CITY OF MIDLAND, TEXAS
AGENDA FOR CITY COUNCIL MEETING
October 25, 2022 - 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 Anthony Paredes, Homeline Baptist 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 “Chiropractic Health Month”

   3b. Presentation of Proclamation for “Monarch Day”

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

CONSENT AGENDA

4. MOTION APPROVING THE FOLLOWING MINUTES:

   4a. BRIEFING SESSION OF OCTOBER 11, 2022

   4b. REGULAR SESSION OF OCTOBER 11, 2022

5. 2022-139 – RESOLUTION AUTHORIZING PURCHASE OF A JOHN DEERE UTILITY TRACTOR AND DIAMOND MOWER FROM DEERE & COMPANY THROUGH BUYBOARD FOR A TOTAL COST OF $148,362.23 (DISTRICT: NONE) (GENERAL SERVICES)

6. 2022-140 – RESOLUTION APPROVING THE PURCHASE OF A GLOBAL H4HSD STREET SWEEPER FROM GLOBAL ENVIRONMENTAL PRODUCTS THROUGH

SOURCEWELL FOR A TOTAL COST OF $334,241.00 (DISTRICT: NONE) (GENERAL SERVICES)

7. 2022-141 – RESOLUTION AUTHORIZING THE SOLE-SOURCE PURCHASE OF A LENCO BEARCAT ARMORED RESPONSE VEHICLE FROM LENCO INDUSTRIES, INC., FOR A TOTAL COST OF $378,675.00 (DISTRICT: ALL) (GENERAL SERVICES)

8. 124-2022 – MOTION APPROVING PLANS AND SPECIFICATIONS FOR THE MICHIGAN AVENUE UTILITY IMPROVEMENTS 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: ALL) (GENERAL SERVICES)

9. 2022-142 – RESOLUTION AUTHORIZING THE PURCHASE OF TWO HUNDRED EIGHT (208) GETAC LAPTOPS AND ACCESSORIES THROUGH THE TEXAS DEPARTMENT OF INFORMATION RESOURCES FROM SHI-GOVERNMENT SOLUTIONS, INC., AT A TOTAL COST OF $609,625.05 FOR THE POLICE DEPARTMENT (DISTRICT: NONE) (GENERAL SERVICES)

10. 2022-143 – RESOLUTION APPROVING A CONTRACT WITH MID-TEX OF MIDLAND, INC., THROUGH THE PURCHASING ASSOCIATION OF COOPERATIVE ENTITIES, FOR THE REPAIR AND REPLACEMENT OF EXPANSION JOINT SEALANT AT ASTOUND BROADBAND STADIUM FOR A TOTAL COST OF $228,323.00; APPROVING $23,000.00 FOR PROJECT-RELATED EXPENSES; AND APPROPRIATING FUNDS FOR SAID CONTRACT (DISTRICT 4) (GENERAL SERVICES)

11. 2022-144 – RESOLUTION AWARDING A CONTRACT FOR THE UTILITY EXTENSION PROGRAM 05 PROJECT TO ENTRENCH INC. AT A TOTAL COST NOT TO EXCEED $2,500,000.00 PER CONTRACTUAL TERM; AND APPROPRIATING AND TRANSFERRING FUNDS (DISTRICT: ALL) (GENERAL SERVICES)

12. 2022-145 – RESOLUTION ESTABLISHING THE DATES OF THE REGULAR CITY COUNCIL MEETINGS TO BE HELD DURING THE CALENDAR YEAR 2023 (DISTRICT: NONE) (CITY SECRETARY'S OFFICE)

13. 2022-146 – RESOLUTION APPROVING THE ISSUANCE OF PERMITS TO PIONEER NATURAL RESOURCES, USA, INC. ("OPERATOR") TO DRILL NINE OIL AND GAS WELLS LOCATED IN SECTION 17, BLOCK 38, T-1-S, T&P RR CO. SURVEY, CITY OF MIDLAND, MIDLAND COUNTY, TEXAS (GENERALLY LOCATED BETWEEN 405 FEET AND 406 FEET SOUTH OF ARAPAHOE ROAD AND BETWEEN 1,182 FEET AND 1,342 FEET WEST OF ELKINS ROAD); AND PROVIDING THAT SAID PERMITS DO NOT REQUIRE A NEW ROAD REPAIR AGREEMENT BUT SHALL BE CONSOLIDATED UNDER AN EXISTING ROAD REPAIR AGREEMENT (DISTRICT 1) (DEVELOPMENT SERVICES)

14. 2022-147 – RESOLUTION APPROVING THE ISSUANCE OF A PERMIT TO PERMIAN DEEP ROCK OIL CO., LLC (“OPERATOR”) TO DRILL AN OIL AND GAS WELL WITHIN THE CITY LIMITS LOCATED IN SECTION 12, BLOCK 39, T-2-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED 410 FEET EAST OF SOUTH LAMESA ROAD AND 463 FEET SOUTH OF INTERSTATE 20); AND PROVIDING THAT SAID PERMIT DOES NOT REQUIRE A NEW ROAD REPAIR AGREEMENT BUT SHALL BE CONSOLIDATED UNDER AN EXISTING ROAD REPAIR AGREEMENT (DISTRICT 2) (DEVELOPMENT SERVICES)

15. 2022-148 – RESOLUTION APPROVING THE ISSUANCE OF A PERMIT TO PERMIAN DEEP ROCK OIL CO., LLC (“OPERATOR”) TO DRILL AN OIL AND GAS WELL WITHIN THE CITY LIMITS LOCATED IN SECTION 2, BLOCK 39, T-2-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED 1,172 FEET WEST OF SOUTH LAMESA ROAD AND 185 FEET SOUTH OF INTERSTATE 20); AND WAIVING THE REQUIREMENT OF A ROAD REPAIR AGREEMENT (DISTRICT 2) (DEVELOPMENT SERVICES)

16. 2022-149 – RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE, ON BEHALF OF THE CITY OF MIDLAND, A SUBSURFACE USE AGREEMENT GRANTING TO PIONEER NATURAL RESOURCES USA, INC. (“OPERATOR”) A SUBSURFACE EASEMENT LOCATED ON A CITY-OWNED TRACT OF LAND DESCRIBED AS THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SECTION 8, BLOCK 38, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS, FOR THE PURPOSE OF DRILLING, COMPLETING, PRODUCING, TRANSPORTING PRODUCTION THROUGH, PLUGGING AND ABANDONING WELLBORES UNDER, ACROSS AND THROUGH SAID TRACT OF LAND TO BENEFIT OIL AND GAS PRODUCTION FROM WELLS DRILLED OR TO BE DRILLED BY OPERATOR, ITS SUCCESSORS OR ASSIGNS ON LANDS LOCATED IN SECTIONS 17 AND 20, BLOCK 38, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS (DISTRICT 1) (DEVELOPMENT SERVICES)

17. 2022-150 – RESOLUTION AUTHORIZING THE EXECUTION OF COMMUNITY DEVELOPMENT BLOCK GRANT CONTRACTS WITH CASA DE AMIGOS OF MIDLAND, TEXAS, INCORPORATED, THE MIDLAND COUNTY HOSPITAL DISTRICT, MIDLAND PARKER PLACE, INC., MISSION HEALTH CARE, INC., THE SALVATION ARMY OF MIDLAND, AND SENIOR LIFE MIDLAND, 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)

18. 125-2022 – MOTION AUTHORIZING THE RESEARCH, DEVELOPMENT AND SUBMISSION OF GRANT APPLICATIONS TO FEDERAL, STATE, AND LOCAL AGENCIES FOR THE EXPRESS PURPOSE OF PREVENTING AND ENDING HOMELESSNESS IN MIDLAND COUNTY (DISTRICT: ALL) (DEVELOPMENT SERVICES)

19. 2022-151 – RESOLUTION AUTHORIZING THE SUBMISSION OF AN APPLICATION TO

THE U.S. DEPARTMENT OF JUSTICE, OFFICE OF JUSTICE PROGRAMS, BUREAU OF JUSTICE ASSISTANCE FOR THE FISCAL YEAR 2023 EDWARD BYRNE JUSTICE ASSISTANCE GRANT PROGRAM; AUTHORIZING THE ACCEPTANCE OF GRANT FUNDS IN THE AMOUNT OF $81,079.12 FOR THE PURCHASE OF TWO EXPLOSIVE ORDNANCE DISPOSAL SUITS AND ACCOMPANYING EQUIPMENT; AUTHORIZING THE EXECUTION OF ALL NECESSARY DOCUMENTS FOR THE ACCEPTANCE OF SAID GRANT FUNDS; AND PROVIDING FOR THE APPROPRIATION OF SAID GRANT FUNDS UPON RECEIPT (DISTRICT: ALL) (POLICE)

SECOND READINGS

20. 10344 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE A 317.56-ACRE TRACT OF LAND OUT OF SECTION 18, BLOCK 38, T-1-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS, FROM SF-1, SINGLE-FAMILY DWELLING DISTRICT, IN PART, SF-2, SINGLE-FAMILY DWELLING DISTRICT, IN PART, SF-3, SINGLE-FAMILY DWELLING DISTRICT, IN PART, TH, TOWNHOUSE (ATTACHED) DWELLING DISTRICT, IN PART, 2F, TWO-FAMILY DWELLING (DUPLEX) DISTRICT, IN PART, MF-16, MULTIPLE-FAMILY DWELLING DISTRICT, IN PART, AND RR, REGIONAL RETAIL DISTRICT, IN PART, TO PD, PLANNED DEVELOPMENT DISTRICT FOR A HOUSING DEVELOPMENT (GENERALLY LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF NORTH FAIRGROUNDS AND EAST MOCKINGBIRD ROAD); 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 OCTOBER 11, 2022)

21. 10347 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOTS 5 AND 6, BLOCK 2, COWDEN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM MF-22, MULTIPLE-FAMILY DWELLING DISTRICT TO TH, TOWNHOUSE (ATTACHED) DWELLING DISTRICT (GENERALLY LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF WEST SCHARBAUER DRIVE AND NORTH MARIENFELD STREET); 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 OCTOBER 11, 2022)

22. 10348 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITH TERM FOR LOTS 4 THROUGH 6, BLOCK 24, COWDEN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF NORTH BIG SPRING STREET AND WEST PARKER AVENUE), WHICH IS PRESENTLY ZONED LR, LOCAL RETAIL DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR THE SALE OF ALL ALCOHOLIC BEVERAGES IN A RESTAURANT FOR ON-PREMISES CONSUMPTION; 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 3) (DEVELOPMENT SERVICES) (FIRST READING HELD OCTOBER 11, 2022)

23. 10349 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITHOUT TERM FOR LOTS 1 AND 2, BLOCK J, GARRETT PLACE ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE SOUTH SIDE OF WEST INDIANA AVENUE, APPROXIMATELY 241 FEET EAST OF CARLTON STREET), WHICH IS PRESENTLY ZONED RR, REGIONAL RETAIL DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR A KENNEL; 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 2) (DEVELOPMENT SERVICES) (FIRST READING HELD OCTOBER 11, 2022)

24. 10350 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITH TERM FOR A 5,085-SQUARE FOOT PORTION OF LOT 6A, BLOCK 27, WYDEWOOD ESTATES, SECTION 26, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE EAST SIDE OF WEST LOOP 250 NORTH, APPROXIMATELY 800 FEET SOUTH OF WEST WADLEY AVENUE), WHICH IS PRESENTLY ZONED PD, PLANNED DEVELOPMENT DISTRICT FOR A SHOPPING CENTER, ALLOWING SAID PROPERTY TO BE USED FOR THE SALE OF ALL ALCOHOLIC BEVERAGES IN A RESTAURANT FOR ON-PREMISES CONSUMPTION; 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 OCTOBER 11, 2022)

25. 10351 – AN ORDINANCE ADOPTING A FEE SCHEDULE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING AN APPEAL PROCESS; ESTABLISHING AN EFFECTIVE DATE OF NOVEMBER 1, 2022; AND ORDERING PUBLICATION (DISTRICT: NONE) (FINANCE) (FIRST READING HELD OCTOBER 11, 2022)

PUBLIC HEARINGS

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

26. 10352 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITH TERM FOR LOT 3G, BLOCK 6, SCOTSDALE ADDITION, SECTION 19, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE SOUTH SIDE OF WEST WADLEY AVENUE, APPROXIMATELY 535 FEET WEST OF NORTH MIDLAND DRIVE), WHICH IS PRESENTLY ZONED RR, REGIONAL RETAIL DISTRICT, ALLOWING SAID PROPERTY

TO BE USED FOR THE SALE OF ALL ALCOHOLIC BEVERAGES IN A RESTAURANT FOR ON-PREMISES CONSUMPTION; 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)

27. 10353 – AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR LOT 7, BLOCK 50, EAST MIDLAND ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF SOUTH STREET AND TYLER STREET), BY PERMITTING A REDUCED MINIMUM LOT WIDTH IN THE EVENT THAT THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND IS AMENDED TO REZONE THE PROPERTY FROM HI, HEAVY INDUSTRIAL DISTRICT TO SF-3, SINGLE-FAMILY DWELLING DISTRICT; 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)

28. 10354 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOT 1, BLOCK 26, WEDGWOOD PARK ADDITION, SECTION 4, CITY AND COUNTY OF MIDLAND, TEXAS, FROM O-1, OFFICE DISTRICT, TO RR, REGIONAL RETAIL DISTRICT (GENERALLY LOCATED ON THE EAST SIDE OF NORTH MIDLAND DRIVE, APPROXIMATELY 510 FEET NORTH OF NEELY AVENUE); 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)

29. 10355 – AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR THE WEST 40 FEET OF LOT 4 AND THE EAST 25 FEET OF LOT 5, BLOCK J, GARRETT PLACE ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE SOUTH SIDE OF WEST INDIANA AVENUE, APPROXIMATELY 80 FEET EAST OF CARLTON STREET), BY PERMITTING A REDUCED MINIMUM LOT DEPTH; 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 3) (DEVELOPMENT SERVICES)

30. 10356 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITHOUT TERM FOR LOT 22 AND THE WEST 97.3 FEET OF LOT 23, BLOCK 81, PERMIAN ESTATES ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE NORTH SIDE OF WEST WALL STREET, APPROXIMATELY 438 FEET WEST OF THOMASON

DRIVE), WHICH IS PRESENTLY ZONED RR, REGIONAL RETAIL DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR AUTOMOBILE OR OTHER MOTORIZED VEHICLE SALES AND SERVICE; 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 2) (DEVELOPMENT SERVICES)

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.)

EXECUTIVE SESSION

32. 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 551.074, Personnel Matters

    a.1. Deliberate the employment, evaluation, and duties of the City Manager

Respectfully Submitted,

Robert Patrick
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
BRIEFING SESSION
MINUTES
October 11, 2022

The City Council convened in briefing session in the Council Chamber, City Hall, Midland, Texas, at 9:30 AM, October 11, 2022.

Council Members present:	Dan Corrales, Robin Poole, Lori Blong, Patrick Payton, Scott Dufford, Jack Ladd, John Norman
Council Members absent:	None
Staff members present:	City Manager Robert Patrick, Deputy City Manager Morris Williams Jr, Assistant City Manager Tina Jauz, First Assistant City Attorney Stephen Gates

The meeting was called to order at 9:30 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 an update from Animal Services regarding Shelter Operations

Ty Coleman, Animal Services Manager, gave a presentation on events, accomplishments and the new Animal Shelter. Mr. Coleman also spoke on adoptions, rescues, new software and changes in operating hours just to name a few of the items discussed in the presentation.

All the business at hand having been completed, the meeting adjourned at 10:01 a.m.

PASSED AND APPROVED October 25, 2022.

Patrick Payton, Mayor

ATTEST:

Amy M. Turner, City Secretary

DRAFT

MIDLAND CITY COUNCIL
MINUTES
October 11, 2022

DRAFT

The City Council convened in regular session in the Council Chamber, City Hall, Midland, Texas, at 10:00 a.m., October 11, 2022.

Council Members present:	Dan Corrales, Robin Poole, Lori Blong, Patrick Payton, Scott Dufford, Jack Ladd, John Norman
Council Members absent:	None
Staff members present:	City Manager Robert Patrick, Deputy City Manager Morris Williams Jr, Assistant City Manager Tina Jauz, First Assistant City Attorney Stephen Gates

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

OPENING ITEMS

1. Invocation – Pastor Philip Teaney, Homeline Baptist 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 “National Business Women’s Week”

   3b. Presentation of Proclamation for “Desk & Derrick Industry Appreciation Week”

CONSENT AGENDA

Dan Corrales moved to approve consent agenda Items 4-20, excluding items 13, 16, 18, 19 & 20; seconded by Robin Poole.

