repairs Program, the City of Midland Parks and Recreation Department MLK Center Weight Room Program, the City of Midland Engineering Department South Benton Street sidewalks/ Camp Street infrastructure improvements, and the City of Midland Development Services Department Demolition Substandard Housing Program.

SECTION THREE. That funds in the amount of $1,067,901.00 shall be appropriated to the 2023-2024 CDBG Block Grant Project and $198,823.00 shall be allocated from the 2020-2021 CDBG CARES CV19 Block Grant Project (700299) Community Development Block Grant Fund (060) for the stated purposes.

SECTION FOUR. That the City Comptroller is hereby authorized and directed to make payment to Casa de Amigos of Midland, Texas, Incorporated, The Salvation Army of Midland, The Midland County Hospital District, Senior Life Midland, Inc., Mission Health Care, Inc., Hellinghausen Hope, Inc., Thriving United, Inc., and Church on Wheels, Inc., pursuant to the terms of their respective contracts, not to exceed the contracted price, upon receipt of proper invoices or statements approved by the City Manager.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2023, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

RECOMMENDED AND APPROVED:

_____
Tommy Gonzalez, City Manager

_____
Christy Weakland, Director of Finance

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Isaac Garnett, Community Development Administrator

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

EXIBIT A

CDBG/CDBG-CV-19 FUNDING

CDBG EXIBIT A

NAME: SE Senior Center Nutrition Program **Request: $66,000**

APPLICANT: Casa de Amigos

Description: Casa de Amigos requests funding for the nutrition programs at the Southeast Senior Citizen Center (1803 E Indiana) and at the Casa de Amigos (1101 E Garden Lane). Approximately 242 seniors are expected to benefit from the lunchtime meal program and take-home food boxes in order to supplement their nutritional needs. Meals are contracted daily with a local catering company and reviewed by a certified nutritionist.

Budget: CDBG funds would be used to pay for an average of 120 meals per day. The estimated $7.75 cost per meal includes all costs in providing the meals: personnel, supplies, transportation, food, equipment, and administrative overhead.

Eligibility: Per 24 CFR 570.201(e), a public service for senior citizens is considered by the U.S. Department of Housing and Urban Development as a presumed benefit to low and moderate-income person's activity under its limited clientele provisions. This request will be subject to the 15% limitation on funds allocated for public services.

Consolidated Plan: Public services of benefit to the elderly and handicapped individuals are a priority community need.

Other Comments: As an ongoing program, this request is subject to the potential need for the operator to secure replacement funding. CDBG assistance has been provided continuously for senior citizen programming in Midland since 1986. Casa de Amigos has administered CDBG funds for the SE Nutrition Program since 2020.

CDBG EXIBIT A

NAME: Home Cleaning Program **Request: $45,000**

APPLICANT: Casa de Amigos

Description: Casa de Amigos requests funds to support its Citywide Community Services' Home Cleaning Program. The program's objective is to maintain safe and sanitary living conditions for indigent senior citizens (60+ years of age) and disabled individuals. Services include an initial deep cleaning and subsequent routine weekly cleaning. It is expected that 105 clients will be assisted during the year.

Budget: The requested funds would be used to help pay the wages of the program's homemakers. CDBG funds are proposed to be 30% of the total Citywide Community Services budget. The Citywide Community Services budget for the program year will be $98,000. Grants from United Way also help fund the program.

Eligibility: Per 24 CFR 570.201(e), public services are eligible for CDBG funding. A public service for senior citizens and disabled persons is considered by HUD as a presumed benefit to low- and moderate-income activity under its limited clientele provisions. This request will be subject to the 15% limitation on funds allocated for public services.

Consolidated Plan: Public services of benefit to the elderly and handicapped individuals are a priority community need.

Other Comments: As an ongoing program, this request is subject to the potential need for the operator to secure replacement funding. The home cleaning service has been continuously CDBG supported since 1991.

CDBG EXIBIT A (CV-19)

NAME: Homeless Nutrition Program **Request: $100,000**

APPLICANT: The Salvation Army

Description: The Salvation Army of Midland requests funding for the nutrition programs at the 600 E. Wall St. Center (Homeless Shelter). Approximately 4,700 meals are expected to be served during the program year. Three meals time will be available to persons wanting a hot meal.

Budget: CDBG funds would be used to pay for an average 150 meals per day with an estimated $8.00 cost per meal; personnel, transportation, equipment and administrative overhead are not included in the grant. The requested funds would be used to help pay for food and nonperishable items related to meal preparation. The Homeless and Indigent Program overall budget for the program year will be $839,835.00 primarily generated from contributions and federal grants for the homeless.

Eligibility: Per 24 CFR 570.201(e), Homeless service for citizens experiencing hardships and/or disabled persons is considered by HUD a high priority. Homeless service for indigent individuals is considered by HUD as a presumed benefit to low and moderate-income person's activity under its limited clientele provisions.

Consolidated Plan: Homeless services is an area of high priority and concentration of community need. All hardship individuals will have an evidence-based needs assessment screening and a plan of care formulated toward each participant's service plan.

Other Comments: COVID-19 funding has a remaining term of 12 months till sunset provision requires return to Department of Treasury.

CDBG EXIBIT A (CV-19)

NAME: Senior Resiliency Program **Request: $46,000**

APPLICANT: Casa de Amigos

Description: Casa de Amigos requests funds to support its Senior Resiliency Program. The program's objective is to provide coping skills and resiliency training for senior citizens to improve their overall mental health as our community continues to recover from the effects of COVID-19. Seniors are adapting to a host of life altering realities (lost friendships, changing living environment, physical capacity, etc.) which has a diminishing effect on mental and physical health. It is expected that 45 clients will be assisted during the year.

Budget: The requested funds would be used to help pay the wages of licensed counseling PLLC. The Senior Resiliency Program Services budget for the program year will be $84,060.00. Casa De Amigos will also help fund the program staff.

Eligibility: Per 24 CFR 570.201(e), public services are eligible for CDBG-CV19 funding. A public service for senior citizens and disabled persons is considered by HUD as a presumed benefit to low- and moderate-income activity under its limited clientele provisions.

Consolidated Plan: Public services of benefit to the elderly and handicapped individuals are a priority community need.

Other Comments: COVID-19 funding has a remaining term of 12 months till sunset provision requires return to Department of Treasury.

CDBG EXIBIT A (CV-19)

NAME: Community Referral and Indigent Services Program (CRISP)

APPLICANT: Midland Memorial Hospital

Description: Mental Health & Wellness Department requests funds to support its Community Referral and Indigent Services Program (CRISP) to help individuals of all ages to recover from the devastation of the pandemic and overcome barriers to restore and stabilize health and livelihood.

The Community Referral and Indigent Program (CRISP) program objective is to provide personal services that follow participants at every point-of-service to assure connection with needed resources and supportive providers. The CRISP team will coordinate, make and follow up with participants/providers to ensure that integrated care is received thus preventing additional stress and cost on the hospital emergency room. All hardship individuals will have an evidence-based mental health screening and a plan of care formulated toward each participant's service plan. It is expected that 600 participants will be connected with transportation vouchers to needed resources during the year.

Budget: The requested funds would be used to help pay for transportation vouchers to supportive services. The Community Referral and Indigent Program (CRISP) will also help fund the program through the hospital grants contributions and fundraising.

Eligibility: Per 24 CFR 570.201(e), mental health services are eligible for CDBG-CV19 funding. Mental Health service for hardship citizens and disabled persons is considered by HUD.

Consolidated Plan: Mental Health services of benefit to indigent and homeless individuals are a priority community need.

Other Comments: COVID-19 funding has a remaining term of 12 months till sunset provision requires return to Department of Treasury.

CDBG EXIBIT A (CV-19)

NAME: Homebound Senior Meal **Request: $17,823**

APPLICANT: Senior Life Midland (SLM)

The objective of Meals on Wheels is to promote better mental and physical health for older homebound persons through nutritious meals and socialization. The nutrition program will be provided each weekday by volunteer drivers. Senior Life Midland (SLM), with main offices at 3301 Sinclair St., will carry out the (COVID) relief program Monday through Friday (except on holidays), will provide meals which meet the nutritional guidelines set by the Texas Department on Aging and Texas Department of Human Services for elderly nutritional programs.

Budget: The requested funds would be used to help pay for the local vendor's meals when disruptions occur in meal preparation at the main kitchen and require vendor meals and PPE.

Eligibility: Per 24 CFR 570.201(e), public services are eligible for CDBG-CV19 funding. A public service for senior citizens and disabled persons is considered by HUD as a presumed benefit to low- and moderate-income activity under its limited clientele provisions.

Consolidated Plan: Public services of benefit to the elderly and handicapped individuals are a priority community need.

Other Comments: COVID-19 funding has a remaining term of 12 months till sunset provision requires return to Department of Treasury.

CDBG EXIBIT A

NAME: Take Home Terrific Program **Request: $38,000**

APPLICANT: Mission Center Adult Day Service

Description: Mission Center Adult Day Service requests funds to support the continuation of program – Take Home Terrific Program. Take Home is an evening meal delivery service for individuals who have some type of mobility dysfunction or health issue that would keep them from meeting their nutritional needs. After an initial assessment, participants will receive meals during the week with extra meals provided for weekend needs on request. Participants will also receive a monthly wellness check. It is expected that 50 clients will be assisted during the year.

Budget: The requested funds would be used to pay for food supplies and staff preparation time and wages. These CDBG funds are proposed to be 30% of the total Take Home Terrific program budget. The entire program budget for the 12-month period is projected to be $97,000.

Eligibility: Per 24 CFR 570.201(e), public services are eligible for CDBG funding. A public service for senior citizens and disabled persons is considered by HUD as a presumed benefit to low- and moderate-income activity under its limited clientele provisions. This request will be subject to the 15% limitation on funds allocated for public services.

Consolidated Plan: Public services of benefit to the elderly and handicapped individuals are a priority community need.

Other Comments: As an ongoing program, this request is subject to the potential need for the operator to secure replacement funding.

CDBG EXIBIT A

NAME: Parking Lot Rehabilitation Program **Request: $50,000**

APPLICANT: Midland Hellinghausen Hope Inc.

Description: Midland Hellinghausen Hope Inc. infrastructure project plans would provide for the removal and replacement of the current facility parking lot. The objective of the project is to help revitalize the development's parking area for low-moderate income residents.

Budget: Midland Hellinghausen Hope Inc. is asking the City of Midland Community Development Block Grant to assist in providing $50,000 to complete the resurfacing of the parking area for its family units.

Eligibility: Per 24 CFR 570.201(m), Parking facility repairs needed for a L/M income Housing development. (HUD) affordable rental development.

Consolidated Plan: Facility repairs needed for a L/M income Housing.

Other Comments: The infrastructure project is located within a low-moderate income census tract and the CDBG target area.

CDBG EXIBIT A

NAME: Peer Support Specialist **Request: $83,000**

APPLICANT: Thriving Untied Inc.

Description: Evidence-based practices will be provided with peer-support substance abuse recovery and outreach services to vulnerable individuals including homeless people. Service work will support recovery services, mental health service and housing stabilization to bridge the gap between people and services within our community.

Budget: The requested funds would be used to help pay staff salaries for community outreach to individuals with substance abuse, and homelessness.

Eligibility: Per 24 CFR 570.201(e), Homeless/Substance Abuse services for citizens experiencing hardships and/or disabled persons is considered by HUD a high priority. Indigent individuals are considered by HUD as a presumed benefit to low and moderate-income activity under its limited clientele provisions.

Consolidated Plan: Homeless services are an area of high priority and concentration of community need. All hardship individuals will have an evidence-based needs assessment screening and a plan of care formulated toward each participant's service plan.

Other Comments: First time grant recipient with a focus on substance abuse and homelessness.

CDBG EXIBIT A (CV-19)

NAME: Commercial Refrigerator Replacement **Request: $15,000**

APPLICANT: Church on Wheels, inc.

Description: Breaking Bread Ministries of Midland requests funding for the replacement of a commercial refrigerator. The nutritional feeding programs at 410 E. Florida Ave. prepare and feed 90 meals per day. They are expected to be served two meals daily Monday-Friday during the program year.

Budget: CDBG funds would be used to maintain the safe storge of perishable food items. The meals are estimated at $8.00 cost per meal; personnel, transportation, and administrative overhead are not included in the grant.

Eligibility: Per 24 CFR 570.201(e), Homeless/Substance Abuse services for citizens experiencing hardships and/or disabled persons is considered by HUD a high priority. Homeless service for indigent individuals is considered by HUD as a presumed benefit to low and moderate-income person's activity under its limited clientele provisions.

Consolidated Plan: Homeless services are an area of high priority and concentration of community need. All hardship individuals will have an evidence-based needs assessment screening and a plan of care formulated toward each participant's service plan.

Other Comments: COVID-19 funding has a remaining term of 12 months till sunset provision requires return to Department of Treasury.

City Council Meeting

Item Number: 19

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Landon Ochoa, Senior Planner

Subject: MOTION APPROVING WITH STAFF'S RECOMMENDED CONDITIONS A PROPOSED PRELIMINARY PLAT OF PIONEER NATURAL RESOURCES USA ADDITION, BEING A PLAT OF AN 87.55-ACRE TRACT OF LAND OUT OF SECTIONS 33 AND 40, BLOCK 38, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS (GENERALLY LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF NORTH COUNTY ROAD 1140 AND EAST STATE HIGHWAY 80) (DISTRICT: NONE) (DEVELOPMENT SERVICES)

Purpose:

The applicant, Dunaway Associates, is requesting to plat an 87.55-acre tract for future development.

Recommended City Council Action:

Approve

Fiscal Impact:

None

Discussion:

The applicant, Dunaway Associates, is requesting to plat an 87.55-acre tract for future development.

The Planning & Zoning Commission recommended approval of this preliminary plat on October 2, 2023.

This request has been routed to all respective departments for internal review. The comments are below.

BUILDING CODE: (Approved)

ETJ, No jurisdiction.

SURVEYOR: (Approved)

The row along the south line of plat I would call "Business 20" 250' ROW.

ENGINEERING: (Approved with Conditions)

IMPACT FEES: There are no impact fees associated with this plat. Plat outside designated service areas. [For Applicant's Information Only.]

ROW: Okay as shown. [For Applicant's Information Only.]

PAVING: HWY 80 Frontage road is TxDOT facility, built and maintained by TxDOT, no improvements required. [For Applicant's Information Only.]

WATER: None existing. Construct water to City standards along entire platted frontage, or request a deferral based on located in the South Midland Utility District. [Reference City Code Section 11-2-3(G)1 & 11-2-4(A)2(a)]

FIRE HYDRANTS: Required as needed to meet NFPA, IFC & City Fire Code; and/or comply with directives of City Fire Marshal. After January 14, 2020 - Fire hydrants shall be spaced no more than 500' apart, Pressure Indicator Rings are to be installed and will require the developers/contractors to pay for the flow test. [For Applicant's Information Only.]

PRO RATA: None. [For Applicant's Information Only.]

SEWER: None existing. Construct wastewater to City standards along entire platted frontage, or request a deferral. [Reference Midland City Code Sect. 11-2-3(G)1 & 11-2-4(A)2(a)]

DRAINAGE: Drainage report has been approved for platting purposes. [For Applicant's Information Only.]

EASEMENTS: Show existing and proposed. [For Applicant's Information Only.]

DIMENSION: * * *

OTHER: * * *

TRANSPORTATION: (Approved)

No objections to plat. [For the Applicant's information only.]

FIRE: (Approved)

No comments.

OIL AND GAS: (Approved)

Not in the City limits- no oil or gas jurisdiction.

GIS: (Approved)

Call L3 currently passes through two structures. Please confirm that this is acceptable.

MIDLAND COUNTY:

No comments.

HEALTH:

Yes, the health department will review application from the 1 proposed lot of Pioneer Natural Resources USA, PLAT OF A 87.5 ACRE TRACT OF LAND OUT OF SECTION 33, BLOCK 38, T-1-S, T. & P. RR. CO. the lot is 87.5 acre to ensure the proposed plans on the application for future septic system will meet the setbacks from existing structures and existing septic systems and the water wells on the property and the water wells on the adjacent properties.

CRMWD:

We do not have any comments on this plat.

PLANNING: (Approved with Conditions)

At the final plat stage:

Relocate the title block to the lower right-hand corner of the page. [Midland City Code 11-2-3(A)1(a)].

The title block must include the following: [Midland City Code 11-2-3(A)1(a)]

i. The proposed subdivision name.
ii. The owner's name, address, and phone number.
iii. The name of a contact person with address and phone number.

Title opinion is required at the Final Plat stage. [Informational].

The Acknowledgement should read, “This plat was acknowledged before me on (DATE) by (NAME OF OWNERS SIGNING ABOVE).” [Midland City Code 11-2-3(h)3(m)1]

Staff recommends approval of the Preliminary Plat of Pioneer Natural Resources USA Addition, subject to conditions A and B.

Condition:

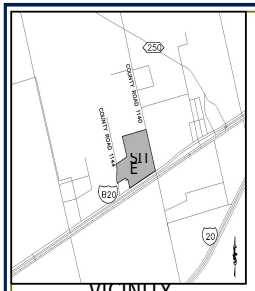
A. **All plat comments, conditions, and requirements must be satisfied by all pertinent City departments before filing for recording with the County Clerk of Midland County, Texas.**

B. **Approval by the City Council shall be required prior to consideration of a final plat by the commission on which any preliminary plat which: Is ten hectares (25 acres) or more in area and is located in any survey section (approximately one square mile) which does not contain a publicly owned site or sites intended for both a public school and park, or public site reservation. [Midland City Code 11-2-3(D)11(a)6].**

Attachments:

Proposed Preliminary Plat
Application
Maps

City Manager's Office



VICINITY MAP
NO SCALE

Line Table		
Line Number	Bearing	Distance
L1	N14°21'34"W	431.26'
L2	S59°45'32"W	104.93'
L3	N14°22'38"W	124.60'

Curve Table				
Curve Number	Central Angle	Radius	Arc Length	Chord Bearing and Distance
C1	022°05'39"	1225.33	472.56	N03°01'45"W 469.58'
C2	022°57'19"	1161.61	465.39	N03°17'47"W 462.29'

UTILITY COMPANY'S CERTIFICATE

This plat has been checked for accessibility of utilities.

ATMOS ENERGY — Print Name:

ONCOR ELECTRIC DELIVERY — Print Name:

OPTIMUM — Print Name:

GRANDE COMMUNICATIONS — Print Name:

AT&T–TEXAS — Print Name:

CERTIFICATE OF APPROVAL

FOR APPROVAL BY THE COMMISSION:
This is to certify that the above and foregoing plat of PIONEER NATURAL RESOURCES USA ADDITION was approved by proper action of the City Planning and Zoning Commission of the City of Midland, Texas, on this the _____ day of _____, 2023.

CHAIRMAN, PLANNING & ZONING COMMISSION, LUCY SISNIEGA

SECRETARY, PLANNING & ZONING COMMISSION, JEFF FISHER

OWNER'S CERTIFICATE

STATE OF TEXAS, COUNTY OF MIDLAND:

WHEREAS PIONEER NATURAL RESOURCES USA, INC, is the record owner of the tracts of land situated in Section 33 and Section 40, Block 38, Township 1 South, T. & P. RR. Co. Survey, County of Midland, and more particularly described hereon.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

That we, PIONEER NATURAL RESOURCES USA, INC, do hereby adopt this plat designating the herein above described property as PIONEER NATURAL RESOURCES USA, INC, to the City of Midland, Texas, and we do hereby dedicate to the public use forever the streets, alleys, and easements shown hereon.

WITNESS our hands at Midland, Texas, this the _____ day of _____, 2023.

Representative of: PIONEER NATURAL RESOURCES USA, INC

ACKNOWLEDGMENT

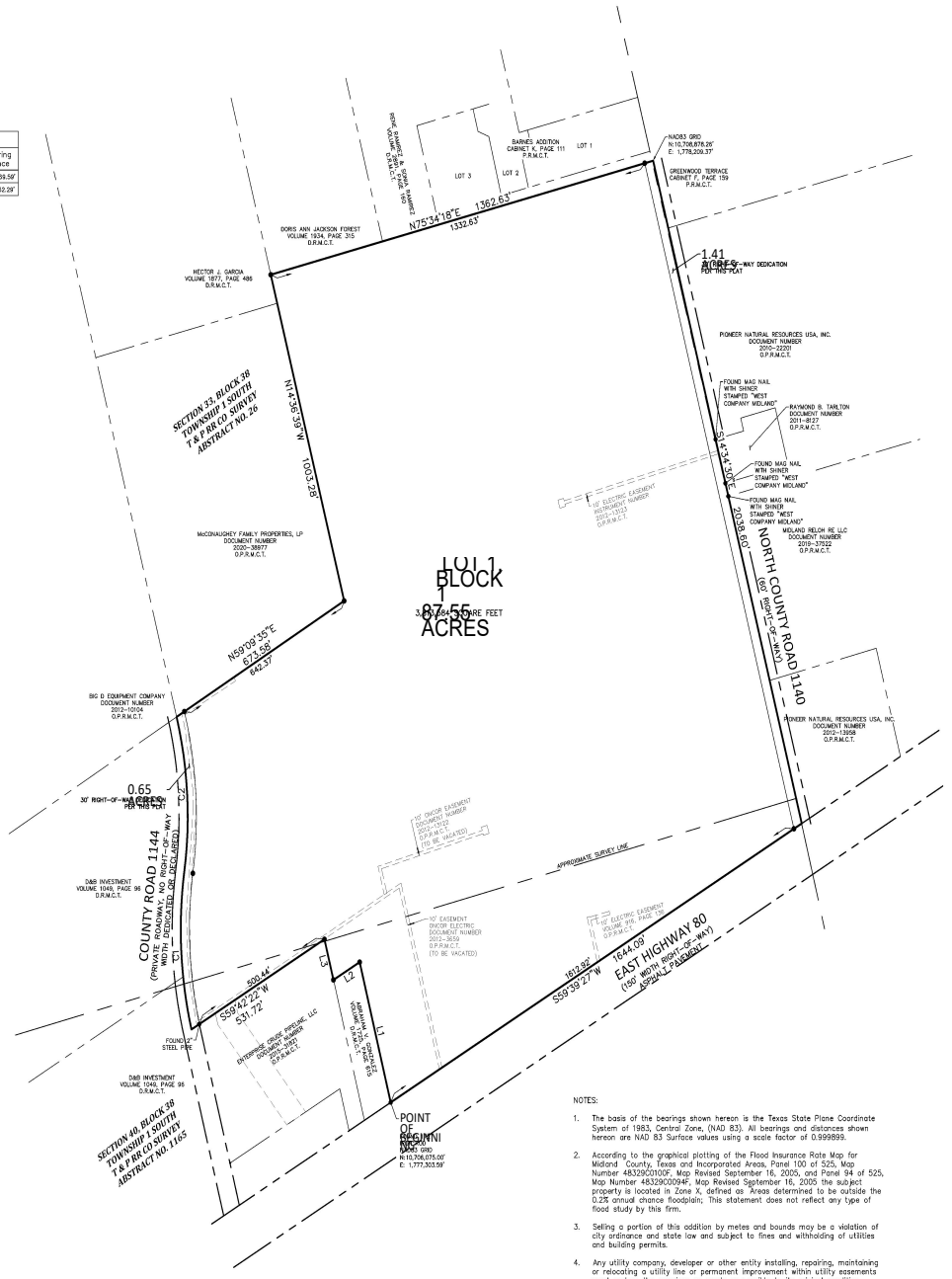
STATE OF TEXAS, COUNTY OF MIDLAND:

This plat was acknowledged Before Me, the undersigned authority, on this day by _____, known to me to be the person and officer whose name is subscribed to the foregoing instrument and acknowledged to me that the same was the act of the said PIONEER NATURAL RESOURCES USA, INC, as the Authorized Agent thereof, and for the purpose and consideration therein expressed and in the capacity therein stated, and that he was authorized to do so.

Given under my hand and seal of office this the _____ day of _____, 2023.

Notary Public in and for the State of Texas

My commission expires _____



NOTES:

1. The basis of the bearings shown hereon is the Texas State Plane Coordinate System of 1983, Central Zone, (NAD 83). All bearings and distances shown hereon are NAD 83 Surface values using a scale factor of 0.999895.
2. According to the graphical plotting of the Flood Insurance Rate Map for Midland County, Texas and Incorporated Areas, Panel 100 of 525, Map Number 48329C0100F, Map Revised September 16, 2005, and Panel 94 of 525, Map Number 48329C0094F, Map Revised September 16, 2005 the subject property is located in Zone X, defined as Areas determined to be outside the 0.2% annual chance floodplain; This statement does not reflect any type of flood study by this firm.
3. Selling a portion of this addition by metes and bounds may be a violation of city ordinance and state law and subject to fines and withholding of utilities and building permits.
4. Any utility company, developer or other entity installing, repairing, maintaining or relocating a utility line or permanent improvement within utility easements must restore the premises as nearly as possible to its original condition following any such work at its sole expense.
5. Approval of a site plan by the City of Midland may be required before the development of any lot and before a building permit may be obtained.
6. A blanket refuse easement of ingress and egress for garbage and trash collection purposes is hereby granted.
7. Midland County shall not be responsible for maintenance of private streets, drives, emergency access easements, recreation areas, and open spaces; and the owners shall be responsible for the maintenance of private streets, drives, emergency access easements, recreation areas, and open spaces, and said owners agree to indemnify and save harmless Midland County from all claims, damages, and losses arising out of or resulting from the performance of the obligations of said owners set forth in this paragraph.
7. All property corners are set 5/8–inch iron rod with yellow cap stamped "DUNAWAY ASSOCIATES LP" unless otherwise noted.

PLAT FILED FOR RECORD
MIDLAND COUNTY, TEXAS

NO._____CABINET_____

DATE_____PAGE_____

200' 0 200' 400'
SCALE 1"= FEET 200'

Metes & Bounds Description

Being a 87.55 acre tract of land situated in Section 33, Block 38, Township 1 South, T&P RR. Co. Survey, Abstract No. 26 and Section 40, Block 38, Township 1 South, T&P RR. Co. Survey, Abstract No. 1165, Midland County, Texas, and being all of the tract of land described in deed to Pioneer Natural Resources USA, Inc, as recorded in Document No. 2010-10747, Official Public Records, Midland County, Texas (O.P.R.M.C.T.), the tract of land described in deed to Pioneer Natural Resources USA, Inc, as recorded in Volume 915, Page 446, Deed Records, Midland County, Texas (D.R.M.C.T.), the tract of land described in deed to Pioneer Natural Resources USA, Inc, as recorded in Document No. 2022-26852, O.P.R.M.C.T., the tract of land described in deed to Pioneer Natural Resources USA, Inc, as recorded in Document No. 2010-12252, O.P.R.M.C.T. the tract of land described in deed to Pioneer Natural Resources USA, Inc, as recorded in Document No. 2010-12251, O.P.R.M.C.T. the tract of land described in deed to Pioneer Natural Resources USA, Inc, as recorded in Document No. 2010-12253, O.P.R.M.C.T., on the north right of way of said East Highway 80, and being more particularly described by metes and bounds as follows:

BEGINNING at a found 1/2 inch steel pipe for the southeast corner of said Pioneer Natural Resources tract described in Document No. 2010-12252, O.P.R.M.C.T., the southwest corner of a tract of land described in deed to McDonaughey Family Properties, LP, as recorded in Document No. 2020-18977, O.P.R.M.C.T., and on the north right of way of said East Highway 80, from which a found 1/2 inch steel pipe for the southeast corner of said Pioneer Natural Resources tract described in Document No. 2010-12252, O.P.R.M.C.T. bears South 59 degrees 39 minutes 27 seconds East, along the north right of way of said East Highway 80, a distance of 1644.09 feet;

THENCE South 59 degrees 39 minutes 27 seconds West, along the north right of way of said East Highway 80, a distance of 1644.09 feet to a found 1/2 inch steel pipe for the southwest corner of said Pioneer Natural Resources tract described in Document No. 2010-12252, O.P.R.M.C.T., the southeast corner of a tract of land described in deed to Enterprise Crude Pipeline LLC, as recorded in Document No. 2013-3157, O.P.R.M.C.T.;

THENCE North 14 degrees 22 minutes 38 seconds West, along the east line of said Enterprise Crude tract, a distance of 124.60 feet to a found 1/2 inch steel pipe for the northeast corner of said Enterprise Crude tract, and the southeast corner of a tract of land described in deed to Big D Equipment Company, as recorded in Document No. 2013-10104, O.P.R.M.C.T.;

THENCE North 14 degrees 21 minutes 34 seconds West, along the east line of said Big D Equipment Company tract, a distance of 431.26 feet to a found 1/2 inch steel pipe for the northeast corner of said Big D Equipment Company tract, the southeast corner of a tract of land described in deed to Perk Ramsey & Susan Ramsey, as recorded in Volume 1934, Page 160, D.R.M.C.T., and the southwest corner of a tract of land described in deed to Doris Ann Jackson Forest, as recorded in Volume 1934, Page 315, D.R.M.C.T.;

THENCE North 14 degrees 35 minutes 39 seconds West, along the east line of said Doris Ann Jackson Forest tract, a distance of 1003.28 feet to a found 1/2 inch steel pipe for the northeast corner of said Doris Ann Jackson Forest tract, the southeast corner of a tract of land described in deed to Hector J. Garcia, as recorded in Volume 1877, Page 485, D.R.M.C.T., and the southwest corner of a tract of land described in deed to Pioneer Natural Resources USA, Inc, as recorded in Document No. 2010-12252, O.P.R.M.C.T.;

THENCE North 75 degrees 34 minutes 18 seconds East, along the south line of said Pioneer Natural Resources tract described in Document No. 2010-12252, O.P.R.M.C.T., the south line of said Pioneer Natural Resources tract described in Document No. 2010-12251, O.P.R.M.C.T., the south line of said Pioneer Natural Resources tract described in Document No. 2010-12253, O.P.R.M.C.T., and the south line of said Pioneer Natural Resources tract described in Document No. 2010-10747, O.P.R.M.C.T., a distance of 1362.63 feet to a found 1/2 inch steel pipe for the southeast corner of said Pioneer Natural Resources tract described in Document No. 2010-10747, O.P.R.M.C.T., the southwest corner of a tract of land described in deed to Greenwood Terrace, as recorded in Cabinet F, Page 159, P.R.M.C.T., and the northwest corner of a tract of land described in deed to Barnes Addition, as recorded in Cabinet K, Page 111, P.R.M.C.T.;

THENCE North 75 degrees 34 minutes 18 seconds East, along the south line of said Barnes Addition, a distance of 1332.63 feet to a found 1/2 inch steel pipe for the southeast corner of said Barnes Addition, the southwest corner of a tract of land described in deed to Raymond B. Tarlton, as recorded in Document No. 2011-8127, O.P.R.M.C.T., and the northeast corner of said Pioneer Natural Resources tract described in Document No. 2010-12251, O.P.R.M.C.T.;

THENCE South 14 degrees 34 minutes 30 seconds East, along the west line of said Raymond B. Tarlton tract, a distance of 431.26 feet to a found 1/2 inch steel pipe for the southwest corner of said Raymond B. Tarlton tract, the northwest corner of a tract of land described in deed to Midland Reloh RE LLC, as recorded in Document No. 2019-17522, O.P.R.M.C.T., and the northeast corner of said Pioneer Natural Resources tract described in Document No. 2010-12251, O.P.R.M.C.T.;

THENCE South 14 degrees 35 minutes 39 seconds East, along the west line of said Midland Reloh RE LLC tract, a distance of 104.93 feet to a set 5/8-inch iron rod with yellow cap stamped "DUNAWAY ASSOC." for the northeast corner of said Pioneer Natural Resources tract, and the northeast corner of an interior tract of said Enterprise Crude tract described in Document No. 2015-2689, O.P.R.M.C.T.;

THENCE South 59 degrees 09 minutes 35 seconds West, along the south line of said Pioneer Natural Resources tract, and the northeast line of said Enterprise Crude tract, passing at a distance of 500.44 feet a found 2 inch steel pipe for the northwest corner of said Enterprise Crude tract, continuing in all a distance of 531.72 feet to a point in County Road 1144 for the southwest corner of said Pioneer Natural Resources tract described in Document No. 2010-12252, and being the beginning of a non-tangent curve to the right, and along said County Road 1144, having a radius of 1225.33 feet, a chord bearing and distance of North 03 degrees 01 minutes 45 seconds West, 469.58 feet;

THENCE Northwesterly, along said curve to the right and along said County Road 1144, through a central angle of 22 degrees 05 minutes 39 seconds, an arc distance of 472.56 feet to a point for the end of said curve being the northwest corner of said Pioneer Natural Resources tract recorded in Document No. 2010-12252, and the southwest corner of said Pioneer Natural Resources tract recorded in Document No. 2010-12253, and being the beginning of a non-tangent curve to the left, and along said County Road 1144, having a radius of 1161.61 feet, a chord bearing and distance of North 03 degrees 17 minutes 47 seconds West, 462.29 feet;

THENCE Northwesterly, along said curve to the left and along said County Road 1144, through a central angle of 22 degrees 57 minutes 19 seconds, an arc distance of 465.39 feet to a point for the end of said curve being the northwest corner of said Pioneer Natural Resources tract recorded in Document No. 2010-12253, and the southwest corner of said Pioneer Natural Resources tract recorded in Document No. 2010-10747, O.P.R.M.C.T.;

THENCE North 14 degrees 21 minutes 34 seconds West, along the west line of said Pioneer Natural Resources tract recorded in Document No. 2010-10747, O.P.R.M.C.T., and the west line of said Pioneer Natural Resources tract recorded in Volume 915, Page 446, D.R.M.C.T., a distance of 1,003.28 feet to a found 1/2 inch steel pipe for the northwest corner of said Pioneer Natural Resources tract described in Volume 915, Page 446, D.R.M.C.T., the southwest corner of said Pioneer Natural Resources tract described in Document No. 2022-26852, O.P.R.M.C.T., and the northwest corner of said Pioneer Natural Resources tract described in Document No. 2010-1112;

THENCE North 75 degrees 34 minutes 18 seconds East, along said North County Road 1140 for the north line of said Pioneer Natural Resources tract recorded in Document No. 2010-1112, a distance of 1,362.63 feet to a point being in North County Road 1140 for the northeast corner of said Pioneer Natural Resources tract recorded in Document No. 2010-1112, and the northwest corner of said Pioneer Natural Resources tract recorded in Document No. 2010-12251, O.P.R.M.C.T.;

THENCE South 14 degrees 35 minutes 39 seconds East, along the west line of said Pioneer Natural Resources tract recorded in Document No. 2010-12251, O.P.R.M.C.T., the west line of said Pioneer Natural Resources tract recorded in Document No. 2010-12252, O.P.R.M.C.T., the west line of said Pioneer Natural Resources tract recorded in Document No. 2010-12253, O.P.R.M.C.T., and the west line of said Pioneer Natural Resources tract recorded in Document No. 2010-10747, O.P.R.M.C.T., a distance of 2338.60 feet to the POINT OF BEGINNING, and containing 87.55 acres (or 3,813,584 square feet) of land, more or less.

SURVEYOR'S CERTIFICATE:

I, Kevin Junge, a Registered Professional Land Surveyor, do hereby certify that I prepared this plat from an actual and accurate survey of the land and that the corner monuments shown hereon were placed under my personal supervision, in accordance with the Subdivision Regulations of the City of Midland, Texas.

Kevin Junge
Registered Professional Land Surveyor
Texas Registration No. 6765

Preliminary, this document shall not be recorded for any purpose and shall not be used or viewed or relied upon as a final survey document.

DUNAWAY
550 Bailey Avenue • Suite 400 • Fort Worth, Texas 76107
Tel: 817.335.1121
TEXAS REGISTERED SURVEYING FIRM NO. 10098100

ENGINEER/SURVEYOR
DUNAWAY ASSOCIATES, L.P.
550 Bailey Avenue
Suite 400
Fort Worth, Texas 76107
(817) 335-1121
Contact: Jessica Schuttler

OWNER
PIONEER NATURAL RESOURCES USA, INC
4815 E Highway 80
Midland, Texas 79706
(432) 684-1178
Contact: Mark S Berg, Executive VP

19.5

PIONEER NATURAL RESOURCES USA ADDITION

BEING A 87.55 ACRE TRACT OF LAND SITUATED IN SECTION 33, BLOCK 38, TOWNSHIP 1 SOUTH, T&P RR. CO SURVEY, ABSTRACT NO. 26 AND SECTION 40, BLOCK 38, TOWNSHIP 1 SOUTH, T&P RR. CO SURVEY, ABSTRACT NO. 1165

MIDLAND COUNTY, TEXAS

MIDLAND
Planning Division

Preliminary Plat Application

Project Number: SUB-23-01644

Case Number: _____

Proposed Subdivision Plat Name: PIONEER NATURAL RESOURCES USA, INC

Legal Description (attached sealed Metes and Bounds): Being an 87.55 acre tract of land out of section 33 and 40 BLOCK 38, Township 1 South, T+P. RR Co survey midland county, Texas

Property Owner Printed Name: Pioneer Natural Resources USA, Inc		Phone (972.) 969-3915 Email	
Address 4815 E Highway 80	City Midland	State TX	Zip 79706

Developer *(if different than Owner)* Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Representative *(if acting as Agent, see affidavit on page 2)* Firm: Dunaway Associates Printed Name: Tim Hair		Phone (432) 699-4889 Email thair@dunaway.com	
Address 4000 N Big Spring St, Suite 101	City Midland	State TX	Zip 79705

Current Zoning: _____

Reason for Platting: Drainage ; relocation of existing drainage pond to accommodate site improvements

Plat Information	Total Acreage: 87.55
Type: ☐ Single-Family Residential ☐ Multi-Family Residential ■ Commercial ☒ Extraterritorial Jurisdiction (ETJ)	
Number of Lots: 1	Number of Multi-family Dwelling Units: 0

Submittal and Fees

Items to be submitted with this application form:

- 1 FOLDED Copy of Dimensioned Plat
- 1 Extra Copy (11x17)
- Digital Files (JPEG & PDF)
- Application Fee – Payable to the 'City of Midland'

Request for a Development Agreement

Do you expect to request a development agreement with the City? ☐ Yes ☐ No

If yes, contact the City Engineer at (432) 685-7286

Provisions

A plat application will not be considered filed pursuant to Section 212.009 of the Texas Local Government Code until all required documents and fees have been submitted and ***all of the terms and conditions of the Subdivision Ordinance, including all necessary studies, plans and supporting information are accepted and approved,*** or the applicant has filed a waiver request for sections from which the plat deviates. Once a plat meets the requirements to be considered filed with the City, the application will be placed on the Planning and Zoning Commission agenda for consideration under the time requirements set out in Section 212.009.

Signature *(by property owner only – authorized agent must sign affidavit below)*

Property Owner (signature): _____ Date: 6/14/2023

Property Owner (printed) : KEVIN SKILLERN

The Preliminary Plat shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Subdivision Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared KEVIN SKILLERN who, being by me duly sworn, upon oath says: That (s)he is the owner of _____ or is authorized by PIONEER NATURAL RESOURCES the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

_____
Authorized Agent (*signature*)

Subscribed and sworn to before me, this 14th day of JUNE, 2023, to certify which witness my hand and seal of office.

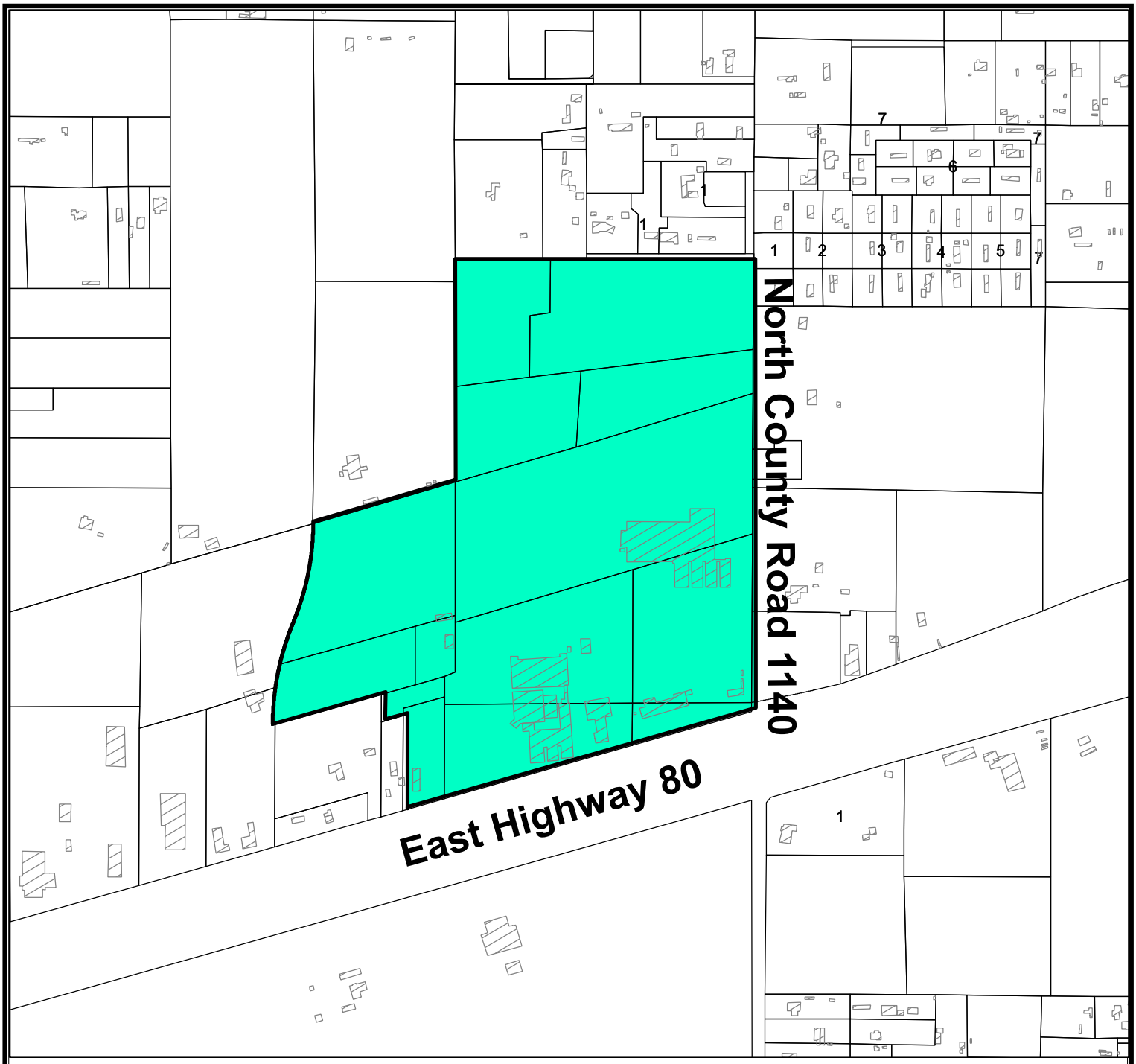
TERESA ANNETTE KNIGHT
Notary ID #132103203
My Commission Expires
July 25, 2023

Teresa Annette Knight
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY

☑ Property Owner Authorization	☑ 1 Copy of Dimensioned Plat	☑ Plat in Digital Format (PDF/JPEG)
☑ Application Fee	☐ 1 Copy of Plat (11x17)	
Check # 1664		
Received By: Daniel Humbert	Date: 9-5-23	

****Application will not be considered for scheduling until reviewed by a planner.****



LOCATION MAP

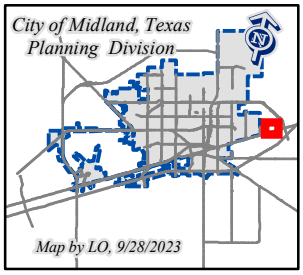
SUB-23-0644 **Scale: 1" = 7,790'**

Proposed Plat of Pioneer Natural Resources USA Addition, being a Plat of an 87.55- acre tract of land out of Sections 33 and 40, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas.

Generally located at the northwest corner of the intersection of North County Road 1140 and East State Highway 80 (DISTRICT: NONE)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



©THE CITY OF MIDLAND - 2021
THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY AND IS NOT IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN.
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.

City Council Meeting

Item Number: 20

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Landon Ochoa, Senior Planner

Subject: MOTION APPROVING WITH STAFF'S RECOMMENDED CONDITIONS A PROPOSED PRELIMINARY PLAT OF YMCA ADDITION, SECTION 1, BEING A PLAT OF A 25.195-ACRE TRACT OF LAND OUT OF SECTIONS 23 AND 24, BLOCK 40, T-1-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE SOUTHEAST CORNER OF THE INTERSECTION OF GOLDEN GATE DRIVE AND MOCKINGBIRD LANE) (DISTRICT 4) (DEVELOPMENT SERVICES)

Purpose:

The applicant, LCA, is requesting to plat a 25.195-acre tract of land out of Sections 23 and 24, Block 40, T-1-S, T&P RR Co Survey, City and County of Midland, Texas, for future development.

Recommended City Council Action:

Approve

Fiscal Impact:

None

Current Zoning:

AE, Agricultural Estate District, in part, and RR, Regional Retail District, in part.

Discussion:

On October 2, 2023, the Planning and Zoning Commission recommended denial of the preliminary plat. Per Section 11-2-3-(D)-11 of the Subdivision Ordinance, City Council approval is required for this plat which is more than 25 acres.

This request has been routed to all respective departments for internal review. The comments are below.

The applicant, LCA, is requesting to plat a 25.195-acre tract of land out of Sections 23 and 24, Block 40, T-1-S, T&P RR Co Survey, City and County of Midland, Texas, for future development.

BUILDING CODE: (Approved)

No issues. All future structures must adhere to the 2018 International Building Codes, the 2015 International Energy Code, the 2020 NEC requirements, the 2015 International Fire Codes, local city ordinances, zoning requirements, established setbacks, oil and gas considerations, and floodplain requirements if necessary. Code versions are subject to change depending on time of new code edition adoption in the City of Midland and date of permit application.

SURVEYOR: (Approved)

No comments.

ENGINEERING: (Approved with Conditions)

IMPACT FEES: Ok as shown. [For Applicant’s Information Only.]

ROW: Refer to Transportation's comments, if any. [For Applicant’s Information Only.]

PAVING: Mockingbird Lane, Golden Gate Dr. and Avalon Dr. is sub-standard, construct to City Standards for entire platted frontage or request a deferral. [Reference City Code Section 11-2-3(G)1 & 11-2-4(A)2(a)]

WATER: 16” water exists in Mockingbird Lane north of tract, and a 16" water exists in Golden Gate Dr. west of tract and a okay as is. No public water improvements required.[For Applicant’s Information Only.]

FIRE HYDRANTS: Required as needed to meet NFPA, IFC & City Fire Code; and/or comply with directives of City Fire Marshal. After January 14, 2020 - Fire hydrants shall be spaced no more than 500' apart, Pressure Indicator Rings are to be installed and will require the developers/contractors to pay for the flow test. [For Applicant’s Information Only.]

PRO RATA: None.[For Applicant’s Information Only.]

SEWER: None existing. Construct to City standards along entire platted frontage, serving all lots within the subdivision and to adjacent lot lines along exterior roadways or request a deferral. [Reference City Code Section 11-2-3(G)1 & 11-2-4(A)2(a)]

DRAINAGE: Drainage report is approved for platting purposes. [For Applicant’s Information Only.]

EASEMENTS: Show existing and proposed. [For Applicant's Information Only.]

SIDEWALKS: Required with building permit. [For Applicant's Information Only.]

DIMENSION: * * *

OTHER:

TRANSPORTATION: (Approved)

No additions or changes to site access are approved with plat or zoning review. Driveways or other access points are approved only with construction drawing review. [For the Applicant's information only.]

No objections to plat. [For the Applicant's information only.]

FIRE: (Approved)

No objections or comments.

OIL AND GAS: (Approved)

No Oil and Gas issues.

GIS: (Approved with Conditions)

Distances/calls needed for ROW dedication or its width can be mentioned. Legal description should say "Being a 25.195 acre tract..."

PLANNING: (Approved with Conditions)

Plat should read, YMCA Addition, Section 1, being a Plat of a 25.195-acre tract of land out of Sections 23 and 24, Block 40, T-1-S, T&P RR Co Survey, City and County of Midland, Texas. [Informational]

Label Golden Gate Drive and right-of-way width adjacent to the west side of the plat [Informational].

MCAD shows that the property to the east is owned by XTO Holdings, LLC instead of Linn Energy Holdings, LLC. Please verify. [Midland City Code 11-2-3(A)1(d)]

Approval by the City Council shall be required prior to consideration of a final plat by the commission on which any preliminary plat which: Is ten hectares (25 acres) or more in area and is located in any survey section (approximately one square mile) which does not contain a publicly owned site or sites intended for both a public school and park, or public site reservation. [Midland City Code 11-2-3(D)11(a)6]

The Acknowledgement should read, “This plat was acknowledged before me on (DATE) by (NAME OF OWNERS SIGNING ABOVE).” [Midland City Code 11-2-3(H)3(m)1]

The Surveyor’s Certificate should read, “…do hereby certify that I prepared this plat from…”. Please also capitalize the first letters of “Subdivision Regulations”. [Midland City Code 11-2-3(H)3(m)2]

The Certificate of Approval should read, “…above and forgoing plat of…”. [Midland City Code 11-2-3(H)3(m)3]

Staff recommends approval of the Preliminary Plat of YMCA Addition, Section 1, subject to conditions A and B.

Conditions:

A. **All plat comments, conditions, and requirements must be satisfied by all pertinent City departments before filing for recording with the County Clerk of Midland County, Texas.**

B. **Approval by the City Council shall be required prior to consideration of a final plat by the Commission on which any preliminary plat is ten hectares (25 acres) or more in area and is located in any survey section (approximately one square mile) which does not contain a publicly owned site or sites intended for both a public school and park, or public site reservation therefor; Midland City Code 11-2-3(D)11(a)(6).**

Attachments:

Proposed Preliminary Plat
Application
Maps

City Manager's Office

MIDLAND Planning Division

Preliminary Plat Application

LCA Job # 2023-014.4

Project Number: SUB-23-0057

Case Number:

Proposed Subdivision Plat Name: YMCA Addition, Section 1

Legal Description (attached sealed Metes and Bounds): Being a Plat of a 25.195-acre tract of land out of Sections 23 and 24, Block 40, T-1-S, T&P RR Co Survey, City and County of Midland Texas.

Property Owner Printed Name: YMCA of Midland/ Christine Bearden, CEO		Phone ( ) Email	
Address 800 North Big Spring Street PO Box 2696-79702	City Midland Midland	State TX TX	Zip 79701 79702

Developer *(if different than Owner)* Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Representative *(if acting as Agent, see affidavit on page 2)* Firm: Landgraf, Crutcher & Associates Printed Name: LCA		Phone (432) 332-5058 Email lca@lcaodessa.com	
Address 521 N. Texas Avenue	City Odessa	State TX	Zip 79761

Current Zoning: AE

Reason for Platting: Ownership Purposes & future building permits.

Plat Information	Total Acreage: 25.195
Type: ☐ Single-Family Residential ☐ Multi-Family Residential ☒ Commercial ☐ Extraterritorial Jurisdiction (ETJ)	
Number of Residential Lots: 0 - N/A	Number of Multi-Family Dwelling Units: 0 - N/A

Submittal and Fees

Items to be submitted with this application form:

- 1 FOLDED Copy of Dimensioned Plat
- 1 Extra Copy (11x17)
- Digital Files (JPEG & PDF)
- Application Fee – Payable to the 'City of Midland'

Request for a Development Agreement

Do you expect to request a development agreement with the City? ☐ Yes ☐ No

If yes, contact the City Engineer at (432) 685-7286

Provisions

A plat application will not be considered filed pursuant to Section 212.009 of the Texas Local Government Code until all required documents and fees have been submitted and ***all of the terms and conditions of the Subdivision Ordinance, including all necessary studies, plans and supporting information are accepted and approved,*** or the applicant has filed a waiver request for sections from which the plat deviates. Once a plat meets the requirements to be considered filed with the City, the application will be placed on the Planning and Zoning Commission agenda for consideration under the time requirements set out in Section 212.009.

Signature *(by property owner only – authorized agent must sign affidavit below)*

Property Owner (signature): Christine R. Bearden Date: 9-5-23

Property Owner (printed) : Christine Bearden, CEO

The Preliminary Plat shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Subdivision Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

If an agent is authorized by the property owner to file and execute the application on behalf of the property owner, the agent must complete the affidavit below.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared Levi Bryand who, being by me duly sworn, upon oath says: That (s)he is authorized by Christine Bearden (YMCA), the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

Authorized Agent (*signature*)

Subscribed and sworn to before me, this 5 day of September, 2023, to certify which witness my hand and seal of office.

LENA A. RENFRO
My Notary ID # 124975492
Expires July 1, 2024

NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY

☑ Property Owner Authorization	☐ 1 Copy of Dimensioned Plat	☐ Plat in Digital Format (PDF/JPEG)
☑ Application Fee	☑ 1 Copy of Plat (11x17)	

Check # 4110115

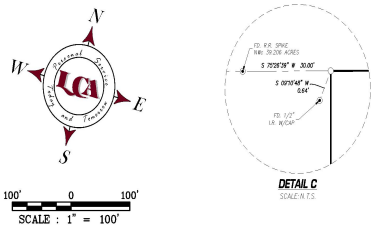
Received By: [illegible] Date: SEP 05 2023

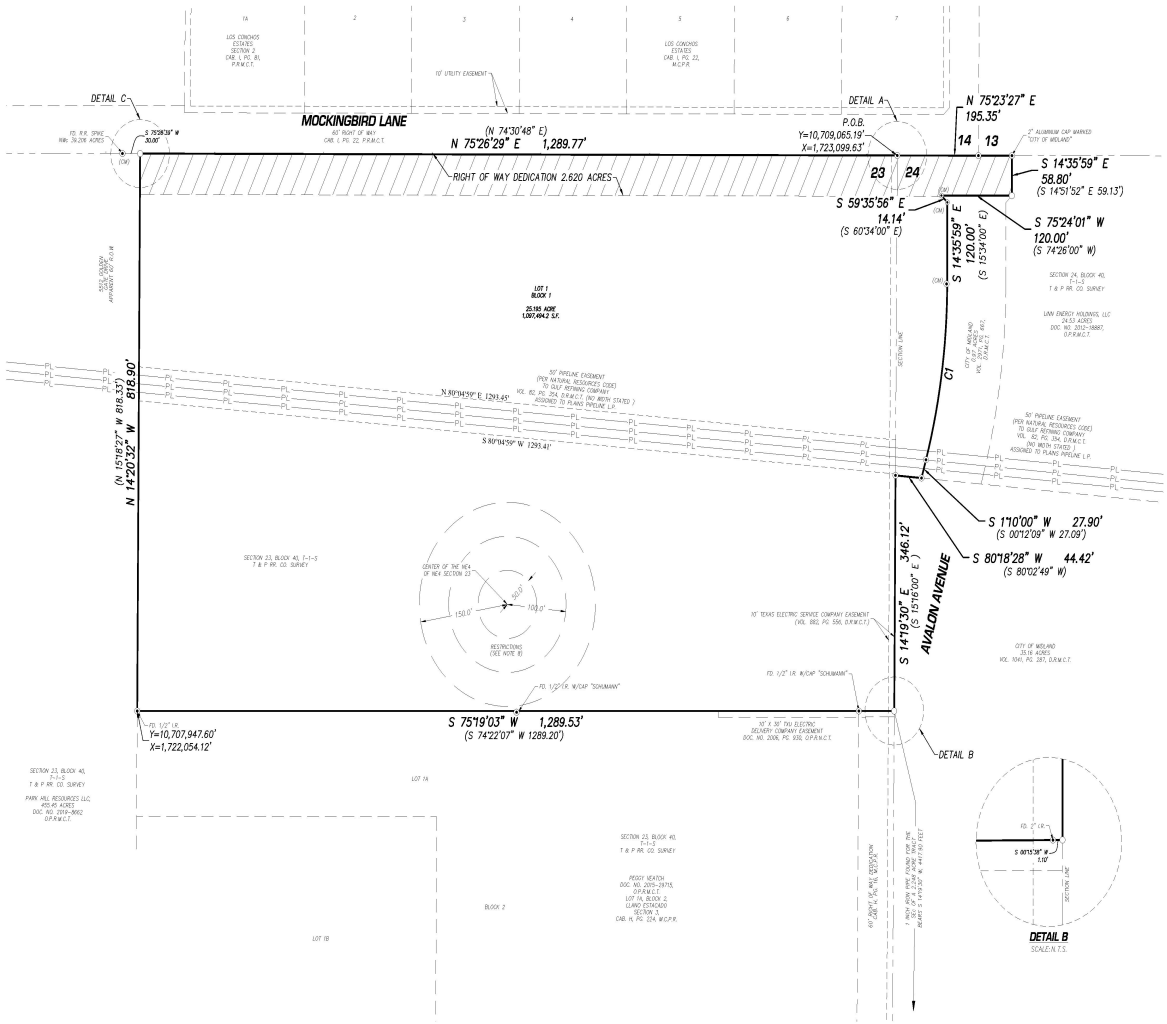
Application will not be considered for scheduling until reviewed by a planner.

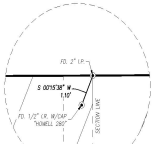
PRELIMINARY PLAT

YMCA ADDITION SECTION 1

25.195 ACRE TRACT LOCATED IN SECTIONS 23 AND 24, BLOCK 40, T-1-S, T&P R.R. CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS







STATE OF TEXAS §
COUNTY OF MIDLAND §

BEING A 25.195 ACRE TRACT OF LAND LOCATED IN SECTIONS 23 AND 24, BLOCK 40, T-1-S, T & P RAILROAD COMPANY SURVEY, MIDLAND COUNTY, TEXAS AND BEING A 24.203 ACRE TRACT DESCRIBED IN WARRANTY DEED FROM CLK-ABR, INC TO THE YOUNG MEN'S CHRISTIAN ASSOCIATION OF MIDLAND, TEXAS RECORDED IN DOCUMENT NO. 2023-9344 OF THE OFFICIAL PUBLIC RECORDS OF MIDLAND COUNTY, TEXAS AND BEING A 0.992 ACRE TRACT TO THE YOUNG MEN'S CHRISTIAN ASSOCIATION OF MIDLAND, TEXAS RECORDED IN DOCUMENT NO. 2023-15747, OF THE OFFICIAL PUBLIC RECORDS OF MIDLAND COUNTY, TEXAS AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT (Y= 10, 709,065.19' & X= 1,723,099.63') A 2 INCH IRON PIPE FOUND IN THE SOUTH LINE OF MOCKINGBIRD LANE A 60-FOOT-WIDE PUBLIC RIGHT OF WAY RECORDED IN CABINET I, PAGE 22, OF THE MIDLAND COUNTY PLAT RECORDS FOR THE NORTHEAST CORNER OF SECTION 23, AND THE NORTHWEST CORNER OF SECTION 24, SAME BEING THE NORTHWEST CORNER OF THE SAID 0.992 ACRE TRACT AND THE NORTHEAST CORNER OF THE SAID 24.203 ACRE TRACT WHENCE A 1/2 INCH IRON ROD FOUND WITH CAP MARKED "HOWELL 280" BEARS S 00°15'38" W, A DISTANCE OF 1.10 FEET;

THENCE N 75°23'27" E, ALONG THE NORTH LINE OF SECTION 24, PASSING A 1/2 INCH ROD FOUND FROM PREVIOUS SURVEY FOR THE COMMON CORNER OF SECTIONS 13 AND 14, SAME BLOCK AND SURVEY AT 138.32 FEET THEN CONTINUING IN ALL A DISTANCE OF 195.35 FEET TO A 2 INCH ALUMINUM CAP MARKED " CITY OF MIDLAND" FOR THE NORTHWEST OF A 24.53 ACRE TRACT RECORDED IN DOCUMENT NO. 2012-18887, OF THE OFFICIAL PUBLIC RECORDS OF MIDLAND COUNTY AND THE NORTHEAST CORNER OF THIS PROPERTY DESCRIBED;

THENCE S 14°35'59" E, CALLED (S 14°51'52" E,) IN THAT DEED OF THE 24.53 ACRE TRACT ALONG THE NORTHERNMOST WEST LINE OF THE SAID 24.53 ACRES AND THE NORTHEAST LINE OF THIS PROPERTY DESCRIBED A DISTANCE OF 58.80 FEET CALLED (59.13') TO A 1/2 INCH IRON ROD SET WITH CAP MARKED "LCA ODESSA TX" FOR THE NORTHEAST CORNER OF A 0.97 ACRE TRACT TO THE CITY OF MIDLAND RECORDED IN VOLUME 2971, PAGE 667, OF THE MIDLAND COUNTY DEED RECORDS;

THENCE S 75°24'01" W, CALLED (S 74°26'00" W,) ALONG THE NORTH LINE OF THE SAID 0.97 ACRE TRACT A DISTANCE OF 120.00 FEET TO A 1/2 INCH IRON FOUND WITH CAP MARKED "LCA ODESSA TX" (CONTROL MONUMENT) FOR THE NORTHWEST CORNER OF THE 0.97 ACRES AND BEING AN ELL CORNER OF THIS PROPERTY DESCRIBED;

THENCE S 59°35'56" E, CALLED (S 60°34'00" E,) A DISTANCE OF 14.14 FEET TO A 1/2 INCH IRON ROD FOUND WITH CAP MARKED " LCA ODESSA TX" (CONTROL MONUMENT) FOR AN ANGLE POINT TO THE RIGHT;

THENCE S 14°35'59" E, CALLED (S 15°34'00" E,) CONTINUING ALONG THE WEST LINE OF THE 0.97 ACRES A DISTANCE OF 120.00 FEET TO A 1/2 INCH IRON ROD FOUND WITH CAP MARKED " LCA ODESSA TX" (CONTROL MONUMENT) FOR THE BEGINNING OF A CURVE TO THE RIGHT HAVING A RADIUS OF 950.00 FEET, DELTA ANGLE 15°46'10" WITH A CHORD BEARING AND DISTANCE OF S 00°42'52"E 260.64 FEET;

THENCE WITH SAID CURVE TO THE RIGHT AND THE WEST LINE OF THE SAID 0.97 ACRES AN ARC LENGTH OF 261.47 FEET TO A 1/2 INCH IRON ROD FOUND WITH CAP MARKED " LCA ODESSA TX" FOR A POINT OF TANGENCY;

THENCE S 01°10'00" W, CONTINUING WITH THE WEST LINE OF THE SAID 0.97 A DISTANCE OF 27.90 FEET CALLED (S 00°12'09"W, 27.09 FEET) TO A 1/2 INCH IRON ROD FOUND WITH CAP MARKED " LCA ODESSA TX" IN THE NORTH LINE OF A 35.16 ACRE TRACT TO THE CITY OF MIDLAND RECORDED IN VOLUME 1041, PAGE 287, OF THE MIDLAND COUNTY DEED RECORDS FOR THE SOUTHWEST CORNER OF THE SAID 0.97 ACRES;

THENCE S 80°18'28" W, CALLED (S 80°02'49" W,) ALONG THE SOUTH LINE OF THE ABOVE SAID 0.992 ACRES AND THE NORTH LINE OF THE SAID 35.16 ACRE TRACT A DISTANCE OF 44.42 FEET TO A 1/2 INCH IRON ROD FOUND WITH CAP MARKED " LCA ODESSA TX" IN THE WEST LINE OF SECTION 24, AND THE EAST LINE OF THE SAID 24.203 ACRES FOR THE SOUTHWEST CORNER OF THE SAID 0.992 ACRES;

THENCE S 14°19'30" E, CALLED (S 15°19'00" E,) ALONG THE EAST LINE OF SECTION 24, AND THE 24.203 ACRES A DISTANCE OF 346.12 FEET TO A 1/2 INCH IRON ROD SET WITH CAP MARKED "LCA ODESSA TX" FOR THE SOUTHEAST CORNER OF THIS PROPERTY DESCRIBED WHENCE A 1/2 INCH IRON ROD FOUND BEARS S 75°19'03" W, A DISTANCE OF 0.51 FEET ALSO FROM SAID 1/2 INCH IRON ROD SET A 1 INCH IRON PIPE FOUND (CONTROL MONUMENT) FOR THE SOUTHEAST CORNER OF A 2.248 ACRE TRACT RECORDED IN VOLUME 713, PAGE 53, OF THE DEED RECORDS OF MIDLAND COUNTY, TEXAS BEARS S 14°19'30" E, A DISTANCE OF 4417.90 FEET;

THENCE S 75°19'03" W, CALLED (S 75°22'07" W,) ALONG THE SOUTH LINE OF THE 24.203 ACRES AND THE NORTH LINE OF A 60-FOOT RIGHT OF WAY DEDICATION BY LLANO ESTACADO ADDITION SECTION 2, RECORDED IN CABINET H, PAGE 16, OF THE MIDLAND COUNTY, PLAT RECORDS, PASSING A 1/2 INCH IRON ROD FOUND WITH CAP MARKED "SCHUMANN" FOR THE NORTHEAST CORNER OF LLANO ESTACADO ADDITION SECTION 3, RECORDED IN CABINET H, PAGE 224, OF THE MIDLAND COUNTY, PLAT RECORDS AT 60.34 FEET THEN PASSING A 1/2 INCH IRON ROD FOUND WITH CAP MARKED "SCHUMANN" AT 645.07 FEET AND CONTINUING IN ALL A DISTANCE OF 1289.53 FEET CALLED (1289.20') TO A 1/2 INCH IRON ROD FOUND IN THE EAST LINE OF GOLDEN GATE DRIVE AN APPARENT 60-FOOT-WIDE PUBLIC RIGHT OF WAY FOR THE SOUTHWEST CORNER OF THIS PROPERTY DESCRIBED AND BEING THE NORTHWEST CORNER OF SAID LLANO ESTACADO ADDITION SECTION 3;

THENCE N 14°20'32" W, CALLED (S 15°18'27" W,) WITH THE EAST LINE OF SAID GOLDEN GATE DRIVE AND THE WEST LINE OF THIS PROPERTY DESCRIBED A DISTANCE OF 818.90 FEET CALLED (818.33') TO A 1/2 INCH IRON ROD SET WITH CAP MARKED " LCA ODESSA TX" IN THE SOUTH LINE OF SAID MOCKINGBIRD LANE FOR THE NORTHWEST CORNER OF THIS PROPERTY DESCRIBED WHENCE A 1/2 INCH IRON ROD WITH CAP FOUND BEARS S 09°10'48" W, A DISTANCE OF 0.64 FEET, ALSO FROM SAID 1/2 INCH IRON ROD SET A FOUND RAILROAD SPIKE (CONTROL MONUMENT) FOR THE NORTHWEST CORNER OF A 39.206 ACRE TRACT RECORDED IN VOLUME 1821, PAGE 702, OF THE MIDLAND COUNTY DEED RECORDS BEARS S 75°26'29" W, A DISTANCE OF 30.00 FEET;

THENCE N 75°26'29" E, CALLED (S 74°30'48" W,) ALONG THE SOUTH LINE OF MOCKINGBIRD LANE A DISTANCE OF 1289.77 FEET TO THE POINT OF BEGINNING AND CONTAINING 25.195 ACRES OF LAND OF WHICH 2.620 ACRES TO BE DEDICATED FOR MOCKINGBIRD LANE AND AVALON AVENUE.

GENERAL NOTES:

1. Approval of a site plan by the City of Midland may be required before this lot may be developed and before a building permit may be obtained
2. Selling a portion of this addition by metes and bounds may be a violation of subdivision regulations and state law.
3. By graphic plotting, no portion of this subdivision is located within the 100 year flood plain as shown on the Federal Insurance Rate Map, Community Panel No. 48329C0005F, dated August 19, 2019.
4. Sidewalks are required along the frontage of all lots in accordance with the Subdivision Regulations of the City of Midland.
5. Utility easements are hereby dedicated as shown on the plat and as described in the Subdivision Regulations of the City of Midland.
6. Drainage plans for this property must be approved by the City Engineer before any building permit is issued.
7. Roadway impact fees will be assessed during the final platting process.
8. All bearings are based on the Texas Coordinate System of 1983, Texas Central Zone (4203), North American Datum of 1983 (2011). Control was established using Trimble R10 GNSS receivers and the Midland County Control monument "117_93" NAD 83 (2011) published coordinates. The coordinates were then brought to surface using a project combined grid factor of 0.99986094 and convergence angle of -00°56'36.832" at the point of origin.
9. All subdivisions recorded in volume 391, page 543, volume 391, page 543 and volume 391, page 548, deed records midland county, Texas. No open pit nor shaft and drift mining operations shall hereafter be carried on upon the subject premises. mineral production operations by means of the drilling of wells are hereby expressly authorized. such drilling operations shall be restricted to the drilling of wells at or within 50 feet of the center of each quarter section of the subject premises and not elsewhere mineral productions facilities other than gas and oil pipelines are hereby restricted to an area not exceeding 100 feet in radius around the center of each quarter section of the subject premises . neither buyer, his heirs or assigns, shall ever erect any buildings or other permanent improvements (except street paving, curb and gutter, water, sewer, electric and telephone lines) nearer than 150 feet from the center of any regular quarter section of the subject premises, nor shall buyer, his heirs or assigns construct any permanent paved street or roadway nearer than 100 feet from the center of any such quarter quarter section.

LEGEND

●	FOUND 1/2" I.R. W/CAP "LCA ODESSA TX" UNLESS OTHERWISE NOTED
○	SET 1/2" I.R. W/CAP UNLESS OTHERWISE NOTED
(CM)	CONTROL MONUMENT
E.C.D.R.	ECTOR COUNTY DEED RECORDS
E.C.P.R	ECTOR COUNTY PLAT RECORDS
O.P.R.E.C.T.	OFFICIAL PUBLIC RECORDS ECTOR COUNTY TEXAS

CERTIFICATE OF APPROVAL

For approval by the Commission:
This is to certify that the above and foregoing YMCA Addition Section 1 was approved by proper action on the City Planning and Zoning Commission of the City of Midland, Texas

SIGNED: _____
D: CHAIRMAN OF PLANNING & ZONING COMMISSION
LUCY SISNIEGA

SIGNED: _____
D: SECRETARY OF PLANNING & ZONING COMMISSION
JEFF FISHER

THE UTILITY COMPANIES CERTIFICATE

The plat has been checked for accessibility of utilities

ATMOS ENERGY _____

ONCOR ELECTRIC _____

ASTOUND BROADBAND _____

AT&T TELEPHONE COMPANY _____

OPTIMUM _____

CURVE TABLE					
Curve #	DELTA	RADIUS	LENGTH	CD. BEARING	CD. DIST.
C1	15°46'10"	950.00'	261.47'	S 06°42'52" E	260.64'

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:
Christine Bearden do hereby adopt this plat designating the herein described property as, YMCA Addition Section 1 an addition to the City of Midland, Midland County, Texas and do hereby dedicate to the public use forever the streets, alley and easements shown thereon for the purpose and consideration therein expressed, and an easement of egress and ingress for trash collection, and location and maintenance of trash containers, and a condition of said easement that no construction shall commence on the said lots until the exact location of said trash enclosure with have been submitted and approved by the Director of Utilities.

OWNER: YMCA OF MIDLAND
CHRISTINE BEARDEN CEO
[illegible]
[illegible]
MIDLAND, TX 79701

ENGINEER: LANDGRAF, CRUTCHER & ASSOC. INC.
[illegible]
[illegible]
79761-5131
PHONE: (432) 332-5058

THE STATE OF TEXAS
COUNTY OF MIDLAND

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared Christine Bearden, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this [illegible] day of [illegible], 2023.

My commission expires: _____

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

SURVEYORS CERTIFICATE
KNOW ALL MEN BY [illegible]
I, Randy A. Anderson, a Registered Professional Land Surveyor of the State of Texas, do hereby certify that this plat was prepared from an actual and accurate survey of the land and that the corner monuments shown thereon were properly placed under my personal supervision, in accordance with the subdivision regulations of the City of Midland, Texas.

THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED FOR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT. 2023-09-05

RANDY A. ANDERSON, R.P.L.S. # 5403

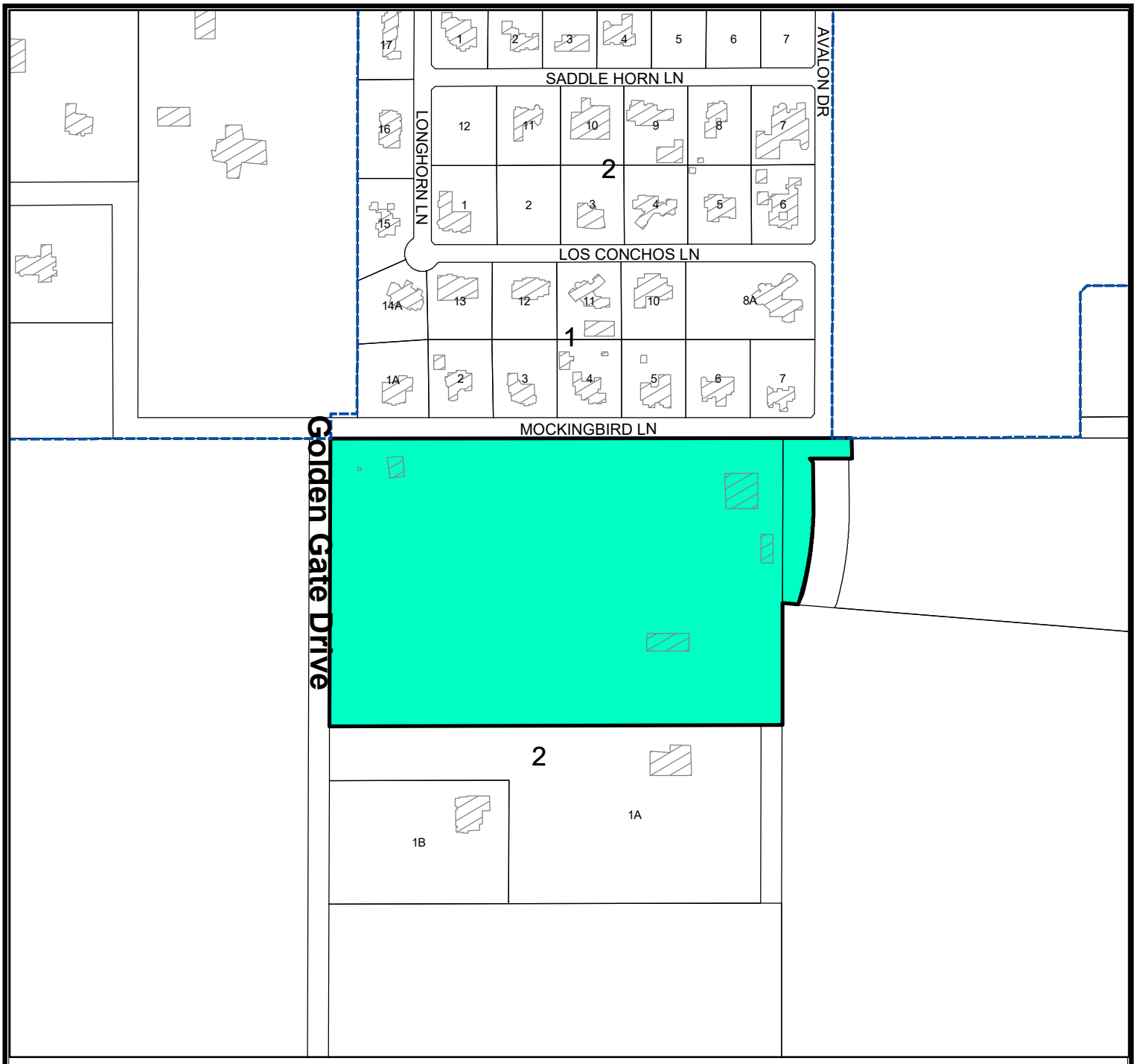
PLAT FILED FOR RECORD
MIDLAND COUNTY, TEXAS
DAT_____
E

PACKET 20.8

YMCA ADDITION SECTION 1 October 24, 2023

LCA *ENVIRONMENTAL • CIVIL ENGINEERING • LAND SURVEYING*
521 North Texas, Odessa Tx. 79761 F-001363 F-10034300
Phone # (432) 332-5038 E-Mail : lca@lcaodessa.com
Personal Service, Today and Tomorrow

E:\2023\2023-314\Dwg\Drafting\Plat\2023-314 Preliminary Plat.dwg, 9/5/2023 1:41:43 PM



LOCATION MAP

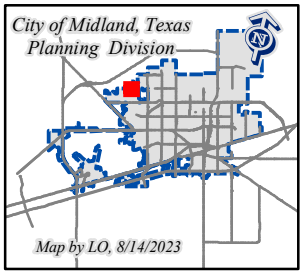
SUB-23-0657 **Scale: 1" = 4,885'**

Proposed Plat of YMCA Addition, Section 1, being a Plat of a 25.195-acre tract of land out of Sections 23 and 24, Block 40, T-1-S, T&P RR Co Survey, City and County of Midland, Texas.

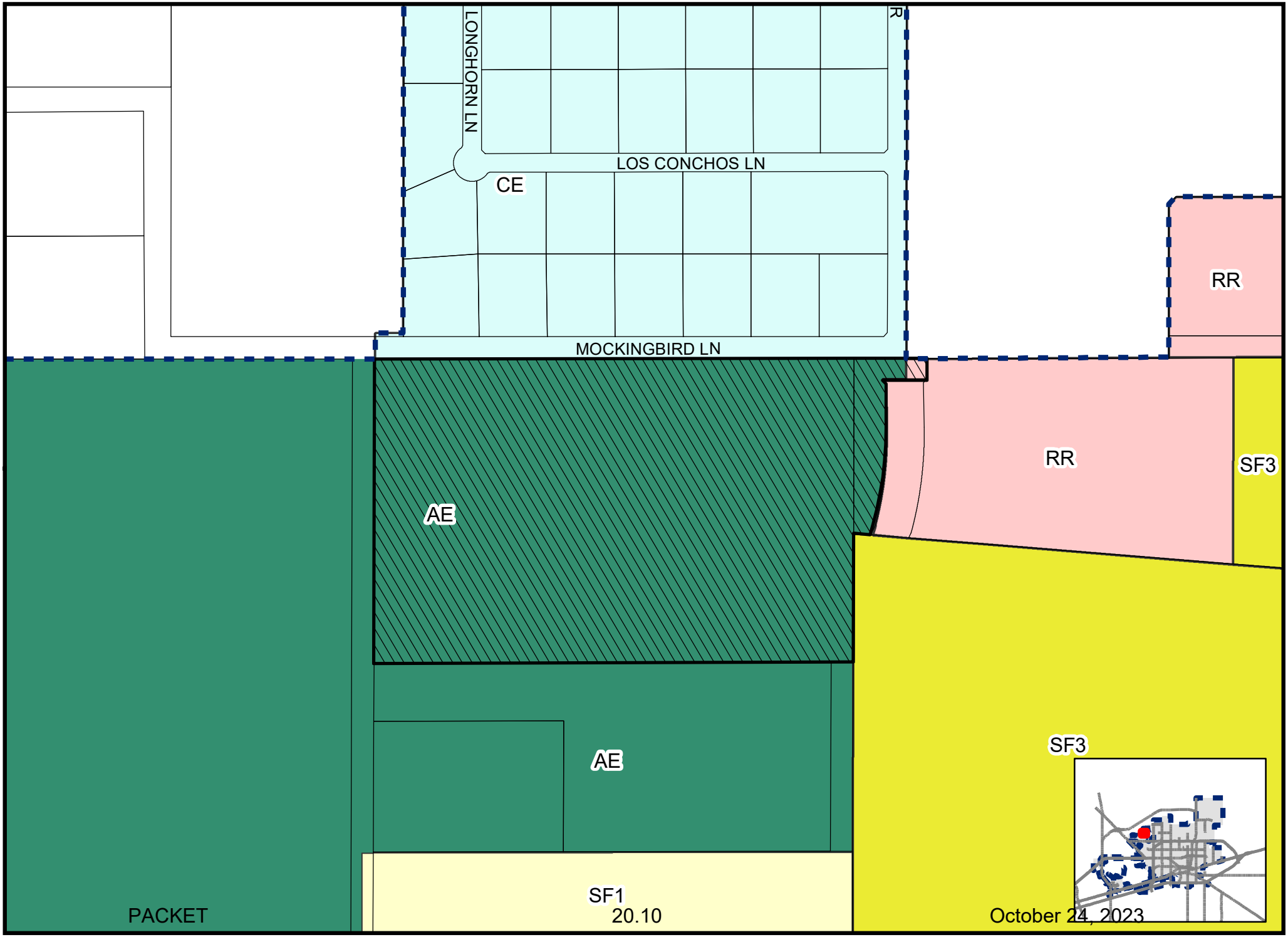
Generally located on the southeast corner of the intersection of Golden Gate Drive and Mockingbird Lane. (District 4)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



©THE CITY OF MIDLAND - 2021
THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY AND IS NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN.
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.



Map By LO, 9/28/2023

P-23-1772

Scale: 1" = 3,880'

ZONING MAP

© THE CITY OF MIDLAND - 2021: THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT, NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN. THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.

City of Midland
Office Memorandum

DATE: October 12, 2023

TO: The Honorable Mayor and City Council Members

FROM: John Ohnemiller, City Attorney

SUBJECT: Resolution establishing a policy limiting eligibility for service on City boards and Commissions with final decision-making authority

---

The proposed resolution establishes a policy limiting eligibility for service on City boards and commissions possessing final decision-making. The policy does not apply to City boards and commissions that are purely advisory in nature. Additionally, the policy does not apply to City Council members or City employees.

As the Council is aware, this issue has been raised several times during the deliberation of appointments to City boards and commissions. Following the most recent discussion, Robin Poole, Council Member At-Large, requested that our office prepare a resolution adopting the aforementioned policy and place the item on your agenda for consideration.

Please do not hesitate to contact me if you have questions.

RESOLUTION NO. _____

RESOLUTION ESTABLISHING A POLICY LIMITING ELIGIBILITY FOR SERVICE ON CITY BOARDS AND COMMISSIONS WITH FINAL DECISION-MAKING AUTHORITY

WHEREAS, the City Council desires to promote broad citizen participation on City boards and commissions; and

WHEREAS, the City Council finds it to be in the public interest to establish a policy limiting eligibility for service on City boards and commissions with final decision-making authority;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the above recitals are hereby approved and adopted for all purposes.

SECTION TWO. That it shall be the policy of the City of Midland that a person may not simultaneously serve on more than one (1) City board or commission that possesses final decision-making authority. Said eligibility limitation shall apply to the following City boards and commissions:

- Building and Fire Code Review Committee/Construction Board of Adjustment and Appeals;
- Midland Development Corporation;
- Midland Housing Authority Commission;
- Midland-Odessa Urban Transit District Board;
- Midland Spaceport Development Corporation;
- Personnel Appeals Board;
- Planning and Zoning Commission;
- The board of any reinvestment zone created pursuant to Chapter 311 of the Texas Tax Code;
- Zoning Board of Adjustment; and

- Any board or commission established hereafter that possesses final decision-making authority as determined by the City Attorney.

SECTION THREE. That the policy adopted herein shall not apply to City boards and commissions that are purely advisory in nature. Such boards and commissions include, but are not limited to, the following:

- Airport Planning and Development Board;
- Animal Control Advisory Commission;
- Barbara and George H.W. Bush Convention Center Advisory Board;
- Capital Improvement Advisory Committee;
- Citizens Development and Hotel/Motel Advisory Board;
- Oil and Gas Advisory Committee; and
- Parks and Recreation Commission.

SECTION FOUR. That the policy adopted herein shall not apply to City Council members or City employees.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2023, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

RECOMMENDED AND APPROVED:

_____
Tommy Gonzalez, City Manager

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

City Council Meeting

Item Number: 22

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Seth Herman, Police Chief

Subject: **RESOLUTION ACCEPTING A GRANT IN THE AMOUNT OF $52,686.00 FROM THE FISCAL YEAR 2023 EDWARD BYRNE MEMORIAL JUSTICE ASSISTANCE GRANT PROGRAM PROVIDED BY THE OFFICE OF JUSTICE PROGRAMS FOR THE UNITED STATES DEPARTMENT OF JUSTICE; SAID GRANT FUNDS SHALL BE USED TO PURCHASE FLOCK LICENSE PLATE CAMERAS FOR THE POLICE DEPARTMENT; AND APPROPRIATING SAID GRANT FUNDS (DISTRICT: ALL) (POLICE)**

Purpose:

RESOLUTION AUTHORIZING ACCEPTANCE AND APPROPRIATION OF FUNDS IN THE AMOUNT OF $52,686 AWARDED THROUGH THE FY2023 EDWARD BYRNE MEMORIAL JUSTICE ASSISTANCE GRANT PROGRAM - U.S. DEPARTMENT OF JUSTICE, OFFICE OF JUSTICE PROGRAMS.

Recommended City Council Action:

Approve

Fiscal Impact:

Funds in the amount of $52,686 will be deposited into the Police Justice Grant Fund and appropriated for the stated purpose.

Discussion:

Funds awarded will be utilized to purchase Flock License Plate Reader camera systems that will be strategically placed throughout the City of Midland. Information derived from the cameras will be employed by approved personnel to identify, track, and locate vehicles involved in criminal activity - serving as an integral component in the Department's crime reduction strategy.

Tina Jaug

City Manager's Office

RESOLUTION NO. _____

RESOLUTION ACCEPTING A GRANT IN THE AMOUNT OF $52,686.00 FROM THE FISCAL YEAR 2023 EDWARD BYRNE MEMORIAL JUSTICE ASSISTANCE GRANT PROGRAM PROVIDED BY THE OFFICE OF JUSTICE PROGRAMS FOR THE UNITED STATES DEPARTMENT OF JUSTICE; SAID GRANT FUNDS SHALL BE USED TO PURCHASE FLOCK LICENSE PLATE CAMERAS FOR THE POLICE DEPARTMENT; AND APPROPRIATING SAID GRANT FUNDS

WHEREAS, the City of Midland, Texas, Police Department has received notice that it has been awarded $52,686.00 through the Fiscal Year 2023 Edward Byrne Memorial Justice Assistance Grant Program; and

WHEREAS, said grant funds will be used to purchase Flock license plate cameras for the Police Department; and

WHEREAS, the City of Midland agrees that, in the event of loss or misuse of the grant funds, the City of Midland assures that said funds will be returned to the Office of Justice Programs for the United States Department of Justice; and

WHEREAS, the City Council finds it to be in the public interest to accept the grant award and to appropriate the grant funds;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the City of Midland hereby accepts the grant award of $52,686.00 awarded by the Office of Justice Programs for the United States Department of Justice through the Fiscal Year 2023 Edward Byrne Memorial Justice Assistance Grant Program. Said grant funds shall be used to purchase Flock license plate cameras for the Police Department.

SECTION TWO. That the Fiscal Year 2023 Edward Byrne Memorial Justice Assistance Grant Program grant in the amount of $52,686.00 is hereby accepted and directed to be deposited into the Police Justice Grant fund, upon which said funds shall be appropriated for purposes consistent with this Resolution.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2023, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

RECOMMENDED AND APPROVED:

_____
Tommy Gonzalez, City Manager

_____
Christy Weakland, Director of Finance

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Seth Herman, Police Chief

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

City Council Meeting

Item Number: **23**

Meeting Date: **October 24, 2023 (October 10, 2023)**

To: **City Council / City Manager**

From: **Jeffrey Fisher, Planning Manager**

Subject: AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITHOUT TERM FOR A 54.008-ACRE TRACT OF LAND OUT OF SECTION 42, BLOCK 40, T-1-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED APPROXIMATELY 1,550 FEET SOUTH OF STATE HIGHWAY 191, AND APPROXIMATELY 1,725 FEET EAST OF FARM-TO-MARKET ROAD 1788), WHICH IS PRESENTLY ZONED RR, REGIONAL RETAIL DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR AN INSTITUTION FOR THE CARE OF ALCOHOLIC, PSYCHIATRIC, OR NARCOTIC PATIENTS; MAKING SAID DESIGNATION SUBJECT TO CERTAIN CONDITIONS AND RESTRICTIONS CONTAINED HEREIN; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION **(DISTRICT 4) (DEVELOPMENT SERVICES)**

Purpose:

The applicant, Permian Basin Behavioral Health Center is requesting a Specific Use Designation (SUDwo) without Term for an Institution for the Care of Alcoholic, Psychiatric, or Narcotic Patients.

Recommended City Council Action:

Approve

Fiscal Impact:

No city funds are required to process this request.

Current Zoning:

RR, Regional Retail District.

Surrounding Zoning and Land Use:

The property to the north is zoned RR, Regional Retail, and the location of the UTPB Engineering Campus. The properties to the east, south, and west are outside the incorporated City Limits in the City's Extraterritorial Jurisdiction and are vacant.

Discussion:

The requested zoning of RR, Regional Retail District, permits an Institution for the Care of Alcoholic, Psychiatric, or Narcotic Patients with the approval of an SUDwo.

The survey (Exhibit A), site plan (Exhibit B), and renderings (Exhibit C) provided show the property and proposed behavioral health inpatient building and parking areas. The facility is approximately 234,640-square feet, and will include inpatient and outpatient services, staff and medical offices, and long-term stay for psychiatric patients. The proposed request and plans are in compliance with the RR, Regional Retail District.

This project has been circulated to all City departments for review. Below are the department comments:

Engineering: (Approved)

No objections. [For the Applicant's information only.]

Transportation: (Approved)

No objections. [For the Applicant's information only.]

Building Code: (Approved)

No issues.

Fire: (Approved)

No objections.

Oil and Gas: (Approved)

No objections.

Planning: (Approved)

The property is located within the Air & Space Port Area of the Tall City of Tomorrow Comprehensive Plan. The Air & Space Port Area policies state that areas north of the airport should be protected for future development, with development in the near term being done in a way that does not limit the future economic development potential of the area. The requested initial zoning for this property of RR, Regional Retail District is compatible with these policies, allowing a wide range of uses that support economic growth, including an Institution for the Care of Alcoholic, Psychiatric, or Narcotic Patients with an approved SUDwo.

On September 18, 2023, the Planning and Zoning Commission recommended approval of the SUDwo.

Staff recommends approval of the request of the Specific Use Designation without Term for an Institution for the Care of Alcoholic, Psychiatric, or Narcotic Patients, subject to Conditions A and B.

Conditions:

A. **That the use and development of this property shall conform to the regulations of the RR, Regional Retail District.**

B. **That the use and development of the Property for the Specific Use shall significantly conform to the site plan and renderings, which are attached hereto as Exhibits "A" and "B" and incorporated herein for all purposes.**

Letters of Objection:

As of September 28, 2023, staff has received no letters of objection for this request.

Attachments:

Application
Survey (Exhibit A)
Site Plan (Exhibit B)
Renderings (Exhibit C)
Maps

Morris Williams Jr.