The motion passed by the following vote:
AYE: Corrales, Poole, Blong, Payton, Dufford, Ladd, Norman
NAY: None

ABSTAIN: None
ABSENT: None

4. MOTION APPROVING THE FOLLOWING MINUTES:

   4a. REGULAR SESSION OF SEPTEMBER 27, 2022

5. 2022-128 – RESOLUTION AUTHORIZING PURCHASE OF A MOWERMAX BOOM TRACTOR FROM ATMAX EQUIPMENT CO. THROUGH BUYBOARD FOR A TOTAL COST OF $321,835.50 (DISTRICT: NONE) (GENERAL SERVICES)

6. 2022-129 – RESOLUTION APPROVING A SOLE-SOURCE CONTRACT WITH ROSSMAN ENTERPRISES, INC., DBA MAGNEGRIP FOR THE PURCHASE AND INSTALLATION OF MAGNEGRIP TAILPIPE ADAPTERS AND ASSOCIATED COMPONENTS FOR A TOTAL COST OF $106,245.00 (DISTRICT: ALL) (GENERAL SERVICES)

7. 2022-130 – RESOLUTION AWARDING A CONTRACT FOR THE MOMENTUM BANK BALLPARK PEDESTRIAN BRIDGE REHABILITATION PROJECT TO MID-TEX OF MIDLAND, INC., IN THE AMOUNT OF $184,250.00; APPROVING $18,425.00 FOR PROJECT-RELATED EXPENSES; AND APPROPRIATING FUNDS FOR SAID PROJECT (DISTRICT 4) (GENERAL SERVICES)

8. 2022-131 – RESOLUTION ACCEPTING THE PROPOSAL SUBMITTED BY STANDARD INSURANCE COMPANY OF PORTLAND, OREGON FOR BASIC LIFE, ACCIDENTAL DEATH AND DISMEMBERMENT, VOLUNTARY LONG-TERM DISABILITY, VOLUNTARY SHORT-TERM DISABILITY, AND VOLUNTARY TERM LIFE INSURANCE COVERAGES; AUTHORIZING THE NEGOTIATION AND EXECUTION OF ALL CONTRACTS AND DOCUMENTS NECESSARY TO EFFECT THE CITY'S ACCEPTANCE OF SAID PROPOSAL; AND AUTHORIZING PAYMENT (DISTRICT: NONE) (GENERAL SERVICES)

9. 2022-132 – RESOLUTION APPROVING THE PURCHASE OF REPLACEMENT PALO ALTO FIREWALL DEVICES AND RENEWAL OF MAINTENANCE FOR THE EXISTING FIREWALLS AND ANTIVIRUS SOFTWARE FOR THE COMMUNICATIONS AND INFORMATION SYSTEMS DEPARTMENT FROM CDW GOVERNMENT LLC, THROUGH THE TEXAS DEPARTMENT OF INFORMATION RESOURCES AT A TOTAL COST OF $741,199.44 (DISTRICT: NONE) (GENERAL SERVICES)

10. 2022-133 – RESOLUTION APPROVING THE PURCHASE OF FIFTY-ONE (51) BUNKER COATS AND FIFTY (50) BUNKER PANTS FROM DOOLEY TACKABERRY, INC., AT A TOTAL COST OF $184,051.65 THROUGH THE HOUSTON GALVESTON AREA COUNCIL (DISTRICT: NONE) (GENERAL SERVICES)

11. 2022-134 – RESOLUTION AUTHORIZING THE EXECUTION OF AN AGREEMENT WITH GTS TECHNOLOGY SOLUTIONS, INC., FOR THE PURCHASE AND INSTALLATION OF FIFTY-SIX (56) TOUGHBOOK LAPTOPS AND ACCESSORIES THROUGH THE TEXAS DEPARTMENT OF INFORMATION RESOURCES AT A TOTAL COST OF $278,021.45

DRAFT

FOR THE FIRE DEPARTMENT (DISTRICT: NONE) (GENERAL SERVICES)

12. 2022-135 – RESOLUTION AUTHORIZING THE PURCHASE OF AN ESTIMATED ANNUAL SUPPLY OF CHEMICALS FOR THE WATER RECLAMATION FACILITY FOR FISCAL YEAR 2023 FROM MULTIPLE BIDDERS, FOR A TOTAL COST OF $286,321.20 (DISTRICT: NONE) (GENERAL SERVICES)

14. 115-2022 – MOTION APPROVING A CONSULTING SERVICES AGREEMENT BETWEEN THE MIDLAND DEVELOPMENT CORPORATION AND VANDERGRIFF GROUP ARCHITECTS, LLC, FOR SERVICES RELATED TO THE DEMOLITION OF STRUCTURES LOCATED AT CERTAIN REAL PROPERTY DESCRIBED AS LOTS 1A, 5, 6, AND 9-12, BLOCK 35, ORIGINAL TOWN OF MIDLAND, CITY OF MIDLAND, MIDLAND COUNTY, TEXAS (DISTRICT 2) (CITY MANAGER)

15. 116-2022 – MOTION APPROVING A DEMOLITION CONTRACT BETWEEN THE MIDLAND DEVELOPMENT CORPORATION AND MIDWEST WRECKING CO. OF TEXAS, INC., FOR THE DEMOLITION OF STRUCTURES LOCATED ON CERTAIN REAL PROPERTY DESCRIBED AS LOTS 1A, 5, 6, AND 9-12, BLOCK 35, ORIGINAL TOWN OF MIDLAND, CITY OF MIDLAND, MIDLAND COUNTY, TEXAS (DISTRICT 2) (CITY MANAGER)

17. 2022-136 – RESOLUTION AUTHORIZING THE SUBMISSION OF AN APPLICATION TO THE OFFICE OF THE GOVERNOR, HOMELAND SECURITY GRANTS DIVISION, FOR THE FISCAL YEAR 2023 OPERATION LONE STAR GRANT PROGRAM; AUTHORIZING THE ACCEPTANCE OF GRANT FUNDS FROM SAID PROGRAM FOR THE PURPOSE OF PURCHASING A PERATON/REMOTEC ANDROS FX EXPLOSIVE ORDNANCE DISPOSAL DRONE AND RELATED ACCESSORIES; AND PROVIDING FOR THE APPROPRIATION OF SAID GRANT FUNDS UPON RECEIPT (DISTRICT: ALL) (POLICE)

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

13. 114-2022 – MOTION AUTHORIZING THE EXECUTION OF AMENDMENT NO. 5 TO THAT CERTAIN PROFESSIONAL SERVICES AGREEMENT DATED MARCH 23, 2021, BETWEEN THE CITY OF MIDLAND, TEXAS, AND PARKHILL, SMITH & COOPER, INC., DBA PARKHILL; SAID AMENDMENT PROVIDING SCOPE OF WORK CHANGES TO THE FOLLOWING PROJECTS: (I) MAF AIRFIELD WILDLIFE FENCE IMPROVEMENTS PROJECT; (II) MAF WILDLIFE MANAGEMENT IMPROVEMENTS - SOUTH DRAINAGE CHANNEL PROJECT; (III) MAF PASSENGER FACILITY CHARGE APPLICATIONS AND AMENDMENTS PROJECT; AND (IV) CONSOLIDATED RENTAL CAR FACILITY PROJECT; AND AUTHORIZING THE APPROPRIATION OF THE FOLLOWING FUNDS TO THE FOLLOWING PROJECTS: (I) $251,000.00 FROM THE PFC FUND UNAPPROPRIATED FUND BALANCE TO THE MAF AIRFIELD WILDLIFE FENCE IMPROVEMENTS PROJECT (900345); (II) $94,350.00 FROM THE PFC FUND UNAPPROPRIATED FUND BALANCE TO THE MAF WILDLIFE MANAGEMENT IMPROVEMENTS - SOUTH DRAINAGE CHANNEL PROJECT (900347); (III) $50,000.00 FROM THE PFC FUND UNAPPROPRIATED FUND BALANCE TO THE MAF PASSENGER FACILITY CHARGE APPLICATIONS AND AMENDMENTS PROJECT

DRAFT

(900346); AND (IV) $41,068.00 FROM THE AIRPORT FUND UNAPPROPRIATED FUND BALANCE TO THE CONSOLIDATED RENTAL CAR FACILITY PROJECT (900331) (DISTRICT 4) (AIRPORTS)

Justine Ruff, Director of Airports, gave a brief overview of the item noting there have been some changes in the scope of some of the projects along with cost increases. They would like to add money to the projects to get through to the next phase.

Dan Corrales moved to approve Motion No. 114-2022; seconded by Robin Poole.

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

16. 117-2022 – MOTION APPROVING THE ADVERTISEMENT OF A REQUEST FOR PROPOSALS FOR THE DEVELOPMENT OF CERTAIN CITY-OWNED REAL PROPERTY DESCRIBED AS LOTS 7 AND 8, BLOCK 35, ORIGINAL TOWN OF MIDLAND, CITY OF MIDLAND, MIDLAND COUNTY, TEXAS, TOGETHER WITH CERTAIN MIDLAND DEVELOPMENT CORPORATION-OWNED REAL PROPERTY DESCRIBED AS LOTS 1A, 5, 6, AND 9-12, BLOCK 35, ORIGINAL TOWN OF MIDLAND, CITY OF MIDLAND, MIDLAND COUNTY, TEXAS (DISTRICT 2) (CITY MANAGER)

Council Member Dufford pulled this item and voiced his wish to sit on the committee that is formed to review proposals. Council Member Corrales also voiced his desire to sit on the committee.

Scott Dufford moved to approve Motion No. 117-2022; seconded by Jack Ladd.

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

18. 2022-137 – RESOLUTION ACCEPTING A FISCAL YEAR 2022 GRANT AWARD FROM THE SOUTHWEST BORDER HIGH INTENSITY DRUG TRAFFICKING AREAS PROGRAM IN THE AMOUNT OF $124,052.00; SAID GRANT SHALL BE USED TO ENHANCE AND COORDINATE DRUG CONTROL EFFORTS AMONG FEDERAL, STATE, AND LOCAL LAW ENFORCEMENT AGENCIES; AND APPROPRIATING SAID GRANT FUNDS (DISTRICT: ALL) (POLICE)

Seth Herman, Police Chief, gave a brief overview of the item noting this allows the City to assign someone to the Federal task force to assist in taking care of this issue. Chief Herman also gave an overview of the seriousness of the Fentanyl drug sweeping the United States, including the Permian Basin.

DRAFT

Dan Corrales moved to approve Resolution No. 2022-137; seconded by Robin Poole.

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

19. 118-2022 – MOTION AUTHORIZING THE EXECUTION OF A RIGHT-OF-WAY LICENSE (22-329-031) WITH MIDLAND-PERMIAN PIPELINE LLC, REGARDING CITY-OWNED PROPERTY DESCRIBED AS SECTIONS 4, 9 AND 16, BLOCK 37, T-3-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS (DISTRICT: NONE) (UTILITIES)

This item was considered immediately after item number 32.

Dan Corrales moved to approve Motion No. 118-2022 with the amendment to include the changes to the fees from item #32's fee schedule; seconded by Lori Blong.

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

20. 119-2022 – MOTION AUTHORIZING THE EXECUTION OF A LEASE AGREEMENT WITH ALLTELL CORPORATION DBA VERIZON WIRELESS REGARDING CITY-OWNED PROPERTY LOCATED AT 4203 SHELL AVENUE (DISTRICT 3) (UTILITIES)

Utilities Director Carl Craigo gave a brief overview of the item noting a couple of cell phone providers have existing equipment that will be upgraded; which will replace the old lease.

Dan Corrales moved to approve Motion No. 119-2022; seconded by Jack Ladd.

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

Mayor Payton jumped to item number 32.

SECOND READINGS

21. 10346 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOT 17, BLOCK 59, PARK AVENUE HEIGHTS ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM MF-22, MULTIPLE-FAMILY DWELLING DISTRICT TO SF-3, SINGLE-FAMILY DWELLING DISTRICT (GENERALLY LOCATED ON THE NORTH SIDE OF EAST CALIFORNIA AVENUE, APPROXIMATELY 480 FEET EAST OF SOUTH LAMESA ROAD); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A

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SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION (DISTRICT 2) (DEVELOPMENT SERVICES) (FIRST READING HELD SEPTEMBER 27, 2022)

Deputy City Secretary Jan Hamilton read the caption of Ordinance No. 10346.

Lori Blong moved to approve the second and final reading of Ordinance No. 10346; seconded by Dan Corrales.

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

PUBLIC HEARINGS

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

22. 120-2022 – 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: KNIGHT 110 MIPA UNIT H110SS; KNIGHT 110 MIPA UNIT H110UH; KNIGHT 110 MIPA UNIT H110WB; KNIGHT 115 MIPA UNIT H115LS; KNIGHT 115 MIPA UNIT H115WA; KNIGHT 120 MIPA UNIT H120MS; KNIGHT 120 MIPA UNIT H120WB; KNIGHT 125 MIPA UNIT H125WA; KNIGHT 130 MIPA UNIT H130LS; KNIGHT 130 MIPA UNIT H130SS; KNIGHT 130 MIPA UNIT H130WB; AND KNIGHT 135 MIPA UNIT H135WA; SAID WELLS BEING GENERALLY LOCATED BETWEEN 1,638 FEET AND 1,998 FEET EAST OF NORTH A STREET EXTENSION AND BETWEEN 1,832 FEET AND 2,020 FEET SOUTH OF W LOOP 250 N; PUBLIC HEARING ONLY (DISTRICT 3) (DEVELOPMENT SERVICES)

Mayor Payton opened the public hearing at 10:51 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

This was a public hearing only; no action was taken.

23. 121-2022 – THE PROPOSED GRANTING OF OIL AND GAS WELL PERMITS TO PIONEER NATURAL RESOURCES, USA, INC. ("OPERATOR") FOR THE DRILLING OF THE FOLLOWING OIL AND GAS WELLS: STIMSON-NAIL E17K 111H; STIMSON-NAIL E17L 112H; STIMSON-NAIL E17M 113H; STIMSON-NAIL E17N 114H; STIMSON-NAIL E17O 116H; STIMSON-NAIL E17P 116H; STIMSON-NAIL E17Q 117H; STIMSON-NAIL E17R 118H; STIMSON-NAIL E17S 119H; AND STIMSON-NAIL E17T 120H; SAID WELLS BEING GENERALLY LOCATED BETWEEN 435 FEET AND 4,366 FEET SOUTH OF ARAPAHOE ROAD AND BETWEEN 1,182 FEET AND 1,362 FEET WEST OF ELKINS ROAD; PUBLIC HEARING ONLY (DISTRICT 1) (DEVELOPMENT SERVICES)

Mayor Payton opened the public hearing at 10:52 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

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This was a public hearing only; no action was taken.

24. 10347 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOTS 5 AND 6, BLOCK 2, COWDEN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM MF-22, MULTIPLE-FAMILY DWELLING DISTRICT TO TH, TOWNHOUSE (ATTACHED) DWELLING DISTRICT (GENERALLY LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF WEST SCHARBAUER DRIVE AND NORTH MARIENFELD STREET); 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)

Deputy City Secretary Jan Hamilton read the caption of Ordinance No. 10347.

Mayor Payton opened the public hearing at 10:52 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

Dan Corrales moved to approve the first of two readings of Ordinance No. 10347; seconded by Lori Blong.

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

25. 10348 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITH TERM FOR LOTS 4 THROUGH 6, BLOCK 24, COWDEN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF NORTH BIG SPRING STREET AND WEST PARKER AVENUE), WHICH IS PRESENTLY ZONED LR, LOCAL RETAIL DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR THE SALE OF ALL ALCOHOLIC BEVERAGES IN A RESTAURANT FOR ON-PREMISES CONSUMPTION; 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 3) (DEVELOPMENT SERVICES)

Deputy City Secretary Jan Hamilton read the caption of Ordinance No. 10348.

Mayor Payton opened the public hearing at 10:54 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

John Norman moved to approve the first of two readings of Ordinance No. 10348; seconded by Jack Ladd.

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

26. 10349 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITHOUT TERM FOR LOTS 1 AND 2, BLOCK J, GARRETT PLACE ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE SOUTH SIDE OF WEST INDIANA AVENUE, APPROXIMATELY 241 FEET EAST OF CARLTON STREET), WHICH IS PRESENTLY ZONED RR, REGIONAL RETAIL DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR A KENNEL; 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 2) (DEVELOPMENT SERVICES)

Deputy City Secretary Jan Hamilton read the caption of Ordinance No. 10349.

Development Services Director Chuck Harrington gave a brief overview of the item noting the request is being made to place a kennel on site for up to 49 small dogs. Staff has serious concerns and recommends denial.

Mayor Payton opened the public hearing at 10:57 a.m.

Elisa Matheson, 3517 W. Michigan Avenue, owner of Stars Hollow Dog Grooming and Resort reported on how she got involved with taking care of dogs and her passion for the work. Mrs. Matheson also reported on the services offered and the structure of the building.

Allen Matheson, 3517 W. Michigan Avenue, spouse of Elisa Matheson and partial owner spoke in his support of this item.

Molly Keffer, 6105 Moroni Street, met the owner and is in support of this item.

There being no one else wishing to speak, the public hearing was closed at 11:08 a.m.

Dan Corrales moved to approve the first of two readings of Ordinance No. 10349; seconded by Robin Poole.

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

27. 10350 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITH TERM FOR A 5,085-SQUARE FOOT PORTION OF LOT 6A, BLOCK 27, WYDEWOOD ESTATES, SECTION

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26, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE EAST SIDE OF WEST LOOP 250 NORTH, APPROXIMATELY 800 FEET SOUTH OF WEST WADLEY AVENUE), WHICH IS PRESENTLY ZONED PD, PLANNED DEVELOPMENT DISTRICT FOR A SHOPPING CENTER, ALLOWING SAID PROPERTY TO BE USED FOR THE SALE OF ALL ALCOHOLIC BEVERAGES IN A RESTAURANT FOR ON-PREMISES CONSUMPTION; 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)

Deputy City Secretary Jan Hamilton read the caption of Ordinance No. 10350.

Development Services Director Chuck Harrington gave a brief overview of the item noting a joint hearing on TABC will possibly take place in November.

Mayor Payton opened the public hearing at 11:11 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. 10350; seconded by John Norman.

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

28. 2022-138 – RESOLUTION AUTHORIZING THE TEMPORARY USE OF LAND FOR A VENDOR MARKET AND CONCERT ON (1) A 0.86-ACRE PORTION OF WEST WALL STREET RIGHT-OF-WAY LOCATED ADJACENT TO LOT 1A, BLOCK 54, AND LOT 1A, BLOCK 55, ORIGINAL TOWN ADDITION, SECTION 14, AND LOTS 1 THROUGH 12, BLOCK 65, ORIGINAL TOWN ADDITION, AND (2) A 0.24-ACRE PORTION OF SOUTH LORAINE STREET RIGHT-OF-WAY LOCATED ADJACENT TO LOT 1 AND LOTS 19 THROUGH 24, BLOCK 65, ORIGINAL TOWN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE WEST SIDE OF THE INTERSECTION OF WEST WALL STREET AND LORAINE STREET) SUBJECT TO CERTAIN SPECIAL CONDITIONS AND RESTRICTIONS (DISTRICT 2) (DEVELOPMENT SERVICES)

Development Services Director Chuck Harrington gave a brief overview of the item noting the requirements of the event.

Council noted that not all of the requirements of the temporary land use were being met and added that this permit could be revoked at Council's discretion.

Mayor Payton opened the public hearing at 11:17 a.m.

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Seth Streun, 2303 W. Cuthbert, reported they are asking for an extension on their current market and gave an overview of the event being planned. Mr. Streun reported he feels like they are adhering to the rules of the agreement.

Grant Billingsly, 901 Pine Court, Vice President of the Midland Downtown Park Conservancy reported the fence is really not needed unless they are serving alcohol.

The Conservancy came to an agreement with the Micromarket that they would erect a fence between the market and the park and that the market would pay $35/hour for cleaning the park's restrooms during the Micromarket. He concluded that the Micromarket has been billed for the restrooms but they have not paid the invoice.

Lauren Johnston, 3406 Sinclair Avenue, doesn't see a need to pay for both porta potties and restroom cleaning. Ms. Johnston also reported that the food vendors go through health inspections which check for fire extinguishers. Council instructed Ms. Johnston that they need to adhere to all of their requirements.

There being no one else wishing to speak, the public hearing was closed at 11:31 a.m.

Jack Ladd moved to approve Resolution No. 2022-138; seconded by Dan Corrales.

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

29. 10344 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE A 317.56-ACRE TRACT OF LAND OUT OF SECTION 18, BLOCK 38, T-1-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS, FROM SF-1, SINGLE-FAMILY DWELLING DISTRICT, IN PART, SF-2, SINGLE-FAMILY DWELLING DISTRICT, IN PART, SF-3, SINGLE-FAMILY DWELLING DISTRICT, IN PART, TH, TOWNHOUSE (ATTACHED) DWELLING DISTRICT, IN PART, 2F, TWO-FAMILY DWELLING (DUPLEX) DISTRICT, IN PART, MF-16, MULTIPLE-FAMILY DWELLING DISTRICT, IN PART, AND RR, REGIONAL RETAIL DISTRICT, IN PART, TO PD, PLANNED DEVELOPMENT DISTRICT FOR A HOUSING DEVELOPMENT (GENERALLY LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF NORTH FAIRGROUNDS AND EAST MOCKINGBIRD ROAD); 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)

Deputy City Secretary Jan Hamilton read the caption of Ordinance No. 10344.

Development Services Director Chuck Harrington gave a brief overview of the item noting this is the next phase of Betenbough homes which will include amenities. They are proposing a mixed use Planned Development (PD).

Mayor Payton opened the public hearing at 11:38 a.m.

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Ronnie Wallace and Chris Berry of Betenbough Homes provided a detailed presentation of their development plan.

There being no one else wishing to speak, the public hearing was closed at 11:50 a.m.

Jack Ladd moved to approve the first of two readings of Ordinance No. 10344; seconded by Robin Poole.

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

MISCELLANEOUS

30. 122-2022 – MOTION APPROVING WITH STAFF'S RECOMMENDED CONDITIONS A PROPOSED PRELIMINARY PLAT OF MOCKINGBIRD RIDGE, BEING A RESIDENTIAL PLAT OF A 317.56-ACRE TRACT OF LAND OUT OF SECTION 18, BLOCK 38, T-1-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF NORTH FAIRGROUNDS AND EAST MOCKINGBIRD ROAD) (DISTRICT 1) (DEVELOPMENT SERVICES)

Dan Corrales moved to approve Motion No. 122-2022; seconded by Jack Ladd.

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

31. 123-2022 – MOTION APPROVING A REQUEST BY S.W. HOWELL, INC. TO DEFER PAVING, WASTEWATER AND WATER IMPROVEMENTS FOR WESTCLIFF ADDITION, SECTION 5, AND TO WAIVE THE CORRESPONDING FINANCIAL SECURITY GUARANTEE VALUED AT $219,060.00, AN AMOUNT EQUAL TO THE ESTIMATED COST TO CONSTRUCT THE PUBLIC INFRASTRUCTURE. THE SUBJECT PROPERTY IS GENERALLY LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF WESTCLIFF DRIVE AND PRINCETON AVENUE. THE PROPERTY IS WITHIN THE CORPORATE LIMITS OF THE CITY OF MIDLAND (DISTRICT 3) (ENGINEERING SERVICES)

Jose Ortiz, Engineering Services Director, gave a brief overview of the item noting S.W. Howell, a survey company, is replatting some property which triggers improvements for roadways, water and sewer due to the Codes of Midland. Mr. Ortiz explained in detail what this entails for the church and is recommending denial to defer certain parts of this item.

Ademolu Ocubajo, 2509 Castle Wood Drive, Pastor of the church reported their need for

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deferring some or all of this item so they may have time to come up with funding.

John Norman moved to approve Motion No. 123-2022 with the amendment to require sewer improvements; seconded by Lori Blong.

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

32. 10351 – AN ORDINANCE ADOPTING A FEE SCHEDULE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING AN APPEAL PROCESS; ESTABLISHING AN EFFECTIVE DATE OF NOVEMBER 1, 2022; AND ORDERING PUBLICATION (DISTRICT: NONE) (FINANCE)

Utilities Director Carl Craigo gave a brief overview and history of the item noting this is adding fees for oil industry right-of-way licenses for City of Midland owned properties. Mr. Craigo reported on the two fee schedule options and what the structure of each option would entail. He added, these fees have been in practice but because there was no formal action taken to adopt them some companies try to negotiate the fees.

Lori Blong moved to approve the first of two readings of Ordinance No. 10351 with the amendment to charge 200% of University Lands rates; seconded by Jack Ladd.

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

Mayor Payton jumped back to item #19.

33. MOTION MAKING APPOINTMENTS TO VARIOUS BOARDS AND COMMISSIONS (CITY SECRETARY'S OFFICE)

Dan Corrales moved to appoint Robert Crites to the Midland-Odessa Urban Transit District Board; seconded by Robin Poole.

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

John Norman moved to reappoint Lynn Rogers to the Parks and Recreation Commission; seconded by Lori Blong.

The motion passed by the following vote:
AYE: Corrales, Poole, Blong, Payton, Dufford, Ladd, Norman

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NAY: None
ABSTAIN: None
ABSENT: None

Jack Ladd moved to appoint Sarah Judge to the Parks and Recreation Commission; seconded by Dan Corrales.

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

It was noted that Mr. Gerety had been previously removed for lack of attendance but it was later discovered that staff had an incorrect email address.

Robin Poole moved to appoint Jim Gerety to the Zoning Board of Adjustment and Airport Zoning Board of Adjustment; seconded by Lori Blong.

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

PUBLIC COMMENT

34. 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.)

Community Services Manager, Issac Garnett, thanked council for item 21, implementing housing and development.

EXECUTIVE SESSION

Mayor Payton recessed the meeting at 12:07 p.m. to go into Executive Session.

35. 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 551.072, Deliberation Regarding Real Property

a.1. Discuss the purchase, exchange, lease or value of real property.

b. Section 551.071, Consultation with Attorney

b.1. Discuss matters in which the duty of the attorney(s) to the governmental body

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under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas clearly conflicts with Chapter 551 of the Texas Government Code.

All the business at hand having been completed, the meeting adjourned at 1:00 p.m.

PASSED AND APPROVED October 25, 2022.

Patrick Payton, Mayor

ATTEST:

Amy M. Turner, City Secretary

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City Council Meeting

Item Number: 5

Meeting Date: October 25, 2022

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: RESOLUTION AUTHORIZING PURCHASE OF A JOHN DEERE UTILITY TRACTOR AND DIAMOND MOWER FROM DEERE & COMPANY THROUGH BUYBOARD FOR A TOTAL COST OF $148,362.23 (DISTRICT: NONE) (GENERAL SERVICES)

Purpose:

Resolution approving the purchase of one (1) John Deere Utility Tractor with a Diamond Mower from Deere & Company. through Buyboard contract 611-20 for a cost of $148,362.23.

Recommended City Council Action:

Approve

Fiscal Impact:

Funding is available in the FY2023 Garage Operating Fund budget.

Discussion:

The Garage Division is requesting the purchase of one (1) John Deere Utility Tractor with a Diamond Mower for the Transportation Department. Staff recommends approving the purchase to Deere & Company through Buyboard contract 611-20. 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 2023 is $144,820.00. Please see attached memos from Manuel Salinas, Garage Superintendent, and Jesse Zamora, Transportation Superintendent, for additional information.

Therefore, please consider approval of a resolution authorizing the purchase of one (1) John

Deere Utility Tractor with a Diamond Mower from Deere & Company through Buyboard contract 611-20 for a cost of $148,362.23.

Tina Jaug

City Manager's Office

Fleet Services Division

INTEROFFICE MEMORANDUM

TO: Regina Stephenson

FROM: Manuel Eloy Salinas

SUBJECT: Buy Board Contract #611-20 for John Deere Utility Tractor with a Diamond Mower

DATE: 10/05/2022

Fleet services is requesting for the purchase of (1) one John Deer Utility Tractor with a Diamond Mower. This new unit will be a replacement for an obsolete unit that we are not able to acquire any replacement parts because they are no longer available. Budgeted amount for FY2023 is $144,820 for the purchase of (1) one John Deer Utility Tractor with a Diamond mower. The purchasing amount of $148,362.23 is being offered through Buy Board contract #611-20 by South Plains Implement, Ltd for (1) one John Deer Utility Tractor with a Diamond Mower.

Sincerely,

Manuel Eloy Salinas

City of Midland Garage Superintendent

RESOLUTION NO. _____

RESOLUTION AUTHORIZING PURCHASE OF A JOHN DEERE UTILITY TRACTOR AND DIAMOND MOWER FROM DEERE & COMPANY THROUGH BUYBOARD FOR A TOTAL COST OF $148,362.23

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, Deere & Company submitted a total cost to the City of $148,362.23 for the purchase of a John Deere Utility Tractor and Diamond Mower 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 John Deere Utility Tractor and Diamond Mower to be fair and reasonable; and

WHEREAS, the City Council finds it to be in the public interest to authorize the purchase of a John Deere Utility Tractor and Diamond Mower from Deere & Company 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 John Deere Utility Tractor and Diamond Mower from Deere & Company through Buyboard for a total cost of $148,362.23.

SECTION TWO. That the City Comptroller is hereby authorized and directed to pay Deere & Company $148,362.23 for said John Deere Utility Tractor and Diamond Mower from funds available in the FY 2023 Garage Operating Fund 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., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

Req# 23000327

JOHN DEERE

Customer:

Quotes are valid for 30 days from the creation date or upon contract expiration, whichever occurs first.

A Purchase Order (PO) or Letter of Intent (LOI) including the below information is required to proceed with this sale. The PO or LOI will be returned if information is missing.

Vendor: Deere & Company
2000 John Deere Run
Cary, NC 27513

- ☐ Signature on all LOIs and POs with a signature line
- ☐ Contract name or number; or JD Quote ID
- ☐ Sold to street address (no PO box)
- ☐ Ship to street address (no PO box)
- ☐ Bill to contact name and phone number
- ☐ Bill to address
- ☐ Bill to email address (required to send the invoice and/or to obtain the tax exemption certificate
- ☐ Membership number if required by the contract

For any questions, please contact:

Joey Sanchez

South Plains Implement, Ltd.
18770 Alameda
Tornillo, TX 79853

Tel: 915-764-2263
Fax: 915-764-2956
Email: jsanchez@spitractor.com

Quotes of equipment offered through contracts between Deere & Company, its divisions and subsidiaries (collectively "Deere") and government agencies are subject to audit and access by Deere's Strategic Accounts Business Division to ensure compliance with the terms and conditions of the contracts.

JOHN DEERE

ALL PURCHASE ORDERS MUST BE MADE OUT TO (VENDOR):
Deere & Company
2000 John Deere Run
Cary, NC 27513
FED ID: 36-2382580
UEID: FNSWEDARMK53

ALL PURCHASE ORDERS MUST BE SENT TO DELIVERING DEALER:
South Plains Implement, Ltd.
18770 Alameda
Tornillo, TX 79853
915-764-2263
Admin@spitractor.com

Quote Summary

Prepared For:
City Of Midland
TX

Delivering Dealer:
South Plains Implement, Ltd.
Joey Sanchez
18770 Alameda
Tornillo, TX 79853
Phone: 915-764-2263
jsanchez@spitractor.com

Quote ID: 26337650
Created On: 26 March 2022
Last Modified On: 03 October 2022
Expiration Date: 04 November 2022

Equipment Summary	Selling Price		Qty		Extended
2022 DIAMOND MOWERS DSF075	$ 46,446.14	X	1	=	$ 46,446.14
Contract: TX BuyBoard Grounds Mtnc Equip, Irrigation 611-20 (PG 67 CG 70) **Price Effective Date:**					
JOHN DEERE 5120M Utility Tractor	$ 101,916.09	X	1	=	$ 101,916.09
Contract: TX BuyBoard Grounds Mtnc Equip, Irrigation 611-20 (PG 67 CG 70) **Price Effective Date:** October 2, 2022					
Equipment Total					**$ 148,362.23**

* Includes Fees and Non-contract items

Quote Summary	
Equipment Total	$ 148,362.23
Trade In	
SubTotal	**$ 148,362.23**
Est. Service Agreement Tax	$ 0.00
Total	$ 148,362.23
Down Payment	(0.00)
Rental Applied	(0.00)
Balance Due	**$ 148,362.23**

Salesperson : X _____ **Accepted By : X** _____

Confidential

JOHN DEERE

Selling Equipment

Quote Id: 26337650 **Customer Name:**

ALL PURCHASE ORDERS MUST BE MADE OUT TO (VENDOR):
Deere & Company
2000 John Deere Run
Cary, NC 27513
FED ID: 36-2382580
UEID: FNSWEDARMK53

ALL PURCHASE ORDERS MUST BE SENT TO DELIVERING DEALER:
South Plains Implement, Ltd.
18770 Alameda
Tornillo, TX 79853
915-764-2263
Admin@spitractor.com

2022 DIAMOND MOWERS DSF075

Hours: 0
Stock Number:
Contract: TX BuyBoard Grounds Mtnc Equip, Irrigation 611-20 (PG 67 CG 70)
Price Effective Date:

Selling Price *
$ 46,446.14

* Price per item - includes Fees and Non-contract items

Code	Description	Qty	List Price	Discount%	Discount Amount	Contract Price	Extended Contract Price
DSF075 - C	Diamond Mowers 75" Side Rotary Cutter with Combo Lift With deflectors, hydrualic cooling, and travel lock	1	$ 23,628.00	0.00	$ 0.00	$ 23,628.00	$ 23,628.00
	Dealer Attachments/Non-Contract/Open Market						
Mount	Equipment Mount	1	$ 5,018.00	0.00	$ 0.00	$ 5,018.00	$ 5,018.00
Freight	Factory Freight	1	$ 1,811.00	0.00	$ 0.00	$ 1,811.00	$ 1,811.00
Charge	Steel Surcharge	1	$ 3,271.14	0.00	$ 0.00	$ 3,271.14	$ 3,271.14
DRF102-OF	102" 3pt Offset Flail Mower	1	$ 12,718.00	0.00	$ 0.00	$ 12,718.00	$ 12,718.00
	Dealer Attachments Total		**$ 22,818.14**		**$ 0.00**	**$ 22,818.14**	**$ 22,818.14**
Total Selling Price			**$ 46,446.14**		**$ 0.00**	**$ 46,446.14**	**$ 46,446.14**

JOHN DEERE 5120M Utility Tractor

Equipment Notes:
Hours:
Stock Number:
Contract: TX BuyBoard Grounds Mtnc Equip, Irrigation 611-20 (PG 67 CG 70)
Price Effective Date: October 2, 2022

Selling Price *
$ 101,916.09

* Price per item - includes Fees and Non-contract items

Code	Description	Qty	List Price	Discount%	Discount Amount	Contract Price	Extended Contract Price
19DGPY	5120M Utility Tractor	1	$ 85,264.00	21.00	$ 17,905.44	$ 67,358.56	$ 67,358.56

Confidential

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Selling Equipment

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915-764-2263
Admin@spitractor.com

	Standard Options - Per Unit						
182A	Less AutoTrac™/Less ISOBUS	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
183A	JDLink™ Capable	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
0202	United States	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
0409	English Operators Manual	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
0500	Less Package	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
1398	Powr8™ 32F/16R 40 km/h Transmission with Creeper	1	$ 10,834.00	21.00	$ 2,275.14	$ 8,558.86	$ 8,558.86
1799	Less Loader Prep Package	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
1950	Less Application	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
2055	Standard Cab	1	$ 14,681.00	21.00	$ 3,083.01	$ 11,597.99	$ 11,597.99
2120	Air Suspension seat	1	$ 1,037.00	21.00	$ 217.77	$ 819.23	$ 819.23
2400	Less Instructional Seat	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
2500	Less Rear View Mirrors	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
3025	Corner Post Deluxe Exhaust	1	$ 737.00	21.00	$ 154.77	$ 582.23	$ 582.23
3326	3 Mechanical Stackable Rear SCV	1	$ 1,083.00	21.00	$ 227.43	$ 855.57	$ 855.57
3420	2 Stackable Mid SCVs with Mechanical Joystick control	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
3830	Three Speed PTO - 540/540E/1000	1	$ 970.00	21.00	$ 203.70	$ 766.30	$ 766.30
4000	Less Front Hitch	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
4030	Electronic Hitch Control with Remote Control on LH Fender	1	$ 581.00	21.00	$ 122.01	$ 458.99	$ 458.99
4110	Telescoping Draft Links with Ball End - Category 2	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
4155	LH and RH Adjustable Lift Links	1	$ 108.00	21.00	$ 22.68	$ 85.32	$ 85.32
4210	Mechanical Center Link with Ball Ends - Category 2	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
4310	Basic Drawbar	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
4420	LH & RH Stabilizer Bar	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
5010	Flange Axle	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
5090	Steel Rear Wheels	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
5133	460/85R30 (18.4R30) R1W Radial	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
5999	No Tire Brand Preference	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
6040	MFWD Front Axle	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
6203	320/85R24 (12.4R24) R1W Radial	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
8280	Rear Window Wiper	1	$ 347.00	21.00	$ 72.87	$ 274.13	$ 274.13