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITHOUT TERM FOR A 54.008-ACRE TRACT OF LAND OUT OF SECTION 42, BLOCK 40, T-1-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED APPROXIMATELY 1,550 FEET SOUTH OF STATE HIGHWAY 191, AND APPROXIMATELY 1,725 FEET EAST OF FARM-TO-MARKET ROAD 1788), WHICH IS PRESENTLY ZONED RR, REGIONAL RETAIL DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR AN INSTITUTION FOR THE CARE OF ALCOHOLIC, PSYCHIATRIC, OR NARCOTIC PATIENTS; MAKING SAID DESIGNATION SUBJECT TO CERTAIN CONDITIONS AND RESTRICTIONS CONTAINED HEREIN; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

WHEREAS, the City Planning and Zoning Commission and the Governing Body of the City of Midland, Texas, in compliance with the City Charter, the City Code, and State law, have given the requisite notices by United States mail, publication and otherwise; and

WHEREAS, after holding due hearings affording a full and fair hearing to all of the property owners generally, and particularly to those interested persons situated in the affected area and in the vicinity thereof, the Governing Body of the City of Midland finds that the public convenience will be best served by granting a Specific Use Designation Without Term for a 54.008-acre tract of land out of Section 42, Block 40, T-1-S, T&P RR Co. Survey, City and County of Midland, Texas, said tract being more specifically described by metes and bounds in Exhibit "A", which is attached hereto and incorporated herein (the "Property") as set out hereinafter;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the Zoning District Map of the City of Midland, Texas, is hereby amended to grant the Property a Specific Use Designation Without Term for an institution for the care of alcoholic, psychiatric, or narcotic patients the ("Specific Use"), together with the uses permitted in the present RR, Regional Retail District.

SECTION TWO. That the Property shall be subject to the following conditions and restrictions:

That the use and development of the Property for the Specific Use shall significantly conform to the site plan and renderings, which are attached hereto as Exhibits "B" and "C" and incorporated herein for all purposes.

SECTION FOUR. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION THREE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances, inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SIX. The City Secretary is hereby authorized and directed to publish the description of Council members voting "AYE": on motion of Council member and for the length of time prescribed by the law as an alternative method of publication.

SECTION SEVEN. The City Secretary is hereby authorized and directed to publish the Council members voting "AYE": on motion of Council member and for the length of time prescribed by the law as an alternative method of publication.

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the

following vote upon motion of Council member _____, seconded by Council

Council members voting "AYE":

member _____, on the _____ day of _____, A.D., 2023, at a regular

Council members voting "NAY":

meeting of the City Council:

PASSED AND APPROVED THIS _____ day of _____, A.D., 2023.

_____

Lori Merritt Blong, Mayor

ATTEST:

_____

Marcia Bentley-German, City Secretary

APPROVED AS TO CONTENT

AND COMPLETENESS:

_____

Rolandrea Russell, Interim Director of Development Services

APPROVED ONLY AS TO FORM:

_____

John Ohnemiller, City Attorney

~~EXHIBIT "A"~~

DESCRIPTION OF PROPERTY

Parkhill

A 54.008-ACRE TRACT OF LAND IN SECTION 42, BLOCK 40, T-1-S, T. & P. RR. CO. SURVEY, MIDLAND COUNTY, TEXAS

A 54.008-acre tract of land in Section 42, Block 40, Township 1-South, T. & P. RR. Co. Survey, Abstract No. 802, Midland County, Texas, being a portion of that certain 3294.00-acre tract of land conveyed to Diamondback O&G, LLC, described as "Tract C" in a special warranty deed recorded in Instrument #2014-19954 of the Official Public Records of Midland County, Texas, said 54.008-acre tract being further described by metes and bounds as follows:

BEGINNING at a 1/2-inch iron rod with a plastic cap marked "PARKHILL RPLS 6453" set in the west line of said "Tract C", for the most westerly northwest corner of this tract, said beginning point having coordinates of NORTHING: 10,683,246.11 and EASTING: 1,703,474.95, Texas Coordinate System, Central Zone 4203, North American Datum of 1983, whence the northwest corner of said Section 42 bears *South 75 degrees 55 minutes 12 seconds West* a distance of 1338.25 feet and *North 14 degrees 04 minutes 48 seconds West* a distance of 4110.74 feet, per calls in previous deeds, and a 1/2-inch iron rod with a plastic cap marked "PLS 1974" found in the south line of a 40.0-acre tract conveyed to the Board of Regents of the University of Texas System, described in a donation deed recorded in Volume 2792, Page 776 of the Official Public Records of Midland County, Texas, at a point of intersection in the west line of said "Tract C" bears *North 14 degrees 06 minutes 26 seconds West* a distance of 1584.38 feet;

(1) THENCE *North 75 degrees 53 minutes 34 seconds East* a distance of 300.00 feet to a 1/2-inch iron rod with a plastic cap marked "PARKHILL RPLS 6453" set at a point of intersection for an ell corner of this tract;

(2) THENCE *North 14 degrees 06 minutes 26 seconds West* a distance of 1724.29 feet to a 1/2-inch iron rod with a plastic cap marked "PARKHILL RPLS 6453" set in the north line of said "Tract C", same being the south line of said 40.0-acre tract, at a point of intersection for the most northerly northwest corner of this tract, whence said 1/2-inch iron rod with plastic cap marked "PLS 1974" bears *South 50 degrees 53 minutes 27 seconds West* a distance of 331.02 feet and a 1/2-inch iron rod with a plastic cap marked "LCA ODESSA" found at the southwest corner of said 40.0-acre tract bears *South 50 degrees 53 minutes 27 seconds West* a distance of 610.78 feet;

(3) THENCE *North 50 degrees 53 minutes 27 seconds East*, along the south line of said 40.0-acre tract, a distance of 286.93 feet to a 1/2-inch iron rod with a plastic cap marked "PARKHILL RPLS 6453" set for the most northerly northeast corner of this tract, whence a 1/2-inch iron rod with a plastic cap marked "PARKHILL RPLS 6453" set for the southeast corner of said 40.0-acre tract bears *North 50 degrees 53 minutes 27 seconds East* a distance of 542.13 feet;

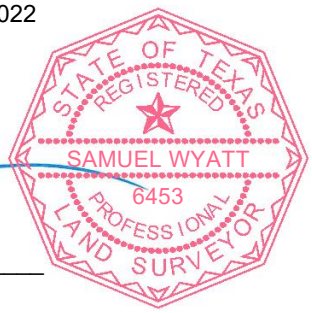
(4) THENCE *South 75 degrees 06 minutes 26 seconds East* a distance of 1253.03 feet to a 1/2-inch iron rod with a plastic cap marked "PARKHILL RPLS 6453" set for the most easterly northeast corner of this tract;

(5) THENCE *South 14 degrees 06 minutes 26 seconds East* a distance of 1358.08 feet to a 1/2-inch iron rod with a plastic cap marked "PARKHILL RPLS 6453" set for the southeast corner of this tract;

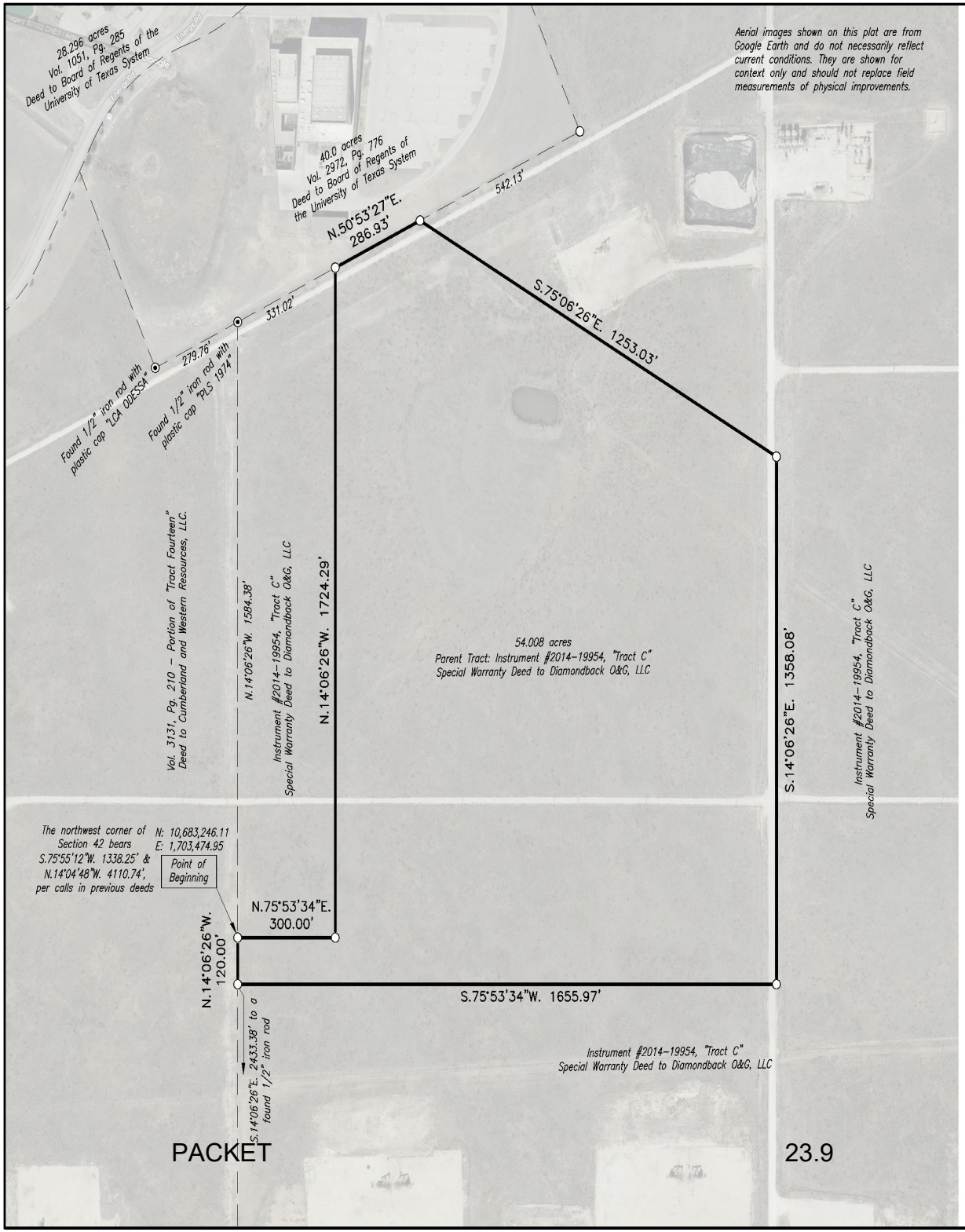
(6) THENCE *South 75 degrees 53 minutes 34 seconds West* a distance of 1655.97 feet to a 1/2-inch iron rod with a plastic cap marked "PARKHILL RPLS 6453" set in the west line of said "Tract C" for the southwest corner of this tract, whence a 1/2-inch iron rod found in the west line of said "Tract C" bears *South 14 degrees 06 minutes 26 seconds East* a distance of 2433.38 feet;

(7) THENCE *North 14 degrees 06 minutes 26 seconds West*, along the west line of said "Tract C", a distance of 120.00 feet to the **POINT OF BEGINNING**. Bearings, coordinates, distance and areas called in this description are at grid, based on the Texas Coordinate System, Central Zone 4203, North American Datum of 1983. This survey is subject to any facts which may be disclosed by a full and accurate title search. Record documents other than those shown may affect these tracts.

Surveyed on the ground: September 14, 2022
Signed: September 24, 2022



Samuel Wyatt, RPLS 6453



A 54.008-ACRE TRACT IN SECTION 42, BLOCK 40, T-1-S, MIDLAND COUNTY, TEXAS

PARENT TRACT: INSTRUMENT NUMBER 2014-19954,
OFFICIAL PUBLIC RECORDS OF MIDLAND COUNTY, TEXAS

NORTH

0 300' 600' 900' 1200' 1500'

LEGEND:

SCALE: 1" = 300'

○ = SET 1/2" IRON ROD WITH CAP "PARKHILL RPLS 6453".

⊙ = FOUND 1/2" IRON ROD WITH CAP

● = FOUND 1/2" IRON ROD

SURVEYOR'S REPORT:

BEARINGS, COORDINATES, DISTANCES AND AREAS SHOWN HEREON ARE BASED ON THE TEXAS COORDINATE SYSTEM, CENTRAL ZONE 4203, NAD83.

THIS SURVEY IS SUBJECT TO ANY FACTS WHICH MAY BE DISCLOSED BY A FULL AND ACCURATE TITLE SEARCH. RECORD DOCUMENTS OTHER THAN THOSE SHOWN MAY AFFECT THIS TRACT.

MONUMENTS INDICATED AS FOUND BY THIS SURVEY ARE NOT "PHYSICAL MONUMENTS OF RECORD DIGNITY" UNLESS SO NOTED.

FOUND MONUMENTS ARE ACCEPTED BY THIS SURVEYOR AS CONTROLLING EVIDENCE DUE TO SUBSTANTIAL AGREEMENT WITH RECORD DOCUMENTS.

THIS PLAT IS INVALID UNLESS IT BEARS THE SURVEYOR'S ORIGINAL SEAL AND SIGNATURE.

A METES AND BOUNDS DESCRIPTION OF THIS TRACT IS SHOWN ON A SEPARATE DOCUMENT ATTACHED HEREWITH.

THIS PLAT WAS PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY AND THE INFORMATION HEREON REPRESENTS THE FINDINGS OF THIS SURVEY TO THE BEST OF MY KNOWLEDGE AND BELIEF.

SURVEYED: SEPTEMBER 14, 2022
SIGNED: SEPTEMBER 24, 2022

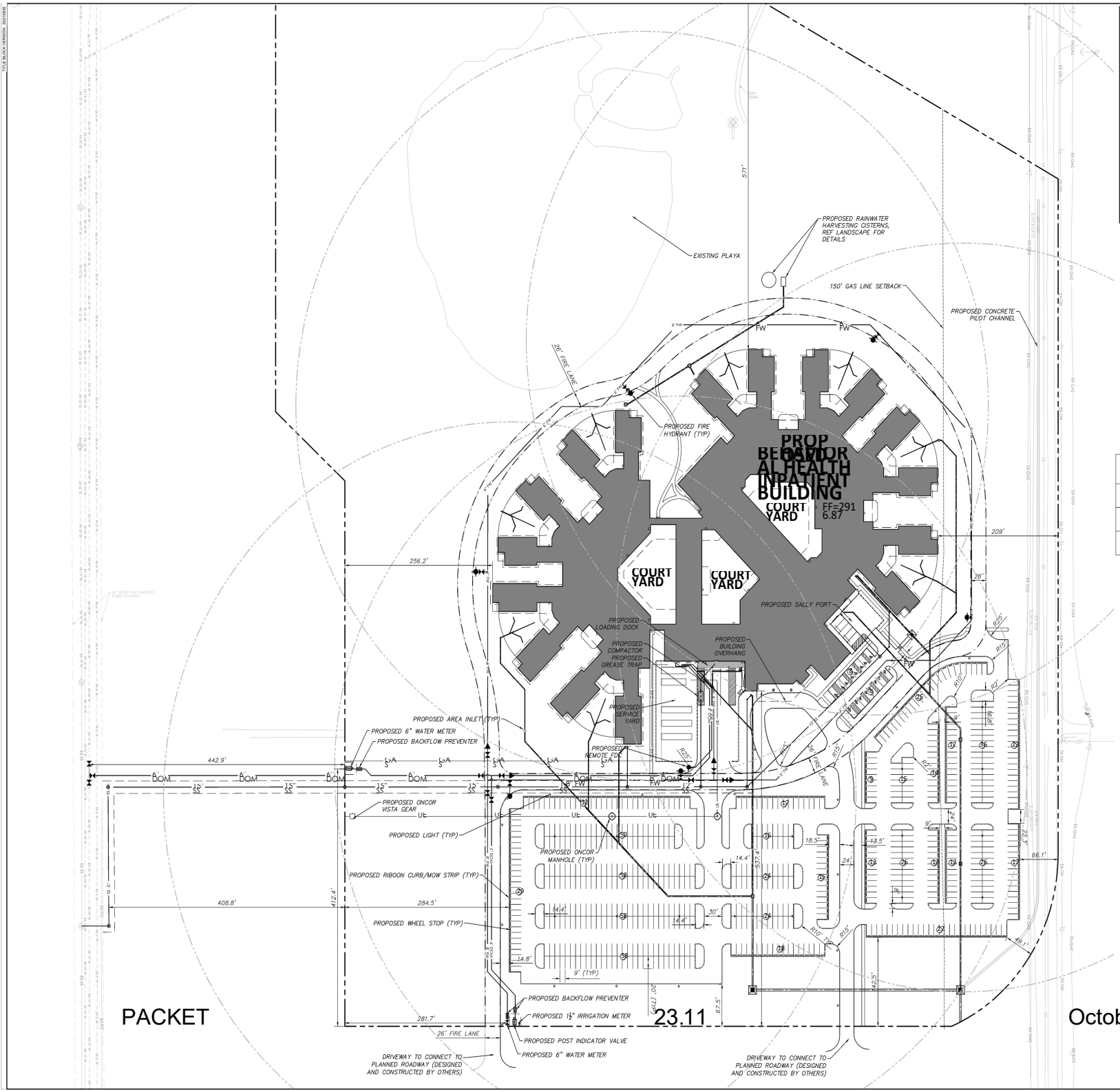
STATE OF TEXAS
REGISTERED
SAMUEL WYATT
6453
PROFESSIONAL
LAND SURVEYOR

SAMUEL WYATT
R.P.L.S. 6453

Parkhill
Parkhill.com
TBPELS FIRM REGISTRATION NO. 10194091

~~EXHIBIT "B"~~

SITE PLAN



WARNING TO CONTRACTOR
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ELEVATION = 2,951.81'

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BOX WITH "X" CUT ON CONCRETE ON THE EAST EDGE OF A CONCRETE SIDEWALK, APPROXIMATELY 22 FEET NORTHEAST OF A ONE-STORY METAL BUILDING AND APPROXIMATELY 72 FEET WEST OF A SANITARY SEWER MANHOLE.
ELEVATION = 2,918.74'

SITE LEGEND

- PROPERTY BOUNDARY
- RADIUS MARKERS
- BUILDING SETBACK
- YARD SETBACK
- FIRE EASEMENT
- PROPOSED FIRE HYDRANT
- PROPOSED 90' FIRE HYDRANT RADIUS
- PROPOSED CURB/MOW STRIP
- FUTURE PROPOSED CURB/MOW STRIP
- PROPOSED RETAINING WALL
- TAS COMPLIANT ROUTE
- PARKING COUNT

PARKING SUMMARY TABLE	
TOTAL PROVIDED	689
ACCESSIBLE REQUIRED	14
ACCESSIBLE PROVIDED	16

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PACKET 23.11 October 24, 2023

GRAPHIC SCALE IN FEET
60 0 60 120

DUNAWAY
550 Bailey Avenue • Suite 400 • Fort Worth, Texas 76107
Tel: 817.335.1121
TX REG. # 11142

HKS, INC.

HKS
ARCHITECT
2050 W. BENDER BLVD., SUITE 400
BAYLOR, TX 76706
MEP CONSULTANT
4201 W. PARMER LANE, SUITE A-100
AUSTIN, TX 78727
CIVIL ENGINEER
5000 LEGACY DRIVE, SUITE 101
PLANO, TX 75024
LANDSCAPE ARCHITECT
2050 W. BENDER BLVD., SUITE 400
BAYLOR, TX 76706
STRUCTURAL ENGINEER
5000 LEGACY DRIVE, SUITE 465
PLANO, TX 75024
INTERIOR DESIGN
1800 NW 169TH PL, SUITE 200
BEAVERTON, OR 97006
MEP ENGINEER
4201 W. PARMER LANE, SUITE A-100
AUSTIN, TX 78727
DATA/ AUDIO/ SECURITY
2101 CEDAR SPRINGS RD, SUITE 250
DALLAS, TX 75201
MEDICAL EQUIPMENT PLANNING
5301 VIRGINIA PARKWAY, SUITE 130
MCKINNEY, TX 75071
FOOD SERVICE
8181 E. TUFTS AVENUE, SUITE 500
DENVER, CO 80237

Permian Basin Behavioral HEALTH CENTER

SEAL & SIGNATURE

PRELIMINARY FOR REVIEW ONLY
THESE DOCUMENTS ARE NOT INTENDED FOR CONSTRUCTION, BIDDING OR PERMIT REVIEW PURPOSES. THEY WERE PREPARED BY, OR UNDER THE SUPERVISION OF:

CONTRACT NO.: 11111
KEY PLAN

REVISION NO. DESCRIPTION DATE

HKS PROJECT NO. 25630.000
ISSUE DATE 08/23/2023
CONSTRUCTION VOLUME PLAN
SHEET NO. 3.0
BUILDING PERMIT NUMBER: 11111
FILE NAME: HKS_INC.
PAGE #:

EXHIBIT "C"
RENDERINGS

HOSPITAL + MEDICAL
OFFICE MAIN ENTRANCE

PERMIAN BASIN
BEHAVIORAL HEALTH
CENTER

HKS

INPATIENT UNIT I REAR VIEW

HKS

PERMIAN BASIN BEHAVIORAL HEALTH CENTER

INPATIENT UNIT
COURTYARD

PERMIAN BASIN
BEHAVIORAL HEALTH
CENTER

HKS

LARGE SHARED COURTYARD

PERMIAN BASIN BEHAVIORAL HEALTH CENTER

HKS

REAR VIEW |
GYMNASIUM

PERMIAN BASIN
BEHAVIORAL HEALTH
CENTER

HKS

HOSPITAL
MAIN LOBBY

PERMIAN BASIN
BEHAVIORAL HEALTH
CENTER

HKS

INPATIENT
UNIT | MILIEU

PERMIAN BASIN
BEHAVIORAL HEALTH
CENTER

HKS

INPATIENT UNIT | PRIVATE PATIENT ROOM

PERMIAN BASIN BEHAVIORAL HEALTH CENTER

HKS

Parkhill

A 54.008-ACRE TRACT OF LAND IN SECTION 42, BLOCK 40, T-1-S, T. & P. RR. CO. SURVEY, MIDLAND COUNTY, TEXAS

A 54.008-acre tract of land in Section 42, Block 40, Township 1-South, T. & P. RR. Co. Survey, Abstract No. 802, Midland County, Texas, being a portion of that certain 3294.00-acre tract of land conveyed to Diamondback O&G, LLC, described as "Tract C" in a special warranty deed recorded in Instrument #2014-19954 of the Official Public Records of Midland County, Texas, said 54.008-acre tract being further described by metes and bounds as follows:

BEGINNING at a 1/2-inch iron rod with a plastic cap marked "PARKHILL RPLS 6453" set in the west line of said "Tract C", for the most westerly northwest corner of this tract, said beginning point having coordinates of NORTHING: 10,683,246.11 and EASTING: 1,703,474.95, Texas Coordinate System, Central Zone 4203, North American Datum of 1983, whence the northwest corner of said Section 42 bears *South 75 degrees 55 minutes 12 seconds West* a distance of 1338.25 feet and *North 14 degrees 04 minutes 48 seconds West* a distance of 4110.74 feet, per calls in previous deeds, and a 1/2-inch iron rod with a plastic cap marked "PLS 1974" found in the south line of a 40.0-acre tract conveyed to the Board of Regents of the University of Texas System, described in a donation deed recorded in Volume 2792, Page 776 of the Official Public Records of Midland County, Texas, at a point of intersection in the west line of said "Tract C" bears *North 14 degrees 06 minutes 26 seconds West* a distance of 1584.38 feet;

(1) THENCE *North 75 degrees 53 minutes 34 seconds East* a distance of 300.00 feet to a 1/2-inch iron rod with a plastic cap marked "PARKHILL RPLS 6453" set at a point of intersection for an ell corner of this tract;

(2) THENCE *North 14 degrees 06 minutes 26 seconds West* a distance of 1724.29 feet to a 1/2-inch iron rod with a plastic cap marked "PARKHILL RPLS 6453" set in the north line of said "Tract C", same being the south line of said 40.0-acre tract, at a point of intersection for the most northerly northwest corner of this tract, whence said 1/2-inch iron rod with plastic cap marked "PLS 1974" bears *South 50 degrees 53 minutes 27 seconds West* a distance of 331.02 feet and a 1/2-inch iron rod with a plastic cap marked "LCA ODESSA" found at the southwest corner of said 40.0-acre tract bears *South 50 degrees 53 minutes 27 seconds West* a distance of 610.78 feet;

(3) THENCE *North 50 degrees 53 minutes 27 seconds East*, along the south line of said 40.0-acre tract, a distance of 286.93 feet to a 1/2-inch iron rod with a plastic cap marked "PARKHILL RPLS 6453" set for the most northerly northeast corner of this tract, whence a 1/2-inch iron rod with a plastic cap marked "PARKHILL RPLS 6453" set for the southeast corner of said 40.0-acre tract bears *North 50 degrees 53 minutes 27 seconds East* a distance of 542.13 feet;

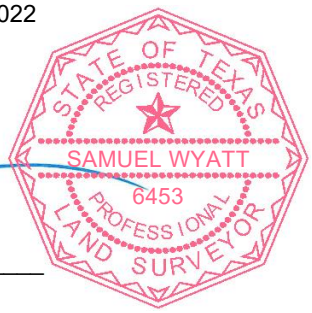
(4) THENCE *South 75 degrees 06 minutes 26 seconds East* a distance of 1253.03 feet to a 1/2-inch iron rod with a plastic cap marked "PARKHILL RPLS 6453" set for the most easterly northeast corner of this tract;

(5) THENCE *South 14 degrees 06 minutes 26 seconds East* a distance of 1358.08 feet to a 1/2-inch iron rod with a plastic cap marked "PARKHILL RPLS 6453" set for the southeast corner of this tract;

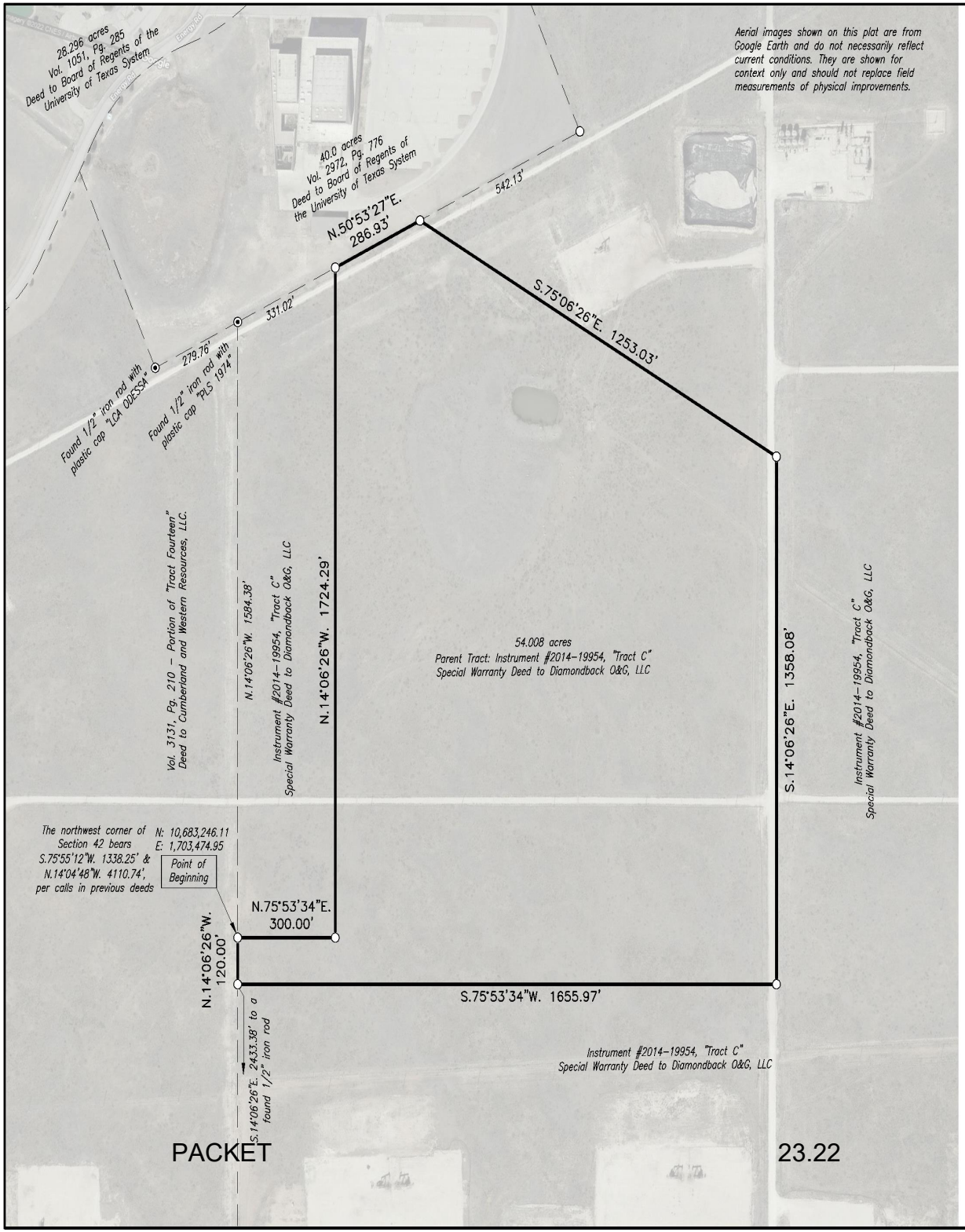
(6) THENCE *South 75 degrees 53 minutes 34 seconds West* a distance of 1655.97 feet to a 1/2-inch iron rod with a plastic cap marked "PARKHILL RPLS 6453" set in the west line of said "Tract C" for the southwest corner of this tract, whence a 1/2-inch iron rod found in the west line of said "Tract C" bears *South 14 degrees 06 minutes 26 seconds East* a distance of 2433.38 feet;

(7) THENCE *North 14 degrees 06 minutes 26 seconds West*, along the west line of said "Tract C", a distance of 120.00 feet to the **POINT OF BEGINNING**. Bearings, coordinates, distance and areas called in this description are at grid, based on the Texas Coordinate System, Central Zone 4203, North American Datum of 1983. This survey is subject to any facts which may be disclosed by a full and accurate title search. Record documents other than those shown may affect these tracts.

Surveyed on the ground: September 14, 2022
Signed: September 24, 2022



Samuel Wyatt, RPLS 6453



A 54.008-ACRE TRACT IN SECTION 42, BLOCK 40, T-1-S, MIDLAND COUNTY, TEXAS

PARENT TRACT: INSTRUMENT NUMBER 2014-19954,
OFFICIAL PUBLIC RECORDS OF MIDLAND COUNTY, TEXAS

NORTH

0 300' 600' 900' 1200' 1500'

LEGEND:

SCALE: 1" = 300'

○ = SET 1/2" IRON ROD WITH CAP "PARKHILL RPLS 6453".

⊙ = FOUND 1/2" IRON ROD WITH CAP

● = FOUND 1/2" IRON ROD

SURVEYOR'S REPORT:

BEARINGS, COORDINATES, DISTANCES AND AREAS SHOWN HEREON ARE BASED ON THE TEXAS COORDINATE SYSTEM, CENTRAL ZONE 4203, NAD83.

THIS SURVEY IS SUBJECT TO ANY FACTS WHICH MAY BE DISCLOSED BY A FULL AND ACCURATE TITLE SEARCH. RECORD DOCUMENTS OTHER THAN THOSE SHOWN MAY AFFECT THIS TRACT.

MONUMENTS INDICATED AS FOUND BY THIS SURVEY ARE NOT "PHYSICAL MONUMENTS OF RECORD DIGNITY" UNLESS SO NOTED.

FOUND MONUMENTS ARE ACCEPTED BY THIS SURVEYOR AS CONTROLLING EVIDENCE DUE TO SUBSTANTIAL AGREEMENT WITH RECORD DOCUMENTS.

THIS PLAT IS INVALID UNLESS IT BEARS THE SURVEYOR'S ORIGINAL SEAL AND SIGNATURE.

A METES AND BOUNDS DESCRIPTION OF THIS TRACT IS SHOWN ON A SEPARATE DOCUMENT ATTACHED HEREWITH.

THIS PLAT WAS PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY AND THE INFORMATION HEREON REPRESENTS THE FINDINGS OF THIS SURVEY TO THE BEST OF MY KNOWLEDGE AND BELIEF.

SURVEYED: SEPTEMBER 14, 2022
SIGNED: SEPTEMBER 24, 2022

STATE OF TEXAS
REGISTERED
SAMUEL WYATT
6453
PROFESSIONAL
LAND SURVEYOR

SAMUEL WYATT
R.P.L.S. 6453

Parkhill
Parkhill.com
TBPELS FIRM REGISTRATION NO. 10194091

MIDLAND Planning Division

Specific Use Designation Application (Non-Alcohol)

Case Number: SUDw0-23-0036

Ord. Number: _____

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: Russell Meyers		Phone (432)661-8000 Email russellmeyers@midlandmemorialfoundation.org	
Address PO Box 61950	City Midland	State TX	Zip 79705

Property Owner Printed Name: Permian Basin Behavioral Health Center		Phone (432)661-8000 Email	
Address	City	State	Zip

Representative *(if different from Applicant or Property Owner)* Firm: Dunaway Printed Name: Tim Hair		Phone (432)699-4889 Email thair@dunaway.com	
Address 4000 N Big Spring Street Suite 101	City Midland	State TX	Zip 79705

Type of Permit: Mental Health Hospital	*For Office Use Only* ☐ with Term ☐without Term

Is there any Code Enforcement action pending on property? ☐ Yes ■ No

Street Address: Section 42, Block 40, T-1-S Midland County Texas

Legal Description
Lot: Block: Subdivision:

Current Zoning: N/A - Application in process - Regional Retail

Maximum Floor Area: 300934 **Maximum Occupancy:** 3402

Proposed hours and days of use or operation: Building will be in use 24 hours a day and 7 days a week.

Reason for request: New Behavioral Health Hospital and Outpatient Mental Health services

Applicant's opinion as to why the request will not adversely affect the public safety, health, morals, general welfare, and convenience: This would increase access to mental health treatment and services for the region

Submittal and Fees
Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan showing
  - Parking (if applicable)
  - Building Footprint
- Digital Copies of Site Plan (PDF/JPEG)

Signatures	
Applicant (signature):	Date: 8/7/23
Applicant (printed): Russell Alleyers	
Property Owner (signature):	Date: 8/7/23
Property Owner (printed): Russell Alleyers	

The Specific Use Designation shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

If an agent is authorized by the property owner to file and execute the application on behalf of the property owner, the agent must complete the affidavit below.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared _____ who, being by me duly sworn, upon oath says: That (s)he is authorized by _____, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

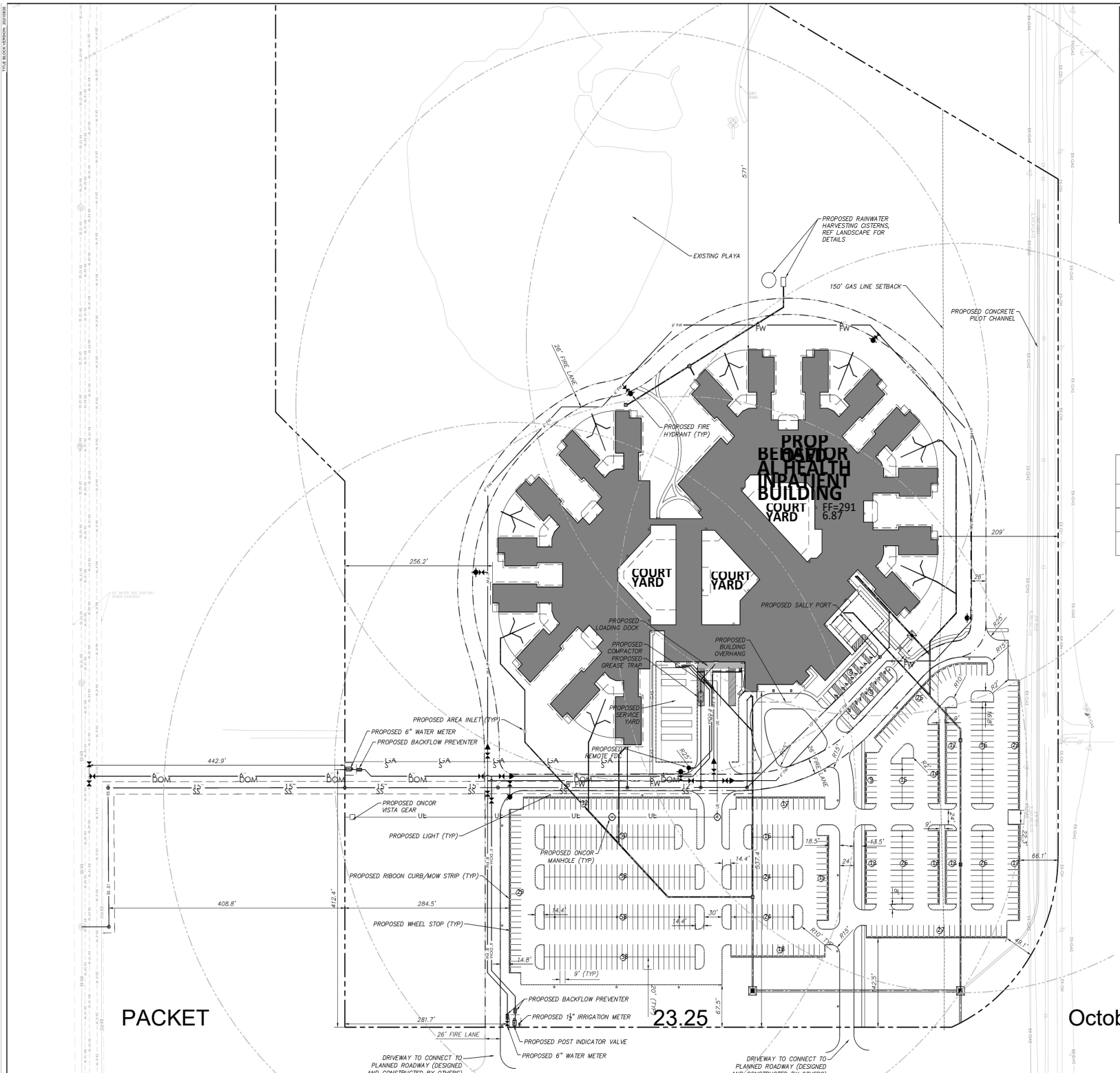
_____
Authorized Agent (*signature*)

Subscribed and sworn to before me, this _____ day of _____, 20 ___, to certify which witness my hand and seal of office.

_____
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY	
☑ Property Owner Authorization	☐ Dimensioned Site Plan
☑ Application Fee	☐ Site Plan in Digital Format (PDF/JPEG)
Check # paid	
Received By: Jeff Fisher	Date: 8-21-2023

****Application will not be considered for scheduling until reviewed by a planner.****



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SITE LEGEND

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- ADJOINERS BUILDING SETBACK
- YARD SETBACK
- FIRE EASEMENT
- PROPOSED FIRE HYDRANT
- PROPOSED 90' FIRE HYDRANT COVERAGE
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ACCESSIBLE REQUIRED	14
ACCESSIBLE PROVIDED	16

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DUNAWAY
550 Bailey Avenue • Suite 400 • Fort Worth, Texas 76107
Tel: 817.335.1121
TX REG: F-11040

HKS, INC.

HKS
ARCHITECT
2323 VICTORY AVENUE, SUITE 400
DALLAS, TX 75219
MEP/FP CONSULTANT
5001 LBJ FREEWAY, SUITE 1100
DALLAS, TX 75244
CIVIL ENGINEER
5510 LBJ FREEWAY, SUITE 101
DALLAS, TX 75240
LANDSCAPE ARCHITECT
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SUITE 130
FOOD SERVICE
5001 LBJ FREEWAY, SUITE 500
DALLAS, TX 75244
SOUTHLAKE, TN
8343 DOUGLAS AVENUE, SUITE 300
CENTENNIAL, CO 80112

Permian Basin Behavioral HEALTH CENTER

SEAL & SIGNATURE

PRELIMINARY FOR REVIEW ONLY
THESE DOCUMENTS, BUILDING OR PORTIONS THEREOF WERE PREPARED BY, OR UNDER THE SUPERVISION OF:

CONSTRUCTION DOCUMENTS
KEY PLAN

REVISION NO. DESCRIPTION DATE

HKS PROJECT NO. 25630.000
ISSUE DATE 08/23/2023
CONSTRUCTION DOCUMENTS VOLUME 3.0
SHEET NAME SITE PLAN
BUILDING PERMIT NUMBER: 11111
HKS FILE NAME
PAGE #:

PACKET 23.25 October 24, 2023

HOSPITAL + MEDICAL OFFICE MAIN ENTRANCE

INPATIENT UNIT | REAR VIEW

INPATIENT UNIT | COURTYARD

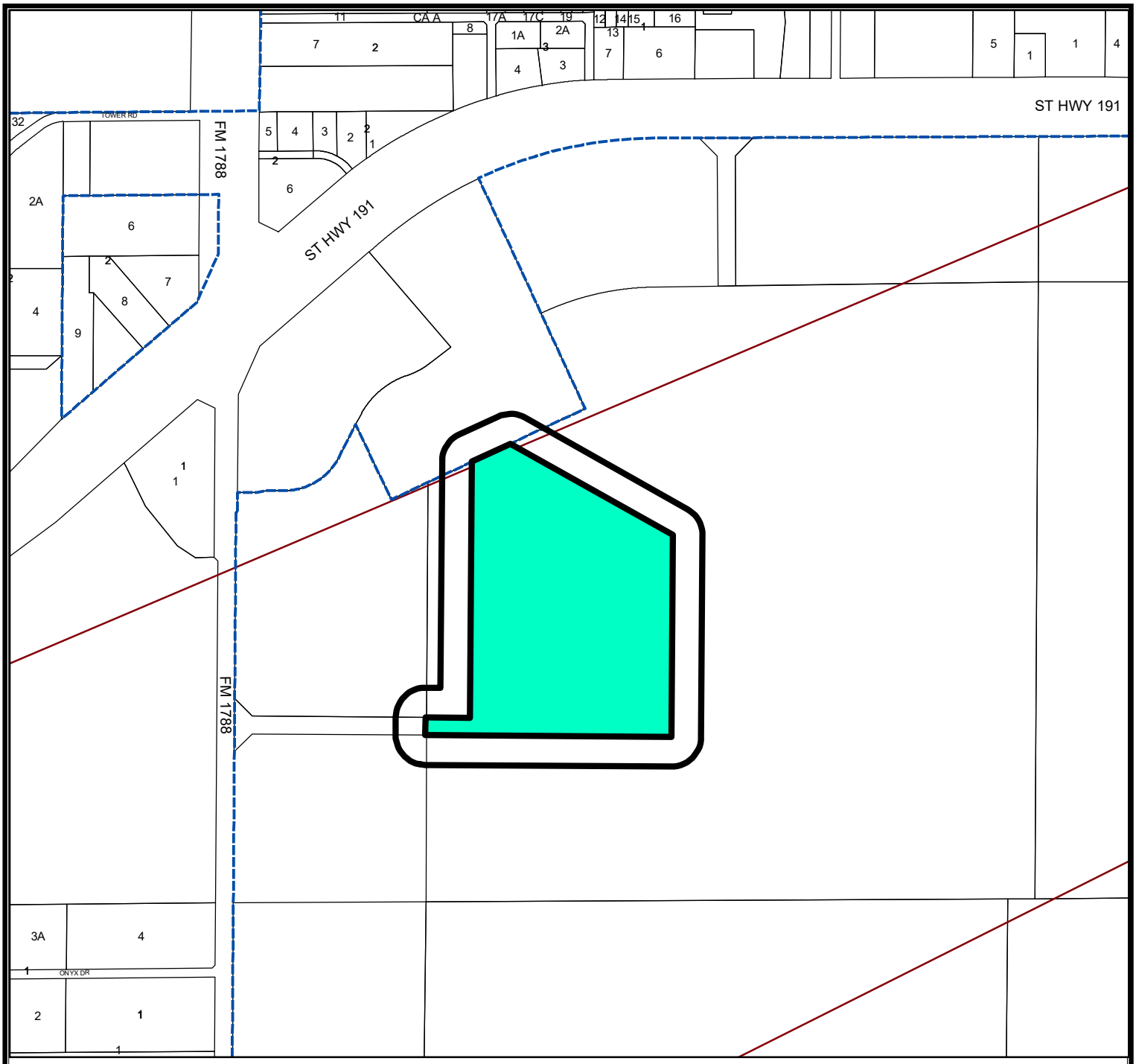
LARGE SHARED COURTYARD

REAR VIEW | GYMNASIUM

HOSPITAL MAIN LOBBY

INPATIENT UNIT | MILIEU

INPATIENT UNIT | PRIVATE PATIENT ROOM



LOCATION MAP

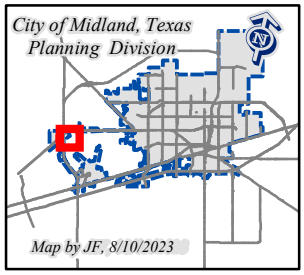
SUDwo-23-0036 **Scale: 1" = 200'**

Consider a request by Permian Basin Behavioral Health Center for a Specific Use without term, for an Institution for the Care of Alcoholic, Psychitratic, or Narcotic Patients on a 54.008-acre tract of land located in Section 42, Block 40, T-1-S, T&P RR. Co Survey, Midland County, Texas.

Generally located approximately 1,550-feet south of State Highway 191, and approximately 1,725-feet east of North Farm-to-Market Road 1788. - (Extraterritorial Jurisdiction)

L E G E N D

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



©THE CITY OF MIDLAND - 2021

THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY AND IS NOT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN.

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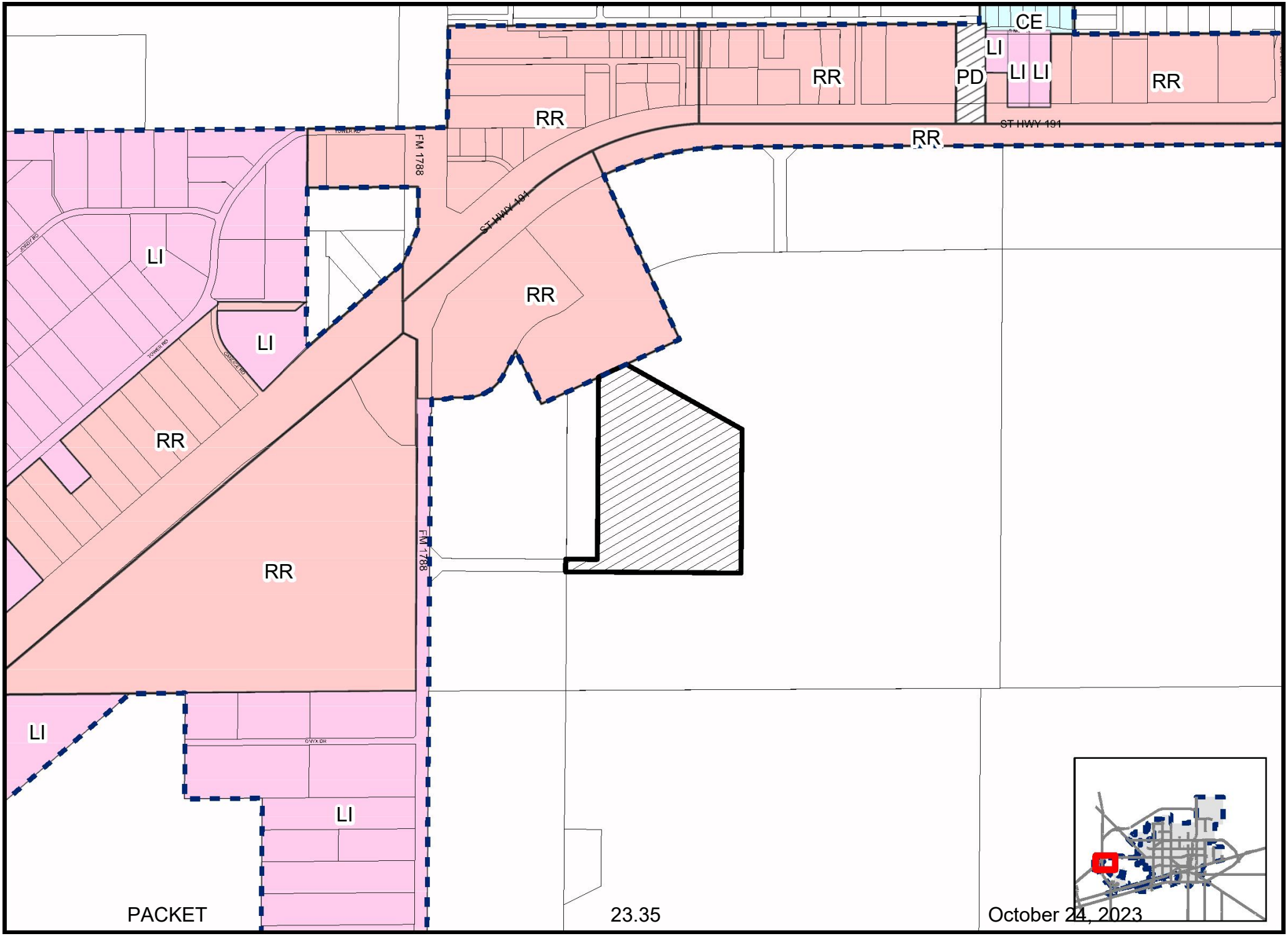

Map By AW, 8/9/2023

SUDwo-23-0036

Scale: 1" = 200'

ZONING MAP

MI
PRI
OF
UCT, NOR IS IT DESIGNED
INFORMATION CONTAINED
THE USE OF THIS DATA.

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City Council Meeting

Item Number: **24**

Meeting Date: **October 24, 2023 (October 10, 2023)**

To: **City Council / City Manager**

From: **Landon Ochoa, Senior Planner**

Subject: AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOT 55, BLOCK 8, 349 RANCH ESTATES, CITY AND COUNTY OF MIDLAND, TEXAS, FROM PD, PLANNED DEVELOPMENT DISTRICT FOR HOUSING DEVELOPMENT TO SF-1, SINGLE-FAMILY DWELLING DISTRICT (GENERALLY LOCATED EAST OF TEJAS, APPROXIMATELY 175 FEET WEST OF SIOUX COURT); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION **(DISTRICT 1) (DEVELOPMENT SERVICES)**

Purpose:

The applicant, Schumann Surveying, Inc., is requesting a Zone Change from PD, Planned District for Housing Development to PD, Planned District for Housing Development to SF-1, Single-Family Dwelling District on the northwest Lot 55, Block 8, 349 Ranch Estates, City and County of Midland, Texas for housing development.

Recommended City Council Action:

Approve

Fiscal Impact:

This request has no significant impact on the City's budget.

Current Zoning:

PD, Planned District for Housing Development (6128).

Surrounding Zoning and Land Use:

The properties to the north are zoned SF-3, Single-Family Dwelling District and PD, Planned District for Housing Development and the location of single-family homes and manufactured homes. The properties to the east are zoned PD, Planned District for Housing Development and the location of single-family homes and manufactured homes. The properties to the south and west are zoned SF-3, Single-Family Dwelling District and the location of single-family homes.

Analysis:

The subject property is zoned PD, Planned District for Housing Development with a base zoning of AE, Agricultural Estate District. The regulating ordinance specifies that the use and development of the property must conform to the requirements of the AE, Agricultural Estate District with the allowance of mobile homes as fixed dwellings be permitted in the same manner as allowed in the MH, Mobile Home District. The applicant is requesting a zone change from the PD, Planned District for a Housing Development to SF-1, Single-Family Dwelling District to develop the property with a reduced minimum lot area of less than two acres and to remove the allowance for mobile homes as currently allowed.

The SF-1, Single-Family Dwelling District has a minimum lot area of 9,000 square feet which is the largest single-family product allowed per the Zoning Ordinance. The applicant is proposing to develop this property in 13 lots with a minimum lot area of over 21,000 square feet (a minimum of .50 acres) which conforms with the lots that are immediately to the north and east.

This proposed zone change has been circulated to the respective City departments for internal review and their comments, conditions, and requirements are as follows:

Fire: (Approved)

No objection.

Building: (Approved)

No issues. All future structures must adhere to the 2018 International Building Codes, the 2015 International Energy Code, the 2020 NEC requirements, the 2015 International Fire Codes, local city ordinances, zoning requirements, established setbacks, oil and gas considerations, and floodplain requirements if necessary. Code versions are subject to change depending on time of new code edition adoption in the City of Midland and date of permit application.

Engineering: (Approved)

No objections to zone change. [For Applicant's Information Only.]
Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations. [For Applicant's Information Only.]

Code Compliance: (Approved)

No Oil and Gas issues concerning zoning.

Transportation: (Approved)

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations. [For the Applicant's information only.]

No objection to zone change. [For the Applicant's information only.]

Planning:

The request fits with the Tall City Tomorrow Comprehensive Plan, Chapter 3 - Land Use Vision. The land use map indicates that the property is designated Urban Low (UR-L) which calls for a mix of complementary uses including mostly single-family, with some attached, townhome and small multi-family projects, schools, small parks and churches, and neighborhood retail or mixed use. This request is consistent with this designation as it would release this property from the restrictiveness of the PD and allow for more single-family residences as the Comprehensive Plan calls for.

The Planning and Zoning Commission recommended approval of this request on September 5, 2023.

Staff recommends approval of this zone change from PD, Planned District for Housing Development to SF-1, Single-Family Dwelling District, subject to condition A.

Condition:

A. That the use and development of this property shall conform to the regulations of the SF-1, Single-Family Dwelling District.

Letters of Objection:

As of September 27, 2023, Staff has received one letter of objection for this request.

Attachments:

Application
Metes & Bounds (Exhibit A)
Maps

Morris Williams Jr.

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOT 55, BLOCK 8, 349 RANCH ESTATES, CITY AND COUNTY OF MIDLAND, TEXAS, FROM PD, PLANNED DEVELOPMENT DISTRICT FOR HOUSING DEVELOPMENT TO SF-1, SINGLE-FAMILY DWELLING DISTRICT (GENERALLY LOCATED EAST OF TEJAS, APPROXIMATELY 175 FEET WEST OF SIOUX COURT); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

WHEREAS, the City Planning and Zoning Commission and the Governing Body of the City of Midland, in compliance with the City Charter, the City Code, and State law, have given the requisite notices by United States mail, publication and otherwise; and after a full and fair hearing to all of the property owners generally and particularly to those interested persons situated in the affected area and in the vicinity thereof, the Governing Body finds that the public health, safety and general welfare will be best served by rezoning Lot 55, Block 8, 349 Ranch Estates, City and County of Midland, Texas (the "Property"), to SF-1, Single-Family Dwelling District, as set out hereinafter;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the Zoning District Map of the City of Midland, Texas, is hereby amended to rezone the Property from PD, Planned Development District for Housing Development to SF-1, Single-Family Dwelling District.

SECTION TWO. That the definitions given in the zoning regulations contained in the City Code of the City of Midland, Texas, shall be applicable to such of those terms as are used herein.

SECTION THREE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances

inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FOUR. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SIX. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2023; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2023, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2023.

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Rolandrea Russell, Interim Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

MIDLAND
Planning Division

Zone Change/Planned District Amendment/Site Plan Approval

Project Number: _____

Case Number: Z-23-0341

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Property Owner Printed Name: LANCE FRIDAY		Phone (432) 638-7495 Email lance@lancefridayhomes.com	
Address	City	State	Zip

Representative *(if different from Applicant or Property Owner)* Firm: SCHUMANN LAND SURVEYING Printed Name: ED ALEMAN		Phone (432) 254-0327 Email EALEMAN@SCHUMANNONLINE NET	
Address 800 N. MARIENFELD	City MIDLAND	State TX	Zip 79701

Street Address:

Legal Description
Lot: 55 Block: 8 Subdivision: 349 RANCH ESTATES

Current Zoning: PD

Proposed Zone: SF-2
(List by tracts if more than one district is requested)

Reason for Zone Change Request: P&Z RECOMMENDED

Present Use of Property: VACANT

Proposed Use of Property: RESIDENCIAL LOTS

How would this zone change affect the public health, safety and welfare? N/A

Describe how conditions affecting the property have changed since present zoning designation: N/A

Submittal and Fees
Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan
- Digital Copies of Site Plan (PDF/JPEG)

Signature *(by property owner only – authorized agent must sign affidavit below)*	
Applicant (signature):	Date:
Applicant (printed):	
Property Owner (signature):	Date: 8/7/2023
Property Owner (printed) : LANCE FRIDAY	

The Zone Change/Planned District Amendment/Site Plan Approval shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appear ED ALEMAN who, being by me duly sworn, upon oath says: That (s)he is the owner of _____ or authorized by LANCE FRIDAY, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

Authorized Agent (*signature*)

Subscribed and sworn to before me, this 7th day of August, 2023 to certify which witness my hand and seal of office.

HUNTER WAYNE HALL
Notary Public, State of Texas
Comm. Expires 06-05-2024
Notary ID 132509132

NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY

☑ Property Owner Authorization	☑ Dimensioned Site Plan
☑ Application Fee	☑ Plans in Digital Format (PDF/JPEG)
Check # Paid online	
Received By:	Date: AUG 07 2023

****Application will not be considered for scheduling until reviewed by a planner.****

SCHUMANN
SURVEYING, INC.
A LATERAL LAND COMPANY

FIELD NOTE DESCRIPTION OF A 7.88 ACRE TRACT OF LAND, IN THE NORTH/4 OF SECTION 12, BLOCK X, ABSTRACT 684, H.P. HILLIARD SURVEY, MIDLAND COUNTY, TEXAS. SAID 7.88 ACRE TRACT DESCRIBED MORE FULLY BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT A REINF BAR SET (N:10721748.45, E:1756054.13) IN THE NORTH RIGHT OF WAY LINE OF A 20.00' ALLEY FOR THE MOST SOUTHERLY SOUTHEAST CORNER OF THIS TRACT, FROM WHICH THE NW LOT CORNER OF LOT 9 N/2, OF BLOCK 8, 349 RANCH ESTATES, AN ADDITION TO THE CITY OF MIDLAND, MIDLAND COUNTY, ACCORDING TO THE MAP OR PLAT RECORDED IN CABINET B, PAGE 287, PLAT RECORDS OF MIDLAND COUNTY, TEXAS, BEARS SOUTH 75°31'26" WEST 211.09 FEET AND SOUTH 14°28'34" EAST 20.95 FEET ;

THENCE SOUTH 75°31'26" WEST 561.94 FEET TO A REINF BAR SET FOR THE SOUTHWEST CORNER OF THIS TRACT;

THENCE NORTH 11°30'37" WEST 333.47 FEET TO A REINF BAR SET FOR AN EXTERIOR CORNER OF THIS TRACT;

THENCE NORTH 14°34'47" WEST 154.27 FEET TO A REINF BAR SET FOR AN INTERIOR CORNER OF THIS TRACT;

THENCE SOUTH 75°36'34" WEST 14.86 FEET TO A REINF BAR SET FOR AN EXTERIOR CORNER OF THIS TRACT;

THENCE NORTH 14°41'37" WEST 94.97 FEET TO A REINF BAR SET FOR THE MOST SOUTHERLY NORTHWEST CORNER OF THIS TRACT;

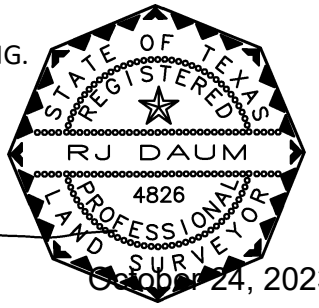
THENCE NORTH 30°27'29" WEST 28.21 FEET TO A REINF BAR SET FOR THE MOST NORTHERLY NORTHWEST CORNER OF THIS TRACT;

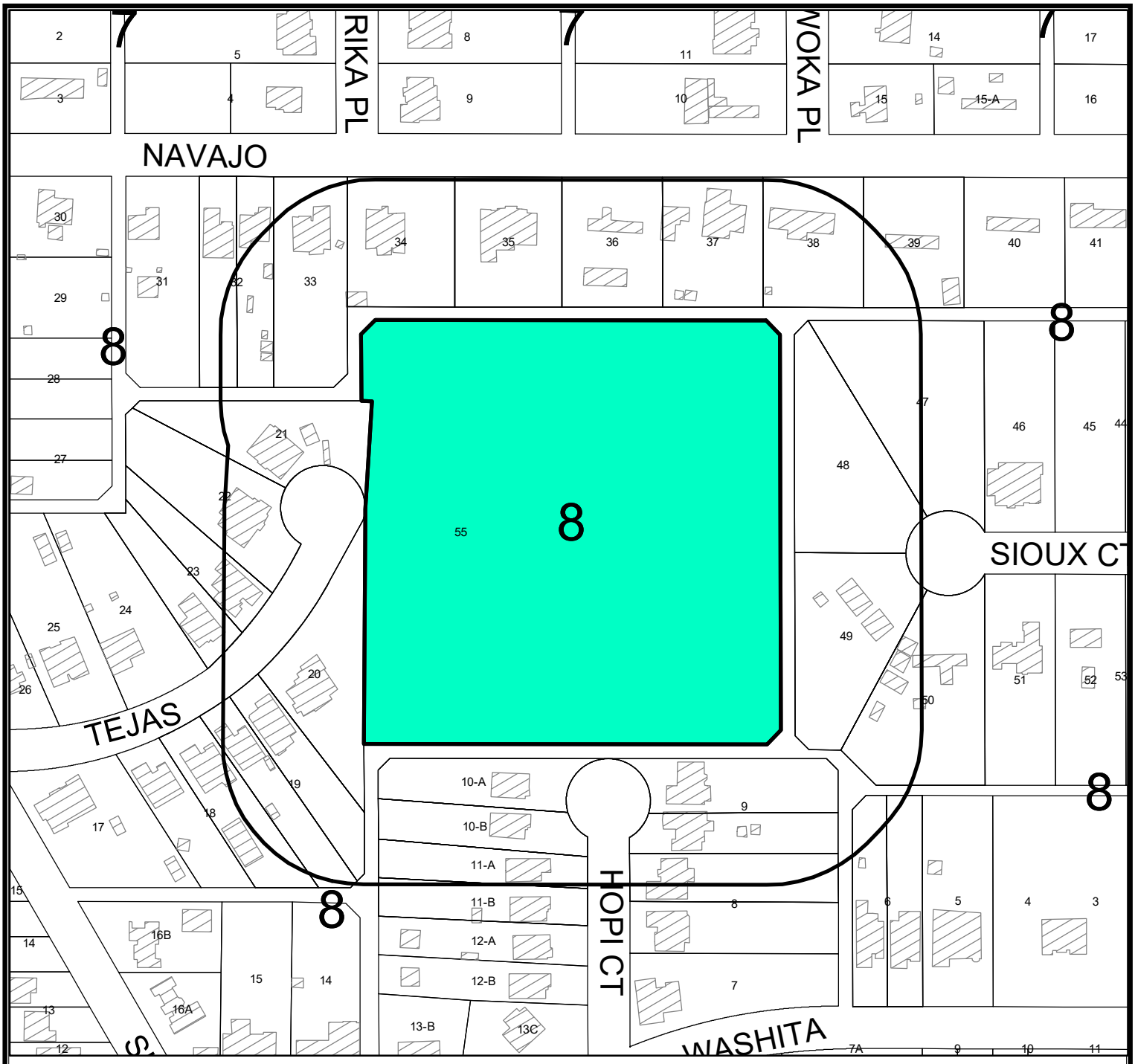
THENCE NORTH 75°36'36" EAST 538.53 FEET TO A REINF BAR SET FOR THE MOST NORTHERLY NORTHEAST CORNER OF THIS TRACT;

THENCE SOUTH 59°29'05" EAST 28.33 FEET TO A REINF BAR SET FOR THE MOST SOUTHERLY NORTHEAST CORNER OF THIS TRACT;

THENCE SOUTH 14°38'32" EAST 561.42 FEET TO A REINF BAR SET FOR THE MOST NORTHERLY SOUTHEAST CORNER OF THIS TRACT;

THENCE SOUTH 30°26'28" WEST 28.24 FEET TO THE PLACE OF BEGINNING.





LOCATION MAP

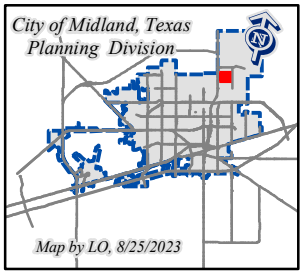
Z-23-0341 **Scale: 1" = 2,434'**

A request by Schumann Engineering for approval of a Zone Change from PD, Planned District for Housing Development to SF-1, Single-Family Dwelling District on Lot 55, Block 8, 349 Ranch Estates, City and County of Midland, Texas.

Generally located east Tejas approximately 175-feet west of Sioux Court. (Council District 1)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



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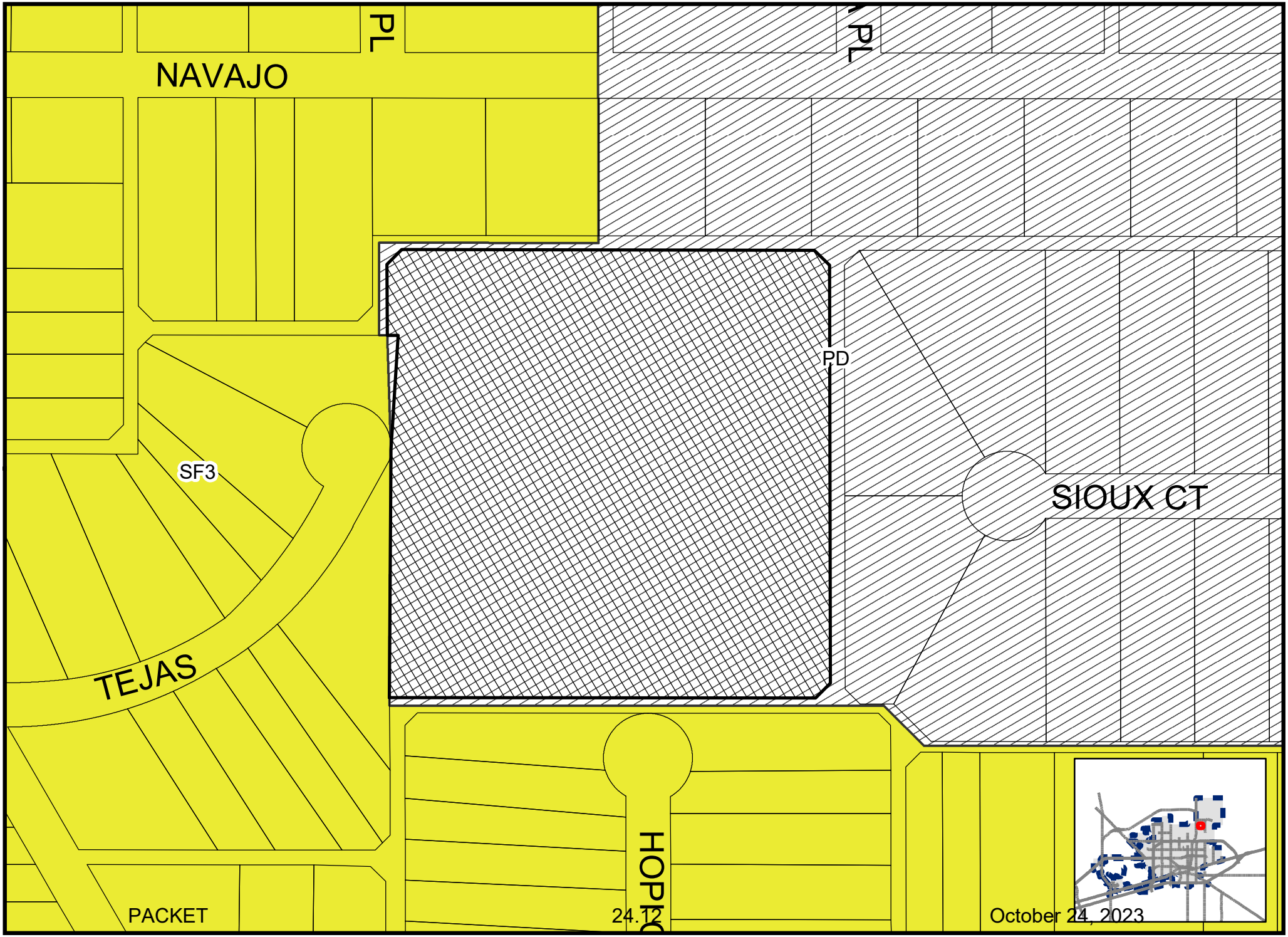
THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY AND NOR IS IT DESIGNED TO BE USED AS THE PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN.
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.



Map By LO, 9/5/2023

Z-23-0341

Scale: 1" = 1,940'

ZONING MAP

© THE CITY OF MIDLAND - 2021: THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT, NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN. THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.

FEUER JOSHUA CRAIG
1413 TEJAS
MIDLAND TX 79705

MIDLAND
Planning Division

PUBLIC NOTICE

The **Planning and Zoning Commission** of the City of Midland, Texas will hold a public hearing at **3:30 p.m.** on **Tuesday, September 5, 2023**, in the Council Chambers, City Hall, 300 N. Loraine, Midland, Texas 79701 and via videoconference, on a request by **Schumann Engineering** for approval of a **Zone Change** on the following described property:

LEGAL DESCRIPTION: Lot 55, Block 8, 349 Ranch Estates, City and County of Midland, Texas.

LOCATION: Generally located east of Tejas approximately 175-feet east of Sioux Court. (Council Court 1)

PROPOSED ZONING: **From:** PD, Planned District for Housing Development

To: SF-1, Single-Family Dwelling District

Not to be considered a part of the Public Notice: 1) See reverse side for location map; 2) In order to be considered as an official objection to this request a response **must be submitted by mail or delivered *in writing*** to the Planning Division at the address listed above. An official objection may be filed by completing this notice and returning it to the address listed above.

I object to this request ✓ **Comments:**
Don't want this to lower my property value. Dont want to lose cul-de-sac on Tejas, not interested in a thru street.

Required Information:

Craig Feuer — Craig Feuer (Printed Name) — 1413 Tejas (Property Address (**No P. O. Boxes**))

Property Owner's Signature

If any further information is desired, please contact the Planning Division, at 685-7400.
Si ud. desea más información en Español sobre esta cuestión, llame al : 685-7400.

Notices Mailed: 30
Date Mailed: August 26, 2023
Case Number: Z-23-0341
Case Name: 349 Ranch Estates
LO Planner's Initials

Lauren Ortoa for
Jeffrey Fisher, AICP
Planning Division Manager
Department of Development Services

The meeting facility is accessible to disabled persons. A wheelchair entry ramp is located at the southeast entrance to City Hall. A parking space designated for use by disabled persons is available near the southeast entrance doors. Any disabled person needing special accommodations or hearing impaired persons wishing to have an interpreter should request services through the Administrative Services Department at least 48 hours prior to the scheduled meeting by contacting Compliance Coordinator for the City of Midland at (432) 685-7251. If communication via TDD is required, please call 1-800-735-2989. Videoconference information will be available by accessing the meeting agenda at https://www.midlandtexas.gov/967/primegov-meeting

pr

ORDINANCE NO. 6128

AN ORDINANCE AMENDING CHAPTER ONE, TITLE XI, OF THE CITY CODE OF MIDLAND, TEXAS, BY PERMITTING THE PROPERTY DESCRIBED IN SECTION ONE HEREOF, WHICH IS PRESENTLY ZONED "AE", AGRICULTURE-ESTATE DISTRICT, TO BE USED AS A "PLANNED DISTRICT" FOR A HOUSING DEVELOPMENT; PROVIDING FOR SUCH USE TO BE SUBJECT TO CERTAIN SPECIAL CONDITIONS AND RESTRICTIONS AS SET OUT HEREIN; PROVIDING THAT THE PROPERTY SHALL BE IMPROVED ACCORDING TO THE ORDINANCES AND OTHER SPECIFICATIONS SET OUT AND REFERRED TO HEREIN; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; AND ORDERING PUBLICATION

WHEREAS, the City Planning and Zoning Commission and the Governing Body of the City of Midland, in compliance with the City Charter and the State law with reference to the creation of "Planned Districts" under the zoning ordinance regulations and zoning map have given the requisite notices by United States mail, publication and otherwise; and after a full and fair hearing to all of the property owners generally and particularly to those interested persons situated in the affected area and in the vicinity thereof, the Governing Body finds that the public health, safety and general welfare will be best served by the creation of the "Planned District" set out hereinafter and subject to the conditions and restrictions set out hereinafter;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That Chapter 1, Title XI, of the City Code of Midland, Texas, and the official zoning map of the City of Midland, Texas, are hereby amended insofar as the hereinafter described property is concerned, which is presently zoned "AE", Agriculture-Estate District, and it shall be used as a "Planned District" for a Housing Development, subject to the special conditions and restrictions hereinafter set out.

Said property is described as follows:

All of Blocks 10 and 11; Lots 1 through 7, Block 12; Lots 36 through 55, Block 8; Lots 1 through 12, Block 13; and Lots 10 through 18, Block 7; all in 349 Ranch Estates Addition to the City of Midland, Midland County, Texas.

SECTION TWO. That the property described in Section One hereof shall be subject to the following special conditions and restrictions:

1. That the use and development of the property shall conform to all regulations applicable to an "AE", Agriculture-Estate District, except that mobile homes as fixed dwellings shall be permitted on the same basis as allowed in an "MH", Mobile Home District.

2. That the use and development of the property with respect to the keeping of animals and fowl shall conform to all regulations applicable within an "AE", Agriculture-Estate District.

SECTION THREE. That definitions given in the zoning regulations contained in the City Code of the City of Midland, Texas, shall be applicable to such of those terms as are used herein.

SECTION FOUR. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FIVE. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION SIX. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance, together with the general penalty provision contained in Section 1-3-1 of the City Code of Midland, Texas, in the manner and for the length of time prescribed by law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the 30th day of November, A.D., 1982; and passed to second reading on motion of Councilman Sloan, seconded by Councilman Hatfield, by the following vote:

Councilmen voting "AYE": Sloan, Hatfield, Marcum, Davidson and Thomas

Councilmen voting "NAY": None

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Councilman Sloan, seconded by Councilman Marcum, on the 14th day of December, A.D., 1982, at a regular meeting of the City Council:

Councilmen voting "AYE": Sloan, Marcum, Hatfield, and Davidson

Councilmen voting "NAY": Thomas
Councilmen ABSTAINING: Akins
PASSED AND APPROVED THIS 14th day of December, A.D., 1982.

G. Thane Akins, Mayor

ATTEST:

J. W. McCullough, City Secretary

APPROVED AS TO FORM:

J. M. Nuessle, City Attorney

City Council Meeting

Item Number: **25**

Meeting Date: **October 24, 2023 (October 10, 2023)**

To: **City Council / City Manager**

From: **Daniel Humbert, Planner**

Subject: AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOTS 2 AND 3, LLANO ESTACADO ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM CE, COUNTRY ESTATE DISTRICT TO RR, REGIONAL RETAIL DISTRICT (GENERALLY LOCATED ON THE NORTH SIDE OF BRIARWOOD AVENUE, APPROXIMATELY 340 FEET WEST OF AVALON DRIVE); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION **(DISTRICT 3) (DEVELOPMENT SERVICES)**

Purpose:

The applicant, Streamline Development Partners, is requesting a Zone Change from CE, Country Estate District, to RR, Regional Retail District for future commercial development.

Recommended City Council Action:

Approve

Fiscal Impact:

No City funds would be required for this project.

Discussion:

Current Zoning:

CE, Country Estate District.

Surrounding Zoning and Land Use:

The properties to the north, south and west are zoned CE, Country Estate District. The property to the west is zoned PD, Planned Development District, and the location of a non-residential building.

Analysis:

The applicant plans to build a retail store on the property and requires the zone change to RR, Regional Retail.

This proposed zone change has been circulated to the respective City departments for internal review and their comments, conditions, and requirements are as follows:

Fire: (Approved)

No objection.

Building: (Approved)

No Oil & Gas well concerns. Informational: No Oil or Gas wells identified within 500 ft. permitted well radius or in the 135 ft. non-permitted well radius of location on plat. Please note if oil & gas wells are not identified or left off plat, this could prevent receiving city permits for structures. Any plugged and abandoned (P&A) well would need to be identified. No structure shall be built over an abandoned well.

Engineering: (Approved)

No objections to zone change. [For Applicant's Information Only.]

Code: (Approved)

No objection.

Transportation: (Approved)

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations. [For the Applicant's information only.] No objection to zone change. [For the Applicant's information only.]

Planning:

The adjacent property per PD Ordinance (8347), Tract 1 (6400 Briarwood) is zoned PD for a Shopping Center with an underlying zoning of LR-2 (Now RR, Regional Retail). This is the same zoning district as the applicant's intended zoning. Therefore, the applicant may apply for a zone change on the subject property to RR consistent with the adjacent property.

Therefore, staff recommends approval of this zone change from CE, County Estate District to RR, Regional Retail District, subject to condition A.

Conditions:

A. **That the use and development of this property shall conform to the regulations of the RR, Regional Retail District.**

Letters of Objection:

As of September 28, 2023, Staff has received one letter of objection for this request.

Attachments:

Survey
Site Plan
Application
Maps
Objection Letter

Morris William Jr.

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOTS 2 AND 3, LLANO ESTACADO ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM CE, COUNTRY ESTATE DISTRICT TO RR, REGIONAL RETAIL DISTRICT (GENERALLY LOCATED ON THE NORTH SIDE OF BRIARWOOD AVENUE, APPROXIMATELY 340 FEET WEST OF AVALON DRIVE); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

WHEREAS, the City Planning and Zoning Commission and the Governing Body of the City of Midland, in compliance with the City Charter, the City Code, and State law, have given the requisite notices by United States mail, publication and otherwise; and after a full and fair hearing to all of the property owners generally and particularly to those interested persons situated in the affected area and in the vicinity thereof, the Governing Body finds that the public health, safety and general welfare will be best served by rezoning Lots 2 and 3, Llano Estacado Addition, City and County of Midland, Texas (the "Property"), to RR, Regional Retail District, as set out hereinafter;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the Zoning District Map of the City of Midland, Texas, is hereby amended to rezone the Property from CE, Country Estate District to RR, Regional Retail District.

SECTION TWO. That the definitions given in the zoning regulations contained in the City Code of the City of Midland, Texas, shall be applicable to such of those terms as are used herein.

SECTION THREE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances

inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FOUR. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SIX. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2023; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2023, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2023.

_____
Lori Merritt Blong, Mayor

ATTEST:

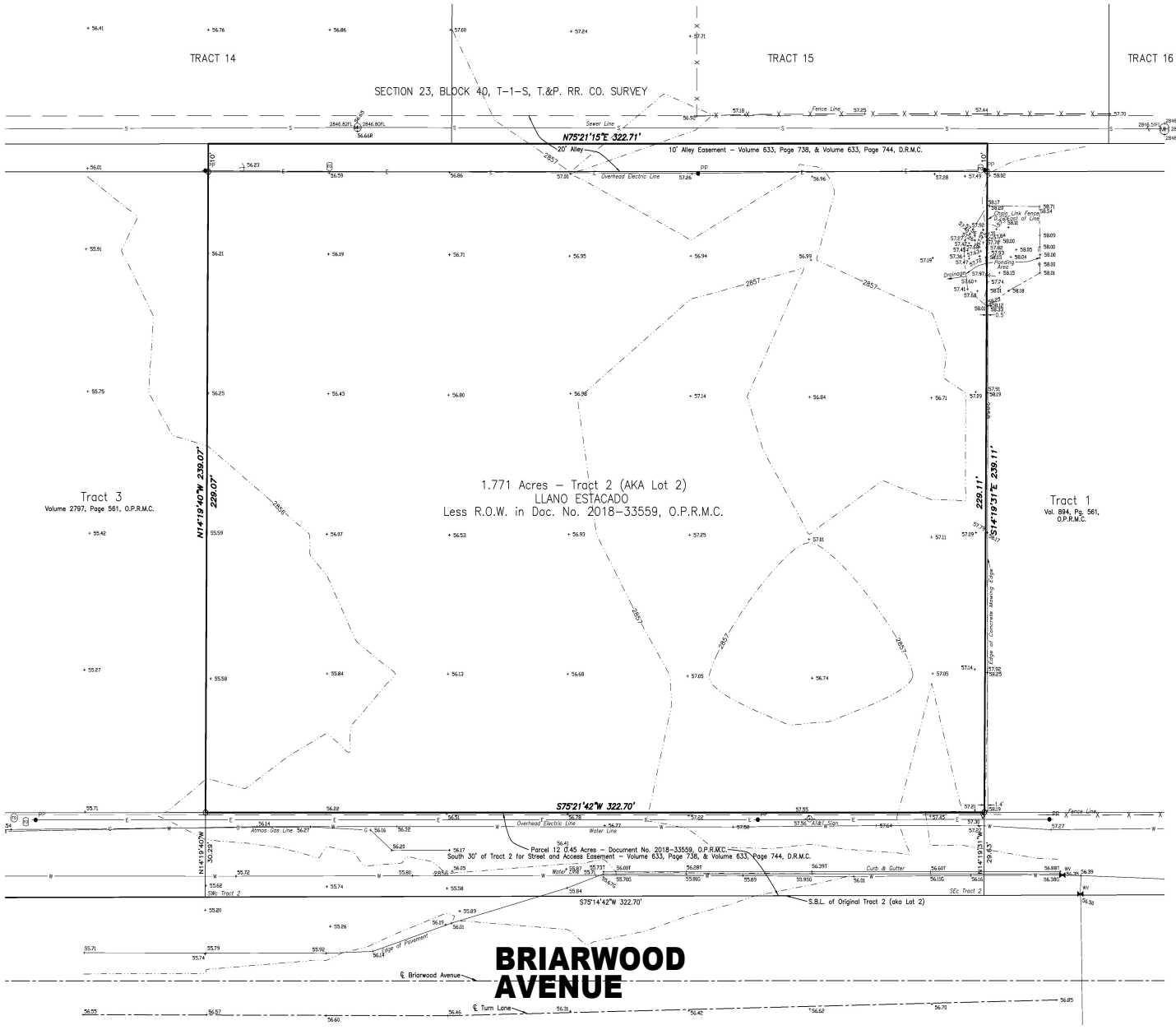
_____
Marcia Bentley-German, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Rolandrea Russell, Interim Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney



ALTA/NSPS LAND TITLE SURVEY

1.771 Acres Being Tract 2, Llano Estacado, First Part According to the plat thereof recorded in Volume 633, Page 743, D.R.M.C. being more particularly described by metes and bounds in Document No. 2007-767, Volume 2797, Page 564, Official Public Records of Midland County, Texas Less Right-of-Way in Document No. 2018-33559, O.P.R.M.C.

GENERAL NOTES

1) Based on the U.S. Department of Housing and Urban Development, Federal Insurance Administration Flood Hazard Boundary Map, Community Number 481239, Sheet Number 48329C0068 F, revised September 16, 2005, the surveyed property is not located in a special flood hazard area according to the map. The flood zone classification for the surveyed property is Zone X.

2) Subject property consist of 73,156 square feet or 1.771 acres of land.

3) The subject property has direct access to Briarwood Avenue, a dedicated public street.

4) Except as shown, all visible utilities serving the subject property enter through adjoining public street and/or easements of record.

5) There is no visible evidence of recent earth moving work, building construction, or building additions that was observed on the subject property in the process of conduction the field work.

6) There are no proposed changes in street right-of-way lines and no visible evidence of recent street or sidewalk construction or repairs that was observed on the subject property in the process of conduction the field work.

7) Bearings, distances, and coordinates are relative to the Texas State Plane Coordinate System, NAD 1983/86, Central Zone, with a combine grid factor of 0.999903130, and a theta angle equal to -0°56'58.283" at station "E89-3650" with published values of Y= 10,703,915.21 and X= 1,725,200.73 in U.S. Survey Feet.

8) A 811 Call was submitted on June 8, 2023, ticket number #2365903389 and June 13, 2023, ticket number 2366457238, with the following utilities responding to ticket: AT&T, Atmos Energy, City of Midland Water & Sewer and United Private Networks, LLC.

EXCEPTIONS LISTED IN SCHEDULE B OF TITLE COMMITMENT NO. 2318913-CAL ISSUED BY FIRST AMERICAN TITLE GUARANTY COMPANY ON MAY 24, 2023 WITH AN EFFECTIVE DATE OF MAY 12, 2023

1) The Restrictive Covenants as recorded in Volume 633, Page 744, Deed Records of Midland County, Texas does affect subject property as shown. (Item 1 in said Title Commitment.)

2) The Easements, restrictions, reservations, covenants, zoning ordinances, set back lines, and/or dedication of roads, if any, as shown on the plat of Llano Estacado, as recorded in Unrecorded Plat, Texas does affect subject property as shown. (Item 10g in said Title Commitment.)

3) The Right of Way Easement recorded in Volume 2797, Page 564, Official Public Records of Midland County, Texas does not affect subject property. (Item 10i in said Title Commitment.)

4) The Easements, restrictions, reservations, covenants, zoning ordinances, set back lines, and/or dedication of roads, if any, as shown on the plat of Llano Estacado, as recorded in Volume 633, Page 738, Deed Records of Midland County, Texas and/or restrictions as recorded in Volume 633, Page 744, Deed Records of Midland County, Texas does affect subject property as shown. (Item 10j in said Title Commitment.)

SURVEYOR'S CERTIFICATE

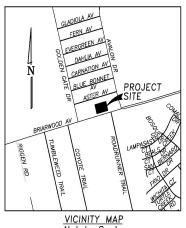
To: Maria Dolores Ruda; Origin Bank; DG Holdings, LLC, a Mississippi limited liability company doing business in Texas as DG Holdings of Texas, LLC; First American Title Guaranty Company:

This is to certify that this map or plat and survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 5, 6, 7a, 8, 9, 10, 11b, 13, 16, 17, 18 and 19 of Table A thereof. The field work was completed on June 16, 2023.

"PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT."

LEGEND

- ○ = Set 1/2" Iron Rod with Plastic Cap marked "PLS 1974"
- PP = Power Pole
- (MH) = Sewer Manhole
- ⊢ = Traffic Sign
- WV = Water Valve
- 48.35+ = Elevation Shot
- 48.35T+ = Elevation Shot on Top of Curb
- 48.35G+ = Elevation Shot on Gutter
- 48.35FL+ = Elevation Shot on Sewer Pipeline
- 48.35R+ = Elevation Shot on Manhole Ring
- (FO) = AT&T Pedestal
- (FO) = AT&T Manhole



VICINITY MAP
Not to Scale

N

GRAPHIC SCALE IN FEET
0 20' 40' 60'
Original Scale: 1"=20'

PIP SURVEYING
604 Llano, Texas 79711
(432)550-0312
Firm No. 10158200

Drawing File: BerryEngALTABriarwoodDT.Dwg
Crd File: Briarwood_Control.Crd
Drawn by: Gene M. Rodriguez
Scale: 1"=20'
Date: 6/21/23

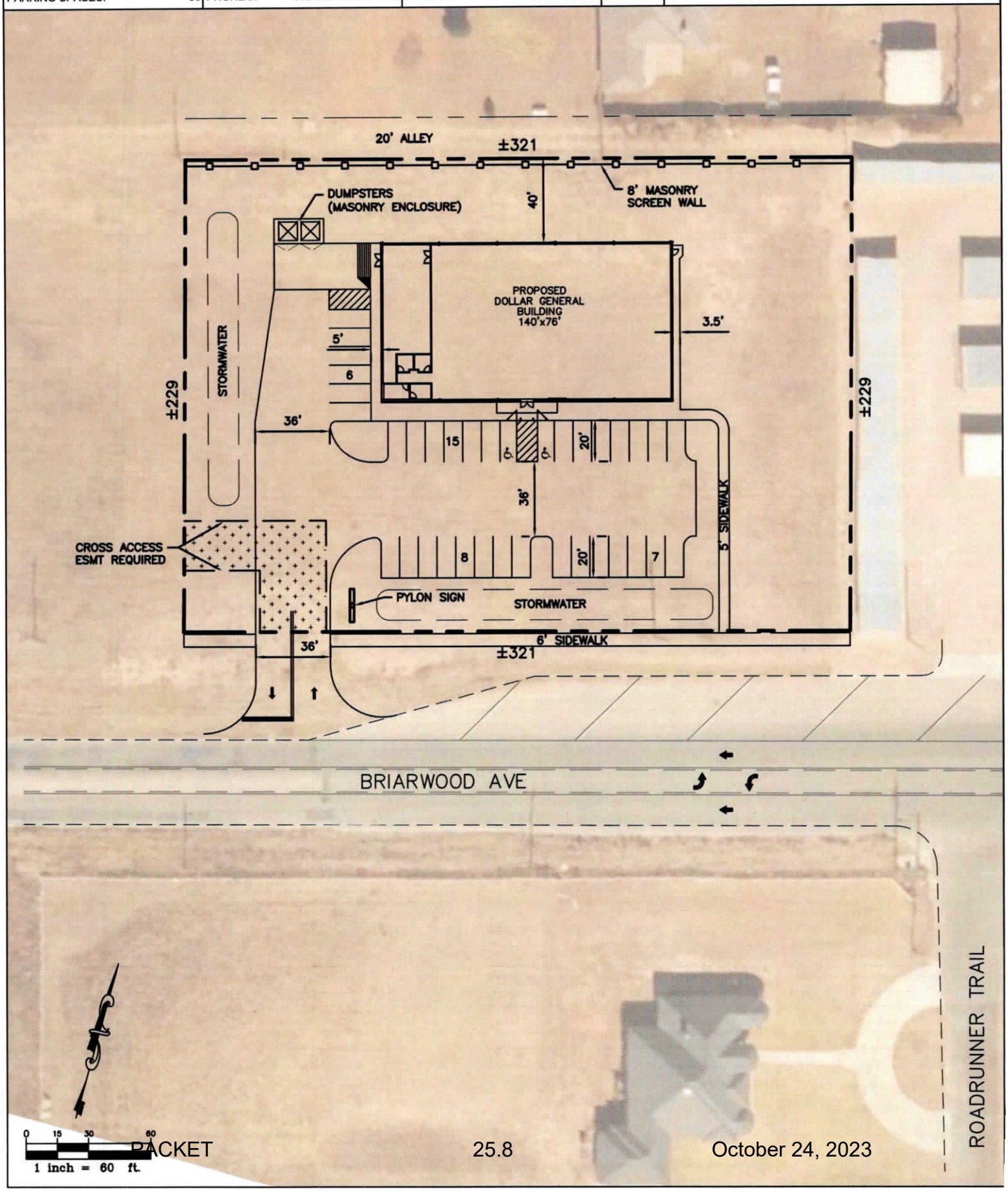
October 24, 2023

Prepared for:
Berry Engineering
63 Broad St. NW
Cleveland, TN 37311

PRELIMINARY SITE PLAN

CITY,STATE - STREET:	MIDLAND, TX BRIARWOOD AVENUE				
PROTOTYPE:	DG 10640 - C	DEVELOPER		DESIGNER	DATE:
BLDG/SALES SF:	10,640 / 8,504	COMPANY:	BLACKBURN CONST.	COMPANY: BERRY ENGINEERS	07/06/2023
ACREAGE:	±1.70	NAME:	DARYL THORNTON	NAME:	
PARKING SPACES:	36	PHONE #:	662-513-4194 EXT 25	PHONE #: 423-790-5880	

DOLLAR GENERAL



Midland GIS

October 24, 2023

25.9

6/9/2023, 6:44:03 PM

Midland County Boundary

Zoning

- <all other values>
- LR, Local Retail District
- RR, Regional Retail District
- CB, Central Business District
- C, Commercial District
- BP, I-20 Business Park District
- AE, Agricultural Estate District
- CE, Country Estate District
- SF1, Single-Family Dwelling District
- SF2, Single-Family Dwelling District
- SF3, Single-Family Dwelling District
- MH, Manufactured Housing District
- 2F, Two-Family Dwelling District
- TH, Townhouse (Attached) Dwelling District
- MF16, Multiple-Family Dwelling District
- MF22, Multiple-Family Dwelling District
- HI, Heavy Industrial District
- LI, Light Industrial District
- O1, Office District
- O2, Office District
- TP, Technology Park District
- PD, Planned Development District
- AOZ 4

City Limit

Parcel

Street Centerline

- Arterial; Collector
- County Road; Frontage; Park; Residential
- Interstate; State Highway; State Loop
- Lease Road; Misc

1:2,257

0 0.02 0.04 0.09 mi

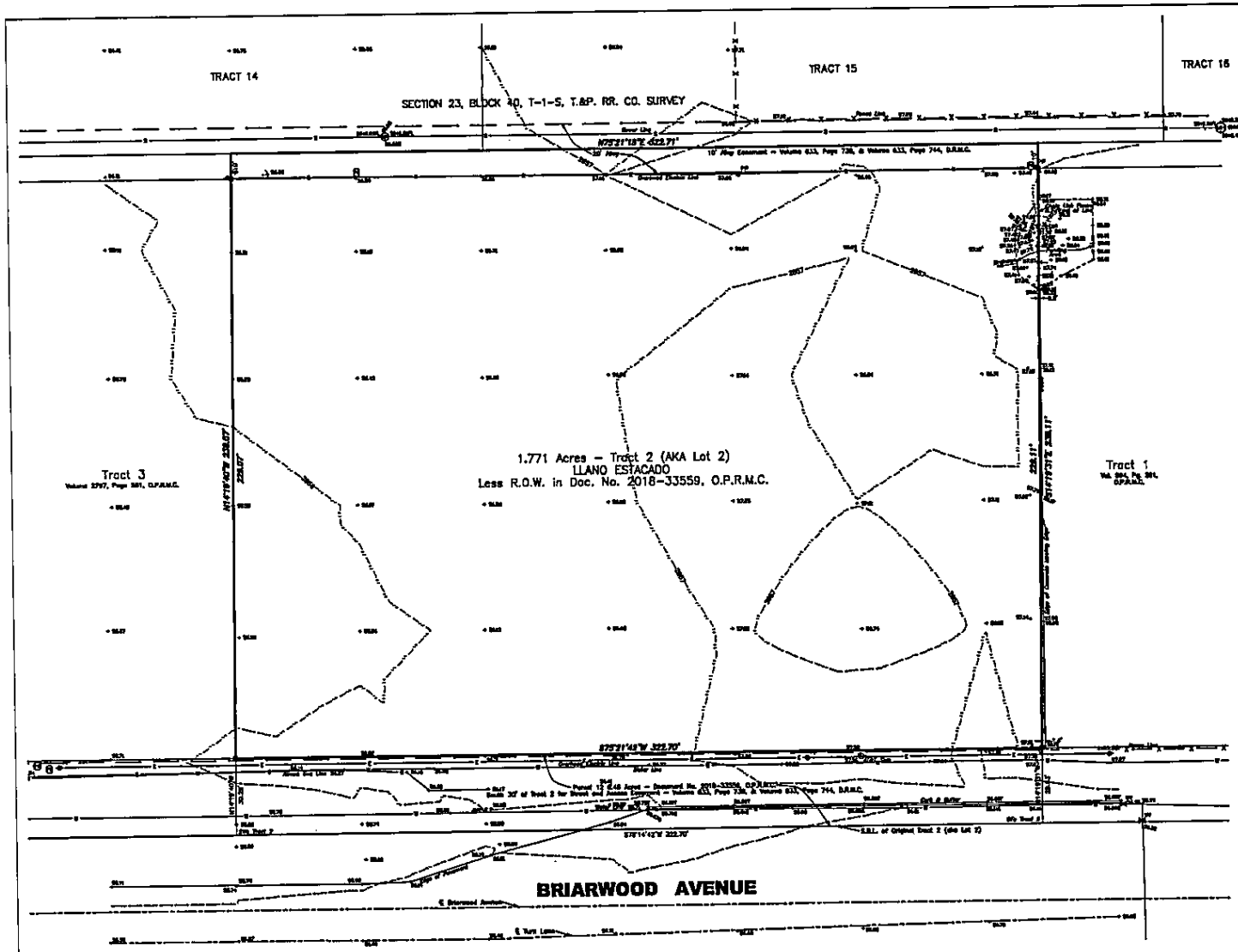
0 0.04 0.07 0.14 km

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

ArcGIS Web AppBuilder

The City of Midland shall not be responsible for any decisions based upon the use of this data. While this data is made available to the public, it was created for internal use by the City of Midland which makes no claim as to its accuracy or completeness. This data is not designed to be used as a primary tool in permitting.

PACKET



ALTA/NSPS LAND TITLE SURVEY

1.771 Acres Being Tract 2, Llano Estacado, First Part According to the plat thereof recorded in Volume 633, Page 743, D.R.M.C. being more particularly described by metes and bounds in Document No. 2007-767, Volume 3797, Page 564, Official Public Records of Midland County, Texas Less Right-of-Way in Document No. 2018-33559, O.P.R.M.C.

October 24, 2023

GENERAL NOTES

1) Based on the U.S. Department of Housing and Urban Development, Federal Insurance Administration Flood Hazard Boundary Map, Community Number 481139, Panel Number 48329C0065 F, revised September 18, 2015, the surveyed property is not located in a special flood hazard area according to the map. The flood zone classification for the surveyed property is Zone X.

2) Subject property consist of 73,156 square feet or 1.771 acres of land.

3) The subject property has direct access to Briarwood Avenue, a dedicated public street.

4) Except as shown, all visible utilities serving the subject property enter through adjoining public street and/or easements of record.

5) There is no visible evidence of recent earth moving work, building construction, or building additions that was observed on the subject property in the process of conduction the field work.

6) There are no proposed changes in street right-of-way lines and no visible evidence of recent street or sidewalk construction or repairs that was observed on the subject property in the process of conduction the field work.

7) Bearings, distances, and coordinates are relative to the Texas State Plane Coordinate System, NAD 1983/86, Central Zone, with a combine grid factor of 0.9998031130, and a theta angle equal to -0°56'56.383" at station "2380-3650" with published values of Y= 10,703,815.23 and X= 1,723,920.72 in U.S. Survey Feet.

8) A 811 Call was submitted on June 8, 2023, ticket number #230800388 and June 13, 2023, ticket number 230843733B, with the following utilities responding to ticket: AT&T, Atmos Energy, City of Midland Water & Sewer and United Private Networks, LLC.

EXCEPTIONS LISTED IN SCHEDULE B OF TITLE COMMITMENT NO. 2318913-CM, ISSUED BY FIRST AMERICAN TITLE GUARANTY COMPANY ON MAY 24, 2023 WITH AN EFFECTIVE DATE OF MAY 22, 2023

1) The Restrictive Covenants as recorded in Volume 633, Page 744, Deed Records of Midland County, Texas does affect subject property as shown. (Item 1 in said Title Commitment.)

2) The Easements, restrictions, reservations, covenants, zoning ordinances, set back lines, and/or dedication of roads, if any, as shown on the plat of Llano Estacado, as recorded in Unrecorded Plat, Town does affect subject property as shown. (Item 10g in said Title Commitment.)

3) The Right of Way Deed recorded in Volume 3797, Page 564, Official Public Records of Midland County, Texas does not affect subject property. (Item 10l in said Title Commitment.)

4) The Easements, restrictions, reservations, covenants, zoning ordinances, set back lines, and/or dedication of roads, if any, as shown on the plat of Llano Estacado, as recorded in Volume 633, Page 738, Deed Records of Midland County, Texas and/or restrictions as recorded in Volume 633, Page 744, Deed Records of Midland County, Texas does affect subject property as shown. (Item 10j in said Title Commitment.)

SURVEYOR'S CERTIFICATE

To: Maria Dolores Ruiz; Origin Bank; DG Holdings, LLC, a Mississippi limited liability company doing business in Texas as DG Holdings of Texas, LLC; First American Title Guaranty Company:

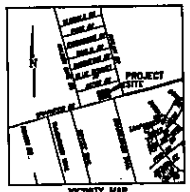
This is to certify that this map or plat and survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 6, 6a, 6b, 7a, 7b, 8, 9, 10, 11a, 13, 14, 17, 18 and 19 of Table A thereof. The field work was completed on June 16, 2023.

"PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT."

J. Stan Piper
Registered Professional Land Surveyor #1874
Date: June 20, 2023

LEGEND

- ○ = Set 1/2" Iron Rod with Plastic Cap marked "PLS 1874"
- PP = Power Pole
- S = Sewer Manhole
- TS = Traffic Sign
- WV = Water Valve
- 48.35+ = Elevation Shot
- 48.35T+ = Elevation Shot on Top of Curb
- 48.35G+ = Elevation Shot on Gutter
- 48.35FL+ = Elevation Shot on Sewer Flowline
- 48.35M+ = Elevation Shot on Manhole Ring
- ATT = AT&T Pedestal
- ATT = AT&T Manhole



VICINITY MAP
Not to Scale

N

GRAPHIC SCALE IN FEET
0 20' 40' 80'
Original Scale: 1"=20'

Drawing File: BarryDrg\ALTABriarwood01.Dwg
Civil Title Briarwood_Control.Civil
Drawn by: Gene M. Rodriguez
Scale: 1"=20'
Date: 6/21/23

PIPER SURVEYING
P.O. Box 54240, Terminal, Texas 79721
(Telephone, Text, Fax (432)580-4249
Firm No. 10116500

Prepared for:
Barry Engineering
53 Broad St. NW
Cleveland, TN 37311

PACKET 25

DH

MIDLAND Planning Division

Zone Change/Planned District Amendment/Site Plan Approval

Project Number: _____

Case Number: _____

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name:		Phone (423) 790-5880 Email	
Address	City	State	Zip

Property Owner Printed Name: Maria Dolores Ruda		Phone (432) 934-9381 Email mdruda@hotmail.com	
Address 3303 Camarie Ave	City Midland	State TX	Zip 79707

Representative *(if different from Applicant or Property Owner)* Firm: Streamline Development Partners Printed Name: Ben Barrier		Phone (615) 973-9220 Email btb@sldpllc.com	
Address 825 Sisk Ave, Suite 200	City Oxford	State MS	Zip 38655

Street Address: 6412 & 6500 Briarwood Ave

Legal Description
Lot: 2 & 3 Block: n/a Subdivision: Llano Estacado

Current Zoning: CE

Proposed Zone: RR
(List by tracts if more than one district is requested)

Reason for Zone Change Request: Proposed Dollar General Retail Store Development

Present Use of Property: Vacant

Proposed Use of Property: Retail

How would this zone change affect the public health, safety and welfare? No

Describe how conditions affecting the property have changed since present zoning designation: Vacant parcels along Briarwood between Golden Gate Dr and Avalon Dr are expected to be commercial. Adjacent parcel to the east (6400 Briarwood) has been developed as storage units.

Submittal and Fees
Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan
- Digital Copies of Site Plan (PDF/JPEG)

Signature *(by property owner only – authorized agent must sign affidavit below)*	
Applicant (signature):	Date: 8/04/2023
Applicant (printed): BEN BARRIER	
Property Owner (signature): Maria D. Ruda.	Date: 7/26/2023
Property Owner (printed) : Maria Dolores Ruda	

The Zone Change/Planned District Amendment/Site Plan Approval shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appear BEN BARRIER who, being by me duly sworn, upon oath says: That (s)he is the owner of 6412 & 6500 Briarwood Ave. or authorized by MARIA DOLORES RUDA, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

Authorized Agent (*signature*)

Subscribed and sworn to before me, this 4th day of August, 2022, to certify which witness my hand and seal of office.

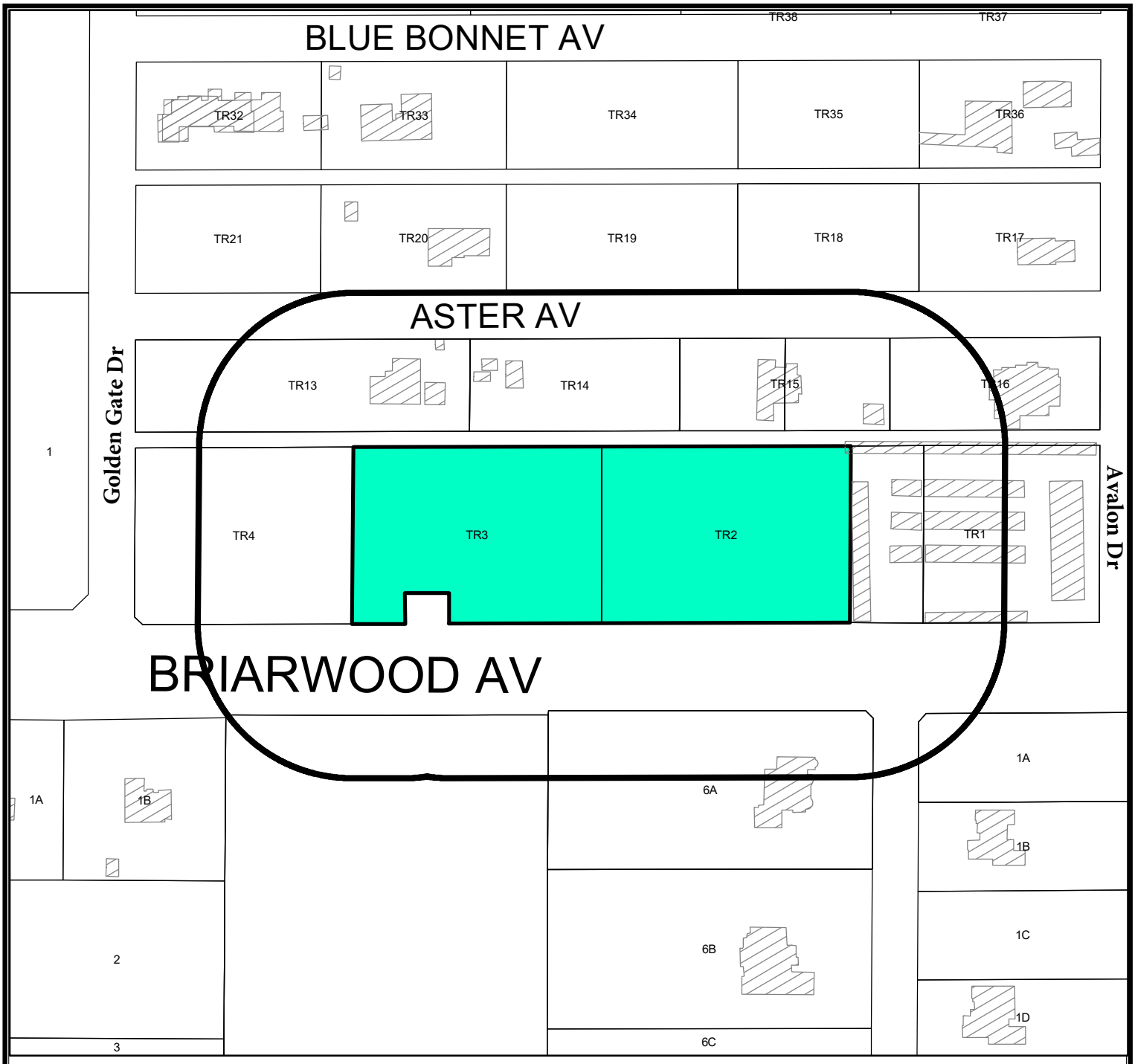
ALEXIS MARIE MARTINEZ
Notary Public, State of Texas
Comm. Expires 07-12-2027
Notary ID 134449907

NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY

☑ Property Owner Authorization	☑ Dimensioned Site Plan
☑ Application Fee	☑ Plans in Digital Format (PDF/JPEG)
Check # 2272	
Received By:	Date:

****Application will not be considered for scheduling until reviewed by a planner.****



LOCATION MAP

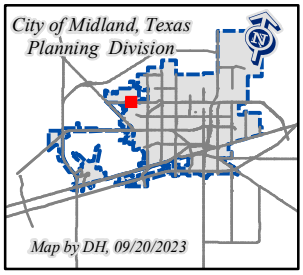
Z-23-0340 **Scale: 1" = 2,200'**

A request by Streamline Development Partners for a Zone Change from CE, Country Estate District to RR, Regional Retail District on Tracts 2 and 3, Llano Estacado Addition, City and County of Midland, Texas.

Generally located north of Briarwood Avenue approximately 340-feet west of Avalon Drive (Council District 4)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



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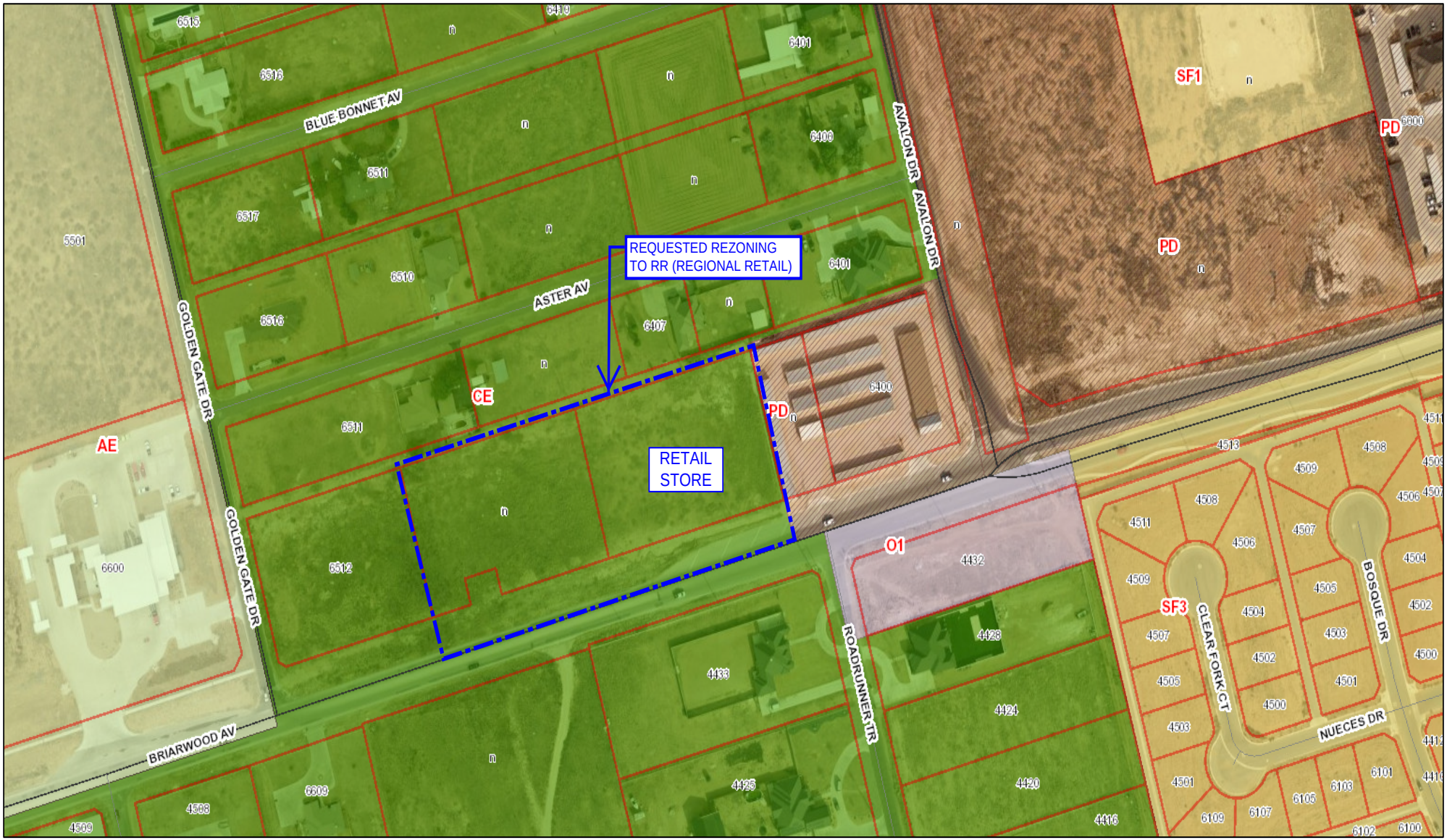
THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY AND IS NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN.
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.

Midland GIS



6/9/2023, 6:44:03 PM

1:2,257

0 0.02 0.04 0.09 mi

0 0.04 0.07 0.14 km

Midland County Boundary

Zoning

<all other values>

LR, Local Retail District

RR, Regional Retail District

CB, Central Business District

C, Commercial District

BP, I-20 Business Park District

AE, Agricultural Estate District

CE, Country Estate District

SF1, Single-Family Dwelling District

SF2, Single-Family Dwelling District

SF3, Single-Family Dwelling District

MH, Manufactured Housing District

2F, Two-Family Dwelling District

TH, Townhouse (Attached) Dwelling District

MF16, Multiple-Family Dwelling District

MF22, Multiple-Family Dwelling District

HI, Heavy Industrial District

LI, Light Industrial District

O1, Office District

O2, Office District

TP, Technology Park District

PD, Planned Development District

AOZ 4

City Limit

Parcel

Street Centerline

Arterial; Collector

County Road; Frontage; Park; Residential

Interstate; State Highway; State Loop

Lease Road; Misc

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

ArcGIS Web AppBuilder

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VELASQUEZ BEJAR ROSSMERY
6407 ASTER AV
MIDLAND TX 79707

MIDLAND
Planning Division

PUBLIC NOTICE

The **Planning and Zoning Commission** of the City of Midland, Texas will hold a public hearing at **3:30 p.m.** on **Tuesday, September 5, 2023**, in the Council Chambers, City Hall, 300 N. Loraine, Midland, Texas 79701 and via videoconference, on a request by **Streamline Development Partners** for approval of a **Zone Change** on the following described property:

LEGAL DESCRIPTION: A 3.402-acre tract of land, in Lots 2 and 3, Llano Estacado Addition, City and County of Midland, Texas.

LOCATION: Generally located north of Briarwood Avenue approximately 340 feet west of Avalon Drive. (Council District 4)

PROPOSED ZONING: **From:** CE, Country Estate District

To: RR, Regional Retail District

Not to be considered a part of the Public Notice: 1) See reverse side for location map; 2) In order to be considered as an official objection to this request a response **must be submitted by mail or delivered *in writing*** to the Planning Division at the address listed above. An official objection may be filed by completing this notice and returning it to the address listed above.

I object to this request X **Comments:**
DG is going to deteriorate our peacefull and quiet ranch life style, our Kids won't be safe playing in the backyard because will be many people moving/circulating right behind my fence. Investigations *
Required Information:

Property Owner's Signature	Printed Name	Property Address (**No P. O. Boxes**)
[signature]	ROSSMERY VELASQUEZ	6407 Aster Ave.

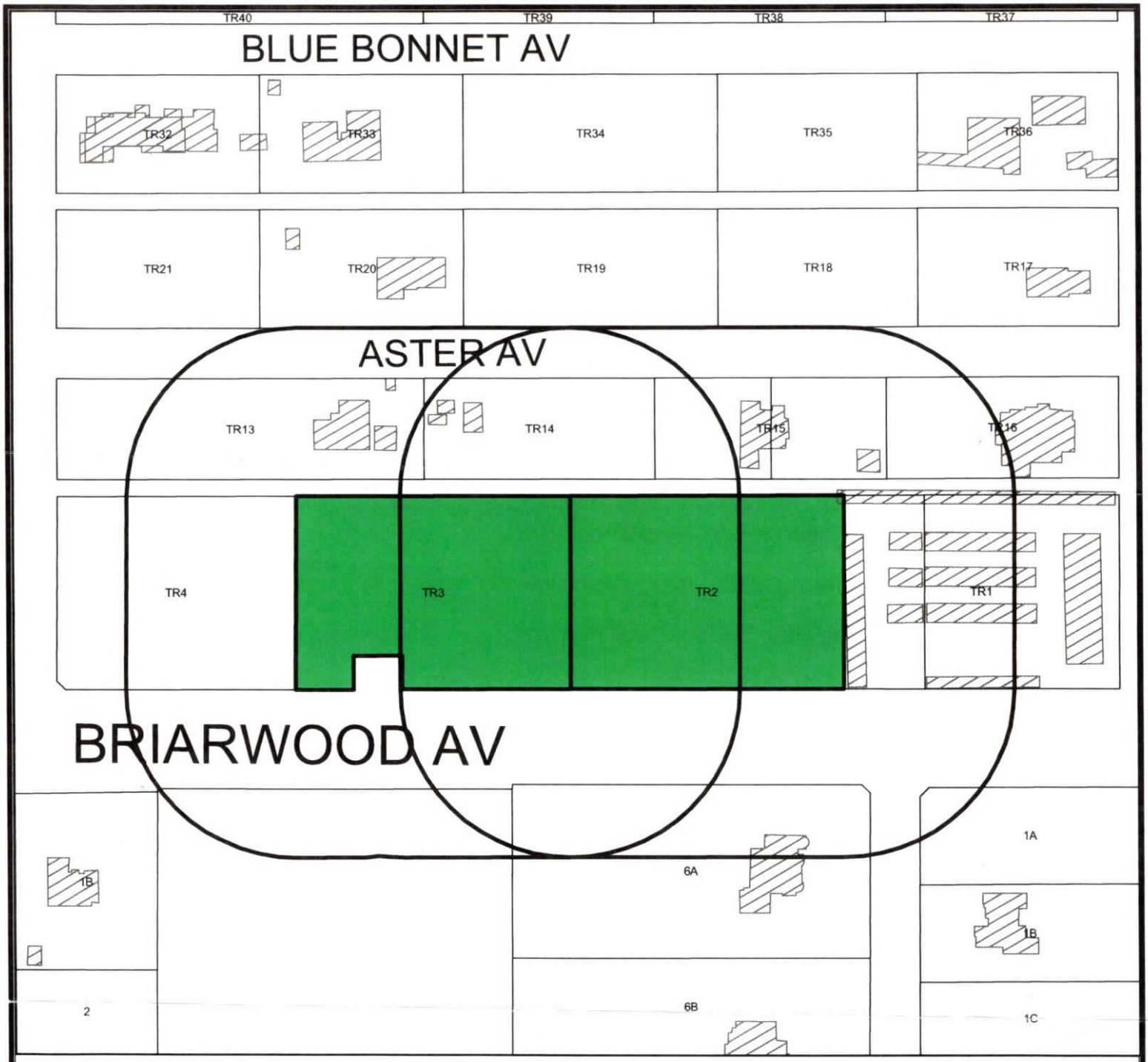
If any further information is desired, please contact the Planning Division, at 685-7400.
Si ud. desea más información en Español sobre esta cuestión, llame al : 685-7400.

Notices Mailed: 13
Date Mailed: August 26, 2023
Case Number: Z-23-0340
Case Name: Ruda Dollar General
DH Planner's Initials

Jeffrey Fisher, AICP
Planning Division Manager
Department of Development Services

The meeting facility is accessible to disabled persons. A wheelchair entry ramp is located at the southeast entrance to City Hall. A parking space designated for use by disabled persons is available near the southeast entrance doors. Any disabled person needing special accommodations or hearing impaired persons wishing to have an interpreter should request services through the Administrative Services Department at least 48 hours prior to the scheduled meeting by contacting Compliance Coordinator for the City of Midland at (432) 685-7251. If communication via TDD is required, please call 1-800-735-2989. Videoconference information will be available by accessing the meeting agenda at https://www.midlandtexas.gov/967/primegov-meeting

* Investigations, document the long history of these DG stores creating a host of problems for a neighborhood, from local shops going out of business to health code violations to higher rates of crime.



LOCATION MAP

SUB-23-0611 **Scale: 1" = 200'**

A request by Streamline Development Partners for a zone change from CE, Country Estate District to RR, Regional Retail District out of a 3.402-acre tract of land, in Lots 2 and 3, Llano Estacado Addition, City and County of Midland, Texas.

Generally located north of Briarwood Avenue approximately 340 feet from Avalon Drive. (Council District 4)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS

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THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT, NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OF THE PROPERTY BASED SOLELY ON THE INFORMATION CONTAINED HEREIN.

THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.

City Council Meeting

Item Number: 26

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Cristina Odenborg Burns, Director of Community Services

Subject: AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS, PURSUANT TO CHAPTER 311 OF THE TEXAS TAX CODE, CREATING TAX INCREMENT FINANCING REINVESTMENT ZONE NUMBER TWO, CITY OF MIDLAND, TEXAS (DISTRICT: 2 & 3) (COMMUNITY SERVICES)

Purpose:

Ordinance of the City Council of the City of Midland, Texas, pursuant to Chapter 311 of the Texas Tax Code, creating Tax Increment Financing Reinvestment Zone Two, City of Midland, Texas.

Recommended City Council Action:

Approve

Fiscal Impact:

All incremental tax value above the 2023 base value will go into the TIRZ fund to support development projects.

Discussion:

Tax increment financing originated as a tool for governments to publicly finance needed improvements and enhance infrastructure within a defined area in order to stimulate private development and redevelopment. An ad valorem valuation base is established the year in which the TIRZ is created, and the revenue from the increased valuation from subsequent years is allocated into a tax increment reinvestment zone (TIRZ) fund to support development projects. The City of Midland previously established TIRZ #1 on March 20, 2001, which included approximately 449 acres in central Midland (the downtown area).

With the renewed interest in downtown development that has been catalyzed by Centennial Park, establishing TIRZ #2 will benefit the community by fostering economic growth, revitalizing infrastructure, and enhancing the overall quality of life for residents and businesses.

This creation ordinance establishes five key elements of the TIRZ:

- Boundary
- Term
- City Participation Level
- TIRZ Board
- Preliminary Project and Financing Plan

The TIRZ will encompass the downtown area with the boundaries being generally located north of Industrial Avenue, east of C Street, south of Cuthbert Avenue, and west of Lee Street. The proposed boundaries are the same as those of TIRZ #1.

The proposed term of the TIRZ is 30 years, with an expiration on December 31, 2053.

The City will have a 100% participation level, which means all incremental tax revenue above the 2023 base value will go into the TIRZ fund. The City will also have discussions with other taxing entities for potential future participation.

The TIRZ Board will consist of seven individuals, which can be City Council members and/or individuals appointed by City Council. Additionally, each taxing entity that chooses to participate in the TIRZ may appoint two members to the board. The maximum number of directors shall not exceed fifteen (15).

Exhibit C of this ordinance is the preliminary project and financing plan for the TIRZ. Proposed projects to be funded by the TIRZ fund are public utility projects; parking and transit improvements; street and intersection improvements; pedestrian enhancements; open space, park and recreation, and public facilities improvements; and economic development grants. Upon the TIRZ's creation, the Final Project and Financing Plan is approved by the TIRZ Board and then by the City Council by separate ordinance.

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS, PURSUANT TO CHAPTER 311 OF THE TEXAS TAX CODE, CREATING TAX INCREMENT FINANCING REINVESTMENT ZONE NUMBER TWO, CITY OF MIDLAND, TEXAS

WHEREAS, the City of Midland, Texas (the "City"), pursuant to Chapter 311 of the Texas Tax Code, as amended (the "Act"), may designate a geographic area within the City as a tax increment reinvestment zone if the area satisfies the requirements of the Act; and

WHEREAS, the Act provides that the governing body of a municipality by ordinance may designate a contiguous geographic area that is in the corporate limits of the municipality or the extraterritorial jurisdiction (the "ETJ") of the municipality to be a reinvestment zone if the governing body determines that development or redevelopment would not occur solely through private investment in the reasonably foreseeable future; and

WHEREAS, the City Council desires to promote the development of a certain contiguous geographic area in the City, which is more specifically described in ***Exhibits "A"*** and ***"B"*** of this Ordinance (the "Zone"), through the creation of a reinvestment zone as authorized by and in accordance with the Tax Increment Financing Act, codified at Chapter 311 of the Texas Tax Code; and

WHEREAS, pursuant to and as required by the Act, the City has prepared a *Preliminary Reinvestment Zone Project Plan and Financing Plan for Reinvestment Zone Number Two, City of Midland,* attached as ***Exhibit C*** (hereinafter referred to as the "Preliminary Project and Finance Plan") for a proposed tax increment reinvestment zone containing the real property within the Zone; and

WHEREAS, notice of the public hearing on the creation of the proposed zone was published in a newspaper having general circulation in the City on October 13, 2023, which date is before the seventh (7th) day before the public hearing held on October 24, 2023; and

WHEREAS, at the public hearing on October 24, 2023, interested persons were allowed to speak for or against the creation of the Zone, the boundaries of the Zone, and the concept of tax increment financing, and owners of property in the proposed Zone were given a reasonable opportunity to protest the inclusion of their property in the Zone; the public hearing was held in full accordance with Section 311.003(c) of the Act; and

WHEREAS, evidence was received and presented at the public hearing on October 24, 2023, and in favor of the creation of the Zone; and

WHEREAS, after all comments and evidence, both written and oral, were received by the City Council, the public hearing was closed on October 24, 2023; and

WHEREAS, the City has taken all actions required to create the Zone including, but not limited to, all actions required by the home-rule Charter of the City, the Act, the Texas Open Meetings Act (defined herein), and all other laws applicable to the creation of the Zone; and

WHEREAS, the percentage of the property in the proposed zone, excluding property that is public owned, that is used for residential purposes is less than thirty percent; and

WHEREAS, a Preliminary Project and Finance plan has been prepared for the proposed reinvestment zone.

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS, THAT:

SECTION ONE. RECITALS INCORPORATED.

The facts and recitations contained in the preamble of this Ordinance are hereby found and declared to be true and correct.

SECTION TWO. FINDINGS.

That the City Council, after conducting the above-described hearing and having heard the evidence and testimony presented at the hearing, has made the following findings and determined based on the evidence and testimony presented to it:

(a) That the public hearing on the expansion of the reinvestment zone has been properly called, held, and conducted and that notice of such hearing has been published as required by law; and

(b) That the creation of the proposed reinvestment zone with boundaries as described and depicted in ***Exhibits "A"*** and ***"B"*** will result in benefits to the City, its residents and property owners, in general, and to the property, residents, and property owners in the reinvestment zone; and

(c) That the proposed reinvestment zone, as defined in ***Exhibits "A"*** and ***"B"***, meets the criteria for the creation of a reinvestment zone set forth in the Act in that:

1. It is a geographic area located within the City limits of the City; and

2. That the City Council further finds and declares that the proposed zone meets the criteria and requirements of Section 311.005 of the Texas Tax Code because the proposed zone is predominantly open and, because of obsolete platting, deterioration of structures or site improvements, or other factors, substantially impair or arrest the sound growth of the City or county.

(d) That 30 percent or less of the property in the proposed reinvestment zone, excluding property dedicated to public use, is currently used for residential purposes; and

(e) That the total appraised value of all taxable real property in the proposed reinvestment zone according to the most recent appraisal rolls of the City, together with the total appraised value of taxable real property in all other existing reinvestment zones within the City, according to the most recent appraisal rolls of the City, does not exceed 50 percent of the current total appraised value of taxable real property in the City and in the industrial districts created by the City, if any; and

(f) That the improvements in the proposed reinvestment zone will significantly enhance the value of all taxable real property in the proposed reinvestment zone and will be of general benefit to the City or county; and

(g) That the development or redevelopment of the property in the proposed reinvestment zone will not occur solely through private investment in the reasonable foreseeable future.

SECTION THREE. DESIGNATION AND NAME OF THE ZONE.

Pursuant to the authority of, and in accordance with the requirements of the Act, the City Council hereby designates the area described and depicted in Exhibits "A" and "B" hereto as a tax increment reinvestment zone. The name assigned to the zone for identification is Reinvestment Zone Number Two, City of Midland, Texas (hereinafter referred to as the "Zone").

SECTION FOUR. BOARD OF DIRECTORS.

That a board of directors for the Zone ("Board") is hereby created. The Board shall consist of seven (7) members appointed by the City Council. The seven (7) members appointed by the City Council may include the Mayor and the members of the City Council.

The Board shall elect a chairman of the Board. The Board may elect a vice chairman and such other officers as the Board sees fit. Additionally, each taxing unit that levies taxes within the Zone and chooses to contribute all or part of the tax increment produced by the unit into the Tax Increment Fund may appoint two (2) members of the board. The number of directors on the Board of Directors shall be increased by two (2) for each taxing unit that appoints two (2) directors to the board; provided, that the maximum number of directors shall not exceed fifteen (15).

The Board shall make recommendations to the City Council concerning the administration, management, and operation of the Zone. The Board shall prepare and adopt a project plan and a reinvestment zone financing plan for the Zone and submit such plans to the City Council for its approval. The Board shall perform all duties imposed upon it by Chapter 311 of the Texas Tax Code and all other applicable laws.

The Board may establish and provide for the administration of one or more programs for the public purposes of developing and diversifying the economy of the Zone, eliminating unemployment and underemployment in the Zone, and developing or expanding transportation, business, and commercial activity in the Zone, including programs to make grants and loans from the Tax Increment Fund of the Zone in an aggregate amount not to exceed the amount of the tax increment produced by the City and paid into the Tax Increment Fund for the Zone for activities that benefit the Zone and stimulate business and commercial activity in the Zone; provided, however, that any such program shall be subject to final approval of the City Council. For the avoidance of doubt, the Board's establishment and administration of a program authorized by this paragraph, including but not limited to an agreement, amendment of an agreement, or renewal of an agreement authorized by Chapter 380, Local Government Code, in conjunction with Chapter 311, Local Government Code, shall be of no force or effect unless it is approved by the City Council.

Notwithstanding anything to the contrary herein, the Board shall not be authorized to (i) issues bonds; (ii) impose taxes or fees; (iii) exercise the power of eminent domain, or (iv) give final approval to the Zone's project plan and financing plan.

SECTION FIVE. DURATION OF THE ZONE.

That the Zone shall take effect immediately upon the passage and approval of this Ordinance, consistent with Section 311.004(a)(3) of the Act, and termination of the Zone shall occur upon any of the following: (i) on December 31, 2053 (with the final year's tax increment to be collected by September 1, 2054); (ii) at an earlier time designated by subsequent ordinance; (iii) at such time, subsequent to the issuance of tax increment bonds, if any, that all project costs, tax increment bonds, notes and other obligations of the Zone, and the interest thereon, have been paid in full, in accordance with Section 311.017 of the Act.

SECTION SIX. TAX INCREMENT BASE AND TAX INCREMENT.

That the tax increment base for the Zone, as defined by Section 311.012(c) of the Texas Tax Code, shall be the total appraised value of all real property in the Zone taxable by a taxing unit, determined as of January 1, 2023, which is the year in which the Zone was designated as a reinvestment zone.

The Tax Increment Fund shall consist of (i) the percentage of the tax increment, as defined by Section 311.012(a) of the Texas Tax Code, that each taxing unit which levies real property taxes in the Zone, other than the City, has elected to dedicate to the Tax Increment Fund under an agreement with the City authorized by Section 311.013(f) of the Texas Tax Code, (ii) one hundred percent (100%) of the City's tax increment, as defined by section 311.012(a) of the Texas Tax Code, subject to any binding agreement executed at any time by the City that pledges a portion of such tax increment or an amount of other legally available funds whose calculation is based on receipt of any portion of such tax increment.

SECTION SEVEN. TAX INCREMENT FUND.

That there is hereby created and established a "Tax Increment Fund" for the Zone which may be divided into such subaccounts as may be authorized by subsequent ordinance, into which all tax increments of the City, as such increments are described in the final project plan and reinvestment zone financing plan and may include administration costs, less any of the amounts not required to be paid into the Tax Increment Fund pursuant to the Act, are to be deposited. The Tax Increment Fund and any subaccounts are to be maintained in an account at the affiliated depository bank of the City and shall be secured in the manner prescribed by law for funds of Texas cities. In addition, all revenues from (i) the sale of any obligations hereafter issued by the City and secured in whole or in part from the tax increments; (ii) the sale of any property acquired as part of a tax increment financing plan adopted by the Board; and (iii) other revenues dedicated to and used in the Zone shall be deposited into the TIF Fund. Prior to the termination of the Zone, money shall be disbursed from the Tax Increment Fund only to pay project costs, as defined by the Texas Tax Code, for the Zone, to satisfy the claims of holders of tax increments bonds or notes issued for the Zone, or to pay obligations incurred pursuant to agreements entered into to implement the project plan and reinvestment zone financing plan and achieve their purpose pursuant to Section 311.010(b), Texas Tax Code.

SECTION EIGHT. SEVERABILITY CLAUSE.

Should any section, subsection, sentence, clause or phrase of this Ordinance be declared unconstitutional or invalid by a court of competent jurisdiction, it is expressly provided that any and all remaining portions of this Ordinance shall remain in full force and effect. The City hereby declares that it would have passed this Ordinance, and each section, subsection, clause or phrase thereof irrespective of the fact that any one or more sections, subsections, sentences, clauses and phrases be declared unconstitutional or invalid.

SECTION NINE. OPEN MEETINGS.

It is hereby found, determined, and declared that sufficient written notice of the date, hour, place and subject of the meeting of the City Council at which this Ordinance was adopted was posted at a place convenient and readily accessible at all times to the general public at the City Hall of the City for the time required by law preceding its meeting, as required by Chapter 551 of the Texas Government Code, and that this meeting has been open to the public as required by law at all times during which this Ordinance and the subject matter hereof has been discussed, considered and formally acted upon. The City Council further ratifies, approves and confirms such written notice and the contents and posting thereof.

SECTION TEN. EFFECTIVE DATE.

This Ordinance shall take effect immediately upon its adoption and publication in accordance with and as provided by law.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2023; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2023, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2023.

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

EXHIBIT A

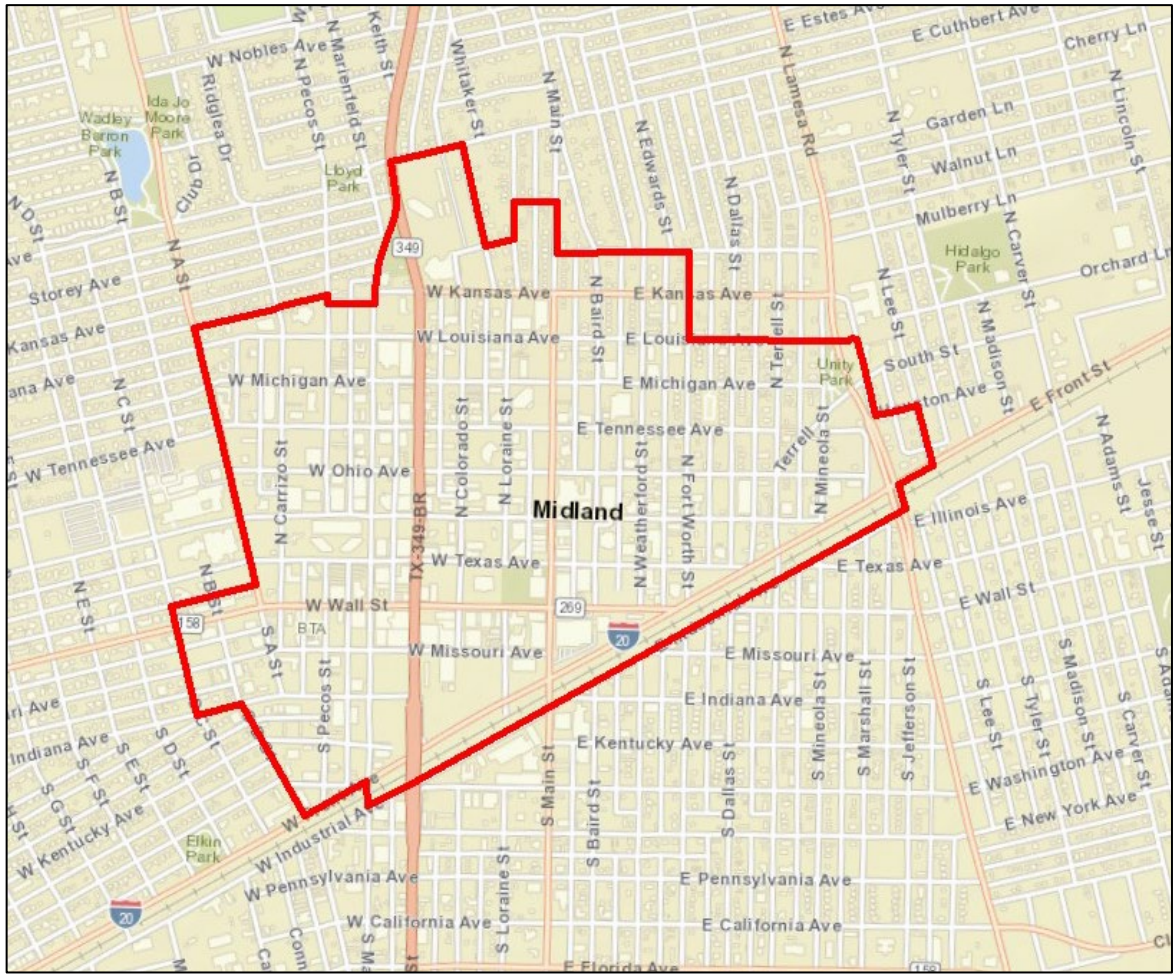
BOUNDARY DESCRIPTION

The proposed boundaries of the Zone, being land all within the City and County of Midland, Texas, are described as follows:

Beginning at a point being the SW corner of "C" St. and Indiana Ave. proceeding north along the western right-of-way line of "C" St. to the NW corner of "C" St. and the EW alley in Block 13, West End Addition, then east along the northern boundary of said alley, across “B” St. to the EW alley in Block 14, West End Addition, then east along the northern boundary of said alley, to the western right-of way line of "A" St., then north along the western right-of-way line of "A" St. to the NW corner of "A" St. and the EW alley in Block 1, Country Club Addition, then east along the northern boundary of said alley, across Carrizo St., to the EW alley in Block 1, Elmwood Addition, then east along the northern boundary of said alley to the NW corner of said alley and Pecos St., then south along the western right-of-way line of Pecos St. to the NW corner of Pecos St. and Kansas Ave., then east along the northern right-of-way line of Kansas Ave. to the NW corner of Kansas Ave. and Marienfeld St., then north along the western right-of-way line of Marienfeld St. to the intersection of Marienfeld St. and Big Spring St., then north along the western right-of-way line of Big Spring St. to the NW corner of Big Spring St. and Cuthbert Ave., then east along the northern right-of-way line of Cuthbert Ave. to the NE corner of Cuthbert Ave. and Whitaker St, then south along the eastern right-of-way line of Whitaker St. to the NE corner of Whitaker St. and Walcott St., then east along the northern right-of-way line of Walcott St. to the western right-of-way line of Loraine St, then north along the western right-of-way line of Loraine St. to the NW corner of Loraine St. and the continuation of Walcott St., then east along the northern right-of-way line of Walcott St. to the NE corner of Walcott St. and Main St., then south along the eastern right-of-way line of Main St. to the NE corner of Main St. and the EW alley between Block 1, Richardson Addition and Block 9, Homestead Addition, then east along the northern boundary of said alley to the northern right-of-way line of Mississippi Ave. then east along said line to the NE corner of Mississippi Ave. and Fort Worth St., then south along the eastern right-of-way line of Fort Worth St. to the NE corner of Fort Worth St. and Louisiana Ave., then east along the northern right-of-way line of Louisiana Ave. to the NS alley between Lot 1, Block 20, Original Town Addition and Block 52, East Midland Addition, then south along the eastern boundary of said alley to the southern right-of-way line of South St., then west along said line to the SE corner of South St. and Lamesa Rd., then south along the eastern right-of-way line of Lamesa Rd. to the NE corner of Lamesa Rd. and Houston Ave., then east along the northern right-of-way line of Houston Ave. to the NE corner of Houston Ave. and Lee St., then south along the eastern right-of-way line of Lee St. to the SE corner of Lee St. and Front Ave., then west along the southern right-of-way line of Front Ave. to the SE corner of Front Ave. and Lamesa Rd., then south along the eastern right-of-way line of Lamesa Rd. to the SE corner of Lamesa Rd. and Industrial Ave., then west along the southern right-of-way line of Industrial Ave. to the SW corner of Industrial Ave. and Marienfeld St., then north along the western right-of-way line of Marienfeld St. to the SW corner of Marienfeld St. and Front Ave., then west along the southern right-of-way line of Front Ave. to the SW corner of Front Ave. and "B" St., then north along the western right-of-way line of "B" St. to the SW corner of "B" St. and Indiana Ave., then west along the southern right-of-way line of Indiana Ave. to the SW corner of Indiana Ave. and "C" St., being the point of beginning.

EXHIBIT B

BOUNDARY MAP



- TIRZ Boundary

EXHIBIT C

PRELIMINARY PROJECT PLAN AND FINANCE PLAN

Tax Increment Reinvestment Zone #2
City of Midland, Texas

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- Introduction 1
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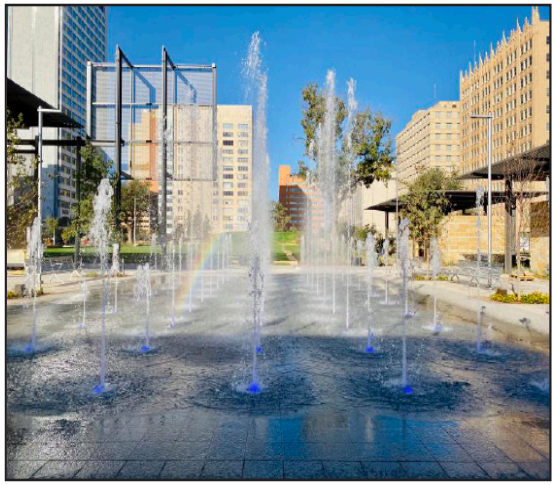
DISCLAIMER

Our conclusions and recommendations are based on current market conditions and the expected performance of the national, and/or local economy and real estate market. Given that economic conditions can change and real estate markets are cyclical, it is critical to monitor the economy and real estate market continuously, and to revisit key project assumptions periodically to ensure that they are still justified.

The future is difficult to predict, particularly given that the economy and housing markets can be cyclical, as well as subject to changing consumer and market psychology. There will usually be differences between projected and actual results because events and circumstances frequently do not occur as expected, and the differences may be material.



Midland, Texas has an estimated population of 131,325 and is the county seat of Midland County. A small part of Midland is in Martin County. Midland is conveniently located in West Texas on Interstate 20 halfway between Fort Worth and El Paso. Midland is easily accessible via Midland International Air & Space Port that is serviced daily by American, Southwest, and United Airlines. Kenan Institute's American Growth Project has projected Midland, Texas, to be the fastest-growing economy among the 100 largest midsize cities in the U.S. for 2023.

Thanks to its prime location in the Permian Basin, Midland's economy has been heavily influenced by the oil and gas industry, yet this region continues to diversify across new industries each year including aerospace and distribution. Midland prides itself in having a highly skilled workforce, with nearly twice the national average of educated engineers. The regional labor pool inlcudes 253,000 professionals with the educational expertise and technical aptitude to serve in any industry.

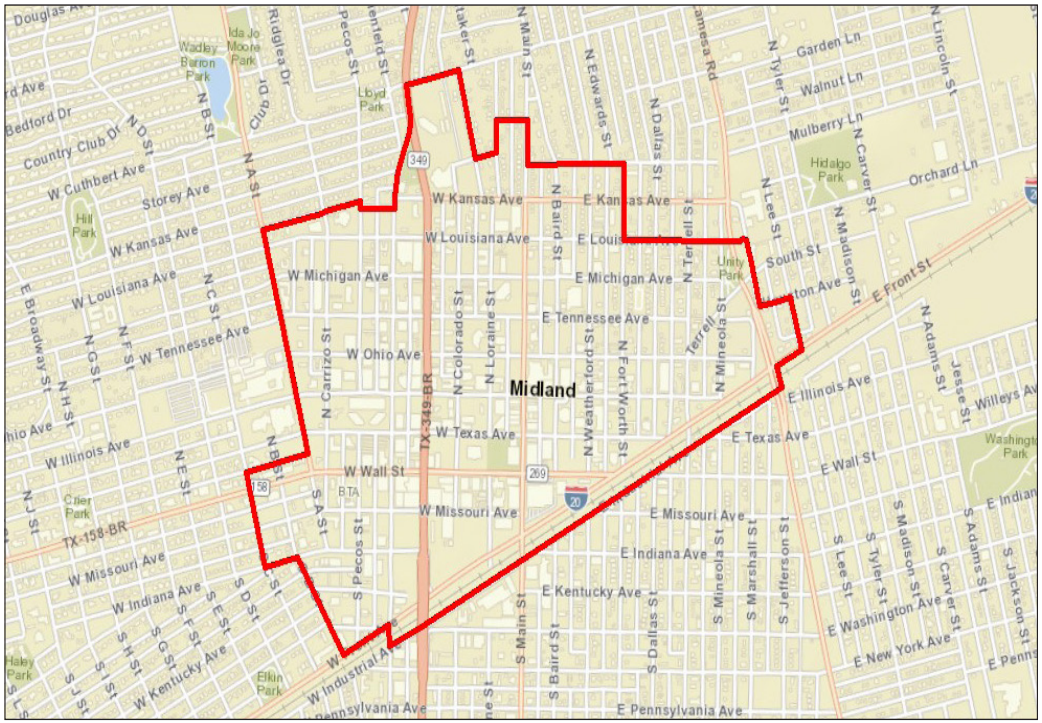
Downtown Midland is home to restaurants, bars, retail spaces, financial services, creative agencies, and arts and cultural organizations, and aims to be a progressive hub of diverse activities attracting and connecting businesses, the community, and visitors.

Tax Increment Reinvestment Zone #2, City of Midland

Tax Increment Financing (TIF) is a tool used to promote both new development and redevelopment within a specified geographic area. A city may designate a geographic area targeted for new development and redevelopment that would not occur but for the designation of the geographic area as a Tax Increment Reinvestment Zone (TIRZ).

On November 14, 2023, the City Council of the City of Midland, Texas (the "Council"), pursuant to Chapter 311 of the Texas Tax Code, will consider an ordinance to designate a contiguous geographic area within the City limits as Reinvestment Zone Number Two, City of Midland, Texas. The goal of Tax Increment Reinvestment Zone #2 (TIRZ #2) is to fund the construction of needed public infrastructure and to encourage private development that will yield additional tax revenue to all local taxing jurisdictions.

This preliminary project and financing plan outlines the funding of $70,726,022 in public improvements related to water, sanitary sewer, and storm water facilites, as well as street and intersection improvements, open space and park facilities, utilities and street lighting, and economic development grants. The TIRZ can fund these improvements through ad valorem participation of eligible taxing jurisdictions, including the City of Midland. Without the implementation of the TIRZ, the specified property would continue to impair the sound growth of the municipality.



- TIRZ Boundary

Boundary Description

TIRZ #2 consists of approximately 449 acres located within the city limits of the City of Midland. The legal description for the zone is described in detail below.

Legal Description TIRZ #2

Beginning at a point being the SW corner of "C" St. and Indiana Ave. proceeding north along the western right of way line of "C" St. to the NW corner of "C" St. and the EW alley in Block 13, West End Addition, then

East along the northern boundary of said alley, across "B" St. to the EW alley in Block 14, West End Addition, then

East along the northern boundary of said alley, to the western right-of way line of "A" St., then

North along the western right of way line of "A" St. to the NW corner of "A" St. and the EW alley in Block 1, Country Club Addition, then

East along the northern boundary of said alley, across Carrizo St., to the EW alley in Block 1, Elmwood Addition, then

East along the northern boundary of said alley to the NW corner of said alley and Pecos St., then

South along the western right-of-way line of Pecos St. to the NW corner of Pecos St. and Kansas Ave., then

East along the northern right of way line of Kansas Ave. to the NW corner of Kansas Ave. and Marienfeld St., then

North along the western right of way line of Marienfeld St. to the intersection of Marienfeld St. and Big Spring St., then

North along the western right of way line of Big Spring St. to the NW corner of Big Spring St. and Cuthbert Ave., then

East along the northern right of way line of Cuthbert Ave. to the NE corner of Cuthbert Ave. and Whitaker St, then

South along the eastern right of way line of Whitaker St. to the NE corner of Whitaker St. and Walcott St., then

East along the northern right of way line of Walcott St. to the western right-of-way line of Loraine St, then

North along the western right of way line of Loraine St. to the NW corner of Loraine St. and the continuation of Walcott St., then

East along the northern right of way line of Walcott St. to the NE corner of Walcott St. and Main St., then

South along the eastern right of way line of Main St. to the NE corner of Main St. and the EW alley between Block 1, Richardson Addition and Block 9, Homestead Addition, then

East along the northern boundary of said alley to the northern right of way line of Mississippi Ave., then

East along said line to the NE corner of Mississippi Ave. and Fort Worth St., then

South along the eastern right of way line of Fort Worth St. to the NE corner of Fort Worth St. and Louisiana Ave., then

East along the northern right of way line of Louisiana Ave. to the NS alley between Lot 1, Block 20, Original Town Addition and Block 52, East Midland Addition, then

South along the eastern boundary of said alley to the southern right of way line of South St., then

West along said line to the SE corner of South St. and Lamesa Rd., then

South along the eastern right of way line of Lamesa Rd. to the NE corner of Lamesa Rd. and Houston Ave., then

East along the northern right of way line of Houston Ave. to the NE corner of Houston Ave. and Lee St., then

South along the eastern right of way line of Lee St. to the SE corner of Lee St. and Front Ave., then

West along the southern right of way line of Front Ave. to the SE corner of Front Ave. and Lamesa Rd., then

South along the eastern right of way line of Lamesa Rd. to the SE corner of Lamesa Rd. and Industrial Ave., then

West along the southern right of way line of Industrial Ave. to the SW corner of Industrial Ave. and Marienfeld St., then

North along the western right of way line of Marienfeld St. to the SW corner of Marienfeld St. and Front Ave., then

West along the southern right of way line of Front Ave. to the SW corner of Front Ave. and "B" St., then

North along the western right of way line of "B" St. to the SW corner of "B" St. and Indiana Ave., then

West along the southern right of way line of Indiana Ave. to the SW corner of Indiana Ave. and "C" St., being the point of beginning.

Land Use

The land within the zone is primarily developed with commercial uses that are well positioned for redevelopment. There are also various surface parking lots that are well positioned to be utilized for new development.

Method of Relocating Persons to be Displaced

It is not anticipated that any persons will be displaced or need to be relocated as result of the implementation of the TIRZ.

Current Ownership

There are currently 728 parcels within Tax Increment Reinvestment Zone #2, some of which are owned by the City of Midland. The 2023 estimated taxable base value of the property within the TIRZ is $683,794,052. The 2023 base value will need to be verified by Midland County Appraisal District when the final values are available. For further details of parcels included within the TIRZ see **Appendix A**.

Zoning

The property may need to be rezoned to accomodate any future development. It is not anticipated there will be any changes to the City of Midland zoning ordinance, master plan, building codes, subdivision rules and regulations or other municipal ordinances as a result of the TIRZ.

Anticipated Development

The land within the zone is well positioned for future development and redevelopment, with opportunities to adapt existing buildings into new uses, including the conversion of office to multifamily. Adaptive reuse includes the repurposing of any vacant or underused building for a new and better use. The ongoing adoption of a remote or hybrid work model is adding office space to the existing inventory of office buildings with high vacancy rates. At the same time, the cost of single-family homes is increasing, creating demand for rental housing. RealPage, a leading global provider of software and data analytics to the real estate industry, reported in May of 2023 that, "The Midland/Odessa apartment market claimed the nation's most impressive revenue growth during the past year. Revenues were up 17.9% in the year-ending April in this market with less than 28,000 apartment units, according to data from RealPage Market Analytics. Most of that increase was on the rent growth side of the equation, as effective asking prices were up 17.2% year-over-year as of April. Meanwhile, occupancy climbed 70 basis points. Both of those annual increases were also nation-leading data points. Inspiring revenue growth, Midland/Odessa ranked in the top 10 nationally for annual apartment demand, absorbing over 1,350 units in the year-ending 1st quarter." Based on market trends of adaptive reuse in Downtown areas throughout the country, high demand for multifamily, and decreasing demand for office, DPED projects additional multifamily units will be added within the TIRZ during the term of the TIRZ, both through adaptive reuse and new construction. Retail demand to support the increase in population downtown is anticipated to increase, leading to the occupancy of existing vacant retail spaces, adaptive reuse of existing underutilized office space, and limited new construction.

According to the Plasencia Group, a national hospitality sales, investment consulting and advisory firm with offices across the country, the Permian Basin oil patch in West Texas, headlined by the cities of Midland and Odessa, is now thriving in terms of RevPAR performance. It reports that Midland-Odessa is the top performing market in terms of RevPAR growth as of June 2023. Based on these positive market trends, and known development plans shared by City leadership, DPED projects that hotel projects will be developed during the term of the TIRZ.

The table below provides an overview of the scope and timing of potential development that DPED projects could occur during the life of the TIRZ, based on market trends and input from the Development community and City leadership. It is anticipated that the development that occurs within the TIRZ could be financed in part by incremental real property tax generated within the TIRZ.

	Projected Completion Date	Units/SF	RP Taxable Value per Unit/SF	Incremental Value
TIRZ #2				
Hotel	2025	80	$ 100,000	$ 8,000,000
Hotel	2026	135	$ 100,000	$ 13,500,000
Multifamily	2027	175	$ 150,000	$ 26,250,000
Multifamily - Adaptive Reuse	2027	50	$ 90,000	$ 4,500,000
Retail	2028	2,500	$ 500	$ 1,250,000
Multifamily	2029	175	$ 150,000	$ 26,250,000
Multifamily - Adaptive Reuse	2029	50	$ 90,000	$ 4,500,000
Retail	2030	2,500	$ 500	$ 1,250,000
Total				

Project Costs of the Zone

There are a number of improvements within Tax Increment Reinvestment Zone #2 that will be financed by in part by incremental real property tax generated within the TIRZ.

Proposed Project Costs - TIRZ #2			
Public Utilities	**$**	**9,901,643**	**14.0%**
Water Facilities and Improvements, Sanitary Sewer Facilities and Improvements, Storm Water Facilities and Improvements			
Parking and Transit Improvements	**$**	**17,681,506**	**25.0%**
Street and Intersection Improvements	**$**	**7,072,602**	**10.0%**
Pedestrian Enhancements	**$**	**10,608,903**	**15.0%**
Streetscape, lighting, public art, and other amenities that enhance the pedestrian experience			
Open Space, Park and Recreation Facilities and Improvements, Public Facilities and Improvements	**$**	**7,072,602**	**10.0%**
Economic Development Grants	**$**	**17,681,506**	**25.0%**
Administrative Costs	**$**	**707,260**	**1.0%**
Total	$	70,726,022	100.0%

The categories listed in the table above outline various public improvements, and are meant to include all projects eligible under Chapter 311, Section 311.002 of the Texas Tax Code.The costs illustrated in the table above are estimates and may be revised. Savings from one line item may be applied to a cost increase in another line item. The $70,726,022 project cost total amount shall be considered a cap on expenditures that shall not be exceeded without an amendment to the project and financing plan.

Economic Development Grants may include grants, loans, and services for public and private development. Chapter 380 of the Local Government Code grants municipalities in Texas the authority to offer grants and loans of public funds to stimulate economic development. Section 311.010 (h) of the Texas Tax Code details the authority of Chapter 380 within a project and financing plan and limits the aggregate amount not to exceed the amount of tax increment produced by the municipality and paid into the tax increment fund for the zone for activities that benefit the zone and simulate business and commercial activity in the zone.

The project costs are anticipated to be incurred over the term of the TIRZ, subject to demand for development driven by market conditions. It is anticipated that the individual TIRZ project costs will be evaluated on a case-by-case basis consistent with Chapter 311, Section 311.002, and brought forward to the TIRZ Board and City Council for consideration

Chapter 311 of the Texas Tax Code

Sec. 311.002.

(1) "Project costs" means the expenditures made or estimated to be made and monetary obligations incurred or estimated to be incurred by the municipality or county designating a reinvestment zone that are listed in the project plan as costs of public works, public improvements, programs, or other projects benefiting the zone, plus other costs incidental to those expenditures and obligations. "Project costs" include:

(A) capital costs, including the actual costs of the acquisition and construction of public works, public improvements, new buildings, structures, and fixtures; the actual costs of the acquisition, demolition, alteration, remodeling, repair, or reconstruction of existing buildings, structures, and fixtures; the actual costs of the remediation of conditions that contaminate public or private land or buildings; the actual costs of the preservation of the facade of a public or private building; the actual costs of the demolition of public or private buildings; and the actual costs of the acquisition of land and equipment and the clearing and grading of land;

(B) financing costs, including all interest paid to holders of evidences of indebtedness or other obligations issued to pay for project costs and any premium paid over the principal amount of the obligations because of the redemption of the obligations before maturity;

(C) real property assembly costs;

(D) professional service costs, including those incurred for architectural, planning, engineering, and legal advice and services;

(E) imputed administrative costs, including reasonable charges for the time spent by employees of the municipality or county in connection with the implementation of a project plan;

(F) relocation costs;

(G) organizational costs, including the costs of conducting environmental impact studies or other studies, the cost of publicizing the creation of the zone, and the cost of implementing the project plan for the zone;

(H) interest before and during construction and for one year after completion of construction, whether or not capitalized;

(I) the cost of operating the reinvestment zone and project facilities;

(J) the amount of any contributions made by the municipality or county from general revenue for the implementation of the project plan;

(K) the costs of school buildings, other educational buildings, other educational facilities, or other buildings owned by or on behalf of a school district, community college district, or other political subdivision of this state; and

(L) payments made at the discretion of the governing body of the municipality or county that the governing body finds necessary or convenient to the creation of the zone or to the implementation of the project plans for the zone.

Public Utilities includes but is not limited to:

Water Facilities and Improvements: This category includes TIRZ eligible expenditures for design, engineering and construction of water facilities and improvements that support the development and redevelopment of the downtown TIRZ.

Sanitary Sewer Facilities and Improvements: This category includes TIRZ eligible expenditures for design, engineering and construction of structures or systems designed for the collection, transmission, treatment, or disposal of sewage, and includes trunk mains, interceptors, treatment plants and disposal systems.

Storm Water Facilities and Improvements: The downtown TIF district has an aging infrastructure, making proper utility drainage an important component of the project plan. Utility drainage encompasses the physical provisions to accommodate and regulate stormwater runoff to preclude excessive erosion and sedimentation and to control and regulate the rate of flow. Facilities/systems can include natural features and conduits, channels, ditches, swales, pipes, detention devices or other devices designed or intended to carry, direct, detain or otherwise control stormwater.

Parking and Transit Improvements: Parking structures, whether newly constructed or existing, may be utilized to encourage denser development and support public access to commercial, residential, and retail developments at future mixed-use or transit-oriented developments. Parking includes, but is not limited to, parking garages; surface parking; parking lighting; parking signage and wayfinding, parking meters/ kiosks and electrical charging stations. The goal is to create compact, walkable, pedestrian-centered developments to enhance and act as a catalyst to spur additional development and redevelopment in the district.

Street and Intersection Improvements and Pedestrian Enhancements: The TIRZ will encourage the construction of multi-functional, pedestrian-oriented, aesthetically-pleasing, safe, and inviting street for residents and visitors. Creating a pleasing public realm supports and encourages a wide variety of new development and investment. Elements of complete streets include the building to building improvements which may encompass: sidewalks, shared travel lanes (e.g. bus and bicycle), parallel and angled parking, pedestrian crosswalks, pedestrian and emergency bulb (American with Disabilities Act (ADA) accessibility), awnings, street improvements, planters, pedestrian street furniture, bike racks and pedestrian lighting. This includes public art and other amenities that enhance the pedestrian experience.

Open Space, Park and Recreation Facilities and Improvements, Public Facilities and Improvements: Public open space is an important amenity in a Downtown area. Park amenities and open spaces communicate the identity of the place and enhance property values. The TIRZ should encourage the identification and set aside of open space and/or places for public amenities, particularly in the vicinity of catalystic investment areas. In accordance with Sec. 311.008(4B), TIRZ funds may be used to acquire, construct, reconstruct, or install public works, facilities, or sites or other public improvements. Costs of design, improvements, and land acquisition are TIRZ eligible expenses and can be funded from this category.

Economic Development Grants: This may include grants, loans, and services for public and private development. Eligible TIRZ project costs are not limited to public uses and may also include projects that involve: historic preservation, demolition, environmental remediation and economic development grants. Chapter 380 of the Local Government Code grants municipalities in Texas the authority to offer grants and loans of public funds to stimulate economic development. Section 311.010 (h) of the Texas Tax Code details the authority of Chapter 380 within a project and financing plan and limits the aggregate amount not to exceed the amount of tax increment produced by the municipality and paid into the tax increment fund for the zone for activities that benefit the zone and simulate business and commercial activity in the zone.

Administrative Costs: Administrative costs, including reasonable charges for the time spent by employees of the City, to assist with implementation within the TIRZ will be eligible for reimbursement as project costs, upon approval by the Board of Directors and in connection with the implementation of the Project and Financing Plan. Other related administrative expenses including legal fees and consulting fees of the City, management expenses, meeting expenditures and equipment are included in this category.

Method of Financing

To fund the public improvements outlined on the previous page, the City of Midland will contribute 100% of the real property increment within the Zone. Subject to separate yet to be negotiated interlocal agreements, Midland County, Midland Hospital, and Midland College may contribute up to 100% of the real property increment within the Zone. Subject to a separate yet to be negotiated interlocal agreement, Midland ISD may contribute up to 100% of the real property increment generated from the Interest and Sinking (I&S) portion of its tax rate within the Zone.

Debt Service

It is not anticipated at this time that the TIRZ will incur any bonded indebtedness.

Economic Feasibility Study

A taxable value analysis was developed as part of the project and financing plan to determine the economic feasibility of the project. The study examined the expected tax revenue the TIRZ would receive based on the previously outlined developments. A summary overview of the anticipated development square footages, the anticipated sales per square foot and the anticipated taxable value per square foot can be found on the following pages.

The following pages show the estimated captured appraised value of the zone during each year of its existence and the net benefits of the zone to each of the local taxing jurisdictions as well as the method of financing and debt service.

Utilizing the information outlined in this feasibility study, DPED has found that the TIRZ is economically feasible and will provide the City and other taxing jurisdictions with economic benefits that would not occur without its implementation.

TIRZ #2	Real Property Tax - 2023 Rates		Participation	
	City of Midland	0.35066200	100%	0.3506620
	Midland County	0.12040000	0%	0.0000000
	Midland Hospital	0.07312000	0%	0.0000000
	Midland College	0.07741000	0%	0.0000000
	Midland ISD	0.87950000	0%	0.0000000
		1.50109200		**0.3506620**

	Personal Property Tax		Participation	
	City of Midland	0.35066200	0%	0.0000000
	Midland County	0.12040000	0%	0.0000000
	Midland Hospital	0.07312000	0%	0.0000000
	Midland College	0.07741000	0%	0.0000000
	Midland ISD	0.87950000	0%	0.0000000
		1.50109200		**0.0000000**

	Sales Tax		Participation	
	City of Midland	0.01250000	0%	0.0000000
	Midland County	0.00500000	0%	0.0000000
		0.01750000		**0.00000000**

▶ *INPUT*

INFLATION RATE	3.50%

DISCOUNT RATE	6.00%

REAL PROPERTY TAX		PARTICIPATION	
City of Midland	0.35066200	100%	0.3506620
Midland County	0.12040000	0%	0.0000000
Midland Hospital	0.07312000	0%	0.0000000
Midland College	0.07741000	0%	0.0000000
Midland ISD	0.87950000	0%	0.0000000
	1.50109200		0.3506620

PERSONAL PROPERTY TAX		PARTICIPATION	
City of Midland	0.35066200	0%	0.0000000
Midland County	0.12040000	0%	0.0000000
Midland Hospital	0.07312000	0%	0.0000000
Midland College	0.07741000	0%	0.0000000
Midland ISD	0.87950000	0%	0.0000000
	1.50109200		0.0000000

City of Midland	0.0125000	0.00%	0.0000000
Midland County	0.0050000	0.00%	0.0000000

	Year	AREA SF/UNITS	REAL PROPERTY $ / SF	REAL PROPERTY TAX VALUE	PERSONAL PROPERTY $ / SF	PERSONAL PROPERTY TAX VALUE	SALES $ / SF	SALES TAX VALUE
Hotel	2025	80	$ 100,000.00	$ 8,000,000	$ -	$ -	$ -	$ -
Hotel	2026	135	$ 100,000.00	$ 13,500,000	$ -	$ -	$ -	$ -
Multifamily	2027	175	$ 150,000.00	$ 26,250,000	$ -	$ -	$ -	$ -
Multifamily - Adaptive Reuse	2027	50	$ 90,000.00	$ 4,500,000	$ -	$ -	$ -	$ -
Retail	2028	2,500	$ 500.00	$ 1,250,000	$ -	$ -	$ 500.00	$ 1,250,000
Multifamily	2029	175	$ 150,000.00	$ 26,250,000	$ -	$ -	$ -	$ -
Multifamily - Adaptive Reuse	2029	50	$ 90,000.00	$ 4,500,000	$ -	$ -	$ -	$ -
Retail	2030	2,500	$ 500.00	$ 1,250,000	$ -	$ -	$ 500.00	$ 1,250,000
	TOTAL	5,665		85,500,000		-		2,500,000

▶ *OUTPUT*

TOTAL TAX REVENUE		TOTAL		REAL PROPERTY		PERSONAL PROPERTY		SALES	
City of Midland	*23.4%*	$ 14,546,699	=	$ 14,546,699	+	$ -	+	$ -
Midland County	*8.0%*	$ 4,994,617	=	$ 4,994,617	+	$ -	+	$ -
Midland Hospital	*4.9%*	$ 3,033,276	=	$ 3,033,276	+	$ -	+	$ -
Midland College	*5.2%*	$ 3,211,240	=	$ 3,211,240	+	$ -	+	$ -
Midland ISD	*58.6%*	$ 36,484,768	=	$ 36,484,768	+	$ -	+	$ -
	100.0%	62,270,600		$ 62,270,600		$ -		$ -
		100.0%		*100.0%*		*0.0%*		*0.0%*

TOTAL PARTICIPATION		TOTAL		REAL PROPERTY		PERSONAL PROPERTY		SALES	
City of Midland	*100.0%*	$ 14,546,699	=	$ 14,546,699	+	$ -	+	$ -
Midland County	*0.0%*	$ -	=	$ -	+	$ -	+	$ -
Midland Hospital	*0.0%*	$ -	=	$ -	+	$ -	+	$ -
Midland College	*0.0%*	$ -	=	$ -	+	$ -	+	$ -
Midland ISD	*0.0%*	$ -	=	$ -	+	$ -	+	$ -
	100.0%	$ 14,546,699		$ 14,546,699		$ -		$ -
		100.0%		*100.0%*		*0.0%*		*0.0%*

NET BENEFIT		TOTAL		REAL PROPERTY		PERSONAL PROPERTY		SALES	
City of Midland	*0.0%*	$ -	=	$ -	+	$ -	+	$ -
Midland County	*10.5%*	$ 4,994,617	=	$ 4,994,617	+	$ -	+	$ -
Midland Hospital	*6.4%*	$ 3,033,276	=	$ 3,033,276	+	$ -	+	$ -
Midland College	*6.7%*	$ 3,211,240	=	$ 3,211,240	+	$ -	+	$ -
Midland ISD	*76.4%*	$ 36,484,768	=	$ 36,484,768	+	$ -	+	$ -
	100.0%	$ 47,723,901		$ 47,723,901		$ -		$ -
		100.0%		*100.0%*		*0.0%*		*0.0%*

Tax Revenue Projections

Calendar Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
TOTAL TAX REVENUE																															
REAL PROPERTY	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**
Hotel Taxable Value Per Unit	100,000	103,500	107,123	110,872	114,752	118,769	122,926	127,228	131,681	136,290	141,060	145,997	151,107	156,396	161,869	167,535	173,399	179,468	185,749	192,250	198,979	205,943	213,151	220,611	228,333	236,324	244,596	253,157	262,017	271,188	280,679
Cumulative Units	-	-	-	80	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215
Hotel Taxable Value	-	-	-	**8,869,743**	**24,671,745**	**25,535,256**	**26,428,990**	**27,354,004**	**28,311,394**	**29,302,293**	**30,327,873**	**31,389,349**	**32,487,976**	**33,625,055**	**34,801,932**	**36,020,000**	**37,280,700**	**38,585,524**	**39,936,018**	**41,333,778**	**42,780,491**	**44,277,777**	**45,827,499**	**47,431,461**	**49,091,562**	**50,809,767**	**52,588,109**	**54,428,693**	**56,333,697**	**58,305,276**	**60,346,065**
Multifamily Taxable Value Per Unit	150000	155,250	160,684	166,308	172,128	178,153	184,388	190,842	197,521	204,435	211,590	218,995	226,660	234,593	242,804	251,302	260,098	269,201	278,623	288,375	298,468	308,915	319,727	330,917	342,499	354,487	366,894	379,735	393,026	406,782	421,019
Cumulative Units	-	-	-	-	-	175	175	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350
Multifamily Taxable Value	-	-	-	-	-	**31,176,766**	**32,267,952**	**66,794,661**	**69,132,474**	**71,552,111**	**74,056,435**	**76,648,410**	**79,331,105**	**82,107,693**	**84,981,462**	**87,955,814**	**91,034,267**	**94,220,466**	**97,518,183**	**100,931,319**	**104,463,915**	**108,120,152**	**111,904,358**	**115,821,010**	**119,874,746**	**124,070,362**	**128,412,824**	**132,907,273**	**137,559,028**	**142,373,594**	**147,356,669**
Multifamily - Adaptive Reuse Taxable Value Per Unit	90,000	93,150	96,410	99,785	103,277	106,892	110,633	114,505	118,513	122,661	126,954	131,397	135,996	140,756	145,683	150,781	156,059	161,521	167,174	173,025	179,081	185,349	191,836	198,550	205,500	212,692	220,136	227,841	235,815	244,069	252,611
Cumulative Units	-	-	-	-	-	50	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Multifamily Taxable Value	-	-	-	-	-	**5,344,588**	**5,531,649**	**11,450,513**	**11,851,281**	**12,266,076**	**12,695,389**	**13,139,727**	**13,599,618**	**14,075,605**	**14,568,251**	**15,078,139**	**15,605,874**	**16,152,080**	**16,717,403**	**17,302,512**	**17,908,100**	**18,534,883**	**19,183,604**	**19,855,030**	**20,549,956**	**21,269,205**	**22,013,627**	**22,784,104**	**23,581,548**	**24,406,902**	**25,261,143**
Retail Taxable Value Per SF	500	518	536	554	574	594	615	636	658	681	705	730	756	782	809	838	867	897	929	961	995	1,030	1,066	1,103	1,142	1,182	1,223	1,266	1,310	1,356	1,403
Cumulative SF	-	-	-	-	-	-	2,500	2,500	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Multifamily Taxable Value	-	-	-	-	-	-	**1,536,569**	**1,590,349**	**3,292,023**	**3,407,243**	**3,526,497**	**3,649,924**	**3,777,672**	**3,909,890**	**4,046,736**	**4,188,372**	**4,334,965**	**4,486,689**	**4,643,723**	**4,806,253**	**4,974,472**	**5,148,579**	**5,328,779**	**5,515,286**	**5,708,321**	**5,908,112**	**6,114,896**	**6,328,918**	**6,550,430**	**6,779,695**	**7,016,984**
Taxable Value	-	-	-	**8,869,743**	**24,671,745**	**62,056,609**	**65,765,160**	**107,189,528**	**112,587,173**	**116,527,724**	**120,606,194**	**124,827,411**	**129,196,370**	**133,718,243**	**138,398,382**	**143,242,325**	**148,255,806**	**153,444,760**	**158,815,326**	**164,373,863**	**170,126,948**	**176,081,391**	**182,244,240**	**188,622,788**	**195,224,586**	**202,057,446**	**209,129,457**	**216,448,988**	**224,024,702**	**231,865,567**	**239,980,852**
PV																															GROSS
City of Midland **5,106,573**	-	-	-	31,103	86,514	217,609	230,613	375,873	394,800	408,618	422,920	437,722	453,043	468,899	485,311	502,296	519,877	538,072	556,905	576,397	596,571	617,451	639,061	661,428	684,578	708,539	733,338	759,004	785,570	813,064	841,522	**14,546,699**
Midland County **1,753,345**	-	-	-	10,679	29,705	74,716	79,181	129,056	135,555	140,299	145,210	150,292	155,552	160,997	166,632	172,464	178,500	184,747	191,214	197,906	204,833	212,002	219,422	227,102	235,050	243,277	251,792	260,605	269,726	279,166	288,937	**4,994,617**
Midland Hospital **1,064,822**	-	-	-	6,486	18,040	45,376	48,087	78,377	82,324	85,205	88,187	91,274	94,468	97,775	101,197	104,739	108,405	112,199	116,126	120,190	124,397	128,751	133,257	137,921	142,748	147,744	152,915	158,267	163,807	169,540	175,474	**3,033,276**
Midland College **1,127,296**	-	-	-	6,866	19,098	48,038	50,909	82,975	87,154	90,204	93,361	96,629	100,011	103,511	107,134	110,884	114,765	118,782	122,939	127,242	131,695	136,305	141,075	146,013	151,123	156,413	161,887	167,553	173,418	179,487	185,769	**3,211,240**
Midland ISD **12,807,864**	-	-	-	78,009	216,988	545,788	578,405	942,732	990,204	1,024,861	1,060,731	1,097,857	1,136,282	1,176,052	1,217,214	1,259,816	1,303,910	1,349,547	1,396,781	1,445,668	1,496,267	1,548,636	1,602,838	1,658,937	1,717,000	1,777,095	1,839,294	1,903,669	1,970,297	2,039,258	2,110,632	**36,484,768**
Total **21,859,901**	-	-	-	**133,143**	**370,346**	**931,527**	**987,196**	**1,609,013**	**1,690,037**	**1,749,188**	**1,810,410**	**1,873,774**	**1,939,356**	**2,007,234**	**2,077,487**	**2,150,199**	**2,225,456**	**2,303,347**	**2,383,964**	**2,467,403**	**2,553,762**	**2,643,144**	**2,735,654**	**2,831,402**	**2,930,501**	**3,033,068**	**3,139,226**	**3,249,098**	**3,362,817**	**3,480,515**	**3,602,334**	**62,270,600**
PERSONAL PROPERTY	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**
Taxable Value Per SF																															
Cumulative SF																															
Taxable Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PV																															GROSS
City of Midland -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Midland County -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Midland Hospital -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Midland College -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Midland ISD -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SALES TAX	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**
Sales Per SF	500	518	536	554	574	594	615	636	658	681	705	730	756	782	809	838	867	897	929	961	995	1,030	1,066	1,103	1,142	1,182	1,223	1,266	1,310	1,356	1,403
Cumulative SF	-	-	-	-	-	-	2,500	2,500	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Taxable Value	-	-	-	-	-	-	**1,536,569**	**1,590,349**	**3,292,023**	**3,407,243**	**3,526,497**	**3,649,924**	**3,777,672**	**3,909,890**	**4,046,736**	**4,188,372**	**4,334,965**	**4,486,689**	**4,643,723**	**4,806,253**	**4,974,472**	**5,148,579**	**5,328,779**	**5,515,286**	**5,708,321**	**5,908,112**	**6,114,896**	**6,328,918**	**6,550,430**	**6,779,695**	**7,016,984**
PV																															GROSS
City of Midland -	-	-	-	-	-	-	19,207	19,879	41,150	42,591	44,081	45,624	47,221	48,874	50,584	52,355	54,187	56,084	58,047	60,078	62,181	64,357	66,610	68,941	71,354	73,851	76,436	79,111	81,880	84,746	87,712	**1,457,142**
Midland County -	-	-	-	-	-	-	7,683	7,952	16,460	17,036	17,632	18,250	18,888	19,549	20,234	20,942	21,675	22,433	23,219	24,031	24,872	25,743	26,644	27,576	28,542	29,541	30,574	31,645	32,752	33,898	35,085	**582,857**
PV																															
Total **584,899**	-	-	-	-	-	-	**26,890**	**27,831**	**57,610**	**59,627**	**61,714**	**63,874**	**66,109**	**68,423**	**70,818**	**73,297**	**75,862**	**78,517**	**81,265**	**84,109**	**87,053**	**90,100**	**93,254**	**96,518**	**99,896**	**103,392**	**107,011**	**110,756**	**114,633**	**118,645**	**122,797**	**2,039,999**
SUMMARY	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**
PV																															GROSS
City of Midland **5,595,782**	-	-	-	31,103	86,514	217,609	249,821	395,752	435,951	451,209	467,001	483,346	500,263	517,773	535,895	554,651	574,064	594,156	614,952	636,475	658,751	681,808	705,671	730,370	755,932	782,390	809,774	838,116	867,450	897,811	929,234	**16,003,841**
Midland County **1,949,028**	-	-	-	10,679	29,705	74,716	86,864	137,008	152,015	157,336	162,842	168,542	174,441	180,546	186,865	193,406	200,175	207,181	214,432	221,937	229,705	237,745	246,066	254,678	263,592	272,818	282,366	292,249	302,478	313,065	324,022	**5,577,474**
Midland Hospital **1,064,822**	-	-	-	6,486	18,040	45,376	48,087	78,377	82,324	85,205	88,187	91,274	94,468	97,775	101,197	104,739	108,405	112,199	116,126	120,190	124,397	128,751	133,257	137,921	142,748	147,744	152,915	158,267	163,807	169,540	175,474	**3,033,276**
Midland College **1,127,296**	-	-	-	6,866	19,098	48,038	50,909	82,975	87,154	90,204	93,361	96,629	100,011	103,511	107,134	110,884	114,765	118,782	122,939	127,242	131,695	136,305	141,075	146,013	151,123	156,413	161,887	167,553	173,418	179,487	185,769	**3,211,240**
Midland ISD **12,807,864**	-	-	-	78,009	216,988	545,788	578,405	942,732	990,204	1,024,861	1,060,731	1,097,857	1,136,282	1,176,052	1,217,214	1,259,816	1,303,910	1,349,547	1,396,781	1,445,668	1,496,267	1,548,636	1,602,838	1,658,937	1,717,000	1,777,095	1,839,294	1,903,669	1,970,297	2,039,258	2,110,632	**36,484,768**
Total **22,544,792**	-	-	-	**133,143**	**370,346**	**931,527**	**1,014,086**	**1,636,845**	**1,747,647**	**1,808,815**	**1,872,124**	**1,937,648**	**2,005,466**	**2,075,657**	**2,148,305**	**2,223,496**	**2,301,318**	**2,381,864**	**2,465,229**	**2,551,512**	**2,640,815**	**2,733,244**	**2,828,907**	**2,927,919**	**3,030,396**	**3,136,460**	**3,246,236**	**3,359,855**	**3,477,449**	**3,599,160**	**3,725,131**	**64,310,599**

PARTICIPATION

REAL PROPERTY Taxable Value	-	-	-	8,869,743	24,671,745	62,056,609	65,765,160	107,189,528	112,587,173	116,527,724	120,606,194	124,827,411	129,196,370	133,718,243	138,398,382	143,242,325	148,255,806	153,444,760	158,815,326	164,373,863	170,126,948	176,081,391	182,244,240	188,622,788	195,224,586	202,057,446	209,129,457	216,448,988	224,024,702	231,865,567	239,980,862
PV																															GROSS
City of Midland **5,106,573**	-	-	-	31,103	86,514	217,609	230,613	375,873	394,800	408,618	422,920	437,722	453,043	468,899	485,311	502,296	519,877	538,072	556,905	576,397	596,571	617,451	639,061	661,428	684,578	708,539	733,338	759,004	785,570	813,064	841,522	**14,546,699**
Midland County -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Midland Hospital -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Midland College -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Midland ISD -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total **5,106,573**	-	-	-	**31,103**	**86,514**	**217,609**	**230,613**	**375,873**	**394,800**	**408,618**	**422,920**	**437,722**	**453,043**	**468,899**	**485,311**	**502,296**	**519,877**	**538,072**	**556,905**	**576,397**	**596,571**	**617,451**	**639,061**	**661,428**	**684,578**	**708,539**	**733,338**	**759,004**	**785,570**	**813,064**	**841,522**	**14,546,699**
PERSONAL PROPERTY Taxable Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PV																															GROSS
City of Midland -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Midland County -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Midland Hospital -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Midland College -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Midland ISD -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SALES TAX Taxable Value	-	-	-	-	-	-	1,536,569	1,590,349	3,292,023	3,407,243	3,526,497	3,649,924	3,777,672	3,909,890	4,046,736	4,188,372	4,334,965	4,486,689	4,643,723	4,806,253	4,974,472	5,148,579	5,328,779	5,515,286	5,708,321	5,908,112	6,114,896	6,328,918	6,550,430	6,779,695	7,016,984
City of Midland -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Midland County -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PV																																
Total -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SUMMARY																																
PV																															GROSS
City of Midland **5,106,573**	-	-	-	31,103	86,514	217,609	230,613	375,873	394,800	408,618	422,920	437,722	453,043	468,899	485,311	502,296	519,877	538,072	556,905	576,397	596,571	617,451	639,061	661,428	684,578	708,539	733,338	759,004	785,570	813,064	841,522	**14,546,699**
Midland County -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Midland Hospital -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Midland College -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Midland ISD -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total **5,106,573**	-	-	-	**31,103**	**86,514**	**217,609**	**230,613**	**375,873**	**394,800**	**408,618**	**422,920**	**437,722**	**453,043**	**468,899**	**485,311**	**502,296**	**519,877**	**538,072**	**556,905**	**576,397**	**596,571**	**617,451**	**639,061**	**661,428**	**684,578**	**708,539**	**733,338**	**759,004**	**785,570**	**813,064**	**841,522**	**14,546,699**

TOTAL TAX REVENUE - PARTICIPATION = NET BENEFIT

SUMMARY																															
PV																															GROSS
City of Midland **489,208**	-	-	-	-	-	-	19,207	19,879	41,150	42,591	44,081	45,624	47,221	48,874	50,584	52,355	54,187	56,084	58,047	60,078	62,181	64,357	66,610	68,941	71,354	73,851	76,436	79,111	81,880	84,746	87,712	**1,457,142**
Midland County **1,949,028**	-	-	-	10,679	29,705	74,716	86,864	137,008	152,015	157,336	162,842	168,542	174,441	180,546	186,865	193,406	200,175	207,181	214,432	221,937	229,705	237,745	246,066	254,678	263,592	272,818	282,366	292,249	302,478	313,065	324,022	**5,577,474**
Midland Hospital **1,064,822**	-	-	-	6,486	18,040	45,376	48,087	78,377	82,324	85,205	88,187	91,274	94,468	97,775	101,197	104,739	108,405	112,199	116,126	120,190	124,397	128,751	133,257	137,921	142,748	147,744	152,915	158,267	163,807	169,540	175,474	**3,033,276**
Midland College **1,127,296**	-	-	-	6,866	19,098	48,038	50,909	82,975	87,154	90,204	93,361	96,629	100,011	103,511	107,134	110,884	114,765	118,782	122,939	127,242	131,695	136,305	141,075	146,013	151,123	156,413	161,887	167,553	173,418	179,487	185,769	**3,211,240**
Midland ISD **12,807,864**	-	-	-	78,009	216,988	545,788	578,405	942,732	990,204	1,024,861	1,060,731	1,097,857	1,136,282	1,176,052	1,217,214	1,259,816	1,303,910	1,349,547	1,396,781	1,445,668	1,496,267	1,548,636	1,602,838	1,658,937	1,717,000	1,777,095	1,839,294	1,903,669	1,970,297	2,039,258	2,110,632	**36,484,768**
Total **17,448,218**	-	-	-	**102,040**	**283,831**	**713,918**	**783,472**	**1,260,972**	**1,352,847**	**1,400,197**	**1,449,204**	**1,499,926**	**1,552,423**	**1,606,758**	**1,662,994**	**1,721,199**	**1,781,441**	**1,843,792**	**1,908,324**	**1,975,116**	**2,044,245**	**2,115,793**	**2,189,846**	**2,266,491**	**2,345,818**	**2,427,921**	**2,512,899**	**2,600,850**	**2,691,880**	**2,786,096**	**2,883,609**	**49,743,900**