JOHN DEERE

Selling Equipment

Quote Id: 26337650 **Customer Name:**

ALL PURCHASE ORDERS MUST BE MADE OUT TO (VENDOR):
Deere & Company
2000 John Deere Run
Cary, NC 27513
FED ID: 36-2382580
UEID: FNSWEDARMK53

ALL PURCHASE ORDERS MUST BE SENT TO DELIVERING DEALER:
South Plains Implement, Ltd.
18770 Alameda
Tornillo, TX 79853
915-764-2263
Admin@spitractor.com

	Technology Options/Non-Contract/Open Market						
1900	Less Display	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
1880	Less Receiver	1	$ 0.00	21.00	$ 0.00	$ 0.00	$ 0.00
	Technology Options Total		**$ 0.00**		**$ 0.00**	**$ 0.00**	**$ 0.00**
	Dealer Attachments/Non-Contract/Open Market						
BSJ10473	MIRROR KIT, TELESCOPIC, LH & RH, MANUALLY ADJUSTED	1	$ 503.58	21.00	$ 105.75	$ 397.83	$ 397.83
RE68495	Power Strip with Six Outlets	1	$ 68.87	21.00	$ 14.46	$ 54.41	$ 54.41
DZ102076	Engine Block Heater (120V)	1	$ 172.75	21.00	$ 36.28	$ 136.47	$ 136.47
BSJ10455	Air filter diverter shield kit	1	$ 108.57	21.00	$ 22.80	$ 85.77	$ 85.77
Open Market	Radio	1	$ 920.00	0.00	$ 0.00	$ 920.00	$ 920.00
	Dealer Attachments Total		**$ 1,773.77**		**$ 179.29**	**$ 1,594.48**	**$ 1,594.48**
	Value Added Services Total		**$ 0.00**			**$ 0.00**	**$ 0.00**
	Fees						
	Customer Delivery Open Market	1	2,240.00			2,240.00	2,240.00
	Open Market installation	1	6,000.00			6,000.00	6,000.00
	Equipment Fees Total		**$ 8,240.00**			**$ 8,240.00**	**$ 8,240.00**
Total Selling Price			**$ 126,572.77**		**$ 24,656.68**	**$ 101,916.09**	**$ 101,916.09**

Confidential

INTEROFFICE MEMORANDUM

TO: **Erika Martinez**

FROM: **Jesse Zamora**

SUBJECT: **John Deere Utility Tractor with Diamond Mower Justification**

DATE: **10/14/2022**

CC:

The Transportation Division is requesting the purchase of a John Deere 5210M Utility Tractor with the Diamond mower. We are asking for these pieces of equipment for the following reasons:

1. This unit will replace an old 1986 tractor and mower combo, that has been out in the field for a long time. Parts are becoming harder to find because of the year model. The John Deere tractor and mower we have now is much worn and beyond its useful service life. Just having a replacement unit will increase our channel, basin and right of way mowing capability.

2. This John Deere tractor cab will improve visibility greatly not only for the side operations, but especially for the rear operation. It also has a mechanical hitch control operation, in which will let the operator raise and lower the rear implements with precision and accuracy so that the depth of cut in our mowing will be consistent.

3. This Diamond Mower comes with a hydraulic cooler which greatly the lowers the chance of overheating. It's made from one inch steel which helps in the durability of the housing and gives added weight to keep the mower from bouncing while mowing.

4. This Flail mower also will help in the cutting of the thicker root-based stems of the weeds and at the same time will mulch them as they are being mowed, in which will help to keep our drainage filtrations free of large weed stems that clog up drainage.

5. The updated budgetary quote came in at 148,362.23.

Req# 23000327

JOHN DEERE

Customer:

Quotes are valid for 30 days from the creation date or upon contract expiration, whichever occurs first.

A Purchase Order (PO) or Letter of Intent (LOI) including the below information is required to proceed with this sale. The PO or LOI will be returned if information is missing.

Vendor: Deere & Company
☐ 2000 John Deere Run
Cary, NC 27513

☐ Signature on all LOIs and POs with a signature line

☐ Contract name or number; or JD Quote ID

☐ Sold to street address (no PO box)

☐ Ship to street address (no PO box)

☐ Bill to contact name and phone number

☐ Bill to address

☐ Bill to email address (required to send the invoice and/or to obtain the tax exemption certificate

☐ Membership number if required by the contract

For any questions, please contact:

Joey Sanchez

South Plains Implement, Ltd.
18770 Alameda
Tornillo, TX 79853

Tel: 915-764-2263
Fax: 915-764-2956
Email: jsanchez@spitractor.com

Quotes of equipment offered through contracts between Deere & Company, its divisions and subsidiaries (collectively "Deere") and government agencies are subject to audit and access by Deere's Strategic Accounts Business Division to ensure compliance with the terms and conditions of the contracts.

JOHN DEERE

ALL PURCHASE ORDERS MUST BE MADE OUT TO (VENDOR):
Deere & Company
2000 John Deere Run
Cary, NC 27513
FED ID: 36-2382580
UEID: FNSWEDARMK53

ALL PURCHASE ORDERS MUST BE SENT TO DELIVERING DEALER:
South Plains Implement, Ltd.
18770 Alameda
Tornillo, TX 79853
915-764-2263
Admin@spitractor.com

Quote Summary

Prepared For:
City Of Midland
TX

Delivering Dealer:
South Plains Implement, Ltd.
Joey Sanchez
18770 Alameda
Tornillo, TX 79853
Phone: 915-764-2263
jsanchez@spitractor.com

Quote ID: 26337650
Created On: 26 March 2022
Last Modified On: 03 October 2022
Expiration Date: 04 November 2022

Equipment Summary	Selling Price	Qty		Extended
2022 DIAMOND MOWERS DSF075	$ 46,446.14 X	1	=	$ 46,446.14
Contract: TX BuyBoard Grounds Mtnc Equip, Irrigation 611-20 (PG 67 CG 70) **Price Effective Date:**				
JOHN DEERE 5120M Utility Tractor	$ 101,916.09 X	1	=	$ 101,916.09
Contract: TX BuyBoard Grounds Mtnc Equip, Irrigation 611-20 (PG 67 CG 70) **Price Effective Date:** October 2, 2022				
Equipment Total				**$ 148,362.23**

* Includes Fees and Non-contract items

Quote Summary	
Equipment Total	$ 148,362.23
Trade In	
SubTotal	**$ 148,362.23**
Est. Service Agreement Tax	$ 0.00
Total	$ 148,362.23
Down Payment	(0.00)
Rental Applied	(0.00)
Balance Due	**$ 148,362.23**

PACKET 5.13 October 25, 2022

Salesperson : X _____ **Accepted By : X** _____

JOHN DEERE

Selling Equipment

Quote Id: 26337650 **Customer Name:**

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2000 John Deere Run
Cary, NC 27513
FED ID: 36-2382580
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18770 Alameda
Tornillo, TX 79853
915-764-2263
Admin@spitractor.com

2022 DIAMOND MOWERS DSF075

Hours: 0
Stock Number:
Contract: TX BuyBoard Grounds Mtnc Equip, Irrigation 611-20 (PG 67 CG 70)
Price Effective Date:

Selling Price *
$ 46,446.14

* Price per item - includes Fees and Non-contract items

Code	Description	Qty	List Price	Discount%	Discount Amount	Contract Price	Extended Contract Price
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Freight	Factory Freight	1	$ 1,811.00	0.00	$ 0.00	$ 1,811.00	$ 1,811.00
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DRF102-OF	102" 3pt Offset Flail Mower	1	$ 12,718.00	0.00	$ 0.00	$ 12,718.00	$ 12,718.00
	Dealer Attachments Total		**$ 22,818.14**		**$ 0.00**	**$ 22,818.14**	**$ 22,818.14**
Total Selling Price			**$ 46,446.14**		**$ 0.00**	**$ 46,446.14**	**$ 46,446.14**

JOHN DEERE 5120M Utility Tractor

Equipment Notes:
Hours:
Stock Number:
Contract: TX BuyBoard Grounds Mtnc Equip, Irrigation 611-20 (PG 67 CG 70)
Price Effective Date: October 2, 2022

Selling Price *
$ 101,916.09

* Price per item - includes Fees and Non-contract items

Code	Description	Qty	List Price	Discount%	Discount Amount	Contract Price	Extended Contract Price
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Confidential

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JOHN DEERE

Selling Equipment

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	Dealer Attachments/Non-Contract/Open Market						
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BSJ10455	Air filter diverter shield kit	1	$ 108.57	21.00	$ 22.80	$ 85.77	$ 85.77
Open Market	Radio	1	$ 920.00	0.00	$ 0.00	$ 920.00	$ 920.00
	Dealer Attachments Total		**$ 1,773.77**		**$ 179.29**	**$ 1,594.48**	**$ 1,594.48**
	Value Added Services Total		**$ 0.00**			**$ 0.00**	**$ 0.00**
	Fees						
	Customer Delivery Open Market	1	2,240.00			2,240.00	2,240.00
	Open Market installation	1	6,000.00			6,000.00	6,000.00
	Equipment Fees Total		**$ 8,240.00**			**$ 8,240.00**	**$ 8,240.00**
Total Selling Price			**$ 126,572.77**		**$ 24,656.68**	**$ 101,916.09**	**$ 101,916.09**

Confidential

City Council Meeting

Item Number: 6

Meeting Date: October 25, 2022

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: Resolution authorizing the purchase of one (1) Global Street Sweeper from Global Environmental Products through Sourcewell contract #093021 for the cost of $334,241.00. (DISTRICT: NONE) (GENERAL SERVICES)

Purpose:

Resolution authorizing the purchase of one (1) Global Street Sweeper from Global Environmental Products through Sourcewell contract #093021 for the cost of $334,241.00.

Recommended City Council Action:

Approve

Fiscal Impact:

Funding is available in the FY2023 Garage Operating Fund budget.

Discussion:

Staff is recommending the purchase of one (1) Global Street Sweeper from Global Environmental Products through Sourcewell contract #093021 for the cost of $334,241.00. We are members of the Sourcewell formerly National Joint Powers Alliance (NJPA) 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 2023 is $329,400.00. Please see attached memos from Manuel Salinas, Garage Superintendent, and Jesse Zamora, Transportation Superintendent, for additional information.

Therefore, please consider a resolution approving the purchase of one (1) Global Street

Sweeper from Global Environmental Products of San Bernardino, California through Sourcewell contract #093021 for the cost of $334,241.00.

City Manager's Office

Fleet Services Division

INTEROFFICE MEMORANDUM

TO: Regina Stephenson

FROM: Manuel Eloy Salinas

SUBJECT: Sourcewell contract # 093021 for the purchase of a Global M4HSD Street Sweeper

DATE: 10/14/2022

Fleet services is requesting the purchase of (1) one Global Street Sweeper as a replacement for a unit that has gone beyond its serviceable life. The budgeted amount for FY 2023 is $329,400 for (1) one Global Street Sweeper. The purchasing amount being offered through Sourcewell contract # 093021 for (1) one Global Street Sweeper by Global Environmental Products is $334,241.

Sincerely,

Manuel Eloy Salinas

City of Midland Garage Superintendent

INTEROFFICE MEMORANDUM

TO: **Erika Munoz**

FROM: **Jesse Zamora**

SUBJECT: **Street Sweeper Justification**

DATE: **10/14/2022**

CC:

The Transportation Division is requesting the purchase of a Global M4HSD street sweeper. We are asking for this equipment for the following reasons:

1. This unit will replace an old Elgin eagle sweeper that is much worn and beyond its useful service life. Just having a replacement unit will increase our street sweeping capability.
2. This sweeper has a larger hopper capacity which equals more lane miles that are being swept between dump cycles. It also gives us an 18.5 foot turning radius which makes it more efficient and comfortable for the operator.
3. This model will be our first center mounted cab which gives the operator better visibility of not only the road surface, but also the surroundings such as pedestrians and traffic.
4. The updated budgetary quote came in at $334,241.00.

RESOLUTION NO. _____

RESOLUTION APPROVING THE PURCHASE OF A GLOBAL H4HSD STREET SWEEPER FROM GLOBAL ENVIRONMENTAL PRODUCTS THROUGH SOURCEWELL FOR A TOTAL COST OF $334,241.00

WHEREAS, the 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, Global Environmental Products has submitted a total proposed cost to the City of $334,241.00 for the purchase of a Global H4HSD Street Sweeper through Sourcewell, 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 Global Environmental Products for said Global H4HSD Street Sweeper to be fair and reasonable; and

WHEREAS, the City Council finds it to be in the public interest to purchase a Global H4HSD Street Sweeper from Global Environmental Products 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 Global H4HSD Street Sweeper from Global Environmental Products through Sourcewell for a total cost of $334,241.00.

SECTION TWO. That the City Comptroller is hereby authorized and directed to pay Global Environmental Products for said Global H4HSD Street Sweeper from funds available in the FY 2023 Garage Operating Fund 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., 2022, by

the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

CONTRACT # 093021 - GEP: M4HSD SWEEPER

DATE: 10/18/2022

CUSTOMER: Midland, TX
DEALER: TX Pack and Load
QUOTE NO.: 09202022 A - M4HSD

Terms: *30 Days Net*
FREIGHT: *FOB - Midland, TX*
UAO#

GLOBAL M4HSD S TANDARD EQUIPMENT

High Visibility Cab (Glass Entry Door Included)	5.2 cu yd Hopper (Volumetric)
69 dBA In-Cab Noise Level	Hopper Dump Alarm
Dust & Weather Sealed Cab	47" dia Gutter Brooms
Multi-Adjustable Suspension Seat	In-Cab Gutter Broom Pressure Adjustment
Tilt & Telescoping Steering Wheel	Tuf-Grip Disposable Gutter Broom Segments
Tinted Safety Windows & Windshield	32" x 56.5" Tube Type Pickup Broom
Left & Right Dual West Coast Mirrors	58" Wide Squeegee Type Elevator
Windshield Wiper/Washer	Cab Controlled Elevator Leafgate System
Ergonomic Go Pedal	LED Gutter Broom Spotlights
Coolant Temp, Oil Pressure & Voltmeter Gauges	Sealed Beam Headlights
Coolant, Eng Oil Pressure & Low Hyd Oil Warning Lights	Stop/Tail Lights, Clearance Lights
Speedometer, Tachometer & Hourmeter	Two 18 gal Hydraulic Oil Tanks
Fuel Level Gauge	Hydraulic Manifolds in LH Fender
280 gal Polyethylene & SS Water Tank	18.5' Turning Radius
15' Hydrant Hose with Coupling & Wrench	130 amp Heavy-Duty Alternator
Gutter Broom Water Spray Jets	All Sheet Metal Surfaces Primer Powder Coated
Pickup Broom Water Spray Jets	Sheet Metal Surfaces Powder Coated
Low Water Level Light in Cab	Fender Mounted Tool Box
Front Spray Bar	Four Wheel Disk Brakes
Buddy Seat	ABS Brake System
Front & Rear Suspension	Front & Rear Tie Downs with Tow Hooks
Electrical Systems Locker	1 Sweeper Service Manual in English
Engine Block Heater	1 Sweeper Parts Manual in English
Centauri Precleaner	1 Sweeper Operator Manual in English
Manual Safety Props	Ergo Switch Standard
PM10 High Quality PUB (Pick Up Broom)	Rear View Camera Standard

QTY	DESCRIPTION	List Price		Contract Price
1	**M4HSD Brm Sweeper**, Cummins ISB6.7-280 HP, High Side Dump, Hydrostatic Drive, Dual Gutter Broom, A/C, Standard ERGO Sweeping Controls, 2021 Emissions	**$286,636**	**$**	**272,304**

***** Powder Coated Paint - White W/ Gray Frame *****

AVAILABLE OPTIONS:

QTY	PT NO.	DESCRIPTION	List Price		Contract Price
	K323148	Elevator Flusher	$1,085	$	1,031
	K323466	Elevator Ass'y 2-pc bottom 11 squeegee	$3,243	$	3,081
	K323753	GB Speed Control	$1,294	$	1,229
	K247012	GB Tilt, Right Single	$2,484	$	2,360

Delivery: 150 days after receipt of order

SIGNATURE: ***DATE:***

Freight - FOB Midland, TX *All prices are valid for 30 days.*

Payment is strictly 30 days net. Late payment penalty 1% per month or part thereof.

Form GS-47.doc Rev: C 02/25/2013

5405 Industrial Parkway
San Bernardino, CA 92407
Tel : 1 (909) 713-1600
Fax : 1 (909) 713-1613

www.globalsweeper.com

QUOTATION: M4HSD MECHANICAL SWEEPER

DATE: 10/18/2022

CUSTOMER: Midland, TX
DEALER: TX Pack and Load
QUOTE NO.: 09202022 A M4HSD

Terms: *30 Days Net*
FREIGHT: *FOB - Midland, TX*
UAO#

AVAILABLE OPTIONS (continued):

QTY	PT NO.	DESCRIPTION	List Price		Contract Price
	M3JHE3	Triple Pump Option	$3,511	$	3,335
	K325256	AM/FM Radio w/ CD	$535	$	508
	K901325	Aux Power Plug Adaptor Port	$325	$	309
	K318806	Seat, High Back, Air	$1,101	$	1,046
	K247172	Heated & Remote Controlled Mirrors with Heavy Duty Brack	$1,785	$	1,696
	K324458	L.E.D. Stop/Tail/Clearance/Marker Lights	$892	$	848
	K325221	Arrowstick (LED)	$1,785	$	1,696
	K325514	Limb Guard (Cab Beacon/Strobe)	$283	$	269
	NPN	Auxiliary Hopper Raise Option	$2,048	$	1,945
	326844	Cab Strobe (LED)	$533	$	506
	247632	Rear Flashing (LED) Strobes (mounted in hyd. Towers)(Qty.	$533	$	506
	329822	Remote Grease Block - 9 positions	$1,638	$	1,556
	322079	In-Cab Water Tank Gauge	$478	$	454
	NPN	Materials Surcharge - 12%		$	35,362
		Freight		$	4,200

TOTAL **$ 334,241**

Delivery: 150 days after receipt of order

SIGNATURE: ***DATE:***

Freight - FOB Baytown, TX *All prices are valid for 30 days.*

Payment is strictly 30 days net. Late payment penalty 1% per month or part thereof.