DAVID PETTIT Economic Development

HOT Generated

Revenue Year		0 2023	1 2024	2 2025	3 2026	4 2027	5 2028	6 2029	7 2030	8 2031	9 2032	10 2033	11 2034	12 2035	13 2036	14 2037
Hotel Rooms		0	0	0	80	215	215	215	215	215	215	215	215	215	215	215
Occupancy		0%	0%	0%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
Hotel Occupancy Tax																
# of Available Rooms		-	-	-	29,200	78,475	78,475	78,475	78,475	78,475	78,475	78,475	78,475	78,475	78,475	78,475
# of Occupied Rooms		-	-	-	20,440	54,933	54,933	54,933	54,933	54,933	54,933	54,933	54,933	54,933	54,933	54,933
Average Daily Rate		$ -	$ -	$ -	$ 175.00	$ 181.13	$ 187.46	$ 194.03	$ 200.82	$ 207.85	$ 215.12	$ 222.65	$ 230.44	$ 238.51	$ 246.85	$ 255.49
Annual Taxable Revenue		$ -	$ -	$ -	$ 3,577,000	$ 9,949,649	$ 10,297,887	$ 10,658,313	$ 11,031,354	$ 11,417,451	$ 11,817,062	$ 12,230,659	$ 12,658,732	$ 13,101,788	$ 13,560,350	$ 14,034,963
City Tax Rate	7%	$ -	$ -	$ -	$ 250,390	$ 696,475	$ 720,852	$ 746,082	$ 772,195	$ 799,222	$ 827,194	$ 856,146	$ 886,111	$ 917,125	$ 949,225	$ 982,447
State Tax Rate	6%	$ -	$ -	$ -	$ 214,620	$ 596,979	$ 617,873	$ 639,499	$ 661,881	$ 685,047	$ 709,024	$ 733,840	$ 759,524	$ 786,107	$ 813,621	$ 842,098
		$ -	$ -	$ -	$ 465,010	$ 1,293,454	$ 1,338,725	$ 1,385,581	$ 1,434,076	$ 1,484,269	$ 1,536,218	$ 1,589,986	$ 1,645,635	$ 1,703,232	$ 1,762,846	$ 1,824,545

	15 2038	16 2039	17 2040	18 2041	19 2042	20 2043	21 2044	22 2045	23 2046	24 2047	25 2048	26 2049	27 2050	28 2051	29 2052	30 2053	
	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	
	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	
	78,475	78,475	78,475	78,475	78,475	78,475	78,475	78,475	78,475	78,475	78,475	78,475	78,475	78,475	78,475	78,475	
	54,933	54,933	54,933	54,933	54,933	54,933	54,933	54,933	54,933	54,933	54,933	54,933	54,933	54,933	54,933	54,933	
$	264.44	$ 273.69	$ 283.27	$ 293.19	$ 303.45	$ 314.07	$ 325.06	$ 336.44	$ 348.21	$ 360.40	$ 373.01	$ 386.07	$ 399.58	$ 413.57	$ 428.04	$ 443.02	
$	14,526,186	$ 15,034,603	$ 15,560,814	$ 16,105,442	$ 16,669,133	$ 17,252,553	$ 17,856,392	$ 18,481,366	$ 19,128,213	$ 19,797,701	$ 20,490,620	$ 21,207,792	$ 21,950,065	$ 22,718,317	$ 23,513,458	$ 24,336,429	
$	1,016,833	$ 1,052,422	$ 1,089,257	$ 1,127,381	$ 1,166,839	$ 1,207,679	$ 1,249,947	$ 1,293,696	$ 1,338,975	$ 1,385,839	$ 1,434,343	$ 1,484,545	$ 1,536,505	$ 1,590,282	$ 1,645,942	$ 1,703,550	**$30,727,500**
$	871,571	$ 902,076	$ 933,649	$ 966,327	$ 1,000,148	$ 1,035,153	$ 1,071,384	$ 1,108,882	$ 1,147,693	$ 1,187,862	$ 1,229,437	$ 1,272,468	$ 1,317,004	$ 1,363,099	$ 1,410,807	$ 1,460,186	**$26,337,858**
$	1,888,404	$ 1,954,498	$ 2,022,906	$ 2,093,708	$ 2,166,987	$ 2,242,832	$ 2,321,331	$ 2,402,578	$ 2,486,668	$ 2,573,701	$ 2,663,781	$ 2,757,013	$ 2,853,508	$ 2,953,381	$ 3,056,750	$ 3,163,736	$57,065,358

ESTIMATE OF GENERAL IMPACT OF PROPOSED PROPERTY VALUES AND TAX REVENUES, INCENTIVE BASED ON PROPOSED PARTICIPATION

TAXABLE BASE YEAR GROWTH 3.50%
DISCOUNT RATE 6.00%

REAL PROPERTY TAX

City of Midland	0.3506620	100%	0.3506620
Midland County	0.1204000	0%	0.0000000
Midland Hospital	0.0731200	0%	0.0000000
Midland College	0.0774100	0%	0.0000000
Midland ISD	0.2200000	0%	0.0000000
	0.8415920		*0.3506620*

T&S Only

BUSINESS PERSONAL PROPERTY TAX

City of Midland	0.3506620	0%	0.0000000
Midland County	0.1204000	0%	0.0000000
Midland Hospital	0.0731200	0%	0.0000000
Midland College	0.0774100	0%	0.0000000
Midland ISD	0.8795000	0%	0.0000000
	1.5010920		*0.0000000*

SALES TAX

City of Midland	0.0125000	0%	0.0000000
Midland County	0.0050000	0%	0.0000000
	456.7675000		*0.0175000*

REVENUE YEAR	TAX BASE YEAR 2023	1 2024	2 2025	3 2026	4 2027	5 2028	6 2029	7 2030	8 2031	9 2032	10 2033	11 2034	12 2035	13 2036	14 2037	15 2038	16 2039	17 2040	18 2041	19 2042	20 2043	21 2044	22 2045	23 2046	24 2047	25 2048	26 2049	27 2050	28 2051	29 2052	30 2053	TOTALS	
BASE YEAR																																	
City of Midland	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052		
Midland County	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052		
Midland Hospital	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052		
Midland College	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052		
Midland ISD	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052		
TAXABLE VALUE																																	
City of Midland		707,726,844	732,497,283	758,134,688	784,669,402	812,132,831	840,557,481	869,976,992	900,426,187	931,941,104	964,559,042	998,318,609	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########		
Midland County		707,726,844	732,497,283	758,134,688	784,669,402	812,132,831	840,557,481	869,976,992	900,426,187	931,941,104	964,559,042	998,318,609	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########		
Midland Hospital		707,726,844	732,497,283	758,134,688	784,669,402	812,132,831	840,557,481	869,976,992	900,426,187	931,941,104	964,559,042	998,318,609	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########		
Midland College		707,726,844	732,497,283	758,134,688	784,669,402	812,132,831	840,557,481	869,976,992	900,426,187	931,941,104	964,559,042	998,318,609	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########		
Midland ISD		707,726,844	732,497,283	758,134,688	784,669,402	812,132,831	840,557,481	869,976,992	900,426,187	931,941,104	964,559,042	998,318,609	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########		
TAXABLE VALUE INCREMENT																																	
City of Midland		23,932,792	48,703,231	74,340,636	100,875,350	128,338,779	156,763,429	186,182,940	216,632,135	248,147,052	280,764,990	314,524,557	349,465,708	385,629,800	423,059,634	461,799,513	501,895,288	543,394,415	586,346,012	630,800,914	676,811,738	724,432,940	773,720,885	824,733,908	877,532,386	932,178,812	988,737,862	##########	##########	##########	##########	##########		
Midland County		23,932,792	48,703,231	74,340,636	100,875,350	128,338,779	156,763,429	186,182,940	216,632,135	248,147,052	280,764,990	314,524,557	349,465,708	385,629,800	423,059,634	461,799,513	501,895,288	543,394,415	586,346,012	630,800,914	676,811,738	724,432,940	773,720,885	824,733,908	877,532,386	932,178,812	988,737,862	##########	##########	##########	##########	##########		
Midland Hospital		23,932,792	48,703,231	74,340,636	100,875,350	128,338,779	156,763,429	186,182,940	216,632,135	248,147,052	280,764,990	314,524,557	349,465,708	385,629,800	423,059,634	461,799,513	501,895,288	543,394,415	586,346,012	630,800,914	676,811,738	724,432,940	773,720,885	824,733,908	877,532,386	932,178,812	988,737,862	##########	##########	##########	##########	##########		
Midland College		23,932,792	48,703,231	74,340,636	100,875,350	128,338,779	156,763,429	186,182,940	216,632,135	248,147,052	280,764,990	314,524,557	349,465,708	385,629,800	423,059,634	461,799,513	501,895,288	543,394,415	586,346,012	630,800,914	676,811,738	724,432,940	773,720,885	824,733,908	877,532,386	932,178,812	988,737,862	##########	##########	##########	##########	##########		
Midland ISD		23,932,792	48,703,231	74,340,636	100,875,350	128,338,779	156,763,429	186,182,940	216,632,135	248,147,052	280,764,990	314,524,557	349,465,708	385,629,800	423,059,634	461,799,513	501,895,288	543,394,415	586,346,012	630,800,914	676,811,738	724,432,940	773,720,885	824,733,908	877,532,386	932,178,812	988,737,862	##########	##########	##########	##########	##########		
REVENUE A																																	
TAXABLE VALUE GROWTH																																	
City of Midland		83,923	170,784	260,684	353,732	450,035	549,710	652,873	759,647	870,157	984,536	1,102,918	1,225,443	1,352,257	1,483,509	1,619,355	1,759,956	1,905,478	2,056,093	2,211,979	2,373,322	2,540,311	2,713,145	2,892,028	3,077,173	3,268,797	3,467,128	3,672,401	3,884,858	4,104,751	4,332,341	56,179,324	City of Midland
Midland County		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Midland County
Midland Hospital		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Midland Hospital
Midland College		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Midland College
Midland ISD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Midland ISD
		83,923	**170,784**	**260,684**	**353,732**	**450,035**	**549,710**	**652,873**	**759,647**	**870,157**	**984,536**	**1,102,918**	**1,225,443**	**1,352,257**	**1,483,509**	**1,619,355**	**1,759,956**	**1,905,478**	**2,056,093**	**2,211,979**	**2,373,322**	**2,540,311**	**2,713,145**	**2,892,028**	**3,077,173**	**3,268,797**	**3,467,128**	**3,672,401**	**3,884,858**	**4,104,751**	**4,332,341**	**56,179,324**	
REVENUE 1 - DOWNTOWN																																	
REAL PROPERTY TAX		0	0	8,869,743	24,671,745	62,056,609	65,765,160	107,189,528	112,587,173	116,527,724	120,606,194	124,827,411	129,196,370	133,718,243	138,398,382	143,242,325	148,255,806	153,444,760	158,815,326	164,373,863	170,126,948	176,081,391	182,244,240	188,622,788	195,224,586	202,057,446	209,129,457	216,448,988	224,024,702	231,865,567	239,980,862		
BUSINESS PERSONAL PROPERTY		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
City of Midland		0	0	31,103	86,514	217,609	230,613	375,873	394,800	408,618	422,920	437,722	453,043	468,899	485,311	502,296	519,877	538,072	556,905	576,397	596,571	617,451	639,061	661,428	684,578	708,539	733,338	759,004	785,570	813,064	841,522	14,546,699	City of Midland
Midland County		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Midland County
Midland Hospital		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Midland Hospital
Midland College		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Midland College
Midland ISD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Midland ISD
		0	**0**	**31,103**	**86,514**	**217,609**	**230,613**	**375,873**	**394,800**	**408,618**	**422,920**	**437,722**	**453,043**	**468,899**	**485,311**	**502,296**	**519,877**	**538,072**	**556,905**	**576,397**	**596,571**	**617,451**	**639,061**	**661,428**	**684,578**	**708,539**	**733,338**	**759,004**	**785,570**	**813,064**	**841,522**	**14,546,699**	
REVENUE 2 - DOWNTOWN SALES																																	
SALES		0	0	0	0	0	1,536,569	1,590,349	3,292,023	3,407,243	3,526,497	3,649,924	3,777,672	3,909,890	4,046,736	4,188,372	4,334,965	4,486,689	4,643,723	4,806,253	4,974,472	5,148,579	5,328,779	5,515,286	5,708,321	5,908,112	6,114,896	6,328,918	6,550,430	6,779,695	7,016,984		
City of Midland		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	City of Midland
Midland County		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Midland County
		0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
REVENUE 3 - HOTEL OCCUPANCY TAX																																	
		0	0	3,577,000	9,949,649	10,297,887	10,658,313	11,031,354	11,417,451	11,817,062	12,230,659	12,658,732	13,101,788	13,560,350	14,034,963	14,526,186	15,034,603	15,560,814	16,105,442	16,669,133	17,252,553	17,856,392	18,481,366	19,128,213	19,797,701	20,490,620	21,207,792	21,950,065	22,718,317	23,513,458	24,336,429		
City of Midland		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	City of Midland
		0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
REVENUE A, 1, 2, 3		**83,923**	**170,784**	**291,787**	**440,246**	**667,644**	**780,323**	**1,028,746**	**1,154,447**	**1,278,776**	**1,407,456**	**1,540,640**	**1,678,486**	**1,821,156**	**1,968,820**	**2,121,652**	**2,279,833**	**2,443,550**	**2,612,998**	**2,788,376**	**2,969,892**	**3,157,762**	**3,352,206**	**3,553,457**	**3,761,751**	**3,977,336**	**4,200,465**	**4,431,405**	**4,670,427**	**4,917,816**	**5,173,862**	**70,726,022**	
Running Total		**83.923**	**254.707**	**546.494**	**986.740**	**1.654.384**	**2.434.708**	**3.463.453**	**4.617.900**	**5.896.676**	**7.304.132**	**8.844.773**	**10.523.259**	**12.344.415**	**14.313.235**	**16.434.887**	**18.714.720**	**21.158.270**	**23.771.267**	**26.559.643**	**29.529.535**	**32.687.297**	**36.039.503**	**39.592.960**	**43.354.711**	**47.332.047**	**51.532.512**	**55.963.917**	**60.634.345**	**65.552.160**	**70.726.022**		

GROSS 70.726.022

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053		
City of Midland	$ 83,923	$ 170,784	$ 291,787	$ 440,246	$ 667,644	$ 780,323	$ 1,028,746	$ 1,154,447	$ 1,278,776	$ 1,407,456	$ 1,540,640	$ 1,678,486	$ 1,821,156	$ 1,968,820	$ 2,121,652	$ 2,279,833	$ 2,443,550	$ 2,612,998	$ 2,788,376	$ 2,969,892	$ 3,157,762	$ 3,352,206	$ 3,553,457	$ 3,761,751	$ 3,977,336	$ 4,200,465	$ 4,431,405	$ 4,670,427	$ 4,917,816	$ 5,173,862	70,726,022	City of Midland
Midland County	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0	Midland County
Midland Hospital	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0	Midland Hospital
Midland College	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0	Midland College
Midland ISD	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0	Midland ISD
	83,923	**170,784**	**291,787**	**440,246**	**667,644**	**780,323**	**1,028,746**	**1,154,447**	**1,278,776**	**1,407,456**	**1,540,640**	**1,678,486**	**1,821,156**	**1,968,820**	**2,121,652**	**2,279,833**	**2,443,550**	**2,612,998**	**2,788,376**	**2,969,892**	**3,157,762**	**3,352,206**	**3,553,457**	**3,761,751**	**3,977,336**	**4,200,465**	**4,431,405**	**4,670,427**	**4,917,816**	**5,173,862**	**70,726,022**	TOTAL

DAVID PETTIT Economic Development

ESTIMATE OF GENERAL IMPACT OF PROPOSED PROPERTY VALUES AND TAX REVENUES, INCENTIVE BASED ON PROPOSED PARTICIPATION

TAXABLE BASE YEAR GROWTH 3.50%
DISCOUNT RATE 6.00%

REAL PROPERTY TAX			BUSINESS PERSONAL PROPERTY TAX			SALES TAX		
City of Midland	0.3506620	100%	0.3506620	0.3506620	100%	0.3506620	0.0125000	100%	0.0125000
Midland County	0.1204000	100%	0.1204000	0.1204000	100%	0.1204000	0.0050000	100%	0.0050000
Midland Hospital	0.0731200	100%	0.0731200	0.0731200	100%	0.0731200	*456.7675000*		*456.7675000*
Midland College	0.0774100	100%	0.0774100	0.0774100	100%	0.0774100			
Midland ISD	0.8795000	100%	0.8795000	0.8795000	100%	0.8795000			
	1.5010920		*1.5010920*	*1.5010920*		*1.5010920*			

REVENUE YEAR	TAX BASE YEAR 2023	1 2024	2 2025	3 2026	4 2027	5 2028	6 2029	7 2030	8 2031	9 2032	10 2033	11 2034	12 2035	13 2036	14 2037	15 2038	16 2039	17 2040	18 2041	19 2042	20 2043	21 2044	22 2045	23 2046	24 2047	25 2048	26 2049	27 2050	28 2051	29 2052	30 2053	TOTALS	
BASE YEAR																																	
City of Midland	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052		
Midland County	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052		
Midland Hospital	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052		
Midland College	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052		
Midland ISD	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052	683,794,052		
TAXABLE VALUE																																	
City of Midland		707,726,844	732,497,283	758,134,688	784,669,402	812,132,831	840,557,481	869,976,992	900,426,187	931,941,104	964,559,042	998,318,609	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########		
Midland County		707,726,844	732,497,283	758,134,688	784,669,402	812,132,831	840,557,481	869,976,992	900,426,187	931,941,104	964,559,042	998,318,609	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########		
Midland Hospital		707,726,844	732,497,283	758,134,688	784,669,402	812,132,831	840,557,481	869,976,992	900,426,187	931,941,104	964,559,042	998,318,609	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########		
Midland College		707,726,844	732,497,283	758,134,688	784,669,402	812,132,831	840,557,481	869,976,992	900,426,187	931,941,104	964,559,042	998,318,609	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########		
Midland ISD		707,726,844	732,497,283	758,134,688	784,669,402	812,132,831	840,557,481	869,976,992	900,426,187	931,941,104	964,559,042	998,318,609	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########	##########		
TAXABLE VALUE INCREMENT																																	
City of Midland		23,932,792	48,703,231	74,340,636	100,875,350	128,338,779	156,763,429	186,182,940	216,632,135	248,147,052	280,764,990	314,524,557	349,465,708	385,629,800	423,059,634	461,799,513	501,895,288	543,394,415	586,346,012	630,800,914	676,811,738	724,432,940	773,720,885	824,733,908	877,532,386	932,178,812	988,737,862	##########	##########	##########	##########	##########		
Midland County		23,932,792	48,703,231	74,340,636	100,875,350	128,338,779	156,763,429	186,182,940	216,632,135	248,147,052	280,764,990	314,524,557	349,465,708	385,629,800	423,059,634	461,799,513	501,895,288	543,394,415	586,346,012	630,800,914	676,811,738	724,432,940	773,720,885	824,733,908	877,532,386	932,178,812	988,737,862	##########	##########	##########	##########	##########		
Midland Hospital		23,932,792	48,703,231	74,340,636	100,875,350	128,338,779	156,763,429	186,182,940	216,632,135	248,147,052	280,764,990	314,524,557	349,465,708	385,629,800	423,059,634	461,799,513	501,895,288	543,394,415	586,346,012	630,800,914	676,811,738	724,432,940	773,720,885	824,733,908	877,532,386	932,178,812	988,737,862	##########	##########	##########	##########	##########		
Midland College		23,932,792	48,703,231	74,340,636	100,875,350	128,338,779	156,763,429	186,182,940	216,632,135	248,147,052	280,764,990	314,524,557	349,465,708	385,629,800	423,059,634	461,799,513	501,895,288	543,394,415	586,346,012	630,800,914	676,811,738	724,432,940	773,720,885	824,733,908	877,532,386	932,178,812	988,737,862	##########	##########	##########	##########	##########		
Midland ISD		23,932,792	48,703,231	74,340,636	100,875,350	128,338,779	156,763,429	186,182,940	216,632,135	248,147,052	280,764,990	314,524,557	349,465,708	385,629,800	423,059,634	461,799,513	501,895,288	543,394,415	586,346,012	630,800,914	676,811,738	724,432,940	773,720,885	824,733,908	877,532,386	932,178,812	988,737,862	##########	##########	##########	##########	##########		
REVENUE A																																	
TAXABLE VALUE GROWTH																																	
City of Midland		83,923	170,784	260,684	353,732	450,035	549,710	652,873	759,647	870,157	984,536	1,102,918	1,225,443	1,352,257	1,483,509	1,619,355	1,759,956	1,905,478	2,056,093	2,211,979	2,373,322	2,540,311	2,713,145	2,892,028	3,077,173	3,268,797	3,467,128	3,672,401	3,884,858	4,104,751	4,332,341	56,179,324	City of Midland
Midland County		28,815	58,639	89,506	121,454	154,520	188,743	224,164	260,825	298,769	338,041	378,688	420,757	464,298	509,364	556,007	604,282	654,247	705,961	759,484	814,881	872,217	931,560	992,980	1,056,549	1,122,343	1,190,440	1,260,921	1,333,868	1,409,369	1,487,512	19,289,203	Midland County
Midland Hospital		17,500	35,612	54,358	73,760	93,841	114,625	136,137	158,401	181,445	205,295	229,980	255,529	281,973	309,341	337,668	366,986	397,330	428,736	461,242	494,885	529,705	565,745	603,045	641,652	681,609	722,965	765,769	810,070	855,922	903,379	11,714,506	Midland Hospital
Midland College		18,526	37,701	57,547	78,088	99,347	121,351	144,124	167,695	192,091	217,340	243,473	270,521	298,516	327,490	357,479	388,517	420,642	453,890	488,303	523,920	560,784	598,937	638,427	679,298	721,600	765,382	810,697	857,597	906,140	956,381	12,401,804	Midland College
Midland ISD		210,489	428,345	653,826	887,199	1,128,740	1,378,734	1,637,479	1,905,280	2,182,453	2,469,328	2,766,243	3,073,551	3,391,614	3,720,809	4,061,527	4,414,169	4,779,154	5,156,913	5,547,894	5,952,559	6,371,388	6,804,875	7,253,535	7,717,897	8,198,513	8,695,949	9,210,797	9,743,663	10,295,181	10,866,001	140,904,105	Midland ISD
		359,253	**731,080**	**1,115,921**	**1,514,232**	**1,926,483**	**2,353,163**	**2,794,777**	**3,251,848**	**3,724,916**	**4,214,541**	**4,721,303**	**5,245,802**	**5,788,658**	**6,350,514**	**6,932,036**	**7,533,910**	**8,156,850**	**8,801,593**	**9,468,902**	**10,159,567**	**10,874,405**	**11,614,262**	**12,389,015**	**13,172,568**	**13,992,862**	**14,841,865**	**15,720,583**	**16,630,057**	**17,571,362**	**18,545,613**	**240,488,942**	
REVENUE 1 - DOWNTOWN																																	
REAL PROPERTY TAX		0	0	8,869,743	24,671,745	62,056,609	65,765,160	107,189,528	112,587,173	116,527,724	120,606,194	124,827,411	129,196,370	133,718,243	138,398,382	143,242,325	148,255,806	153,444,760	158,815,326	164,373,863	170,126,948	176,081,391	182,244,240	188,622,788	195,224,586	202,057,446	209,129,457	216,448,988	224,024,702	231,865,567	239,980,862		
BUSINESS PERSONAL PROPERTY		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
City of Midland		0	0	31,103	86,514	217,609	230,613	375,873	394,800	408,618	422,920	437,722	453,043	468,899	485,311	502,296	519,877	538,072	556,905	576,397	596,571	617,451	639,061	661,428	684,578	708,539	733,338	759,004	785,570	813,064	841,522	14,546,699	City of Midland
Midland County		0	0	10,679	29,705	74,716	79,181	129,056	135,555	140,299	145,210	150,292	155,552	160,997	166,632	172,464	178,500	184,747	191,214	197,906	204,833	212,002	219,422	227,102	235,050	243,277	251,792	260,605	269,726	279,166	288,937	4,994,617	Midland County
Midland Hospital		0	0	6,486	18,040	45,376	48,087	78,377	82,324	85,205	88,187	91,274	94,468	97,775	101,197	104,739	108,405	112,199	116,126	120,190	124,397	128,751	133,257	137,921	142,748	147,744	152,915	158,267	163,807	169,540	175,474	3,033,276	Midland Hospital
Midland College		0	0	6,866	19,098	48,038	50,909	82,975	87,154	90,204	93,361	96,629	100,011	103,511	107,134	110,884	114,765	118,782	122,939	127,242	131,695	136,305	141,075	146,013	151,123	156,413	161,887	167,553	173,418	179,487	185,769	3,211,240	Midland College
Midland ISD		0	0	78,009	216,988	545,788	578,405	942,732	990,204	1,024,861	1,060,731	1,097,857	1,136,282	1,176,052	1,217,214	1,259,816	1,303,910	1,349,547	1,396,781	1,445,668	1,496,267	1,548,636	1,602,838	1,658,937	1,717,000	1,777,095	1,839,294	1,903,669	1,970,297	2,039,258	2,110,632	36,484,768	Midland ISD
		0	**0**	**133,143**	**370,346**	**931,527**	**987,196**	**1,609,013**	**1,690,037**	**1,749,188**	**1,810,410**	**1,873,774**	**1,939,356**	**2,007,234**	**2,077,487**	**2,150,199**	**2,225,456**	**2,303,347**	**2,383,964**	**2,467,403**	**2,553,762**	**2,643,144**	**2,735,654**	**2,831,402**	**2,930,501**	**3,033,068**	**3,139,226**	**3,249,098**	**3,362,817**	**3,480,515**	**3,602,334**	**62,270,600**	
REVENUE 2 - DOWNTOWN SALES																																	
SALES		0	0	0	0	0	1,536,569	1,590,349	3,292,023	3,407,243	3,526,497	3,649,924	3,777,672	3,909,890	4,046,736	4,188,372	4,334,965	4,486,689	4,643,723	4,806,253	4,974,472	5,148,579	5,328,779	5,515,286	5,708,321	5,908,112	6,114,896	6,328,918	6,550,430	6,779,695	7,016,984		
City of Midland		0	0	0	0	0	19,207	19,879	41,150	42,591	44,081	45,624	47,221	48,874	50,584	52,355	54,187	56,084	58,047	60,078	62,181	64,357	66,610	68,941	71,354	73,851	76,436	79,111	81,880	84,746	87,712	1,457,142	City of Midland
Midland County		0	0	0	0	0	7,683	7,952	16,460	17,036	17,632	18,250	18,888	19,549	20,234	20,942	21,675	22,433	23,219	24,031	24,872	25,743	26,644	27,576	28,542	29,541	30,574	31,645	32,752	33,898	35,085	582,857	Midland County
		0	**0**	**0**	**0**	**0**	**26,890**	**27,831**	**57,610**	**59,627**	**61,714**	**63,874**	**66,109**	**68,423**	**70,818**	**73,297**	**75,862**	**78,517**	**81,265**	**84,109**	**87,053**	**90,100**	**93,254**	**96,518**	**99,896**	**103,392**	**107,011**	**110,756**	**114,633**	**118,645**	**122,797**	**2,039,999**	
REVENUE 3 - HOTEL OCCUPANCY TAX		0	0	3,577,000	9,949,649	10,297,887	10,658,313	11,031,354	11,417,451	11,817,062	12,230,659	12,658,732	13,101,788	13,560,350	14,034,963	14,526,186	15,034,603	15,560,814	16,105,442	16,669,133	17,252,553	17,856,392	18,481,366	19,128,213	19,797,701	20,490,620	21,207,792	21,950,065	22,718,317	23,513,458	24,336,429		
City of Midland		0	0	250,390	696,475	720,852	746,082	772,195	799,222	827,194	856,146	886,111	917,125	949,225	982,447	1,016,833	1,052,422	1,089,257	1,127,381	1,166,839	1,207,679	1,249,947	1,293,696	1,338,975	1,385,839	1,434,343	1,484,545	1,536,505	1,590,282	1,645,942	1,703,550	30,727,500	City of Midland
		0	**0**	**250,390**	**696,475**	**720,852**	**746,082**	**772,195**	**799,222**	**827,194**	**856,146**	**886,111**	**917,125**	**949,225**	**982,447**	**1,016,833**	**1,052,422**	**1,089,257**	**1,127,381**	**1,166,839**	**1,207,679**	**1,249,947**	**1,293,696**	**1,338,975**	**1,385,839**	**1,434,343**	**1,484,545**	**1,536,505**	**1,590,282**	**1,645,942**	**1,703,550**	**30,727,500**	
REVENUE A, 1, 2, 3		**359,253**	**731,080**	**1,499,454**	**2,581,053**	**3,578,862**	**4,113,331**	**5,203,817**	**5,798,717**	**6,360,925**	**6,942,811**	**7,545,062**	**8,168,393**	**8,813,540**	**9,481,267**	**10,172,364**	**10,887,650**	**11,627,971**	**12,394,203**	**13,187,254**	**14,008,061**	**14,857,596**	**15,736,865**	**16,646,909**	**17,588,804**	**18,563,665**	**19,572,647**	**20,616,942**	**21,697,789**	**22,816,465**	**23,974,294**	**335,527,042**	
Running Total		**359.253**	**1.090.334**	**2.589.788**	**5.170.841**	**8.749.703**	**12.863.033**	**18.066.850**	**23.865.567**	**30.226.492**	**37.169.302**	**44.714.364**	**52.882.757**	**61.696.296**	**71.177.563**	**81.349.927**	**92.237.577**	**103.865.549**	**116.259.752**	**129.447.006**	**143.455.066**	**158.312.663**	**174.049.528**	**190.696.437**	**208.285.240**	**226.848.905**	**246.421.552**	**267.038.495**	**288.736.283**	**311.552.748**	**335.527.042**		

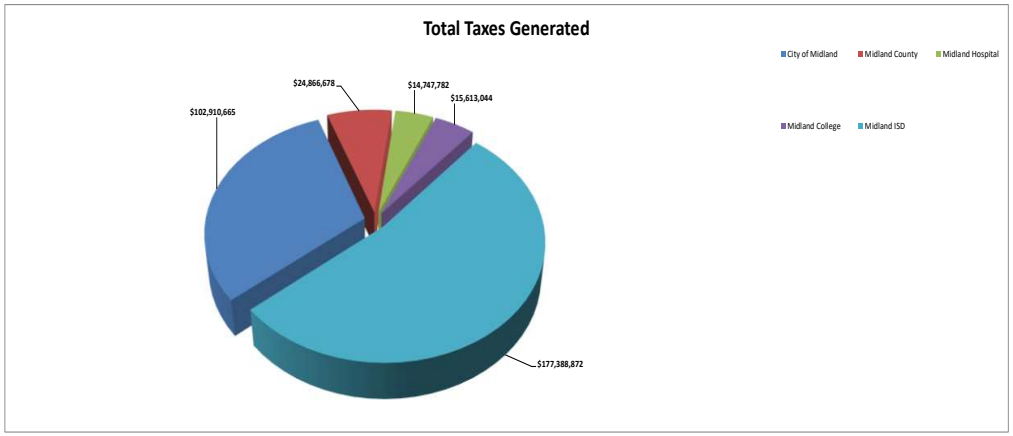
GROSS	335.527.042	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053		
City of Midland		$ 83,923	$ 170,784	$ 542,177	$ 1,136,721	$ 1,388,496	$ 1,545,612	$ 1,820,820	$ 1,994,819	$ 2,148,561	$ 2,307,684	$ 2,472,376	$ 2,642,832	$ 2,819,254	$ 3,001,851	$ 3,190,840	$ 3,386,442	$ 3,588,891	$ 3,798,425	$ 4,015,293	$ 4,239,752	$ 4,472,066	$ 4,712,512	$ 4,961,373	$ 5,218,944	$ 5,485,530	$ 5,761,447	$ 6,047,021	$ 6,342,590	$ 6,648,504	$ 6,965,125	102,910,665	City of Midland
Midland County		$ 28,815	$ 58,639	$ 100,185	$ 151,159	$ 229,236	$ 275,607	$ 361,172	$ 412,840	$ 456,105	$ 500,883	$ 547,229	$ 595,198	$ 644,844	$ 696,229	$ 749,412	$ 804,457	$ 861,428	$ 920,393	$ 981,422	$ 1,044,587	$ 1,109,962	$ 1,177,626	$ 1,247,658	$ 1,320,141	$ 1,395,161	$ 1,472,807	$ 1,553,170	$ 1,636,346	$ 1,722,433	$ 1,811,534	24,866,678	Midland County
Midland Hospital		$ 17,500	$ 35,612	$ 60,843	$ 91,800	$ 139,217	$ 162,713	$ 214,514	$ 240,725	$ 266,650	$ 293,483	$ 321,254	$ 349,998	$ 379,747	$ 410,538	$ 442,407	$ 475,390	$ 509,529	$ 544,862	$ 581,432	$ 619,282	$ 658,456	$ 699,002	$ 740,966	$ 784,400	$ 829,354	$ 875,881	$ 924,036	$ 973,877	$ 1,025,462	$ 1,078,853	14,747,782	Midland Hospital
Midland College		$ 18,526	$ 37,701	$ 64,413	$ 97,186	$ 147,385	$ 172,259	$ 227,100	$ 254,849	$ 282,295	$ 310,701	$ 340,102	$ 370,532	$ 402,027	$ 434,625	$ 468,363	$ 503,282	$ 539,423	$ 576,829	$ 615,545	$ 655,615	$ 697,088	$ 740,013	$ 784,439	$ 830,421	$ 878,012	$ 927,269	$ 978,250	$ 1,031,015	$ 1,085,627	$ 1,142,150	15,613,044	Midland College
Midland ISD		$ 210,489	$ 428,345	$ 731,835	$ 1,104,187	$ 1,674,527	$ 1,957,139	$ 2,580,211	$ 2,895,484	$ 3,207,315	$ 3,530,060	$ 3,864,101	$ 4,209,833	$ 4,567,666	$ 4,938,023	$ 5,321,343	$ 5,718,079	$ 6,128,701	$ 6,553,694	$ 6,993,562	$ 7,448,826	$ 7,920,024	$ 8,407,713	$ 8,912,472	$ 9,434,898	$ 9,975,608	$ 10,535,243	$ 11,114,465	$ 11,713,961	$ 12,334,438	$ 12,976,632	177,388,872	Midland ISD
		359,253	**731,080**	**1,499,454**	**2,581,053**	**3,578,862**	**4,113,331**	**5,203,817**	**5,798,717**	**6,360,925**	**6,942,811**	**7,545,062**	**8,168,393**	**8,813,540**	**9,481,267**	**10,172,364**	**10,887,650**	**11,627,971**	**12,394,203**	**13,187,254**	**14,008,061**	**14,857,596**	**15,736,865**	**16,646,909**	**17,588,804**	**18,563,665**	**19,572,647**	**20,616,942**	**21,697,789**	**22,816,465**	**23,974,294**	**335,527,042**	TOTAL

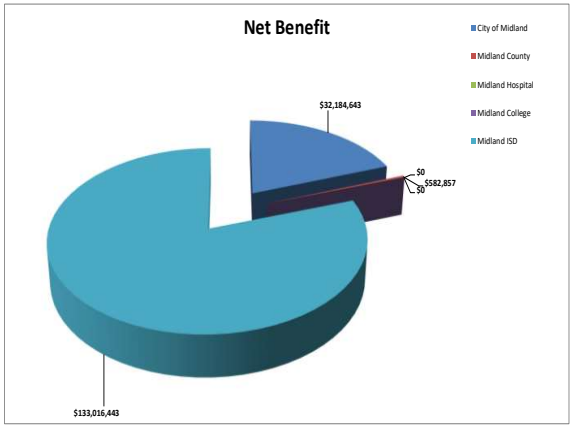
Revenue Summary

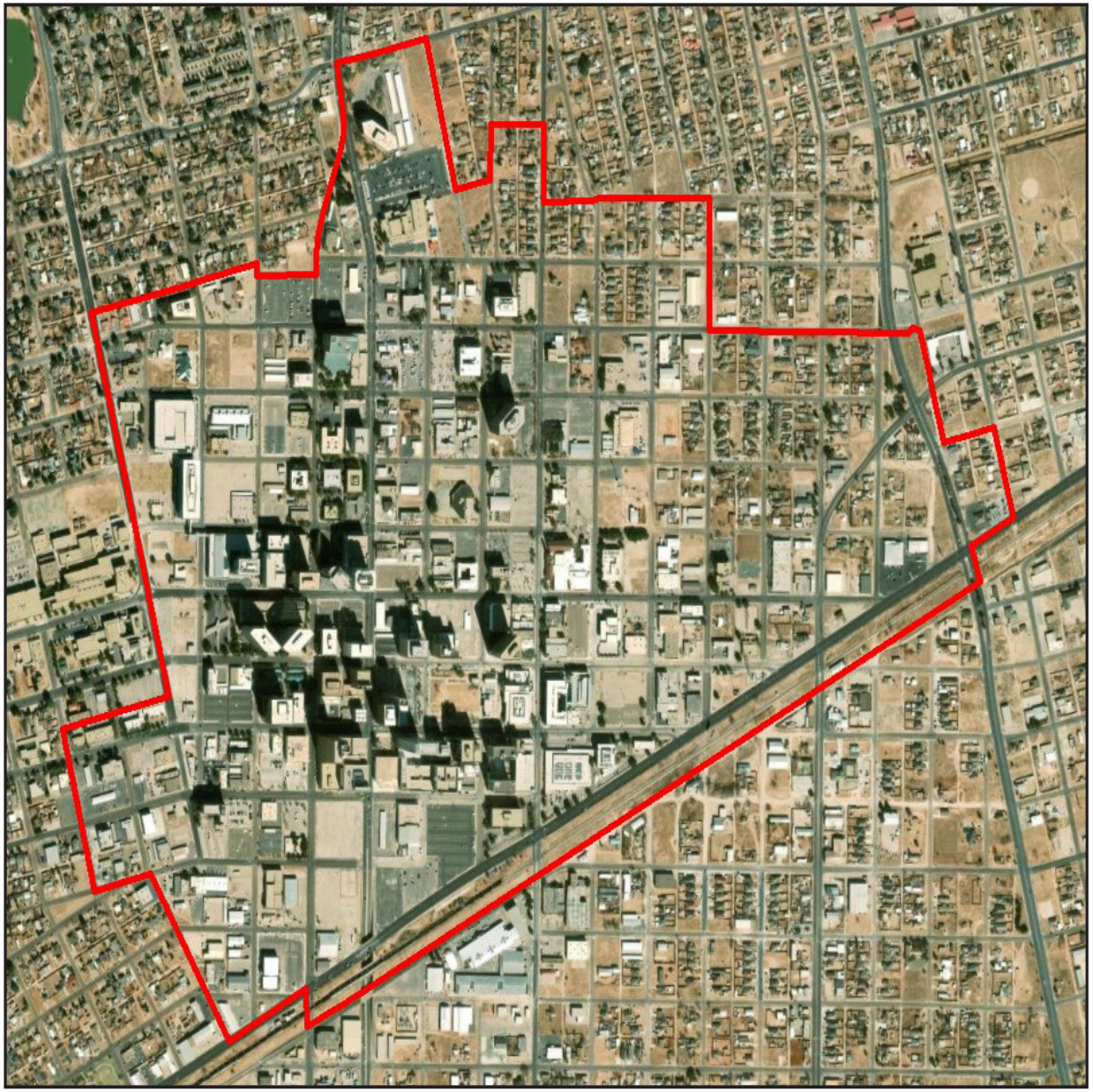
Taxing Jurisdictions	Total Taxes Generated	City Participation (100%)	*Potential Additional Participation (100%)	Net Benefit
City of Midland	$102,910,665	$70,726,022		$32,184,643
Midland County	$24,866,678		$24,283,821	$582,857
Midland Hospital	$14,747,782		$14,747,782	$0
Midland College	$15,613,044		$15,613,044	$0
Midland ISD	$177,388,872		$44,372,430	$133,016,443
Total	**$335,527,042**	**$70,726,022**	**$99,017,077**	**$165,783,942**

**Potential Additional Participation subject to separate yet to be negotiated interlocal agreements, Midland County, Midland Hospital, and Midland College may contribute up to 100% of the real property increment within the Zone. Subject to a separate yet to be negotiated interlocal agreement, Midland ISD may contribute up to 100% of the real property increment generated from the Interest and Sinking (I&S) portion of its tax rate within the Zone.*

Taxing Jurisdictions	Total Taxes Generated	Participation	Net Benefit
City of Midland	$102,910,665	$70,726,022	$32,184,643
City of Midland - Real Property	*$70,726,022*	*$70,726,022*	$0
City of Midland - Sales	*$1,457,142*	*$0*	*$1,457,142*
City of Midland -HOT	*$30,727,500*	*$0*	$30,727,500







Length of TIRZ #2 in Years:

The TIRZ has a 30 year term and is scheduled to end on December 31, 2053 (with the final year's tax increment to be collected by September 1, 2054).

Powers and Duties of Board of Directors:

The Board shall have all powers granted to it by Chapter 311 of the Texas Tax Code, including powers of a municipality under Chapter 380, Local Government Code. The Board shall not be authorized to:

issue bonds;

impose taxes or fees;

exercise the power of eminent domain; or

give final approval to the Zone's project and financing plan.

Property ID	Street Address	Legal Description	Acres	Owner Name	Exemption	Taxable Value
R000035533		BLK: 088, LOT: NORTH-SOUTH ALLEY, ADDN: ORIGINAL TOWN	0.138	14 TEXAS REAL ESTATE LLC		$ 16,880
R000035534	215 S MARIENFELD ST	BLK: 088, LOT: 009, ADDN: ORIGINAL TOWN	0.161	14 TEXAS REAL ESTATE LLC		$ 19,690
R000035535	409 W MISSOURI AV	BLK: 088, LOTS: 010 THRU 12 E.56, ADDN: ORIGINAL TOWN	0.193	14 TEXAS REAL ESTATE LLC		$ 23,630
R000035536	210 N MARIENFELD ST	BLK: 088, LOTS: 010 THRU 12 W.84, ADDN: ORIGINAL TOWN	0.289	14 TEXAS REAL ESTATE LLC		$ 35,440
R000035532	401 W MISSOURI AV	BLK: 088, LOTS: 001 THRU 8, ADDN: ORIGINAL TOWN	1.285	14 TEXAS REAL ESTATE LLC		$ 115,500
R000035116		BLK: 026, LOTS: 001 THRU 3, ADDN: ORIGINAL TOWN	0.482	312 PARTNERSHIP ET AL		$ 59,060
R000035663	407 S MARIENFELD ST	BLK: 109, LOT: 003 & S.16.5 OF 4, ADDN: ORIGINAL TOWN	0.138	4WC PROPERTIES LLC		$ 54,160
R000026089	500 N COLORADO ST	BLK: 041, S.240 OF W/2, ADDN: HOMESTEAD	0.771	500 COLORADO LLC		$ 2,145,840
R000026121	500 W OHIO AV	BLK: 047, S.80 OF SE/4, ADDN: HOMESTEAD	0.257	500 WEST OHIO LLC		$ 1,401,012
R000026063	606 W TENNESSEE AV	BLK: 037, SW/4, ADDN: HOMESTEAD	0.482	606 W TENNESSEE		$ 836,603
R000051778	808 W WALL ST	BLK: 014, LOTS: 007 THRU 9, ADDN: WEST END	0.492	808 PARTNERS LLC		$ 743,235
R000025981	0 N COLORADO ST	BLK:029, LOT: 001A, ADDN: HOMESTEAD SEC 8	0.4	A & D ALLIANCE ENERGY MANAGEMENT LLC		$ 799,850
R000034985	511 N DALLAS ST	BLK: 001, LOT: 001, ADDN: OLD PUEBLO PARK	0.112	A N FINANCE LLC		$ 261,970
R000035542	511 W MISSOURI AV	BLK: 089, LOTS: 010 THRU 12, ADDN: ORIGINAL TOWN	0.482	A R STRATEGIES LLC		$ 305,080
R000051903	807 W MISSOURI AV	BLK: 032, LOT: 007 E.70, ADDN: WEST END	0.225	ABYSS PROPERTIES LLC		$ 39,200
R000052576	811 W MISSOURI AV	BLK: 032, LOT: 7A, ADDN: WEST END SEC 5	0.225	ABYSS PROPERTIES LLC		$ 617,950
R000041035	903 N MAIN ST	BLK: 002, LOTS: 007, ADDN: RICHARDSON ABILENE	0.158	ACOSTA MARTIN ORLANDO		$ 196,680
R000032395	407 N LEE ST	BLK: 006, LOT: 003, ADDN: MOODY	0.161	ACOSTA MARTIN SOTO		$ 242,200
R000035049	404 N TERRELL ST	BLK: 014, 9336 SQ IN SW/4, ADDN: ORIGINAL TOWN	0.214	ACOSTA ROSALINDA		$ 167,170
R000035192	210 N MAIN ST	BLK: 038, LOTS: 9(N41) & 10(S/2), ADDN: ORIGINAL TOWN	0.212	AGGIETECH LLC		$ 170,520
R000035122	301 W OHIO AV	BLK: 027, LOT: 001, ADDN: ORIGINAL TOWN	0.08	AGUILAR SALVADOR		$ 80,660
R000017946	204 W KANSAS AV	BLK: 001, LOT: 001 & 2 W 69, ADDN: ESTES	0.171	AGUILERA JAVIER		$ 61,810
R000035117	200 W ILLINOIS AV	BLK: 026, LOTS: 004 THRU 6, ADDN: ORIGINAL TOWN	0.482	AKA SQUARE INC		$ 1,152,600
R000025949	610 N FORT WORTH ST	BLK: 023, N 50' OF N 100' OF NW/4, ADDN: HOMESTEAD	0.161	AKATI SETOR		$ 185,440
R000026000	507 W LOUISIANA AV	BLK: 031, E.70 OF NW/4, ADDN: HOMESTEAD	0.241	ALAMO HEIGHTS HOMES LLC		$ 92,580
R000035082	309 N TERRELL ST	BLK: 020, LOT: 002, ADDN: ORIGINAL TOWN	0.161	ALCOCER JESSE		$ 14,000
R000035083	307 N TERRELL ST	BLK: 020, LOT: 003, ADDN: ORIGINAL TOWN	0.161	ALCOCER JESSE		$ 21,950
R000035080	310 N TERRELL ST	BLK: 019, LOT: 012, ADDN: ORIGINAL TOWN	0.161	ALCOCER JESSE		$ 91,880
R000034966	505 N MINEOLA ST	BLK: 003, LOTS: 002 & 003, ADDN: ORIGINAL TOWN	0.322	ALCOCER JESSE		$ 116,420
R000035198	211 E TEXAS AV	BLK: 039, LOT: 004 S/2&ALL OF 5&6, ADDN: ORIGINAL TOWN	0.402	ALLEN REAL PROPERTIES LTD		$ 216,890
R000025850	701 N BIG SPRING ST	BLK: 010, SE/4, ADDN: HOMESTEAD	0.643	AMERICAN MOMENTUM BANK		$ 35,000
R000026072	510 N MARIENFELD ST	BLK: 039, N.75 OF W/2, ADDN: HOMESTEAD	0.241	AMERICAN MOMENTUM BANK		$ 74,660
R000026110	405 N BIG SPRING ST	BLK: 046, SE/4, ADDN: HOMESTEAD	0.482	AMERICAN MOMENTUM BANK		$ 126,590
R000026108	407 N BIG SPRING ST	BLK: 046, NE/4, ADDN: HOMESTEAD	0.482	AMERICAN MOMENTUM BANK		$ 2,872,770
R000035366	509 W WALL ST	BLK: 062, LOTS: 011 & 12, ADDN: ORIGINAL TOWN	0.321	AMERICAN STATE BANK		$ 4,045,459
R000035543	601 W MISSOURI AV	BLK: 090, LOTS: 001 THRU 3, ADDN: ORIGINAL TOWN	0.482	AR STRATEGIES LLC		$ 42,000
R000035306	120 N MAIN ST	BLK: 053, LOT: 024, ADDN: ORIGINAL TOWN	0.08	ARMENDARIZ MARCELINO		$ 153,570
R000025923	601 N MINEOLA ST	BLK: 021, S.50 OF SE/4, ADDN: HOMESTEAD	0.161	ARMENDARIZ TERRY		$ 67,410
R000035337	513 W TEXAS AV	BLK: 058, LOTS: 011 & 12 E.60, ADDN: ORIGINAL TOWN	0.138	ARRINGTON BUILDING LLC THE		$ 100,010
R000035332	511 W TEXAS AV	BLK: 058, LOTS: 001 & 2 W.65, ADDN: ORIGINAL TOWN	0.149	ARRINGTON BUILDING LLC THE		$ 129,070
R000035333	109 N MARIENFELD ST	BLK: 058, LOTS: 001 & 2 E.75, ADDN: ORIGINAL TOWN	0.172	ARRINGTON BUILDING LLC THE		$ 147,820
R000035336	102 N PECOS ST	BLK: 058, LOT: 010 & W.80 OF, ADDN: ORIGINAL TOWN, LOT 11 & 12	0.344	ARRINGTON BUILDING LLC THE		$ 281,360
R000035334	500 W WALL ST	BLK: 058, LOTS: 003 THRU 6, ADDN: ORIGINAL TOWN	0.643	ARRINGTON BUILDING LLC THE		$ 4,530,767
R000035215	203 N DALLAS ST	BLK: 041, LOT: 01A, ADDN: ORIGINAL TOWN, SECTION 17	0.964	AUSBUILT LLC	E	$ -
R000035056	401 N MARSHALL ST	BLK: 015, S.50 SE/4, ADDN: ORIGINAL TOWN, (AKA LOT 2C)	0.161	AVALOS ELODIA H		$ 107,280
R000025872	0 N MAIN ST	BLK: 014, N.60 OF SW/4, ADDN: HOMESTEAD	0.193	B AND B INVESTMENTS		$ 16,800
R000025873	105 E LOUISIANA AV	BLK: 014, S.90 OF SW/4, ADDN: HOMESTEAD	0.289	B AND B INVESTMENTS		$ 25,200
R000035354	108 S PECOS ST	BLK: 061, LOT: 004, ADDN: ORIGINAL TOWN	0.161	B T A OIL PRODUCERS		$ 26,690
R000035352	601 W WALL ST	BLK: 061, LOTS: 001 & 2, ADDN: ORIGINAL TOWN	0.321	B T A OIL PRODUCERS		$ 116,700
R000035355	602 W MISSOURI AV	BLK: 061, LOTS: 005 & 6, ADDN: ORIGINAL TOWN	0.321	B T A OIL PRODUCERS		$ 189,330

Property ID	Street Address	Legal Description	Acres	Owner Name	Exemption	Taxable Value
R000035353	104 S PECOS ST	BLK: 061, LOT: 003, ADDN: ORIGINAL TOWN	0.161	B T A OIL PRODUCERS		$ 1,644,324
R000025816	207 E KANSAS AV	BLK: 008, W/2 OF SE/4, ADDN: HOMESTEAD	0.241	BADILLO MINERVA M EST		$ 194,040
R000035046	409 N MINEOLA ST	BLK: 014, S.50 OF N.100 OF E/2, ADDN: ORIGINAL TOWN	0.126	BAESA ANGELITA		$ 61,890
R000035048	401 N MINEOLA ST	BLK: 014, LOT: 002 S.150 OF E.140, ADDN: ORIGINAL TOWN	0.482	BAESA ANGELITA		$ 73,270
R000035047	407 N MINEOLA ST	BLK: 014, LOT: 001 S.50, ADDN: ORIGINAL TOWN	0.158	BAEZA ALFREDO		$ 241,680
R000026093	501 N BAIRD ST	BLK: 043, S.114.3 OF E/2, ADDN: HOMESTEAD	0.367	BAIRD STREET STORAGE LLC		$ 153,170
R000025939	601 N TERRELL ST	BLK: 022, LOT: 006, ADDN: HOMESTEAD	0.161	BALTIER JOSE R		$ 153,820
R000035017	407 N FORT WORTH ST	BLK: 011, S.55 OF NE/4, ADDN: ORIGINAL TOWN	0.177	BANDA OSVALDO		$ 93,470
R000035099	307 N FORT WORTH ST	BLK: 022, LOT: 003, ADDN: ORIGINAL TOWN	0.161	BECKER STEVE A		$ 14,000
R000035020	303 E OHIO AV	BLK: 011, LOT: 003 E.70 OF S.100, ADDN: ORIGINAL TOWN	0.161	BECKER STEVE A		$ 24,570
R000035098	311 N FORT WORTH ST	BLK: 022, LOTS: 001 & 2, ADDN: ORIGINAL TOWN	0.321	BECKER STEVE A		$ 28,000
R000035110	312 N WEATHERFORD ST	BLK: 022, LOT: 012 N.45, ADDN: ORIGINAL TOWN	0.145	BECKER STEVEN A		$ 55,110
R000109949	702 N BAIRD ST	BLK: 015, LOT: 008, ADDN: HOMESTEAD SEC 3	0.172	BELL JACQUELINE R		$ 157,010
R000017756	400 W KANSAS AV	BLK: 018, LOT: 004, ADDN: ELMWOOD SEC 2	0.378	BELL NONGYOW R		$ 134,960
R000035329	410 W WALL ST	BLK: 057, LOTS: 007 & 8, ADDN: ORIGINAL TOWN	0.321	BEN MAR PARTNERS		$ 193,730
R000041038	806 N LORAINE ST	BLK: 002, LOT: 012, ADDN: RICHARDSON ABILENE	0.13	BENITEZ MARTA		$ 87,460
R000109948	700 N BAIRD ST	BLK: 015, LOT: 007, ADDN: HOMESTEAD SEC 3	0.172	BENNETT AUGUSTINE JR		$ 162,770
R000025924	611 N MINEOLA ST	BLK: 021, N.50 OF NE/4, ADDN: HOMESTEAD	0.161	BETANCOURT ONIEL		$ 14,000
R000041032	919 N MAIN ST	BLK: 002, LOTS: 003 & 4, ADDN: RICHARDSON ABILENE	0.316	BEZINQUE CURTIS F		$ 122,040
R000025985	600 N BIG SPRING ST	BLK:029, S.100 OF W/2, ADDN: HOMESTEAD	0.321	BHBW HOLDINGS LLC		$ 265,040
R000014586	714 W LOUISIANA AV	BLK: 001, LOT: 018A, ADDN: COUNTRY CLUB, HEIGHTS 2	0.482	BIG BROTHERS BIG SISTERS	E	$ -
R000035184	213 N MAIN ST	BLK: 037, LOT: 003, ADDN: ORIGINAL TOWN	0.161	BORLAND R MIKE		$ 221,550
R000025853	710 N BIG SPRING ST	BLK: 011, N.100 OF NW/4, ADDN: HOMESTEAD	0.321	BRANCH BANKING & TRUST CO		$ 245,946
R000025970	610 N MAIN ST	BLK: 026, N.75 OF NW/4, ADDN: HOMESTEAD	0.241	BRANUM MARK L		$ 142,910
R000035222	501 E TEXAS AV	BLK: 042, LOTS: 006 & 7, ADDN: ORIGINAL TOWN	0.321	BROOKS JULIUS L		$ 28,410
R000032397	0 N LEE ST	BLK: 006, LOT: 005, ADDN: MOODY	0.161	BUSTILLOS YSIDRO A JR		$ 14,000
R000032398	401 N LEE ST	BLK: 006, LOT: 006, ADDN: MOODY	0.161	BUSTILLOS YSIDRO A JR		$ 27,010
R000025852	300 W LOUISIANA AV	BLK: 011, E/2, ADDN: HOMESTEAD	0.964	CABRITO LTD		$ 2,124,195
R000058239	509 N DALLAS ST	BLK: 001, LOT: 002, ADDN: OLD PUEBLO PARK	0.115	CALLEROS MARIA DELALUZ		$ 182,380
R000025952	606 N FORT WORTH ST	BLK: 023, N 50' OF THE M.100 OF W/2, ADDN: HOMESTEAD	0.16	CAMACHO FELICIANO RAMOS JR		$ 194,850
R000205486	604 N FORT WORTH ST	BLK: 023, S50' OF THE M.100 OF W/2, ADDN: HOMESTEAD	0.16	CAMACHO KARINA		$ 221,930
R000035279	315 E WALL ST	BLK: 051, LOTS: 010 THRU 12 W.40, ADDN: ORIGINAL TOWN	0.069	CAPROCK TITLE MIDLAND LLC		$ 22,240
R000035281	315 E WALL ST	BLK: 051, LOTS: 013 THRU 15 E.65, ADDN: ORIGINAL TOWN	0.112	CAPROCK TITLE MIDLAND LLC		$ 149,730
R000041036	809 N MAIN ST	BLK: 002, LOT: 010, ADDN: RICHARDSON ABILENE	0.158	CARRASCO ALEJANDRO		$ 160,080
R000025937	605 N TERRELL ST	BLK: 022, LOT: 004, ADDN: HOMESTEAD	0.161	CARRASCO RUBEN H		$ 62,990
R000109952	708 N BAIRD ST	BLK: 015, LOT: 011, ADDN: HOMESTEAD SEC 3	0.172	CARRASCO VANESSA MAE		$ 160,790
R000035088	310 N DALLAS ST	BLK: 020, LOT: 012, ADDN: ORIGINAL TOWN	0.161	CARTERS FURNITURE		$ 14,000
R000035078	306 N TERRELL ST	BLK: 019, LOT: 010, ADDN: ORIGINAL TOWN	0.161	CARTERS FURNITURE INC		$ 14,000
R000035077	601 E ILLINOIS AV	BLK: 019, LOTS: 007 THRU 9, ADDN: ORIGINAL TOWN	0.482	CARTERS FURNITURE INC		$ 188,070
R000035087	501 E ILLINOIS AV	BLK: 020, LOTS: 007 THRU 11, ADDN: ORIGINAL TOWN	0.803	CARTERS FURNITURE INC		$ 476,910
R000025806	811 N FORT WORTH ST	BLK: 007N.75 OF E/2,, ADDN: HOMESTEAD	0.241	CASTILLO CRUZ VIDALES		$ 91,050
R000051781	800 W WALL ST	BLK: 014, LOT: 011 E.26.67 &, ADDN: WEST END, W.9.66 OF LOT 12	0.119	CENTENARY ENTERPRISES		$ 106,380
R000051780	800 W WALL ST	BLK: 014, LOT: 010 E.13 &, ADDN: WEST END, W.23.33 OF LOT 11	0.119	CENTENARY ENTERPRISES		$ 106,390
R000051779	800 W WALL ST	BLK: 014, LOT: 010 W.37, ADDN: WEST END	0.121	CENTENARY ENTERPRISES		$ 107,070
R000051782	800 W WALL ST	BLK: 014, LOT: 012 E.40.34, ADDN: WEST END	0.132	CENTENARY ENTERPRISES		$ 110,540
R000025815	807 N WEATHERFORD ST	BLK: 008, S.50 OF NE/4, ADDN: HOMESTEAD	0.161	CHAVEZ RAMONA SEGURA		$ 53,800
R000035360	615 W WALL ST	BLK: 061, LOTS: 010 THRU 12 E.50, ADDN: ORIGINAL TOWN	0.172	CHIN ROBERT AND JULIE TATE AKA JULIE CHIN		$ 144,610
R000025947	404 E LOUISIANA AV	BLK: 023, N.100 OF NE/4, ADDN: HOMESTEAD	0.321	CHURCH OF GOD SEVENTH DAY	E	$ -
R000034994	404 N COLORADO ST	BLK: 007, ALL, ADDN: ORIGINAL TOWN	2.066	CITY OF MIDLAND		$ 1,230,784
R000214346	209 E TEXAS AV	BLK: 038, LOT: 07A, ADDN: ORIGINAL TOWN, SEC 11	1.516	CITY OF MIDLAND TEXAS	E	$ -

Property ID	Street Address	Legal Description	Acres	Owner Name	Exemption	Taxable Value
R000035167	310 W TEXAS AV	BLK: 035, LOTS: 007 & 8, ADDN: ORIGINAL TOWN	0.321	CITY OF MIDLAND TEXAS	E	$ -
R000051786	111 N B ST	BLK: 015, LOT: 007, ADDN: WEST END	0.161	CLARK J A		$ 96,080
R000034975	511 N TERRELL ST	BLK: 004, LOT: 001 N.50, ADDN: ORIGINAL TOWN	0.161	CLYDE L AND MATILDE REYES MASTER TRUST		$ 126,770
R000035068	406 N MARSHALL ST	BLK: 016, N.15 OF S.65, ADDN: ORIGINAL TOWN	0.025	COATES W M		$ 2,210
R000026114	408 N PECOS ST	BLK: 047, SEC: S.25 OF NW/4, ADDN: HOMESTEAD	0.08	COG REALTY LLC		$ 9,840
R000026027	607 N PECOS ST	BLK: 032, S.50 OF NE/4, ADDN: HOMESTEAD	0.161	COG REALTY LLC		$ 14,000
R000026026	609 N PECOS ST	BLK: 032, M.50 OF NE/4, ADDN: HOMESTEAD	0.161	COG REALTY LLC		$ 14,000
R000026025	611 N PECOS ST	BLK: 032,N.50 OF NE/4, ADDN: HOMESTEAD	0.161	COG REALTY LLC		$ 14,000
R000026132	0 W TENNESSEE AV	BLK: 049, (40 X 150) ABANDONED ST, ADDN: HOMESTEAD	0.138	COG REALTY LLC		$ 16,880
R000026069	0 N PECOS ST	BLK: 038, N.50 OF SW/4, ADDN: HOMESTEAD	0.161	COG REALTY LLC		$ 19,690
R000026029	601 N PECOS ST	BLK: 032, S.50 OF SE/4, ADDN: HOMESTEAD	0.161	COG REALTY LLC		$ 19,690
R000026031	600 N CARRIZO ST	BLK:032, S.75 OF SW/4, ADDN: HOMESTEAD	0.241	COG REALTY LLC		$ 21,000
R000026066	508 N PECOS ST	BLK: 038, S.75 OF NW/4, ADDN: HOMESTEAD	0.241	COG REALTY LLC		$ 29,530
R000026030	605 N PECOS ST	BLK: 032, N.100 OF SE/4, ADDN: HOMESTEAD	0.321	COG REALTY LLC		$ 30,960
R000026070	500 W TENNESSEE AV	BLK: 038, S.100 OF SW/4, ADDN: HOMESTEAD	0.321	COG REALTY LLC		$ 39,380
R000057849	0 SAN ANGELO ST	BLK: 033, LOT: S 150 FT OF W/2, ADDN: HOMESTEAD	0.482	COG REALTY LLC		$ 42,000
R000203803	606 N CARRIZO ST	BLK: 032, LT 001, ADDN: HOMESTEAD, SEC 4, & E 10' OF N CARRIZO ST	0.775	COG REALTY LLC		$ 42,190
R000026112	0 W PECOS ST	BLK: 047, LOT: 001 & N.50 OF 5, ADDN: HOMESTEAD	0.161	COG REALTY LLC		$ 45,730
R000026134	709 W TENNESSEE AV	BLK: 049, LOT: N/2 OF BLK 49 1/2, ADDN: HOMESTEAD,	0.367	COG REALTY LLC		$ 50,060
R000026113	506 W OHIO AV	BLK: 047, LOTS: 002 THRU 4 & S.10, ADDN: HOMESTEAD, OF LOT 5	0.321	COG REALTY LLC		$ 75,780
R000026126	707 W TENNESSEE AV	BLK: 049, NW/4, ADDN: HOMESTEAD	0.482	COG REALTY LLC		$ 161,110
R000026115	408 N PECOS ST	BLK: 047, SEC: N25 OF S50 OF NW/4, ADDN: HOMESTEAD	0.08	COG REALTY LLC		$ 226,030
R000026065	510 N PECOS ST	BLK: 038, N/2 OF NW/4, ADDN: HOMESTEAD	0.241	COG REALTY LLC		$ 339,820
R000035383	100 S MAIN ST	BLK: 066, LOTS: 001 THRU 3, ADDN: ORIGINAL TOWN	0.241	COG REALTY LLC		$ 1,624,865
R000214253	505 N PECOS ST	BLK:037, LOT 001, ADDN: HOMESTEAD SEC: 11	1.551	COG REALTY LLC		$ 4,310,600
R000035384	102 S MAIN ST	BLK: 066, LOT: 025, ADDN: ORIGINAL TOWN, SEC 15	0.723	COG REALTY LLC		$ 9,330,110
R000218745	0 CARRIZO ST	BLK: 036, LOT: 001, ADDN: HOMESTEAD, SEC: 016	3.287	COG REALTY LLC		$ 26,003,286
R000032446	1101 E FRONT ST	BLK: 014, LOT: 04A, ADDN: MOODY SEC 5	0.555	COMMUNITY CHILDRENS MINISTRY INC	E	$ -
R000026045	717 W LOUISIANA AV	BLK: 034, LOTS: 001 THRU 4, ADDN: HOMESTEAD	0.703	COMMUNITY NATIONAL BANK		$ 721,676
R000214855	811 N MAIN ST	BLK: 002, LOT: 009, ADDN: RICHARDSON ABILENE	0.158	CONCEPCION JOSUE M		$ 222,710
R000203136	511 N FORT WORTH ST	BLK: 002, LOT: 001, ADDN: OLD PUEBLO PARK, SEC 2	0.161	CORDERO BRENDA ELAINE		$ 185,000
R000034960	500 N MINEOLA ST	BLK: 002, LOT: 01A ADDN: ORIGINAL TOWN, SEC 16	0.383	CORNETT RICHARD		$ 345,570
R000035312	0 N COLORADO ST	BLK: 056, LOTS: 005 THRU 7, ADDN: ORIGINAL TOWN	0.112	COWDEN MELANIE HOPE		$ 52,290
R000035300	113 E WALL ST	BLK: 053, LOTS: 009 S 17 OF W 75, ADDN: ORIGINAL TOWN, & W 75 OF 10;11 & 12	0.158	COWDEN WRIGHT JR ESTATE		$ 209,010
R000035301	100 N MAIN ST	BLK: 053, LOT: 13A, ADDN: ORIGINAL TOWN, SEC 7	1.01	CRP SCP WALL ST LOFTS OWNER LP		$ 18,747,580
R000025854	706 N BIG SPRING ST	BLK: 011, N.60 OF SW/4 &, ADDN: HOMESTEAD, S.50 OF NW/4	0.354	DAIRY QUEEN #420		$ 158,000
R000051897	801 W MISSOURI AV	BLK: 032, LOT: 001, ADDN: WEST END	0.241	DEHLINGER MARK T		$ 88,410
R000025932	605 N MINEOLA ST	BLK: 021, N.50 OF SE/4, ADDN: HOMESTEAD	0.161	DELAO ALEJANDRO G		$ 262,150
R000041037	807 N MAIN ST	BLK: 002, LOT: 011, ADDN: RICHARDSON ABILENE	0.158	DELCO INVESTMENTS LP		$ 150,810
R000035069	801 E FRONT ST	BLK: 017, ALL LESS 1351 SQ, ADDN: ORIGINAL TOWN	0.179	DIAZ DAVID		$ 31,230
R000017753	800 N MARIENFELD ST	BLK: 018, LOT: 001, ADDN: ELMWOOD SEC 2	0.638	DISCOVERY PLAZA JOINT		$ 992,115
R000034987	505 N FORT WORTH ST	BLK: 006, N.50 OF SE/4, ADDN: ORIGINAL TOWN	0.161	DOMINGUEZ MANUEL A		$ 226,380
R000026075	510 N BIG SPRING ST	BLK: 040, N.75 OF W/2, ADDN: HOMESTEAD	0.241	DOMINION RESERVES LLC		$ 223,600
R000203976	502 N DALLAS ST	BLK: 003, LOT: 007, ADDN: OLD PUEBLO PARK SEC 3	0.106	DUARTE MARIA		$ 147,040
R000026074	500 N MARIENFELD ST	BLK: 039, S.150 OF SW/4, ADDN: HOMESTEAD	0.482	DURHAM LYNN D JR &		$ 373,700
R000026071	505 N BIG SPRING ST	BLK: 039, E/2, ADDN: HOMESTEAD	0.964	DURHAM LYNN D JR &		$ 10,031,715
R000026085	500 N BIG SPRING ST	BLK: 040, S 100 OF SW/4, ADDN: HOMESTEAD	0.321	ELLIS PROPERTIES		$ 131,170
R000109945	705 N WEATHERFORD ST	BLK: 015, LOT: 004, ADDN: HOMESTEAD SEC 3	0.172	ELY GLORIA A		$ 163,690
R000035156	219 N BIG SPRING ST	BLK: 034, LOTS: 001 THRU 3, ADDN: ORIGINAL TOWN	0.482	ENDEAVOR ENERGY RESOURCES LP		$ 176,660
R000035159	414 W TEXAS AV	BLK: 034, LOTS: 7-9(W100) &, ADDN: ORIGINAL TOWN, LOTS 10-12	0.964	ENDEAVOR ENERGY RESOURCES LP		$ 3,367,660

Property ID	Street Address	Legal Description	Acres	Owner Name	Exemption	Taxable Value
R000035331	110 N MARIENFELD ST	BLK: 057, LOTS: 010 THRU 12, ADDN: ORIGINAL TOWN	0.482	ENDEAVOR ENERGY RESOURCES LP		$ 11,978,465
R000035164		BLK: 035, LOTS: 003 & 4 PT, ADDN: ORIGINAL TOWN, (REAR 17 X 20)	0.008	ENERGAS		$ 1,980
R000035527	125 W MISSOURI AV	BLK: 085, LOTS: 001 THRU 20, ADDN: ORIGINAL TOWN	1.497	ENERTIA TECH CENTER LLC		$ 23,854,184
R000041050	106 W KANSAS AV	BLK: 002, LOT: 024, ADDN: RICHARDSON ABILENE	0.161	ESCAJEDA JACINTO		$ 57,600
R000035022	406 N WEATHERFORD ST	BLK: 011, LOTS: 3(N/3) & 4(S2/3), ADDN: ORIGINAL TOWN	0.482	ESCN INC		$ 42,000
R000035023	410 N WEATHERFORD ST	BLK: 011, LOT: 004 N.50, ADDN: ORIGINAL TOWN	0.161	ESCN INC		$ 76,970
R000109942	711 N WEATHERFORD ST	BLK: 015, LOT: 001, ADDN: HOMESTEAD SEC 3	0.172	ESPINOZA ALBERT VILLA II		$ 166,460
R000041045	914 N LORAINE ST	BLK: 002, LOT: 019, ADDN: RICHARDSON ABILENE	0.158	ESPINOZA ESAU		$ 39,000
R000041046	916 N LORAINE ST	BLK: 002, LOT: 020, ADDN: RICHARDSON ABILENE	0.158	ESPINOZA ESAU		$ 86,960
R000217317	0 N CARRIZO ST	E/2 OF BLK: 033, ADDN: HOMESTEAD, SEC : 15	0.965	FIELDS DAVID B		$ 84,030
R000035547	701 W INDIANA AV	BLK: 091, LOTS: 004 THRU 6, ADDN: ORIGINAL TOWN	0.482	FIRST H AND H HOLDINGS LLC		$ 516,020
R000026105	403 N COLORADO ST	BLK: 045, M.50 OF SE/4, ADDN: HOMESTEAD	0.161	FIRST NATIONAL BANK OF STANTON		$ 14,000
R000218596	400 N BIG SPRING ST	BLK: 045, LT: 09A ADDN: HOMESTEAD SEC 14	0.482	FIRST NATL BANK OF STANTON		$ 2,184,703
R000035152	208 N A ST	BLK: 031, LOT: 008, ADDN: ORIGINAL TOWN	0.075	FIRST PRESBYTERIAN	E	$ -
R000035151	201 N A ST	BLK: 031, LOT: 007, ADDN: ORIGINAL TOWN	0.115	FIRST PRESBYTERIAN	E	$ -
R000035153	212 N A ST	BLK: 031, LOTS: 009 THRU 11, ADDN: ORIGINAL TOWN	0.31	FIRST PRESBYTERIAN	E	$ -
R000035150	201 N CARRIZO ST	BLK: 031, LOTS: 003 THRU 6, ADDN: ORIGINAL TOWN	0.643	FIRST PRESBYTERIAN	E	$ -
R000051893	906 W INDIANA AV	BLK: 031, LOTS: 009 & 010, ADDN: WEST END	0.321	FIRST PRESBYTERIAN CHURCH	E	$ -
R000035010	201 E OHIO AV	BLK: 010, LOT: E(47X65) OF S1/3, ADDN: ORIGINAL TOWN	0.07	FIRST UNITED METHODIST CHURCH	E	$ -
R000035011	404 N BAIRD ST	BLK: 010, LOT: 003 N/3, ADDN: ORIGINAL TOWN	0.161	FIRST UNITED METHODIST CHURCH	E	$ -
R000035007	409 N WEATHERFORD ST	BLK: 010, S/3 OF NE/4, ADDN: ORIGINAL TOWN	0.161	FIRST UNITED METHODIST CHURCH	E	$ -
R000035009	205 E OHIO AV	BLK: 010, LOT: 3 LESS E 47 X 65, ADDN: ORIGINAL TOWN	0.247	FIRST UNITED METHODIST CHURCH	E	$ -
R000035006	411 N WEATHERFORD ST	BLK: 010, N.100 OF NE/4, ADDN: ORIGINAL TOWN	0.321	FIRST UNITED METHODIST CHURCH	E	$ -
R000035114	301 N MAIN ST	BLK: 025, LOTS: 001 THRU 3, ADDN: ORIGINAL TOWN	0.482	FIRST UNITED METHODIST CHURCH	E	$ -
R000034997	405 N MAIN ST	BLK: 008, S/3 OF E/2, ADDN: ORIGINAL TOWN	0.321	FIRST UNITED METHODIST CHURCH	E	$ -
R000034995	411 N MAIN ST	BLK: 008, N/3 OF E/2, ADDN: ORIGINAL TOWN	0.321	FIRST UNITED METHODIST CHURCH	E	$ -
R000035002	401 N BAIRD ST	BLK: 009, E/2 LESS 48 X 80 IN N/PT, ADDN: ORIGINAL TOWN	0.876	FIRST UNITED METHODIST CHURCH	E	$ -
R000034996	407 N MAIN ST	BLK: 008, M/3 OF E/2, ADDN: ORIGINAL TOWN	0.321	FIRST UNITED METHODIST CHURCH	E	$ -
R000035001	413 N BAIRD ST	BLK: 009, 48 X 80 IN N/PT OF E/2, ADDN: ORIGINAL TOWN	0.088	FIRST UNITED METHODIST CHURCH	E	$ -
R000035113	300 N MAIN ST	BLK: 024, LOTS: 001 THRU 12, ADDN: ORIGINAL TOWN	2.066	FIRST UNITED METHODIST CHURCH	E	$ -
R000035557	311 S PECOS ST	BLK: 092, LOT: 007, ADDN: ORIGINAL TOWN	0.161	FIRST UNITED METHODIST CHURCH		$ 131,930
R000025859	705 N LORAINE ST	BLK: 012, LOT: 004, ADDN: HOMESTEAD, SEC 9	0.321	FIVE SEVEN PROPERTIES LLC		$ 587,550
R000203971	512 N DALLAS ST	BLK: 003, LOT: 002, ADDN: OLD PUEBLO PARK SEC 3	0.103	FLORES OLIVIA F		$ 144,580
R000025925	606 N TERRELL ST	BLK: 021, M 100 OF W/2, ADDN: HOMESTEAD	0.321	FLORES ROSARIO G EST		$ 163,650
R000035277	125 N FORT WORTH ST	BLK: 051, LOTS: 001 THRU 5, ADDN: ORIGINAL TOWN	0.402	FOSTER BRUCE EVAN		$ 343,040
R000035092	303 N DALLAS ST	BLK: 021, LOT: 005, ADDN: ORIGINAL TOWN	0.161	FOUNDATION FOR M H M R	E	$ -
R000035091	305 N DALLAS ST	BLK: 021, LOT: 004, ADDN: ORIGINAL TOWN	0.161	FOUNDATION FOR M H M R	E	$ -
R000035090	307 N DALLAS ST	BLK: 021, LOT: 003, ADDN: ORIGINAL TOWN	0.161	FOUNDATION FOR M H M R	E	$ -
R000035094	401 E ILLINOIS AV	BLK: 021, LOTS: 007 THRU 12, ADDN: ORIGINAL TOWN	0.964	FOUNDATION FOR M H M R	E	$ -
R000035089	309 N DALLAS ST	BLK: 021, LOTS: 001 & 2, ADDN: ORIGINAL TOWN	0.321	FOUNDATION FOR MENTAL HEALTH	E	$ -
R000035005	410 N MAIN ST	BLK: 009, N.100 OF W/2, ADDN: ORIGINAL TOWN	0.321	FOUR TEN N MAIN INC		$ 243,940
R000035344	0 W WALL ST	BLK: 059, LOT: 009, ADDN: ORIGINAL TOWN	0.161	FRANKLIN MOUNTAIN PERMIAN I LLC		$ 33,690
R000035347	701 W TEXAS AV	BLK: 060, LOTS: 001 THRU 4, ADDN: ORIGINAL TOWN	0.689	FRANKLIN MOUNTAIN PERMIAN I LLC		$ 40,030
R000035341	103 N PECOS ST	BLK: 059, LOT: 004, ADDN: ORIGINAL TOWN	0.161	FRANKLIN MOUNTAIN PERMIAN I LLC		$ 51,890
R000035340	109 N PECOS ST	BLK: 059, LOT: 003, ADDN: ORIGINAL TOWN	0.161	FRANKLIN MOUNTAIN PERMIAN I LLC		$ 51,890
R000035340	109 N PECOS ST	BLK: 059, LOT: 003, ADDN: ORIGINAL TOWN	0.161	FRANKLIN MOUNTAIN PERMIAN I LLC		$ 51,890
R000035343	626 W WALL ST	BLK: 059, LOTS: 007 & 8, ADDN: ORIGINAL TOWN	0.321	FRANKLIN MOUNTAIN PERMIAN I LLC		$ 67,380
R000035342	0 N PECOS ST	BLK: 059, LOTS: 005 & 6, ADDN: ORIGINAL TOWN	0.321	FRANKLIN MOUNTAIN PERMIAN I LLC		$ 103,780
R000035558	301 S PECOS ST	BLK: 092, LOTS: 008 THRU 12, ADDN: ORIGINAL TOWN	0.803	FRANKLIN MOUNTAIN PERMIAN I LLC		$ 145,880
R000035335	508 W WALL ST	BLK: 058, LOTS: 007 THRU 9, ADDN: ORIGINAL TOWN	0.482	FRANKLIN MOUNTAIN PERMIAN I LLC		$ 32,887,265

Property ID	Street Address	Legal Description	Acres	Owner Name	Exemption	Taxable Value
R000035379	115 S COLORADO ST	BLK: 065, LOTS: 013 THRU 18, ADDN: ORIGINAL TOWN	0.482	FRANKLIN MOUNTAIN PERMIAN II LP		$ 5,634,060
R000035374	303 W WALL ST	BLK: 064, ALL, ADDN: ORIGINAL TOWN	2.066	FRANKLIN MOUNTAIN PERMIAN II LP		$ 49,693,378
R000035316	110 N BIG SPRING ST	BLK: 056, LOT: 014 W.25 OF N.35, ADDN: ORIGINAL TOWN, & N.35 OF LOT 15	0.06	FRANKLIN MOUNTAIN PERMIAN III LP		$ 13,130
R000035319	305 W TEXAS AV	BLK: 056, LOT: 018, ADDN: ORIGINAL TOWN	0.172	FRANKLIN MOUNTAIN PERMIAN III LP		$ 63,090
R000035317	114 N BIG SPRING ST	BLK: 056, LOTS: 016 & 17, ADDN: ORIGINAL TOWN	0.344	FRANKLIN MOUNTAIN PERMIAN III LP		$ 123,750
R000035315	310 W WALL ST	BLK: 056, LOT 014 S.115 OF W/2 &, ADDN: ORIGINAL TOWN, LT 15	0.198	FRANKLIN MOUNTAIN PERMIAN III LP		$ 18,493,492
R000035311	115 N COLORADO ST	BLK: 056, LOTS: 003 & 4, ADDN: ORIGINAL TOWN	0.149	FRANKLIN MOUNTAIN PERMIAN IV LP		$ 32,500
R000035310	115 N COLORADO ST	BLK: 056, LOTS: 001 & 2, ADDN: ORIGINAL TOWN	0.149	FRANKLIN MOUNTAIN PERMIAN IV LP		$ 32,500
R000035313	300 W WALL ST	BLK: 056, LOTS: 008 THRU 12, ADDN: ORIGINAL TOWN	0.373	FRANKLIN MOUNTAIN PERMIAN IV LP		$ 81,250
R000035314	306 W WALL ST	BLK: 056, LOTS: 13 & 14(E/2), ADDN: ORIGINAL TOWN, ONE WALL PLAZA	0.258	FRANKLIN MOUNTAIN PERMIAN IV LP		$ 20,450,168
R000025862	110 W LOUISIANA AV	BLK: 013, ALL, ADDN: HOMESTEAD	2.066	FRANKLIN MOUNTAIN PERMIAN V LP		$ 10,685,578
R000203975	504 N DALLAS ST	BLK: 003, LOT: 006, ADDN: OLD PUEBLO PARK SEC 3	0.103	FUENTES MEGAN		$ 138,660
R000035183	217 N MAIN ST	BLK: 037, LOT: 002 S/2, ADDN: ORIGINAL TOWN	0.08	FULCRUM PROPERTIES LLC		$ 181,340
R000035004	406 N MAIN ST	BLK: 009, LOTS: 3(N50) & 4(S50), ADDN: ORIGINAL TOWN	0.321	G T PARTNERS		$ 1,118,457
R000034976	509 N TERRELL ST	BLK: 004, LOT: 001 M.50, ADDN: ORIGINAL TOWN	0.161	GALLARDO MARCUS		$ 213,040
R000032399	400 N LAMESA RD	BLK: 006, LOT: 007, ADDN: MOODY	0.161	GALVAN JUANITA RUBIO		$ 48,070
R000214345	808 N WEATHERFORD ST	BLK:007, LOT: 002, ADDN: HOMESTEAD, SEC 12	0.161	GAMINO STEPHANIE		$ 245,110
R000058244	500 N FORT WORTH ST	BLK: 001, LOT: 007, ADDN: OLD PUEBLO PARK	0.112	GARCIA ADRIAN		$ 182,640
R000035021	301 E OHIO AV	BLK: 011, LOT: 003 W.70 OF S.100, ADDN: ORIGINAL TOWN	0.161	GARCIA CEZAR G		$ 180,280
R000035213	306 E ILLINOIS AV	BLK: 040, LOT: 012 E 55, ADDN: ORIGINAL TOWN	0.063	GARCIA ELEACER		$ 37,980
R000035045	411 N MINEOLA ST	BLK: 014, LOT: 001 N.50, ADDN: ORIGINAL TOWN	0.072	GARCIA LUPE V		$ 32,990
R000203802	802 N BAIRD ST	BLK: 008, LOT: 002, ADDN: HOMESTEAD, SEC 4	0.182	GARCIA MARTIN SR		$ 29,730
R000025940	600 N DALLAS ST	BLK: 022, LOT: 007, ADDN: HOMESTEAD	0.161	GARCIA TERESA		$ 14,000
R000035225	0 N DALLAS ST	BLK: 042, LOT: 010, ADDN: ORIGINAL TOWN	0.161	GARZA EDWARD T		$ 14,000
R000035220	203 N TERRELL ST	BLK: 042, LOT: 003, ADDN: ORIGINAL TOWN	0.161	GARZA EDWARD T		$ 15,030
R000035226	500 E ILLINOIS AV	BLK: 042, LOT: 011, ADDN: ORIGINAL TOWN	0.161	GARZA EDWARD T		$ 70,260
R000035221	507 E FRONT ST	BLK: 042, LOTS: 004 & 5, ADDN: ORIGINAL TOWN	0.305	GARZA EDWARD T		$ 149,670
R000035219	205 N TERRELL ST	BLK: 042, LOT: 002, ADDN: ORIGINAL TOWN	0.161	GEORGE VELOZ MNGT LP		$ 14,000
R000034999	406 N LORAINE ST	BLK: 008, S.50 OF NW/4, ADDN: ORIGINAL TOWN	0.161	GGB LEASING LP		$ 19,690
R000035000	410 N LORAINE ST	BLK: 008, N.100 OF W/2, ADDN: ORIGINAL TOWN	0.321	GGB LEASING LP		$ 206,130
R000034998	106 W OHIO AV	BLK: 008, SW/4, ADDN: ORIGINAL TOWN	0.482	GGB LEASING LP		$ 212,830
R000058264	900 W WALL ST	BLK: 013, LOT; 014, ADDN: WEST END SEC 9	0.515	GLASS-JOHNSON HOSPICE HOUSE INC	E	$ -
R000026087	501 N LORAINE ST	BLK: 041, S.100 OF E/2, ADDN: HOMESTEAD	0.321	GOD'S RAINBOW PROMISES FELLOWSHIP	E	$ -
R000041031	921 N MAIN ST	BLK: 002, LOT: 002, ADDN: RICHARDSON ABILENE	0.158	GOLLIHAR JOHN B		$ 65,390
R000025814	0 N WEATHERFORD ST	BLK: 008, E/2 OF SE/4, ADDN: HOMESTEAD	0.241	GOMEZ ELIAS		$ 35,310
R000203801	800 N BAIRD ST	BLK: 008, LOT: 001 W/2, ADDN: HOMESTEAD SEC 4	0.108	GOMEZ ELIAS		$ 196,240
R000035055	403 N MARSHALL ST	BLK: 015, M.50 SE/4, ADDN: ORIGINAL TOWN, (AKA LOT 2B)	0.161	GONZALES DANIEL C		$ 14,000
R000035059	400 N MINEOLA ST	BLK: 015, S.50 SW/4, ADDN: ORIGINAL TOWN, (AKA S.50 OF LOT 3)	0.161	GONZALES DANIEL C		$ 15,220
R000058246	504 N FORT WORTH ST	BLK: 001, LOT: 009, ADDN: OLD PUEBLO PARK	0.115	GONZALES GEORGE M		$ 183,600
R000035079	308 N TERRELL ST	BLK: 019, LOT: 011, ADDN: ORIGINAL TOWN	0.161	GONZALES SAVINO EST		$ 78,770
R000025929	609 N MINEOLA ST	BLK: 021, M.50 OF NE/4, ADDN: HOMESTEAD	0.161	GONZALEZ LYDIA HUITRON		$ 148,430
R000211388	201 E KANSAS AV	BLK: 008, LOT: 001 E/2 , ADDN: HOMESTEAD SEC 4	0.108	GONZALEZ ROBERTO & NORMA		$ 96,390
R000025933	600 N TERRELL ST	BLK: 021, S.50 OF SW/4, ADDN: HOMESTEAD	0.161	GOOL GARY		$ 76,060
R000035100	305 N FORT WORTH ST	BLK: 022, LOT: 004, ADDN: ORIGINAL TOWN	0.161	GOOL GARY		$ 188,570
R000025993	607 N MARIENFELD ST	BLK: 031, S.50 OF NE/4, ADDN: HOMESTEAD	0.161	GRAHAM BUILDING LLC THE		$ 14,000
R000025996	0 N MARIENFELD ST	BLK: 031, N.50 OF SE/4, ADDN: HOMESTEAD	0.161	GRAHAM BUILDING LLC THE		$ 36,750
R000025994	604 N PECOS ST	BLK: 031, S.5 OF W.70 OF, ADDN: HOMESTEAD, NW/4 & N.50 OF SW/4	0.169	GRAHAM BUILDING LLC THE		$ 52,900
R000025995	511 W LOUISIANA AV	BLK: 031, W.70 OF NW/4 LESS S.5, ADDN: HOMESTEAD	0.233	GRAHAM BUILDING LLC THE		$ 53,290
R000025998	602 N PECOS ST	BLK: 031, N.56 OF S.100 OF SW/4, ADDN: HOMESTEAD	0.18	GRAHAM BUILDING LLC THE		$ 53,880
R000025999	600 N PECOS ST	BLK: 031, S.44 OF SW/4, ADDN: HOMESTEAD	0.141	GRAHAM BUILDING LLC THE		$ 54,500

Property ID	Street Address	Legal Description	Acres	Owner Name	Exemption	Taxable Value
R000025992	601 N MARIENFELD ST	BLK: 031, S.100 OF SE/4, ADDN: HOMESTEAD	0.321	GRAHAM BUILDING LLC THE		$ 3,723,110
R000014588	700 W LOUISIANA AV	BLK: 001, LOTS: 021 THRU 26, ADDN: COUNTRY CLUB, HEIGHTS	1.207	GREAT WESTERN DRLG		$ 2,127,200
R000025858	710 N COLORADO ST	BLK: 012, N.100 OF NW/4, ADDN: HOMESTEAD	0.321	GRIMES AMY ET AL		$ 184,040
R000052043	707 W INDIANA AV	BLK: 050, LOT: 001, ADDN: WEST END	0.161	GROVER DAVID B		$ 84,670
R000035555	0 S MARIENFELD ST	BLK: 092, LOT: 005, ADDN: ORIGINAL TOWN	0.161	GTP ACQUISITION PARTNERS II LLC		$ 19,690
R000035556	504 W KENTUCKY AV	BLK: 092, LOT: 006, ADDN: ORIGINAL TOWN	0.161	GTP ACQUISITION PARTNERS II LLC		$ 36,750
R000035057	406 N MINEOLA ST	BLK: 015,N.50 SW/4, ADDN: ORIGINAL TOWN, (AKA W/2 OF N.50 OF, 3 & E/2 OF N.50 OF 3)	0.16	GUAJARDO MARGARITA L		$ 13,940
R000035058	404 N MINEOLA ST	BLK: 015, SW/4(N50 OF S100), ADDN: ORIGINAL TOWN, (AKA N50 S100 OF 3)	0.161	GUAJARDO MARGARITA L		$ 14,000
R000035062	408 N MINEOLA ST	BLK: 015, S.50 NW/4, ADDN: ORIGINAL TOWN, (AKA S.50 OF LOT 4)	0.161	GUAJARDO MARGARITA L		$ 83,890
R000035074	307 N MINEOLA ST	BLK: 019, LOTS: 003 & 4 E/2, ADDN: ORIGINAL TOWN	0.161	GUERRERO VALERIO		$ 19,010
R000035280	321 E WALL ST	BLK: 051, LOTS: 010 THRU 12 E.100, ADDN: ORIGINAL TOWN, LESS RIGHT OF WAY	0.172	GUZMAN AGAPITO		$ 37,830
R000026096	0 N MAIN ST	BLK: 043, N.50 OF SW/4 &, ADDN: HOMESTEAD, S.20 OF NW/4	0.225	HARTMAN DOYLE		$ 42,260
R000026095	500 N MAIN ST	BLK: 043, S.100 OF SW/4, ADDN: HOMESTEAD	0.321	HARTMAN DOYLE		$ 383,490
R000041043	910 N LORAINE ST	BLK: 002, LOT: 017, ADDN: RICHARDSON ABILENE	0.158	HASTINGS TIMOTHY B		$ 13,800
R000041044	912 N LORAINE ST	BLK: 002, LOT: 018, ADDN: RICHARDSON ABILENE	0.158	HASTINGS TIMOTHY B		$ 13,800
R000041042	814 N LORAINE ST	BLK: 002, LOT: 016, ADDN: RICHARDSON ABILENE	0.158	HASTINGS TIMOTHY B		$ 66,950
R000035085	523 E ILLINOIS AV	BLK: 020, LOTS: (005 & 6) E.90, ADDN: ORIGINAL TOWN	0.207	HATFIELD DEREK W		$ 87,780
R000035086	509 E ILLINOIS AV	BLK: 020, LOTS: (005 & 6) W.50, ADDN: ORIGINAL TOWN	0.115	HATFIELD DEREK W		$ 103,270
R000035223	204 N DALLAS ST	BLK: 042, LOT: 008, ADDN: ORIGINAL TOWN	0.161	HBCO CORPORATION		$ 14,000
R000035224	206 N DALLAS ST	BLK: 042, LOT: 009, ADDN: ORIGINAL TOWN	0.161	HBCO CORPORATION		$ 14,000
R000052049	810 W KENTUCKY AV	BLK: 050, LOT: 6(69X126 SW COR), ADDN: WEST END	0.352	HENDERSON VERA P		$ 159,320
R000035076	607 E ILLINOIS AV	BLK: 019, LOTS: 003 THRU 6 W/2, ADDN: ORIGINAL TOWN	0.321	HERB ERNEST		$ 56,000
R000035075	617 E ILLINOIS AV	BLK: 019, LOTS: 005 & 6 E/2, ADDN: ORIGINAL TOWN	0.161	HERB ERNEST		$ 177,910
R000025942	606 N DALLAS ST	BLK: 022, LOT: 009, ADDN: HOMESTEAD	0.161	HEREDIA MARIA		$ 14,000
R000025825	802 N MAIN ST	BLK: 009, LOT: 008, ADDN: HOMESTEAD	0.161	HERNANDEZ AMABELIA		$ 157,320
R000025805	803 N FORT WORTH ST	BLK: 007, S.75 OF N.250 OF E/2, ADDN: HOMESTEAD	0.241	HERNANDEZ CRUZ		$ 125,810
R000025938	603 N TERRELL ST	BLK: 022, LOT: 005, ADDN: HOMESTEAD	0.161	HERNANDEZ EFRAIN		$ 141,010
R000035043	408 N DALLAS ST	BLK: 013, M.50 OF NW/4, ADDN: ORIGINAL TOWN	0.161	HERNANDEZ JERARDO		$ 14,000
R000203972	510 N DALLAS ST	BLK: 003, LOT: 003, ADDN: OLD PUEBLO PARK SEC 3	0.103	HERNANDEZ JOAQUINA		$ 142,090
R000025934	611 N TERRELL ST	BLK: 022, LOT: 001, ADDN: HOMESTEAD	0.161	HERNANDEZ JOHNNY		$ 14,000
R000205485	608 N FORT WORTH ST	BLK: 023, S 50' OF N 100' OF NW/4, ADDN: HOMESTEAD	0.161	HERNANDEZ JUAN AND LUZ		$ 185,590
R000041034	911 N MAIN ST	BLK: 002, LOT: 006, ADDN: RICHARDSON ABILENE	0.158	HERRERA FRANCISCO		$ 191,240
R000051889	903 W MISSOURI AV	BLK: 031, LOT: 003, ADDN: WEST END	0.161	HERRMANN KEVIN AND AMANDA		$ 33,690
R000051888	901 W MISSOURI AV	BLK: 031, LOTS: 001 & 2, ADDN: WEST END	0.321	HERRMANN KEVIN AND AMANDA		$ 116,250
R000216162	201 S C ST	BLK: 031, LOT: 013 , ADDN: WEST END, SEC: 22	0.479	HERRMANN KEVIN AND AMANDA		$ 926,010
R000035040	402 N DALLAS ST	BLK: 013, LOT: 003 S.55 OF N.100, ADDN: ORIGINAL TOWN	0.177	HIGGINS JAMEE L		$ 217,610
R000026076	507 N COLORADO ST	BLK: 040, S.50 OF NE/4, ADDN: HOMESTEAD	0.161	HOMESTEAD MANAGEMENT TR		$ 14,000
R000026077	511 N COLORADO ST	BLK: 040, N.50 OF NE/4, ADDN: HOMESTEAD	0.161	HOMESTEAD MANAGEMENT TR		$ 16,720
R000026082	505 N COLORADO ST	BLK: 040, N.50 OF SE/4, ADDN: HOMESTEAD	0.161	HOMESTEAD MANAGEMENT TR		$ 44,710
R000026078	509 N COLORADO ST	BLK: 040, S.50 OF N.100 OF NE/4, ADDN: HOMESTEAD	0.161	HOMESTEAD MANAGEMENT TR		$ 64,380
R000025945	600 N FORT WORTH ST	BLK: 023, S.50 OF W/2, ADDN: HOMESTEAD	0.161	HUBBARD BOLES		$ 14,000
R000025953	602 N FORT WORTH ST	BLK: 023, N.50 OF S.100 OF W/2, ADDN: HOMESTEAD	0.161	HUBBARD BOLES		$ 14,000
R000035101	0 N FORT WORTH ST	BLK: 022, LOT: 005, ADDN: ORIGINAL TOWN	0.161	HUGHES DAVID C		$ 19,690
R000035103	311 E ILLINOIS AV	BLK: 022, LOT: 006, ADDN: ORIGINAL TOWN	0.161	HUGHES DAVID C		$ 136,040
R000026122	600 W OHIO AV	BLK: 048, ALL, ADDN: HOMESTEAD	2.066	HUGHES DEVELOPMENT LLC		$ 1,176,110
R000035325	401 W TEXAS AV	BLK: 057, LOTS: 1; 2(E90) & 3, ADDN: ORIGINAL TOWN	0.367	INDUSPAD MIDLAND CHARMS LLC		$ 600,000
R000025954	308 E LOUISIANA AV	BLK: 024, E/2 ALL (AKA 1 THRU 6), ADDN: HOMESTEAD	0.964	JACKSON LEILA GHAI		$ 113,830
R000209690	701 N LORAINE ST	BLK: 012, LOT: 003, ADDN: HOMESTEAD, SEC 9	0.347	JAMESON FAMILY PARTNERSHIP LP		$ 30,250
R000035041	404 N DALLAS ST	BLK: 013, N.45 OF SW/4, ADDN: ORIGINAL TOWN	0.145	JARAMILLO JENNIFER		$ 205,620
R000026073	506 N MARIENFELD ST	BLK: 039, S/2 OF NW/4, ADDN: HOMESTEAD	0.241	JKL 20 LP		$ 24,750

Property ID	Street Address	Legal Description	Acres	Owner Name	Exemption	Taxable Value
R000035327	113 N BIG SPRING ST	BLK: 057, LOT: 004 S/2, ADDN: ORIGINAL TOWN	0.08	JLC LLC		$ 20,340
R000035326	111 N BIG SPRING ST	BLK: 057, LOT: 004 N/2, ADDN: ORIGINAL TOWN	0.08	JLC LLC		$ 116,890
R000035328	400 W WALL ST	BLK: 057, LOTS: 005 & 6, ADDN: ORIGINAL TOWN	0.321	JLC LLC		$ 1,269,530
R000025991	501 W LOUISIANA AV	BLK:031, N.100 OF NE/4, ADDN: HOMESTEAD	0.321	JOB RESIDENCES LLC		$ 570,990
R000109947	701 N WEATHERFORD ST	BLK: 015, LOT: 006, ADDN: HOMESTEAD SEC 3	0.172	JOHNSON LAVONDA E		$ 163,470
R000035033	410 N FORT WORTH ST	BLK: 012, N.50 OF NW/4, ADDN: ORIGINAL TOWN	0.161	JOHNSON ROSEMARY E		$ 85,530
R000025958	0 N BAIRD ST	BLK: 025, N/99.48 OF W/2, ADDN: HOMESTEAD	0.32	JONES JERRY		$ 27,850
R000025965	0 N WEATHERFORD ST	BLK: 025, M.50 OF SE/4, ADDN: HOMESTEAD	0.161	JONES JERRY L		$ 19,690
R000025964	0 N WEATHERFORD ST	BLK: 025, N.50 OF SE/4, ADDN: HOMESTEAD	0.161	JONES JERRY L		$ 19,690
R000025962	607 N WEATHERFORD ST	BLK: 025, S.53 OF NE/4, ADDN: HOMESTEAD	0.17	JONES JERRY L		$ 20,870
R000035139	500 W ILLINOIS AV	BLK: 029, E/2, ADDN: ORIGINAL TOWN	0.964	KAUFMAN KITTRIDGE LP ET AL		$ 28,605,080
R000052048	0 W INDIANA AV	BLK: 050, LOT: 005, ADDN: WEST END	0.193	KEA BUILDERS LLC		$ 33,600
R000052047	713 W INDIANA AV	BLK: 050, LOT: 004, ADDN: WEST END	0.138	KEA BUILDERS LLC		$ 596,020
R000051788	806 W MISSOURI AV	BLK: 015, LOT: 009, ADDN: WEST END	0.161	KIMBROUGH ENGINEERING COMPANY LLC		$ 50,750
R000051789	800 W MISSOURI AV	BLK: 015, LOTS: 010 THRU 12 S.75, ADDN: WEST END	0.258	KIMBROUGH ENGINEERING COMPANY LLC		$ 157,590
R000035367	401 W WALL ST	BLK: 063, LOTS: 001 THRU 3 & 11 &, ADDN: ORIGINAL TOWN, 12 E.35	0.631	KINCO PARTNERS LTD		$ 4,487,380
R000025960	609 N WEATHERFORD ST	BLK: 025, N97 OF NE/4, ADDN: HOMESTEAD	0.312	KMISS LLC		$ 78,810
R000035019	401 N FORT WORTH ST	BLK: 011, LOT: 002 S.100, ADDN: ORIGINAL TOWN	0.321	KMISS LLC		$ 129,960
R000025879	706 N WEATHERFORD ST	BLK: 016, S. 50 OF NW/4 & ALL OF, ADDN: HOMESTEAD, SW/4	0.643	KMISS LLC		$ 228,890
R000035345	619 W TEXAS AV	BLK: 059, LOT: 010 E.86 OF S.40, ADDN: ORIGINAL TOWN, & W.54 OF 10 THRU 12	0.265	L & L AUSTEX LLC		$ 696,030
R000025931	0 N MINEOLA ST	BLK: 021, M.50 OF SE/4, ADDN: HOMESTEAD	0.161	LAABS DAVIS		$ 14,000
R000058248	508 N FORT WORTH ST	BLK: 001, LOT: 011, ADDN: OLD PUEBLO PARK	0.115	LANGSTON RACHEL MACKENZIE		$ 190,590
R000025956	604 N WEATHERFORD ST	BLK: 024, ALL OF SW/4, ADDN: HOMESTEAD	0.482	LARSON HOLDINGS LLC		$ 193,340
R000025868	0 N MAIN ST	BLK: 014, S.50 OF S.100 OF NW/4, ADDN: HOMESTEAD	0.161	LAURA CASTILLO GROUP LLC		$ 14,000
R000025866	710 N MAIN ST	BLK: 014, N.50 OF NW/4, ADDN: HOMESTEAD	0.161	LAURA CASTILLO GROUP LLC		$ 14,000
R000025867	708 N MAIN ST	BLK: 014, N.50 OF S.100 OF NW/4, ADDN: HOMESTEAD	0.161	LAURA CASTILLO GROUP LLC		$ 14,560
R000035035	407 N TERRELL ST	BLK: 013, S/2 OF NE/4, ADDN: ORIGINAL TOWN	0.241	LEWALLEN GARCIA PARTNERS HOLDINGS LLC		$ 55,060
R000035038	405 N TERRELL ST	BLK: 013, N.50 OF SE/4, ADDN: ORIGINAL TOWN	0.161	LEWALLEN GARCIA PARTNERS HOLDINGS LLC		$ 216,780
R000035034	508 E TENNESSEE AV	BLK: 013, N/2 OF NE/4, ADDN: ORIGINAL TOWN	0.241	LEWALLEN-GARCIA PARTNERS		$ 21,000
R000025928	607 N MINEOLA ST	BLK: 021, S.50 OF NE/4, ADDN: HOMESTEAD	0.161	LEWIS LOVIE		$ 24,520
R000035044	410 N DALLAS ST	BLK: 013, N.50 OF NW/4, ADDN: ORIGINAL TOWN	0.161	LLENZA CHARLOTTE A		$ 14,000
R000047940	412 N TERRELL ST	BLK: 001, LOT: 001, ADDN: TENNESSEE SEC 1	0.257	LONE STAR FLOORING SERVICES LLC		$ 208,140
R000025976	107 W LOUISIANA AV	BLK: 027, E.70 OF N.100 OF NW/4, ADDN: HOMESTEAD	0.161	LONG SARAH M		$ 167,800
R000025809	802 N WEATHERFORD ST	BLK: 007, SW/4, ADDN: HOMESTEAD	0.482	LOPEZ ISABELLE TERESA		$ 324,210
R000034978	505 N TERRELL ST	BLK: 004, LOT: 002 N.50, ADDN: ORIGINAL TOWN	0.161	LOPEZ JASMINE F		$ 68,990
R000034957	503 N LAMESA RD	BLK: 002, M.50 OF SE/4 LESS, ADDN: ORIGINAL TOWN, TRI ON E SIDE	0.142	LOPEZ JESSE RODRIGUEZ		$ 12,360
R000034956	0 N LAMESA RD	BLK: 002, W PT OF N.50 OF SE/4, ADDN: ORIGINAL TOWN	0.112	LOPEZ JESSE RODRIGUEZ		$ 13,590
R000034959	501 N MARSHALL ST	BLK 002, S.50 OF SE/4, ADDN: ORIGINAL TOWN	0.161	LOPEZ JESSE RODRIGUEZ		$ 21,160
R000035061	410 N MINEOLA ST	BLK: 015, N.100 NW/4, ADDN: ORIGINAL TOWN, (AKA N.100 OF LOT 4)	0.321	LOPEZ REYMUNDO		$ 32,460
R000035188	200 N LORAINE ST	BLK: 037, LOTS: 007 THRU 12, ADDN: ORIGINAL TOWN	0.964	LORAINE AT TEXAS		$ 26,408,990
R000052050	802 W KENTUCKY AV	BLK: 050, LOT: 007, ADDN: WEST END	0.153	LOUIS E INVESMENTS LLC		$ 48,190
R000052051	800 W KENTUCKY AV	BLK: 050, LOT: 008, ADDN: WEST END	0.158	LOUIS E INVESMENTS LLC		$ 49,990
R000052046	711 W INDIANA AV	BLK: 050, LOT: 003, ADDN: WEST END	0.149	LOUIS E INVESMENTS LLC		$ 221,170
R000032444	1109 E FRONT ST	BLK: 014, LOT: 001, 002 & 003 E/2, ADDN: MOODY	0.294	LOZANO OSBALDO		$ 174,260
R000035382	112 S LORAINE ST	BLK: 065, LOTS: 022 THRU 24, ADDN: ORIGINAL TOWN	0.241	LS BRENTWAY LLC		$ 834,620
R000041030	923 N MAIN ST	BLK: 002, LOT: 001, ADDN: RICHARDSON ABILENE	0.158	LUEVANOS JOSE LUIS		$ 78,700
R000224149	405 N FORT WORTH ST	BLK:011, LOT:005, ADDN: ORIGINAL TOWN	0.16	LUPITA HOMES CONSTRUCTION		$ 13,900
R000026079	502 N BIG SPRING ST	BLK: 040, N.50 OF SW/4 &, ADDN: HOMESTEAD, S.75 OF NW/4	0.402	LWM COMMERCIAL PROPERTIES LTD		$ 450,400
R000051901	206 N A ST	BLK: 032, LOT: 004, ADDN: WEST END	0.177	M I S D	E	$ -
R000051900	204 S A ST	BLK: 032, LOT: 003, ADDN: WEST END	0.177	M I S D	E	$ -

Property ID	Street Address	Legal Description	Acres	Owner Name	Exemption	Taxable Value
R000035544	0 S PECOS ST	BLK: 090, LOTS: 004 THRU 6, ADDN: ORIGINAL TOWN, MASHBURN BLDG PKLT	0.482	M I S D	E	$ -
R000035545	615 W MISSOURI AV	BLK: 090, LOTS: 007 THRU 12 & PT, ADDN: ORIGINAL TOWN, CARRIZO ST ADJ TO W/SIDE, SCH: ADMINSTRATION BLDG	1.18	M I S D	E	$ -
R000026104	401 N COLORADO ST	BLK: 045, S.50 OF SE/4, ADDN: HOMESTEAD	0.161	M&M PROPERTIES		$ 299,320
R000035039	400 N DALLAS ST	BLK: 013, LOT: 003 S.50, ADDN: ORIGINAL TOWN	0.161	MADRID MARIA GONZALES		$ 67,170
R000025813	811 N WEATHERFORD ST	BLK: 008, N.50 OF NE/4, ADDN: HOMESTEAD	0.08	MAGALLANES CATRINA		$ 46,220
R000203113	811 N WEATHERFORD ST	BLK: 008, E/2 OF N50 OF NE/4, ADDN: HOMESTEAD	0.08	MAGALLANES ELIZABETH		$ 43,990
R000025817	818 N BAIRD ST	BLK: 008, N.200 OF W/2, ADDN: HOMESTEAD	0.643	MAGALLANES FRANCO		$ 100,250
R000035194	218 N MAIN ST	BLK: 038, LOT: 012 N/2, ADDN: ORIGINAL TOWN (UNIT # A)	0.027	MAIN STREET HOLDINGS AB LLC		$ 194,780
R000025967	605 N BAIRD ST	BLK:026, S.36 OF NE/4, ADDN: HOMESTEAD	0.116	MALDONADO DORA EST		$ 38,830
R000025966	108 E LOUISIANA AV	BLK: 026, N.114 OF NE/4, ADDN: HOMESTEAD	0.366	MALDONADO DORA EST		$ 125,100
R000025969	111 E MICHIGAN AV	BLK:026, SE/4, ADDN: HOMESTEAD	0.482	MALDONADO DORA EST		$ 223,870
R000032396	405 N LEE ST	BLK: 006, LOT: 004, ADDN: MOODY	0.161	MALDONADO JUAN A		$ 48,820
R000014585	718 W LOUISIANA AV	BLK: 001, LOTS: 16(E/2) & 17, ADDN: COUNTRY CLUB, HEIGHTS	0.241	MANULIK MATTHEW C		$ 107,620
R000041049	108 W KANSAS AV	BLK: 002, LOT: 023, ADDN: RICHARDSON ABILENE	0.161	MAROC INDUSTRIES LLC		$ 157,720
R000052044	709 W INDIANA AV	BLK: 050, LOT: 002 E.50, ADDN: WEST END	0.152	MARTIN WATER LABORATORIES INC		$ 167,830
R000052045		BLK: 050, LOT: 002 W.5, ADDN: WEST END	0.015	MARTIN WATER LABORATORIES INC.		$ 2,650
R000035031	406 N FORT WORTH ST	BLK: 012, LOT: 004 S.50, ADDN: ORIGINAL TOWN	0.161	MARTINEZ JAVIER		$ 14,000
R000025803	807 N FORT WORTH ST	BLK: 007, S.50 OF N.125 OF E/2, ADDN: HOMESTEAD	0.161	MARTINEZ JAVIER		$ 58,110
R000035025	406 E TENNESSEE AV	BLK: 012, LOT: 001 W.35 OF W/2, ADDN: ORIGINAL TOWN	0.121	MARTINEZ JAVIER		$ 149,310
R000035024	406 E TENNESSEE AV	BLK: 012, LOT: 001 E.35 OF W/2, ADDN: ORIGINAL TOWN	0.121	MARTINEZ PETRA		$ 10,500
R000032404	410 N LAMESA RD	BLK: 006, LOT: 012, ADDN: MOODY	0.161	MARTINEZ ROSALVA		$ 18,940
R000032403	408 N LAMESA RD	BLK: 006, LOT: 011, ADDN: MOODY	0.161	MARTINEZ ROSALVA		$ 19,750
R000025927	610 N TERRELL ST	BLK: 021, N.50 OF NW/4, ADDN: HOMESTEAD	0.161	MASTER MATILDE REYES		$ 24,940
R000051896	900 W INDIANA AV	BLK: 031, LOT: S.42.5 OF LOT 11, ADDN: WEST END, & LOT 12	0.098	MATS MAINTENANCE		$ 57,140
R000025841	700 N MARIENFELD ST	BLK: 010, S.50 OF W/2, ADDN: HOMESTEAD	0.161	MC ANDREW MIKE		$ 197,590
R000052052	705 W KENTUCKY AV	BLK: 051, LOTS: 1-4 & TRI(W/SD), ADDN: WEST END	0.738	MCCONAUGHEY GEORGANNE HURT		$ 273,080
R000035381	120 S LORAINE ST	BLK: 065, LOT: 021, ADDN: ORIGINAL TOWN	0.08	MEADOWS HENRY EDWARD JR ET AL		$ 14,970
R000035380	120 S LORAINE ST	BLK: 065, LOTS: 019 & 20, ADDN: ORIGINAL TOWN	0.161	MEADOWS HENRY EDWARD JR ET AL		$ 50,150
R000014584	724 W LOUISIANA AV	BLK: 001, LOTS: 14 & 15 & 16(W/2), ADDN: COUNTRY CLUB, HEIGHTS	0.402	MEISSNER MARTIN C REVO LIV TR EST		$ 194,540
R000025930	608 N TERRELL ST	BLK: 021, M.50 OF NW/4, ADDN: HOMESTEAD	0.161	MELENDEZ VIRGINIA		$ 160,170
R000034992	504 N WEATHERFORD ST	BLK: 006,N.150 & S.100 OF SW/4, ADDN: ORIGINAL TOWN	0.803	MIDLAND ACADEMY CHARTER SCHOOL	E	$ -
R000026097	500 N BAIRD ST	BLK: 044, ALL, ADDN: HOMESTEAD	2.066	MIDLAND ACADEMY CHARTER SCHOOL INC	E	$ -
R000025963	601 N WEATHERFORD ST	BLK: 025, S.50 OF SE/4, ADDN: HOMESTEAD	0.161	MIDLAND BUSINESS CENTER LLC		$ 19,690
R000025959	600 N BAIRD ST	BLK: 025, S.200.52 OF W/2, ADDN: HOMESTEAD	0.644	MIDLAND BUSINESS CENTER LLC		$ 986,820
R000026068	500 W TENNESSEE AV	BLK: 038, S.100 OF SE/4, ADDN: HOMESTEAD	0.321	MIDLAND CC DEVELOPMENT LLC		$ 56,000
R000026118	405 N MARIENFELD ST	BLK: 047, NE/4, ADDN: HOMESTEAD	0.482	MIDLAND CC DEVELOPMENT LLC		$ 1,235,760
R000035128	310 W ILLINOIS AV	BLK: 027, LOTS: 13A, ADDN: ORIGINAL TOWN, SEC 3	0.448	MIDLAND CHAMBER OF COMMERCE	E	$ -
R000035127	301 N COLORADO ST	BLK: 027, LOTS: 07A, ADDN: ORIGINAL TOWN, SEC 3	0.451	MIDLAND CHAMBER OF COMMERCE	E	$ -
R000034952	511 N LAMESA RD	BLK: 002, E/2 OF N50 OF NE/4, ADDN: ORIGINAL TOWN, REYES/SANCHEZ MEML PL, UNITY PLAZA	0.08	MIDLAND CITY OF	E	$ -
R000034952	511 N LAMESA RD	BLK: 002, E/2 OF N50 OF NE/4, ADDN: ORIGINAL TOWN, REYES/SANCHEZ MEML PL, UNITY PLAZA	0.08	MIDLAND CITY OF	E	$ -
R000034954	507 N LAMESA RD	BLK: 002, S.50 OF NE/4, ADDN: ORIGINAL TOWN	0.161	MIDLAND CITY OF	E	$ -
R000034953	507 N LAMESA RD	BLK: 002, M.50 OF NE/4, ADDN: ORIGINAL TOWN	0.161	MIDLAND CITY OF	E	$ -
R000034968	501 N MINEOLA ST	BLK: 003, LOTS: 005&6 AKA (S 2/3, ADDN: ORIGINAL TOWN, OF SE/4)	0.321	MIDLAND CITY OF	E	$ -
R000035187	0 N MAIN ST	BLK: 037, LOT: 006, ADDN: ORIGINAL TOWN	0.161	MIDLAND CITY OF	E	$ -
R000025980	0 N COLORADO ST	BLK: 028, W/2, ADDN: HOMESTEAD	0.964	MIDLAND CITY OF	E	$ -
R000035276	406 E TEXAS AV	BLK: 050, ALL, ADDN: ORIGINAL TOWN	0.985	MIDLAND CITY OF	E	$ -
R000017754	900 N BIG SPRING ST	BLK: 018, LOT: 002, ADDN: ELMWOOD SEC 2, VOLUNTEER PARK	0.501	MIDLAND CITY OF	E	$ -
R000217757	106 W WALL ST	BLK: 054, LOT:01A ADDN: ORIGINAL TOWN, SEC 14	1.514	MIDLAND CITY OF	E	$ -
R000217756	105 N MAIN ST	BLK: 054, LOT 02A: ADDN: ORIGINAL TOWN, SEC 14,	1.432	MIDLAND CITY OF	E	$ -
R000025979	601 N LORAINE ST	BLK: 028, E/2, ADDN: HOMESTEAD	0.964	MIDLAND CITY OF	E	$ -

Property ID	Street Address	Legal Description	Acres	Owner Name	Exemption	Taxable Value
R000035115	300 N LORAINE ST	BLK: 025, LOTS: 004 THRU 12, ADDN: ORIGINAL TOWN	1.446	MIDLAND CITY OF	E	$ -
R000035115	300 N LORAINE ST	BLK: 025, LOTS: 004 THRU 12, ADDN: ORIGINAL TOWN	1.446	MIDLAND CITY OF	E	$ -
R000217758	200 W WALL ST	BLK: 055, LOT: 001A, ADDN: ORIGINAL TOWN, SEC 14	2.066	MIDLAND CITY OF	E	$ -
R000035294	108 E TEXAS AV	BLK: 053, LT O1A, ADDN: ORIGINAL TOWN, SEC 7	0.368	MIDLAND CITY OF	E	$ -
R000035294	108 E TEXAS AV	BLK: 053, LT O1A, ADDN: ORIGINAL TOWN, SEC 7	0.368	MIDLAND CITY OF	E	$ -
R000035093	407 E ILLINOIS AV	BLK: 021, LOT: 006, ADDN: ORIGINAL TOWN	0.161	MIDLAND CO REPUBLICAN PARTY		$ 56,890
R000035181	105 W ILLINOIS AV	BLK: 037, LOT: 001, ADDN: ORIGINAL TOWN	0.161	MIDLAND COMMUNITY COLLEGE DISTRICT	E	$ -
R000034939	611 N LAMESA RD	BLK: 001, LOT: 001, ADDN: ORIGINAL TOWN	0.107	MIDLAND COMMUNITY DEVELOPMENT CORP	E	$ -
R000185323		COMMON AREA A &,PUBLIC UTILITY EASEMENT,ADDN: OLD PUEBLO PARK	0.837	MIDLAND COMMUNITY DEVELOPMENT CORP	E	$ -
R000034940	609 N LAMESA RD	BLK: 001, LOT: 002, ADDN: ORIGINAL TOWN	0.54	MIDLAND COMMUNITY DEVELOPMENT CORP	E	$ -
R000034940	609 N LAMESA RD	BLK: 001, LOT: 002, ADDN: ORIGINAL TOWN	0.54	MIDLAND COMMUNITY DEVELOPMENT CORP	E	$ -
R000035540	208 S MARIENFELD ST	BLK: 089, LOTS: 005 & 6, ADDN: ORIGINAL TOWN	0.321	MIDLAND COMMUNITY DEVELOPMENT CORP	E	$ -
R000035541	0 S PECOS ST	BLK: 089, LOTS: 007 THRU 9, ADDN: ORIGINAL TOWN	0.482	MIDLAND COMMUNITY DEVELOPMENT CORP	E	$ -
R000025878	701 N FORT WORTH ST	BLK: 016, E/2, ADDN: HOMESTEAD	0.964	MIDLAND COMMUNITY DEVELOPMENT CORP	E	$ -
R000035176	208 N COLORADO ST	BLK: 036, LOTS: 010 THRU 15 (NORTH, ADDN: ORIGINAL TOWN, PARTS) & 7 O/O LOT 9	0.273	MIDLAND COMMUNITY THEATER	E	$ -
R000025977	605 N MAIN ST	BLK: 027, N.50 OF SE/4, ADDN: HOMESTEAD	0.161	MIDLAND COUNTY	E	$ -
R000025810	801 N FORT WORTH ST	BLK: 007, S.50 OF E/2, ADDN: HOMESTEAD	0.161	MIDLAND COUNTY	E	$ -
R000025974	0 N MAIN ST	BLK:027, E/4, ADDN: HOMESTEAD	0.482	MIDLAND COUNTY	E	$ -
R000026094	514 N MAIN ST	BLK: 043, N.130 OF NW/4, ADDN: HOMESTEAD	0.418	MIDLAND COUNTY	E	$ -
R000185297	0 N BAIRD ST	BLK: 043, N 185.7' OF E/2,ADDN: HOMESTEAD	0.597	MIDLAND COUNTY	E	$ -
R000025971	0 N MAIN ST	BLK: 026, SW/4, ADDN: HOMESTEAD	0.482	MIDLAND COUNTY	E	$ -
R000025978	601 N MAIN ST	BLK: 027, S.100 OF SE/4, ADDN: HOMESTEAD	0.321	MIDLAND COUNTY	E	$ -
R000035565	200 W FRONT ST	BLK: 095, (51000 SQ FT), ADDN: ORIGINAL TOWN	1.171	MIDLAND COUNTY	E	$ -
R000035197	213 N WEATHERFORD ST	BLK: 039, LOT: 003 & N/2 OF LOT 4, ADDN: ORIGINAL TOWN	0.241	MIDLAND COUNTY	E	$ -
R000052206	800 W FRONT ST	BLK: 67 1/2, LOT: ALL, ADDN: WEST END	0.2	MIDLAND COUNTY	E	$ -
R000026088	509 N LORAINE ST	BLK: 041, N.100 OF E/2, ADDN: HOMESTEAD	0.321	MIDLAND COUNTY	E	$ -
R000035529	301 W MISSOURI AV	BLK: 087, LOTS: 1-5(LESS E/2), ADDN: ORIGINAL TOWN, OF 87 PLUS	0.964	MIDLAND COUNTY	E	$ -
R000035190	200 N MAIN ST	BLK: 038, LOT: 007 & S/2 OF LOT 8, ADDN: ORIGINAL TOWN	0.241	MIDLAND COUNTY	E	$ -
R000026092	500 N LORAINE ST	BLK: 042, ALL, ADDN: HOMESTEAD	2.066	MIDLAND COUNTY	E	$ -
R000025989	0 N COLORADO ST	BLK: 029, S.175 OF E/2, ADDN: HOMESTEAD	0.562	MIDLAND COUNTY		$ 110,260
R000035168	210 N BIG SPRING ST	BLK: 035, LOTS: 009 THRU 12, ADDN: ORIGINAL TOWN	0.643	MIDLAND DEVELOPMENT CORP	E	$ -
R000211781	211 N COLORADO ST	BLK: 035, LOT: 01A, ADDN: ORIGINAL TOWN, SEC 8	0.635	MIDLAND DEVELOPMENT CORP	E	$ -
R000035166	304 W TEXAS AV	BLK: 035, LOTS: 005 & 6, ADDN: ORIGINAL TOWN	0.321	MIDLAND DEVELOPMENT CORP	E	$ -
R000035209	303 E TEXAS AV	BLK: 040, LOTS: 007 THRU 11, ADDN: ORIGINAL TOWN	0.803	MIDLAND HABITAT FOR HUMANITY	E	$ -
R000035207	205 N FORT WORTH ST	BLK: 040, LOT: 004, ADDN: ORIGINAL TOWN	0.161	MIDLAND NAUTICAL SOCIETY LLC		$ 14,000
R000035206	207 N FORT WORTH ST	BLK: 040, LOT: 003, ADDN: ORIGINAL TOWN	0.161	MIDLAND NAUTICAL SOCIETY LLC		$ 14,000
R000035528	309 W MISSOURI AV	BLKS: 086; 087, 094 & 095, LOT: LESS 51000 SQ FT &, CLOSED STREETS & ALLEYS	4.854	MIDLAND SUPERBLOCK		$ 400,400
R000035528	309 W MISSOURI AV	BLKS: 086; 087, 094 & 095, LOT: LESS 51000 SQ FT &, CLOSED STREETS & ALLEYS	4.854	MIDLAND SUPERBLOCK		$ 400,400
R000035528	309 W MISSOURI AV	BLKS: 086; 087, 094 & 095, LOT: LESS 51000 SQ FT &, CLOSED STREETS & ALLEYS	4.854	MIDLAND SUPERBLOCK		$ 400,400
R000035204	312 E ILLINOIS AV	BLK: 040, LOT: 001 & 002, ADDN: ORIGINAL TOWN	0.321	MIDLAND YACHT CLUB LLC		$ 162,350
R000035178	214 N COLORADO ST	BLK: 036, LOT: 017 S/2, ADDN: ORIGINAL TOWN	0.08	MIDLAND YUCCA REALTY INC		$ 9,020
R000035179	216 N COLORADO ST	BLK: 036, LOT: 017 N/2, ADDN: ORIGINAL TOWN	0.08	MIDLAND YUCCA REALTY INC		$ 9,020
R000035177	212 N COLORADO ST	BLK: 036, LOT: 016, ADDN: ORIGINAL TOWN	0.161	MIDLAND YUCCA REALTY INC		$ 17,870
R000035180	220 N COLORADO ST	BLK: 036, LOT: 018, ADDN: ORIGINAL TOWN	0.161	MIDLAND YUCCA REALTY INC		$ 17,870
R000035172	207 N LORAINE ST	BLK: 036, LOT: 003, ADDN: ORIGINAL TOWN	0.161	MIDLAND YUCCA REALTY INC		$ 19,230
R000035171	209 N LORAINE ST	BLK: 036, LOT: 002, ADDN: ORIGINAL TOWN	0.161	MIDLAND YUCCA REALTY INC		$ 19,230
R000035170	211 N LORAINE ST	BLK: 036, LOT: 001, ADDN: ORIGINAL TOWN	0.161	MIDLAND YUCCA REALTY INC		$ 25,270
R000035173	200 W TEXAS AV	BLK: 036, LOTS: 004 & 5, ADDN: ORIGINAL TOWN	0.149	MIDLAND YUCCA REALTY INC		$ 30,860
R000035174	206 W TEXAS AV	BLK: 036, LOTS: 006 THRU 8 & E.18, ADDN: ORIGINAL TOWN, OF LOT 9	0.278	MIDLAND YUCCA REALTY INC		$ 58,580
R000035175	212 W TEXAS AV	BLK: 036, LOT: 009 W.7 & ALL OF, ADDN: ORIGINAL TOWN, LOTS 10 THRU 15 LESS N.PT	0.195	MIDLAND YUCCA REALTY INC		$ 3,429,494

Property ID	Street Address	Legal Description	Acres	Owner Name	Exemption	Taxable Value
R000035330	106 N MARIENFELD ST	BLK: 057, LOT: 009, ADDN: ORIGINAL TOWN	0.161	MIDLANDMC LLC		$ 88,500
R000025837	0 N MARIENFELD ST	BLK: 010, S.50 OF N.100 OF NW/4, ADDN: HOMESTEAD	0.161	MIDPAR LTD		$ 14,000
R000025833	710 N MARIENFELD ST	BLK: 010, N.50 OF NW/4, ADDN: HOMESTEAD	0.161	MIDPAR LTD		$ 14,000
R000025846	0 N MARIENFELD ST	BLK: 010, N.50 OF S.100 OF W/2, ADDN: HOMESTEAD	0.161	MIDPAR LTD		$ 19,690
R000025842	0 N MARIENFELD ST	BLK: 010, M.100 OF W/2, ADDN: HOMESTEAD	0.321	MIDPAR LTD		$ 39,380
R000026001	0 N MARIENFELD ST	BLK: 31A, LOT: 001A, ADDN: HOMESTEAD SEC 6	1.536	MIDPAR LTD		$ 83,640
R000025990	600 N MARIENFELD ST	BLK: 030, ALL, ADDN: HOMESTEAD	2.066	MIDPAR LTD		$ 34,470,266
R000035324	405 W TEXAS AV	BLK: 057, LOTS: 001 & 2 W.50, ADDN: ORIGINAL TOWN	0.115	MILLER ROBERT REECE		$ 29,060
R000035680		BLK: 112 .06 AC TR N.,SIDE OF FRONT & PECOS,ADDN: ORIGINAL TOWN	0.064	MISSOURI PACIFIC RR CO		$ 5,550
R000035548	610 W KENTUCKY AV	BLK: 091, LOTS: 007 THRU 9, ADDN: ORIGINAL TOWN	0.504	MJL CORP		$ 204,200
R000214854	901 N MAIN ST	BLK: 002, LOT: 008, ADDN: RICHARDSON ABILENE	0.158	MOCTEZUMA NICOLAS		$ 220,870
R000034970	500 N TERRELL ST	BLK: 003, SW/4 LESS S.75, ADDN: ORIGINAL TOWN	0.241	MONARREZ LAURA G		$ 138,760
R000025819	809 N BAIRD ST	BLK: 009, N.75 OF NE/4, ADDN: HOMESTEAD, (AKA 1 & N/2 OF 2)	0.241	MONTOYA ARMIDA		$ 98,820
R000026120	403 N MARIENFELD ST	BLK: 047, N.70 OF SE/4, ADDN: HOMESTEAD	0.225	MOORE WAYNE AND JO ANN	E	$ -
R000214344	810 N WEATHERFORD ST	BLK:007, LOT: 001 ADDN: HOMESTEAD, SEC 12	0.162	MORALES CESAR GUADALUPE		$ 241,970
R000017947	805 N LORAINE ST	BLK: 001, LOT: 003 E.115, ADDN: ESTES	0.132	MORALES EDUARDO ET AL		$ 242,880
R000025829	806 N MAIN ST	BLK: 009, LOT: 10(S50 OF NW/4), ADDN: HOMESTEAD	0.161	MORENO JOSE A		$ 175,450
R000025830	808 N MAIN ST	BLK: 009, LOT: 11(M50 OF NW/4), ADDN: HOMESTEAD	0.161	MORENO JOSE ANTONIO		$ 24,080
R000109946	703 N WEATHERFORD ST	BLK: 015, LOT: 005, ADDN: HOMESTEAD SEC 3	0.172	MORIN DANIEL ANTHONY		$ 163,470
R000025944	500 E LOUISIANA AV	BLK: 022, LOTS: 010;011 & 012, ADDN: HOMESTEAD	0.482	MR PROPERTY HOLDINGS LLC		$ 488,150
R000035378	223 W WALL ST	BLK: 065, LOT: 009 W.24.25 & ALL, ADDN: ORIGINAL TOWN, OF LOTS 10 THRU 12	0.296	MT223 LLC		$ 8,866,995
R000211116	400 N FORT WORTH ST	BLK: 012, LOT: 003 S.68, ADDN: ORIGINAL TOWN	0.219	MUNOZ PEDRO		$ 44,530
R000035030	400 N FORT WORTH ST	BLK: 012, LOT: 003 N.82, ADDN: ORIGINAL TOWN	0.263	MUNOZ PEDRO		$ 182,650
R000017667	600 W LOUISIANA AV	BLK: 001, LOT: 018, ADDN: ELMWOOD SEC 4	2.15	MY COMMUNITY FEDERAL CREDIT UNION		$ 2,500,000
R000109950	704 N BAIRD ST	BLK: 015, LOT: 009, ADDN: HOMESTEAD SEC 3	0.172	NAJERA AGAPITO JR		$ 155,360
R000035003	400 N MAIN ST	BLK: 009, S.100 OF W/2, ADDN: ORIGINAL TOWN	0.321	NAVIGATOR OIL & MINERALS INC		$ 166,560
R000051770	908 W WALL ST	BLK: 013, LOT: 7(S96) & 8(W46), ADDN: WEST END, LOT 8(LESS N47 OF W23)	0.236	NELSON ROY E		$ 163,170
R000034979	515 E TENNESSEE AV	BLK: 004, LOT: 002 S.100, ADDN: ORIGINAL TOWN	0.321	NLA LIVING TRUST		$ 113,930
R000035284	300 E TEXAS AV	BLK: 051, LOTS: 018 THRU 24, ADDN: ORIGINAL TOWN	0.562	NNN REIT LP		$ 285,500
R000035120	310 N COLORADO ST	BLK: 026, LOT: 011, ADDN: ORIGINAL TOWN	0.161	NOLLEY CAMILA O		$ 870,130
R000218744	504 N A ST	BLK: 035, LOT: 001 , ADDN: HOMESTEAD, SEC 16	1.33	NORTH A & TENNESSEE	E	$ -
R000035012	408 N BAIRD ST	BLK: 010, S.50 OF NW/4, ADDN: ORIGINAL TOWN	0.161	NORTH MAIN LLC		$ 19,690
R000035013	410 N BAIRD ST	BLK: 010, M.50 OF NW/4, ADDN: ORIGINAL TOWN	0.161	NORTH MAIN LLC		$ 19,690
R000035193	212 N MAIN ST	BLK: 038, LOTS: 10(N/2) & 11, ADDN: ORIGINAL TOWN	0.241	NORTH MAIN LLC		$ 626,210
R000035133	400 W ILLINOIS AV	BLK: 028, LOT: 003 S/2 & ALL OF, ADDN: ORIGINAL TOWN, LOTS 4 THRU 6	0.562	NORTH WATERFRONT-TEXAS LLC		$ 21,527,274
R000026111	410 W OHIO AV	BLK: 046, SW/4, ADDN: HOMESTEAD	0.482	O NEILL LEASING CO		$ 1,313,124
R000025822	801 N BAIRD ST	BLK: 009, LOT: 005 W/2 & ALL OF 6, ADDN: HOMESTEAD	0.241	OCHOA VICTOR &		$ 60,050
R000025821	805 N BAIRD ST	BLK: 009, LOT: 004 & N/2 OF LOT 5, ADDN: HOMESTEAD	0.241	OCHOA VICTOR &		$ 62,840
R000017945	202 W KANSAS AV	BLK: 001, LOT: 001 & 2 LESS W.69, ADDN: ESTES	0.229	OCHOA VICTOR R		$ 205,320
R000026067	0 N MARIENFELD ST	BLK: 038, N/3 OF SE/4, ADDN: HOMESTEAD	0.161	OGX REAL ESTATE LLC		$ 19,690
R000026109	400 N MARIENFELD ST	BLK: 046, NW/4, ADDN: HOMESTEAD	0.482	OGX REAL ESTATE LLC		$ 1,240,930
R000035282	301 E WALL ST	BLK: 051, LOTS: 013 THRU 15 W.75, ADDN: ORIGINAL TOWN	0.129	OK CARIOCA LLC		$ 98,640
R000058243	501 N DALLAS ST	BLK: 001, LOT: 006, ADDN: OLD PUEBLO PARK	0.112	OLIVAREZ NOEMI		$ 185,420
R000025869	701 N BAIRD ST	BLK:014, S.50 OF SE/4, ADDN: HOMESTEAD	0.161	OLIVAS MARTINA L		$ 96,370
R000025865	707 N BAIRD ST	BLK: 014, S.50 OF NE/4, ADDN: HOMESTEAD	0.161	OLIVAS SIXTO		$ 14,000
R000025871	703 N BAIRD ST	BLK 014, M.50 OF SE/4, ADDN: HOMESTEAD	0.161	OLIVAS SIXTO		$ 49,250
R000025870	705 N BAIRD ST	BLK: 014, N.50 OF SE/4, ADDN: HOMESTEAD	0.161	OLIVAS SIXTO		$ 57,370
R000041040	810 N LORAINE ST	BLK: 002, LOT: 014, ADDN: RICHARDSON ABILENE	0.158	ONTIVEROS SEVERIANA		$ 74,160
R000109944	707 N WEATHERFORD ST	BLK: 015, LOT: 003, ADDN: HOMESTEAD SEC 3	0.172	OUDEMS LATOYA DENISE		$ 187,250
R000025950	601 N DALLAS ST	BLK: 023, S.50 OF SE/4, ADDN: HOMESTEAD	0.161	PACHECO SANDRA C		$ 182,290

Property ID	Street Address	Legal Description	Acres	Owner Name	Exemption	Taxable Value
R000035131		BLK: 027, LOTS: 023 & 24, ADDN: ORIGINAL TOWN	0.161	PACHUCO LLC		$ 31,000
R000035130	316 N BIG SPRING ST	BLK: 027, LOT: 022, ADDN: ORIGINAL TOWN	0.08	PACHUCO LLC		$ 93,980
R000035216	401 E TEXAS AV	BLK: 041, LOTS: 007 & 8, ADDN: ORIGINAL TOWN	0.321	PATEL MOHANBHAI BALUBHAI ET AL		$ 115,548
R000034967	503 N MINEOLA ST	BLK: 003, LOT: 4(AKA N/3 OF SE/4), ADDN: ORIGINAL TOWN	0.161	PATILLO ARTHUR ETAL		$ 14,000
R000035119	308 N COLORADO ST	BLK: 026, LOT: 008 N/2 & ALL OF, ADDN: ORIGINAL TOWN, LOTS 9 & 10	0.402	PEGASUS BUILDING MNGT LLC		$ 668,150
R000109951	706 N BAIRD ST	BLK: 015, LOT: 010, ADDN: HOMESTEAD SEC 3	0.172	PEREZ NOEMI N		$ 157,940
R000051902	208 S A ST	BLK: 032, LOT: S 59.5 OF E/2, ADDN: WEST END	0.191	PERMIAN BASIN OFFICE PRODUCTS INC		$ 239,800
R000035186	203 N MAIN ST	BLK: 037, LOT: 005, ADDN: ORIGINAL TOWN	0.161	PERMIAN BASIN PUBLIC TELECOM INC	E	$ -
R000035346	617 W TEXAS AV	BLK: 059, LOT: 010 N.10 OF E.86, ADDN: ORIGINAL TOWN, & E 86 OF 11 & 12	0.217	PERMIAN COURT REPORTERS INC		$ 45,530
R000035338	605 W TEXAS AV	BLK: 059, LOTS: 001 & 2 W.50, ADDN: ORIGINAL TOWN	0.115	PERMIAN COURT REPORTERS INC		$ 64,140
R000035135	306 N MARIENFELD ST	BLK: 028, LOT: 010 S/2, ADDN: ORIGINAL TOWN	0.08	PERMIAN RESOURCES CORPORATION LLC		$ 9,840
R000035136	306 N MARIENFELD ST	BLK: 028, LOT: 010 N/2, ADDN: ORIGINAL TOWN	0.08	PERMIAN RESOURCES CORPORATION LLC		$ 9,840
R000035137	308 N MARIENFELD ST	BLK: 028, LOT: 011, ADDN: ORIGINAL TOWN	0.161	PERMIAN RESOURCES CORPORATION LLC		$ 19,730
R000035138	310 N MARIENFELD ST	BLK: 028, LOT: 012, ADDN: ORIGINAL TOWN	0.161	PERMIAN RESOURCES CORPORATION LLC		$ 75,890
R000035132	311 N BIG SPRING ST	BLK: 028, LOTS: 001 & 2 & N/2 OF 3, ADDN: ORIGINAL TOWN	0.402	PERMIAN RESOURCES CORPORATION LLC		$ 1,612,420
R000035134	300 N MARIENFELD ST	BLK: 028, LOTS: 007 THRU 9, ADDN: ORIGINAL TOWN	0.482	PERMIAN RESOURCES CORPORATION LLC		$ 19,948,339
R000035364	510 W MISSOURI AV	BLK: 062, LOT: 007 & S.20 OF 8, ADDN: ORIGINAL TOWN	0.225	PETROLEUM CLUB OF MIDLAND		$ 37,360
R000035365	107 S PECOS ST	BLK: 062, LOT: 008 N.30 & ALL OF, ADDN: ORIGINAL TOWN, LOTS 9 & 10	0.418	PETROLEUM CLUB OF MIDLAND		$ 113,750
R000035362	501 W WALL ST	BLK: 062, LOTS: 001 THRU 3, ADDN: ORIGINAL TOWN	0.482	PETROLEUM CLUB OF MIDLAND		$ 1,458,980
R000035363	106 S MARIENFELD ST	BLK: 062, LOTS: 004 THRU 6, ADDN: ORIGINAL TOWN	0.482	PETROLEUM CLUB OF MIDLAND INC		$ 250,430
R000058240	507 N DALLAS ST	BLK: 001, LOT: 003, ADDN: OLD PUBELO PARK	0.115	PINA LAURA		$ 175,960
R000035348	702 W WALL ST	BLK: 060, LOTS: 005 & 6, ADDN: ORIGINAL TOWN	0.275	POPS STATION LLC		$ 126,600
R000203138	507 N FORT WORTH ST	BLK: 002, LOT: 003, ADDN: OLD PUEBLO PARK, SEC 2	0.161	PRIETO PEDRO		$ 187,300
R000017755	805 N BIG SPRING ST	BLK: 018, LOT: 003, ADDN: ELMWOOD SEC 2	0.402	PROSPERITY BANK		$ 136,690
R000026103	405 N COLORADO ST	BLK: 045, N.50 OF SE/4, ADDN: HOMESTEAD	0.161	PURVIS HOLDINGS LLC		$ 14,000
R000026099	407 N COLORADO ST	BLK: 045, S.50 OF NE/4, ADDN: HOMESTEAD	0.161	PURVIS HOLDINGS LLC		$ 43,800
R000026102	406 N BIG SPRING ST	BLK: 045, S.50 OF NW/4, ADDN: HOMESTEAD	0.161	PURVIS HOLDINGS LLC		$ 1,478,796
R000035278	105 N FORT WORTH ST	BLK: 051, LOTS: 006 THRU 9, ADDN: ORIGINAL TOWN	0.321	QUADRIGA INVESTMENTS INC		$ 121,990
R000025812	809 N WEATHERFORD ST	BLK: 008, S.50 OF N.100 OF NE/4, ADDN: HOMESTEAD	0.161	QUAIN JACK ROBERT		$ 77,570
R000058242	503 N DALLAS ST	BLK: 001, LOT: 005, ADDN: OLD PUEBLO PARK	0.115	QUEZADA DAVID		$ 180,550
R000025831	810 N MAIN ST	BLK: 009, LOT: 12(N50 OF NW/4), ADDN: HOMESTEAD	0.161	RAMOS MARK		$ 14,000
R000203973	508 N DALLAS ST	BLK: 003, LOT: 004, ADDN: OLD PUEBLO PARK SEC 3	0.103	RAY ELLA L		$ 141,170
R000026035	709 W LOUISIANA AV	BLK: 033, LOT: N 150 FT OF W/2, ADDN: HOMESTEAD	0.482	REESE DEBBIE P		$ 495,690
R000051771	102 N C ST	BLK: 013, LOTS: 7(N47)& 8(NW47X23), ADDN: WEST END	0.079	REFLECTION MINISTRIES OF TEXAS INC		$ 50,610
R000035169		BLK: 036 EAST-WEST &,NORTH-SOUTH ALLEYS,ADDN: ORIGINAL TOWN	0.207	RENAISSANCE WEST JOINT		$ 25,310
R000220096	0 E KENTUCKY AV	BLK: 110, LOT 01A, ADDN: ORIGINAL TOWN, SEC: 19	2.038	RENEW LIFE CHURCH INC	E	$ -
R000035677	410 S PECOS ST	BLK: 111, LOT: 002 S.75 & ALL OF, ADDN: ORIGINAL TOWN, 3 & TRI OFF E.SIDE, OF BLK 51 WEST END, SUBDIVISION	0.562	RENEW LIFE CHURCH INC	E	$ -
R000035677	410 S PECOS ST	BLK: 111, LOT: 002 S.75 & ALL OF, ADDN: ORIGINAL TOWN, 3 & TRI OFF E.SIDE, OF BLK 51 WEST END, SUBDIVISION	0.562	RENEW LIFE CHURCH INC	E	$ -
R000034973	510 N TERRELL ST	BLK: 003, N.50 OF NW/4, ADDN: ORIGINAL TOWN	0.161	REYES LUIS		$ 101,770
R000034972	508 N TERRELL ST	BLK: 003, S.50 OF N 100 OF NW/4, ADDN: ORIGINAL TOWN	0.161	REYES LUIS ETAL		$ 70,610
R000025808	806 N WEATHERFORD ST	BLK:007, S.50 OF NW/4, ADDN: HOMESTEAD	0.161	REYES MATILDE		$ 157,900
R000034971	506 N TERRELL ST	BLK: 003, S.50 OF NW/4, ADDN: ORIGINAL TOWN	0.161	REYES MATILDE ETAL		$ 90,480
R000025936	607 N TERRELL ST	BLK: 022, LOT: 003, ADDN: HOMESTEAD	0.161	REYES MIQUELA		$ 98,510
R000109943	709 N WEATHERFORD ST	BLK: 015, LOT: 002, ADDN: HOMESTEAD SEC 3	0.172	REYES RAUL B		$ 165,000
R000041039	808 N LORAINE ST	BLK: 002, LOT: 013, ADDN: RICHARDSON ABILENE	0.142	REYES RITO RICARDO		$ 139,050
R000035125	315 N COLORADO ST	BLK: 027, LOT: 005, ADDN: ORIGINAL TOWN	0.08	REYNOLDS BROTHERS		$ 68,650
R000035124	317 N COLORADO ST	BLK: 027, LOT: 004, ADDN: ORIGINAL TOWN	0.08	REYNOLDS BROTHERS		$ 96,120
R000035126	313 N COLORADO ST	BLK: 027, LOT: 006, ADDN: ORIGINAL TOWN	0.08	REYNOLDS BROTHERS		$ 100,720
R000035562	0 S BIG SPRING ST	BLK: 093, LOT: 006, ADDN: ORIGINAL TOWN	0.126	RIMT PROPERTY LP		$ 26,650
R000035560	0 S BIG SPRING ST	BLK: 093, LOT: NORTH-SOUTH ALLEY, ADDN: ORIGINAL TOWN	0.138	RIMT PROPERTY LP		$ 28,880

Property ID	Street Address	Legal Description	Acres	Owner Name	Exemption	Taxable Value
R000035563	0 S MARIENFELD ST	BLK: 093, LOTS: 007 & 8, ADDN: ORIGINAL TOWN	0.321	RIMT PROPERTY LP		$ 39,380
R000035561	0 S BIG SPRING ST	BLK: 093, LOTS: 004 & 5, ADDN: ORIGINAL TOWN	0.253	RIMT PROPERTY LP		$ 52,940
R000035564	405 W INDIANA AV	BLK: 093, LOTS: 009 THRU 12, ADDN: ORIGINAL TOWN	0.643	RIMT PROPERTY LP		$ 57,750
R000035559	0 S BIG SPRING ST	BLK: 093, LOTS: 001 THRU 3, ADDN: ORIGINAL TOWN	0.379	RIMT PROPERTY LP		$ 79,410
R000035121	312 N COLORADO ST	BLK: 026, LOT: 012, ADDN: ORIGINAL TOWN	0.161	RITA & SMA PROPERTIES INC		$ 19,690
R000035123	319 N COLORADO ST	BLK: 027, LOTS: 002 & 3, ADDN: ORIGINAL TOWN	0.161	RITA & SMA PROPERTIES INC		$ 176,430
R000026091	0 W MICHIGAN AV	BLK: 041, N.60 OF W/2, ADDN: HOMESTEAD	0.193	RNCS PROPERTY AND SERVICES LLC		$ 44,260
R000216335	505 N LORAINE ST	BLK: 041, LOT: 001 , ADDN: HOMESTEAD, 13TH	0.321	RNCS PROPERTY AND SERVICES LLC		$ 1,016,120
R000026064	507 N MARIENFELD ST	BLK: 038, NE/4, ADDN: HOMESTEAD	0.482	ROBINSON BUILDING LLC		$ 2,881,081
R000034980	501 E TENNESSEE AV	BLK: 004, W.70 OF S.75 OF W/2, ADDN: ORIGINAL TOWN	0.121	ROBLES OSCAR		$ 10,500
R000034981	505 E TENNESSEE AV	BLK: 004, E.70 OF S.75 OF W/2, ADDN: ORIGINAL TOWN	0.121	ROBLES OSCAR		$ 77,890
R000035196	209 N WEATHERFORD ST	BLK: 039, LOT: 001 & 2, ADDN: ORIGINAL TOWN	0.321	ROCK HOUSE RESIDENTIAL PROP LTD		$ 39,380
R000035214	300 E ILLINOIS AV	BLK: 040, LOT: 012 W 85, ADDN: ORIGINAL TOWN	0.098	RODEA MARTIN T		$ 45,790
R000041052	803 N MAIN ST	Lot: 002, Blk: 001, Subd: ATRIUM, BLK: 001, LOT: 002, ADDN: ATRIUM	0.149	RODRIGUEZ ANDREA E		$ 150,060
R000032394	409 N LEE ST	BLK: 006, LOT: 002, ADDN: MOODY	0.161	RODRIGUEZ CATARINA NICOLE		$ 236,700
R000035072	311 N MINEOLA ST	BLK: 019, LOT: 001, ADDN: ORIGINAL TOWN	0.161	RODRIQUEZ FELIPE		$ 29,910
R000035073	309 N MINEOLA ST	BLK: 019, LOT: 002, ADDN: ORIGINAL TOWN	0.161	RODRIQUEZ FELIPE		$ 191,880
R000035029	401 N DALLAS ST	BLK: 012, S.50 OF SE/4, ADDN: ORIGINAL TOWN	0.161	RODRIQUEZ FELIPE EST		$ 49,300
R000025832	709 N BIG SPRING ST	BLK: 010, LOT: NE/4, ADDN: HOMESTEAD	0.482	ROSE HOLDINGS LTD		$ 203,910
R000051787	808 W MISSOURI AV	BLK: 015, LOT: 008, ADDN: WEST END	0.161	ROYS NANCY		$ 111,180
R000051892	908 W INDIANA AV	BLK: 031, LOTS: 007 & 8, ADDN: WEST END	0.321	RSVS LLC		$ 218,800
R000026046	600 N A ST	BLK: 034, LOT: 005 & W/2 OF LOT 6, ADDN: HOMESTEAD	0.186	RUBIO JONATHAN J		$ 79,870
R000035026	411 N DALLAS ST	BLK: 012, LOT: 001 E/2, ADDN: ORIGINAL TOWN	0.241	RUIZ PEDRO		$ 21,000
R000035050	406 N TERRELL ST	BLK: 014, LOT: 004 SOUTH PART &, ADDN: ORIGINAL TOWN, NW/CORNER LOT 3	0.166	RUIZ RAFAEL E		$ 49,230
R000035051	410 N TERRELL ST	BLK: 014, LOT: 004 NORTH PART, ADDN: ORIGINAL TOWN	0.132	RUIZ RAFAEL E		$ 66,810
R000035032	408 N FORT WORTH ST	BLK: 012, S.50 OF N.100 OF NW/4, ADDN: ORIGINAL TOWN	0.161	RUTLEDGE MELYSSA		$ 100,850
R000026098	409 N COLORADO ST	BLK: 045, S/2 OF NE/4 LESS S.50, ADDN: HOMESTEAD	0.08	S B W CORPORATION		$ 7,880
R000026100	411 N COLORADO ST	BLK: 045, N/2 OF NE/4, ADDN: HOMESTEAD	0.241	S B W CORPORATION		$ 23,750
R000203137	509 N FORT WORTH ST	BLK: 002, LOT: 002, ADDN: OLD PUEBLO PARK, SEC 2	0.161	SAENZ JESSICA MADRID		$ 187,300
R000058249	510 N FORT WORTH ST	BLK: 001, LOT: 012, ADDN: OLD PUEBLO PARK	0.112	SAENZ LEROY		$ 186,740
R000203974	506 N DALLAS ST	BLK: 003, LOT: 005, ADDN: OLD PUEBLO PARK SEC 3	0.103	SAIZ ERNESTO		$ 142,090
R000203970	514 N DALLAS ST	BLK: 003, LOT: 001, ADDN: OLD PUEBLO PARK SEC 3	0.13	SALCIDO FRANCISCO		$ 230,240
R000034989	501 N FORT WORTH ST	BLK: 06, S.50 OF SE/4, ADDN: ORIGINAL TOWN	0.161	SAMANIEGO ANITA V		$ 14,000
R000034988	503 N FORT WORTH ST	BLK: 006, N.50 OF SE/4, ADDN: ORIGINAL TOWN	0.161	SAMANIEGO ANITA V		$ 60,910
R000032402	406 N LAMESA RD	BLK: 006, LOT: 010, ADDN: MOODY	0.161	SANCHEZ JUAN		$ 14,000
R000032401	404 N LAMESA RD	BLK: 006, LOT: 009 LESS 350, ADDN: MOODY	0.153	SANCHEZ JUAN		$ 50,840
R000032400	402 N LAMESA RD	BLK: 006, LOT: 008 LESS 644, ADDN: MOODY	0.146	SANCHEZ JUAN J		$ 12,710
R000052056	710 W WASHINGTON AV	BLK: 051, LOTS: 5 THRU 7, ADDN: WEST END	0.513	SANCHEZ OSCAR O		$ 203,000
R000041033	913 N MAIN ST	BLK: 002, LOT: 005, ADDN: RICHARDSON ABILENE	0.158	SANCHEZ VELASCO MIGUEL A		$ 252,560
R000025946	603 N DALLAS ST	BLK: 023, M.50 OF SE/4, ADDN: HOMESTEAD	0.161	SANDATE OSCAR MENCHACA		$ 215,950
R000035208	317 E TEXAS AV	BLK: 040, LOTS: 005 & 6, ADDN: ORIGINAL TOWN	0.321	SCHMID 5 HOLDINGS LLC		$ 124,820
R000051784	0 W WALL ST	BLK: 015, LOT: 003 W.20 & ALL OF, ADDN: WEST END, LOT 4	0.225	SCYTHIAN LTD		$ 71,050
R000051785	0 W WALL ST	BLK: 015, LOTS: 005 & 6, ADDN: WEST END	0.321	SCYTHIAN LTD		$ 103,780
R000051783	801 W WALL ST	BLK: 015, LOTS: 001 & 2 & E.30 OF, ADDN: WEST END, LOT 3	0.418	SCYTHIAN LTD		$ 194,850
R000035659	401 S MARIENFELD ST	BLK: 109, LOT: 01A, ADDN: ORIGINAL TOWN, SEC 6	1.408	SHH ENTERPRISES LLC		$ 2,047,190
R000051772	902 W WALL ST	BLK: 013, LOT: 013, ADDN: WEST END SEC 9	0.153	SHULL HAROLD		$ 77,240
R000026117	509 W TENNESSEE AV	BLK: 047, E.48 OF W.94 OF, ADDN: HOMESTEAD, N.100 OF NW/4	0.11	SIGNAL MARIENFELD LLC		$ 9,600
R000026116	0 W TENNESSEE AV	BLK: 047, W.46 OF N.100 OF NW/4, ADDN: HOMESTEAD	0.106	SIGNAL MARIENFELD LLC		$ 24,900
R000035008	401 N WEATHERFORD ST	BLK: 010, LOT: 002, ADDN: ORIGINAL TOWN	0.482	SIGNAL WEATHERFORD LLC		$ 139,740
R000035552	310 S PECOS ST	BLK: 091, LOTS: 010 THRU 12 S/2, ADDN: ORIGINAL TOWN	0.241	SIMS LARRY		$ 53,510

Property ID	Street Address	Legal Description	Acres	Owner Name	Exemption	Taxable Value
R000035551	306 S PECOS ST	BLK: 091, LOTS: 010 THRU 12 N/2, ADDN: ORIGINAL TOWN	0.241	SIMS LARRY		$ 94,740
R000215329	400 S PECOS ST	BLK: 111, LOT: 01A, ADDN: ORIGINAL TOWN, SEC 13	0.449	SIMS LARRY D		$ 218,700
R000025984	604 N BIG SPRING ST	BLK: 029, S.50 OF M.100 OF W/2, ADDN: HOMESTEAD	0.161	SIR MANAGEMENT LLC		$ 17,200
R000025982	0 N BIG SPRING ST	BLK: 029, N.50 OF M.100 OF W/2, ADDN: HOMESTEAD	0.161	SIR MANAGEMENT LLC		$ 234,490
R000025968	608 N MAIN ST	BLK:026, S/2 OF NW/4, ADDN: HOMESTEAD	0.241	SIX O EIGHT N MAIN		$ 1,078,297
R000025863	711 N BAIRD ST	BLK: 014, N.50 OF NE/4, ADDN: HOMESTEAD	0.161	SMITH RONNIE D		$ 14,000
R000025864	709 N BAIRD ST	BLK: 014, M.50 OF NE/4, ADDN: HOMESTEAD	0.161	SMITH RONNY D		$ 14,000
R000051790	106 S A ST	BLK: 015, LOTS: 010 THRU 12 N.65, ADDN: WEST END	0.224	SOSA ONE LLC		$ 145,280
R000035351	103 S A ST	BLK: 060 1/2, LOTS: 002;3 & 4, ADDN: ORIGINAL TOWN	0.218	SOSA ONE LLC		$ 160,550
R000051895	204 S B ST	BLK: 031, LOT: N 97.5 OF LOT 11, ADDN: WEST END, & LOT 12	0.224	SOUTH JK LLC		$ 155,050
R000035539	0 N MARIENFELD ST	BLK: 089, LOT: 004, ADDN: ORIGINAL TOWN	0.161	SOUTHWESTERN BELL TELEPHONE CO		$ 19,690
R000035538	0 N MARIENFELD ST	BLK: 089, LOT: 003, ADDN: ORIGINAL TOWN	0.161	SOUTHWESTERN BELL TELEPHONE CO		$ 19,690
R000035537	0 N MARIENFELD ST	BLK: 089, LOTS: 001 & 2, ADDN: ORIGINAL TOWN	0.321	SOUTHWESTERN BELL TELEPHONE CO		$ 39,380
R000026119	507 W TENNESSEE AV	BLK: 047, E.46 OF N.100 OF, ADDN: HOMESTEAD	0.106	SPENCER GREGORY S		$ 215,490
R000035105	301 E ILLINOIS AV	BLK: 022, LOTS: 007 & 8, ADDN: ORIGINAL TOWN	0.321	STACKING STONES LLC		$ 143,740
R000051792	908 W MISSOURI AV	BLK: 016, LOTS: 007 & 8 S/2, ADDN: WEST END	0.161	STAGG 901 LTD		$ 50,750
R000051793		BLK: 016, LOTS: 007 & 8 N/2 & ALL, ADDN: WEST END, OF LOTS 9 THRU 12	0.803	STAGG 901 LTD		$ 253,750
R000051791	901 W WALL ST	BLK: 016, LOTS: 001 THRU 6, ADDN: WEST END	0.964	STAGG 901 LTD		$ 6,406,495
R000035375	201 W WALL ST	BLK: 065, LOTS: 001 & 2 & E.23.5, ADDN: ORIGINAL TOWN, OF LOT 3	0.219	STAGG INVESTMENT III LTD		$ 7,486,443
R000035376	203 W WALL ST	BLK: 065, LOTS: 3(W1.5); 4-6 &, ADDN: ORIGINAL TOWN, LOT 7(E24.25)	0.301	STAGG INVESTMENT III LTD		$ 11,988,486
R000025804	805 N FORT WORTH ST	BLK: 007, N.50 OF S.125 OF N.250, ADDN: HOMESTEAD, OF E/2	0.161	STATHAKOS NIKCOAL		$ 93,500
R000058247	506 N FORT WORTH ST	BLK: 001, LOT: 010, ADDN: OLD PUEBLO PARK	0.115	STENSON JACE		$ 175,720
R000035554	302 S MARIENFELD ST	BLK: 092, LOTS: 002 THRU 4, ADDN: ORIGINAL TOWN	0.482	STROOPE BEVERLY MAXCINE		$ 244,920
R000025955	606 N WEATHERFORD ST	BLK: 024, NW/4, ADDN: HOMESTEAD	0.482	SWEET COMMERCIAL PROPERTIES LLC		$ 565,900
R000025975	600 N LORAINE ST	BLK: 027, S.200 OF W/2, ADDN: HOMESTEAD	0.643	T J J C K LLC		$ 410,490
R000025855	700 N BIG SPRING ST	BLK: 011, S.90 OF SW/4, ADDN: HOMESTEAD	0.289	TAING HANG KHEANG		$ 135,940
R000035155	500 W TEXAS AV	BLKS: 032 & 33, ALL, ADDN: ORIGINAL TOWN	4.684	TALL CITY TOWERS LLC		$ 95,808,384
R000025935	609 N TERRELL ST	BLK: 022, LOT: 002, ADDN: HOMESTEAD, (AKA S.50 N.100 OF E/2)	0.161	TARANGO SAMUEL EST		$ 46,870
R000025827	804 N MAIN ST	BLK: 009, LOT: 009, ADDN: HOMESTEAD	0.161	TEAL JUDY A		$ 151,290
R000035339	601 W TEXAS AV	BLK: 059, LOTS: 001 & 2 E.90, ADDN: ORIGINAL TOWN	0.207	TEJAS AVENUE LLC		$ 416,370
R000035015	411 N FORT WORTH ST	BLK: 011, N.95 OF NE/4 LESS W 50, ADDN: ORIGINAL TOWN	0.196	TENNON HATTIE		$ 72,900
R000035016	306 E TENNESSEE AV	BLK: 011, W.50 OF N.95 OF NE/4, ADDN: ORIGINAL TOWN	0.109	TENNON HATTIE		$ 81,590
R000035108	308 N WEATHERFORD ST	BLK: 022, LOT: 011 S.25, ADDN: ORIGINAL TOWN	0.08	TEXAS ARMS OF LOVE INC	E	$ -
R000035106	304 N WEATHERFORD ST	BLK: 022, LOT: 009, ADDN: ORIGINAL TOWN	0.161	TEXAS ARMS OF LOVE INC	E	$ -
R000035109	310 N WEATHERFORD ST	BLK: 022, LOTS: 11(N25) & 12(S5), ADDN: ORIGINAL TOWN	0.096	TEXAS ARMS OF LOVE INC	E	$ -
R000035107	306 N WEATHERFORD ST	BLK: 022, LOT: 010, ADDN: ORIGINAL TOWN	0.161	TEXAS ARMS OF LOVE INC	E	$ -
R000035217	204 N FORT WORTH ST	BLK: 041, LOTS: 009 THRU 12, ADDN: ORIGINAL TOWN	0.643	TEXAS ARMS OF LOVE INC		$ 35,000
R000035070	711 E FRONT ST	BLK: 018, LOTS: 001 THRU 4, ADDN: ORIGINAL TOWN	0.62	TEXAS BROTHERS LLC		$ 156,190
R000035071	703 E FRONT ST	BLK: 018, LOTS: 005 THRU 10, ADDN: ORIGINAL TOWN	0.912	TEXAS BROTHERS LLC		$ 637,670
R000035149	0 N CARRIZO ST	BLK: 031, LOT: 002, ADDN: ORIGINAL TOWN	0.161	TEXAS TEN LTD		$ 14,000
R000035148	211 N CARRIZO ST	BLK: 031, LOT: 001, ADDN: ORIGINAL TOWN	0.161	TEXAS TEN LTD		$ 14,000
R000051904	808 W INDIANA AV	BLK: 032, LOT: 5 & 6 S.160.1 OF W/2, ADDN: WEST END	0.515	TEXLAND 1031 HOLDINGS LLC		$ 634,880
R000035014	412 N BAIRD ST	BLK: 010, N.50 OF NW/4, ADDN: ORIGINAL TOWN	0.161	THB BRENTWAY LLC		$ 36,750
R000035546	300 S PECOS ST	BLK: 091, LOTS: 001 THRU 3, ADDN: ORIGINAL TOWN	0.482	THB BRENTWAY LLC		$ 77,830
R000035283	108 N WEATHERFORD ST	BLK: 051, LOTS: 016 & 17, ADDN: ORIGINAL TOWN	0.161	THE OLD WAREHOUSE LLC		$ 57,730
R000035028	403 N DALLAS ST	BLK: 012, N.100 OF SE/4, ADDN: ORIGINAL TOWN	0.321	THRIFTY STORAGE INC		$ 116,090
R000225624	0 E ILLINOIS AV	BLK: 023, LOT: 013, ADDN: ORIGINAL TOWN SEC 24	0.97	THRIVING UNITED INC		$ 479,040
R000035111	201 E ILLINOIS AV	BLK: 023, LOTS: 7-12, ADDN: ORIGINAL TOWN	1.01	THRIVING UNITED INC		$ 1,692,380
R000035182	219 N MAIN ST	BLK: 037, LOT: 002 N/2, ADDN: ORIGINAL TOWN	0.08	THUNDERBOLT PETROLEUM COMPANY LLC		$ 118,140
R000058245	502 N FORT WORTH ST	BLK: 001, LOT: 008, ADDN: OLD PUEBLO PARK	0.115	TIJERINA ROSA LINDA		$ 177,630

Property ID	Street Address	Legal Description	Acres	Owner Name	Exemption	Taxable Value
R000035118	218 W ILLINOIS AV	BLK: 026, LOT: 007 & S/2 OF LOT 8, ADDN: ORIGINAL TOWN	0.241	TIN KEY 218 LLC		$ 393,560
R000035191	206 N MAIN ST	BLK: 038, LOT: 008 N/2 & S.9 OF 9, ADDN: ORIGINAL TOWN	0.109	TITLE TECHNOLOGIES INC		$ 279,640
R000032393	411 N LEE ST	BLK: 006, LOT: 001, ADDN: MOODY	0.161	TORRES GILBERTO ANTONIO		$ 242,520
R000034974	500 N TERRELL ST	BLK: 003, S.75 OF SW/4, ADDN: ORIGINAL TOWN	0.241	TOVAR EMILIO &		$ 81,110
R000035553	300 S MARIENFELD ST	BLK: 092, LOT: 001, ADDN: ORIGINAL TOWN	0.161	TRINITY RHEMA INTERNATIONAL CHURCH		$ 36,750
R000035157	400 W TEXAS AV	BLK: 034, LOTS: 004 & N/2 OF 005, ADDN: ORIGINAL TOWN	0.241	TUNA INVESTMENT LLC		$ 279,243
R000203779	400 W TEXAS AV	BLK: 034, LTS:005(S/2) & ALL OF 006, ADDN: ORIGINAL TOWN	0.241	TUNA INVESTMENT LLC		$ 7,507,459
R000034990	500 N WEATHERFORD ST	BLK 006, .50 OF SW/4, ADDN: ORIGINAL TOWN	0.161	TYLER REAL ESTATE LLC		$ 14,000
R000026080	501 N COLORADO ST	BLK: 040, S.100 OF SE/4, ADDN: HOMESTEAD	0.321	TYNER REAL ESTATE LLC		$ 64,450
R000035289	0 N WEATHERFORD ST	BLK: 052, LOT: 008, ADDN: ORIGINAL TOWN	0.08	UNITED STATES OF	E	$ -
R000035287	0 N WEATHERFORD ST	BLK: 052, LOT: 004, ADDN: ORIGINAL TOWN	0.08	UNITED STATES OF	E	$ -
R000035286	0 N WEATHERFORD ST	BLK: 052, LOT: 003, ADDN: ORIGINAL TOWN	0.08	UNITED STATES OF	E	$ -
R000035292	0 N BAIRD ST	BLK: 052, LOTS: 017 & 18, ADDN: ORIGINAL TOWN	0.161	UNITED STATES OF	E	$ -
R000035285	0 N WEATHERFORD ST	BLK: 052, LOTS: 001 & 2, ADDN: ORIGINAL TOWN	0.161	UNITED STATES OF	E	$ -
R000035288	0 N WEATHERFORD ST	BLK: 052, LOTS: 005 THRU 7, ADDN: ORIGINAL TOWN	0.241	UNITED STATES OF	E	$ -
R000035291	0 N BAIRD ST	BLK: 052, LOTS: 013 THRU 16, ADDN: ORIGINAL TOWN	0.321	UNITED STATES OF	E	$ -
R000035290	0 N WEATHERFORD ST	BLK: 052, LOTS: 009 THRU 12, ADDN: ORIGINAL TOWN	0.321	UNITED STATES OF	E	$ -
R000035293	0 N BAIRD ST	BLK: 052, LOTS: 019 THRU 24, ADDN: ORIGINAL TOWN	0.482	UNITED STATES OF	E	$ -
R000035386	100 E WALL ST	BLKS: 67;68;, 69 & 84, ADDN: ORIGINAL TOWN	5.125	UNITED STATES OF	E	$ -
R000025948	607 N DALLAS ST	BLK: 023, S.50 OF NE/4, ADDN: HOMESTEAD	0.161	URBINA JOSUE &		$ 188,140
R000035037	403 N TERRELL ST	BLK: 013, M.50 OF SE/4, ADDN: ORIGINAL TOWN	0.161	VALLE ARTHURO		$ 30,280
R000035036	401 N TERRELL ST	BLK: 013, S.50 OF SE/4, ADDN: ORIGINAL TOWN	0.161	VALLE ARTURO		$ 24,140
R000035054	405 N MARSHALL ST	BLK: 015, N.50 SE/4 (AKA 2A), ADDN: ORIGINAL TOWN, & S.50 NE/4 (AKA 1C)	0.321	VALLIN OSCAR		$ 28,000
R000035053	409 N MARSHALL ST	BLK: 015, M.50 NE/4, ADDN: ORIGINAL TOWN, (AKA LOT 1B)	0.161	VALLIN OSCAR M		$ 14,000
R000035052	411 N MARSHALL ST	BLK: 015, N.50 NE/4, ADDN: ORIGINAL TOWN, (AKA LOT 1A)	0.161	VALLIN OSCAR M		$ 14,000
R000035129	312 N BIG SPRING ST	BLK: 027, LOTS: 019 THRU 21, ADDN: ORIGINAL TOWN	0.241	VANDERGRIFF BUILDING MANAGEMENT LLC		$ 326,020
R000034964	509 N MINEOLA ST	BLK: 003, LOT: 001, ADDN: ORIGINAL TOWN	0.161	VARELA JUAN V &		$ 79,910
R000035042	406 N DALLAS ST	BLK: 013, S.50 OF NW/4, ADDN: ORIGINAL TOWN	0.161	VARELA MARCO		$ 60,180
R000025882	710 N WEATHERFORD ST	BLK: 016, N.100 OF W/2, ADDN: HOMESTEAD	0.321	VASQUEZ MARIO		$ 238,910
R000025941	604 N DALLAS ST	BLK: 022, LOT: 008, ADDN: HOMESTEAD	0.161	VEGA RICARDO		$ 186,580
R000035084	305 N TERRELL ST	BLK: 020, LOT: 004, ADDN: ORIGINAL TOWN	0.161	VELA JOE		$ 15,730
R000035218	508 E ILLINOIS AV	BLK: 042, LOT: 001, ADDN: ORIGINAL TOWN	0.161	VELOZ GEORGE MANAGEMENT LP		$ 134,700
R000034977	507 N TERRELL ST	BLK: 004, LOT: 001 S.50, ADDN: ORIGINAL TOWN	0.161	VERASTEGUI FRANCISCO JAVIER		$ 14,000
R000041047	922 N LORAINE ST	BLK: 002, LOT: 021, ADDN: RICHARDSON ABILENE	0.158	VILLELA ELVA ERICKA OLIVAS		$ 13,800
R000041048	924 N LORAINE ST	BLK: 002, LOT: 022, ADDN: RICHARDSON ABILENE	0.158	VILLELA ELVA ERICKA OLIVAS		$ 63,080
R000025820	807 N BAIRD ST	BLK: 009, LOT: 002 S/2 & ALL OF 3, ADDN: HOMESTEAD	0.241	WALKER THEDIS		$ 50,500
R000035349	703 W WALL ST	BLK: 060 1/2, LOT: 001 & N.30 OF LOT, ADDN: ORIGINAL TOWN, 2 & 10X80 OF CARRIZO ST	0.127	WALL ST COCINA LLC		$ 121,150
R000035356	606 W MISSOURI AV	BLK: 061, LOTS: 007 & 8, ADDN: ORIGINAL TOWN	0.321	WALL ST JOINT VENTURE		$ 333,470
R000035385	117 W WALL ST	BLK: 066, LOTS: 013 THRU 24, ADDN: ORIGINAL TOWN	0.964	WALL STREET		$ 13,760,378
R000035359	106 S CARRIZO ST	BLK: 061, LOT: 009, ADDN: ORIGINAL TOWN	0.161	WALL STREET JOINT		$ 28,620
R000226416	621 W WALL ST	BLK: 061, LOTS: 013, ADDN: ORIGINAL TOWN	0.345	WALL STREET JOINT		$ 204,450
R000026047	712 W MICHIGAN AV	BLK: 034, LOT: 006 E/2 & ALL OF 7, ADDN: HOMESTEAD	0.382	WALTON TRENT A		$ 650,850
R000026133	0 W TENNESSEE AV	BLK: 049, (40 X 65) ABANDONED ST, ADDN: HOMESTEAD	0.06	WE INCORPORATED	E	$ -
R000026123	0 N CARRIZO ST	BLK: 049, 40 X 85 ADJACENT TO SW/4, ADDN: HOMESTEAD	0.078	WE INCORPORATED	E	$ -
R000026131	404 SAN ANGELO ST	BLK: 049, N.65 OF W/2 OF SW/4, ADDN: HOMESTEAD	0.104	WE INCORPORATED	E	$ -
R000026135	712 W OHIO AV	BLK: 049, LOT: S/2 OF BLK 49 1/2, ADDN: HOMESTEAD, & 40 X150 ABANDONED ST	0.237	WE INCORPORATED	E	$ -
R000026129	706 W OHIO AV	BLK: 049, E.70 OF SW/4, ADDN: HOMESTEAD	0.241	WE INCORPORATED	E	$ -
R000041041	812 N LORAINE ST	BLK: 002, LOT: 015, ADDN: RICHARDSON ABILENE	0.158	WHITE MARIA		$ 54,430
R000025856	711 N LORAINE ST	BLK: 012, N.91 OF NE/4, ADDN: HOMESTEAD	0.292	WHITE STAR ENERGY INC		$ 25,480
R000035372	415 W WALL ST	BLK: 063, LOTS: 010;11&W.105 OF 12, ADDN: ORIGINAL TOWN	0.402	WILCO BUILDING PARTNER		$ 19,187,708

Property ID	Street Address	Legal Description	Acres	Owner Name	Exemption	Taxable Value
R000109953	710 N BAIRD ST	BLK: 015, LOT: 012, ADDN: HOMESTEAD SEC 3	0.172	WILEY JOE W		$ 155,360
R000058241	505 N DALLAS ST	BLK: 001, LOT: 004, ADDN: OLD PUEBLO PARK	0.115	WILLIAMS DEBRA B		$ 192,550
R000026101	412 N BIG SPRING ST	BLK: 045, N.100 OF NW/4, ADDN: HOMESTEAD	0.321	WRANGLER MITX 130311 PORTFOLIO OWNER LLC		$ 155,060
R000214218	610 N BIG SPRING ST	BLK:029, LT 05A, ADDN: HOMESTEAD, SEC 10	0.349	WSE REALTY LLC		$ 791,780
R000219719	706 N COLORADO ST	BLK: 012, LOT: 01A, ADDN: HOMESTEAD SEC 17	0.722	WSE REALTY LLC		$ 1,977,920
R000035195	216 N MAIN ST	BLK: 038, LOT: 012 S/2, ADDN: ORIGINAL TOWN	0.08	WSJV LLC		$ 165,620
R000017990	907 WHITAKER ST	BLK: 006, LOT: 013, ADDN: ESTES	0.143	Y M C A	E	$ -
R000017991	909 WHITAKER ST	BLK: 006, LOT: 014, ADDN: ESTES	0.143	Y M C A	E	$ -
R000017992	0 WHITAKER ST	BLK: 006, LOT: 015, ADDN: ESTES	0.143	Y M C A	E	$ -
R000017993	1005 WHITAKER ST	BLK: 006, LOT: 016, ADDN: ESTES	0.143	Y M C A	E	$ -
R000017994	1007 WHITAKER ST	BLK: 006, LOT: 017, ADDN: ESTES	0.143	Y M C A	E	$ -
R000017995	1009 WHITAKER ST	BLK: 006, LOT: 018, ADDN: ESTES	0.143	Y M C A	E	$ -
R000017948	802 WHITAKER ST	BLK: 001, LOT: 003 4 & 5 W 50, ADDN: ESTES	0.172	Y M C A	E	$ -
R000226306	800 N BIG SPRING ST	BLK: 019, LOT: 002A, ADDN: ELMWOOD SEC 3	7.47	Y M C A	E	$ -
R000035377	211 W WALL ST	BLK: 065, LOT: 008, +9 IN ALL OF L OF 007 & 009, ADDN: ORIGINAL TOWN	0.079	YEI ACQUISITION LLC		$ 176,560
R000041051	805 N MAIN ST	Lot: 001, Blk: 001, Subd: ATRIUM, BLK: 001, LOT: 001, ADDN: ATRIUM	0.149	YHARTE BELINDA		$ 152,120
R000025951	605 N DALLAS ST	BLK: 023, N.50 OF SE/4, ADDN: HOMESTEAD	0.161	YOUNG ANDRE		$ 183,950
R000017952	807 N LORAINE ST	BLK: 001, LOT: 004 E.115, ADDN: ESTES	0.132	YOUNG MENS CHRISTIAN ASSO	E	$ -
R000017953	0 LORAINE ST	BLK: 001, LOT: 005 E.115, ADDN: ESTES	0.132	YOUNG MENS CHRISTIAN ASSO	E	$ -
R000017996	1011 WHITAKER ST	BLK: 006, LOT: 019, ADDN: ESTES	0.143	YOUNG MENS CHRISTIAN ASSO	E	$ -
R000017997	1013 WHITAKER ST	BLK: 006, LOT: 020 & STRIP 15, ADDN: ESTES, WIDE N OF LOT 20	0.187	YOUNG MENS CHRISTIAN ASSO	E	$ -
R000017955	808 WHITAKER ST	BLK: 001, LOT: 006 & 7 W/2, ADDN: ESTES	0.189	YOUNG MENS CHRISTIAN ASSO	E	$ -
R000017971	1017 WHITAKER ST	BLK: 005, LOT: 1A, ADDN: SPW ESTES, SEC 2	0.445	YOUNG MENS CHRISTIAN ASSO	E	$ -
R000017954	811 N LORAINE ST	BLK: 001, LOT: 006 & 7 E/2, ADDN: ESTES	0.189	YOUNG MENS CHRISTION ASSO	E	$ -
R000035081	311 N TERRELL ST	BLK: 020, LOT: 001, ADDN: ORIGINAL TOWN	0.161	ZARATE ERBY		$ 98,560
R000025926	602 N TERRELL ST	BLK: 021,M.50 OF SW/4, ADDN: HOMESTEAD	0.161	ZARATE SANDY ETAL		$ 45,220
R000041053	801 N MAIN ST	Lot: 003, Blk: 001, Subd: ATRIUM, BLK: 001, LOT: 003, ADDN: ATRIUM	0.178	ZUBIA LINDA HINOJOS		$ 182,620
R000025823	800 N MAIN ST	BLK: 009, LOT: 007, ADDN: HOMESTEAD	0.161	ZUBIA RICARDO		$ 155,190

City Council Meeting

Item Number: 27

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Landon Ochoa, Senior Planner

Subject: **AN ORDINANCE VACATING AND ABANDONING A 0.138-ACRE PORTION OF ALLEY RIGHT-OF-WAY, LOCATED WITHIN BLOCK 127, SOUTHERN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED SOUTH OF EAST KENTUCKY AVENUE, APPROXIMATELY 100 FEET WEST OF SOUTH LAMESA ROAD); ADOPTING THE APPRAISAL BY THE ASSISTANT CITY MANAGER OF $12,000.00; RETAINING A NONEXCLUSIVE UTILITY EASEMENT; AND ORDERING RECORDATION BY THE CITY SECRETARY (DISTRICT 2) (DEVELOPMENT SERVICES)**

Purpose:

Maria Luisa Gardea and Guadelupe Amparan are requesting to vacate a 0.138-acre alley, located within Block 127, Southern Addition, City and County of Midland, Texas, for the future development of a retail store.

Recommended City Council Action:

Approve

Fiscal Impact:

The 2023 appraised value of the right-of-way is $2.00 per square foot, for a total value of $12,000.

Discussion:

The approximated area that will be vacated is 6,000 square feet (0.138-acres). The owner is requesting this vacation to obtain more land for the development of a retail store.

This request has been circulated and reviewed by all pertinent City departments and

franchise utility companies. Their comments, conditions, and requests are as follows:

Code Compliance: (Approved)

No oil and gas issues.

Building Code: (Approved)

No objections.

Engineering: (Approved)

No objections to vacation. Applicant shall be responsible for relocating any utilities, if existing, or providing easements as needed.

Fire: (Approved)

No comments

Transportation: (Approved)

No objections to vacation. Applicant shall be responsible for relocating any utilities, if existing, or providing easements as needed.

GIS: (Approved)

No comments.

AT&T: (Approved)

AT&T has stated that they have utilities in the area but are fine with the request as long as the utility and access easement is maintained.

Atmos: (Approved)

Atmos Energy currently has facilities located within the above-described alley Right of Way west. of S. Lamesa between E. Kentucky & E. Washington. We currently have a gas main that crosses the proposed vacate area. Atmos would have no objection to this vacation if a utility easement is maintained within the existing alley.

Astound: (Approved)

Astound has utilities in the alley and is fine with the request as long as the utility easement is maintained and the developer pays for the relocation of utilities.

Oncor: (Approved)

Oncor has facilities on the east side of the alley, which will be in the middle of the driveway.

Oncor can relocate these facilities or bury them, this will be at the cost of the developer. Oncor can work with the developer to vacate these facilities.

Altice USA: (Approved)

We do have aerial fiber & coax on those poles. If we relocate to the new proposed poles, the builder is responsible for all costs remove & relocate our plant.

Planning:

Pertinent City departments and franchise utility companies have reviewed this vacation request and have approved the request.

Therefore, staff recommends approval of this vacation subject to conditions A through C.

Conditions:

A. **That the value of the property shall be $12,000.**

B. **That an accessible nonexclusive utility easement is retained.**

C. **That a replat of the subject property is approved by the City of Midland and filed and recorded with the County Clerk of Midland County.**

Letters of Objection:

As of October 13, 2023, staff has not received any letters of objection to this request.