Form GS-47.doc Rev: C 02/25/2013

5405 Industrial Parkway
San Bernardino, CA 92407
Tel : 1 (909) 713-1600
Fax : 1 (909) 713-1613

www.globalsweeper.com

City Council Meeting

Item Number: 7

Meeting Date: October 25, 2022

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: RESOLUTION AUTHORIZING THE SOLE-SOURCE PURCHASE OF A LENCO BEARCAT ARMORED RESPONSE VEHICLE FROM LENCO INDUSTRIES, INC., FOR A TOTAL COST OF $378,675.00 (DISTRICT: ALL) (GENERAL SERVICES)

Purpose:

Resolution authorizing the sole source purchase of a Lenco Bearcat armored response vehicle from Lenco Industries, Inc. for a total cost of $378,675.00.

Recommended City Council Action:

Approve

Fiscal Impact:

Funding is available in the FY2023 General Operating Fund budget.

Discussion:

Staff recommends authorizing the sole source purchase of a Lenco Bearcat armored response vehicle for the Police Department. 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 memos from Manuel Salinas, Garage Superintendent, and Seth Herman, Police Chief, for additional information.

Therefore, please consider approval of a resolution authorizing the sole source purchase of a Lenco Bearcat armored response vehicle from Lenco Industries, Inc. of Pittsfield, Massachusetts for a total cost of $378,675.00.

Tina Jaug

City Manager's Office

Fleet Services Division

INTEROFFICE MEMORANDUM

TO: Regina Stephenson

FROM: Manuel Eloy Salinas

SUBJECT: Sole Source Lenco Armored Vehicles

DATE: 09/29/2022

Fleet services is requesting the purchase of (1) one Lenco Bearcat armored response vehicle. This vehicle will be an addition to the Midland Police Department Tactical Unit / Special Weapons and Tactics Team. The budgeted amount for FY 2023 for (1) one Lenco Bearcat armored response vehicle is $400,000. The purchasing amount for (1) one Lenco Bearcat armored response vehicle being offered through Sole Source armor vehicle manufactured by Lenco Armored Vehicles for $378,675.

Sincerely,

Manuel Eloy Salinas

City of Midland Garage Superintendent

RESOLUTION NO. _____

RESOLUTION AUTHORIZING THE SOLE-SOURCE PURCHASE OF A LENCO BEARCAT ARMORED RESPONSE VEHICLE FROM LENCO INDUSTRIES, INC., FOR A TOTAL COST OF $378,675.00

WHEREAS, the City of Midland Police Department is in need of a Lenco BearCat armored response vehicle, which is only available for purchase through a sole-source provider; and

WHEREAS, the sole-source provider of said armored response vehicle, Lenco Industries, Inc., submitted a total quote of $378,675.00 as shown on the document attached hereto as Exhibit A, which is incorporated herein for all purposes; and

WHEREAS, said armored response vehicle is available only from Lenco Industries, Inc.; and

WHEREAS, the City Council finds the price proposed for said armored response vehicle to be fair and reasonable; and

WHEREAS, the City Council finds it to be in the public interest to authorize the purchase of a Lenco BearCat armored response vehicle from Lenco Industries, Inc.;

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 Lenco BearCat armored response vehicle from Lenco Industries, Inc., for a total cost of $378,675.00.

SECTION TWO. That the City Comptroller is hereby authorized and directed to pay Lenco Industries, Inc., $378,675.00 from funds available in the FY 2023 General Operating Fund 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., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

LENCO ARMORED VEHICLES
Protecting Our Nation's Defenders™

10 Betnr Industrial Drive – Pittsfield, MA 01201
PH (413) 443-7359 – FAX (413) 445-7865

Exhibit A

Quotation: 22025C
Customer Code: MILTX
Quotation Date: 10/18/2022
Lenco Tax ID#: 04-2719777
Repeat Customer: Yes ☐ No ☑

Bill To
City of Midland
Accounts Payable
PO Box 1152
Midland, TX 79502

Ship To
Midland Police Department
601 N. Loraine St.
Midland, TX 79701

Payment Terms	Shipping Terms	Ship Via
Net 30 Days	FOB: Destination	Common Carrier
Estimated Completion	**Inhouse Contact**	**Inspection & Acceptance**
12+ Months ARO (Est.)	Jim Massery	At Lenco's Facility in Pittsfield, MA

Item:	Product #	Qty	Unit Price	Extension
Lenco BearCat	BC55003	1	**$ 200,704.00**	**$ 200,704.00**
Paint Color: Lusterless Desert Tan	100559			
LED Lights: Red & Blue				
Options:				
Diesel Engine, 6.7L Turbo	BCDLEN	1	$ 8,859.00	$ 8,859.00
Police Cupola w/ Glass & Barn Doors	BCPCUPOLA	1	$ 26,321.00	$ 26,321.00
Hydraulic Front Mounted Receiver with Ram Post and Plate	BCHYDRAM	1	$ 12,479.00	$ 12,479.00
Electric Power Mirrors	BCMIR	1	$ 1,508.00	$ 1,508.00
Back up Camera System with Monitor	BCBU	1	$ 2,297.00	$ 2,297.00
Intercom System; Inside to Outside	BCINT	1	$ 2,871.00	$ 2,871.00
Rear A/C - Heating System: High Capacity Upgrade	BCHACUP	1	$ 7,182.00	$ 7,182.00
Radio Prep Package, (1) Max (2)	BCINSRA	1	$ 502.00	$ 502.00
Roof Mounted Remote Control Spot Light - LED	BCSLLED	3	$ 1,404.00	$ 4,212.00
High Intensity Driving Lights in Front Bumper	BCHIDL	1	$ 1,340.00	$ 1,340.00
(1) 7" Vertical GunPort Upgrade	BCGP7	8	$ 152.00	$ 1,216.00
4-Door Configuration	BC4DR	1	$ 7,858.00	$ 7,858.00
22.5" Tire and Wheel Upgrade	BCTWU	1	$ 8,800.00	$ 8,800.00
Ballistic Skip Round Shield	BCBSRS	2	$ 1,936.00	$ 3,872.00
Color & Thermal Camera w/Controller, Front and Rear Monitors	BCTI	1	$ 31,585.00	$ 31,585.00
Exterior Equipment Storage Compartment	BCSCOMP	1	$ 3,020.00	$ 3,020.00
Break and Rake	BCBAR	1	$ 1,200.00	$ 1,200.00
Protective Window Screens - Automatic	BCPWSA	1	$ 8,981.00	$ 8,981.00
LRAD Wiring Prep (for internal controls)	BCLWP	1	$ 4,520.00	$ 4,520.00
LRAD T-Lock Mount	BCLTM	1	$ 1,628.00	$ 1,628.00
LRAD 450XL	19-249	1	$ 28,420.00	$ 28,420.00
BearCat (Configuration Subtotal)		**1**	**$ 369,375.00**	**$ 369,375.00**

Notes:		
	Subtotal	**$ 369,375.00**
	Shipping	$ 9,300.00
	Tax	$ -
	Total Order	**$ 378,675.00**

WARNING: Information Subject to Export Control Laws
The written approval of the Directorate of US Defense Trade Controls and Lenco Industries, Inc. must be obtained before reselling, transferring, transshipping or disposing of a defense article to any end user, end use or destination other than as stated on this Lenco quote or the shipper's export declaration in cases where an exemption is claimed under this subchapter ITAR 123.9(A).

ACCEPTANCE OF PROPOSAL –

Authorized Signature: _____

Authorized Signature: *Jim Massery*
Jim Massery

Please Sign and Return

Thank You

City of Midland

Midland Police Department

Interoffice Memorandum

Date: **September 22, 2022**

To: **Fleet Services Management Team**

From: **Seth Herman/0699**

Subject: **Acquisition Support Letter – LENCO Bearcat**

The purpose of this correspondence is to express my support for the purchase of LENCO Bearcat armored response vehicle to be assigned and deployed by specially trained members of the Midland Police Department Tactical Unit / Special Weapons and Tactics Team.

The Midland Police Department Tactical Unit and the Midland Fire Department Hazmat Response Unit, as is the nature of their being, are tasked with numerous responsibilities that include responses to emergency incidents within the City and County of Midland, as well as throughout the West Texas region. By virtue of our proximity to smaller / less prepared jurisdictions, the collective training and experience of our personnel coupled with our existing capabilities, these Units will continue to be called upon for response whenever and wherever incidents requiring such specialties occur.

The Permian Basin currently faces unprecedented threats of violence from Mexican drug cartels, outlaw motorcycle gangs and their various operational components engaged in the trafficking of fentanyl, weapons and humans. Added to these concerns are the ever-present and increasingly prevalent events centering on armed suspect encounters and domestic violence-turned hostage takings. Such responses require the abilities provided through selection, specialized training and equipment possessed by those units previously identified.

Currently, our City's Special Response Units possess the knowledge, training and experience to handle major incidents. The only area requiring upgrade to insure the safest, most effective deployments possible centers on the assignment of a vehicle capable of delivering necessary personnel into hostile, hazardous environments for the preservation of life. It is for this reason that our agencies have researched and identified "Lenco" as the most suitable manufacturer of such conveyance. Having provided Special Response / Rescue Vehicles for federal, state and municipal agencies throughout the United States, "Lenco's" reputation exceeds that of other manufacturer's products currently in use today.

The specific vehicle that has been determined to be most suitable for our needs is the "Lenco" Bearcat. The vehicle is based on the Ford F-550, available with either a V10 gasoline or diesel engine. For the purposes of this proposal, we have requested the option of a diesel engine – allowing for more efficient gas mileage and engine wear.

As established by the manufacturer, the Bearcat maintains a twenty to twenty-five year useful life expectancy that would likely extend far beyond with proper care and maintenance. The vehicle's power and design are such that it can effectively respond to virtually any location regardless of distance, terrain, weather or climate. The engine and crew compartment grants ballistic and bomb protection, ***as is permitted in section 10 of the State Homeland Security Program and Section 7 of the Law Enforcement Terrorist Prevention Program.***

Other necessary features include pneumatic run-flat tires with built-in polymer tires affixed to the rims to enable the vehicle's continued response despite puncture. All windows on the vehicle are glass-clad polycarbonate - maintaining explosion and projectile resistant capabilities. The Bearcat is of an open box design, with room in the cargo compartment for 10-fully equipped Tactical / EOD / HazMat response personnel, not including the driver and front passenger. There is a roof mounted rescue hatch with an emergency portal, accessible from inside the cargo compartment that provides projectile protection and is railed to accommodate elevated deployments. A 3600-watt power inverter stationed inside of the cargo compartment facilitates the use of laptop computers, battery chargers, or any other applicable electrical device required for incident resolution. The cargo area provides sufficient storage space, independent of the personnel spaces, for equipment necessary during CBRNE/WMD response and rescue. Both vehicles are optioned with an Explosive Gas Detection System and Radiation Detection Package, as well as Thermal Imaging – providing enhanced response capabilities for police and fire personnel tasked with such operations. For the many other technical specifications of this vehicle, reference should be made to the attached product/equipment list provided by "Lenco".

The estimated cost of this hardened vehicle with necessary amenities is $378,675.

LENCO ARMORED VEHICLES
Protecting Our Nation's Defenders™

10 Betnr Industrial Drive – Pittsfield, MA 01201
PH (413) 443-7359 – FAX (413) 445-7865

Quotation: 22025C

Customer Code: MILTX
Quotation Date: 10/18/2022
Lenco Tax ID#: 04-2719777
Repeat Customer: Yes ☐ No ☑

Bill To
City of Midland
Accounts Payable
PO Box 1152
Midland, TX 79502

Ship To
Midland Police Department
601 N. Loraine St.
Midland, TX 79701

Payment Terms	Shipping Terms	Ship Via
Net 30 Days	FOB: Destination	Common Carrier
Estimated Completion	**Inhouse Contact**	**Inspection & Acceptance**
12+ Months ARO (Est.)	Jim Massery	At Lenco's Facility in Pittsfield, MA

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BearCat (Configuration Subtotal)		**1**	**$ 369,375.00**	**$ 369,375.00**

Notes:

Subtotal	**$ 369,375.00**
Shipping	$ 9,300.00
Tax	$ -
Total Order	**$ 378,675.00**

WARNING: Information Subject to Export Control Laws
The written approval of the Directorate of US Defense Trade Controls and Lenco Industries, Inc. must be obtained before reselling, transferring, transshipping or disposing of a defense article to any end user, end use or destination other than as stated on this Lenco quote or the shipper's export declaration in cases where an exemption is claimed under this subchapter ITAR 123.9(A).

ACCEPTANCE OF PROPOSAL –

Authorized Signature: _____

Authorized Signature: *Jim Massery*
Jim Massery

Please Sign and Return

Thank You

LENCO ARMORED VEHICLES
Protecting Our Nation's Defenders™

SOLE SOURCE SPECIFICATIONS

Lenco Industries, Inc.
10 Betnr Industrial Drive
Pittsfield, MA, 01201
E-mail: Contracting@LencoArmor.com
Phone: 413-443-7359

DATE: September 6, 2022

RE: Sole Source Specifications for the Lenco BearCat

Lenco BearCat Key Features, Testing and Certifications

Armor Protection

- Armor Panels constructed of Certified Mil-Spec Steel
- Vertical Armor Panels are .50 inch thick, one-piece solid construction from the front of the vehicle to the rear of the vehicle
- Gunports and all surrounding armor protection, including backup armor, is .50 inch thick.
- Proprietary welding technique utilized in sidewall, floor and roof construction
- Armored hood, radiator protection, fuel tank, exterior lighting armor backup, inner fender armor, door and window pocket armor backup
- Department of the Army, U.S. Army Aberdeen Test Center – Ballistic Certification for armor plate used in **every** BearCat manufactured
- Independent Third-Party Testing to the following threats / ballistic standards: EN 1063 BR7, NIJ IV, STANAG 4569 Level 2, .50 CAL M2 Multi-Hit, .50 CAL M33 Multi-Hit, DM51x2 Hand Grenades, DM31 Anti-Personnel Mine, M67x2 Hand Grenades, 20mm FSP, V50 (BL) P Ballistic Test

Mobility & Automotive Safety

- 126" – 131.5" Wheelbase
- Custom-tuned suspension, including shocks, springs, bump stops, front and rear sway bars, track bar and radius arms
- Proprietary OEM Frame-to-Body construction
- Department of the Army, U.S. Army Aberdeen Test Center, Aberdeen Proving Grounds – Automotive Performance Testing to the following standards:
    - Test Operating Procedures (TOP)
    - North Atlantic Treating Organization (NATO) Reference Mobility Model (NRMM)

- NATO Allied Vehicle Testing Publication (AVTP)
- Society of Automotive Engineers (SAE)

- Human Factors Integration - Safety Assessment Review (SAR)
  - Fort Knox, KY
  - Fort Belvoir, VA

- National Highway Transportation Safety Administration (NHTSA), Office of Vehicle Safety Compliance (OVSC), Federal Motor Vehicle Safety Standards (FMVSS) Compliance Testing
  - Center of Gravity Test
  - FMVSS 105 – Hydraulic Brake Test
  - FMVSS 206 – Door Locks and Door Retention Test
  - FMVSS 207 – Seating Systems
  - FMVSS 210 – Seat Belt Anchorages
  - FMVSS 302 – Flammability of Interior Components

- National Tactical Officers Association (NTOA), Member Tested and Recommended Certification
  - 2003 Certification
  - 2020 Re-Certification

- U.S. Air Force Air Transportability Test Loading Activity (ATTLA) – Air Transportation Certification
  - Lockheed C-5 Galaxy
  - Boeing C-17 Globemaster III
  - Lockheed C-130 Hercules

Tactical Features

- Patented, zero gravity counter balanced & rotating roof hatch system
- Height-adjustable gunner stand with removable / serviceable design
- Automatic Door Lock-Out (side doors) with single tap release
- Welded Running Boards rated to hold 3,000 lbs. at each side & 2,500 lbs. on rear
- Occupant situational awareness
- 390 square feet of interior space
- 2-Piece Bumper-integrated hydraulic entry bars with attachments for Audio / Video, Chemical Deployment, and Water Deployment
- Roof Mounted Water Nozzle with internal joystick controls
- Bumper Mounted Water Nozzle with internal joystick controls
- Vehicle-Integrated On-Board SCBA System
- Tactical EMS interior layout, workstation, medical cabinet, oxygen storage and trauma lighting
- 68 Gallon Single Fuel Cell
- 40” Water Fording Package with Independent 3rd Party Testing

Service, Reliability & Interoperability

- Commercial Chassis common to government fleet

- Commercial Chassis Warranty and Service history at nearly 130 Authorized Ford Service Centers across the United States

- Ford OEM Warranty
- 3 Year Lenco Warranty
- Operational and Support Cost: Average cost of $558 USD per 10,000 miles of operation
- Reliability, Availability and Maintainability (RAM): 24,906 mean miles between repair, 1.3 hours mean time to repair and 98% operational readiness
- Interoperability with hundreds of federal, state and local law enforcement agencies across the United States; reduces training cost and limits response time in joint operations
- Lenco Refurbishment Program – (4) individual 'Schedules' of refurbishment work that address Ford chassis components, Lenco components, paint and upgrades.
- Lenco Trade-In Program – End-of-Life vehicles can be traded-in to Lenco for value against the acquisition of a new or used model vehicle.