Attachments:

Metes & Bounds (Exhibit A)
Vacation Survey (Exhibit B)
Application
Maps
Responses from Franchise Utility Companies

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE VACATING AND ABANDONING A 0.138-ACRE PORTION OF ALLEY RIGHT-OF-WAY, LOCATED WITHIN BLOCK 127, SOUTHERN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED SOUTH OF EAST KENTUCKY AVENUE, APPROXIMATELY 100 FEET WEST OF SOUTH LAMESA ROAD); ADOPTING THE APPRAISAL BY THE ASSISTANT CITY MANAGER OF $12,000.00; RETAINING A NONEXCLUSIVE UTILITY EASEMENT; AND ORDERING RECORDATION BY THE CITY SECRETARY

WHEREAS, it has been determined by the Midland City Council that a 0.138-acre portion of alley right-of-way, located within Block 127, Southern Addition, City and County of Midland, Texas, as described in Exhibit "A" attached hereto and made a part hereof for all legal purposes (the "Property"), is no longer needed for public use; and

WHEREAS, Section 272.001 of the Texas Local Government Code provides that a political subdivision may not convey, sell, or exchange its interest in land without observing notice and bid requirements, unless the conveyance is to one or more abutting property owners; and

WHEREAS, an application for vacating the Property has been received by the City from the abutting property owner; and

WHEREAS, the Assistant City Manager has appraised the value of the City's property interest in the Property at $12,000.00, as shown in Exhibit "B" attached hereto and incorporated herein by reference; and

WHEREAS, the Council finds it to be in the public interest to abandon and vacate the Property;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the Property is hereby vacated and abandoned for all public purposes. Provided, however, that the City is hereby abandoning only the public interest in the Property, and this ordinance in no way affects any private easement or access easement

which abutting property owners may have in the Property.

SECTION TWO. That this ordinance shall not be effective until:

A. the City of Midland has received from the abutting property owner(s) the sum of $12,000.00;

B. a replat of the Property is approved by the City of Midland and filed and recorded with the County Clerk of Midland County, Texas; and

C. a vehicular access easement has been granted by the owner(s) of Lots 1 through 6, Block 127, Southern Addition, City and County of Midland, Texas, to the owner(s) of Lots 7 through 12, Southern Addition, City and County of Midland, Texas. Said easement shall be reflected on the replat of the Property required by Subsection B above.

SECTION THREE. That the City herein retains an accessible nonexclusive utility easement across, through, over, under, on and along the Property until all entities that were using the Property for utility purposes as of the date of approval of this ordinance have abandoned their uses of the Property.

SECTION FOUR. That upon the City's receipt of the sum set forth in Section Two hereof, the City Secretary is hereby authorized and directed to file a certified copy of this ordinance with the County Clerk of Midland County, Texas, for purposes of recording in the Official Records of Midland County, Texas.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2023; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2023, at a regular

meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2023.

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Rolandrea Russell, Interim Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

EXHIBIT "A"

Legal Description of the Alley in Block 127,
SOUTHERN ADDITION,
as recorded in Volume 2, Page 2, Deed Records of Midland County,
to the City of Midland, Midland County, Texas

Boundary being further described by metes and bounds as follows:

BEGININNG at (N= 10,693,338.79' and E= 1,760,076.14') a 1/2" iron rod with a plastic cap marked "PLS 1974" set in the South boundary of E. Kentucky Avenue at the Northwest corner of Lot 1, said Block 127, and the Northeast corner of this tract, from whence a 1/2" iron rod set erroneously by others bears N08°35'W, a distance of 1.2 feet;

THENCE S00°10'05"E with the West line of Lots 1 through 3, at 150 feet pass a 1/2" iron rod with a plastic cap marked "PLS 1974" set at the common West corner of Lots 3 and 4 said Block 127 from whence a 1/2" iron rod erroneously set by others bears N01°06'E a distance of 1.1 feet, continuing with the West line of Lots 4 through 6, a total distance of 300.00 feet to a 1/2" iron rod with a plastic cap marked "PLS 1974" set at the Southeast corner of this tract and the Southwest corner of said Lot 6, from whence a 1/2" iron rod set erroneously by others bears N00°32'W a distance of 1.1', also a 1/2" iron rod found at the Southeast corner of said Lot 6 bears N89°34'19"E, a distance of 140.00 feet:

THENCE S89°34'19"W with the North line of E. Washington Avenue, a distance of 20.00 feet to a 1/2" iron rod with a plastic cap marked "PLS 1974" set at the Southeast corner of Lot 7, said Block, at Southwest corner of this tract from whence a 1/2" iron rod found at or near the Southeast corner of Lot 6, Block 128, bears S89°34'19"W, a distance of 219.71 feet:

THENCE N00°10'05"W with the East line of Lots 6 through 12, said Block 127, a distance of 300.00 feet to a 1/2" iron rod with a plastic cap marked "PLS 1974" set at the Northeast corner of Lot 12, said Block and the Northwest corner of this tract:

THENCE N89°34'19"E along the South boundary line of E. Kentucky Avenue, a distance of 20.00 feet to the Point of Beginning, containing an area of 6000 square feet, or 0.138 acres of land.

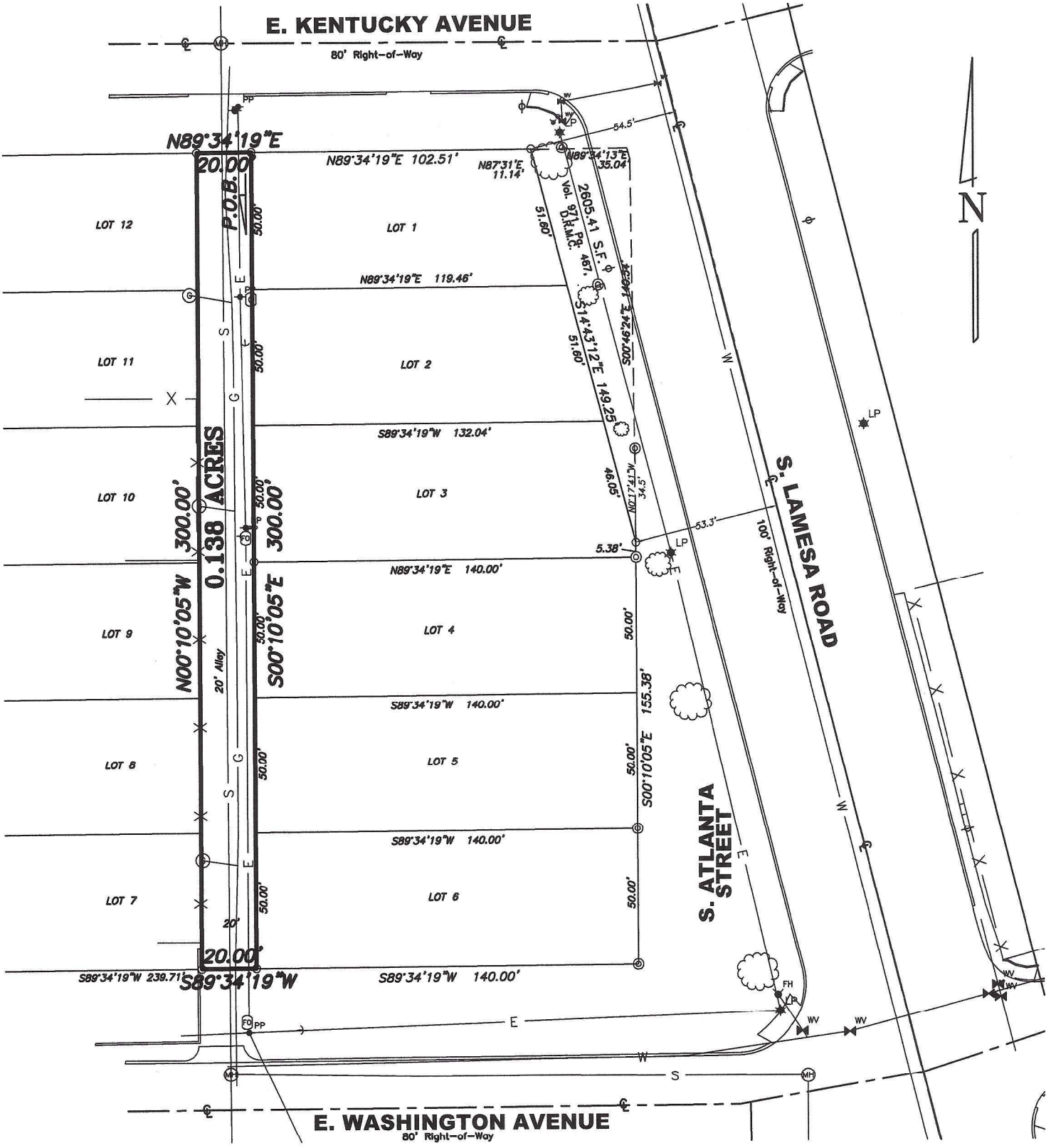
Bearings, distances, and coordinates are relative to the Texas State Plane Coordinate System, NAD 1983/CORS, Central Zone, in U.S. Survey Feet.

I, J. Stan Piper, Registered Professional Land Surveyor, do hereby certify that this plat and legal description is based on an actual survey made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief as surveyed on the ground on August 2, 2023.

J. Stan Piper August 2, 2023
Registered Professional Land Surveyor #1974

STATE OF TEXAS REGISTERED J. STAN PIPER 1974 PROFESSIONAL LAND SURVEYOR

PIPER SURVEYING Inc. Firm No. 10155200; Box 60432; Midland, Texas 79711; 432.550.7810



○ = Set 1/2" Iron Rod with Plastic Cap marked "PLS 1974" ◎ = Found 1/2" Iron Rod Unless Noted Otherwise

Drawing File: BerryEngr-ALTASouthernAddnFD; Crd File: Southern83c88; Drawn by: Gene M. Rodriguez; Scale: 1"=50'; Date: 8/2/23

BOUNDARY SURVEY OF THE ALLEY IN BLOCK 127, SOUTHERN ADDITION, AS RECORDED IN VOLUME 2, PAGE 2, DEED RECORDS OF MIDLAND COUNTY, TO THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS

Prepared for:
Berry Engineering
63 Broad St. NW
Cleveland, TN 37311

Sheet 2 of 2 – See Sheet 1 of 2 for Certificate

Firm No. 10155200
PIPER SURVEYING P.O. BOX 60432; MIDLAND, TEXAS 79711; 432.550.7810

MIDLAND
Feel the Energy!

Office of the City Manager

October 16, 2023

Midland City Council
City of Midland, Texas

RE: Request for vacation of a 0.138-acre portion of alley right-of-way, located within Block 127, Southern Addition, City and County of Midland, Texas

Dear Members of the City Council:

The above-referenced property has been appraised in accordance with Chapter 272 of the Texas Local Government Code. The fair market value of the property is $12,000.00. Upon the City's receipt of this sum from the adjoining property owner(s), the ordinance vacating and abandoning the City's interest in the property may be recorded in the Midland County Clerk's office.

Very truly yours,

Jose Ortiz
Assistant City Manager

300 N. Loraine, Midland TX 79701 • 432-685-7202 • Fax 432-686-1600

MIDLAND
Planning Division

Vacate Right-of-Way/Public Utility Easement/Land/Street Application

Project Number: _____

Case Number: _____

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: Guadalupe Amparan		Phone ( ) Email	
Address 1423 E Jax Ave	City Midland	State TX	Zip 79707

Application is hereby made to the City Council to vacate the following:

- ■ Right-of-Way
- ☐ Public Utility Easement
- ☐ Land
- ☐ Street

Description of Address: 406-410 S Lamesa Rd

Reason for Request: Requesting abandonment of 20' alley between E Kentucky Ave and E Washington Ave for development of a proposed Dollar Tree retail store. Alley to become access & utility easement to maintain public functions for connectivity and utility access.

Reasons, in applicant's opinion, why the requested vacation will not adversely affect the public welfare or will contribute to it in a positive way: By abandoning the alley and converting it into an access and utility easement; it will remain functional for public uses of connectivity and utility access while allowing development of the proposed retail store project.

Submittal and Fees

Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Sealed metes and bounds description of the property to be vacated (included on the map) and total square feet of vacation. Include ownership, legal and deed information for adjacent property owners
- Digital Copies of Survey (PDF/JPEG)

Utility Company Approval

Clearance is needed from the following utility companies:

- City of Midland
- Atmos Energy
- Oncor Electric
- AT&T
- Suddenlink Cable TV Co.
- Grande Communications

The City will route the request to these companies, but it is the applicant's responsibility to ensure clearance has been obtained to resolve any issues that may arise.

Policies

1. If the vacation request involves only a portion of a section right-of-way, such that approval would not affect the public's ability to travel along said right-of-way, then the request will be scheduled for consideration by the City Council. No public hearing will be needed.

2. If the vacation request involves an entire section of right-of-way, such that approval would cause the public to lose all rights to use it, then the following procedures apply:

   a. Nearby land owners who have a reasonable expectation to use said right-of-way, as determined by the Transportation Division, must first agree to the proposed vacation. It is the applicant's responsibility to obtain a letter of concurrence signed by the affected landowners.

   b. If all letters are received indicating that the affected landowners agree to the request, then a public hearing before the City Council will be scheduled. The Transportation Division will mail public notice of the hearing to landowners within 400 feet of the affected right-of-way.

   c. If a request is approved, the right-of-way shall be divided into two equal parts, with each half becoming the property of the respective abutting owner. If the applicant desires to own the entire width, he or she must negotiate with the opposite landowner.

Signatures

Applicant (signature):		Date:
Affected Property Owners:		
Signature: Lorenza Garcia	Print: Lorenza Garcia	Date:
Signature:	Print: Maria Hernandez	Date
Signature: Maria Gardea	Print: Maria ~~Amparan~~ Gardea	Date 8/18/23
Signature:	Print:	Date

The Vacation of right-of-way/public utility easement/land/street shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

FOR OFFICE USE ONLY

☐ 1 FOLDED Copy of Survey ☐ Survey in Digital Format (PDF/JPEG)

☐ Application Fee

Check #_____

Received By:	Date:

****Application will not be considered for scheduling until reviewed by Planning**

MIDLAND
Planning Division

Vacate Right-of-Way/Public Utility Easement/Land/Street Application

Project Number: _____

Case Number: _____

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: Maria Luisa ~~Amparan~~ Gardea		Phone (432) 813-3042 Email	
Address: 403 Waverly Dr	City: Midland	State: TX	Zip: 79703

Application is hereby made to the City Council to vacate the following:

- ■ Right-of-Way
- ☐ Public Utility Easement
- ☐ Land
- ☐ Street

Description of Address: 400-404 S Lamesa Rd

Reason for Request: Requesting abandonment of 20' alley between E Kentucky Ave and E Washington Ave for development of a proposed Dollar Tree retail store. Alley to become access & utility easement to maintain public functions for connectivity and utility access.

Reasons, in applicant's opinion, why the requested vacation will not adversely affect the public welfare or will contribute to it in a positive way: By abandoning the alley and converting it into an access and utility easement; it will remain functional for public uses of connectivity and utility access while allowing development of the proposed retail store project.

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Signatures

Applicant (signature): Ma Luisa Garden		Date: 8/18/23
Affected Property Owners:		
Signature: Lorenza Garcia	Print: Lorenza Garcia	Date:
Signature: [signature]	Print: Maria Hernandez	Date
Signature:	Print:	Date
Signature:	Print:	Date

The Vacation of right-of-way/public utility easement/land/street shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

FOR OFFICE USE ONLY

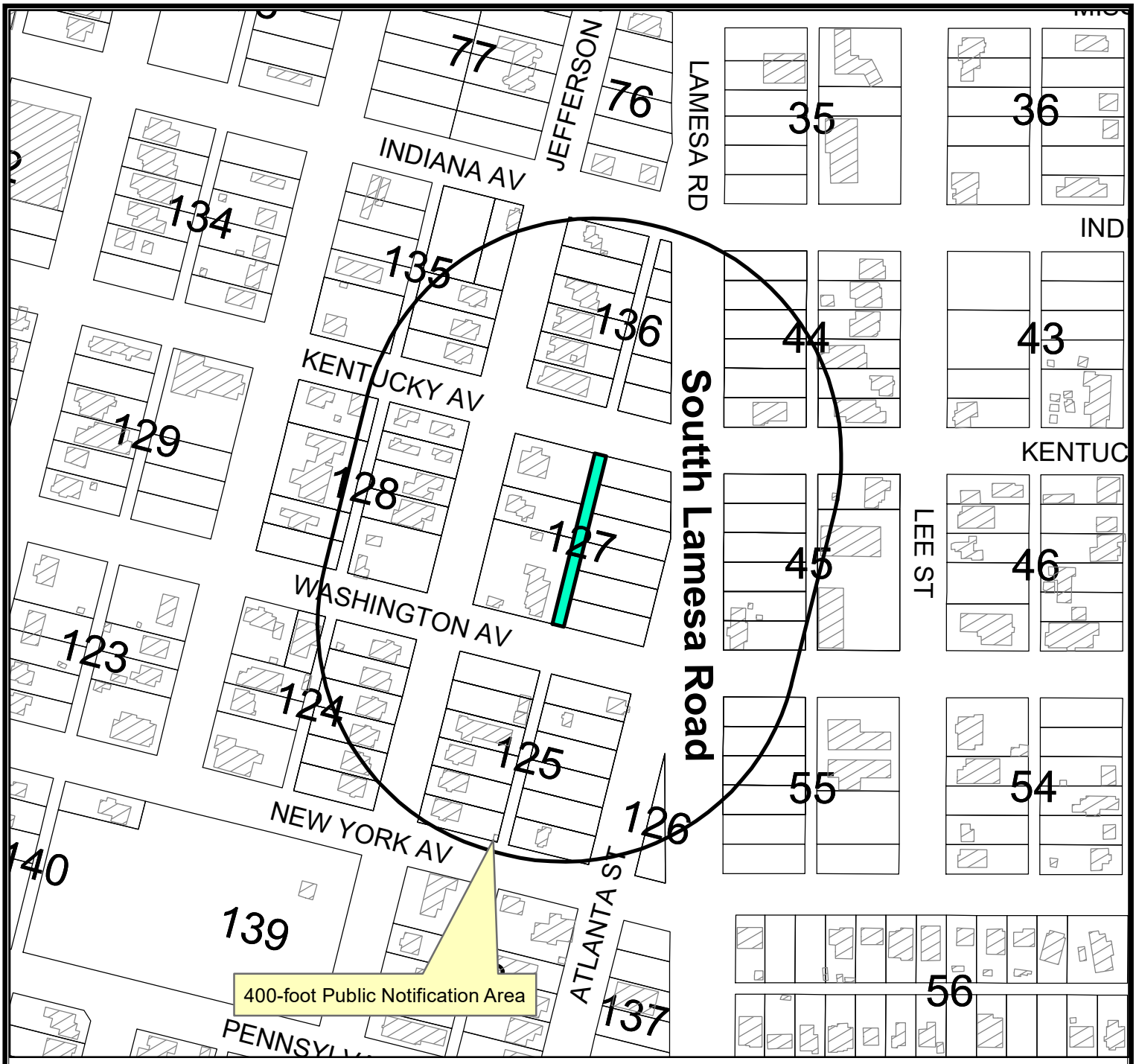
☐ 1 FOLDED Copy of Survey ☐ Survey in Digital Format (PDF/JPEG)

☐ Application Fee

Check #_____

Received By:	Date:

****Application will not be considered for scheduling until reviewed by a planner****



LOCATION MAP

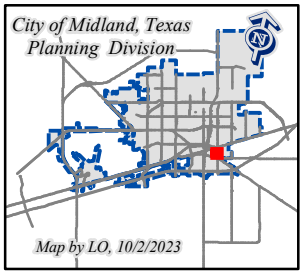
V-23-0055 **Scale: 1" = 3,229'**

Consider a request by Maria Luisa Gardea and Guadelupe Amparan for a vacation of a 0.138-acre alley, located within Block 127, Southern Addition, City and County of Midland, Texas.

Generally located south of East Kentucky Avenue, approximately 100 feet west of South Lamesa Road. (Council District 2)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



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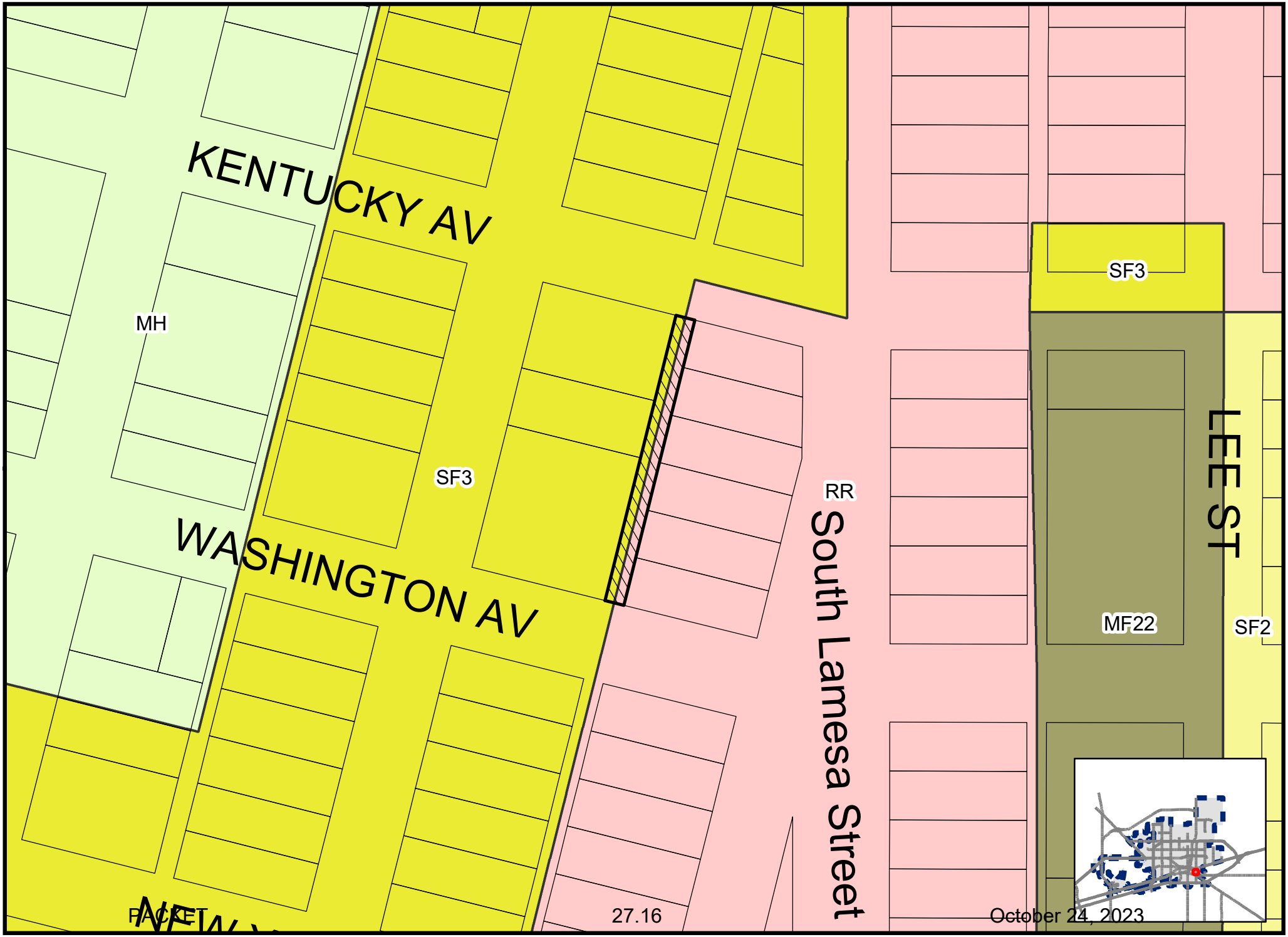
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.



Map By DH, 10/13/2023

V-23-0055

Scale: 1" = 1,474'

ZONING MAP

© THE CITY OF MIDLAND - 2021: THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT, NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.

Legal Description of the Alley in Block 127,

SOUTHERN ADDITION,

as recorded in Volume 2, Page 2, Deed Records of Midland County,
to the City of Midland, Midland County, Texas

Boundary being further described by metes and bounds as follows:

BEGININNG at (N= 10,693,338.79' and E= 1,760,076.14') a 1/2" iron rod with a plastic cap marked "PLS 1974" set in the South boundary of E. Kentucky Avenue at the Northwest corner of Lot 1, said Block 127, and the Northeast corner of this tract, from whence a 1/2" iron rod set erroneously by others bears N08°35'W, a distance of 1.2 feet;

THENCE S00°10'05"E with the West line of Lots 1 through 3, at 150 feet pass a 1/2" iron rod with a plastic cap marked "PLS 1974" set at the common West corner of Lots 3 and 4 said Block 127 from whence a 1/2" iron rod erroneously set by others bears N01°06'E a distance of 1.1 feet, continuing with the West line of Lots 4 through 6, a total distance of 300.00 feet to a 1/2" iron rod with a plastic cap marked "PLS 1974" set at the Southeast corner of this tract and the Southwest corner of said Lot 6, from whence a 1/2" iron rod set erroneously by others bears N00°32'W a distance of 1.1', also a 1/2" iron rod found at the Southeast corner of said Lot 6 bears N89°34'19"E, a distance of 140.00 feet:

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THENCE N89°34'19"E along the South boundary line of E. Kentucky Avenue, a distance of 20.00 feet to the Point of Beginning, containing an area of 6000 square feet, or 0.138 acres of land.

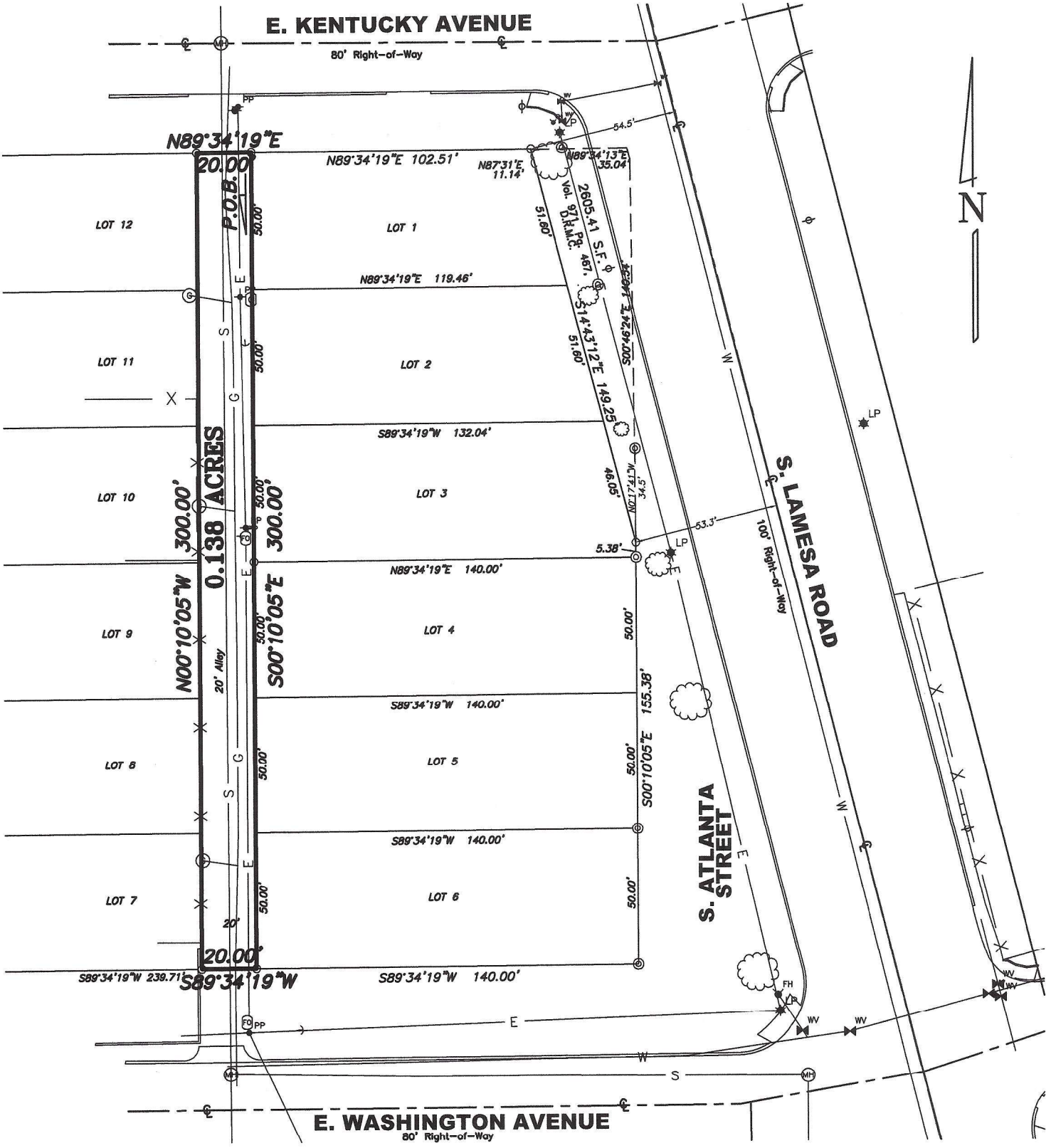
Bearings, distances, and coordinates are relative to the Texas State Plane Coordinate System, NAD 1983/CORS, Central Zone, in U.S. Survey Feet.

I, J. Stan Piper, Registered Professional Land Surveyor, do hereby certify that this plat and legal description is based on an actual survey made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief as surveyed on the ground on August 2, 2023.

J. Stan Piper August 2, 2023
Registered Professional Land Surveyor #1974

STATE OF TEXAS REGISTERED J. STAN PIPER 1974 PROFESSIONAL LAND SURVEYOR

PIPER SURVEYING Inc. Firm No. 10155200; Box 60432; Midland, Texas 79711; 432.550.7810



○ = Set 1/2" Iron Rod with Plastic Cap marked "PLS 1974" ◎ = Found 1/2" Iron Rod Unless Noted Otherwise

Drawing File: BerryEngr-ALTASouthernAddnFD; Crd File: Southern83c88; Drawn by: Gene M. Rodriguez; Scale: 1"=50'; Date: 8/2/23

BOUNDARY SURVEY OF THE ALLEY IN BLOCK 127, SOUTHERN ADDITION, AS RECORDED IN VOLUME 2, PAGE 2, DEED RECORDS OF MIDLAND COUNTY, TO THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS

Prepared for:
Berry Engineering
63 Broad St. NW
Cleveland, TN 37311

Sheet 2 of 2 – See Sheet 1 of 2 for Certificate

October 24, 2023

Firm No. 10155200
PIPER SURVEYING P.O. BOX 60432; MIDLAND, TEXAS 79711; 432.550.7810

Landon J. Ochoa

From: LReyna@midcad.org
Sent: Monday, October 9, 2023 3:54 PM
To: Landon J. Ochoa
Subject: Re: V-23-0055, Alley Vacation Valuation
Attachments: V-23-0055, TaxVacMCAD vac ltr.pdf; V-23-0055, Survey (Exhibit A).pdf; V-23-0055, Location Map.pdf

Landon see below!

Market Value

6000 sq ft X $2.00 = $12,000

Sincerely,

Lisa Reyna, RPA
Assistant Chief Appraiser
Midland Central Appraisal District
4631 Andrews Hwy
Midland, TX 79703
Phone (432) 699-4991
Fax (432) 689-7185

From: "Landon J. Ochoa" <ljochoa@midlandtexas.gov>
To: Lisa Reyna <lreyna@midcad.org>
Date: 10/03/2023 12:07 PM
Subject: V-23-0055, Alley Vacation Valuation

Lisa,

Attached is the letter detailing a request for a vacation. Please also see the attached map and survey for this property and provide us with a valuation by October 10, 2023. Thank you!

Respectfully,

Landon Ochoa
Senior Planner
Planning Division
Development Services
O. 432-685-7405
ljochoa@midlandtexas.gov

300 N. Loraine | P.O. Box 1152 | Midland, TX 79702

CAUTION: This email originated from outside your organization — exercise caution when opening attachments or clicking links, especially from unknown senders.

ATMOS ENERGY

West Texas Division
P.O. Box 1111,
Midland, Texas 79702

City of Midland
Landon Ochoa
Planning Division
Development Services
300 N. Loraine
Midland, Texas 79701

October 9, 2023

Re: Case Name: 406-410 S. Lamesa
Case Number: V-23-0055

Mr. Ochoa,

Atmos Energy currently has facilities located within the above-described alley Right of Way west. of S. Lamesa between E. Kentucky & E. Washington. We currently have a gas main that crosses the proposed vacate area. Atmos would have no objection to this vacation if a utility easement is maintained within the existing alley.
Please let me know if you have any further questions.

Sincerely,

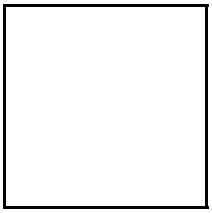
Mark Lieb

Mark Lieb
Project Specialist
Atmos Energy/Permian Basin
432-967-0370 cell
mark.lieb@atmosenergy.com

Landon J. Ochoa

From: Landon J. Ochoa
Sent: Sunday, October 15, 2023 3:06 PM
To: Landon J. Ochoa
Subject: FW: V-23-0055, 406-410 Alley Vacation (Oncor)

From: Molina, Sergio <Sergio.Molina@oncor.com>
Sent: Wednesday, October 11, 2023 8:18 PM
To: Landon J. Ochoa <ljochoa@midlandtexas.gov>; Arguello, Martin <Martin.Arguello@oncor.com>
Subject: RE: V-23-0055, 406-410 Alley Vacation (Oncor)



Landon,

Oncor has electric facilites on this alley that will need to be relocated in order to vacate this area.

Sergio Molina, P.E.
Oncor | NCM Manager WTX
Cell: 214.970.4143

My Manager: Hannah Hamilton
Cell: 432.894.4601 email: Hannah.Hamilton@oncor.com

Landon J. Ochoa

From: UNDERWOOD, JERRY D <ju1659@att.com>
Sent: Thursday, October 5, 2023 11:18 AM
To: Landon J. Ochoa
Subject: RE: V-23-0055, 406-410 Alley Vacation (AT&T)

Follow Up Flag: Follow up
Flag Status: Flagged

As long as we keep an easement to keep our cable in place I am good with it.

Thanks,
Jerry

From: Landon J. Ochoa <ljochoa@midlandtexas.gov>
Sent: Thursday, October 5, 2023 11:09 AM
To: UNDERWOOD, JERRY D <ju1659@att.com>
Subject: RE: V-23-0055, 406-410 Alley Vacation (AT&T)

Jerry,

See the attached site plan. There will be a utility and vehicular access easement in the to be vacated alley. No structures will be built there. Would this change your comment?

From: Landon J. Ochoa
Sent: Tuesday, October 3, 2023 12:33 PM
To: UNDERWOOD, JERRY D <ju1659@att.com>
Subject: RE: V-23-0055, 406-410 Alley Vacation (AT&T)

Thank you for your response, Jerry.

From: UNDERWOOD, JERRY D <ju1659@att.com>
Sent: Tuesday, October 3, 2023 12:24 PM
To: Landon J. Ochoa <ljochoa@midlandtexas.gov>
Subject: RE: V-23-0055, 406-410 Alley Vacation (AT&T)

We have cable in that alleyway as well that they will need pay to reroute if they want it vacated.

Thanks,
Jerry

From: Landon J. Ochoa <ljochoa@midlandtexas.gov>
Sent: Tuesday, October 3, 2023 12:16 PM
To: UNDERWOOD, JERRY D <ju1659@att.com>
Subject: V-23-0055, 406-410 Alley Vacation (AT&T)

Good morning, Jerry.

Please see the attached letter and supporting documents and provide comments by October 10, 2023 as this request will be going to the October 24 City Council meeting. Thank you!

Respectfully,

Landon Ochoa
Senior Planner
Planning Division
Development Services
O. 432-685-7405
ljochoa@midlandtexas.gov

300 N. Loraine | P.O. Box 1152 | Midland, TX 79702

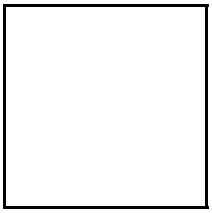
CAUTION: This email originated from outside your organization — exercise caution when opening attachments or clicking links, especially from unknown senders.

CAUTION: This email originated from outside your organization — exercise caution when opening attachments or clicking links, especially from unknown senders.

Landon J. Ochoa

From: Landon J. Ochoa
Sent: Sunday, October 15, 2023 3:02 PM
To: Landon J. Ochoa
Subject: FW: V-23-0055, 406-410 Alley Vacation (Grande)

From: Ruben Guerra <ruben.guerra@astound.com>
Sent: Friday, October 13, 2023 10:00 AM
To: Landon J. Ochoa <ljochoa@midlandtexas.gov>
Subject: Re: V-23-0055, 406-410 Alley Vacation (Grande)



That's fine but relocations are not so cheap these days. I just want them to understand that if it is underground it will be expensive. I just want them to know upfront and not later down the road.

Thank You
Ruben Guerra
Construction Coordinator
O: 432-272-3088
C: 432-653-9369
Ruben.Guerra@astound.com
Astound Business Solutions
Powered by RCN | Grande | Wave
astound.com

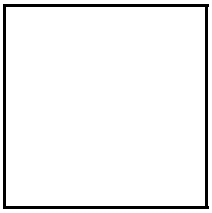
On Fri, Oct 13, 2023 at 9:57 AM Landon J. Ochoa <ljochoa@midlandtexas.gov> wrote:

> Okay, so you are okay with the vacation as long as the easement is maintained and as long the applicant pays for the relocation?

Landon J. Ochoa

From: Landon J. Ochoa
Sent: Sunday, October 15, 2023 3:03 PM
To: Landon J. Ochoa
Subject: FW: External E-mail - V-23-0055, 406-410 Alley Vacation (Altice)

From: Luis Montez <Luis.Montez@AlticeUSA.com>
Sent: Friday, October 13, 2023 11:10 AM
To: Chris Berry <cberry@berryengineers.com>; Landon J. Ochoa <ljochoa@midlandtexas.gov>; Eron Zapata <Eron.Zapata@AlticeUSA.com>; Ricardo Cardona <Ricardo.Cardona@AlticeUSA.com>
Cc: Ronnye Kettler <ronnye.kettler@g2kpartners.com>; Jeffrey S. Fisher <jsfisher@midlandtexas.gov>
Subject: RE: External E-mail - V-23-0055, 406-410 Alley Vacation (Altice)



Mr. Berry,
My name is, Luis Montez
Construction coordinator for, Optimum. We do have aerial fiber & coax on those poles.
If we relocate to the new proposed poles, the builder is responsible for all costs remove & relocate our plant.
I am currently looking at this project & will get you a cost later.

City Council Meeting

Item Number: 28

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Landon Ochoa, Senior Planner

Subject: AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR LOTS 1 THROUGH 6 AND A 0.138-ACRE TRACT OF LAND, BLOCK 127, SOUTHERN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF SOUTH LAMESA ROAD AND EAST KENTUCKY AVENUE), BY PERMITTING A METAL SCREENING FENCE IN LIEU OF A MASONRY SCREENING WALL; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); ORDERING RECORDATION BY THE CITY SECRETARY IN THE DEED RECORDS OF MIDLAND COUNTY, TEXAS; AND ORDERING PUBLICATION (DISTRICT 2) (DEVELOPMENT SERVICES)

Purpose:

The applicants, Maria Luisa Gardea and Guadelupe Amparan are requesting a Special Exception from the City of Midland Zoning Ordinance, to allow a masonry screening wall to not be required between a nonresidential zoning district and a residential zoning district.

Recommended City Council Action:

Approve

Fiscal Impact:

No City funds are required to process this request.

Discussion:

The property is located at 410 South Lamesa and is a vacant lot. The applicant is requesting a special exception for a masonry screening wall to not be required between a nonresidential

zoning district and a residential zoning district. Lots 1 through 6 are currently zoned RR, Regional Retail District. Lots 7-12, adjacent to Lots 1 through 6, are zoned SF-3, Single-Family Dwelling District. Per our City of Midland Zoning Ordinance, Section *6.01.A.1– Screening Requirements for Residential and Nonresidential Properties,* concerning required screening between nonresidential and residential districts, “A masonry screening wall separating a nonresidential zoning district from a residential zoning district shall be required pursuant to this section except when deemed physically impractical by the City Council.”

This request has been circulated to all pertinent City departments for review. Below are the departments’ comments.

Fire: (Approved)

No comments.

Building: (Approved)

No comments.

Engineering: (Approved)

No objections to zoning/zone change. [For Applicant’s Information Only.]

Code Compliance: (Approved)

No Oil and Gas issues.

Transportation: (Approved)

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations. [For the Applicant’s information only.]

No objection to zone change. [For the Applicant’s information only.]

Planning (Approved):

Though not made of masonry, the property already has a metal fence in place that fulfills the intent of Section 6.01.A.1. Requiring the fence to be demolished and a masonry wall to be erected would create an unnecessary hardship. Additionally, the neighboring property owners are in agreement with this request since Dollar General has agreed to maintain the fence, include a vehicular access easement once the alley is vacated, and install gates along the fence to allow rear access to the neighboring properties.

The request fits with the Tall City Tomorrow Comprehensive Plan, Chapter 3-Land Use Vision. The land use map designates this property as Urban-Medium Neighborhood Center (U-M NC) which calls for a mix of traditional neighborhood businesses including small scale commercial,

office, civic and residential. Therefore, the placement of a retail store at this location would be consistent with this designation.

Due to these factors, staff is recommending approval of this special exception subject to conditions A through F.

Condition:

A. That the property shall significantly conform to the site plan shown in Exhibit "A" and is attached hereto and incorporated herein.

B. That the alley in Block 127, Southern Addition be vacated.

C. That a replat of Lots 1 through 6 and the alley into one lot be approved.

D. That a vehicular access easement be provided.

E. That gates be installed along the screening fence to allow rear access to Lots 7 through 12.

F. That the owner of Lots 1 through 6 be responsible for maintaining the screening fence.

Letters of Objection:

Staff has not received any letters of objection as of October 16, 2023.

Attachments:

Survey (Exhibit A)
Site Plan (Exhibit B)
Application
Maps

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR LOTS 1 THROUGH 6 AND A 0.138-ACRE TRACT OF LAND, BLOCK 127, SOUTHERN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF SOUTH LAMESA ROAD AND EAST KENTUCKY AVENUE), BY PERMITTING A METAL SCREENING FENCE IN LIEU OF A MASONRY SCREENING WALL; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); ORDERING RECORDATION BY THE CITY SECRETARY IN THE DEED RECORDS OF MIDLAND COUNTY, TEXAS; AND ORDERING PUBLICATION

WHEREAS, the City Council modified the authority of the Board of Adjustment in Title XI, Chapter 1, Section 7 ("Section 11-1-7") of the Midland City Code; and

WHEREAS, Section 11-1-7 provides for the consideration of requests for special exceptions to the Midland Zoning Ordinance; and

WHEREAS, the Council finds that satisfactory evidence has been presented that the use to be authorized by the granting of the special exception will not be detrimental to the health, safety, comfort and welfare of the occupants of the land area near the tract on which the use to be allowed by special exception will be located; and

WHEREAS, the Council finds that it is clearly and specifically authorized by the terms of Section 11-1-7 to grant such a special exception, and said exception will be in harmony with the general purposes and intent of the zoning provisions of the Midland City Code; and

WHEREAS, after a full and fair public hearing at which all parties in interest were offered an opportunity to be heard, all pursuant to law, the Council finds it to be in the public interest to grant a special exception to the Zoning Ordinance, pursuant to Section 11-1-7, for the purposes herein stated, subject to special conditions;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE

CITY OF MIDLAND, TEXAS:

SECTION ONE. That a special exception is hereby granted for the property described as Lots 1 through 6 and a 0.138-acre tract of land, Block 127, Southern Addition, City and County of Midland, Texas (the "Property"), said 0.138-acre tract of land being more fully described by metes and bounds in Exhibit "A", which is attached hereto and incorporated herein. Said special exception shall allow a metal screening fence in lieu of a masonry screening wall required by Section 11-1-6.01 of the City Code.

SECTION TWO. Said special exception is subject to the following special conditions:

A. A metal screening fence shall be constructed and maintained in lieu of a masonry screening wall required by Section 11-1-6.01 of the City Code.

B. That gates shall be installed along the metal screening fence to allow rear access to Lots 7 through 12, Block 127, Southern Addition, City and County of Midland, Texas.

C. That the owner(s) of Lots 1 through 6, Block 127, Southern Addition, City and County of Midland, Texas, shall maintain the metal screening fence.

SECTION THREE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FOUR. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance

with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SIX. The City Secretary is hereby authorized and directed to file this ordinance with the Office of the County Clerk for purposes of recordation.

SECTION SEVEN. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2023; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2023, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2023.

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Rolandrea Russell, Interim Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

EXHIBIT "A"

Legal Description of the Alley in Block 127,
SOUTHERN ADDITION,
as recorded in Volume 2, Page 2, Deed Records of Midland County,
to the City of Midland, Midland County, Texas

Boundary being further described by metes and bounds as follows:

BEGININNG at (N= 10,693,338.79' and E= 1,760,076.14') a 1/2" iron rod with a plastic cap marked "PLS 1974" set in the South boundary of E. Kentucky Avenue at the Northwest corner of Lot 1, said Block 127, and the Northeast corner of this tract, from whence a 1/2" iron rod set erroneously by others bears N08°35'W, a distance of 1.2 feet;

THENCE S00°10'05"E with the West line of Lots 1 through 3, at 150 feet pass a 1/2" iron rod with a plastic cap marked "PLS 1974" set at the common West corner of Lots 3 and 4 said Block 127 from whence a 1/2" iron rod erroneously set by others bears N01°06'E a distance of 1.1 feet, continuing with the West line of Lots 4 through 6, a total distance of 300.00 feet to a 1/2" iron rod with a plastic cap marked "PLS 1974" set at the Southeast corner of this tract and the Southwest corner of said Lot 6, from whence a 1/2" iron rod set erroneously by others bears N00°32'W a distance of 1.1', also a 1/2" iron rod found at the Southeast corner of said Lot 6 bears N89°34'19"E, a distance of 140.00 feet:

THENCE S89°34'19"W with the North line of E. Washington Avenue, a distance of 20.00 feet to a 1/2" iron rod with a plastic cap marked "PLS 1974" set at the Southeast corner of Lot 7, said Block, at Southwest corner of this tract from whence a 1/2" iron rod found at or near the Southeast corner of Lot 6, Block 128, bears S89°34'19"W, a distance of 219.71 feet:

THENCE N00°10'05"W with the East line of Lots 6 through 12, said Block 127, a distance of 300.00 feet to a 1/2" iron rod with a plastic cap marked "PLS 1974" set at the Northeast corner of Lot 12, said Block and the Northwest corner of this tract:

THENCE N89°34'19"E along the South boundary line of E. Kentucky Avenue, a distance of 20.00 feet to the Point of Beginning, containing an area of 6000 square feet, or 0.138 acres of land.

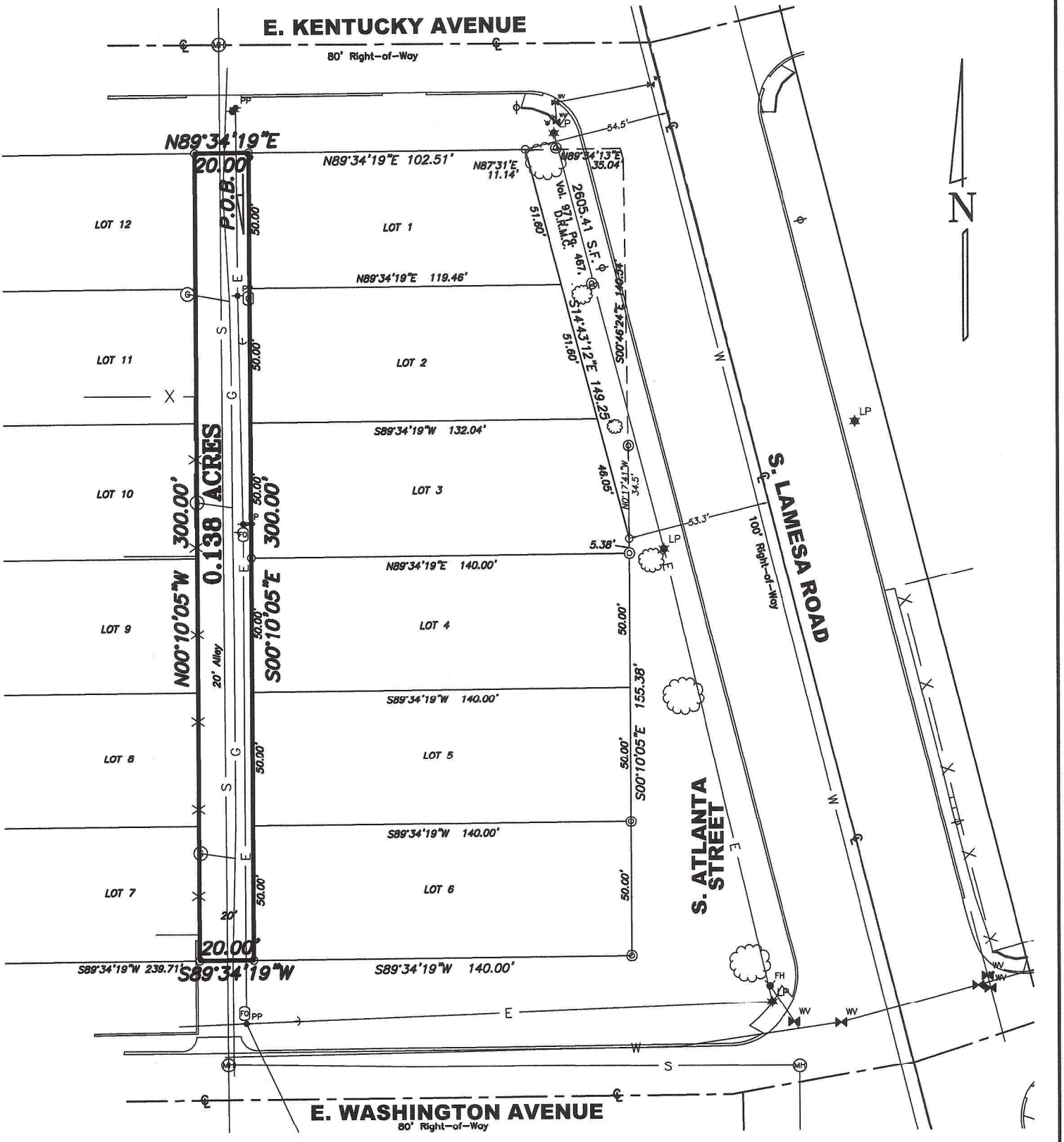
Bearings, distances, and coordinates are relative to the Texas State Plane Coordinate System, NAD 1983/CORS, Central Zone, in U.S. Survey Feet.

I, J. Stan Piper, Registered Professional Land Surveyor, do hereby certify that this plat and legal description is based on an actual survey made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief as surveyed on the ground on August 2, 2023.

J. Stan Piper August 2, 2023
Registered Professional Land Surveyor #1974

STATE OF TEXAS REGISTERED J. STAN PIPER 1974 PROFESSIONAL LAND SURVEYOR

PIPER SURVEYING Inc. Firm No. 10155200; Box 60432; Midland, Texas 79711; 432.550.7810



○ = Set 1/2" Iron Rod with Plastic Cap marked "PLS 1974" ◎ = Found 1/2" Iron Rod Unless Noted Otherwise

Drawing File: BerryEngr-ALTASouthernAddnFD; Crd File: Southern83c88; Drawn by: Gene M. Rodriguez; Scale: 1"=50'; Date: 8/2/23

BOUNDARY SURVEY OF THE ALLEY IN BLOCK 127, SOUTHERN ADDITION, AS RECORDED IN VOLUME 2, PAGE 2, DEED RECORDS OF MIDLAND COUNTY, TO THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS

Prepared for:
Berry Engineering
63 Broad St. NW
Cleveland, TN 37311

Sheet 2 of 2 – See Sheet 1 of 2 for Certificate

Firm No. 10155200
PIPER SURVEYING P.O. BOX 60432; MIDLAND, TEXAS 79711; 432.550.7810

MIDLAND
Planning Division

Special Exception Application

Project Number: _____
Case Number: E-23-0105

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Property Owner Printed Name: Maria Luisa ~~Amparan~~ Gardea		Phone (432) 813-3042 Email	
Address 403 Waverly	City Midland	State TX	Zip 79703

Representative *(if different from Applicant or Property Owner)* Firm: _____ Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Street Address: 400-404 S Lamesa

Legal Description
Lot: 1-3 Block: 127 Subdivision: Southern Addition

Current Zoning: RR

This property qualifies as an exception to the City Code because:

- ☐ It is an expansion of a nonconforming use.
- ☐ There are existing nonconforming structures in the area.
- ☐ The addition of architectural or other projections of a minor extent.

Reason for Request: Code requires an 8' masonry fence along western boundary of proposed project. As part of proposed alley abandonment along this property line, the adjacent property owners have requested the developer improve (provide gates) and extend their existing metal screen fences.

This exception is needed to meet the desires of the adjacent property owners for their agreement to the alley abandonment.

Submittal and Fees
Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan showing:
  - Parking
  - Building Footprint
- Digital Copies of Site Plan (PDF/JPEG)

Signatures	
Applicant (signature):	Date:
Applicant (printed):	
Property Owner (signature): DocuSigned by:	Date: 8/16/2023 | 2:45 PM EDT
Property Owner (printed) : Guadalupe Amparan	

The Special Exception shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

If an agent is authorized by the property owner to file and execute the application on behalf of the property owner, the agent must complete the affidavit below.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared _____ who, being by me duly sworn, upon oath says: That (s)he is authorized by _____, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

_____
Authorized Agent (*signature*)

Subscribed and sworn to before me, this _____ day of _____, 20 ___, to certify which witness my hand and seal of office.

_____
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY	
☑ Property Owner Authorization	☑ Dimensioned Site Plan
☑ Application Fee	☑ Plans in Digital Format (PDF/JPEG)
Check # paid	
Received By: Jeff Fisher	Date: 9-5-23

****Application will not be considered for scheduling until reviewed by a planner.****

DocuSign Envelope ID: 385F819A-B7AD-467E-B4FD-D1DAD63AA867

MIDLAND Planning Division

Special Exception Application

Project Number: _____

Case Number: E-23-0105

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Property Owner Printed Name: Guadalupe Amparan		Phone (432) 425-0276 Email midlandgirl215@yahoo.com	
Address 1423 E Jax Ave	City Midland	State TX	Zip 79707

Representative *(if different from Applicant or Property Owner)* Firm: _____ Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Street Address: 406-410 S Lamesa

Legal Description
Lot: 4-6 Block: 127 Subdivision: Southern Addition

Current Zoning: RR

This property qualifies as an exception to the City Code because:

- ☐ It is an expansion of a nonconforming use.
- ☐ There are existing nonconforming structures in the area.
- ☐ The addition of architectural or other projections of a minor extent.

Reason for Request: Code requires an 8' masonry fence along western boundary of proposed project. As part of proposed alley abandonment along this property line, the adjacent property owners have requested the developer improve (provide gates) and extend their existing metal screen fences. This exception is needed to meet the desires of the adjacent property owners for their agreement to the alley abandonment.

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Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan showing:
  - Parking
  - Building Footprint
- Digital Copies of Site Plan (PDF/JPEG)

Signatures	
Applicant (signature):	Date:
Applicant (printed):	
Property Owner (signature): Melissa Gordon	Date: 8/16/23
Property Owner (printed) :	

The Special Exception shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

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STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared _____ who, being by me duly sworn, upon oath says: That (s)he is authorized by _____, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

_____
Authorized Agent (*signature*)

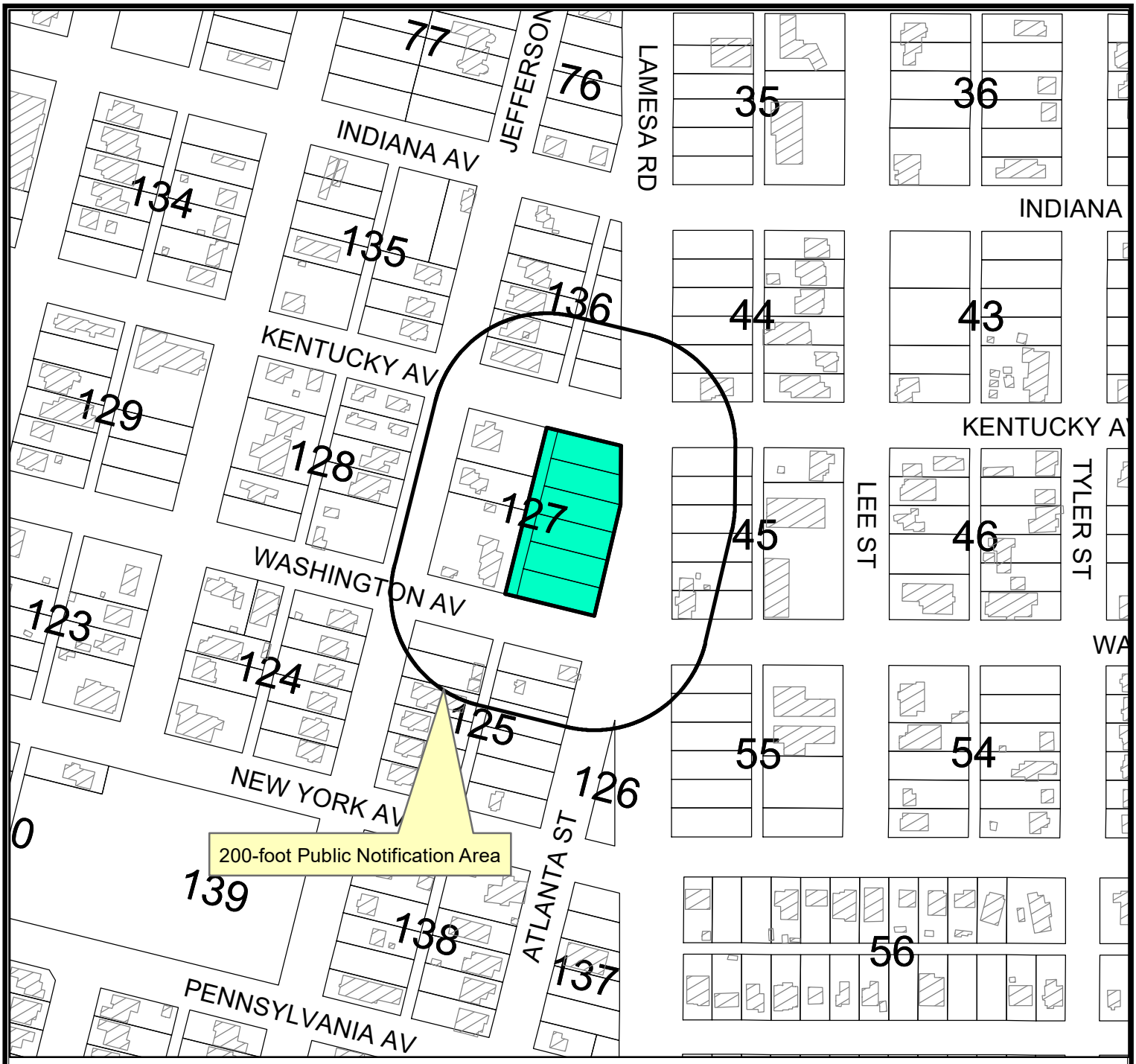
Subscribed and sworn to before me, this _____ day of _____, 20 ___, to certify which witness my hand and seal of office.

_____
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY

☑ Property Owner Authorization	☑ Dimensioned Site Plan
☑ Application Fee	☑ Plans in Digital Format (PDF/JPEG)
Check # paid	
Received By: Jeff Fisher	Date: 9-5-23

****Application will not be considered for scheduling until reviewed by a planner.****



LOCATION MAP

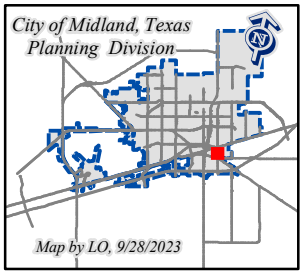
E-23-0105 **Scale: 1" = 3,000'**

Consider a request by Luisa Gardea and Guadelupe Amparan for a Special Exception to the City of Midland Zoning Ordinance, Section 6.01.A.1 – Screening Requirements for Residential and Nonresidential Properties, for a masonry screening wall to not be required between a nonresidential zoning district and a residential zoning district on Lots 1 through 6, Block 127, Southern Addition, and a 0.138-acre alley to be abandoned located in Block 127, Southern Addition, City and County of Midland, Texas.

Generally located on the southwest corner of the intersection of South Lamesa Road and East Kentucky Avenue. (Council District 2)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



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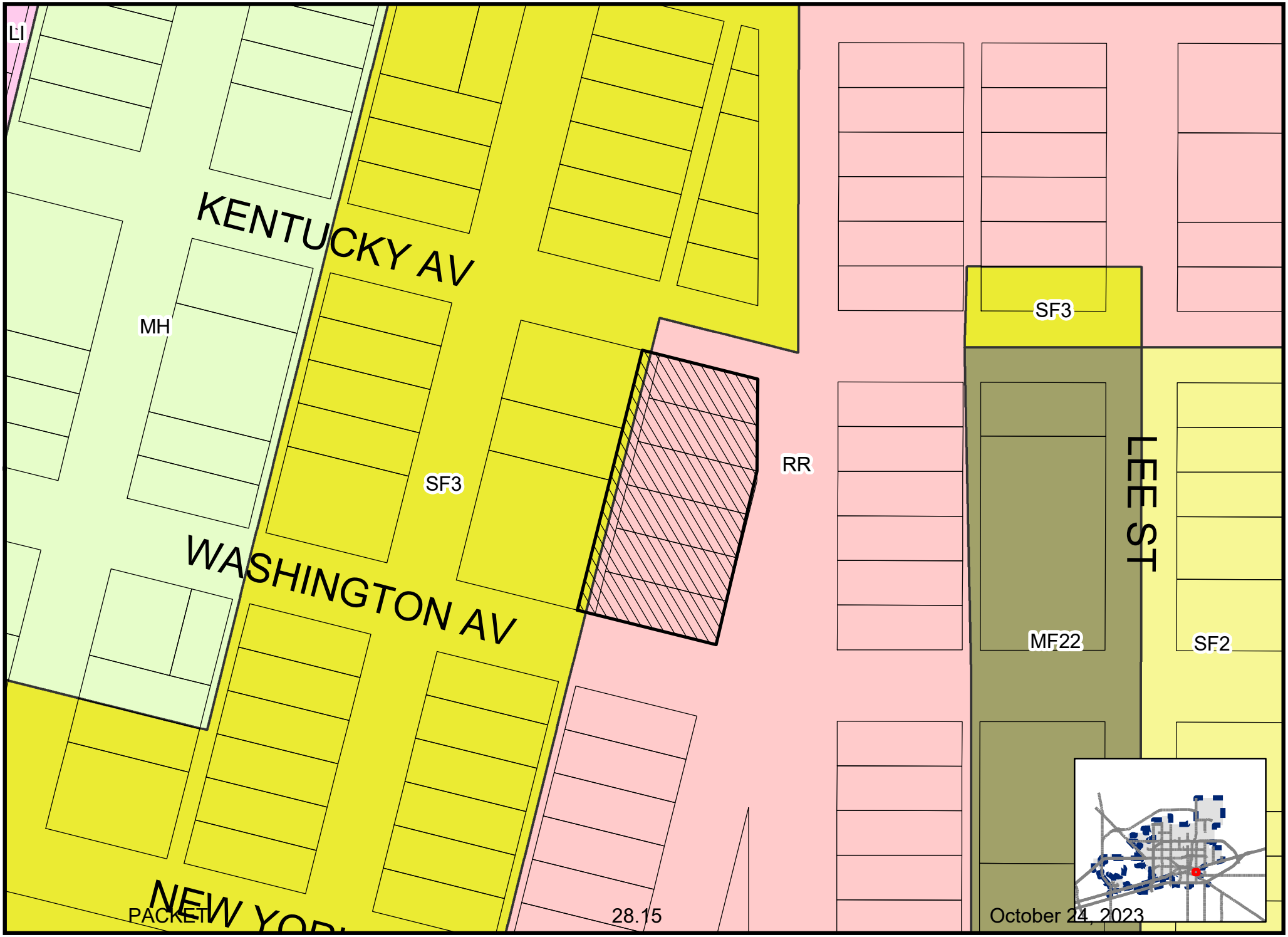
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.



Map By LO, 9/28/2023

E-23-0105

Scale: 1" = 1,617'

ZONING MAP

© THE CITY OF MIDLAND - 2021: THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT, NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN. THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.

SITE DATA

EXISTING ZONING	RR
REZONING REQUIRED?	NO
SITE AREA	0.93± AC
STORE AREA	9,180 S.F.
PARKING REQUIRED	31 SPACES
PARKING PROVIDED	31 SPACES
VARIANCES ANTICIPATED?	NO
GAS AVAILABLE?	YES

PROJECT #: _____

MIDLAND, TX
STORE DESIGN PRELIMINARY SITE PLAN APPROVAL

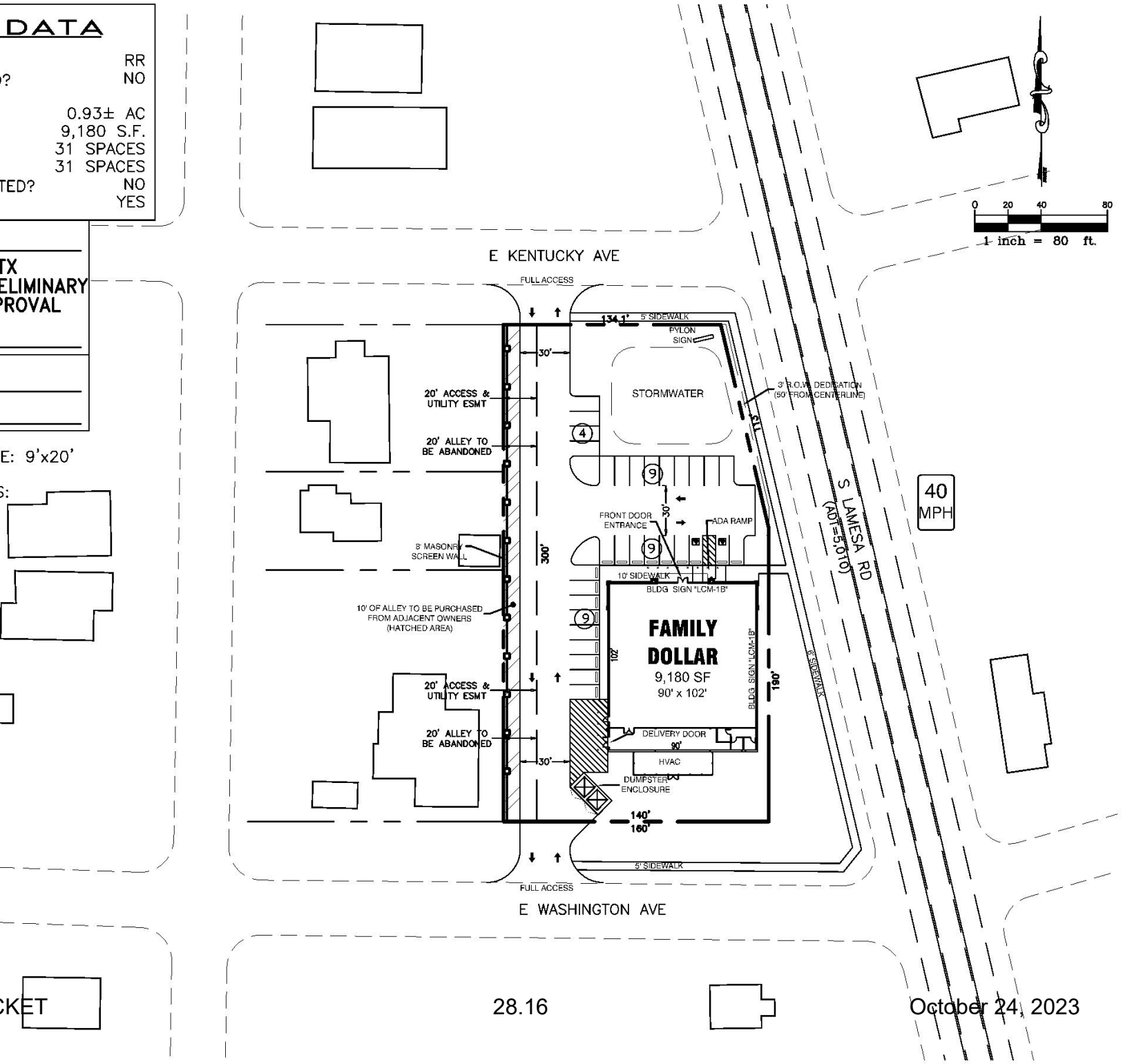
DATE: _____

D.S.D.: _____

C.D.O.: _____

PARKING SPACE SIZE: 9'x20'

REQUIRED SETBACKS:
FRONT = 15'
REAR = 0'
SIDE = 0'



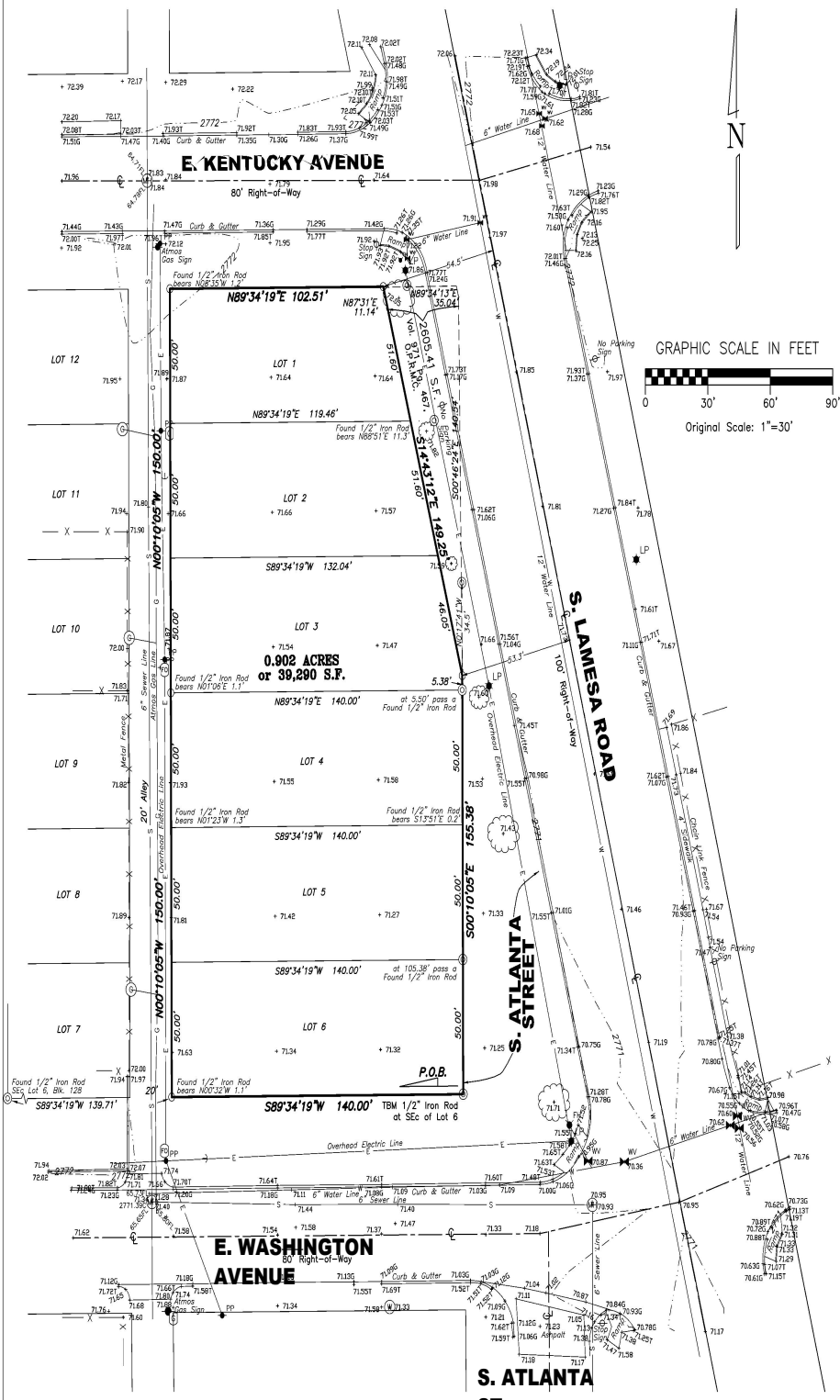
BERRY ENGINEERS LLC
63 BROAD ST NW
CLEVELAND, TN 37311
423-790-5880

DEVELOPER:
G2K PARTNERS
33300 EGYPT LANE, SUITE D-200
MAGNOLIA, TX 77354

PROJECT:
FAMILY DOLLAR
S LAMESA RD
MIDLAND, TX

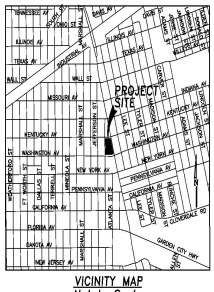
SHEET NAME:
CONCEPTUAL SITE PLAN

DATE: 08/21/2023



LEGEND

- ○ = Set 1/2" Iron Rod with Plastic Cap marked "PLS 1974"
- ⓪ = Found 1/2" Iron Rod Unless Noted Otherwise
- FH = Fire Hydrant
- G = Gas Meter
- G = Gas Riser
- = Guy Wire
- LP = Light Pole
- PP = Power Pole
- MH = Sewer Manhole
- = Traffic Sign
- = Utility Sign
- = Tree
- WV = Water Valve
- 48.35+ = Elevation Shot
- 48.35T+ = Elevation Shot on Top of Curb
- 48.35G+ = Elevation Shot on Gutter
- 48.35FL+ = Elevation Shot on Sewer Flowline
- 48.35R+ = Elevation Shot on Manhole Ring
- FO = Fiber Optic Pedestal



VICINITY MAP
Not to Scale

ALTA/NSPS LAND TITLE SURVEY

LOTS 1, 2, 3, 4, 5, AND 6, BLOCK 127, SOUTHERN ADDITION, AN ADDITION TO THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS ACCORDING TO THE MAP OR PLAT THEREOF OF RECORD IN VOLUME 2, PAGE 2, DEED RECORDS OF MIDLAND COUNTY, TEXAS SAVE AND EXCEPT A 2605.41 SQ. FT. TRACT CONVEYED TO THE CITY OF MIDLAND, TEXAS AS DESCRIBED IN AND CONVEYED BY A DEED OF RECORD IN VOLUME 971, PAGE 467, DEED RECORDS, MIDLAND COUNTY, TEXAS

Outer Boundary being further described by metes and bounds as follows:

BEGINNING at (N= 10,693,039.84' E=1,760,217.02') a 1/2" iron rod found and accepted as the Southeast of said Lot 6, Block 127, and this tract at the Northwest corner of the intersection of S. Atlanta Street and E. Washington Avenue;

THENCE S89°34'19"W with the North line of E. Washington Avenue and the South line of said Lot 6, a distance of 140.00 feet to a 1/2" iron rod with a plastic cap marked "PLS 1974" set at the Southwest corner of said Lot 6 and this tract, from whence a 1/2" iron rod found at the Southeast corner of Lot 6, Block 128, said Addition bears S89°34'19"W a distance of 239.71 feet, also from said Southwest corner a 1/2" iron rod by others erroneously set bears N00°33'W, a distance of 1.1 feet;

THENCE N0°10'05"W with the West line of Lots 4–6 of said Block 127 and the East line of a 20 foot wide alley, at distance of 150.00 feet to a 1/2" iron rod with a plastic cap marked "PLS 1974" set at the common West corner of said Lots 3 and 4, from whence a 1/2" iron rod found as set by others erroneously bears N01°06'E a distance of 1.1 feet;

THENCE N0°10'05"W continuing with the West line of Lots 1–3 of said Block 127 and said alley, a distance of 150.00 feet to a 1/2" iron rod with a plastic cap marked "PLS 1974" set at the Northwest corner of said Lot 1 and this tract, from whence a 1/2" iron rod erroneously set by others bears N08°35'W a distance of 1.2 feet;

THENCE N89°34'19"E with the North line of said Lot 1 and the South line of E Kentucky Avenue, a distance of 102.51 feet to a 1/2" iron rod with a plastic cap marked "PLS 1974" set at the Northeast corner of this tract, from whence a 1/2" iron rod erroneously set by others bears N87°31'E, a distance of 11.14 feet;

THENCE S14°43'12"E with the West line of S. Lamesa Road as described in Volume 971, Page 467, Deed Records of Midland County, a distance of 149.24 feet to a 1/2" iron rod with a plastic cap marked "PLS 1974" set at the South corner of deed described in said Volume 971, and an exterior corner of this tract, from whence the Southeast corner of Lot 3, bears S0°46'24"E, a distance of 5.38 feet as called for in said Deed, also a 1/2" iron rod erroneously set by others bears N0°17'41"W, a distance of 34.5 feet;

THENCE S0°10'05"E with the West line of said S. Atlanta Street and the East line of part of Lot 3 and all of Lots 4–6, said Block 127, at 5.50 feet pass a 1/2" iron rod found at or near the Northeast corner of said Lot 4, at 105.38 feet pass a 1/2" iron rod found at the Northeast corner of Lot 5 continuing for a total distance of 155.38 feet to the Place of Beginning, containing an area of 39,290 square feet or 0.902 Acres of Land.

GENERAL NOTES

1) Based on the U.S. Department of Housing and Urban Development, Federal Insurance Administration Flood Hazard Boundary Map, Community Number 480477, Sheet Number 48329C0202 F, revised September 16, 2005, the surveyed property is not located in a special flood hazard area according to the map. The flood zone classification for the surveyed property is Zone X.

2) Subject property consist of 39290 square feet or 0.902 acres of land.

3) The subject property has direct access to S. Lamesa Road, E. Washington Avenue and E. Kentucky Avenue, all dedicated public streets.

4) Except as shown, all visible utilities serving the subject property enter through adjoining public street and/or easements of record.

5) There is no visible evidence of recent earth moving work, building construction, or building additions that was observed on the subject property in the process of conduction the field work.

6) There are no proposed changes in street right-of-way lines and no visible evidence of recent street or sidewalk construction or repairs that was observed on the subject property in the process of conduction the field work.

7) Bearings, distances, and coordinates are relative to the Texas State Plane Coordinate System, NAD 1983/86, Central Zone, with a combine grid factor of 0.999903130, and a theta angle equal to −0°56'58.283" at station "158 LAMESA" with published values of Y= 10,691,430.83 and X= 1,760,806.01 in U.S. Survey Feet and an Elevation of 2769.91'.

8) TBM being a 1/2" iron rod found at Southeast corner of subject property with values of N=10,693,039.84', E=1,760,217.05' and an elevation of 2770.89'. Elevations are relative to 1988 NAVD.

EXCEPTIONS LISTED IN SCHEDULE B OF TITLE COMMITMENT NO. 1983462 ISSUED BY STEWART TITLE GUARANTY COMPANY ON APRIL 24, 2023 WITH AN EFFECTIVE DATE OF MARCH 16, 2023

1) There are no exceptions in title commitment that affect subject property which is a land surveying matter.

SURVEYOR'S CERTIFICATE

To: Maria Luisa Amparan; Guadalupe Amparan; G2K Development Partners; Stewart Title Guaranty Company:

This is to certify that this map or plat and survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 5, 6, 7a, 8, 9, 10, 11b, 13, 16, 17, 18 and 19 of Table A thereof. The field work was completed on July 6, 2023.

"PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT."

Date: July 17, 2023

PACKET

Drawing File: BerryEngr ALTASouthernAddnFD.Dwg
Crd File: Southern83c88.Crd
Drawn by: Gene M. Rodriguez
Scale: 1"=30'
Date: 7/16/23

PIPE SURVEYING
Box 60432, Midland, Texas 79711
(432)550-7810, Fax (432)550-0312
Firm No. 10155200

23.17

October 24, 2023

Prepared for:
Berry Engineering
63 Broad St. NW
Cleveland, TN 37311

City Council Meeting

Item Number: 29

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Landon Ochoa, Senior Planner

Subject: **AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR LOT 2, BLOCK 3, MELODY ACRES, SECTION 4, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE NORTH SIDE OF TANFORAN AVENUE, APPROXIMATELY 200 FEET EAST OF ORIOLE DRIVE), BY PERMITTING A REDUCED MINIMUM LOT AREA; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); ORDERING RECORDATION BY THE CITY SECRETARY IN THE DEED RECORDS OF MIDLAND COUNTY, TEXAS; AND ORDERING PUBLICATION (DISTRICT 4) (DEVELOPMENT SERVICES) (DEFERRED FROM SEPTEMBER 26, 2023)**

Purpose:

The applicant, Shane Huffman, is requesting a Special Exception from the City of Midland Zoning Ordinance, *Section 5.04 - Residential District Dimensional Regulations Chart,* to allow the creation of two lots with the west lot being a minimum 1.69 acres instead of the required 2.0 acre minimum in the AE, Agricultural Estate District.

Recommended City Council Action:

Deny

Fiscal Impact:

No City funds are required to process this request.

Discussion:

The AE, Agricultural Estate District requires a minimum lot area of 2 acres (87,120 square feet).

An exception is required because the proposed west lot will be less than the required acreage.

This request has been circulated to all pertinent City departments for review. Below are the departments' comments.

Fire: (Approved)

No objections.

Building: (Approved)

No issues. All future structures must adhere to the 2018 International Building Codes, the 2015 International Energy Code, the 2020 NEC requirements, the 2015 International Fire Codes, local city ordinances, zoning requirements, established setbacks, oil and gas considerations, and floodplain requirements if necessary. Code versions are subject to change depending on time of new code edition adoption in the City of Midland and date of permit application.

Engineering: (Approved)

No objections. [For the Applicant's information only.]

Code Compliance: (Approved)

No Oil and Gas issues.

Transportation: (Approved)

No objections. [For the Applicant's information only.]

Planning (Denied):

The properties along Tanforan Avenue were annexed into the city in 1980 and the subject property was platted as one 3.7-acre lot in 1987 as part of Melody Acres, Fourth Section in compliance with the AE, Agricultural Estate Zoning District minimum 2.0-acre lot area requirement. The adjacent lot to the east which contains a single-family home is 2.0 acres in size, also in compliance. There is no hardship for the proposed request, as the lots were legally platted with the minimum lot sizes. The AE, Agricultural Estate District is intended for a minimum of 2.0-acre sized lots.

This request was approved in its first reading at the September 12, 2023 City Council meeting and deferred at the September 26, 2023 City Council meeting in its second reading.

Staff is recommending denial of this special exception, however, should it be approved, staff recommends that it be subject to conditions A and B.

Condition:

A. **The east lot shall have an area of 2.00 acres as shown in Exhibit "A", which is attached hereto and incorporated herein for all purposes; and**

B. **The west lot shall have an area that is equal to the remainder of the area of the Property (approximately 1.69 acres) as shown in Exhibit "A".**

Letters of Objection:

Staff has received four letters of objection as of October 13, 2023.

Attachments:

Proposed Plat (Exhibit A)
Metes & Bounds (Exhibit B)
Application
Maps
Objection Letters

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR LOT 2, BLOCK 3, MELODY ACRES, SECTION 4, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE NORTH SIDE OF TANFORAN AVENUE, APPROXIMATELY 200 FEET EAST OF ORIOLE DRIVE), BY PERMITTING A REDUCED MINIMUM LOT AREA; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); ORDERING RECORDATION BY THE CITY SECRETARY IN THE DEED RECORDS OF MIDLAND COUNTY, TEXAS; AND ORDERING PUBLICATION

WHEREAS, the City Council modified the authority of the Board of Adjustment in Title XI, Chapter 1, Section 7 ("Section 11-1-7") of the Midland City Code; and

WHEREAS, Section 11-1-7 provides for the consideration of requests for special exceptions to the Midland Zoning Ordinance; and

WHEREAS, the Council finds that satisfactory evidence has been presented that the use to be authorized by the granting of the special exception will not be detrimental to the health, safety, comfort and welfare of the occupants of the land area near the tract on which the use to be allowed by special exception will be located; and

WHEREAS, the Council finds that it is clearly and specifically authorized by the terms of Section 11-1-7 to grant such a special exception, and said exception will be in harmony with the general purposes and intent of the zoning provisions of the Midland City Code; and

WHEREAS, after a full and fair public hearing at which all parties in interest were offered an opportunity to be heard, all pursuant to law, the Council finds it to be in the public interest to grant a special exception to the Zoning Ordinance, pursuant to Section 11-1-7, for the purposes herein stated, subject to special conditions;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That a special exception is hereby granted for the property described as Lot 2, Block 3, Melody Acres, Section 4, City and County of Midland, Texas (the "Property"). Said special exception shall allow a reduced minimum lot area.

SECTION TWO. Said special exception is subject to the following special conditions:

That the Property shall not be subdivided unless the Property is subdivided into two lots as follows:

A. The east lot shall have an area of 2.00 acres as shown in Exhibit "A", which is attached hereto and incorporated herein for all purposes; and

B. The west lot shall have an area that is equal to the remainder of the area of the Property (approximately 1.69 acres) as shown in Exhibit "A".

SECTION THREE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FOUR. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SIX. The City Secretary is hereby authorized and directed to file this ordinance with the Office of the County Clerk for purposes of recordation.

SECTION SEVEN. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2023; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2023, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2023.

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Rolandrea Russell, Interim Director of Development Services

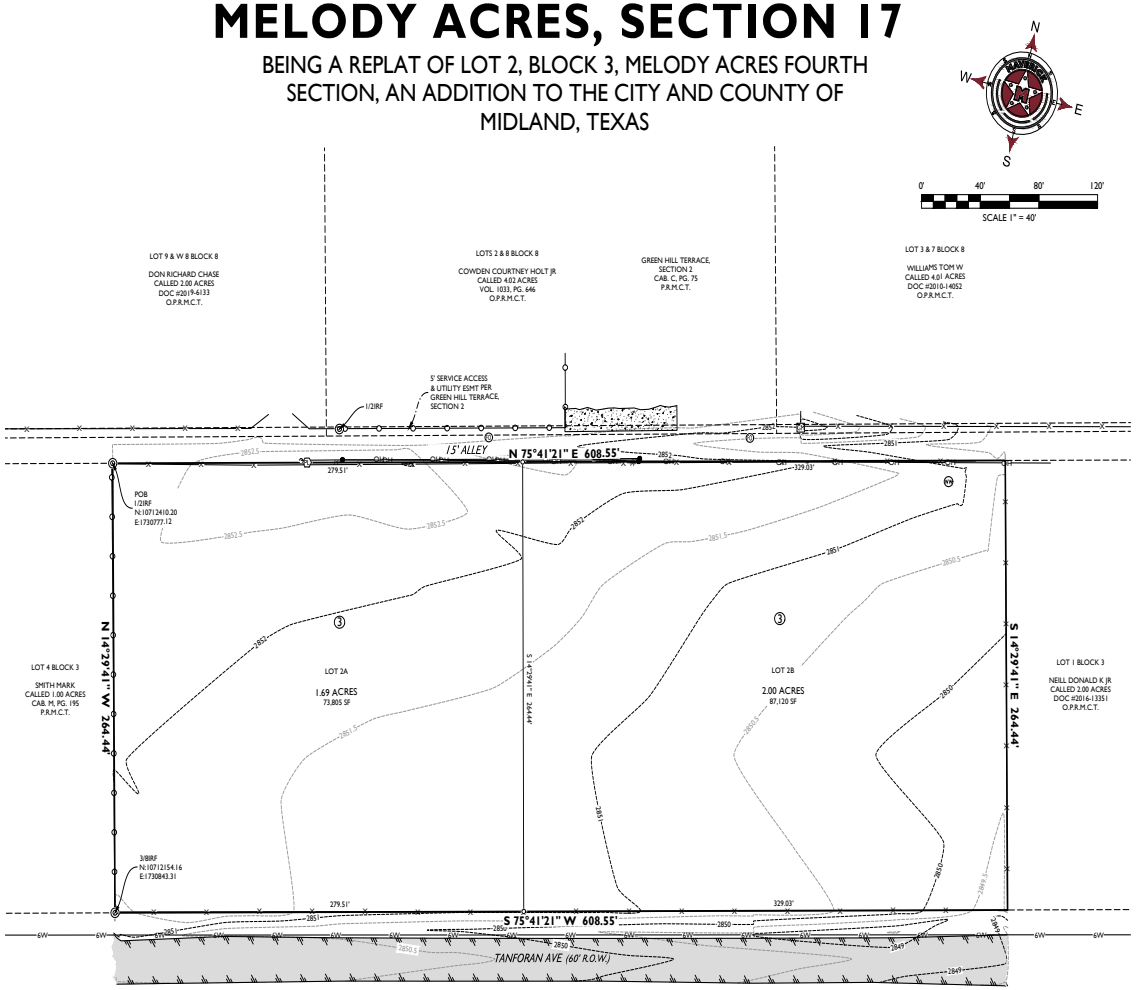
APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

EXHIBIT "A"

MELODY ACRES, SECTION 17

BEING A REPLAT OF LOT 2, BLOCK 3, MELODY ACRES FOURTH SECTION, AN ADDITION TO THE CITY AND COUNTY OF MIDLAND, TEXAS



OWNER'S CERTIFICATE

THE STATE OF TEXAS
COUNTY OF MIDLAND
WHEREAS SHANE LANCE HUFFMAN, IS THE RECORD OWNER OF A TRACT OF LAND SITUATED IN SECTION 17, BLOCK 3, T-1-S, T&P. RR. CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

THAT SHANE LANCE HUFFMAN, BEING THE OWNER OF THE LAND SHOWN ON THIS PLAT DESIGNATED AS MELODY ACRES, SECTION 17, AN ADDITION TO THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS AND WHOSE NAME IS SUBSCRIBED HERETO, DO HEREBY DEDICATE TO THE PUBLIC USE FOREVER THE STREETS, ALLEYS, AND EASEMENTS SHOWN THEREON; AND DO HEREBY GIVE AN EASEMENT OF INGRESS AND EGRESS TO THE CITY OF MIDLAND FOR GARBAGE COLLECTION, UTILITY FACILITY ACCESS AND MAINTENANCE, LOCATION AND MAINTENANCE OF TRASH CONTAINERS AND ACCESS THERETO; AND CONDITION SAID EASEMENT THAT NO CONSTRUCTION SHALL COMMENCE ON SAID LOT OR LOTS UNTIL THE EXACT LOCATION OF SAID CONTAINERS THEREWITH HAS BEEN SELECTED AND APPROVED BY THE DIRECTOR OF UTILITIES.

WITNESS MY HAND AT _____ - ___M.

THE_____DAY OF _____ 2023.

BY: SHANE LANCE HUFFMAN, OWNER

ACKNOWLEDGEMENT

THE STATE OF TEXAS
COUNTY OF MIDLAND
BEFORE ME, THE UNDERSIGNED AUTHORITY, A NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS, ON THIS DAY PERSONALLY APPEARED _____ KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT HE WAS ACTING AS OWNER, AND THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED, AND IN THE CAPACITY THEREIN STATED. GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS

THE _____ DAY OF _____ 2023.

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

CERTIFICATE OF APPROVAL

THIS IS TO CERTIFY THAT THE ABOVE AND FOREGOING PLAT OF MELODY ACRES, SECTION 17, WAS APPROVED BY PROPER ACTION OF THE CITY PLANNING AND ZONING COMMISSION OF THE CITY OF MIDLAND, TEXAS ON THIS

_____DAY OF_____ 2023.

LUCY SISNIEGA, CHAIRMAN

JEFFREY FISHER, SECRETARY

DEVELOPMENT NOTES

1. *SELLING A PORTION OF THIS ADDITION BY METES AND BOUNDS MAY BE A VIOLATION OF CITY ORDINANCE AND STATE LAW AND SUBJECT TO FINES AND WITHHOLDING OF UTILITIES AND BUILDING PERMITS.*
2. *APPROVAL OF A SITE PLAN BY THE CITY OF MIDLAND MAY BE REQUIRED BEFORE THE DEVELOPMENT OF ANY LOT AND BEFORE A BUILDING PERMIT MAY BE OBTAINED.*
3. *THE INSTALLATION OF IMPROVEMENTS MAY BE REQUIRED BY THE CITY OF MIDLAND AS SUCH TIME AS:*
   (1) THE REPRESENTED LOT IS REPLATTED FOR SUBDIVISION INTO MORE THAN ONE LOT OR :
   (2) THE PROPERTY IS REZONED FOR A MORE INTENSIVE USE.
4. *IMPACT FEES WILL BE ASSESSED DURING THE FINAL PLATTING PROCESS, IMPLEMENTATION AND COLLECTION OF IMPACT FEES WILL TAKE PLACE DURING THE BUILDING PERMIT PROCESS. ADDITIONAL IMPACT FEES OR INCREASES IN FEES MAY NOT BE ASSESSED AGAINST THE TRACT UNLESS THE NUMBER OF SERVICE UNITS TO BE DEVELOPED ON THE TRACT INCREASED.*

SURVEY NOTES:

1. *BASIS OF BEARING, COORDINATES, DISTANCE AND ACREAGE ARE A LAMBERT CONICAL PROJECTION OF THE TEXAS COORDINATE SYSTEM, STATE PLANE GRID, CENTRAL ZONE, NAD 83, U.S. SURVEY FOOT WITH A CONVERGENCE ANGLE (theta) OF -0°54'48.40" AND A COMBINED SCALE FACTOR OF 0.99989691 I AT NO: "MIDLAND".*
2. *1/2" IRON ROD WITH RED PLASTIC CAP MARKED "MAVERICK FIRM # 10194514" AT ALL SET CORNERS, UNLESS OTHERWISE SPECIFIED.*
3. *SEE DOCUMENTS OR ELECTRONIC DATA FILED IN THE OFFICE OF MAVERICK ENGINEERING FOR COMPLETE RECONSTRUCTION OF THIS SURVEY.*
4. *LOCATION OF BURIED UTILITIES AND PIPELINES, IF ANY, IS APPROXIMATE BASED UPON OBSERVED EXISTING SIGNAGE, CITY OF MIDLAND GIS AND VISUAL EVIDENCE, OR BY ONE-CALL 811 SITE MARKINGS AT THE TIME OF THIS SURVEY. DUE CARE IS RECOMMENDED. CALL 1-800-DIG-TESS FOR LOCATES PRIOR TO ANY CONSTRUCTION OR EXCAVATION.*
5. *THIS IS A PROVISIONAL SKETCH PLAT, THIS IS NOT TO BE RECORDED OR USED FOR CONSTRUCTION PURPOSES. SET MONUMENTS SHOWN HEREON ARE ALSO PRELIMINARY AND SHALL ONLY BE PLACED IN ACCORDANCE WITH A FINAL SURVEY SEALED BY THE SURVEYOR OF RECORD.*

FEMA NOTE

FLOOD STATEMENT: ACCORDING TO FEMA'S N.F.I.P. FLOOD INSURANCE RATE MAP #48329C0066F, DATED SEPTEMBER 26, 2008, THIS PROPERTY IS WITHIN THE UNSHADED PORTION OF ZONE "X", DESIGNATED AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN."

THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR THE STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. ON RARE OCCASIONS, GREATER FLOODS CAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MAN-MADE OR NATURAL CAUSES. THIS STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF MAVERICK CIVIL & SURVEY, LLC.

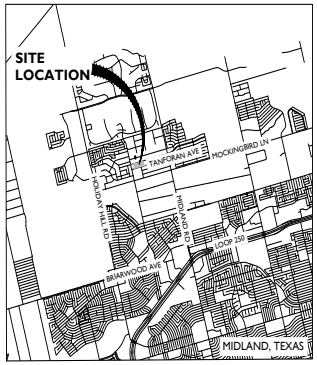
SURVEYOR'S CERTIFICATE

KNOW ALL MEN BY THESE PRESENTS:

THAT I, GREGORY W. SHOULTS, A REGISTERED [illegible] AND SURVEYOR OF THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM AN ACTUAL AND ACCURATE SURVEY OF THE LAND AND THAT THE CORNER MONUMENTS SHOWN THEREON WERE [illegible] UNDER MY PERSONAL SUPERVISION, IN ACCORDANCE WITH THE SUBDIVISION [illegible] OF MIDLAND, TEXAS.

GREGORY W. SHOULTS, R.P.L.S.
MAVERICK ENGINEERING / LAND SURVEYING
1909 W. WALL STREET, SUITE "K"
MIDLAND, TX 79701

PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE



VICINITY MAP

N.T.S.

UTILITY COMPANY'S CERTIFICATE

THIS PLAT HAS BEEN CHECKED FOR ACCESSIBILITY OF UTILITIES.

ATMOS ENERGY
BY: _____

AT&T
BY: _____

OPTIMUM
BY: _____

ASTOUND BROADBAND
BY: _____

ONCOR ELECTRIC DELIVERY
BY: _____

LEGEND

	FOUND CORNER
FO	FIBER OPTIC BOX
GM	GAS METER
	GUY ANCHOR
PM	PIPELINE MARKER
PP	POWER POLE
WW	WATER WELL
	BOUNDARY LINE
	PROPERTY LINES
	EDGE OF ASPHALT
X	FENCE
	CHAINLINK FENCE
OH	OVERHEAD ELECTRIC LINE
6W	6" WATER MAIN
	CONCRETE
	PAVEMENT
O.P.R.M.C.T.	OFFICIAL PUBLIC RECORDS, MIDLAND CO., TX
P.R.M.C.T.	PLAT RECORDS, MIDLAND CO., TX

MAVERICK
CIVIL ENGINEERING / LAND SURVEYING
1909 West Wall Street, Suite "K"
Midland, Texas 79701
ENGINEER FIRM #: F-15089
SURVEY FIRM #: 10194514
Tel: (432) 262-0999 Fax: (432) 262-0989
www.Maverick-Eng.com

PACKET

PLAT FILED FOR RECORD IN MIDLAND COUNTY, TEXAS

NO. _____

DATE _____

29.8

PROPERTY OWNER
SHANE LANCE HUFFMAN
4416 TANFORAN AVE
MIDLAND, TEXAS - 79707
DEED INSTRUMENT #2016-3066

October 24, 2023

MELODY ACRES SECTION 17

Drawing: P:\2023\23013\3-SHANE HUFFMAN-MELODY ACRES EXCEPTION & RE-PLAT\DRAWINGS\PLAT\23013 2 - SKETCH PLAT.DWG Last Saved By: BKing on 9/28/23

MIDLAND
Planning Division

Special Exception Application

Project Number: _____

Case Number: E.23.0103

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: See Owner		Phone ( ) Email	
Address	City	State	Zip

Property Owner Printed Name: Shane Huffman		Phone ( ) Email	
Address 4709 Woodbar Court	City Midland	State TX	Zip 79707

Representative *(if different from Applicant or Property Owner)* Firm: Maverick Engineering Printed Name: Andrew Mellen		Phone (432) 262-0999 Email amellen@maverick-eng.com	
Address 1909 W Wall St Ste K	City Midland	State TX	Zip 79701

Street Address: 4416 Tanforan Avenue, Midland, TX

Legal Description
Lot: 2 Block: 3 Subdivision: Melody Acres, Section 4 (also see attached Metes & Bounds)

Current Zoning: AE Agricultural Estates

This property qualifies as an exception to the City Code because:

- ☒ It is an expansion of a nonconforming use.
- ☐ There are existing nonconforming structures in the area.
- ☐ The addition of architectural or other projections of a minor extent.

Reason for Request: Applicant is seeking to re-plat the existing Lot 2, (approximately 3.7 acres total) into two lots less than the 2-acre minimum required by existing zoning. Other area non-conforming lots exist within this subdivision.

Submittal and Fees
Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan showing:
  - Parking
  - Building Footprint
- Digital Copies of Site Plan (PDF/JPEG)

Signatures	
Applicant (signature):	Date:
Applicant (printed):	
Property Owner (signature): Shane Huffman	Date: 7/24/23
Property Owner (printed) : Shane Huffman	

The Special Exception shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

If an agent is authorized by the property owner to file and execute the application on behalf of the property owner, the agent must complete the affidavit below.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared Andrew L Mellen who, being by me duly sworn, upon oath says: That (s)he is authorized by Shane Huffman, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

Andrew L. Mellen Jr.
Authorized Agent (*signature*)

Subscribed and sworn to before me, this 24th day of July, 2023, to certify which witness my hand and seal of office.

Kelsey Ann Lewis
My Commission Expires
2/19/2026
Notary ID
131456388

Kelsey Ann Lewis
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY

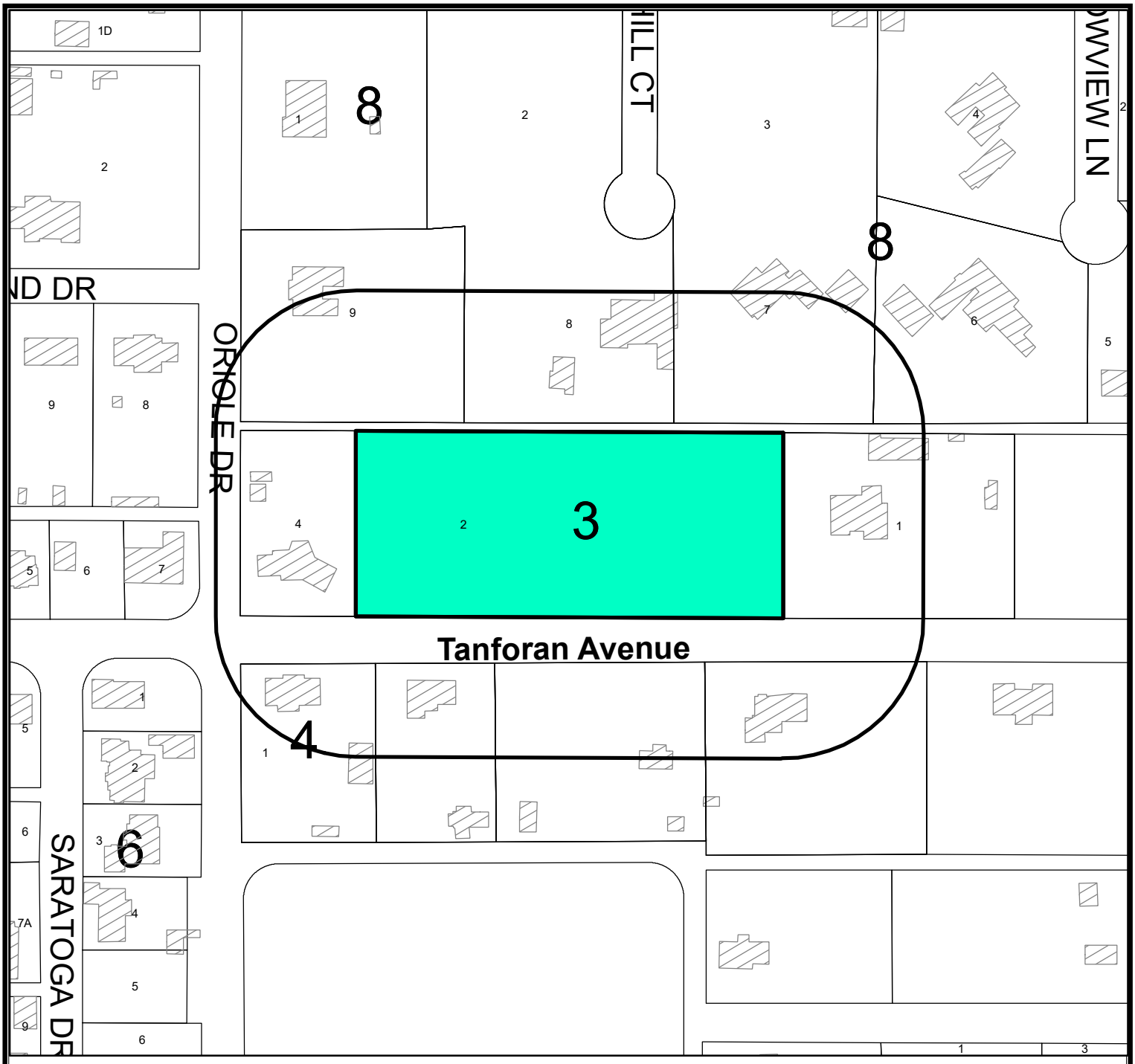
- ☑ Property Owner Authorization
- ☑ Dimensioned Site Plan
- ☑ Application Fee
- ☑ Plans in Digital Format (PDF/JPEG)

Check # 4369

Received By: Landon Ashton | Date: JUL 24 2023

BY: .....

****Application will not be considered for scheduling until reviewed by a planner.****



LOCATION MAP

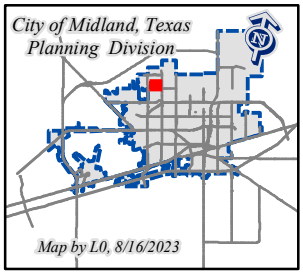
E-23-0103 **Scale: 1" = 2,442'**

A request by Maverick Engineering for a Special Exception from the City of Midland Zoning Ordinance, Section 5.04 - Residential District Dimensional Regulations Chart, for a reduced minimum lot area on Lot 2, Block 3, Melody Acres, Section 4, City of and County of Midland, Texas.

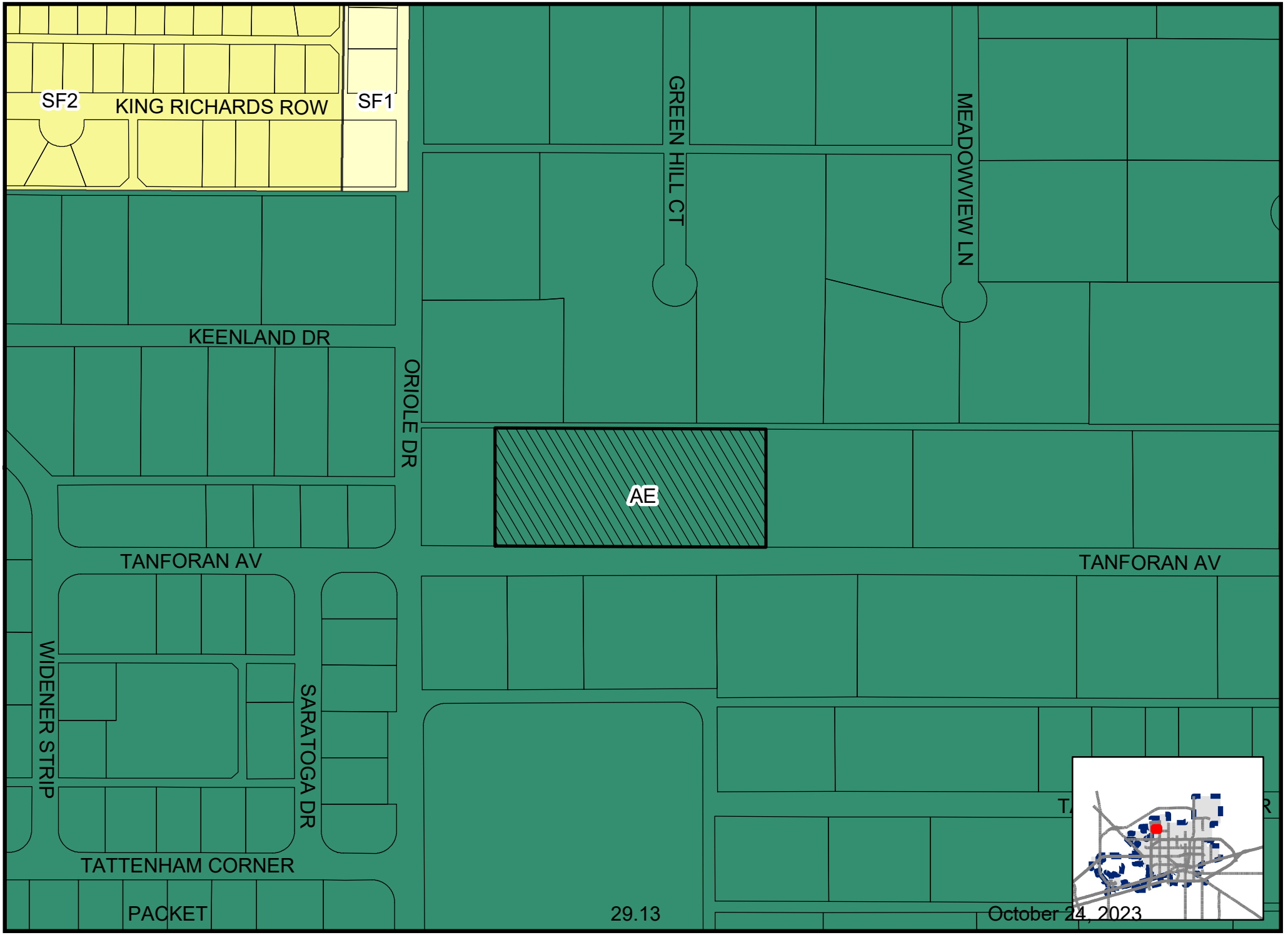
Genrally located on the north side of Tanforan Avenue approximately 200-feet east of Oriole Drive. (Council District 4)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



©THE CITY OF MIDLAND - 2021
THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY AND NOR IS IT DESIGNED TO BE USED AS THE ONLY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN.
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.



Map By LO, 8/30/2023

E-23-0103

Scale: 1" = 3,233'

ZONING MAP

© THE CITY OF MIDLAND - 2021: THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT, NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN. THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.

MAVERICK
ENGINEERING • SURVEY • WATER RESOURCES
1909 West Wall Street, Suite K • Midland, TX 79701
Tel: 432.262.0999 • Fax: 432.262.0989 • maverick-eng.com
ENGINEER FIRM #: F-15089 | SURVEY FIRM #:10194514

STATE OF TEXAS §

COUNTY OF MIDLAND §

FIELD NOTE DESCRIPTION OF LOT 2, BLOCK 3, FOURTH SECTION, MELODY ACRES

FIELD NOTE DESCRIPTION OF A 3.69 ACRE TRACT OF LAND, BEING LOT 2, BLOCK 3, MELODY ACRES, FOURTH SECTION (SECTION 4), AN ADDITION TO THE CITY AND COUNTY OF MIDLAND , TEXAS, AS SHOWN ON A PLAT RECORDED AS DOCUMENT NUMBER 7257 IN PLAT CABINET D ON PAGE 387 OF THE PLAT RECORDS OF SAID MIDLAND COUNTY, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

BEGINNING AT N.(y):10712410.20, E.(x):1730777.12, A ONE HALF INCH IRON ROD FOUND AND ACCEPTED AS BEING THE NORTHEAST CORNER OF LOT 4, BLOCK 3, MELODY ACRES, SECTION 16, AS SHOWN ON A PLAT RECORDED AS DOCUMENT NUMBER 2023-5355, IN PLAT CABINET M ON PAGE 195 OF SAID PLAT RECORDS FOR THE NORTHWEST CORNER HEREOF;

THENCE N.75°41'21"E., ALONG THE SOUTH LINE OF A CALLED 15 FOOT ALLEY, 608.55 FEET TO A POINT WITHIN A FENCE CORNER, BEING THE NORTHWEST CORNER OF LOT 1 OF THIS BLOCK FOR THE NORTHEAST CORNER HEREOF;

THENCE S.14°29'41"E., ALONG THE WEST LINE OF SAID LOT 1, 264.44 FEET TO A POINT WITHIN A FENCE CORNER, BEING ON THE NORTH RIGHT-OF-WAY LINE OF TANFORAN AVENUE, AS RECORDED IN VOLUME 469 ON PAGE 269 OF THE DEED RECORDS OF SAID MIDLAND COUNTY FOR THE SOUTHEAST CORNER HEREOF;

THENCE S.75°41'21"W., ALONG SAID TANFORAN AVENUE, 608.55 FEET TO A THREE EIGHTHS INCH IRON ROD FOUND AND ACCEPTED AS THE SOUTHEAST CORNER OF SAID LOT 4 FOR THE SOUTHWEST CORNER HEREOF;

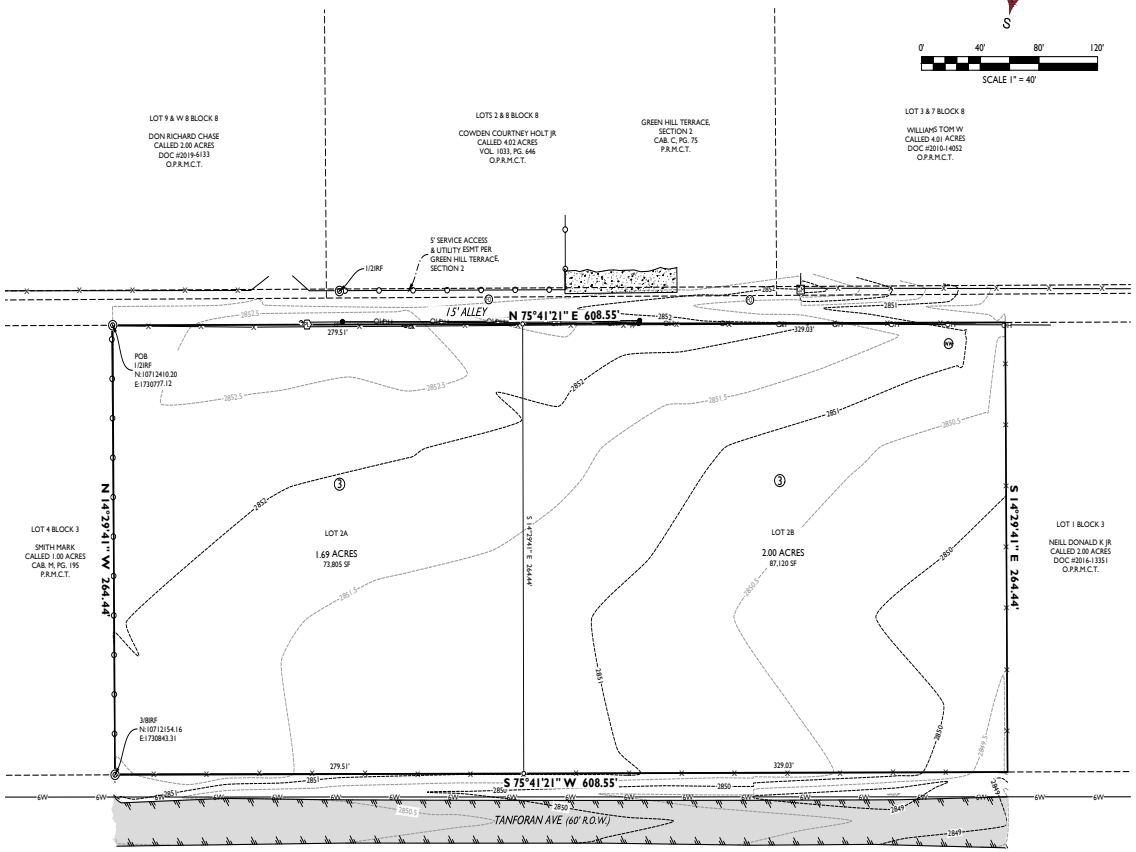
THENCE N.14°29'41"W., ALONG THE EAST LINE OF SAID LOT 4, 264.44 FEET TO THE **POINT OF BEGINNING**, CONTAINING 160925 SQUARE FEET OR 3.69 ACRES OF LAND.

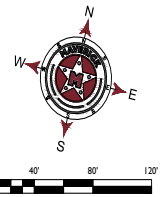
August 1, 2023

Gregory W. Shoults
www.maverick-eng.com
Texas RPLS - No. 5356
Maverick Engineering (FIRM – No. 10194514)

MELODY ACRES, SECTION 17

BEING A REPLAT OF LOT 2, BLOCK 3, MELODY ACRES FOURTH SECTION, AN ADDITION TO THE CITY AND COUNTY OF MIDLAND, TEXAS





OWNER'S CERTIFICATE

THE STATE OF TEXAS
COUNTY OF MIDLAND
WHEREAS SHANE LANCE HUFFMAN, IS THE RECORD OWNER OF A TRACT OF LAND SITUATED IN SECTION 17, BLOCK 3, T-1-S, T&P. RR. CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

THAT SHANE LANCE HUFFMAN, BEING THE OWNER OF THE LAND SHOWN ON THIS PLAT DESIGNATED AS MELODY ACRES, SECTION 17, AN ADDITION TO THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS AND WHOSE NAME IS SUBSCRIBED HERETO, DO HEREBY DEDICATE TO THE PUBLIC USE FOREVER THE STREETS, ALLEYS, AND EASEMENTS SHOWN THEREON; AND DO HEREBY GIVE AN EASEMENT OF INGRESS AND EGRESS TO THE CITY OF MIDLAND FOR GARBAGE COLLECTION, UTILITY FACILITY ACCESS AND MAINTENANCE, LOCATION AND MAINTENANCE OF TRASH CONTAINERS AND ACCESS THERETO; AND CONDITION SAID EASEMENT THAT NO CONSTRUCTION SHALL COMMENCE ON SAID LOT OR LOTS UNTIL THE EXACT LOCATION OF SAID CONTAINERS THEREWITH HAS BEEN SELECTED AND APPROVED BY THE DIRECTOR OF UTILITIES.

WITNESS MY HAND AT _____ - ___M.

THE_____DAY OF _____ 2023.

BY: SHANE LANCE HUFFMAN, OWNER

ACKNOWLEDGEMENT

THE STATE OF TEXAS
COUNTY OF MIDLAND
BEFORE ME, THE UNDERSIGNED AUTHORITY, A NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS, ON THIS DAY PERSONALLY APPEARED _____ KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT HE WAS ACTING AS OWNER, AND THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED, AND IN THE CAPACITY THEREIN STATED. GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS

THE _____ DAY OF _____ 2023.

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

CERTIFICATE OF APPROVAL

THIS IS TO CERTIFY THAT THE ABOVE AND FOREGOING PLAT OF MELODY ACRES, SECTION 17, WAS APPROVED BY PROPER ACTION OF THE CITY PLANNING AND ZONING COMMISSION OF THE CITY OF MIDLAND, TEXAS ON THIS

_____DAY OF_____ 2023.

LUCY SISNIEGA, CHAIRMAN

JEFFREY FISHER, SECRETARY

DEVELOPMENT NOTES

1. *SELLING A PORTION OF THIS ADDITION BY METES AND BOUNDS MAY BE A VIOLATION OF CITY ORDINANCE AND STATE LAW AND SUBJECT TO FINES AND WITHHOLDING OF UTILITIES AND BUILDING PERMITS.*
2. *APPROVAL OF A SITE PLAN BY THE CITY OF MIDLAND MAY BE REQUIRED BEFORE THE DEVELOPMENT OF ANY LOT AND BEFORE A BUILDING PERMIT MAY BE OBTAINED.*
3. *THE INSTALLATION OF IMPROVEMENTS MAY BE REQUIRED BY THE CITY OF MIDLAND AS SUCH TIME AS:*
   (1) THE REPRESENTED LOT IS REPLATTED FOR SUBDIVISION INTO MORE THAN ONE LOT OR :
   (2) THE PROPERTY IS REZONED FOR A MORE INTENSIVE USE.
4. *IMPACT FEES WILL BE ASSESSED DURING THE FINAL PLATTING PROCESS, IMPLEMENTATION AND COLLECTION OF IMPACT FEES WILL TAKE PLACE DURING THE BUILDING PERMIT PROCESS. ADDITIONAL IMPACT FEES OR INCREASES IN FEES MAY NOT BE ASSESSED AGAINST THE TRACT UNLESS THE NUMBER OF SERVICE UNITS TO BE DEVELOPED ON THE TRACT INCREASED.*

SURVEY NOTES:

1. *BASIS OF BEARING, COORDINATES, DISTANCE AND ACREAGE ARE A LAMBERT CONICAL PROJECTION OF THE TEXAS COORDINATE SYSTEM, STATE PLANE GRID, CENTRAL ZONE, NAD 83, U.S. SURVEY FOOT WITH A CONVERGENCE ANGLE (theta) OF -0°54'48.40" AND A COMBINED SCALE FACTOR OF 0.99989691 I AT NO: "MIDLAND".*
2. *1/2" IRON ROD WITH RED PLASTIC CAP MARKED "MAVERICK FIRM # 10194514" AT ALL SET CORNERS, UNLESS OTHERWISE SPECIFIED.*
3. *SEE DOCUMENTS OR ELECTRONIC DATA FILED IN THE OFFICE OF MAVERICK ENGINEERING FOR COMPLETE RECONSTRUCTION OF THIS SURVEY.*
4. *LOCATION OF BURIED UTILITIES AND PIPELINES, IF ANY, IS APPROXIMATE BASED UPON OBSERVED EXISTING SIGNAGE, CITY OF MIDLAND GIS AND VISUAL EVIDENCE, OR BY ONE-CALL 811 SITE MARKINGS AT THE TIME OF THIS SURVEY. DUE CARE IS RECOMMENDED. CALL 1-800-DIG-TESS FOR LOCATES PRIOR TO ANY CONSTRUCTION OR EXCAVATION.*
5. *THIS IS A PROVISIONAL SKETCH PLAT, THIS IS NOT TO BE RECORDED OR USED FOR CONSTRUCTION PURPOSES. SET MONUMENTS SHOWN HEREON ARE ALSO PRELIMINARY AND SHALL ONLY BE PLACED IN ACCORDANCE WITH A FINAL SURVEY SEALED BY THE SURVEYOR OF RECORD.*

FEMA NOTE

FLOOD STATEMENT: ACCORDING TO FEMA'S N.F.I.P. FLOOD INSURANCE RATE MAP #48329C0066F, DATED SEPTEMBER 26, 2020, THIS PROPERTY IS WITHIN THE UNSHADED PORTION OF ZONE "X", DESIGNATED AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN."

THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR THE STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. ON RARE OCCASIONS, GREATER FLOODS CAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MAN-MADE OR NATURAL CAUSES. THIS STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF MAVERICK CIVIL & SURVEY, LLC.

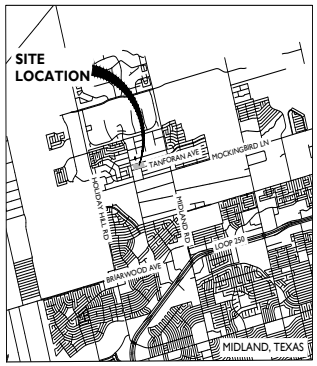
SURVEYOR'S CERTIFICATE

KNOW ALL MEN BY THESE PRESENTS:

THAT I, GREGORY W. SHOULTS, A REGISTERED [illegible] AND SURVEYOR OF THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT WAS [illegible] AND ACCURATE SURVEY MADE ON THE GROUND AND THAT THE CORNER [illegible] THEREON WERE [illegible] BY ME OR UNDER MY PERSONAL SUPERVISION, IN [illegible] THE SUBDIVISION [illegible] CITY OF MIDLAND, TEXAS.

GREGORY W. SHOULTS, R.P.L.S.
MAVERICK ENGINEERING / LAND SURVEYING
1909 W. WALL STREET, SUITE "K"
MIDLAND, TX 79701

PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE



VICINITY MAP

N.T.S.

UTILITY COMPANY'S CERTIFICATE

THIS PLAT HAS BEEN CHECKED FOR ACCESSIBILITY OF UTILITIES.

ATMOS ENERGY
BY: _____

AT&T
BY: _____

OPTIMUM
BY: _____

ASTOUND BROADBAND
BY: _____

ONCOR ELECTRIC DELIVERY
BY: _____

LEGEND

◎	FOUND CORNER
FO	FIBER OPTIC BOX
GM	GAS METER
^	GUY ANCHOR
PM	PIPELINE MARKER
PP	POWER POLE
WW	WATER WELL
———	BOUNDARY LINE
- - -	PROPERTY LINES
⊿⊿⊿	EDGE OF ASPHALT
-x-x-	FENCE
-o-o-	CHAINLINK FENCE
OH	OVERHEAD ELECTRIC LINE
6W	6" WATER MAIN
	CONCRETE
	PAVEMENT
O.P.R.M.C.T.	OFFICIAL PUBLIC RECORDS, MIDLAND CO., TX
P.R.M.C.T.	PLAT RECORDS, MIDLAND CO., TX

MAVERICK
CIVIL ENGINEERING / LAND SURVEYING
1909 West Wall Street, Suite "K"
Midland, Texas 79701
ENGINEER FIRM #: F-15089
SURVEY FIRM #: 10194514
Tel: (432) 262-0999 Fax: (432) 262-0989
www.Maverick-Eng.com

PACKET

PLAT FILED FOR RECORD
MIDLAND COUNTY, TEXAS

NO. _____

DATE _____

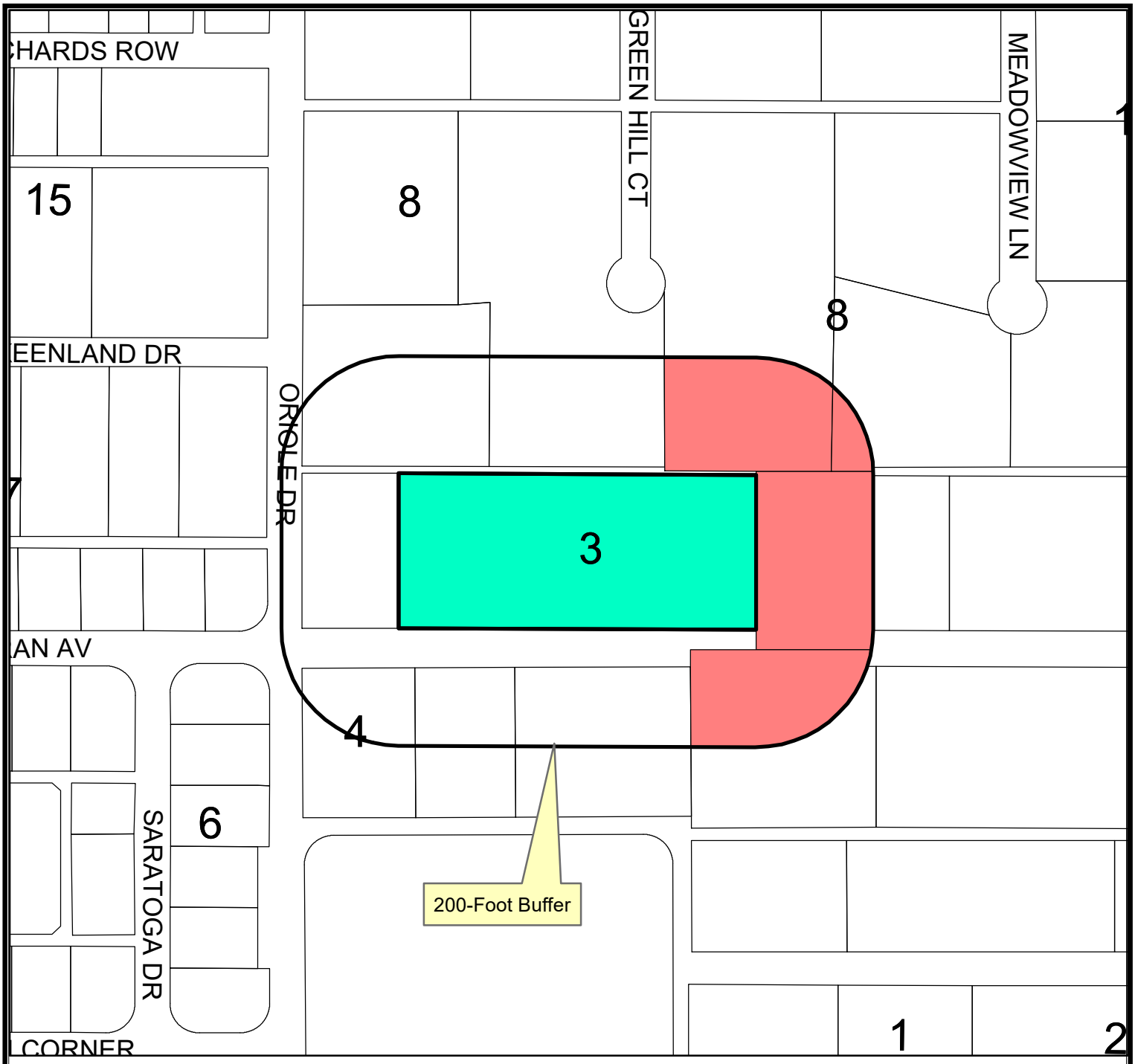
29.15

PROPERTY OWNER
SHANE LANCE HUFFMAN
4416 TANFORAN AVE
MIDLAND, TEXAS - 79707
DEED INSTRUMENT #2016-3066

October 24, 2023

MELODY ACRES SECTION 17

Drawing: P:\2023\23013\3-SHANE HUFFMAN-MELODY ACRES EXCEPTION & RE-PLAT\DRAWINGS\PLAT\23013 2 - SKETCH PLAT.DWG Last Saved By: BKing on 9/28/23



36.6% Objection

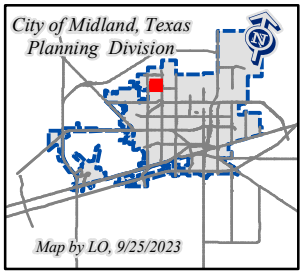
E-23-0103 **Scale: 1" = 4,057'**

A request by Maverick Engineering for a Special Exception from the City of Midland Zoning Ordinance, Section 5.04 - Residential District Dimensional Regulations Chart, for a reduced minimum lot area on Lot 2, Block 3, Melody Acres, Section 4, City of and County of Midland, Texas.

Genrally located on the north side of Tanforan Avenue approximately 200-feet east of Oriole Drive. (Council District 4)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



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1

MIDLAND
Planning Division

NEILL DONALD K JR
4414 TANFORAN AV
MIDLAND TX 79707

PUBLIC NOTICE

SEP 20 2023

The **City Council** of the City of Midland, Texas will hold a public hearing at **10:00 a.m.** on **Tuesday, September 12, 2023,** in the Council Chambers, City Hall, 300 N. Loraine, Midland, Texas 79701, on a request by **Maverick Engineering** for approval of a **Special Exception to the City of Midland Zoning Ordinance, 5.04 – Residential Zoning District Dimensional Regulations Chart, for a reduced minimum lot area** on the following described property:

LEGAL DESCRIPTION: Lot 2, Block 3, Melody Acres, Section 4, City and County of Midland, Texas.

LOCATION: Generally located on the north side of Tanforan Avenue approximately 200-feet east of Oriole Drive. (Council District 4)

Not to be considered a part of the Public Notice: 1) See reverse side for location map; 2) In order to be considered as an official objection to this request a response **must be submitted by mail or delivered *in writing*** to the Planning Division at the address listed above. An official objection may be filed by completing this notice and returning it to the address listed above.

I object to this request YES **Comments:** _____

Required Information:

Don Neill
Property Owner's Signature

DON NEILL
Printed Name

4414 TANFORAN
Property Address (**No P. O. Boxes**)

If any further information is desired, please contact the Planning Division, at 685-7400.
Si ud. desea más información en Español sobre este caso, llame al : 685-7400.

Notices Mailed: 9
Date Mailed: 8/25/2023
Case Number: E-23-0103
Case Name: 4416 Tanforan Ave
LO Planner's Initials

Jeff Fisher

Jeff Fisher, AICP
Planning Division Manager
Department of Development Services

The meeting facility is accessible to disabled persons. A wheelchair entry ramp is located at the southeast entrance to City Hall. A parking space designated for use by disabled persons is available near the southeast entrance doors. Any disabled person needing special accommodations or hearing impaired persons wishing to have an interpreter should request services through the Administrative Services Department at least 48 hours prior to the scheduled meeting by contacting Compliance Coordinator for the City of Midland at (432) 685-7251. If communication via TDD is required, please call 1-800-735-2989.

MIDLAND
Planning Division

2

RECEIVED
SEP 25 2023

PUBLIC NOTICE

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I object to this request YES **Comments:** NEED DETAILS, FUTURE ZONING WHY? DE-SPACING? WHY CHANGE? NO.

Required Information:

[signature] | TOM W. WILLIAMS | 6610 GREEN HILL CT. MIDLAND, TX, 79707

Property Owner's Signature | Printed Name | Property Address (**No P. O. Boxes**)

If any further information is desired, please contact the Planning Division, at 685-7400.
Si ud. desea más información en Español sobre este caso, llame al : 685-7400.

DE-VALUATION, POTENTIAL LEGAL SUITS THAT WILL BE PURSUED.

Notices Mailed: 9
Date Mailed: 8/25/2023
Case Number: E-23-0103
Case Name: 4416 Tanforan Ave
LO Planner's Initials

Jeff Fisher

Jeff Fisher, AICP
Planning Division Manager
Department of Development Services

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MIDLAND
Planning Division

3

SEP 25 2023

BY

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I object to this request YES **Comments:** Concerned with Property devaluation and the road acess is terrible

Required Information:

Scott Breeding — Property Owner's Signature

Scott Breeding — Printed Name

4415 Tanforan Ave — Property Address (**No P. O. Boxes**)

If any further information is desired, please contact the Planning Division, at 685-7400.
Si ud. desea más información en Español sobre este caso, llame al : 685-7400.

Notices Mailed: 9
Date Mailed: 8/25/2023
Case Number: E-23-0103
Case Name: 4416 Tanforan Ave
LO Planner's Initials

Jeff Fisher

Jeff Fisher, AICP
Planning Division Manager
Department of Development Services

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MIDLAND
Planning Division

: 4

PUBLIC NOTICE

SEP 2 5 2023

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I object to this request ✓ **Comments:** I BOUGHT OUT HERE BECAUSE OF THE OPENESS AND SPACING OF THE HOUSES I DONT WANT TO CHANGE ANYTHING THAT WILL EFFECT VALUATION OF PROPERTY.

Required Information:

Property Owner's Signature: [signature] | Printed Name: BYRON FENDER | Property Address (**No P. O. Boxes**): 6001 MEADOWVIEW LN.

If any further information is desired, please contact the Planning Division, at 685-7400.
Si ud. desea más información en Español sobre este caso, llame al : 685-7400.

Notices Mailed: 9
Date Mailed: 8/25/2023
Case Number: E-23-0103
Case Name: 4416 Tanforan Ave
LO Planner's Initials

Jeff Fisher

Jeff Fisher, AICP
Planning Division Manager
Department of Development Services

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MIDLAND
Planning Division

RECEIVED
SEP 25 2023

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LEGAL DESCRIPTION: Lot 2, Block 3, Melody Acres, Section 4, City and County of Midland, Texas.

LOCATION: Generally located on the north side of Tanforan Avenue approximately 200-feet east of Oriole Drive. (Council District 4)

Not to be considered a part of the Public Notice: 1) See reverse side for location map; 2) In order to be considered as an official objection to this request a response **must be submitted by mail or delivered *in writing*** to the Planning Division at the address listed above. An official objection may be filed by completing this notice and returning it to the address listed above.

I object to this request X **Comments:** Reason for purchasing 20 plus years ago was no lot less than 2 Acres, We have 3 Acres + we told the Zoning laws then.

Required Information:

Property Owner's Signature	Printed Name	Property Address (**No P. O. Boxes**)
[signature]	Russell Winkley	4410 Tanforan Ave

If any further information is desired, please contact the Planning Division, at 685-7400.
Si ud. desea más información en Español sobre este caso, llame al : 685-7400.

Notices Mailed: 9
Date Mailed: 8/25/2023
Case Number: E-23-0103
Case Name: 4416 Tanforan Ave
LO Planner's Initials

Jeff Fisher

Jeff Fisher, AICP
Planning Division Manager
Department of Development Services

The meeting facility is accessible to disabled persons. A wheelchair entry ramp is located at the southeast entrance to City Hall. A parking space designated for use by disabled persons is available near the southeast entrance doors. Any disabled person needing special accommodations or hearing impaired persons wishing to have an interpreter should request services through the Administrative Services Department at least 48 hours prior to the scheduled meeting by contacting Compliance Coordinator for the City of Midland at (432) 685-7251. If communication via TDD is required, please call 1-800-735-2989.

MIDLAND
Planning Division

PUBLIC NOTICE

SEP 25 2023

BY

The **City Council** of the City of Midland, Texas will hold a public hearing at **10:00 a.m.** on **Tuesday, September 12, 2023,** in the Council Chambers, City Hall, 300 N. Loraine, Midland, Texas 79701, on a request by **Maverick Engineering** for approval of a **Special Exception to the City of Midland Zoning Ordinance, 5.04 – Residential Zoning District Dimensional Regulations Chart, for a reduced minimum lot area** on the following described property:

LEGAL DESCRIPTION: Lot 2, Block 3, Melody Acres, Section 4, City and County of Midland, Texas.

LOCATION: Generally located on the north side of Tanforan Avenue approximately 200-feet east of Oriole Drive. (Council District 4)

Not to be considered a part of the Public Notice: 1) See reverse side for location map; 2) In order to be considered as an official objection to this request a response **must be submitted by mail or delivered *in writing*** to the Planning Division at the address listed above. An official objection may be filed by completing this notice and returning it to the address listed above.

I object to this request X **Comments:** Bought Property for space. Road is already to busy, lower value of home. STRONGLEY OBJECT

Required Information:

Ryan Thomas
Property Owner's Signature

Ryan Thomas
Printed Name

4413 Tanforan
Property Address (**No P. O. Boxes**)

If any further information is desired, please contact the Planning Division, at 685-7400.
Si ud. desea más información en Español sobre este caso, llame al : 685-7400.

Notices Mailed: 9
Date Mailed: 8/25/2023
Case Number: E-23-0103
Case Name: 4416 Tanforan Ave
LO Planner's Initials

Jeff Fisher

Jeff Fisher, AICP
Planning Division Manager
Department of Development Services

The meeting facility is accessible to disabled persons. A wheelchair entry ramp is located at the southeast entrance to City Hall. A parking space designated for use by disabled persons is available near the southeast entrance doors. Any disabled person needing special accommodations or hearing impaired persons wishing to have an interpreter should request services through the Administrative Services Department at least 48 hours prior to the scheduled meeting by contacting Compliance Coordinator for the City of Midland at (432) 685-7251. If communication via TDD is required, please call 1-800-735-2989.

City Council Meeting

Item Number: 30

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Landon Ochoa, Senior Planner

Subject: **AN ORDINANCE VACATING AND ABANDONING A 0.42-ACRE PORTION OF NORTH N STREET RIGHT-OF WAY AND A 0.13-ACRE PORTION OF ALLEY RIGHT-OF-WAY, EACH LOCATED ADJACENT TO OR WITHIN BLOCK 11, HIGHLAND PARK ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED NORTH OF THE INTERSECTION OF NORTH N STREET AND WEST ILLINOIS AVENUE); ADOPTING THE APPRAISAL BY THE ASSISTANT CITY MANAGER OF $75,592.00; RETAINING A NONEXCLUSIVE UTILITY EASEMENT; AND ORDERING RECORDATION BY THE CITY SECRETARY (DISTRICT 3) (DEVELOPMENT SERVICES)**

Purpose:

Midland Memorial Hospital is requesting to vacate a 0.42-acre portion of North N Street right-of way between West Illinois Avenue and West Ohio Avenue, and a 0.13-acre portion of alley right-of-way within Block 11, Highland Park addition, City and County of Midland, Texas for the development of medical office buildings.

Recommended City Council Action:

Approve

Fiscal Impact:

The 2023 appraised value of the right-of-way is $4.00 per square foot, for a total value of $75,592.

Discussion:

The approximated area that will be vacated is 30,184 square feet (0.55-acres).

This request is associated with the plat of Midland Memorial Hospital, Section 3. This plat is currently in the preliminary phase and was approved by the Planning & Zoning Commission on September 5, 2023.

This request is also associated with a zone change request which was on the October 16, 2023 Planning and Zoning Commission meeting.

This request has been circulated and reviewed by all pertinent City departments and franchise utility companies. Their comments, conditions, and requests are as follows:

Code Compliance: (Approved)

No oil and gas issues.

Building Code: (Approved)

No issues.

Engineering: (Approved)

No objections to vacation. Applicant shall be responsible for relocating any utilities, if existing, or providing easements as needed.

Fire: (Approved)

No objection to vacation request.

Transportation: (Approved)

No objections to vacation. Applicant shall be responsible for relocating any utilities, if existing, or providing easements as needed.

GIS: (Approved)

No comments.

AT&T: (Approved)

We have cable on North N St. and down the alley requesting vacation. Whoever is wanting it vacated would need to pay to have all cables relocate.

Atmos: (Approved)

Atmos Energy currently has facilities located within the above-described alley and street Right of Way proposed to be vacated. Atmos would have no objection to this vacation if a utility easement is maintained for the portion of N Street planned for vacation. Our gas facilities in the alley right of way can be retired and relocated. Any relocation costs would be passed on to

the property owner or entity requesting the vacate.

Astound: (Approved with Conditions)

Astound has stated that they have utilities in the in the area. They are fine with the vacation as long as the applicant pays for the relocation of utilities and a utility easement for the portion of North N Street is kept.

Oncor: (Approved)

Oncor has both Overhead and Underground facilities in the area identified. We will work with our internal partners to provide a cost to relocate the Oncor facilities to vacate the area.

Altice USA: (Approved)

Optimum does have coax aerial plant in the alley described on your map. There are a few businesses north of that alley, we cannot vacate & terminate their services. We have been in touch with the hospital P.O.C. concerning this vacate & they are aware of this issue. We will work on a quote & redesign for us to vacate & relocate our plant at their cost.

Planning:

Pertinent City departments and franchise utility companies have reviewed this vacation request and have approved the request.

Therefore, staff recommends approval of this vacation subject to conditions A through C.

Conditions:

A. **That the value of the property shall be $75,592.**

B. **That an accessible nonexclusive utility easement is retained in the 0.42-acre portion of N Street.**

C. **That a replat of the subject property is approved by the City of Midland and filed and recorded with the County Clerk of Midland County.**

Letters of Objection:

As of October 13, staff has not received any letters of objection to this request.

Attachments:

Metes & Bounds (Exhibit A)
Vacation Survey (Exhibit B)
Application
Maps
Responses from Franchise Utility Companies

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE VACATING AND ABANDONING A 0.42-ACRE PORTION OF NORTH N STREET RIGHT-OF WAY AND A 0.13-ACRE PORTION OF ALLEY RIGHT-OF-WAY, EACH LOCATED ADJACENT TO OR WITHIN BLOCK 11, HIGHLAND PARK ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED NORTH OF THE INTERSECTION OF NORTH N STREET AND WEST ILLINOIS AVENUE); ADOPTING THE APPRAISAL BY THE ASSISTANT CITY MANAGER OF $75,592.00; RETAINING A NONEXCLUSIVE UTILITY EASEMENT; AND ORDERING RECORDATION BY THE CITY SECRETARY

WHEREAS, it has been determined by the Midland City Council that a 0.42-acre portion of North N Street right-of way and a 0.13-acre portion of alley right-of-way, each located adjacent to or within Block 11, Highland Park Addition, City and County of Midland, Texas, as described in Exhibits "A" and "B" attached hereto and made a part hereof for all legal purposes (the "Property"), are no longer needed for public use; and

WHEREAS, Section 272.001 of the Texas Local Government Code provides that a political subdivision may not convey, sell, or exchange its interest in land without observing notice and bid requirements, unless the conveyance is to one or more abutting property owners; and

WHEREAS, an application for vacating the Property has been received by the City from the abutting property owner; and

WHEREAS, the Assistant City Manager has appraised the value of the City's property interest in the Property at $75,592.00, as shown in Exhibit "C" attached hereto and incorporated herein by reference; and

WHEREAS, the Council finds it to be in the public interest to abandon and vacate the Property;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the Property is hereby vacated and abandoned for all public

purposes. Provided, however, that the City is hereby abandoning only the public interest in the Property, and this ordinance in no way affects any private easement or access easement which abutting property owners may have in the Property.

SECTION TWO. That this ordinance shall not be effective until:

A. the City of Midland has received from the abutting property owner(s) the sum of $75,592.00; and

B. a replat of the Property is approved by the City of Midland and filed and recorded with the County Clerk of Midland County, Texas.

SECTION THREE. That the City herein retains an accessible nonexclusive utility easement across, through, over, under, on and along the aforementioned 0.42-acre portion of North N Street right-of way included in the Property until all entities that were using said portion of the Property for utility purposes as of the date of approval of this ordinance have abandoned their uses of the Property.

SECTION FOUR. That upon the City's receipt of the sum set forth in Section Two hereof, the City Secretary is hereby authorized and directed to file a certified copy of this ordinance with the County Clerk of Midland County, Texas, for purposes of recording in the Official Records of Midland County, Texas.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2023; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2023, at a regular

meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2023.

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Rolandrea Russell, Interim Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

NEWTON ENGINEERING, PC
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(432) 770-0499
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F-10194809
2481 E. 2nd St.
Odessa, Texas 79761
(432) 935-0707

"EXHIBIT A"
LEGAL DESCRIPTION FOR A
24,166 SQUARE FEET TRACT
LOCATED IN SECTION 27, BLOCK 39, T-1-S, T&P R.R. CO. SURVEY,
CITY AND COUNTY OF MIDLAND, TEXAS

BOUNDARY BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a ½" Iron rod with cap "RPLS 1974" found in the south right-of-way line of West Ohio Avenue and the east right-of-way line of North "N" Street, being the northwest corner of the Block 11, Highland Park Addition, as recorded in Cabinet C, Page 96, Midland County Plat Records and the most northerly northeast corner of this tract;

THENCE S 14°11'53" E along the east right-of-way line of said North "N" Street and the west line of said Block 11, a distance of 139.77 feet to a Mag nail with washer "RPLS 1974" found at the southwest corner of the North Half of said Block 11 and an ell corner of this tract;

THENCE N 75°48'07" E along the south line of said North Half of said Block 11, a distance of 299.83 feet to the southeast corner of said North Half of said Block 11 and the most easterly northeast corner of this tract;

THENCE S 14°11'53" E along the west right-of-way line of said North "M" Street, a distance of 20.07 feet to a ½" Iron rod with cap "RPLS 1974" found at the northeast corner of the South Half of said Block 11, being the most easterly southeast corner of this tract;

THENCE S 75°48'07" W along the north line of said South Half of said Block 11, a distance of 299.83 feet to a ½" Iron rod found in the east right-of-way line of said North "N" Street, being the northwest corner of said South Half of said Block 11 and an ell corner of this tract;

THENCE S 14°11'53" E along the east right-of-way line of said North "N" Street and the west line of said South Half of said Block 11, a distance of 139.84 feet to a ½" Iron rod with cap "RPLS 1974" found in the north right-of-way line of West Illinois Avenue, being the southwest corner of said South Half of said Block 11 and the most southerly southeast corner of this tract;

THENCE S 75°35'46" W along the north right-of-way line of said West Illinois Avenue, a distance of 75.15 feet to a ½" Iron rod found in the southwest cutback corner of said North "N" Street, being the most southerly southeast corner of Lot 1A, Block 1, Midland Memorial Hospital, Section 2, as recorded in Cabinet I, Page 53, Midland County Plat Records and the southwest corner of this tract;

NEWTON ENGINEERING, PC
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Odessa, Texas 79761
(432) 935-0707

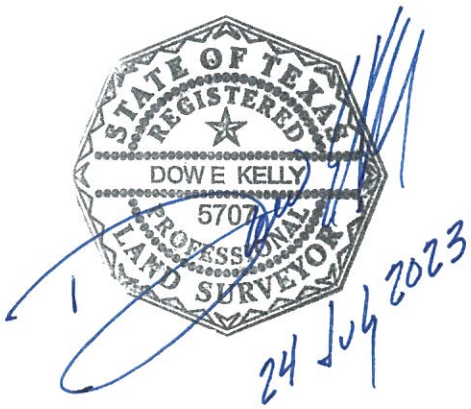
THENCE N 30°41'58" E along said cutback, a distance of 21.25 feet to the most easterly southeast corner of said Lot 1A, being a point of deflection of this tract;

THENCE N 14°11'53" W along the west right of way line of said North "N" Street and the east line of said Lot 1A, a distance of 284.90 feet to the northwest corner of this tract, and being in a projection of the south right-of-way line of said West Ohio Avenue;

THENCE N 75°48'07" E along the south right-of-way line of said West Ohio Avenue, a distance of 60.15 feet to the Point of Beginning, containing 24,166 surface square feet of land.

Bearings and distances are relative to the Texas State Plane Coordinate System, 1983 NAD, Central Zone, with a combined Grid Factor of 0.999901786 and a Theta Angle of -00°54'32".

Exhibit 'B' accompanies this description.

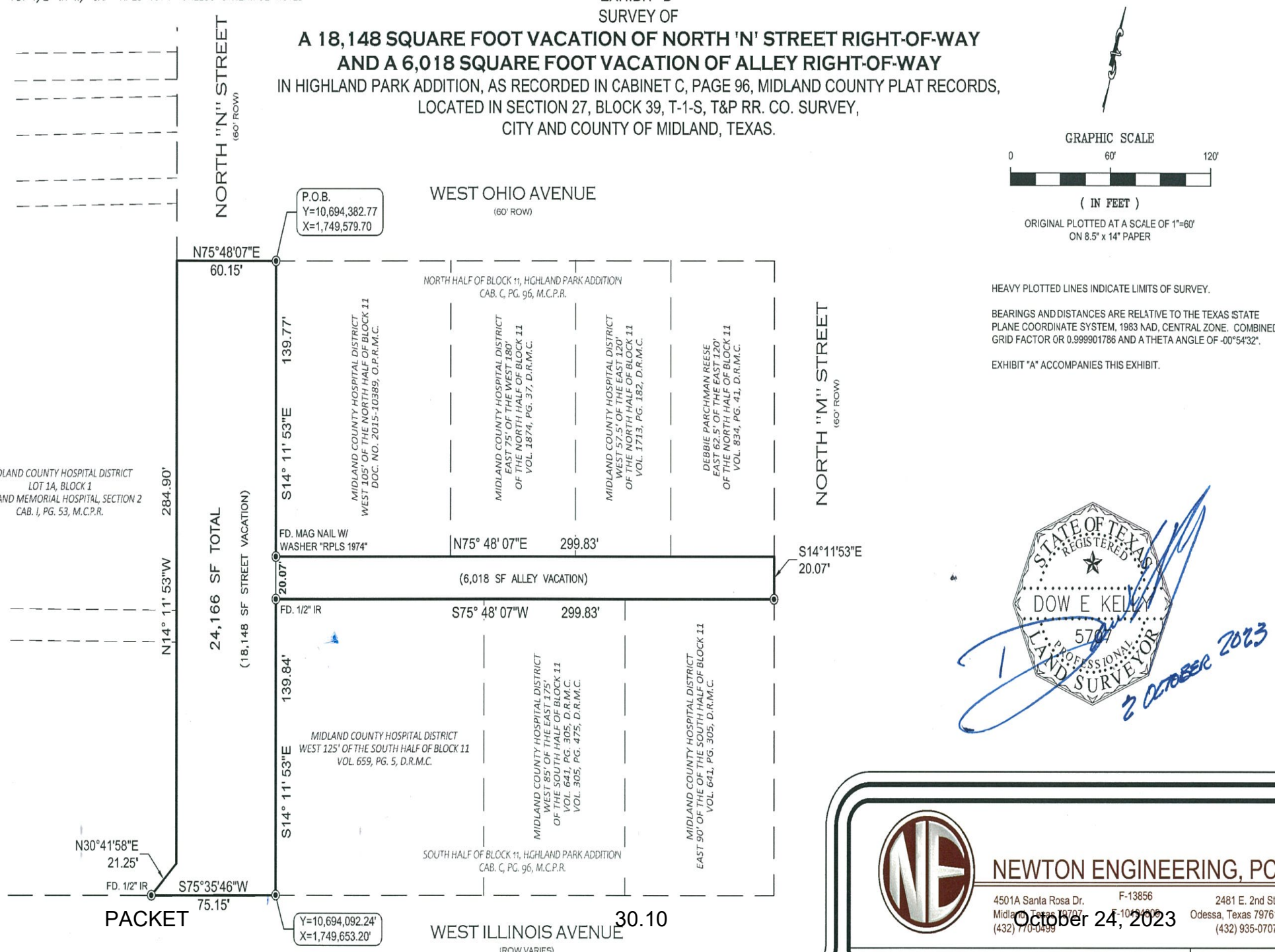


FD. 1/2" IR W/ CAP "RPLS 1974" UNLESS OTHERWISE NOTED

EXHIBIT "B"
SURVEY OF

A 18,148 SQUARE FOOT VACATION OF NORTH 'N' STREET RIGHT-OF-WAY AND A 6,018 SQUARE FOOT VACATION OF ALLEY RIGHT-OF-WAY

IN HIGHLAND PARK ADDITION, AS RECORDED IN CABINET C, PAGE 96, MIDLAND COUNTY PLAT RECORDS, LOCATED IN SECTION 27, BLOCK 39, T-1-S, T&P RR. CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS.



GRAPHIC SCALE

0 60' 120'

(IN FEET)

ORIGINAL PLOTTED AT A SCALE OF 1"=60' ON 8.5" x 14" PAPER

HEAVY PLOTTED LINES INDICATE LIMITS OF SURVEY.

BEARINGS AND DISTANCES ARE RELATIVE TO THE TEXAS STATE PLANE COORDINATE SYSTEM, 1983 NAD, CENTRAL ZONE. COMBINED GRID FACTOR OR 0.999901786 AND A THETA ANGLE OF -00°54'32".

EXHIBIT "A" ACCOMPANIES THIS EXHIBIT.

STATE OF TEXAS
REGISTERED
DOW E KELLY
5707
PROFESSIONAL
LAND SURVEYOR

2 OCTOBER 2023

NEWTON ENGINEERING, PC

4501A Santa Rosa Dr.
Midland, Texas 79707
(432) 770-0499

F-13856

2481 E. 2nd St.
Odessa, Texas 79761
(432) 935-0707

Prepared For: MIDLAND COUNTY HOSPITAL DISTRICT | Job No: 22-ME12291

MIDLAND
Feel the Energy!

Office of the City Manager

October 16, 2023

Midland City Council
City of Midland, Texas

RE: Request for vacation of a 0.42-acre portion of North N Street right-of way and a 0.13-acre portion of alley right-of-way, each located adjacent to or within Block 11, Highland Park Addition, City and County of Midland, Texas, City and County of Midland, Texas

Dear Members of the City Council:

The above-referenced property has been appraised in accordance with Chapter 272 of the Texas Local Government Code. The fair market value of the property is $75,592.00. Upon the City's receipt of this sum from the adjoining property owner(s), the ordinance vacating and abandoning the City's interest in the property may be recorded in the Midland County Clerk's office.

Very truly yours,

Jose Ortiz
Assistant City Manager

300 N. Loraine, Midland TX 79701 • 432-685-7202 • Fax 432-686-1600

MIDLAND
Planning Division

Vacate Right-of-Way/Public Utility Easement/Land/Street Application

Project Number: _____

Case Number: V-23-0054

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: Midland Memorial Hospital		Phone ( ) Email	
Address 400 Rosalind Redfern Grover Parkway	City Midland	State TX	Zip 79701

Application is hereby made to the City Council to vacate the following:

- ☑ Right-of-Way
- ☐ Public Utility Easement
- ☐ Land
- ☐ Street

Description of Address: North "N" Street from W. Ohio Ave to W. Illinois Ave and 20' alley located in Block 11 of Highland Park Addition.

Reason for Request: Right of way abandonment will facilitate development of new office building for Midland Memorial Hospital.

Reasons, in applicant's opinion, why the requested vacation will not adversely affect the public welfare or will contribute to it in a positive way: Vacating this portion of North "N" Street will have minimal impact on traffic patterns. An easement will be granted as per replat for the existing utilities in North "N" Street to allow them to remain in place.

Submittal and Fees

Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Sealed metes and bounds description of the property to be vacated (included on the map) and total square feet of vacation. Include ownership, legal and deed information for adjacent property owners
- Digital Copies of Survey (PDF/JPEG)

Utility Company Approval

Clearance is needed from the following utility companies:

- City of Midland
- AT&T
- Atmos Energy
- Suddenlink Cable TV Co.
- Oncor Electric
- Grande Communications

The City will route the request to these companies, but it is the applicant's responsibility to ensure clearance has been obtained to resolve any issues that may arise.

Policies

1. If the vacation request involves only a portion of a section right-of-way, such that approval would not affect the public's ability to travel along said right-of-way, then the request will be scheduled for consideration by the City Council. No public hearing will be needed.

2. If the vacation request involves an entire section of right-of-way, such that approval would cause the public to lose all rights to use it, then the following procedures apply:

   a. Nearby land owners who have a reasonable expectation to use said right-of-way, as determined by the Transportation Division, must first agree to the proposed vacation. It is the applicant's responsibility to obtain a letter of concurrence signed by the affected landowners.

   b. If all letters are received indicating that the affected landowners agree to the request, then a public hearing before the City Council will be scheduled. The Planning Division will mail public notice of the hearing to landowners within 400 feet of the affected right-of-way.

   c. If a request is approved, the right-of-way shall be divided into two equal parts, with each half becoming the property of the respective abutting owner. If the applicant desires to own the entire width, he or she must negotiate with the opposite landowner.

Signatures

Applicant (signature): [signature]		Date: 8/7/2023
Affected Property Owners:		
Signature: [signature]	Print: Debbie P. Reese	Date: 8/4/2023
Signature:	Print:	Date
Signature:	Print:	Date
Signature:	Print:	Date

The Vacation of right-of-way/public utility easement/land/street shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

FOR OFFICE USE ONLY

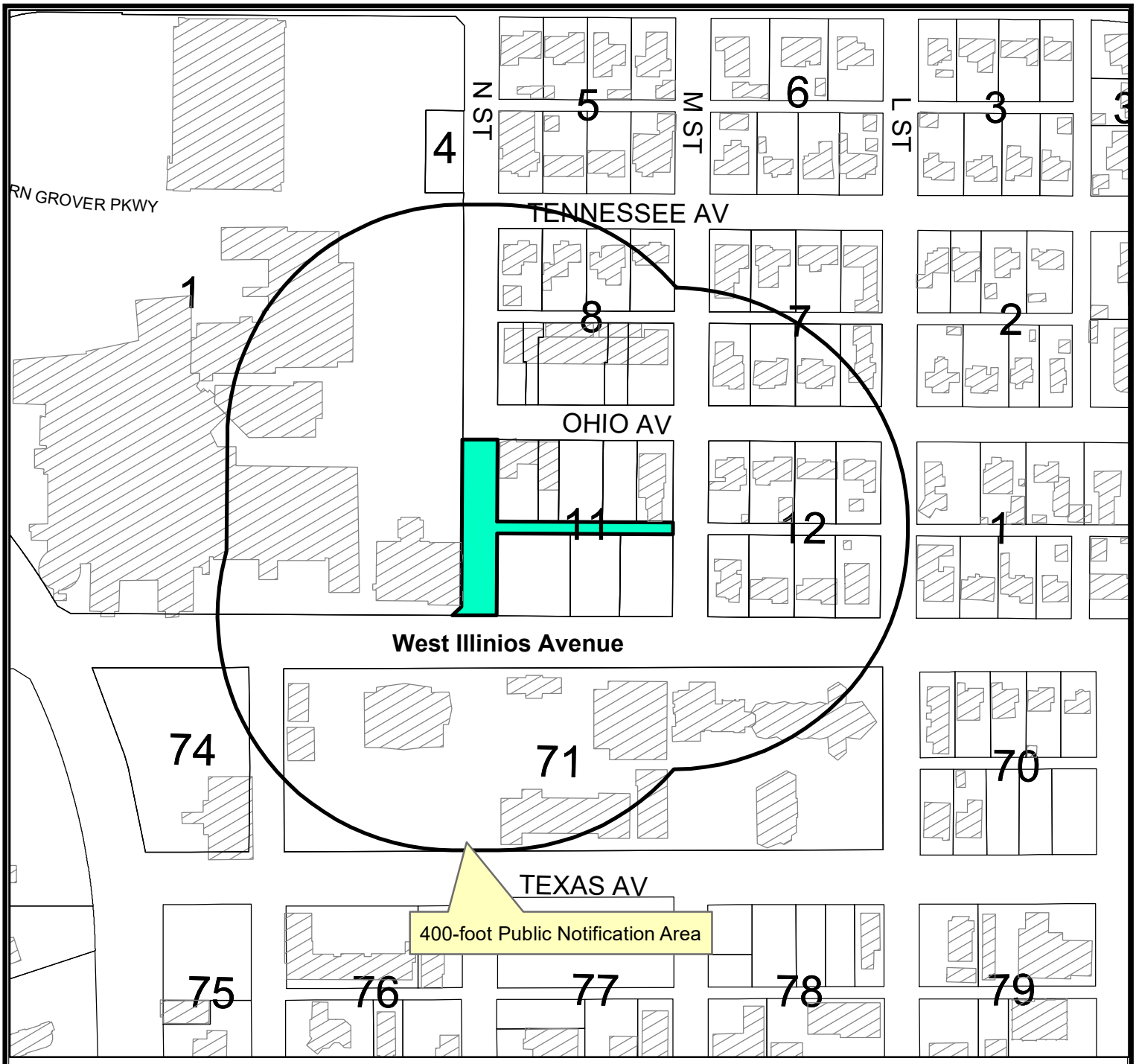
☑ 1 FOLDED Copy of Survey ☑ Survey in Digital Format (PDF/JPEG)

☑ Application Fee

Check # Paid

Received By: [signature]	Date: SEP 05 2023

****Application will not be considered for scheduling until reviewed by a planner.****



LOCATION MAP

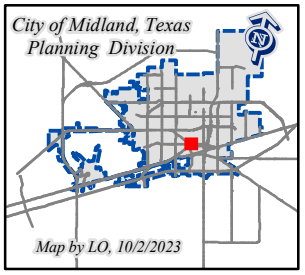
V-23-0054 **Scale: 1" = 2,951'**

Consider a request for a vacation by Midland Memorial Hospital of a 0.42-acre portion of North N Street right-of way between West Illinois Avenue and West Ohio Avenue, and a 0.13-acre portion of alley right-of-way within Block 11, Highland Park Addition, City and County of Midland, Texas.

Generally located on the northeast corner of the intersection of North N Street and West Illinois Avenue. (Council District 3)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



©THE CITY OF MIDLAND - 2021
THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN.
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.

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"EXHIBIT A"
LEGAL DESCRIPTION FOR A
24,166 SQUARE FEET TRACT
LOCATED IN SECTION 27, BLOCK 39, T-1-S, T&P R.R. CO. SURVEY,
CITY AND COUNTY OF MIDLAND, TEXAS

BOUNDARY BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a ½" Iron rod with cap "RPLS 1974" found in the south right-of-way line of West Ohio Avenue and the east right-of-way line of North "N" Street, being the northwest corner of the Block 11, Highland Park Addition, as recorded in Cabinet C, Page 96, Midland County Plat Records and the most northerly northeast corner of this tract;

THENCE S 14°11'53" E along the east right-of-way line of said North "N" Street and the west line of said Block 11, a distance of 139.77 feet to a Mag nail with washer "RPLS 1974" found at the southwest corner of the North Half of said Block 11 and an ell corner of this tract;

THENCE N 75°48'07" E along the south line of said North Half of said Block 11, a distance of 299.83 feet to the southeast corner of said North Half of said Block 11 and the most easterly northeast corner of this tract;

THENCE S 14°11'53" E along the west right-of-way line of said North "M" Street, a distance of 20.07 feet to a ½" Iron rod with cap "RPLS 1974" found at the northeast corner of the South Half of said Block 11, being the most easterly southeast corner of this tract;

THENCE S 75°48'07" W along the north line of said South Half of said Block 11, a distance of 299.83 feet to a ½" Iron rod found in the east right-of-way line of said North "N" Street, being the northwest corner of said South Half of said Block 11 and an ell corner of this tract;

THENCE S 14°11'53" E along the east right-of-way line of said North "N" Street and the west line of said South Half of said Block 11, a distance of 139.84 feet to a ½" Iron rod with cap "RPLS 1974" found in the north right-of-way line of West Illinois Avenue, being the southwest corner of said South Half of said Block 11 and the most southerly southeast corner of this tract;

THENCE S 75°35'46" W along the north right-of-way line of said West Illinois Avenue, a distance of 75.15 feet to a ½" Iron rod found in the southwest cutback corner of said North "N" Street, being the most southerly southeast corner of Lot 1A, Block 1, Midland Memorial Hospital, Section 2, as recorded in Cabinet I, Page 53, Midland County Plat Records and the southwest corner of this tract;

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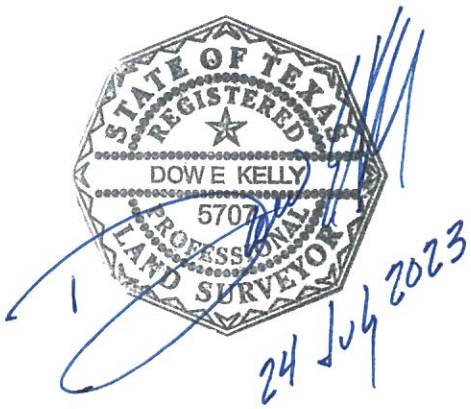
THENCE N 30°41'58" E along said cutback, a distance of 21.25 feet to the most easterly southeast corner of said Lot 1A, being a point of deflection of this tract;

THENCE N 14°11'53" W along the west right of way line of said North "N" Street and the east line of said Lot 1A, a distance of 284.90 feet to the northwest corner of this tract, and being in a projection of the south right-of-way line of said West Ohio Avenue;

THENCE N 75°48'07" E along the south right-of-way line of said West Ohio Avenue, a distance of 60.15 feet to the Point of Beginning, containing 24,166 surface square feet of land.

Bearings and distances are relative to the Texas State Plane Coordinate System, 1983 NAD, Central Zone, with a combined Grid Factor of 0.999901786 and a Theta Angle of -00°54'32".

Exhibit 'B' accompanies this description.

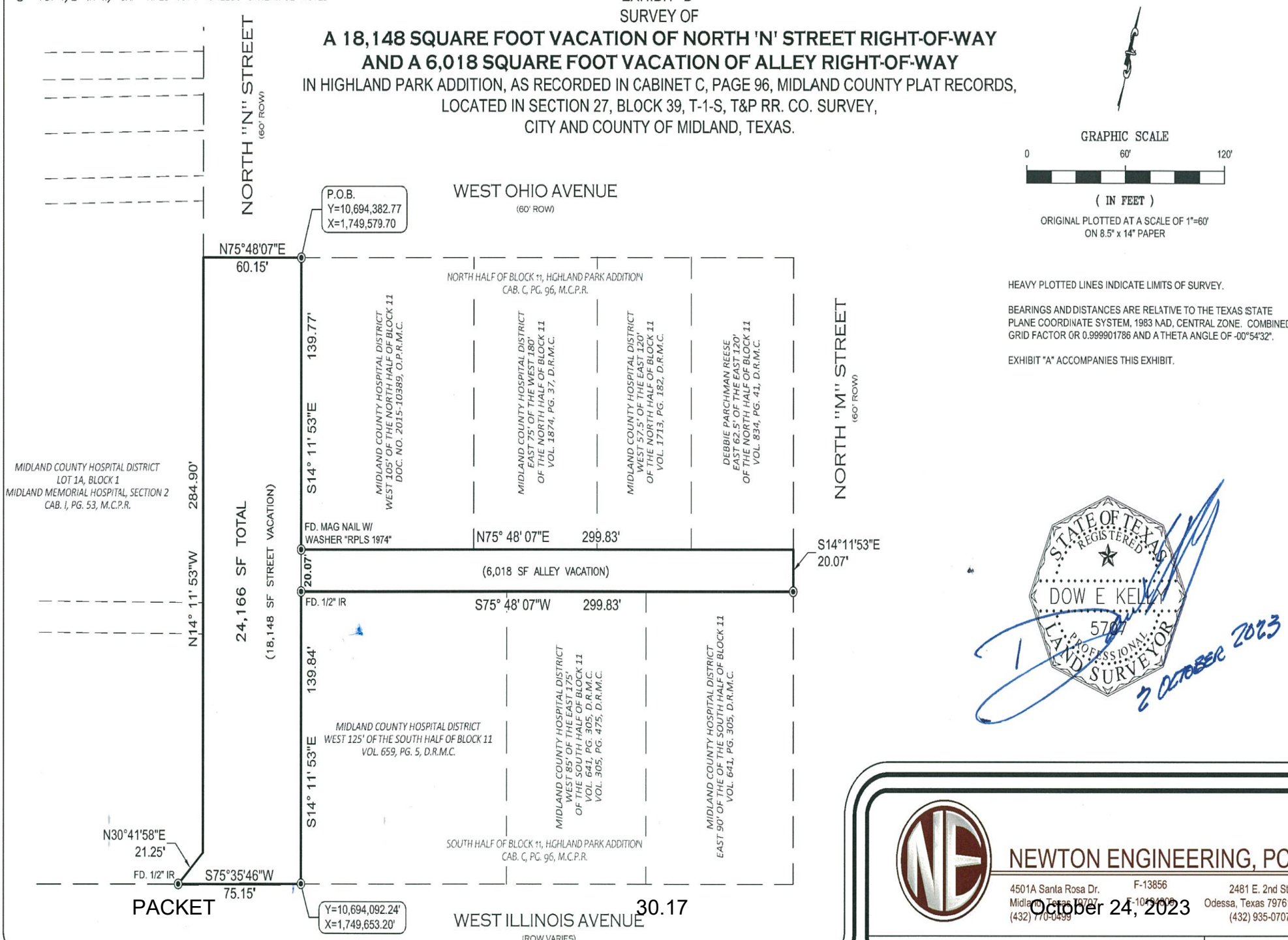


FD. 1/2" IR W/ CAP "RPLS 1974" UNLESS OTHERWISE NOTED

EXHIBIT "B"
SURVEY OF

A 18,148 SQUARE FOOT VACATION OF NORTH 'N' STREET RIGHT-OF-WAY AND A 6,018 SQUARE FOOT VACATION OF ALLEY RIGHT-OF-WAY

IN HIGHLAND PARK ADDITION, AS RECORDED IN CABINET C, PAGE 96, MIDLAND COUNTY PLAT RECORDS, LOCATED IN SECTION 27, BLOCK 39, T-1-S, T&P RR. CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS.



GRAPHIC SCALE

0 60' 120'

(IN FEET)

ORIGINAL PLOTTED AT A SCALE OF 1"=60' ON 8.5" x 14" PAPER

HEAVY PLOTTED LINES INDICATE LIMITS OF SURVEY.

BEARINGS AND DISTANCES ARE RELATIVE TO THE TEXAS STATE PLANE COORDINATE SYSTEM, 1983 NAD, CENTRAL ZONE. COMBINED GRID FACTOR OR 0.999901786 AND A THETA ANGLE OF -00°54'32".

EXHIBIT "A" ACCOMPANIES THIS EXHIBIT.

STATE OF TEXAS
REGISTERED
DOW E KELLY
5707
PROFESSIONAL
LAND SURVEYOR

2 OCTOBER 2023

NEWTON ENGINEERING, PC

4501A Santa Rosa Dr.
Midland, Texas 79707
(432) 770-0499

F-13856

2481 E. 2nd St.
Odessa, Texas 79761
(432) 935-0707

Prepared For: MIDLAND COUNTY HOSPITAL DISTRICT | Job No: 22-ME12291

SPEED
LIMIT
30
PRIVATE
PARKING

STOP

301

Landon J. Ochoa

From: LReyna@midcad.org
Sent: Tuesday, October 10, 2023 11:05 AM
To: Landon J. Ochoa
Cc: Jeffrey S. Fisher
Subject: Re: Vacation Valuations

Importance: High

Hi Landon,

This is the last one! Let me know if you need anything else!

To map use R 24832

North "N" St: 72592 sq ft X $4.00 = $75,592
Alley: 6018 sa ft X $4.00 + 24,072

Sincerely,

Lisa Reyna, RPA
Assistant Chief Appraiser
Midland Central Appraisal District
4631 Andrews Hwy
Midland, TX 79703
Phone (432) 699-4991
Fax (432) 689-7185

From: "Landon J. Ochoa" <ljochoa@midlandtexas.gov>
To: Lisa Reyna <lreyna@midcad.org>
Cc: "Jeffrey S. Fisher" <jsfisher@midlandtexas.gov>
Date: 10/09/2023 05:15 PM
Subject: Vacation Valuations

Good afternoon, Lisa.

I would like to follow up with you regarding the valuations of properties associated with three vacation requests. We will need these valuations by Thursday at the latest if we are to take the requests to the October 24 City Council meeting. Thank you.

Respectfully,

Landon Ochoa
Senior Planner

Planning Division
Development Services
O. 432-685-7405
ljochoa@midlandtexas.gov

300 N. Loraine | P.O. Box 1152 | Midland, TX 79702

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ATMOS ENERGY

West Texas Division
P.O. Box 1111,
Midland, Texas 79702

City of Midland
Landon Ochoa
Planning Division
Development Services
300 N. Loraine
Midland, Texas 79701

October 9, 2023

Re: Case Name: Midland Memorial
Case Number: V-23-0054

Mr. Ochoa,

Atmos Energy currently has facilities located within the above-described alley and street Right of Way proposed to be vacated. Atmos would have no objection to this vacation if a utility easement is maintained for the portion of N Street planned for vacation. Our gas facilities in the alley right of way can be retired and relocated. Any relocation costs would be passed on to the property owner or entity requesting the vacate.
Please let me know if you have any further questions.

Sincerely,

Mark Lieb

Mark Lieb
Project Specialist
Atmos Energy/Permian Basin
432-967-0370 cell
mark.lieb@atmosenergy.com

Landon J. Ochoa

From: Luis Montez <Luis.Montez@AlticeUSA.com>
Sent: Tuesday, October 3, 2023 11:40 AM
To: Landon J. Ochoa
Cc: Eron Zapata; Raymond Revilla; Lorenzo Reyes; Vanessa Chavarria
Subject: RE: External E-mail - V-23-0054, Midland Memorial Hospital Vacation (Altice)

Mr. Ochoa,
Optimum does have coax aerial plant in the alley described on your map.
There are a few businesses north of that alley, we cannot vacate & terminate their services.
I have been in touch with the hospital P.O.C. concerning this vacate & they are aware of this issue.
I will work on a quote & redesign, for us to vacate & relocate our plant at their cost.
They are not planning to start anything until next year.

From: Landon J. Ochoa <ljochoa@midlandtexas.gov>
Sent: Tuesday, October 3, 2023 11:10 AM
To: Luis Montez <Luis.Montez@AlticeUSA.com>
Subject: External E-mail - V-23-0054, Midland Memorial Hospital Vacation (Altice)

[External Email]

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Good morning, Luiz.

Please see the attached letter and supporting documents and provide comments by October 10, 2023 as this request will be going to the October 24 City Council meeting.

Respectfully,

Landon Ochoa
Senior Planner
Planning Division
Development Services
O. 432-685-7405
ljochoa@midlandtexas.gov

300 N. Loraine | P.O. Box 1152 | Midland, TX 79702

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Landon J. Ochoa

From: Ruben Guerra <ruben.guerra@astound.com>
Sent: Friday, October 13, 2023 2:22 PM
To: Landon J. Ochoa
Subject: Re: V-23-0054, Midland Memorial Hospital Vacation (Grande)

Follow Up Flag: Follow up
Flag Status: Flagged

Yes

Thank You
Ruben Guerra
Construction Coordinator
O: 432-272-3088
C: 432-653-9369
Ruben.Guerra@astound.com
Astound Business Solutions
Powered by RCN | Grande | Wave
astound.com

On Fri, Oct 13, 2023 at 11:35 AM Landon J. Ochoa <ljochoa@midlandtexas.gov> wrote:

> But you would still be okay with the vacation as long as they pay to do it, right?

From: Ruben Guerra <ruben.guerra@astound.com>
Sent: Friday, October 13, 2023 11:26 AM
To: Landon J. Ochoa <ljochoa@midlandtexas.gov>
Subject: Re: V-23-0054, Midland Memorial Hospital Vacation (Grande)

I know this section will have to go underground cause I drove it out, this project will be costed high.

Thank You

Ruben Guerra

Construction Coordinator

O: 432-272-3088

C: 432-653-9369

Ruben.Guerra@astound.com

Astound Business Solutions

Powered by RCN | Grande | Wave

astound.com

On Fri, Oct 13, 2023 at 11:11 AM Landon J. Ochoa <ljochoa@midlandtexas.gov> wrote:

> Ruben,
>
> Are you okay with this vacation as well if the applicant pays for the relocation?

From: Ruben Guerra <ruben.guerra@astound.com>
Sent: Tuesday, October 3, 2023 1:38 PM
To: Landon J. Ochoa <ljochoa@midlandtexas.gov>
Subject: Re: V-23-0054, Midland Memorial Hospital Vacation (Grande)

Yes we do have utilities located in this section as well. I would have to ask who will be the responsible party for the relocation of our utilities.

On Tue, Oct 3, 2023 at 11:13 AM Landon J. Ochoa <ljochoa@midlandtexas.gov> wrote:

> Good morning, Ruben.
>
> Please see the attached letter and supporting documents and provide comments by October 10, 2023 as this request will be going to the October 24 City Council meeting.

Respectfully,

Landon Ochoa

Senior Planner

Planning Division

Development Services

O. 432-685-7405

ljochoa@midlandtexas.gov

300 N. Loraine | P.O. Box 1152 | Midland, TX 79702

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CAUTION: This email originated from outside your organization — exercise caution when opening attachments or clicking links, especially from unknown senders.

Landon J. Ochoa

From: UNDERWOOD, JERRY D <ju1659@att.com>
Sent: Tuesday, October 3, 2023 11:01 AM
To: Landon J. Ochoa
Cc: DODSON, KRISTOPHER
Subject: RE: V-23-0054, Midland Memorial Hospital Vacation (AT&T)

Good morning,

We have cable on North N St and down the alley requesting vacation. Whoever is wanting it vacated would need to pay to have all cables relocate.

Thanks
Jerry

Thanks,
Jerry

From: Landon J. Ochoa <ljochoa@midlandtexas.gov>
Sent: Tuesday, October 3, 2023 10:54 AM
To: UNDERWOOD, JERRY D <ju1659@att.com>
Subject: V-23-0054, Midland Memorial Hospital Vacation (AT&T)

Good morning, Jerry.

Please see the attached letter and supporting documents and provide comments by October 10, 2023 as this request will be going to the October 24 City Council meeting. Thank you!

Respectfully,

Landon Ochoa
Senior Planner
Planning Division
Development Services
O. 432-685-7405
ljochoa@midlandtexas.gov

300 N. Loraine | P.O. Box 1152 | Midland, TX 79702

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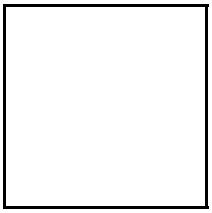
Landon J. Ochoa

From: Landon J. Ochoa
Sent: Sunday, October 15, 2023 6:49 PM
To: Landon J. Ochoa
Subject: FW: V-23-0054, Midland Memorial Hospital Vacation (Oncor)

From: Molina, Sergio <Sergio.Molina@oncor.com>
Sent: Wednesday, October 11, 2023 8:12 PM
To: Landon J. Ochoa <ljochoa@midlandtexas.gov>; Arguello, Martin <Martin.Arguello@oncor.com>
Subject: RE: V-23-0054, Midland Memorial Hospital Vacation (Oncor)



Landon,

Oncor has both Overhead and Underground facilites in the area identified. We will work with our internal partners to provide a cost to relocate the Oncor facilities to vacate the area.

Regards,

Sergio Molina, P.E.
Oncor | NCM Manager WTX
Cell: 214.970.4143

My Manager: Hannah Hamilton
Cell: 432.894.4601 email: Hannah.Hamilton@oncor.com

City Council Meeting

Item Number: 31

Meeting Date: October 24, 2023

To: City Council / City Manager

From: Rolandrea Russell, Assistant Director

Subject: AN ORDINANCE AMENDING TITLE XI, "PLANNING AND DEVELOPMENT" OF THE CITY CODE OF MIDLAND, TEXAS, BY ADDING CHAPTER 1A, "CENTENNIAL ENTERTAINMENT OVERLAY DISTRICT" SO AS TO ESTABLISH AN OVERLAY ZONING DISTRICT; ESTABLISHING PROVISIONS RELATED TO LAND USE AND DEVELOPMENT WITHIN SAID OVERLAY ZONING DISTRICT; AMENDING THE ZONING MAP; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); ESTABLISHING AN EFFECTIVE DATE OF DECEMBER 1, 2023; AND ORDERING PUBLICATION (DISTRICT: ALL) (DEVELOPMENT SERVICES)

Purpose:

This ordinance is to amend Title XI, "Planning and Development", of the City Code of Midland, Texas by adding Chapter 1a, "Centennial Entertainment Overlay District", so as to establish an overlay zoning district and provisions related to the land use and development within said Overlay District and to amend the zoning map accordingly.

Recommended City Council Action:

Approve

Fiscal Impact:

This request will have no significant impact on the City.

Discussion:

The proposed boundary of the Centennial Entertainment Overlay District will include approximately 49.50± acres within the CB, Central Business District. The purpose of this district is to provide for the development of downtown Midland as the regional business center for professional offices. This district is also designed to promote a vibrant downtown by providing residential, restaurant, retail, hotel, and other unique development opportunities that encourage downtown development and redevelopment efforts.

The purpose of the Centennial Entertainment Overlay District is to provide destination-oriented venues to promote a vibrant and active core in Midland's central business district, leveraging Centennial Park as an engaging public space, and providing residents and employees opportunities to socialize and be entertained. The Centennial Entertainment Overlay District is anticipated to encourage economic development through infill and redevelopment of underutilized properties and adaptive reuse of existing buildings. The balance of land uses for working, living, shopping, and entertainment creates an environment conducive to increasing the quality of life for residents and employees and furthering the City of Midland's unique identity.

The Centennial Entertainment Overlay District will allow all uses allowed in the CB, Central Business District along with additional uses and regulations that will be unique to the Centennial Entertainment Overlay District.

The City Council approved an ordinance calling this joint public hearing on September 26, 2023. The public notices were published in the Midland Reporter-Telegram and on the City's website on September 28, 2023. This joint meeting was held on Tuesday, October 17, 2023.

The ordinance is now before the City Council for a vote to establish the overlay district and regulations.