Protecting Our Nation's Defenders™

SOLE SOURCE LETTER

Lenco Industries, Inc.
10 Betnr Industrial Drive
Pittsfield, MA, 01201
E-mail: Contracting@LencoArmor.com
Phone: 413-443-7359

DATE: August 29, 2022

RE: Sole Source Letter for the Lenco BearCat

To Whom It May Concern:

This letter confirms that Lenco Industries Inc. (d/b/a Lenco Armored Vehicles), as designer and manufacturer, is the **Sole Source** provider of the following products in the United States and internationally:

- **Lenco BEAR®**
- **Lenco BearCat®**
- **Lenco BombCat®**
- **Lenco MedCat™**
- **Lenco FireCat™**

Additionally, these Lenco products, their specifications, manufacturing techniques and marketing materials are proprietary and are protected by copyrights, trademarks, service marks, patents-pending, nondisclosure agreements, noncompete agreements and exclusive supply agreements; in whole or in part.

There are no other items or products available that offer identical functionality or performance characteristics, and Lenco determines the prices for the above-named products to be fair and reasonable because of pre-competed federal and state supply schedules controlled by exclusive distribution.

Federal Acquisition Regulation (FAR) Part 6.302-1 – "Only one responsible source and no other supplies or services will satisfy agency requirements" is the statutory authority permitting this Sole Source government procurement.

Further, the Code of Federal Regulations (CFR) Title 2, Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards establishes government-wide requirements for federal grants and cooperative agreements. Under the Uniform Guidance, a non-Federal entity that receives a federal award must "provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States." *See* 2 C.F.R. § 200.322. If the non-Federal entity fails to do so, the federal awarding agency or pass-through entity may sanction a non-compliant recipient of funds.

In summary, Lenco Armored Vehicles, based in the United States, is the only manufacturer or authorized dealer of the Lenco BearCat, its variants or its equivalent.

City Council Meeting

Item Number: 8

Meeting Date: October 25, 2022

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: MOTION APPROVING PLANS AND SPECIFICATIONS FOR THE MICHIGAN AVENUE UTILITY IMPROVEMENTS 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: ALL) (GENERAL SERVICES)

Purpose:

Motion authorizing the City Manager or the City Manager's designee to advertise a request for bids for the Michigan Avenue Utility Improvements Project.

Recommended City Council Action:

Approve

Fiscal Impact:

Funding is not required at this time.

Discussion:

Staff recommends issuing a request for bids for the Michigan Avenue Utility Improvements Project which includes to construct and/or modify water infrastructure between 'A' Street and Weatherford Street along Michigan Avenue. Please see the attached memo from Joshua Ferguson, Assistant City Engineer, for additional information.

Tina Dawg

City Manager's Office

INTEROFFICE MEMORANDUM

TO: Erika Martinez; City of Midland, Purchasing Manager

FROM: Josh Ferguson, P.E.; City of Midland, Assistant City Engineer

SUBJECT: Consider a resolution authorizing the City Manager to approve the plans and specifications and advertise for bids for the Michigan Avenue Utility Improvements project; said project to construct or modify water infrastructure between 'A' Street and Weatherford Street along Michigan Avenue.

DATE: 10/11/2022 **COUNCIL MEETING DATE:** 10/25/2022

Please carry a resolution to council to obtain approval to advertise a project for bid. The Michigan Avenue Utility Improvements project will construct or water infrastructure between 'A' Street and Weatherford Street along Michigan Avenue.

The project is necessary to replace existing water infrastructure that is currently in a state of failure.

Funding will be determined prior to awarding the project. Let me know if you have any questions.

cc: Jose Ortiz, P.E.
Regina Stephenson

SPECIFICATIONS

Project Name: Michigan Avenue Utility Improvements
Project Number: PU21-02

MAYOR

Patrick Payton

COUNCIL MEMBERS

District 1	Scott Dufford	District 3	Jack Ladd
District 2	John Norman	District 4	Lori Blong
At-Large	Dan Corrales	At Large	Robin Poole

ASSISTANT CITY ENGINEER

Joshua C. Ferguson, P.E.



NOTICE TO BIDDERS

ATTENTION: All bidders who choose to mail bid packets must address them to one of the addresses below:

USPS Mailing Address:		***Physical Address for mail carriers other than USPS:***
City of Midland, Texas		**City of Midland, Texas**
Attn: City Secretary's Office	**OR**	**Attn: City Secretary's Office**
P O Box 1152		**300 North Loraine St, Suite 330**
Midland, TX 79702		**Midland, TX 79701**

If bid packets are delivered in person then bidders must drop the bid packets off at the first-floor front desk of City Hall before the bid opening deadline.

Sealed proposals, addressed to the Mayor and City Council of the City of Midland, Texas, for the furnishing of materials and labor together with other miscellaneous and appurtenant work will be received at the office of the City Secretary, City Hall, Midland, Texas, until 2:00 p.m. on the 16th day of November, 2022, and publicly opened and read aloud at that time.

Delivery of Submittals

Bid packets must be received in the City Secretary's Office no later than November 16, 2022 at 2:00 p.m. Bidders are responsible for the means of timely delivering the bid packet. Delays due to any instrumentality used to transmit the bid packet (e.g., delay occasioned by a bidder, City's internal mailing system, etc.) are the sole responsibility of the bidder. **Late bid packets will not be accepted under any circumstances.**

ATTENTION: The public bid opening will be in the City Council Meeting Chambers.

The Proposed Work provides for the furnishing of materials and labor for Michigan Avenue Utility Improvements together with other miscellaneous and appurtenant work.

ATTENTION: A NON-MANDATORY PRE-BID MEETING will be held at 3:00 p.m. on Wednesday, November 9th, 2022 in the basement conference room of City Hall, 300 N. Loraine Street, Midland, Texas. Bidders may attend the meeting either in person.

ATTENTION: All questions submitted before or after the Non-Mandatory Pre-Bid Meeting must be submitted via email to the following email address:

jferguson@midlandtexas.gov

The deadline for submitting additional questions after the Non-Mandatory Pre-Bid Meeting is Noon on Friday, November 11, 2022. Questions submitted before the Noon deadline will be included in the Addendum that will go out that same day along with all discussion items, questions, answers, and any new information resulting from the Non-Mandatory Pre-Bid Meeting. Questions submitted after the Noon deadline will not receive any additional information and will instead only be directed to the information already provided.

Bids will be received on a unit price basis.

No Bid may be withdrawn within a period of 60 days after the date fixed for opening Bids.

“FAX” or telephone bids or modifications will not be accepted.

Bid Envelopes shall be plainly marked "Proposal for City of Midland”.

ATTENTION: Information for bidders, proposal forms, specifications, and plans may be obtained by emailing purchasing@midlandtexas.gov.

A bid bond or proposal guaranty is to accompany the bid, thereby guaranteeing the good faith of the bidder and that the bidder will enter into the written contract. The guaranty is to amount to five percent (5%) of the total bid and must be in the form of cash or certified check, issued by a bank satisfactory to the City of Midland, or bid bond. If in the form of cash or certified check, it is expressly understood and agreed that the City of Midland is given the right to retain such as liquidated damages if such bidder withdraws its bid anytime after such bid is opened and before official rejection of such bid, or if successful in securing the awarded thereof, such bidder fails to enter into the contract and furnish satisfactory performance and payment bonds. If a bid bond is submitted, it shall be executed on forms contained in these contract documents by a corporate surety authorized to do business in the State of Texas and acceptable to the City of Midland.

WAIVER OF ATTORNEY FEES

BY SUBMITTING A BID, BIDDER AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST THE OWNER, REGARDING THE AWARD OF ATTORNEY’S FEES, WHICH ARE IN ANY WAY RELATED TO THE CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE CONTRACT. THE BIDDER SPECIFICALLY AGREES THAT IF THE BIDDER 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, THE BIDDER AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY’S FEES TO WHICH BIDDER MIGHT OTHERWISE BE ENTITLED.

BIDDER AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. THE BIDDER ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THE CONTRACT. THE BIDDER FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN THE OWNER AND THE BIDDER. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF SOVEREIGN IMMUNITY.

THE BIDDER AND OWNER ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION.

WAIVER

BIDDER’S WAIVER:

BY SUBMITTING A BID, THE BIDDER AGREES TO WAIVE AND DOES HEREBY VOLUNTARILY AND INTENTIONALLY WAIVE, ABANDON AND RELINQUISH ANY CLAIM THE BIDDER HAS OR MAY HAVE IN THE FUTURE AGAINST THE CITY OF MIDLAND, TEXAS, AND THE CITY’S EMPLOYEES, AGENTS AND OFFICERS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE FOLLOWING:

1. **THE ADMINISTRATION, EVALUATION OR RECOMMENDATION OF ANY BID;**

2. **WAIVER OR DELETION OF ANY OF THE REQUIREMENTS UNDER THE BID DOCUMENTS OR THE CONTRACT DOCUMENTS;**

3. **ACCEPTANCE OR REJECTION OF ANY BIDS; OR**

4. **AWARD OF THE CONTRACT**

BY SUBMITTING A BID, THE BIDDER ACKNOWLEDGES THAT THE BIDDER UNDERSTANDS ALL OF THE TERMS OF THE BIDDING DOCUMENTS AND CONSENTS TO THE BIDDING PROCESS AND THE POSSIBILITY OF A NEGATIVE ASSESSMENT. BY SUBMITTING A BID, THE BIDDER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN THE BIDDER AND THE CITY OF MIDLAND, TEXAS. THE BIDDER AGREES THAT THIS IS THE INTENTIONAL RELINQUISHMENT OF A PRESENTLY EXISTING KNOWN RIGHT. BY SIGNING THE REQUEST FOR BID AND/OR BELOW, YOUR COMPANY AGREES TO THE ABOVE WAIVER(S).

City of Midland

Amy Turner
City Secretary

Form Revised October 2022

INSTRUCTION AND INFORMATION FOR BIDDERS

1. LOCATION AND EXTENT OF WORK

The work and construction contemplated to be accomplished under this Contract is located in the City of Midland, Texas, and consists of municipal public works projects as set forth in the proposal.

The location and details for the construction and related work are shown upon a set of drawings dated September 9, 2022 and approved on October 6, 2022, and numbered from C100 (1) through C305 (23) inclusive. These drawings and plans, together with the specifications, form a part of the Contract. Where figures are shown on the drawings, they shall take precedence over scaled distances and dimensions.

2. TIME AND PLACE OF RECEIVING BIDS

All bids shall be sealed, addressed to the Mayor and City Council of the City of Midland, Texas, and will be received by the City Secretary in her office at City Hall, 300 N. Loraine Street, Midland, Texas, mailing address is P.O. Box 1152, Midland, Texas 79702, until time stated on the Advertisement for Bids.

3. PREPARATION OF BID FORM

Bids shall be submitted only on the forms provided therefore in the Contract Documents, and must not be submitted in letter form or in any other form. They shall be filled out in ink in both script and figures. The Proposal form provided in the Contract Documents sets forth in detail the various items and approximate quantities thereof contained in the Project. Bids submitted in any other form will be considered irregular and will be returned to the Bidder without receiving consideration by the Owner.

All bids must be submitted in sealed envelopes bearing on the outside the name of the Bidder, his address, and the name of the Project for which the bid is submitted. It is the sole responsibility of the Bidder to see that his bid is received in proper time. Any bid received after the scheduled closing time for receipt of bids will be returned to the Bidder unopened.

The bid must be signed in the name of the Bidder and must bear the signature in longhand of the persons duly authorized to sign the bid.

Changes in or additions to the bid form, recapitulations of the work bid upon, alternative proposals, or any other modification of the bid form which is not specifically called for in the Contract Documents may result in the Owner's rejection of the bid as not being responsive to the invitation. No oral or telephonic modification of any bid submitted will be considered and a telegraphic modification may be considered only if the postmark evidences that a confirmation of the telegram duly signed by the Bidder was placed in the mail prior to the opening of bids.

The bid submitted must not contain any erasures, interlineations or other corrections unless each such correction is suitably authenticated by affixing in the margin immediately opposite the correction the surnames of the person or persons signing the bid.

4. EXAMINATION OF SITE, DRAWINGS, ETC

Each Bidder is requested to visit the site of the proposed work and fully acquaint himself with the conditions relating to the construction and labor so that he may fully understand the facilities, difficulties and restrictions attending the execution of the work under the Contract. Bidders shall thoroughly examine and be familiar with the Plans and the Specifications. The failure or omission of any Bidder to receive or examine any form, instrument, addendum or other document or to visit the site and acquaint himself with conditions there existing shall in no way relieve any Bidder from obligations with respect to his bid or to the Contract. The submission of a bid shall be taken as prima-facie evidence of compliance with this section.

5. WITHDRAWAL OF BIDS

Any Bidder may withdraw his bid, either personally, by written request, or by telegraphic request confirmed in the manner specified above, at any time prior to the scheduled closing time for receipt of bids.

6. AGREEMENT AND BONDS

The successful Bidder will be required to furnish a Performance Bond, and a Payment Bond, 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, and 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.

7. INTERPRETATION OF PLANS AND DOCUMENTS

If any person contemplating submitting a bid for the proposed Contract is in doubt as to the true meaning of any part of the Plans, Specifications, or other Contract Documents or finds discrepancies in, or omissions from the Plans or Specifications, he may submit to the Owner written request for an interpretation or correction thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation or correction of the Contract Documents will be made only by Addendum duly issued and a copy of such addendum will be mailed or delivered to each person receiving a set of such Contract Documents. The Owner will not be responsible for any other explanations or interpretations of the Contract Documents. No oral interpretations of any provision in the Contract Documents will be made to any Bidder.

8. BIDDERS INTERESTED IN MORE THAN ONE BID

No person, firm or corporation shall be allowed to make, or file more than one bid for the same work unless alternate bids are specifically called for. A person, firm or corporation that has submitted a sub-proposal to a Bidder, or that has quoted prices of materials to a Bidder is not thereby disqualified from submitting a sub-proposal or quoting prices to other Bidders or making a prime proposal.

9. AWARD OF CONTRACT

The Owner reserves the right to reject any or all bids submitted and not make an award. The Owner also reserves the privilege of accepting any item as a separate contract or the combination of items of a contract. The Owner and Bidder agree that, if the Contract is awarded, that it will be awarded to either the lowest responsible bidder/proposer, or to the bidder/proposer 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. Further, the Owner reserves all rights granted by Section 271.027 of the Texas Local Government Code. The Owner reserves the right to award the bid to the lowest responsible bidder.

10. OPENING OF BIDS

Bidders are invited to be present at the opening of the Proposals. All Proposals shall be made and received with the understanding that the Bidder accepts the terms and conditions contained in the Contract Documents.

11. COMPARISON OF BIDS

All bids will be compared on the basis of the Proposal.

12. BID GUARANTY

A Certified Check, Bank Money Order, issued by a bank satisfactory to the Owner, or a Bidder's Bond on the form provided and approved by the City Attorney, in the amount of five percent (5%) of the largest possible lump sum bid submitted, payable without recourse to the Owner, must accompany the Bidder's Proposal, as a guaranty that the Bidder will enter into a Contract and execute the required Performance 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 Proposals shall remain in effect for a period of thirty (30) days after date of bid opening.

13. CONTRACT DOCUMENTS

The complete Contract Documents may include the following: (1) Notice to Bidders, (2) Instructions and Information for Bidders, (3) Proposal, (4) Experience Record, (5) Bid Bond, (6) Contract Agreement, (7) Performance Bond, (8) Payment Bond, (9) Insurance Certificate, (10) General Conditions, (11) Special Conditions, (12) Detailed Specifications all of which are bound together, and/or (13) Certificate of Payment. The Contract Documents shall also include Drawings or Detailed Plans for the proposed work. A complete set of the Contract Documents and the detailed plans are on file in the Office of the City Secretary.

14. TIME ELEMENT

The work to be done under this Contract shall be commenced within fifteen (15) days from the date of the notice from the City to the Contractor to commence work. The Contractor shall commence performance of the Contract on the date stated in the City's notice to the Contractor to proceed and shall complete the performance of the Contract without delay.

15. PAYMENTS

Payments to the Contractor will be based upon the prices stated in the proposal and upon basis of the work performed as determined by the Engineer. The Engineer's determination shall be considered as final unless changes are authorized by the City in writing which shall affect the work. Upon issuance of the Certificate of Completion, the Engineer shall proceed to take final measurements and prepare a final statement of the value of all work performed and materials furnished under the terms of the agreement and shall certify same to the Owner who shall pay to the Contractor on or after the 30th day, and before the 35th day, after the date of the

Certificate of Completion, the balance due the Contractor under the terms of this agreement, provided he has fully performed his contractual obligations under the terms of this Contract, and said payment shall become due in any event upon said performance by the Contractor. Notwithstanding any provision of these Contract documents to the contrary, it is expressly understood and agreed by the parties hereto that neither the Certificate of Acceptance, nor the final or any other payment hereunder, nor any partial or total occupancy or possession of the project by the Owner, shall relieve the Contractor of his responsibility for completion of the entire project in a good workmanlike manner and in full compliance with the plans and specifications and the fulfillment of any warranties which may be required in the Contract documents.

Revised October 2022

NOTICE TO BIDDERS

IF THIS PURCHASE REQUIRES A CONTRACT, THE ATTACHED **CONTRACT AND INSURANCE REQUIREMENTS ARE NON-NEGOTIABLE**. MODIFICATIONS BY BIDDER/CONTRACTOR OF ANY MATERIAL TERM(S) TO THE CONTRACT DOCUMENTS WILL BE DEEMED A NON-RESPONSIVE BID. NON-RESPONSIVE BIDS WILL BE REJECTED. BIDDER/CONTRACTOR 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/CONTRACTOR 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/CONTRACTOR 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 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

PACKET 8:15 October 25, 2022

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.

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: _____

TECHNICAL SPECIFICATIONS

FOR: Michigan Avenue Utility Improvements

All construction for this project must conform to the City of Midland "STANDARD SPECIFICATIONS" issued by the Engineering Services Department which are herein made a part of these specifications by reference.

The bidder/contractor is to pay particular attention to the following items in the "STANDARD SPECIFICATIONS" for this project.