ORDINANCE NO. _____

AN ORDINANCE AMENDING TITLE XI, "PLANNING AND DEVELOPMENT" OF THE CITY CODE OF MIDLAND, TEXAS, BY ADDING CHAPTER 1A, "CENTENNIAL ENTERTAINMENT OVERLAY DISTRICT" SO AS TO ESTABLISH AN OVERLAY ZONING DISTRICT; ESTABLISHING PROVISIONS RELATED TO LAND USE AND DEVELOPMENT WITHIN SAID OVERLAY ZONING DISTRICT; AMENDING THE ZONING MAP; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); ESTABLISHING AN EFFECTIVE DATE OF DECEMBER 1, 2023; AND ORDERING PUBLICATION

WHEREAS, the City Council finds it to be in the public interest to approve and adopt an amendment to Title XI, "Planning and Development" of the City Code of the City of Midland, Texas, by adding Chapter 1a, "Centennial Entertainment Overlay District" so as to establish an overlay zoning district and provisions related to land use and development within said overlay zoning district and to amend the Zoning Map; and

WHEREAS, the City Council finds that the zoning regulations contained in Chapter 1a are in accordance with the City's comprehensive plan and have been designed to:

A. lessen congestion in the streets;

B. secure safety from fire, panic, and other dangers;

C. promote health and the general welfare;

D. provide adequate light and air;

E. prevent the overcrowding of land;

F. avoid undue concentration of population; and

G. facilitate the adequate provision of transportation, water, sewers, schools, parks, and other public requirements; and

WHEREAS, the City Council finds that the zoning regulations contained in Chapter 1a were made with reasonable consideration, among other things, for the character of each zoning district therein and its peculiar suitability for particular uses, with a view of

conserving the value of buildings and encouraging the most appropriate use of land in the City; and

WHEREAS, the City Council and the Planning and Zoning Commission jointly held a public hearing at 10:00 a.m. on October 17, 2023, at the Barbara and George H. W. Bush Convention Center, 105 N. Main Street, Ballroom A, Midland, Texas 79701, to hear comments regarding the proposed adoption of this ordinance; and

WHEREAS, in accordance with Texas Local Government Code Section 211.007(d), the City Council prescribed that notice of the joint public hearing was to be:

A. By publication in a newspaper of general circulation in the City of Midland before the 15th day before the date of the public hearing;

B. By publication on City of Midland's Internet website before the 15th day before the date of the public hearing; and

C. By posting notice in accordance with Texas Government Code Chapter 551 of the City Council meeting and the Planning and Zoning Commission meeting during which the public hearing will be held; and

WHEREAS, the City Council finds that notice of the public hearing was published and posted as prescribed by the City Council; and

WHEREAS, the City Council finds that all procedural requirements necessary for the adoption of this ordinance have been complied with and satisfied; and

WHEREAS, the City Council finds that the public health, safety and general welfare will be best served by amending Title XI, "Planning and Development" of the City Code of the City of Midland, Texas, as described in this ordinance;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That Title XI, "Planning and Development" of the City Code of the City of Midland, Texas, is hereby amended by adding Chapter 1a to read in its entirety

as follows:

Chapter 1a - CENTENNIAL ENTERTAINMENT OVERLAY DISTRICT.

11-1a-1 - Purpose.

The purpose of the Centennial Entertainment Overlay District is to provide for destination-oriented venues to promote a vibrant and active core in Midland's central business district, leveraging Centennial Park as an engaging public space, and providing residents and employees opportunities to socialize and be entertained. The Centennial Entertainment Overlay District is anticipated to encourage economic development through infill and redevelopment of underutilized properties and adaptive reuse of existing buildings. The balance of land uses for working, living, shopping and entertainment creates an environment conducive to increasing the quality of life for residents and employees and furthering the City of Midland's unique identity.

11-1a-2 - Application.

This Chapter applies only to property located within the Centennial Entertainment Overlay District.

11-1a-3 - Description of district.

Centennial Entertainment Overlay District means the portion of the City located within the following-described area and shown in Figure 11-1a-3.1:

An approximately 49.50-acre tract located in the City of Midland, Texas, and being a portion of Original Town Addition to the City of Midland, Texas, and all of Original Town Addition, Sections 3, 7, 8, 14 and 15 to the City of Midland, Texas, and being more fully described as follows:

Beginning at a point at the southeast corner of the intersection of W. Missouri Ave. and Big Spring St.,

Thence northerly along the easterly line of Big Spring St. about 1510 ft. to a point at the northeast corner of the intersection of Big Spring St. and Ohio St.,

Thence easterly along the south side line of Ohio St. about 380 ft to northeast corner of the intersection of Ohio Ave. and Colorado St.,

Thence northerly along the easterly line of Colorado St. about 380 ft. to the southeast corner of the intersection of Colorado St. and Tennessee Ave.,

Thence easterly along the south line of Tennessee Ave. about 380 ft. to the southeast corner of the intersection of Tennessee Ave. and Loraine St.,

Thence southerly along the east line of Loraine St about 380 ft. to the southeast corner of the intersection of Loraine St. and Ohio Ave.,

Thence easterly along the south line of Ohio Ave. about 380 ft. to the southwest corner of the intersection of Ohio Ave. and Main St.,

Thence southerly along the east line of N. Main St. about 380 ft. to the northeast corner of the intersection of Main St. and Illinois Ave.,

Thence easterly along the south line of Illinois Ave. a distance of about 340 ft. to a point at the southwest corner of the intersection of Illinois Ave. and Baird St.,

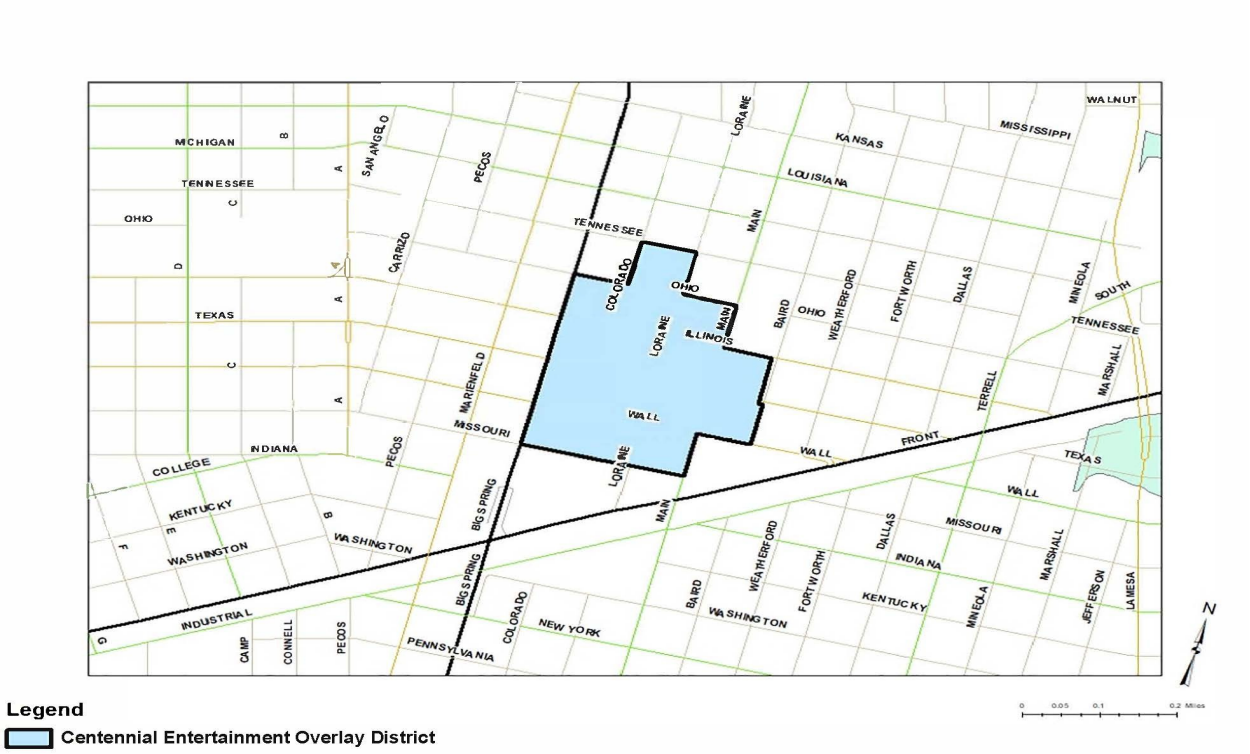
Thence southerly along the west line of Baird St. about 760 ft. to a point in the south line of W. Wall St.,

Thence westerly along the south line of W. Wall St. about 300 ft. to a point at the southeast corner of the intersection of W. Wall St. and S. Main St.,

Thence southerly along the east line of S. Main St. about 380 ft. to a point at the southeast corner of the intersection of S. Main St. and W. Missouri Ave.,

Thence westerly along the south line of W. Missouri Ave. about 1140 ft. to the place of beginning and containing about 49.50 acres.

Figure 11-1a-3.1



11-1a-4 - Definitions.

A. Except as otherwise provided in this Section, the words and terms used in this Chapter and in the application of this Chapter shall have the same meanings given those words and terms in Chapter 1 of this Title, as amended.

B. As used in this Chapter and in the application of this Chapter:

1. *Extended Hours Area* has the same meaning given that term in Section 105.06 of the Texas Alcoholic Beverage Code, as amended.

2. *Restaurant or Cafeteria, with Drive-Through Window or Curb Service* means a business, with drive-through window or curb service, that:

   a. operates its own permanent food service facility with commercial cooking equipment on its premises; and

   b. prepares and offers to sell multiple entrees for consumption on or off the premises.

   To the extent that a provision of this Chapter applies to both a Restaurant or Cafeteria, with Drive-Through Window or Curb Service and a Restaurant or Cafeteria, without Drive-Through Window or Curb Service, such business may be referred to as a Restaurant.

3. *Restaurant or Cafeteria, without Drive-Through Window or Curb Service* means a business, without drive-through window or curb service, that:

   a. operates its own permanent food service facility with commercial cooking equipment on its premises; and

   b. prepares and offers to sell multiple entrees for consumption on or off the premises.

   To the extent that a provision of this Chapter applies to both a Restaurant or Cafeteria, with Drive-Through Window or Curb Service and a Restaurant or Cafeteria, without Drive-Through Window or Curb Service, such business may be referred to as a Restaurant.

4. *Restaurant Patio* means an outdoor space connected to a Restaurant where food is served from the Restaurant to customers and eaten on the premises. A Restaurant Patio may be unenclosed or enclosed and, if authorized in writing by the City, may occupy a portion of the public right-of-way adjacent to the Restaurant.

11-1a-5 - Compliance with the Zoning Ordinance required.

Except as expressly provided in this Chapter, property shall be developed and used in accordance with the regulations of Chapter 1 of this Title that are applicable to the zoning district in which the property is located as shown on the Zoning Map.

11-1a-6 - Permitted uses.

A. Property may be used for uses that are permitted in the property's zoning district in accordance with Chapter 1 of this Title; provided, however, that in the event of a conflict between a use's definition contained in Section 11-1a-4 and the same use's definition contained in Chapter 1 of this Title, the definition contained in Section 11-1a-4 shall control.

B. In addition to the uses that are permitted by Subsection A hereof, property may be used for:

1. Alcoholic Beverages Sales for On-Premises Consumption;
2. Bar;
3. Brewery, Local;
4. Brewery, Regular;
5. Distillery;
6. Lounge or Nightclub;
7. Restaurant or Cafeteria, with Drive-Through Window or Curb Service, as defined in Section 11-1a-4;
8. Restaurant or Cafeteria, without Drive-Through Window or Curb Service, as defined in Section 11-1a-4; and
9. Winery.

11-1a-7 - Use of the public right-of-way by restaurants.

A. A Restaurant Patio shall not be located in any portion of the public right-of-way unless the owner or operator of the Restaurant to which the Restaurant Patio is connected obtains written authorization from the City to so use the public right-of-way. To the extent that a Restaurant Patio is located in the public right-of-way, written authorization from the City to so use the public right-of-way may include authorization to use such portion of the public right-of-way for Alcoholic Beverages Sales for On-Premises Consumption. In the event of a conflict between this Subsection and any other ordinance, this Subsection shall control.

B. A Restaurant Patio shall not occupy the public right-of-way in a manner that causes less than four (4) feet of clear sidewalk space to be available for pedestrians to use.

11-1a-8 - Extended hours of alcoholic beverage sales.

The Centennial Entertainment Overlay District is an Extended Hours Area. Alcoholic beverages may be sold within the Centennial Entertainment Overlay District in accordance with this Section during the extended hours of sale provided in Section 105.03 and 105.05 of the Texas Alcoholic Beverage Code, as amended.

11-1a-9 - Offense and penalty.

Any person, firm, corporation, or other entity who violates, disobeys, or otherwise fails to comply with or who resists the enforcement of any of the provisions of this Chapter shall be guilty of a misdemeanor and shall be fined not more than $2,000.00 for each violation. Each day that a violation exists shall constitute a separate and distinct offense.

SECTION TWO. That the Zoning Map is hereby amended in accordance with Section One of this Ordinance.

SECTION THREE. That the provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter

as that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FOUR. That the provisions of this ordinance pertaining to the sale of alcoholic beverages apply only to property located within the Centennial Entertainment Overlay District, as defined in this ordinance. The portions of Title XI, "Planning and Development", Chapter 1, "Zoning" of the City Code of Midland, Texas, that existed on June 30, 2019, and that pertained to the regulation of the sale of alcoholic beverages (the "Preexisting Alcoholic Beverage Regulations") were validated by acts of the Texas Legislature. *See* Tex. Rev. Civ. Stat. Ann. arts. 974d-36 § 1, 974d-37 § 1 (Vernon Supp. 2000); Act of May 27, 1985, 69th Leg., R.S., ch. 815, § 2, 1985 Tex. Gen. Laws 2872, repealed by Act of May 1, 1987, 70th Leg., ch. 149, 1987 Tex. Gen. Laws 707, 1307. To the extent that any provision of the current Title XI, "Planning and Development", Chapter 1, "Zoning Ordinance" of the City Code of Midland, Texas, pertaining to the regulation of the sale of alcoholic beverages conflicts with the Preexisting Alcoholic Beverage Regulations or was not validated by an act of the Texas Legislature, such provision shall not be effective, and the applicable provision of the Preexisting Alcoholic Beverage Regulations shall remain in effect and shall be deemed to have not been repealed or superseded.

SECTION FIVE. That if any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION SIX. That the penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code

of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SEVEN. That the effective date of this ordinance is December 1, 2023.

SECTION EIGHT. That the City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2023; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2023, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2023.

_____
Lori Merritt Blong, Mayor

ATTEST:

_____
Marcia Bentley-German, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Rolandrea Russell, Interim Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

Date: October 10, 2023

To: The Honorable Mayor Blong and Council

From: Vanessa Magallanes, Chief Deputy City Secretary

Subject: Annual Recruitment Applications

Dear Council, included within this packet are the applications received during the 2023-2024 Boards & Commissions Annual Recruitment, attendance records and those individuals who are interested or not interested in serving on a Board and Commission.

The remaining Boards and Commissions are still needing appointments:

Midland Housing Authority Commission:

2 – Vacancies (Cantu & Lehrer)

The Midland Housing Authority would like to request the following be considered to fill the vacancies. Jeff Hansard has Banking experience; Melissa Mosier has HR and MH/MR experience, and Randall Millow has MH/MR experience. The Midland Housing Authority is designated for Elderly and Disabled individuals.

Midland-Odessa Urban Transit District Board

3 – Re-Appointments (Sanchez, Norwood, & Stubbs)

Oil and Gas Advisory Board

1 – Vacancy (Adkins, Petroleum Engineer)

Planning and Zoning Commission

3 – Regular Vacancies (Williams, Sisniega, & Deck)

1 – Alternate Vacancy (Dillow)

Zoning Board of Adjustment and Airport Zoning Board of Adjustment

3 – Regular Vacancies (Whiting, Baldridge, & Gray)

3 – Alternate Vacancies

The following individuals who are currently serving **ARE** interested in continuing their service on their Board and Commission:

Midland-Odessa Urban Transit District Board

Daniel Norwood

Joseph Sanchez

The following Individual who is currently serving is **NOT** interested in continuing their service on their Board and Commission:

Zoning Board of Adjustment & Airport Zoning Board of Adjustment

Robert Gray

BOARDS AND COMMISSIONS OF THE CITY OF MIDLAND
October 24, 2023

AIRPORT PLANNING AND DEVELOPMENT BOARD

(Advisory)
(Membership-10; Terms - 3 Years expiring 3-3-4.)

	Appt Date	Term Expires	Eligibility Expires
Dave Joyner	10/21	Sept 30 2024	Sept 30 2027
Justin Kuethe	09/19	Sept 30 2025	Sept 30 2025
Nick McClure	09/19	Sept 30 2025	Sept 30 2025
James Linderman	04/22	Sept 30 2025	Sept 30 2028
Frank Kisner	09/22	Sept 30 2025	Sept 30 2028
Brandon Patterson	09/22	Sept 30 2025	Sept 30 2028
Gena Linebarger	09/20	Sept 30 2026	Sept 30 2026
Benjamin Fietz	09/20	Sept 30 2026	Sept 30 2026
John Echols	09/23	Sept 30 2026	Sept 30 2029
Samuel Jolliffe V	09/23	Sept 30 2026	Sept 30 2029

Justine Ruff (Liaison)
Robin Poole (Council Liaison)

Ex-Officio members are Earl Erdman and Harry Spannaus, the City Manager and the City Attorney. The Secretary is the Director of Aviation.

Eligibility Requirements: Resident of Midland County

ANIMAL CONTROL ADVISORY COMMISSION

(Advisory)
(Membership - 7; Terms - 4 Years)

	Appt Date	Term Expires	Eligibility Expires
Melissa Griffin-Hobson (daily operations)	08/23	Sept 30 2025	Does Not Expire
Dr. J. Annette Jensen (Veterinarian)	04/20	Sept 30 2024	Does Not Expire
Tasha Sport	04/20	Sept 30 2024	Sept 30 2028
Sharla Hotchkiss	04/20	Sept 30 2024	Sept 30 2028
Judge Terry Johnson (County)	05/23	Sept 30 2027	Does Not Expire
Alyson Dial	09/18	Sept 30 2026	Sept 30 2026
Beth Meeks	09/22	Sept 30 2026	Sept 30 2030

Melissa Griffin-Hobson (Staff Liaison)
Dan Corrales (Council Liaison)

Eligibility Requirements: 1 License Veterinarian, 1 Animal Shelter Employee, 1 Animal Welfare Organization Representative, 1 County or Municipal Official, 3 Citizens

BARBARA AND GEORGE H.W. BUSH CONVENTION CENTER ADVISORY BOARD

(Advisory)

(Membership-7; City Appoints 4 Seats; Terms – 3 Years - Staggered)

	Appt Date	Term Expires	Eligibility Expires
Kevin Nelson	09/23	Sept 30 2024	Sept 30 2027
Randall Milloy	09/23	Sept 30 2025	Sept 30 2028
Tucker Schneemann	09/23	Sept 30 2025	Sept 30 2028
Dillon Custer	09/23	Sept 30 2026	Sept 30 2029

Robin Poole (Council Liaison)

Non-voting Ex-Officio member is the City Governance Officer/City Secretary.

BUILDING AND FIRE CODE REVIEW COMMITTEE/CONSTRUCTION BOARD OF ADJUSTMENTS & APPEALS

(Decision Making)

(Membership – 9; Terms – 6 Years)

Shall consist of two architects, a fire protection contractor or specialist, a general contractor, an electrical contractor, a homebuilder, a plumbing and mechanical contractor, a structural engineer, a City Council Liaison

	Appt Date	Term Expires	Eligibility Expires
Ryan Almand (Electrical Contractor)	12/18	Sept 30 2024	Sept 30 2030
Jay Bradford (Architect)	12/18	Sept 30 2024	Sept 30 2030
T.J. McClure (Architect)	12/18	Sept 30 2024	Sept 30 2030
Laurence Oeth (Structural Engineer)	12/18	Sept 30 2024	Sept 30 2030
Gary Glasscock (General Contractor)	12/18	Sept 30 2024	Sept 30 2030
Robert Anderson (Homebuilder)	12/18	Sept 30 2024	Sept 30 2030
Dean Kelly (Plumbing & Mechanical Contractor)	04/22	Sept 30 2028	Sept 30 2034
Kenneth Whiting (Fire Protection)	04/22	Sept 30 2028	Sept 30 2034
Jeff Pinkstaff (Liaison)	12/18	Sept 30 2024	Sept 30 2030
Dan Corrales (Council Liaison)			

Eligibility Requirements: Members shall reside within the City.

CAPITAL IMPROVEMENT ADVISORY COMMITTEE

(Advisory)
(Membership – 7)
A minimum of 40% must be representative of real estate, development, or building industries who are not employees or officials of a political subdivision or governmental entity.)

	Appt Date
Carl Craigo	10/19
Walter Pate	06/18
Mark Payne	06/18
Brian Sales	06/18
Rolandrea Russell	09/23
Gabriel McClelland (Staff Liaison)	09/23
Bill Scott	09/22
Robin Poole (Council Liaison)	

CITIZENS DEVELOPMENT AND HOTEL/MOTEL ADVISORY BOARD

(Advisory)
(Membership - 7; Terms - 2 Years Staggered)

	Appt Date	Term Expires	Eligibility Expires
Brandon Ofield	09/20	Sept 30 2024	Sept 30 2024
Ankur Bhakta	09/22	Sept 30 2024	Sept 30 2026
Cole Harrison	09/22	Sept 30 2024	Sept 30 2026
Reggie Lawrence	09/22	Sept 30 2024	Sept 30 2026
Clint Williamson	04/21*	Sept 30 2025	Sept 30 2025
Vicky Hailey	09/21	Sept 30 2025	Sept 30 2025
Heather Bredimus	09/23	Sept 30 2025	Sept 30 2027

Marcia Bentley-German (Staff Liaison)
Robin Poole (Council Liaison)
John Norman (Council Liaison)

Eligibility Requirements: Members shall be thoroughly familiar with Chapter 351, “Municipal Hotel Occupancy Taxes”, 1 Member Representative of Hotel/Motel Association.

MIDLAND CENTRAL APPRAISAL DISTRICT BOARD OF DIRECTORS

(Separate Legal Entity)
Five Directors, Elected by Local Taxing Entities.
City Nominates/Cast Vote for one Director
(Terms - 2 Years)

	Appt Date	Term Expires
Robert McNaughton	11/15	Dec 31 2024

MIDLAND DEVELOPMENT CORPORATION

(Decision Making/Separate Legal Entity)
(Membership - 7; Terms -3 Years - Staggered)

	Appt Date	Term Expires	Eligibility Expires
Chase Gardaphe	01/19	Jan 14 2025	Jan 14 2025
Barry Simpson	01/19	Jan 14 2025	Jan 14 2025
Brad Bullock	04/21*	Jan 14 2026	Jan 14 2029
Lucy Sisniega	02/22	Jan 14 2025	Jan 14 2028
P Lourcey Sams	04/20*	Jan 14 2026	Jan 14 2026
Jill Pennington	04/20*	Jan 14 2026	Jan 14 2026
Zachary Deck	01/23	Jan 14 2026	Jan 14 2029

Vanessa Magallanes (Staff Liaison)
Amy Stretcher-Burkes (Council Liaison)
Lori Blong – Mayor (Council Liaison)

Eligibility Requirements: No director or employee shall be related to a current City Council member.

MIDLAND DOWNTOWN PARK CONSERVANCY BOARD

(Separate Legal Entity)
(Membership - 7; City Appoints 3 Seats; Terms -3 Years - Staggered)
(Resolution of appointment is made each February and each appointment must be ratified by the Conservancy Board in March at their annual meeting)

	Appt Date	Term Expires	Eligibility Expires
Barry Beal Jr.	08/18	Sep 30 2024	Sep 30 2024
Sharla Hotchkiss	07/20*	Sep 30 2025	Sep 30 2028
Elvie Brown	02/23	Sep 30 2026	Sep 30 2029

MIDLAND HIGHER EDUCATION FACILITIES CORPORATION

(Membership - 7; Terms - 2 Years Staggered)

	Appt Date	Term Expires	Eligibility Expires
Steve Jones	**09/08***	**Jan 1 2010**	**Jan 1 2012**
Cathy Oestmann	**11/05***	**Jan 1 2010**	**Jan 1 2010**
Vacancy		**Jan 1 2007**	
Vacancy		**Jan 1 2007**	
Vacancy		**Jan 1 2007**	
Vacancy		**Jan 1 2009**	
Curt Kamradt	**11/05***	**Jan 1 2014**	**Jan 1 2014**

Sharla Hotchkiss (Liaison)

MIDLAND HOUSING AUTHORITY COMMISSION

(Separate Legal Entity)
(Membership - 5; Terms - 2 Years expiring 3 even & 2 odd.)
Appointments Made by Mayor (LGC 392.031)

	Appt Date	Term Expires
Wes Gotcher	09/20	Oct 2024
VACANT (Lehrer)	09/20	Oct 2024
Latoya Mayberry	06/21	Oct 2025
VACANT (Cantu)	09/18*	Oct 2023
Cheryl Wadley (Resident Commissioner)	11/19	Oct 2025

Isaac Garnett (Staff Liaison)

Eligibility Requirements: No member may be an officer or employee of the City of Midland.

MIDLAND-ODESSA URBAN TRANSIT DISTRICT BOARD

(Decision Making/Separate Legal Entity)
(Membership – 12 with 6 appointed by Midland; Terms - 2 Years Staggered; Can serve 3 terms)

	Appt Date	Term Expires	Eligibility Expires
Joseph Sanchez	12/19*	Sept 30 2023	Sept 30 2027
Daniel Norwood	04/21*	Sept 30 2023	Sept 30 2029
Brian Stubbs	06/22*	Sept 30 2023	Sept 30 2029
Don “Woody” Woodward	09/22	Sept 30 2024	Sept 30 2028
Dan Corrales	09/22	Sept 30 2024	Sept 30 2028
Robert Crites	10/22	Sept 30 2024	Sept 30 2028

Rolandrea Russell (Staff Liaison)

MIDLAND SPACEPORT DEVELOPMENT CORPORATION

(Decision Making)
(Membership – 7 with 4 appointed by City of Midland & 3 by Midland County; 2 Year-Terms)

	Appt Date	Term Expires
VACANT (Blong) (City)	04/23	Sept 30 2025
VACANT (Poole) (City)	04/23	Sept 30 2025
VACANT (Stretcher Burkes) (City)	04/23	Sept 30 2025
Frank Kisner (City)	04/23	Sept 30 2025
Judge Terry Johnson (County)	04/23	Sept 30 2025
Luis Sanchez (County)	04/23	Sept 30 2025
Ed Anderson (County)	04/23	Sept 30 2025

Justine Ruff (Staff Liaison)

OIL AND GAS ADVISORY COMMITTEE

(Advisory)
(Membership – 5; Terms – 3 Years expiring 2-2-1)
2 real property developer, real estate sales, or developer; 3 Lic. petroleum engineer, engineer w/ bachelor, or geologist

	Appt Date	Term Expires	Eligibility Expires
Court Adkins (Petroleum Eng.)	09/17	Sept 30 2023	Sept 30 2023
Rhett Bullock (Petroleum Eng.)	09/21	Sept 30 2024	Sept 30 2027
Cameron Willmann (Real Estate)	10/21*	Sept 30 2024	Sept 30 2027
Scott Bowden (Real Estate)	10/19	Sept 30 2025	Sept 30 2025
Ross Klabon (Petroleum Eng.)	10/19	Sept 30 2025	Sept 30 2025

Ron Jenkins (Staff Liaison)

Eligibility Requirements: 3 Petroleum Engineers or Geologists and 2 with Property Development or Real Estate Experience.

PARKS AND RECREATION COMMISSION

(Advisory)
(Membership - 9; Terms - 3 Years expiring 3-3-3.)

	Appt Date	Term Expires	Eligibility Expires
Shirley Howard	02/16*	Sept 30 2024	Sept 30 2024
Laura Smith	10/19	Sept 30 2025	Sept 30 2025
Amber Voithorer	09/22	Sept 30 2025	Sept 30 2028
Rachel Overman	09/22	Sept 30 2025	Sept 30 2028
Sarah Judge	09/22	Sept 30 2025	Sept 30 2028
Lynn Rogers	09/22	Sept 30 2025	Sept 30 2028
Susannah Prucka	04/20*	Sept 30 2026	Sept 30 2026
Dal Watson	09/20	Sept 30 2026	Sept 30 2026
Andra Jones	09/23	Sept 30 2026	Sept 30 2029

Cristina Odenburg-Burns (Staff Liaison)
John Norman (Council Liaison)

Eligibility Requirements: Resident Citizen, Taxpayer and Qualified Voter.

PERMIAN BASIN COMMUNITY CENTER FOR MH/MR (PermiaCare)

(Separate Legal Entity)
(Membership 9 - 2 (City); Terms - 2 Years)

	Appt Date	Term Expires
Derek Cook (City)	06/21	June 2025
Mickey Cargile (City)	09/23	June 2025

PERSONNEL BOARD OF APPEALS

(Decision Making)
(Membership - 3; No designated terms. Mayor appoints.)

	Appt. Date
Scott Dufford	01/14
Hugh A. “Andy” Shaffer	09/05
Lori Blong	01/23

Mark Widman (Staff Liaison)

Eligibility Requirements: Board consists of two City Council members and one other member who is not a City employee.

PLANNING AND ZONING COMMISSION

(Decision Making)
(Membership - 7; Terms - 3 Years)

	Appt Date	Term Expires	Eligibility Expires
Diane Williams	09/17	Sept 30 2023	Sept 30 2023
Lucy Sisniega	09/20	Sept 30 2023	Sept 30 2026
Zachary Deck	09/20	Sept 30 2023	Sept 30 2026
Adrian Carrasco	09/21	Sept 30 2024	Sept 30 2027
Emily Holeva	09/22	Sept 30 2025	Sept 30 2028
Abraham Bejil	09/22	Sept 30 2025	Sept 30 2028
Steven Villela	05/23*	Sept 30 2026	Sept 30 2029
ALTERNATES:			
VACANT (Dillow)	09/21	Sept 30 2024	Sept 30 2027
Sallie Vega	09/22	Sept 30 2025	Sept 30 2028

Jeff Fisher (Staff Liaison)

Eligibility Requirements: Resident citizen of City of Midland, owner of real property within the City Limits and qualified Voter.

ZONING BOARD OF ADJUSTMENT
AND
AIRPORT ZONING BOARD OF ADJUSTMENT

(Decision Making)
(Membership - 5; Terms - 2 Years expiring 3 odd & 2 even.)

	Appt Date	Term Expires	Eligibility Expires
Derek Whiting	01/18*	Sept 30 2023	Sept 30 2023
E.J. Baldridge	02/18*	Sept 30 2023	Sept 30 2023
Robert Gray	01/21*	Sept 30 2023	Sept 30 2027
Reed Claybrook	03/19*	Sept 30 2024	Sept 30 2024
James Gerety	10/22	Sept 30 2024	Sept 30 2026

ALTERNATES: (not applicable to Airport Zoning)

Ross Schumann	Sept 30 2025
VACANCY	**Sept 30 2020**
VACANCY	**Sept 30 2020**
VACANCY	**Sept 30 2020**

Jeff Pinkstaff (Staff Liaison)

****Updated: October 12, 2023****

* **Indicates appointment to an unexpired term.**

ZONING BOARD OF ADJUSTMENT AND AIRPORT ZONING BOARD OF ADJUSTMENT
(Advisory; Membership - 5: Terms - 2 Years Expiring 3 Odd & 2 Even)
September 2022 - August 2023

MEMBER	TERM EXPIRES	ATTENDANCE	MEETINGS ATTENDED	TOTAL MTGS	ELIGIBLE	NOTES
Reed Claybrook	Sept 30 2024	100%	3	3		
Derek Whiting	Sept 30 2023	67%	2	3		
E.J. Baldridge	Sept 30 2023	100%	3	3		
Robert Gray	Sept 30 2024	67%	2	3		
James Gerety	Sept 30 2024	33%	1	3		
ALTERNATES: (not applicable to Airport Zoning)						
Ross Schumann	Sept 30 2025	33%	1	3		
VACANCY						
VACANCY						
VACANCY						

Applicants Name	Additional Boards Applying to	NOTES
Randall Milloy		
Sonya L. Mucino		
April Valdez		
Rachel Walker		
Danny Norwood		

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date: 8/10/2023

Name: Randall Milloy

Phone: 432-552-9848 **(Home)**

432-552-5000 **(Business)**

Address: 6409 Mosswood Drive

Midland (City) Texas (State) 79707 (Zip)

Email: rvmilloy@att.net

I am [✔] **I am not** [ ] **a U.S. Citizen**

Are you a graduate of Midland 101? [ ] **yes** [✔] **no**

Please tell us about yourself:

I have lived in Midland 18 **years.**

Occupation: Banking

Professional and/or Community Activities:

United Way commitee volunteer for the past 6 years. Very active in school system and athletics as my son is a senior at Legacy High and both my daughters graduated from Lee.

What is your personal vision for the City?

My vision for Midland has always been for it to be the safest most enjoyable place to raise a family and work. The people of Midland are wonderful hard working individuals that care for their fellow neighbor.

Please specify any time constraints you may have.

My employer encourages employees to serve on boards and commissions. With that being said, there would be no time constraints.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

I am interested in serving on any needed available Board/Commission.

Please tell us why you are interested in serving on this board or commission.

My interest in serving comes from my personal vision as stated above. Only by being involved in the process can I try to make a difference in the safety and attraction to families to live in Midland

What contribution would you most like to make?

As a resident of Midland for 18 years I have seen the ups and downs, along with the potential for this great city. By having children involved in community and school activities I have insight as to what familyies expect and need from this city. My financial backgrund of serving in the banking community also allows me the knowlege of the industries that operate within our region.

Additional pertinent information or references:

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

Applications may be submitted online via email or print in order to send by mail:

City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

Submit Via Email

Print Application

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PLEASE TYPE OR PRINT CLEARLY:

Date: 9/28/2023

Name: Sonya Luna Mucino

Phone: (432) 934-8358 **(Home)**

Address: 223 W. Wall St., Ste.299

(432) 934-8358 **(Business)**

Midland TX 79701

Email: luna9979@gmail.com

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 20 **years.**

Occupation: REALTOR

Professional and/or Community Activities:

I am taking training to help with elections this fall. I serve on the Midland County Republican Party. I serve on the Governmental Affairs Committee at the Permian Basin Board of Realtors.

What is your personal vision for the City?

My personal vision for the City is to help make it better and help people understand the changes that will make the City better.

Please specify any time constraints you may have.

None

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Zoning Board of Adjustment

Airport Zoning Board of Adjustment

Please tell us why you are interested in serving on this board or commission.

I would like to learn about either Zoning or Airport or both because I'm a Realtor, I feel the need to know more about the city I sell real estate in. Not just sell real estate and know the market, but really know about the city in which I live and do business in.

What contribution would you most like to make?

I feel that my background in real estate can be helpful.

Additional pertinent information or references:

Warren Ivy - Century 21 The Edge

Rhonda Lesley - Permian Board of Realtors

(2) Name of Board/Commission:

Zoning Board of Adjustment

Airport Zoning Board of Adjustment

What contribution would you most like to make?

I feel that my background in real estate can be helpful.

Additional pertinent information or references:

Warren Ivey - Century 21 The Edge

Rhonda Lesley - Permian Basin Board of Realtors

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Signature of Applicant

Sonya Luna Mucino

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PLEASE TYPE OR PRINT CLEARLY:

Date: 09/26/2023

Name: April L. Valdez

Phone: 432-813-4919 **(Home)**

Address: 1511 S Jefferson St

_____ **(Business)**

Midland TX 79701

Email: april.val05@gmail.com

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 15 **years.**

Occupation: West Texas AGC - Midland - Office Manager

Professional and/or Community Activities:

Midland Rescue Runners

What is your personal vision for the City?

Long term vision to bring the community together.

A people centered city that is health, vibrant, affordable and resilient with a strong sense of identity.

A place to be proud of, and a place that others want to visit.

Please specify any time constraints you may have.

Notification of meeting date/time in advance.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Zoning Board of Adjustment

Airport Zoning Board of Adjustments

Please tell us why you are interested in serving on this board or commission.

Learning purposes

To be more involved in the community

What contribution would you most like to make?

In my current occupation I've become familiar with construction plans and local contractors.

Knowledge and understanding in the city's advisory board would be educational.

Additional pertinent information or references:

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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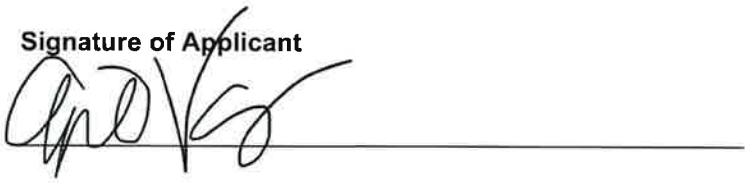
Signature of Applicant



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City of Midland

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PO Box 1152

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Submit Via Email

Print Application

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PLEASE TYPE OR PRINT CLEARLY:

Date: 8/11/2023

Name: Rachel Walker

Phone: 325-642-9539 **(Home)**

Address: 4604 Gleneagles Dr

432-994-0784 **(Business)**

Midland TX 79707

Email: rwalker@crownquest.com

(City) (State) (Zip)

I am [✔] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [✔] **yes** [ ] **no**

I have lived in Midland 7 **years.**

Occupation: Public Affairs Manager

Professional and/or Community Activities:

I am a 2022 graduate of Leadership Midland, the Awards Chair for the Midland County Republican Women, and the Events Chair for the Midland Liberty Leadership Council. I am an active member of the Midland Bible Church. Professionally, I am involved in various committees for several oil and gas trade organizations.

What is your personal vision for the City?

I aspire for Midland to become an attractive destination rather than a "passing through" stop. While not native to Midland, I've fully embraced my new hometown. I'm committed to helping others see Midland as a place to hold dear, just as I do. I'm confident in its potential to become a place people never want to leave, and I am eager to contribute to this shared vision.

Please specify any time constraints you may have.

I do not have any currently known time constraints allowing me from not attending meetings for the commission I'm seeking.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Parks and Recreation Commission

Please tell us why you are interested in serving on this board or commission.

Amidst our desert environment, our city's parks stand out as oases. I want to help safeguard and enhance our parks for present and future generations. I believe the commission can collaborate with city employees to expand our citizens' outdoor recreational

opportunities. By contributing to this effort, I aim to dispel misconceptions of "nothing to do" and add to Midland's vibrancy.

What contribution would you most like to make?

There is undoubtedly a delicate balance between meeting citizens' wants and city budgetary restraints. I would like to explore new ways to attain the city's wish list while maintaining fiscal responsibility. I believe we can create a vibrant recreational environment while maximizing the value the city provides to its citizens within its current budget.

Additional pertinent information or references:

Seth Herman sherman@midlandtexas.gov

Luke Dunn ldunn@crownquest.com

Jimmy Young 432-425-5231

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

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As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date: 9-29-2023

Name: DANNY NORWOOD

Phone: 682-5544 (Home)

Address: 1705 MABERRY

618-5012 ~~(Business)~~ (Business)

MIDLAND, TX. 79705

Email: danny@dannynorwood.com

(City) (State) (Zip)

I am ☑ I am not ☐ a U.S. Citizen

→ I was in the class that didn't finish b/c of covid.

Please tell us about yourself:

Are you a graduate of Midland 101? ☐ yes ☐ no

I have lived in Midland 65 years.

Occupation: Realtor

Professional and/or Community Activities:

PAST BOARD MEMBERS OF [BIG BROTHER, AMERICAN CANCER SOCIETY, CENTER FOR BATTERED WOMEN, HIGH SKY CHILDRENS RANCH,] MIDLAND ODESSA TRANSIT AUTHORITY - CURRENT MEMBER. MEMBER OF MSQUAD.

What is your personal vision for the City?

TO CONTINUE TO HAVE MORE BUSINESSES COME TO TOWN.

Please specify any time constraints you may have.

NONE

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

AIRPO & ZONING BOARD OF ADJUSTMENT

Please tell us why you are interested in serving on this board or commission.

I CURRENTLY AM ON THE MIDLAND ODESSA TRANSIT AUTHORITY BOARD & I WOULD LIKE TO GET MORE INVOLVED WITH THE CITY.

I AM A GRADUATE OF UT-AUSTIN WITH A BBA IN FINANCE.

What contribution would you most like to make?

UNKNOWN @ this time.

Additional pertinent information or references:

I RAISED MY CHILDREN HERE (I AM A NATIVE MIDLANDER) & MY GIRLS ARE GROWN & GONE & I HAVE FREE TIME TO SERVE WHEN I'M NOT DOING REAL ESTATE WORK.

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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Signature of Applicant

Applications may be submitted online via email or print in order to send by mail:

City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

Submit Via Email

Print Application

MIDLAND HOUSING AUTHORITY COMMISSION
(Advisory; Membership - 5: Terms - 2 Years Expiring 2-3)
September 2022 - August 2023

MEMBER	TERM EXPIRES	ATTENDANCE	MEETINGS ATTENDED	TOTAL MTGS	ELIGIBLE	NOTES
Wes Gotcher	Oct 30 2022	60%	3	5		
VACANT (Lehrer)	Oct 30 2022	100%	5	5		
Latoya Mayberry	Oct 30 2023	40%	2	5		
Sylvestor (Cantu)	Oct 30 2023	100%	5	5		
Cheryl Wadley	Oct 30 2023	100%	5	5		
Applicants Name	Additional Boards Applying to	COUNCIL NOTES				
Melissa Mosier						
Linda Griffin						
Liliana Lopez						
Neville Peyton						
Archia Word Jones						
Pete Ruiz						
Martin Silva						
Michelle Evans						

Kyle Jamerson
Jeff Hansard
Randall Milloy

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date: 11/29/2022

Name: Melissa "Mel" Mosier

Phone: 432-640-9278 **(Home)**

Address: 708 Beckley Dr

_____ **(Business)**

Midland TX 79703

Email: mmosier@ez-rider.org

(City) (State) (Zip)

I am [✔] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✔] **no**

I have lived in Midland 5 **years.**

Occupation: HR

Professional and/or Community Activities:

Program Director of PBSHRM

Women's Servant Leader at Stonegate Fellowship

Foster for Permian Basin Animal Adovcates

What is your personal vision for the City?

I moved to Midland 5yrs ago and have made it my home. I want others to learn and know what Midland has to offer for families, why it is a great place to live, and what Midland is hoping to accomplish for the future.

Please specify any time constraints you may have.

As long as it schedule in advance I am flexibile.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Airport Planning and Development Board, Animal Services Advisory Commission, Midland Development Corporation, Midland Downtown Park Conservancy, Parks and Recreation Commission, Permian Basin Community Center for MH/MR Planning and Zoning Comission

Please tell us why you are interested in serving on this board or commission.

Being apart of a board gives me an insight on the what, hows, and whys of businesses in Midland and what the vision they have for the city, for the industry. I would be honored to serve in any capacity.

What contribution would you most like to make?

Whatever I can, whether it be my knowledge, my concerns, or my own vision to show others just how wonderful Midland is to live.

Additional pertinent information or references:

I am the board liasion for Midland Odessa Urban Transit District

(2) Name of Board/Commission:

Permain Basin Society of Human Resources

What contribution would you most like to make?

Whatever I can, whether it be my knowledge, my concerns, or my own vision to show others just how wonderful Midland is to live.

Additional pertinent information or references:

Dan Corrales-Councilman at Large

Chuck Harrington - Development Services Director

Lori Blong- New Mayor of Midland

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Signature of Applicant

M Mosier

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City of Midland

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PO Box 1152

Midland, TX 79702

Submit Via Email

Print Application

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 6/19/2023

Name: Linda Griffin

Phone: 432-889-8677 **(Home)**

Address: 2101 Northrup Drive

_____ **(Business)**

Midland, TX 79705

Email: ljegriffin@gmail.com

(City) (State) (Zip)

I am [✔] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✔] **no**

I have lived in Midland 42 **years.**

Occupation: retired

Professional and/or Community Activities:

I am on the board of "Live on Stage," an organization that brings live music to the community at a resonable price.

What is your personal vision for the City?

I am concerned about the quality of life for all Midlanders regardless of how much income they have or don't have.

Many people are struggling, but don't know where to go for help or who to ask.

Please specify any time constraints you may have.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Midland Housing Authority Commission

Please tell us why you are interested in serving on this board or commission.

My daughter has lived in Hillcrest Manor for 10 years. She is eligible due to her disability.

I am concerned about the quality of life of the residents and others who live in similar facilities due to circumstances.

My personal experience with low-income housing, through my daughter, gives me insight into problems and, hopefully, solutions.

What contribution would you most like to make?

Concerning Hillcrest Manor and Langtree Village, I would take a personal interest in making the facilities better for the residents.

Most of the residents have very limited income and more needs to be done to help provide them with a decent place to live.

Additional pertinent information or references:

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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Signature of Applicant

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PO Box 1152

Midland, TX 79702

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APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 7/7/2023

Name: Liliana Lopez

Phone: 432-413-2750 **(Home)**

Address: 104 S Glenwood Dr

_____ **(Business)**

Midland TX 79703

Email: lilianalopez656@gmail.com

(City) (State) (Zip)

I am [✔] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [✔] **yes** [ ] **no**

I have lived in Midland 14 **years.**

Occupation: Housing Counselor

Professional and/or Community Activities:

Board Member West Texas Opportunities

What is your personal vision for the City?

It is a beautiful city with a lot of opportunities for its residents

Please specify any time constraints you may have.

None

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Midland Housing Authority Commission

Please tell us why you are interested in serving on this board or commission.

I would like to contribute to my community and be more aware of the benefits of this program.

What contribution would you most like to make?

I am available to the needs of the program

Additional pertinent information or references:

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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Signature of Applicant

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APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 6/14/2023

Name: Neville Peyton

Phone: (432) 528-4855 **(Home)**

Address: 2624 Delano Avenue

N/A **(Business)**

Midland Texas 79701

Email: Pey5938@gmail.com

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [✓] **yes** [ ] **no**

I have lived in Midland 23 **years.**

Occupation:

Professional and/or Community Activities:

Midland 101

Volunteered With The Basin Dream Center

Volunteered With Meals on Wheels

What is your personal vision for the City?

My personal vision for the City is to create a better everyday life for the people, to bring the community together and to see the City move toward its full potential.

Please specify any time constraints you may have.

None

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Midland Housing Authority Commission

Please tell us why you are interested in serving on this board or commission.

I am interested in serving on this commission because I believe that I could have an impact on improving the quality of life for vulnerable populations (the elderly and disabled) in our City.

What contribution would you most like to make?

I would contribute my life experiences as an Educator and a mother of a disabled son. I know what it takes to identify the needs of individuals and define immediate steps to address those needs. I want to be a contributing member of society by offering my time and personal resources to strengthen those most vulnerable while alleviating homelessness and human suffering in the city.

Additional pertinent information or references:

Sandy Vasquez, Vice Principal, Alternative Education Center, Odessa, Texas, Sandy.vasquez@ectorcountyisd.org (432) 456-0044

Tina Gillihan, Director of Basin Dream Center for Orphans, Midland, Texas , (432) 967-9452

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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Signature of Applicant

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APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 08/1/2023

Name: Archia Jones Word

Phone: (432) 889-7006 (Home)

(same) (Business)

Address: 207 East Dormard Ave

Midland Texas 79705

(City) (State) (Zip)

Email: archiajonesword@yahoo.com

I am [x] I am not [ ] a U.S. Citizen

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] yes [x] no

I have lived in Midland 58 years.

Occupation: Substitute Teacher

Professional and/or Community Activities:

St. Andrews Presbyterian Mission Committee Member (3yrs) Centers For Children + Families Volunteer (3yrs); Advocate Member for implementing a Martin Luther King Street; Carver Reunion Committee Member, NAACP Member

What is your personal vision for the City?

My personal vision for the city of Midland is to promote diversity, continue to advocate for children in what is possible, + to help serve where needed.

Please specify any time constraints you may have.

Being newly retired, my schedule can be adjusted for need purposes.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Midland Housing Authority Commission
Permian Basin Community Center for MH/MR (Permian Core)

Please tell us why you are interested in serving on this board or commission.

To advocate for children, senior citizens and gain knowledge in how to best help the community of Midland.

What contribution would you most like to make?

For the purpose of Midland Housing Authority, to learn about the needs of our community, research what has made a difference elsewhere that benefit Midland, Tx.

Additional pertinent information or references:

Presently, I'm one of the Directors of Promise Seeds Ministry. Our primary focus has been on helping with their needs. A primary reference is: Ms. Brenda Niblett @ (432) 254-8298

(2) Name of Board/Commission:

Permian Basin Community Center for MH/MR (Permian Care) Would like to help in any way possible in educating our community that it's OK, if help is needed.

What contribution would you most like to make?

My contribution to this community would likely be in the area of helps. After gaining victory in mental depression, and advocate to some a voice of encouragement to those in need.

Additional pertinent information or references:

Many times one might not know the root of life's outcome based on choices. To educate our community on symptoms to look for & then get help without being ashamed would be my quest.

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

Aruhia Word

Applications may be submitted online via email or print in order to send by mail or fax:

City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

FAX: (432) 685-7433

Submit Via Email

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APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date: 8/8/2023

Name: Pete Ruiz

Phone: 432-296-2300 **(Home)**

Address: 902 Bonham

432-250-180 **(Business)**

Midland texas 79703

Email: peteruiz@guidingheartcouselingcent

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 59 **years.**

Occupation: Therapist

Professional and/or Community Activities:

Board Member Boys and Girls Club, Housing Authority Board Member, State Of Texas PAPA Arts Board Member, Member of State c

Member of State of Texas Recruiment committe,

What is your personal vision for the City?

Delivering exceptional services and amenities in an equitable, effective, and efficient manner will ensure that

that Midland remains a highly sought-after community. Innovative and sustainable measures will also be used to ensure Midland's

future growth and prosperity.

Please specify any time constraints you may have.

I own my business so have no time constraints

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

housing authority

Please tell us why you are interested in serving on this board or commission.

I love to give back to my community. In the past, my time was limited, but now that I have my own business, it's time to get active onc

What contribution would you most like to make?
Time and effort

Additional pertinent information or references:

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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Signature of Applicant

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APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 8/6/2023

Name: Martin Silva

Phone: 432-352-5756 **(Home)**

(Business)

Address: 5615 Magellan Street

Midland Texas 79705

(City) (State) (Zip)

Email: martys9395@gmail.com

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 22 **years.**

Occupation: Regional Sales for Oilfield Supply Company

Professional and/or Community Activities:

Permian Basin Association of Pipeliners

Midland Aggies Club

What is your personal vision for the City?

I have lived in midland almost my entire life. This is my home and I love my community and its citizens. I would love to see this be a place families want to move to. In the oilfield you constantly hear people say derrogitory things about our community and it hurts. I believe a serious culture change is needed and I will work deligently to ensure every midlander loves our community as much as I do

Please specify any time constraints you may have.

I have an 8-5 job but as a saleman it is very flexible so i am able to attend any regular meetings that will be needed for any board or commissions.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Planning and Zoning Comission

Please tell us why you are interested in serving on this board or commission.

I want to see more things to do for young families together. It seems like a new bar is open every month but we as a community are seriously lacking in places we can enjoy with our children. Also I feel as if we are somewhat stuck in the small town mindset. Our

community is constantly expanding and we do not have all the big business and activities other communities of our same size do.

What contribution would you most like to make?

I would love to be able to bring in more of a family friendly midset to our community. Working in the oilfield you constantly hear of people who work here but do not want to bring their family for various reasons. I truly believe if we are able to partner and bring more business and change the culture of our community we will see Midland grow and prosper.

Additional pertinent information or references:

Dr. Stephanie Howard (432) 240 - 1002
Robert Marquez (432) 978 - 9712

(2) Name of Board/Commission:

Midland Housing Authority Commission

What contribution would you most like to make?

I understand how hard it can be to find affordable housing in Midland. I just purchased a home two months ago. I would love to be able to provide families a place to stay and see the smile of children finally have their own room or just a stable place to live.

Additional pertinent information or references:

Dr. Stephanie Howard (432) 240 - 1002
Robert Marquez (432) 978 - 9712

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

[signature]

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City Secretary's Office
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APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 8/9/2023

Name: Michelle M. Evans, M.Ed

Phone: 432-349-7981 **(Home)**

Address: 1206 Daybreak Way 432-685-7714 **(Business)**

Midland TX 79705

Email: michelle.evans7981@gmail.com

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 41 **years.**

Occupation: Non-Profit

Professional and/or Community Activities:

I currently work for the United Way of Midland as the Director of Community Engagement (8-Yrs) and worked for the state of Texas with DFPS for 17 yrs. I have worked with numerous organizations and agencies over the years. I also work in my local church, where I'm a volunteer Director for our local food pantry.

What is your personal vision for the City?

My vision for any city encompasses a wide range of aspects, aiming to create a thriving, sustainable, and inclusive environment that enhances the quality of life for all residents.

Please specify any time constraints you may have.

At this time, I can not think of any time constraints. If approved for my selected commission, my office has approved me to attend the meeting as it is currently listed on the City website.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Midland Housing Authority Commission

Please tell us why you are interested in serving on this board or commission.

I believe in the importance of housing equity and want to work towards ensuring everyone has access to safe, affordable, and stable housing; serving on the board can allow me to advocate for policies and initiatives promoting these goals.

What contribution would you most like to make?

I have extensive experience working with non-profits, state, county, and local governments, procurements, research, contracts, budgets, data collection, development/management, policy development, project management, diversity, equity, and inclusion. I currently serve on the 2-1-1 Committee and the MAHA.

Additional pertinent information or references:

NA

(2) Name of Board/Commission:

NA

What contribution would you most like to make?

NA

Additional pertinent information or references:

NA

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

Michelle Evans Digitally signed by Michelle Evans
Date: 2023.08.09 14:08:33 -05'00'

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City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

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APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 8/9/2023

Name: Kyle Jamerson

Phone: (432) 664-8173 **(Home)**

Address: 4708 Mimosa Ct

(432) 552-5000 **(Business)**

Midland TX 79707

Email: kyle.jamerson@southwest.bank

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 11 **years.**

Occupation: SVP - Commercial Lender

Professional and/or Community Activities:

I've been in banking for 11 years and majority of the time has been spent helping local businesses grow and expand in the Permian Basin.

What is your personal vision for the City?

My personal goal for Midland would be to create a place that people not only want to work but also want to raise a family here. Midland is in desperate need to invest in its local community such as schools, affordable housing and small business in order to obtain a growing healthy local economy.

Please specify any time constraints you may have.

Schedule is fairly flexible during working hours. Afternoons can get tied up with kids activities.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Midland Housing Authority Commission

Please tell us why you are interested in serving on this board or commission.

Being a lender and being involved in the community has given me the desire to make a positive impact on my community's housing situation. Having a young kids has opened my eyes to how much Midland is in need of teachers to help guide our youth and cost of

housing can be a big deterrent for young teachers to pass on the Permian Basin.

What contribution would you most like to make?

Serving on this commission would allow me to contribute to the development for affordable housing programs, policies and initiatives. Allowing me to advocate for those in need of suitable housing, work to address housing challenges that Midland has continued to face. It's an opportunity to create positive change and contribute to the betterment of Midland's housing landscape.

Additional pertinent information or references:

(2) Name of Board/Commission:

Planning and Zoning Commission

What contribution would you most like to make?

I would use my experience in commercial lending/real estate to help with Midland development. I believe we need to strive to bring in more local small business's to our community by offering more incentives that we tend to offer to corporate companies. I've seen many small business owners turn away from buying land in the city limits due to the extra costs demands imposed by the city,

Additional pertinent information or references:

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Signature of Applicant

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APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 8/10/2023

Name: Jeff Hansard

Phone: (432) 553-2944 **(Home)**

Address: 809 Trinidad Place (432) 552-5000 **(Business)**

Midland TX 79705

Email: Jeff.Hansard@southwest.bank

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 35 **years.**

Occupation: Banker

Professional and/or Community Activities:

Current Midland Market President SouthWest Bank. Former Board Trustee Greenwood Independent School District.

Former Deacon Greenwood Baptist Church. Former Board member Midland Development Corp.

What is your personal vision for the City?

My personal vision for the City is for Midland to continue to expand its role as the leader of the domestic oil & gas industry.

Strive to be a City that attracts young talent and families with good schools and social attractions.

Please specify any time constraints you may have.

none

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Citizens Development and Hotel/Motel advisory Board

Please tell us why you are interested in serving on this board or commission.

Give back to the City of Midland and be apart of the planning and development of the Hotel/Motel sector.

What contribution would you most like to make?

Use my 35 years of experience in banking to be apart of a board that looks to Midland's future needs.

Additional pertinent information or references:

(2) Name of Board/Commission:

Midland Housing Authority Commission

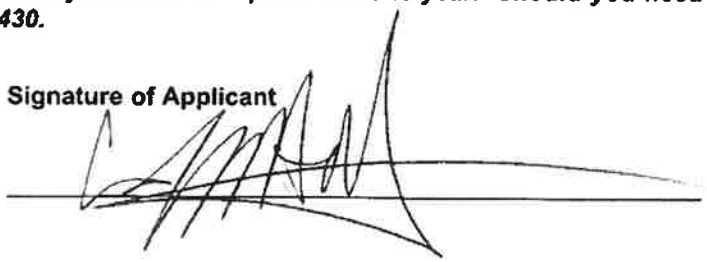
What contribution would you most like to make?

Help to continue to see planned developments low income housing.

Additional pertinent information or references:

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant



Applications may be submitted online via email or print in order to send by mail:

City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

Submit Via Email

Print Application

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Name: Randall Milloy

Address: 6409 Mosswood Drive

Midland (City) Texas (State) 79707 (Zip)

Date: 8/10/2023

Phone: 432-552-9848 **(Home)**

432-552-5000 **(Business)**

Email: rvmilloy@att.net

I am [✔] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

I have lived in Midland 18 **years.**

Are you a graduate of Midland 101? [ ] **yes** [✔] **no**

Occupation: Banking

Professional and/or Community Activities:

United Way commitee volunteer for the past 6 years. Very active in school system and athletics as my son is a senior at Legacy High and both my daughters graduated from Lee.

What is your personal vision for the City?

My vision for Midland has always been for it to be the safest most enjoyable place to raise a family and work. The people of Midland are wonderful hard working individuals that care for their fellow neighbor.

Please specify any time constraints you may have.

My employer encourages employees to serve on boards and commissions. With that being said, there would be no time constraints.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

I am interested in serving on any needed available Board/Commission.

Please tell us why you are interested in serving on this board or commission.

My interest in serving comes from my personal vision as stated above. Only by being involved in the process can I try to make a difference in the safety and attraction to families to live in Midland

What contribution would you most like to make?

As a resident of Midland for 18 years I have seen the ups and downs, along with the potential for this great city. By having children involved in community and school activities I have insight as to what familyies expect and need from this city. My financial backgrund of serving in the banking community also allows me the knowlege of the industries that operate within our region.

Additional pertinent information or references:

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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MIDLAND-ODESSA URBAN TRANSIT DISTRICT BOARD

(Advisory; Membership - 12 with 6 appointed by Midland: Terms - 2 Years Staggered; Can serve 3 terms)

September 2022 - August 2023

MEMBER	TERM EXPIRES	ATTENDANCE	MEETINGS ATTENDED	TOTAL MTGS	ELIGIBLE	NOTES
Joseph Sanchez	Sept 30 2023	30%	3	10	Yes	
Daniel Norwood	Sept 30 2023	90%	9	10	Yes	
Brian Stubbs	Sept 30 2023	60%	6	10		
Don "Woody" Woodward	Sept 30 2024	60%	6	10		
Dan Corrales	Sept 30 2024	78%	7	9		
Robert Crites	Sept 30 2024	89%	8	9		

Applicants Name	Additional Boards Applying to	COUNCIL NOTES
Randall Milloy		

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Name: Randall Milloy

Address: 6409 Mosswood Drive

Midland (City) Texas (State) 79707 (Zip)

Date: 8/10/2023

Phone: 432-552-9848 **(Home)**

432-552-5000 **(Business)**

Email: rvmilloy@att.net

I am [✔] **I am not** [ ] **a U.S. Citizen**

Are you a graduate of Midland 101? [ ] **yes** [✔] **no**

Please tell us about yourself:

I have lived in Midland 18 **years.**

Occupation: Banking

Professional and/or Community Activities:

United Way commitee volunteer for the past 6 years. Very active in school system and athletics as my son is a senior at Legacy High and both my daughters graduated from Lee.

What is your personal vision for the City?

My vision for Midland has always been for it to be the safest most enjoyable place to raise a family and work. The people of Midland are wonderful hard working individuals that care for their fellow neighbor.

Please specify any time constraints you may have.

My employer encourages employees to serve on boards and commissions. With that being said, there would be no time constraints.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

I am interested in serving on any needed available Board/Commission.

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What contribution would you most like to make?

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Additional pertinent information or references:

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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Print Application

OIL AND GAS ADVISORY COMMITTEE

(Advisory; Membership - 5: Terms - 3 Years Expiring 2-2-1)

2 Real Property Developer, Real Estate Sales, or Developer; 3 Lic. Petroleum Engineer, Engineer w/ Bachelor, or Geologist

September 2022 - August 2023

MEMBER	TERM EXPIRES	ATTENDANCE	MEETINGS ATTENDED	TOTAL MTGS	ELIGIBLE	NOTES
Vacant (Adkins) (Petro. Eng.)	Sept 30 2023	80%	4	5	Yes	
Rhett Bullock (Petr En)	Sept 30 2024	80%	4	5		
Cameron Willmann (Real Estate)	Sept 30 2024	100%	5	5		
Scott Bowden (Real Estate)	Sept 30 2025	80%	4	5		
Ross Klabon (Petro. Eng.)	Sept 30 2025	80%	4	5		

Applicants Name	Additional Boards Applying to	Notes
Wade McClendon		
Melanie Robertson		
Ryan Buck		
Layton Hargesheimer		
Gustavo Gonzalez		
Camille Hillian		
Dante Perez		
Ciara McDaniel		

Joseph Schwab
J. Andrew DeWoody
Thomas F. Prehn
Randall Milloy

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 8/7/2023

Name: Ciara McDaniel

Phone: 432-999-3033 **(Home)**

636-614-5354 **(Business)**

Address: 3609 Boyd Ave.

Midland TX 79707

(City) (State) (Zip)

Email: ciarakmcdaniel@gmail.com

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 3 **years.**

Occupation: Drilling Engineer - Diamondback Energy Company

Professional and/or Community Activities:

I join with Keep Midland Beautiful through Diamondback to plant trees in local parks. I serve as a reading buddy at Bunche Elementar

I volunteered at the Bunche Elementary's story walk and distributed books to local children. I participate in local high school career fa

I attend YPE, SPE, and AADE events in Midland. I also volunteer with Meals on Wheels in Midland and am constantly looking for nev

What is your personal vision for the City?

It is my goal for Midland to become a destination rather than a pit-stop in oilfield careers. I want Midland to be a thriving community w

I think Midland has come a long way even in the relatively short time that I've been here, but I think that there is still plenty of room to

Midland has a very young population and I'd love to see the city continue to develop ways to attract and keep that population engage

Please specify any time constraints you may have.

I work Monday - Thursday from 7:30 to 4:00 and Friday from 7:30 to 11:30. I will be able to attend meetings at any time, so I don't hav

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Oil and Gas Advisory Commission

Please tell us why you are interested in serving on this board or commission.

Oil and Gas Advisory Commission - I have a B.S. in Petroleum Engineering and a B.A. in Government and I'm currently working as a

What contribution would you most like to make?

I want to provide my perspective and unique background to represent the young professionals and new families in Midland to further

I would like to pair my industry experience with my passion for government to help resolve local oil and gas matters.

Additional pertinent information or references:

Auggie Setiadarma - Drilling Manager at Diamondback Energy: Phone: (432) 556-7179. Email: asetiadarma@diamondbackenergy.cc

Ashley Colquitt - Corporate Affairs Representative at Diamondback Energy (reference for community involvement): Phone: 432-221-7

Amy Lane - Senior Drilling Technician at Diamondback Energy: Phone: (432)294-0723. Email: alane@diamondbackenergy.com

(2) Name of Board/Commission:

Parks and Recreation Commission

Planning and Zoning Commission

What contribution would you most like to make?

Parks and Recreation Commission - As I mentioned in my reason for my interest in the Oil and Gas Advisory Commission, I have a B

Planning and Zoning Commission: I love Midland and I want to see it keep growing and thriving. Participating in the Planning and Zor

Additional pertinent information or references:

See references above.

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Signature of Applicant

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PLEASE TYPE OR PRINT CLEARLY:

Date: 8/6/2023

Name: Joseph Schwab

Phone: 432-889-2633 **(Home)**

Address: 5508 Kingston Dr.

_____ **(Business)**

Midland TX 79705

Email: 1980jalan@gmail.com

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [✓] **yes** [ ] **no**

I have lived in Midland 28 **years.**

Occupation: Retired Geologist

Professional and/or Community Activities:

Worked forty years as a petroleum geologist

Taught College Classic Courses at Midland College

Member of the YMCA

What is your personal vision for the City?

1) Maintain current "small town life style" via careful planning and growth

2) Develop Midland's appeal to young professionals by creating and encouraging entertainment venues

3) Develop Midland's appeal to young familes by creating Midland as a hub for various sports offerings for children

Please specify any time constraints you may have.

None at present time

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Oil and Gas Advisory Commission

Citizens Development and Hotel/Motel Advisory Board

Parks and Recreation Commission

Please tell us why you are interested in serving on this board or commission.

Oil & Gas Advisory Comission...because of my strong background in the Oil & Gas Industry

Citizens Development...because of the need to promote Midland as a sports center and destination city

Parks & Recreation...because of a need to develop Midland as a regional youth sports center.

What contribution would you most like to make?

Oil & Gas Commission...to help the city make wise decisions concerning the resources within the bounds of the city for it's citizens

Citizens Development...to help the city promote the city as a business and family friendly community

Parks & Recreation...to continue the development of parks for not only citizens but also to attract visitors to spend time in Midland

Additional pertinent information or references:

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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Signature of Applicant

Joseph Schwab

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PLEASE TYPE OR PRINT CLEARLY:

Date: 8/8/2023

Name: J. Andrew DeWoody

Phone: 7654268603 **(Home)**

Address: 2501 Homeland Dr

same **(Business)**

Midland TX 79707-2145

(City) (State) (Zip)

Email: jadewoody@gmail.com

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 9 **years.**

Occupation: Professor, Purdue University

Professional and/or Community Activities:

I work remotely as a research professor for Purdue; I work in population genomics. I've served as a Director for an international NGO serve on IUCN's Species Survival Commission, and serve as an advisor to many similar organizations. I'm a native West Texan, having grown up in Odessa, and I live in Midland. My family has ranches in both Coleman and Terrell Counties.

What is your personal vision for the City?

I'd like Midland to be a nicer place to live. It's a good place to raise a family now but I wish there was a stronger, local culture of pride in the West Texas landscape. We have many itinerant workers (both white- and blue-collar) who disparage West Texas. The best oil and gas operators should serve as aspirational peers for the industry; if they did so effectively, Midland would be a better place to live

Please specify any time constraints you may have.

With sufficient advance notice, I have considerable flexibility with my time.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Oil and Gas Advisory Commission

Please tell us why you are interested in serving on this board or commission.

I have a background in oil; my grandfather was a pumper for Shell and I grew up hunting jackrabbits on his leases. Today, I conduct conservation research (whales, prairie-chickens, songbirds) for federal & state agencies and for the oil and gas industry.

What contribution would you most like to make?

I could serve as an objective and effective sounding board for the oil and gas industry when it comes to environmental concerns related to conservation (e.g., threatened and endangered species). I think about these issues when it comes to production on our family ranches but also in my professional capacity.

Additional pertinent information or references:

Interested parties can look up my academic credentials on Google Scholar Profiles or via standard academic search engines.

(2) Name of Board/Commission:

Oil and Gas Advisory Commission

What contribution would you most like to make?

See above.

Additional pertinent information or references:

Ron Schindler (Pioneer Resources) and Ben Sheppard (Permian Basin Petroleum Association) are both familiar with my work.

Dane Crunk (Syntal) or Dick Saulsbury (Saulsbury Industries) both know me personally.

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Signature of Applicant

J.A. DeWoody Digitally signed by J.A. DeWoody
Date: 2023.08.08 14:02:24 -05'00'

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City Secretary's Office

PO Box 1152

Midland, TX 79702

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PLEASE TYPE OR PRINT CLEARLY:

Date: 8/1/2023

Name: Thomas F. Prehn

Phone: (210) 373-9062 **(Home)**

Address: 2602 Lockheed Dr (Same) **(Business)**

Midland TX 79701

Email: thomas@oxbowpetroleum.com

(City) (State) (Zip)

I am ✓ **I am not** ___ **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? ___ **yes** ✓ **no**

I have lived in Midland 11 **years.**

Occupation: Petroleum Land Manager

Professional and/or Community Activities:

See Attached for clarity

What is your personal vision for the City?

Also, please see attached.

Please specify any time constraints you may have.

My first child is due in September. I would like as much time with her as I can.

I also run the Land department for a production company and that has significant time commitments.

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(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Oil and Gas Advisory Commision

Please tell us why you are interested in serving on this board or commission.

I have very intimately been involved in drilling wells in Martin, Andrews, Midland, Upton, Ward and Reeves Counties as a Landman

I am a professional oil and gas developer with unique skills to assist the City of Midland as we move into more drilling in the city limits

What contribution would you most like to make?

I want to assist the City in the approval of new drilling proposals and help ease concerns about drilling activity with citizens.

I want to help find new ways for the City to generate new revenues from oil and gas extraction.

Anything to enhance revenue from Energy projects to the city for the good of community projects.

Additional pertinent information or references:

C. Chris Aycock: Oil & Gas attorney, former manager, current Partner at Permian Mediation 432-638-0501

L. Dan Varner, Engineer, operations, drilling and completions, 432-634-4392

Monte Fryt, Petroleum Engineer and Geophysicist, family friend and mentor 432-254-9533

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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Date: 8/10/2023

Name: Randall Milloy

Phone: 432-552-9848 **(Home)**

432-552-5000 **(Business)**

Address: 6409 Mosswood Drive

Midland (City) Texas (State) 79707 (Zip)

Email: rvmilloy@att.net

I am [✔] **I am not** [ ] **a U.S. Citizen**

Are you a graduate of Midland 101? [ ] **yes** [✔] **no**

Please tell us about yourself:

Occupation: Banking

I have lived in Midland 18 **years.**

Professional and/or Community Activities:

United Way commitee volunteer for the past 6 years. Very active in school system and athletics as my son is a senior at Legacy High and both my daughters graduated from Lee.

What is your personal vision for the City?

My vision for Midland has always been for it to be the safest most enjoyable place to raise a family and work. The people of Midland are wonderful hard working individuals that care for their fellow neighbor.

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(1) Name of Board/Commission:

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Please tell us why you are interested in serving on this board or commission.

My interest in serving comes from my personal vision as stated above. Only by being involved in the process can I try to make a difference in the safety and attraction to families to live in Midland

What contribution would you most like to make?

As a resident of Midland for 18 years I have seen the ups and downs, along with the potential for this great city. By having children involved in community and school activities I have insight as to what familyies expect and need from this city. My financial backgrund of serving in the banking community also allows me the knowlege of the industries that operate within our region.

Additional pertinent information or references:

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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PLEASE TYPE OR PRINT CLEARLY:

Date: 8/18/2022

Name: Ryan Buck

Phone: 972-689-9056 **(Home)**

Address: 6100 Frio Drive _____ **(Business)**

Midland TX 79707

Email: Ryan.Buck@pxd.com

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? ____**yes** [✓] **no**

I have lived in Midland 5 **years.**

Occupation: Production Engineering Supervisor; Pioneer

Professional and/or Community Activities:

Southwest Ollmans Tennis Tournament Board Member. Previous President and Board Member of Toastmasters

Tutored algebra at Midland Legacy High School. Active participant in Habitat for Humanity numerous years.

Active member in SPE and YPE

What is your personal vision for the City?

Continued development to support a robust economy. Need to have the ability to support increased business needs, but also attract future families. The increased growth should be balanced by a vision to develop a sustainable economy that can thrive in low commodity prices and inevitably flourish beyond oil and gas.

Please specify any time constraints you may have.

Fairly busy work schedule (7am - 5pm weekdays), but will prioritize these meetings.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Oil and Gas Advisory Commission

Please tell us why you are interested in serving on this board or commission.

I am fully committed to Midland and want to do everything I can do enhance the community. I see these two committees as having the ability to materially impact Midland's economy.

What contribution would you most like to make?

I am interested in leveraging my network to better the Midland community. I am also a registered Professional Engineer (PE 142934) in Petroleum Engineering, as well as an MBA, so hoping to provide both technical and business perspectives.

Additional pertinent information or references:

(2) Name of Board/Commission:

Airport Planning and Development Board

Oil and Gas Advisory Commission

What contribution would you most like to make?

I am interested in leveraging my network to better the Midland community. I am also a registered Professional Engineer (PE 142934) in Petroleum Engineering, as well as an MBA, so hoping to provide both technical and business perspectives.

Additional pertinent information or references:

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

Buck, Ryan

Digitally signed by Buck, Ryan
DN: cn=Buck, Ryan ou=Domestic Exploration e=Ryan.Buck@pxd.com
Reason: I am the author of this document
Location:
Date: 2022-08-18 10:54:05 00

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City Secretary's Office

PO Box 1152

Midland, TX 79702

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Print Application

Midland, TX

Ryan Buck, MBA, PE

RBuck89@gmail.com

(972) 689-9056

Production Engineering Supervisor | Proven Leader

Accomplished and self-motivated Production Engineering Supervisor with a specialization in the Permian Basin. In 2013, I graduated from the University of Oklahoma with Petroleum Engineering and MBA degrees (3.5 GPA). I am a proven leader with a track record of top-tier performance, specifically in production optimization, LOE-reduction, and emissions control. Daily, I strive to grow personally and add value to my company. I am an efficiency-minded leader driven by optimizing productivity and relationships.

My competitive advantage: first-rate communication skills paired with a commitment to excellence.

Employment

Pioneer Natural Resources Midland, TX and Las Colinas, TX September 2013 – Present
Production Engineering Supervisor – Permian Basin (5 Years)

- Managed a high-performing team of production engineers responsible for all production, workover, and facility operations of the 1,500 rod pump vertical wells and 150 horizontal wells. Developed strong field relationships.
- High-level thinker and leader. Led several production-focused initiatives resulting in 2000+ bopd increase.
- LOE, OPEX, and CAPEX lead. Responsible for creation, tracking, and reconciliation of all budgets. Refined Pioneer's coding practices to ensure quality reporting. Led accrual process. Mentored others to raise awareness and understanding.
- Managed Pioneer's entire $55MM ARO program, running 16 rigs, and plugging 600 wells in 2021. On pace for 650 in 2022.
- Acted as mentor to team. Organized 50+ trainings on a variety of topics. Scheduled dozens of gatherings and roundtables.
- Direct focus on emissions control. Led all areas with largest reduction in venting and flaring locations.
- Leader of the Proactive HSE training group. Trained all of Pioneer on how to properly conduct a safety observation.
- Directly led efforts to optimize leaseholding positions. Constant collaboration with land, legal, reservoir, and field operations. Developed in-depth understanding of lease intricacies.
- Acted as the production engineering point-of-contact for land trades. Ensured successful transactions.

Horizontal Production Engineer – Permian Basin (2 Years)

- Handled all production, workover, and facility operations in the XBC Giddings Estate lease. I operated all 111 horizontal producing wells and 6 SWD's in the most cost-effective manner. Developed gas lift, rod pump, and ESP proficiency.
- In-depth SWD tubing study. Developed recommendation and communicated effectively. Cut failure rate in half.
- Converted five high-failure rod pump wells to gas lift, resulting in a $3.9MM NPV uplift.
- Identified weakness in the current choke design. Upgraded to more resilient design at no additional cost.
- Facilitated quarterly well reviews. Developed proficiency in well optimization and production uplift.
- Wrote Pioneer's standard rod pump workover procedure and standard tubing/coiled tubing lateral cleanout procedures.

Reservoir Engineer – Eagle Ford (1 Year)

- Forecasted reserves, monitored performance, and provided economics for a large portion of Eagle Ford acreage.
- Analyze and provided technical recommendation regarding refracs and offset frac hits.
- Worked in tandem with geologists to obtain a better grasp of the trends and performance drivers in the Eagle Ford shale.

Drilling Engineer – Permian Basin (1 Year)

- Developed drilling engineering skillset and learned how to manage a rig and crew. Acted as night company man.
- Attended a variety of classes and tours to bolster my drilling understanding.

Pioneer Natural Resources Las Colinas, TX Summer of 2012
Petroleum Engineering Intern

- Created new, more accurate and reliable set of Eagle Ford type curves. Helped expand possible parameters available.
- Side projects: study of molar basis equivalents using PVT data and determining analog wells for each area using PI.

Website: rbuck89.wixsite.com/ryanbuck

Midland, TX

Ryan Buck, MBA, PE

(972) 689-9056

RBuck89@gmail.com

Aresco, LP Plano, TX Summers of 2010 and 2011
Petroleum Engineering Intern

- Returned to same company for consecutive summers. Assisted both the Petroleum Engineer and Executive Director with all daily operations. Responsibilities ranged from production reporting to refining legal lease agreements.

Additional Accomplishments and Skills

Licenses: Professional Engineer in Petroleum Engineering (PE 142934) and Security Industries Essentials (SIE) certification.

Involvement: SWOTT board member, 2016-17 President of Toastmasters at Pioneer (member for three years), algebra tutor at local Midland Lee High School, Habitat for Humanity, Society of Petroleum Engineers, and Young Professionals in Energy.

Skills: leadership, project management, collaboration, motivation, problem solving, public speaking, and time management.

Education

Petroleum Engineering at the Mewbourne College of Earth and Energy, University of Oklahoma, May 2013. GPA: 3.4.

Masters of Business Administration (MBA) at the Michael F. Price College of Business, University of Oklahoma, May 2013. GPA: 3.6.

Relevant Coursework

Leadership: several in-house Pioneer leadership courses and 17+ leadership-focused books.

Production: Petroskills Oil Production and Processing Facilities (PF-4 with Mahmood Moshfeghi), Petroskills Production Operations (PO1), Flowco Gas Lift Design School, and numerous Production-Focused Well Controls.

Reservoir: Petroskills Reservoir Management for Unconventional Reservoirs (RMUR with Jack Jones) and Petroskills Basic Reservoir Engineering (BR).

Drilling/Completions: Murchison Drilling School (top placement in class), NSI Technologies Hydraulic Fracturing (Carl Montgomery), Baroid Mud School, and Drilling-Focused Well Control.

Systems and Programs

Proficiencies: Spotfire, Power BI, Aries, WellView, and Microsoft Office.

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date: 9/14/2022

Name: Wade McClendon

Phone: 254-716-4381 **(Home)**

Address: 2402 Seaboard

432-333-4106 **(Business)**

Midland TX 79705

Email: wade.mcclendon@aleragroup.com

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 5 **years.**

Occupation: Risk Management

Professional and/or Community Activities:

I am involved in coaching of kids soccer and flag football. I am a member of the Oilfield Connections group. My wife and I own a sm
business in the community.

What is your personal vision for the City?

Continue to make it better than when you found it. To become a place that attracts young adults to the area. To have a school district
that supports the kids to excel in life.

Please specify any time constraints you may have.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Airport Planning and Development Board

Citizens Development and Hotel/Motel Advisory Board

Oil and Gas Advisory Commission

Please tell us why you are interested in serving on this board or commission.

Each of these boards can serve to advise on aspects that can make real improvements to our community.

What contribution would you most like to make?

Any positive impact.

Additional pertinent information or references:

I look at this like a State Parks. Leave the park better than you found it. I teach this to my kids and it's a good motto to have.

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

Digitally signed by Wade McClendon
Date: 2022.09.14 11:09:59 -05'00'

Applications may be submitted online via email or print in order to send by mail:

City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

Submit Via Email

Print Application

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 8/31/2022

Name: Camille Killian

Phone: 801-682-0009 **(Home)**

469-506-4148 **(Business)**

Address: 810 Trinidad Place

Midland TX 79705

(City) (State) (Zip)

Email: camille.killian@pxd.com

I am ☑ **I am not** ☐ **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? ☐ **yes** ☑ **no**

I have lived in Midland 1 **years.**

Occupation: Operations Superintendent and Chemical Engineer

Professional and/or Community Activities:

ROPE Youth Board Member (Midland, TX), Church of Jesus Christ of Latter-Day Saints, Society of Petroleum Engineers, Womens Energy Network (Permian Basin Chapter), former Genesis Domestic Violence Shelter Outreach Lead (Dallas, TX)

What is your personal vision for the City?

Midland is a growing, thriving city! I've been working in Midland for years but recently purchased a home and moved here full-time. I see Midland as the energy capital of America. We have a wealth of resources and a huge amount of growth here, I want to support that growth while accommodating current residents' concerns and perspectives, to ensure growth is achieved sustainably.

Please specify any time constraints you may have.

With advance notice, I should have no issues attending meetings. Generally my evenings are free; during the work day I will need to coordinate ahead of time.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Planning and Zoning Commission

Please tell us why you are interested in serving on this board or commission.

As a Midland resident, I am personally invested in ensuring that we allow for growth and development of our real estate and sub-surface oil and gas resources in a safe, environmentally compliant, sustainable way. My husband works in real estate development,

and I work in oil, so I have a balanced perspective and vested interest in both real estate and oil & gas growth.

What contribution would you most like to make?

As residential developments continue to expand, I would like to build a sustainable process to assess the risks posed by existing wells and tank batteries when planning nearby construction. If we can bring in oil & gas operators early in this process, we could incentivize operators to plug and abandon low-producing vertical wells, and also standardize spacing / safety recommendations.

Additional pertinent information or references:

From an oil & gas operator perspective, in a few recent cases we have not been aware that homes were being built near existing wells and/or tank batteries until after construction was started. If we had been made aware sooner, we might have been able to come to better compromise solutions and/or accelerate plans to plug and abandon the wells in question.

(2) Name of Board/Commission:

Oil and Gas Advisory Committee

What contribution would you most like to make?

I would like to assist in standardizing recommendations for safety equipment and construction spacing for wells / tank batteries near homes or other real estate developments (or in areas where future residential growth is likely).

Additional pertinent information or references:

S.B. Chemical Engineering, 2013 (Massachusetts Institute of Technology)

S.M. Chemical Engineering, 2014 (Massachusetts Institute of Technology)

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Signature of Applicant

Camille Killian

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City of Midland

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Midland, TX 79702

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Print Application

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 8/24/2022

Name: Dante A. Perez

Phone: 432-231-7788 **(Home)**

Address: 2319 Sky View Rd

_____ **(Business)**

Midland Texas 79705

Email: dperez@crownquest.com

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 4 **years.**

Occupation: Drilling Engineer at CrownQuest Operating LLC

Professional and/or Community Activities:

Professionally, I have been working in Midland for 8.5 years, as a Drilling Engineer I work closely with land, water, production, and mineral departments by efficiently develop our oil fields. Also, I have supervised our construction department and worked in drilling rigs for 6 years. That has help me to acquire a critical decision making in high stress environments.

What is your personal vision for the City?

My vision of Midland is to continue creating and growing a city that our families enjoy being part of. Our city has extraordinary potential for businesses, students, families, and U.S. internal migrant professionals. My vision of Midland is having a place with more opportunities for our local entrepreneurs, encourage companies to hire MC and UTPB graduates, develop the city primarily focusing

Please specify any time constraints you may have.

(Continuation of last question) on our family spaces, and create an environment where young professionals proudly come to stay and serve the community.

(Current question) No constraints, my supervisors will be glad that I take time off from work to attend a city meeting.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Midland Development Corporation

Please tell us why you are interested in serving on this board or commission.

I am interested in MDC because this board is the spear of Midland's future, business development its a key factor to increase families quality of life. As mention in previous question, I strongly believe in supporting our hard working local entrepreneurs.

What contribution would you most like to make?

In my career in the O&G private sector, I have learned how business are successfully and poorly ran. Also, I'm aware our community needs and have a strong desire to help develop Midland. So, my main contribution will be an all-around understanding from a business, citizen, and city standpoint. That comes in place when is time to advise or make a decision representing the community.

Additional pertinent information or references:

Reference: Jeffrey Beard - President of Midland Health Board of Directors - jbeard.district7@midlandhealth.org

I recently applied for Midland 101 - Fall 2022

(2) Name of Board/Commission:

Oil and Gas Advisory Committee

What contribution would you most like to make?

Enforcing oil and gas regulations in a well-organized and efficient way has powerful positive consequences for developing Midland. My main contribution will be technical knowledge in O&G operations while being a reliable member and a responsible citizen that wants to grow the city while thinking ahead, to make sure current development do not interfere with future city plans.

Additional pertinent information or references:

Jeffrey Beard - President of Midland Health Board of Directors - jbeard.district7@midlandhealth.org

Luke Dunn - Vice President of Engineering - ldunn@crownquest.com

I recently applied for Midland 101 Fall 2022

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

Dante Perez

Applications may be submitted online via email or print in order to send by mail:

City of Midland

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Midland, TX 79702

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APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 7/10/2023

Name: Melanie Robertson

Phone: (432) 853-0599 **(Home)**

Address: 1100 Silverton Drive

(432) 559-8663 **(Business)**

Midland TX 79705

Email: melanie.robertson@pxd.com

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 28 **years.**

Occupation: Property Administration Manager at Pioneer

Professional and/or Community Activities:

I work for Pioneer Natural Resources USA, Inc. and am a member of the Permian Leadership Team that is actively involved in the community. I've been a Landman for over 18 years and worked for Pioneer for the last 11 of them as a Landman, Land Supervisor and now as the Property Administration Manager.

What is your personal vision for the City?

Continued growth and strategic improvement of the City of Midland.

Please specify any time constraints you may have.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Planning and Zoning Commission

Oil and Gas Advisory Commission- Real Estate background

Airport Planning and Development Board

Please tell us why you are interested in serving on this board or commission.

I relocated back to Midland last year and would like to be more involved in the community.

What contribution would you most like to make?

To listen, ask questions and make recommendations that are in the best interest of the City of Midland.

Additional pertinent information or references:

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

Robertson, Melanie

Digitally signed by Robertson, Melanie
DN: cn=Robertson, Melanie ou=Domestic Operations
Reason: I filed out this form
Location:
Date: 2023-07-10 10:24-05:00

Applications may be submitted online via email or print in order to send by mail:

City of Midland

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Midland, TX 79702

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APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 6/7/2023

Name: Layton Hargesheimer

Phone: 432-413-7920 **(Home)**

Address: 2802 Lockheed Dr. 432-687-3700 **(Business)**

Midland Texas 79701

Email: LaytonH@hannathon.com

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 26 **years.**

Occupation: COO/Petroleum Engineer

Professional and/or Community Activities:

Active Volunteer and Member of Redeemer Church of Midland

Society of Petroleum Engineers

What is your personal vision for the City?

My Vision is to ensure that the city of Midland maintains the unique and valuable community it currently has while we continue to lead and grow.

Please specify any time constraints you may have.

none

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Oil and Gas Advisory Committee (Petroleum Engineer)

Please tell us why you are interested in serving on this board or commission.

I am interested in this board to make certain Midland's resources are developed adequately while makin our city and community first priority. The oil and gas industry has been a passion and area I have been around my entire life.

What contribution would you most like to make?

To serve the city of Midland by offering my oil and gas experience. I will commit to the citizens of Midland to serve in the best interest of our city with diligence and integrity.

Bachelor of Science in Petroleum Engineering from the University of Oklahoma

Additional pertinent information or references:

Dan Hord III, 432-253-7805, danhord@hedlocinv.com

Justin Kuethe, 432-238-1456, justink@hannathon.com

Randy Prude , 432-685-1980 , rprude@mcounty.com

(2) Name of Board/Commission:

Airport Planning and Development Board

What contribution would you most like to make?

To serve the city of Midland by offering my 26 years of resident experience.

I will commit to the citizens of Midland to serve in the best interest .

Additional pertinent information or references:

Dan Hord III, 432-253-7805, danhord@hedlocinv.com

Justin Kuethe, 432-238-1456, justink@hannathon.com

Randy Prude , 432-685-1980 , rprude@mcounty.com

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Signature of Applicant

L. Haynie

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APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 1/6/2023

Name: GUSTAVO GONZALEZ

Phone: 432-257-2009 **(Home)**

Address: 6609 MOSSWOOD DR

432-257-2009 **(Business)**

MIDLAND TX 79707

Email: GGONZALEZ@ODSEP.COM

(City) (State) (Zip)

I am [✔] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✔] **no**

I have lived in Midland 6 **years.**

Occupation: Chief Comercial Officer for Odessa Separator Inc

Professional and/or Community Activities:

SPE - Society of Petroleum Engineers (Chair Program), SWPSC (Program Committee Member)

SPE- Volunteer Activities in the permian such as West Texas Food bank, social events thru SPE Permian Basin

What is your personal vision for the City?

My vision of Midland is a place where Midlanders feel proud about the city, a safe place where the community feels protected and wants to raise their families. I beleive in our local market, skills and talents from the comunity where we can create more events such as concerns, theatre, festivals, Opera, Art shows, etc,

Please specify any time constraints you may have.

Once a month I need to travel to Houston, Denver or Dallas due to business meetings. But these trips are scheudle with at least 2 weeks in advance

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Midland Downtown Park Conservancy Board

Please tell us why you are interested in serving on this board or commission.

I can add value to the Board, and help them to protect and create innovate ways to have the community participating and using our green areas, as well of making these social areas more enjoyable.

What contribution would you most like to make?

My brackgroud is an Industrial Engineering, but has been involve in the Oil and Gas from the past 10 years. but I have some engineering knolowage and Financial/Operational backgroud that could help the board.

Additional pertinent information or references:

My current position involves a lot of constant communication with people from E&P companies that are either moving to Midland or already live in Midland. If they want some references: Paula Tocora (Enviromental Eng from ConocoPhillips), Seth Riddle

(2) Name of Board/Commission:

Oil and Gas Advisory Committee:

What contribution would you most like to make?

I have more than 10 years of experience in the Oil and Gas industry including US and Overseas shales. Manageing personnel and working in conjuction with a very diverse group of people from different countries.

Additional pertinent information or references:

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Signature of Applicant

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Midland, TX 79702

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Print Application

PLANNING AND ZONING COMMISSION
(Advisory; Membership - 7: Terms - 3 Years)
September 2022 - August 2023

MEMBER	TERM EXPIRES	ATTENDANCE	MEETINGS ATTENDED	TOTAL MTGS	ELIGIBLE	NOTES
Lucy Sisniega	Sept 30 2026	92%	22	24	No	
Diane Williams	Sept 30 2023	79%	19	24	No	
Zachary Deck	Sept 30 2026	58%	14	24	NO	
Adrian Carrasco	Sept 30 2027	71%	17	24		
Abraham Bejil	Sept 30 2028	79%	19	24		
Emily Holeva	Sept 30 2028	63%	15	24		
Steven Villela	Sept 30 2029	100%	6	6		Appointed May 23, 2023
ALTERNATES:						
Salli Vega	Sept 30 2025	29%	7	24		
Beverly Dillow	Sept 30 2024	38%	9	24		
Applicants Name						
Brennan Berry	Mason Sparacino	Aaron Urquieta				
Melissa Mosier	J. Brian Martin	Ciara McDaniel				
Melanie Robertson	Camille Killian	Martin Silva				
Christopher Butler	Laura Watkins	Kyle Jamerson				
Eduardo Aleman	Adam Cunyus	Diana Trejo-Mesa				
Raymond Doss	Joshua Sparks	Randall Milloy				
Billy Gibbs	Melissa Ruckman	Lindsay Childress				
Shonna Garcia	Elizah Don Arp	David Grigsby				
Brian Stubbs	John Burkholder	Mariel Juarez				