1) Preparation of Right of Way
2) Excavation, Embankment and Preparation of Subgrade
3) Concrete Curb and Gutter, Sidewalks, Driveways, Valley Gutters, Center Drains and Rip Rap
4) Concrete Structures
5) Flexible Base, Caliche
6) Bituminous Prime
7) Bituminous Tack
8) Hot Mix Asphaltic Concrete
9) Double Course Asphalt Surface Treatment
10) Preparation of Asphaltic Concrete Surface for Overlay or Seal Coat
11) Seal Coat
12) Asphalt –Rubber Seal Coat
13) Polymer Modified Slurry
14) PVC Pipe Casings
15) Water Line Specifications
16) Gravity Flow Sewers for Waste Water and Storm Water

The "STANDARD SPECIFICATIONS" are available from the Department of Engineering Services, City Hall, 300 North Loraine Street, Suite 510, Midland, Texas.

GENERAL CONDITIONS AND PROVISIONS

1. DEFINITIONS

The following terms as used in this contract shall be defined and interpreted as follows:

(a) "Contract" or "This Contract" or "Agreement": The particular Contract executed by the Contractor and the Owner of which these general conditions are integral parts.

(b) "Contractor": The person, firm or corporation to whom this Contract is awarded by the Owner and who is a party thereto.

(c) "Owner", "City", or pronouns instead: The entity that is a party to this Contract, contracting under the official name of the City of Midland, Texas or the City Council of the City of Midland.

(d) The words "as directed", "as required", "as permitted", "acceptable to", "satisfactory", and the words of like import, shall mean that the direction, requirement or permission of the Engineer is intended.

(e) "Engineer": The word "Engineer" used in these specifications or in this Contract means the duly authorized representative or agent of the Owner supervising the performance of the Contract and representing the Owner in his Contractual relations and negotiations with the Contractor during the period of construction. The Engineer will be represented by assistants and inspectors authorized to act for him. On all questions concerning the acceptability of material or equipment, the classifications of material, the execution of the work, conflicting interest of Contractors performing related work and the determination of costs, the decision of the Engineer shall be final, but shall not relieve the Contractor of his responsibility for completion of the entire work in a good and workmanlike manner and in full compliance with the plans and specifications.

Inspectors are required to see that all the provisions of the Contract specifications are faithfully adhered to. Any inspector may, if authorized by the Engineer, stop the work entirely if there is not sufficient quantity of suitable and approved material on the ground to carry it on properly, or for any other good and sufficient cause. Any work done in the absence of an inspector may be ordered opened up for thorough examination, and must be rebuilt or replaced at the Contractors sole expense if found to be deficient or not in accordance with the plans and specifications. But no approval by an inspector shall be construed as an acceptance of defective or improper work or material, which must be rebuilt or properly replaced whenever discovered. Inspectors have not the power to give orders or directions under any possible circumstances, except as herein defined and provided, and on authority of the Engineer

(f) "Subcontractor": Any person, firm or corporation other than an employee of the contractor, supplying, for and under agreement either with the Contractor or any subcontractor of the Contractor, labor or material, or both, at the site of the project in connection with this Contract.

(g) "Project": The structure or improvement to be constructed in whole or in part through the performance of this Contract.

(h) "Work on the Project": Such work as is performed or ordinarily would be performed at the site of the project.

(i) "Surety": Any firm or corporation executing a Surety Bond or Bonds payable to the Owner securing the performance of the Contract either in whole or in part.

(j) Whenever certain articles are specifically mentioned, by brand name or name of the manufacturer, such materials shall be taken as standard and guide for quality, operation, capacity, etc. The term "or equal" shall mean that articles of equal characteristics as required, but of different brand or manufacturer, may be substituted and accepted, subject in all instances to the approval of the Engineer.

(k) "Special Provisions", "Special Conditions", "Project Specific Specification" or "Job Specific Specifications" are included as amendment of and/or additions to the General Conditions and/or Standard Specifications for the particular project in which they are included and will take precedence over the General Conditions and Standard Specifications only in so far as the amendments and/or additions. All other provisions in the General Conditions and/or Standard Specifications will not be affected.

(l) "Drawings" "Contract Drawings", "Plans" "Detail Drawings" "Detail Sheets" or "Plans and Details" refers to the set of drawings which show the details for the construction and related work anticipated on this project and upon which bids are being solicited.

2. CONFLICT OF PROVISIONS

Unless it is specifically provided otherwise, any provision in any other part of this Contract which may be in conflict or inconsistent with any provision in the General Conditions and Provisions shall be void to the extent only of such conflict or inconsistency.

3. DUTIES AND RESPONSIBILITIES OF THE CONTRACTOR

The Contractor shall have charge of and shall be responsible for the entire work under this Contract until its completion and acceptance by the city. A competent superintendent, foreman or other representative, invested with sufficient authority to conduct the work properly, shall be maintained on the work at all times.

It is expressly agreed and understood that no decision of the Engineer or any certificate issued nor payment made to the Contractor nor partial or entire use or occupancy of the work by the Owner, shall be an acceptance of any work or materials not in accordance with this Contract, nor constitute a waiver of the Contractor's responsibility to perform the entire work in a good and workmanlike manner and in accordance with the plans and specifications.

4. TIME ELEMENT

The work shall be commenced and finished within the time set out in the Form of Contract.

The time of completion of this Contract is an essential element and consideration. Since, therefore, time is of the essence thereof, and in the event of delay in the completion of the entire work required hereunder beyond the period prescribed, or beyond the period for which time may be extended by authority of the Owner for good cause shown, the Owner shall be paid damages for such delay. Inasmuch as the amount of such damages is difficult to ascertain, it is hereby stipulated and agreed that such damages shall be liquidated and the Owner shall be paid damages at the rate as set forth in the Special Provisions, said damages to be paid to the Owner for each and every day that the Contractor be in default in completing the entire work required under this Contract. The Owner shall have the right to deduct such amounts from any monies due, or which may become due, under

this Contract. In the event that no amount for such damages is shown in the Special Provisions of these specifications, it is agreed that the amount of damages shall be Five Hundred dollars ($500.00) per day.

If during the progress of the work weather conditions, or other circumstances beyond the control of the Contractor should prevail to the extent that the work cannot be prosecuted and completed within the time specified in the Contract, the Contractor shall file with the Engineer within one week of the occurrence of such delay a request for a credit on the time of completion. Unless the Contractor files such request, the liquidated damages specified above will be enforced.

5. PAYMENT TO CONTRACTOR

ESTIMATED QUANTITIES:

This Contract, including the specifications, plans and estimate, is intended to show clearly all work to be done and material to be furnished hereunder. Where the estimated quantities are shown for the various classes of work to be done and material to be furnished under this Contract, they are approximate and are to be used only as a basis for estimating the probable cost of the work and for comparing the proposals offered for the work. It is understood and agreed that the actual amount of work to be done and material to be furnished under this Contract may differ somewhat from these estimates, and that where the basis for payment under this Contract is the unit price method, payment shall be for the actual amount of such work done and the material furnished.

Where payment is based on the unit price method, the Contractor agrees that he will make no claim for damages, anticipated profits or otherwise on account of any differences which may be found between the quantities of work actually done, the material actually furnished under this Contract and the estimated quantities contemplated and contained in the proposal provided, however, that in case the actual quantity of any major item should become as much as twenty percent (20%) more than, or twenty percent (20%) less than the estimated or contemplated quantity for such items, then either party of this agreement, upon demand, shall be entitled to a revised consideration upon the portion of the work above or below twenty percent (20%) of the estimated quantity.

A "Major Item" shall be construed to be any individual item incurred in the proposal that has a total cost equal to or greater than five percent (5%) of the total Contract cost, computed on the basis of the proposal quantities and the Contract unit price.

Any revised consideration is to be determined by agreement between the parties, otherwise by the terms of this Contract, as provided under "Extra Work".

PAYMENT; RETAINAGE:

On or before the 1st day of each month the Contractor shall prepare an itemized statement showing the total value of the work completed by the Contractor up to and including the 25th day of the preceding month; said statement shall also include the value of all sound materials delivered on the site of the work that are to be fabricated into the work. NO ESTIMATE WILL BE MADE ON UNCOMPLETED PORTIONS OF THE WORK.

After all work is completed by Contractor, 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 Contractor in the amount of the contract and all Change Orders. The City shall be the final judge of when the

work is completed by Contractor. 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.

The City may make periodic payments to Contractor; 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 Contractor 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.

FINAL COMPLETION AND ACCEPTANCE:

Within ten (10) days after the Contractor has given the Engineer written notice that the work has been completed, or substantially completed, the Engineer and the Owner shall inspect the work and within said time, if the work be found to be completed or substantially completed in accordance with the Contract documents, the Engineer shall issue to the Owner and the Contractor his Certificate of Completion.

FINAL PAYMENT:

Upon the issuance of the Certificate of Completion, the Engineer shall proceed to make final measurements and prepare final statement of the value of all work performed and materials furnished under the terms of the Contract and shall certify same to the Owner, who shall pay to the Contractor the balance due the Contractor under the terms of this Contract, provided he has fully performed his obligations under the terms of this Contract. Notwithstanding any provision of these Contract Documents to the contrary, it is expressly understood and agreed by the parties hereto that neither the certificate of acceptance, nor the final or any other payment hereunder, nor any partial or total occupancy or possession of the project by the Owner, shall relieve the Contractor of his responsibility for completion of the entire project in a good and workmanlike manner and a full compliance with the plans and specifications and the fulfillment of any warranties which may be required in the Contract Documents.

6. OWNER'S RIGHT TO WITHHOLD CERTAIN AMOUNTS AND MAKE APPLICATION THEREOF

In addition to the amount which the Owner may otherwise retain under the Contract, the Owner may withhold a sufficient amount or amounts of any payment or payment otherwise due to the Contractor, as in this judgment may be necessary to cover:

(a) Payments which may be past due and payable for just claims against the Contractor or any subcontractor for labor or materials furnished for the performance of this Contract.

(b) For defective work not remedied.

(c) For failure of the Contractor to make proper payments to his subcontractors.

7. CERTIFICATE OF PAYMENT

Contractor shall, prior to issuance of final payment pursuant to the terms herein stated, provide proof satisfactory to the owner that all debts, bills and expenses incurred by the Contractor, his agents, employees or subcontractors employed by him, for labor, wages, materials and other purposes, in the furtherance of this

project, have been paid and satisfied in full. Satisfactory proof shall consist of an executed Certificate of Payment.

8. EXTRA, ADDITIONAL OR OMITTED WORK PAYMENT

The Owner, upon proper action by its governing body, may require changes in this Contract, or additions to, or deductions from the work to be performed or the materials to be furnished pursuant to this Contract. No employee, agent or representative of the Owner, with the exception of the governing body authorized to award this Contract, has any power to approve any change in this Contract and it is the responsibility of the Contractor before proceeding with any change to satisfy himself that the change has been properly authorized on behalf of the Owner. No charge for any extra work or other change in the Contract will be allowed unless the extra work or change has been authorized in writing by the Owner, or its duly authorized representative, and the price therefore is stated in such written authority.

Adjustments, if any, in the amounts to be paid the Contractor where such adjustments are made by reason of additions to or deductions from the quantities of units or items bid upon in the proposal schedules, shall be paid for in accordance with the provisions of the Specifications, at the unit and/or lump sum prices bid in such proposal schedules.

Adjustments, if any, in the amounts to be paid the Contractor where such adjustments are made by reason of additions of items not appearing in the proposal schedules, or addition of work of such a nature that unit and/or lumps sum prices contained in the proposal schedules cannot reasonably or equitably be applied to provide proper payment therefore, the payment to the Contractor for such work shall be determined by one or more of the following methods:

(a) By an acceptable lump sum proposal from the Contractor.

(b) By unit prices contained in the Contractor's proposal and incorporated in the Contract or fixed by subsequent agreement between the Owner and the Contractor.

(c) By a cost method pursuant to which the Contractor shall be paid the costs of the change or addition. He shall be required to keep and present in such form as the Owner may direct, a correct account of the cost of the change or addition, together with all vouchers therefore. The cost may include an allowance for overhead and profit not to exceed fifteen percent (15%) of the net cost.

In computing the cost, there shall be considered reasonable and proper net expenditures for labor, materials, power tools and equipment, pro rata charges for foremen, deductions for social security, old age and unemployment benefits and workmen's compensation insurance and surety bond premium. In computing cost of machinery and equipment involved in additional work, the amount to be paid shall be not more than one hundred percent (100%) of the latest schedule of "Equipment Ownership Expense" adopted by Associated General Contractors of America. No overhead and profit shall be allowed on the deductions for Social Security, old age and unemployment benefits. All other expenditures shall be treated as overhead costs.

No extra work shall be performed or change made unless in pursuance of a written order from the Owner stating that the extra work or change is authorized and no claim for an addition to the Contract sum shall be valid unless so ordered; provided, however, that nothing in this Article shall excuse the Contractor from proceeding with the prosecution of the work so changed.

The Contractor shall, when required by the Owner, furnish an itemized breakdown of the quantities and prices used in computing the value of any change, addition or deduction that might be ordered.

If the Contractor should claim that any instruction, request, drawing, specification, action, condition, omission, default, or other situation obligated or may obligate the Owner to pay additional compensation to the Contract, or constitutes a waiver of any provision in the Contract, he shall notify the Owner in writing of such claim within ten (10) days from the date he has actual or constructive notice of the factual basis supporting the claim. The Contractor's failure to notify the Owner within such ten (10) days period shall be deemed a waiver and relinquishment of any such claim against the Owner. The procedure for consideration of such claims shall be as stated in this Article.

9. ASSIGNMENT OF CONTRACT

The Contractor shall not assign this Contract or any part thereof, nor any monies due or to become due thereunder without the prior written consent of the Owner. No assignment of this Contract shall be valid unless it shall contain a provision that the funds to be paid to the assignee under the assignment are subject to a prior lien for services rendered or material supplied for performance of the work called for under this Contract in favor of all persons, firms, or corporations rendering such services or supplying such materials.

10. SUBCONTRACTORS

Specialty subcontractors may be utilized for the performance of such parts of the work under this Contract as, under normal practices, are performed by Specialty subcontractors, unless the Owner determines that the Contractor has heretofore customarily performed such specialty work with his own organization and is equipped to do so, or unless the Owner determines that performance of the specialty work by Specialty subcontractors will result in increased costs or inordinate delays.

The Contractor shall not subcontract any work to be performed or any materials to be furnished in the performance of this Contract without the prior written consent of the Owner. If the Contractor shall subcontract any part of this Contract, the Contractor shall be as fully responsible to the Owner for the acts and omissions of his subcontractor and of the persons either directly or indirectly employed by the subcontractor as he is for the acts and omissions of persons directly employed by himself. Nothing contained in this Contract shall create any Contractual relations between any subcontractor and the Owner. The Contractor shall ensure that the sub contractor has the insurance coverage required by this contract.

The Owner's consent to or approval of any subcontract under this Contract shall not in any way relieve the Contractor of his obligations under this Contract and no such consent or approval shall be deemed to waive any provisions of this Contract.

11. SUSPENSION OF WORK

Pending settlement of disputes on any point of controversy, the Engineer may suspend action on all or any part of the work. The Contractor shall not be entitled to any claim for loss or damage by reason of such, nor shall he be entitled to extension of time, although such extension of time may be granted by the Engineer if he deems it in the interest of the work.

12. RIGHT OF OWNER TO TERMINATE CONTRACT

If, in the opinion of the Engineer, the Contractor shall be improperly performing the work under this Contract, or shall neglect or refuse to take out or rebuild such work as shall have been rejected by the Engineer as being defective or unsuitable, or if, any time, the Engineer shall be of the opinion that the work is unnecessarily delayed and will not be finished within the prescribed time, or if the Contractor shall abandon the work, or shall neglect or refuse to comply with the instructions of the Engineer relative thereto, or shall fail in any manner to comply with the Specifications or Stipulations herein contained, the Engineer shall notify the Contractor to that effect in writing, and if the Contractor shall not within five (5) days thereafter take such measures as will, in the judgment of the Engineer, insure the satisfactory performance or construction of the work, the City may annul and cancel the Contract, in which event it shall notify the Contractor to discontinue all work under this Contract, and the Contractor shall immediately respect such notice and stop work and cease to have any rights to the possession of the ground and shall forfeit his Contract. Such annulment shall not entitle the Contractor to any claim for damages on account thereof, nor shall it affect the right of the City of Midland to recover damages on account of such failure. The City Council may thereupon advertise and re-let a new Contract for the uncompleted work without further ordinance, in the same manner as was followed in the letting of this Contract, and any excess of cost arising there from over and above what would have resulted from the prices set forth in this Contract will be charged against the Contractor and his surety or sureties hereto, who shall be liable therefore.

13. RIGHT OF CONTRACTOR TO TERMINATE CONTRACT

If the work should be stopped under an order of any court or other public authority for a period of three (3) months, through no act or fault of the Contractor or of anyone employed by him, or if the City should fail to make payment to the Contractor within thirty (30) days after such payment is due, as set out in the Contract, then the Contractor may, upon seven (7) days written notice to the City and the Engineer, stop work or terminate his Contract and recover from the City payment for all work executed and for any loss sustained upon any plant or materials and reasonable profit and damages.

14. INCIDENTAL WORK

Any and all minor details 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 and included with the work for which the prices are named in the Contract Documents. The Contractor will not be entitled to any extra or additional compensation therefore, unless specifically stated otherwise.

15. PERMITS – COMPLIANCE WITH LAW

The Contractor shall, at his expense, obtain all permits and licenses necessary for the performance of this Contract, and give all necessary notices, pay all fees required by law, and comply with all laws, ordinances, rules and regulations governing the Contractor's performance of the Contract.

Portions of this contract qualify for exemption pursuant to the provisions of the Texas Limited Sales, Excise and Use Tax Act. The Contractor shall obtain a sales tax exemption certificate from the City. All labor performed on the project and all materials incorporated into the project qualify for such tax exemption. However, equipment and parts for equipment purchased to be used on the project, but are not incorporated into the project; do not qualify for said tax exemption. Contractor shall issue a resale certificate in lieu of paying such sales tax for all

materials incorporated into the project. Further Contractor shall separate the charges for materials incorporated into the project from the charges for labor.

16. INSPECTION BY OWNER

The Owner and its representatives shall at all times have access to all parts of the work and to the shops wherein the work is in preparation for the purpose of inspection, and the Contractor shall at all times maintain proper facilities and provide safe access for such inspection.

The Owner shall have the right to reject materials and workmanship which are defective, or to require their correction. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the premises without charge to the Owner. If the Contractor does not correct such rejected work within a reasonable time, fixed by written notice, the Owner may correct same and charge the expense to the Contractor. No inspector shall have the power to waive the obligation resting upon the Contractor to furnish good material or do work as herein prescribed, and any failure or omission of any inspector or the Engineer to condemn any defective material or work shall not release the Contractor from the obligation to at once tear out, remove and properly rebuild the same at any time upon discovery of the defect and upon receipt of notice of the Engineer to do so.

Should it be considered necessary or advisable by the Owner at any time before final acceptance of the entire work to make an examination of work already completed by removing or tearing out any portion thereof, the Contractor shall on request promptly furnish all necessary facilities, labor and materials. If such work is found to be defective in any respect due to the fault of the Contractor or his subcontractor, he shall defray all the expenses of such examinations and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the additional cost of labor and materials necessarily involved in such examination and replacement, plus fifteen percent (15%) for overhead and profit, shall be allowed the Contractor.

Where the Specifications require work to be specifically tested or approved, it shall not be tested or covered up without timely notice to the Owner of its readiness for inspection and without the approval or consent thereto by the Owner. Should any such work be covered up without such notice, approval or consent, it must, if required by the Owner, be uncovered for examination at the Contractor's expense.

17. PATENTS

The Contractor shall hold and save the Owner and its officers, agents, servants, and employees harmless from liability of any nature or kind, including all costs and legal expenses, for or on account of, any patented or unpatented invention, process, article or appliance, manufactured for or used in the performance of the Contract, including its use by the Owner, unless otherwise specifically stipulated in the Contract.

18. MUTUAL RESPONSIBILITY OF CONTRACTORS

If, through acts of neglect on the part of the Contractor, any other Contractor or any subcontractor shall suffer loss or damage on the work, the Contractor agrees to settle with such other Contractor or subcontractor by agreement or arbitration, if such other Contractor or subcontractor will so settle. If such other Contractor or subcontractor shall assert any claim against the Owner on account of any damage alleged to have been so sustained, the Owner shall notify the Contractor, who shall indemnify and save harmless the Owner against any such claim.

The Contractor must ascertain to his own satisfaction the scope of the project and the nature of any other Contracts that have been or may be awarded by the Owner in the prosecution of the project to the end that the Contractor may perform this Contract in the light of such other Contract, if any.

Nothing herein contained shall be interpreted as granting the Contractor exclusive occupancy of the site of the project. The Contractor shall not cause any unnecessary hindrance or delay to any other Contractor working on the project. If the performance of any Contract for the project is likely to be interfered with by the simultaneous execution of some other Contract or Contracts, the Owner shall decide which Contractor shall cease work temporarily and which shall continue, or whether the work under the Contracts can be coordinated so that the Contractors may proceed simultaneously. The Owner shall not be responsible for any damages suffered or extra costs incurred by the Contractor, resulting directly or indirectly from the award or performance or attempted performance of any other Contract or Contracts on the project, or caused by any decision or omission of the Owner respective to the order of precedence in the performance of Contracts.

19. NOTICE AND SERVICE THEREOF

Any notice from one party to another under the Contract shall be in writing and shall be dated and signed by the party giving such notice or by duly authorized representative of such party. Any such notice shall not be effective for any purpose whatsoever unless served in the following manner; namely, if the notice is given to the Owner, (a) by personal delivery thereof to the individual duly authorized to direct and supervise the project of the Owner, or (b) by depositing the same in the United States Mail, enclosed in a sealed envelope, addressed to the City of Midland, 300 North Loraine Street, Midland, Texas, 79701, postage prepaid and certified; or if the notice is given to the contractor (a) by personal delivery thereof to the project superintendent or other person authorized to act for the contractor, or (b) by depositing the same in the United States Mail, enclosed in a sealed envelope, addressed to the Contractor at his regular place of business or at such other address as may have been established for the conduct of the work under this Contract, postage prepaid and certified; or (c) if the notice is given to the Surety or any other person by personal delivery to such Surety or other person, or by depositing the same in the United States Mail, enclosed in a sealed envelope addressed to such Surety or other person, at the address of such surety or other person last communicated by him to the party giving the notice, postage prepaid and certified.

20. QUALITY OF MATERIALS AND WORKMANSHIP

It is the intention of this Contract to have only first class materials and the best workmanship throughout, and the methods and appliances adopted by the Contractor must be such as will secure a satisfactory quality of work and will enable him to complete the work in the time agreed upon. If at any time such methods and appliances appear inadequate, the Engineer may order the Contractor to improve their character or increase their efficiency, and the Contractor must conform to such order; but the failure of the Engineer to order such improvement of methods or increase of efficiency will not relieve the Contractor from his obligations to perform good work or finish it in the time agreed upon. The Contractor shall submit samples or specimens of any and all materials proposed to be used in the work when required to do so by the Engineer. All materials must be of specified quality and fully equal to approved samples. All work must be done and completed in a thorough and workmanlike manner. All materials furnished and all work done must be satisfactory to the Engineer and will be subject to rigid inspection, and if not in accordance with the Specifications in the opinion of the Engineer, shall be made to conform thereto.

It is understood that except as otherwise specifically stated in the Contract, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence of temporary

construction of every nature, and all other services and facilities required for the completion of the Contract within the specified time.

21. SPECIAL METHODS

The Engineer may consent to special methods for carrying out the work in difficult cases, but the Contractor will not be relieved of responsibility for the result. The Contractor shall be responsible for the result of all work performed by him whether directed by the Engineer or not.

22. REMOVAL OR REPLACEMENT OF WORK DONE WITHOUT LINES OR GRADES

Any work done without lines or grades given by the Engineer or under his direction or without the supervision of an inspector, may be ordered removed and replaced by the Engineer at the Contractor's expense.

23. COVERING WORK

No work shall be covered until it has been examined and approved by the Engineer.

24. UNFAVORABLE WEATHER

During unfavorable weather and other adverse conditions, only such portions of the work may be done which will not be damaged thereby, unless by special means or precautions approved by the Engineer.

25. ALL WORK SUBJECT TO FINAL INSPECTION

Failure to neglect on the part of the Engineer or his inspectors to condemn or reject bad or inferior work or materials shall not be construed to imply his acceptance of such work or materials if it becomes evident at any time prior to the final acceptance of the work and the release of the Contractor.

26. PUBLIC CONVENIENCE

When materials for construction are brought on the work site they shall be neatly piled so as to cause as little obstruction to travel as possible, and so that they may be conveniently inspected.

No material or other obstruction shall be placed within five (5) feet of fire hydrants, which must at all times be readily accessible to the fire department, nor shall any material be piled within two (2) feet of any trees.

The Contractor shall be responsible for all damages to persons or property that occur as a result of his fault or negligence in connection with the prosecution of the Contract and shall be responsible for the proper care and protection of all materials delivered and work performed until completion, and final acceptance by the Owner.

The Contractor shall provide such heat, covering and enclosures as are necessary to protect all work and materials against damage by weather conditions.

The Contractor shall take adequate precautions to protect existing sidewalks, curbs, pavement, utilities, adjoining property, and structures, and avoid damage thereto, and he shall at his own expense completely repair any damage thereto caused by his operations.

If required by the Engineer, the Contractor shall shore up, brace, underpin, and protect as may be necessary, all foundations, and other parts of all existing structures adjacent and adjoining the site of the Project, which are in any way affected by the excavations or other operations connected with the completion of the work under this Contract. Whenever any notice is required to be given by the Owner or the Contractor to any adjoining or adjacent landowner or other party before commencement of any work under this Contract, such notice shall be given by the Contractor. The Contractor shall indemnify the Owner and save it harmless from any damages on account of settlement or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the Owner may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

During the progress of the work the convenience of the public and of the residents along streets must be provided as far as practicable. Convenient access to driveways, houses and buildings along streets must be maintained whenever possible.

Temporary approaches and crossings of streets and sidewalks must be provided and kept in good condition whenever practicable.

The Contractor shall provide and maintain such fences, barriers, "Street Closed" signs, red lights and watchmen as may be necessary to prevent avoidable accidents to residents and to the public.

The Contractor alone shall be held responsible for all injuries to persons, and for all damages to property of the City or others, caused by or resulting from the negligence of himself, his employees or agents during the progress of or connected with the prosecution of the work, whether within the limits of the work or elsewhere. He must restore all injured public or private property to a condition as good as it was when he entered upon the work, purchasing new materials to replace all that which is injured or destroyed during the course of the work.

In an emergency affecting the safety of life or property, including adjoining property, the Contractor, without special instructions or authorization from the Owner is authorized to act at his discretion to prevent such threatened loss or injury and he shall so act.

27. TRAFFIC CONTROL

It is the policy of the City of Midland to keep at least two travel lanes open to traffic at all times and where possible to have three travel lanes between 7:30 a.m. and 9:00 a.m. and 4 p.m. and 6 p.m. (Two (2) lanes in the direction of peak travel).

At least 48 hours before beginning work the contractor shall present a traffic control and/or barricade plan prepared as per the approved Barricading Standards to the Traffic Engineering Division for review and approval. When approved and barricades are in place, they shall be inspected by the Traffic Engineering Division prior to beginning work.

Traffic control signs, such as stop signs, yield signs, etc., are placed in various intersections for the safety and protection of the traveling public. The contractor shall not move, alter or damage said signs for any reason. If said signs must be removed for construction purposes, contractor shall notify the City of Midland, Traffic Division Operations Superintendent at least 48 hours (not including weekends) before construction activities are scheduled to begin. All construction barricading, warning signs, and other construction traffic control devices shall be in place and shall be in accordance with the Texas Manual on Uniform Traffic Control Devices and approved Barricading Standards included in plans before traffic signs can be removed. The contractor shall notify the Traffic Division Operations Superintendent at least 72 hours (not including weekends) before

scheduled removal of construction barricades, warning signs, and traffic control devices. But in all cases the contractor shall not remove said barricades, warning signs, and traffic control devices until the City of Midland's Traffic Department has replaced stop signs, yield signs, etc., in their proper location. The Contractor shall notify Traffic Engineering Division at least 24 hours in advance of any Traffic Signal modification due to construction (i.e. eliminating left turn phases). Notice shall also be given to the Traffic Engineering Division at least 24 hours prior to removing barricades at signalized intersections.

28. PROTECTION OF NEW WORK

All new work shall be carefully protected by the Contractor, and any work injured from any cause before the completion of the whole project must be rebuilt by the Contractor at his own expense.

29. MONUMENTS OR STAKES

The Contractor must carefully protect from disturbance or injury all monuments, stakes and bench marks, of City County, State or Federal Government and shall not excavate nearer than five (5) feet to any of them without the permission of the Engineer, or until they have been removed, witnessed or otherwise disposed of by the Engineer.

30. USE OF COMPLETED PORTIONS

The City shall have the right to take possession of and use any completed or partially completed portions of the work notwithstanding the time for completing the entire work on such portions may not have expired; but such taking possession and use shall not be deemed an acceptance of any work not completed in accordance with the Contract Documents. If such prior use increases the cost of, or delays the work, the Contractor shall be entitled to such extra compensation or extension of time, or both as the Engineer may determine.

The Owner, in taking possession of completed portions, shall agree to accept the decision of the Engineer on matters relating to responsibility for damages that may occur to any portions of the work during the period of possession preceding acceptance and final payment.

31. USE OF PREMISES

The Contractor shall confine his apparatus, storage of materials and construction operations to such limits as may be directed by the Owner, and shall not unreasonably encumber the premises with his materials.

The Contractor shall enforce any instructions of the Owner regarding advertising, fires, danger signals, barricades and smoking, and shall require all persons employed on the work to comply with all building, post or institutional regulations while on the premises.

32. SAFETY RESTRICTIONS

The following procedures will be followed regarding the subject item on this contract:

A warning sign painted yellow with black letters that are legible at twelve feet shall be placed inside and outside vehicles such as cranes, 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."

Equipment that may be operated within ten feet of high voltage lines shall have an insulating cage type of guard about the boom or arm, except back hoes or dippers, and insulator links on the lift hook connections.

When necessary to work within six feet of high voltage electric lines, notification shall be given to the power company who will erect temporary mechanical barriers, de – energize the line, or raise or lower the line. The notifying department

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.

No person shall work within six feet of high voltage line without precautions having been taken and protection provided as outlined in Paragraph (3) above.

33. INSURANCE REQUIREMENTS AND WORKERS COMPENSATION

INSURANCE REQUIREMENTS

Contractor 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 an occurrence basis. This insurance shall name the City as an additional insured and waive subrogation in favor of the City.

The Business Automobile Liability insurance provided by Contractor 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 the City as an additional insured and waive subrogation in favor of the City.

The Workers' Compensation coverage provided by Contractor shall inure to the benefit of employees injured during the course and scope of their employment by Contractor pursuant to this Contract. The Workers' Compensation shall waive all rights of subrogation in favor of the City.

All insurance required pursuant to this Contract shall provide for a waiver of subrogation in favor of the City. All insurance required pursuant to this Contract, except for Workers' Compensation Insurance, shall name the City as an additional insured on a claims occurred basis. City shall be provided the notice by Contractor's insurance provider not later than thirty (30) days prior to any reduction or termination of such coverage.

Contractor 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, Contractor shall provide one or more certificates of insurance specifically stating that these requirements have been met and subject to the approval of the City. The City shall not be required to provide any insurance whatsoever pursuant to this Contract.

The Contractor certifies that the certificate of insurance provided as required herein complies with the requirements of Senate Bill 425, passed during the 82nd regular session of the Texas Legislature, and effective January 1, 2012. The Contractor shall not use an unapproved certificate of insurance or insert inappropriate language on a certificate. Compliance with state law is the sole responsibility of the Contractor.

34. INDEMNIFICATION

INDEMNITY: THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND THE OWNER AND ALL OF THE OWNER'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, 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 THE CONTRACTOR, 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 CONTRACTOR WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST THE OWNER OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.

THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND THE OWNER AND ALL OF THE OWNER'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 THE OWNER, THE OWNER'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 THE CONTRACTOR OR THE CONTRACTOR'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 CONTRACTOR WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST THE OWNER OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.

THE CONTRACTOR AGREES THAT HE WILL INDEMNIFY AND SAVE THE OWNER 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, ALL SUPPLIES, INCLUDING COMMISSARY INCURRED IN THE FURTHERANCE OF THE PERFORMANCE OF THIS CONTRACT. WHEN OWNER SO DESIRES, THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE THAT ALL OBLIGATIONS OF THE NATURE HEREINABOVE DESIGNATED HAVE BEEN PAID, DISCHARGED OR WAIVED. THE CONTRACTOR, ITS SURETIES AND INSURANCE CARRIERS SHALL DEFEND, INDEMNIFY AND SAVE HARMLESS THE OWNER 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 THE CONTRACTOR 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 THE OWNER OR ANY OF ITS OFFICERS, AGENTS, OR EMPLOYEES INCLUDING ATTORNEY'S FEES.

35. RELEASE

NOTWITHSTANDING ANY OTHER PROVISION, CONTRACTOR HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES OWNER, OWNER'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH CONTRACTOR HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKING CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS OR OWNER'S NEGLIGENCE.

36. INDEPENDENT CONTRACTOR

It is expressly understood and agreed that Contractor shall perform all work and services described herein as an independent contractor and not as an officer, agent, servant or employee of the Owner; that Contractor 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 respondent superior shall not apply as between Owner and Contractor, its officers, agents, employees, contractors and subcontractors; and

that nothing herein shall be construed as creating a partnership or joint enterprise between Owner and Contractor. No person performing any of the work and services described hereunder by Contractor shall be considered an officer, agent, servant or employee of the Owner. Further, it is specifically understood and agreed that nothing in this Contract 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. Contractor 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. The Owner does not have the power to direct the order in which the work is done. The Owner shall not have the right to control the means, methods or details of the Contractor's work. Contractor shall assume exclusive responsibility for the work. Contractor is entirely free to do the work in its own way.

37. QUALIFICATIONS FOR EMPLOYMENT

Preference shall be given to qualified local residents in the employment of laborers and mechanics for work on the Project under this Contract. No person under the age of sixteen (16) years shall be employed on the project under this Contract. No person whose age or physical condition is such as to make his employment dangerous to his health or safety or to the health or safety of others shall be employed on the Project under this Contract: Provided, that this shall not operate against the employment of physically handicapped persons, otherwise employable, where such persons may be safely assigned to work which they can ably perform. No person currently serving sentence in a penal or correctional institution and no inmate of an institution for mentally defective shall be employed on the project under this contract.

38. PAYROLLS OF CONTRACTOR AND SUBCONTRACTORS

The Contractor and each of his subcontractors shall prepare payrolls for the workers on the Project. Not later than the seventh (7th) day following the payment of wages, the Contractor shall transmit to the Owner, if requested, a certified legible copy and two confirmed copies of such payroll.

Such copies of payrolls shall be accompanied by substantial proof that all bills for services rendered and materials supplied have been duly paid and by such other data as the Owner may require.

39. POSTING WAGE RATES

The Contractor shall post at appropriate conspicuous points at the site of the Project a schedule showing the wage rates for the various classes of laborers and mechanics to be engaged in work on the Project under this Contract and all deductions, if any, required by law to be made from unpaid wages actually earned by the laborers and mechanics so engaged.

40. PAYMENT OF EMPLOYEES

The Contractor shall post at appropriate conspicuous points at the site of the Project a schedule showing the wage rates for the various classes of laborers and mechanics to be engaged in work on the Project under this Contract and all deductions, if any, required by law to be made from unpaid wages actually earned by the laborers and mechanics so engaged.

41. WAGE UNDERPAYMENT AND ADJUSTMENTS

The Contractor agrees that, in case of underpayment of wages to any worker on the project under this Contract by the Contractor or any subcontractor, the Owner shall withhold from the Contractor out of payments due, an amount sufficient to pay such worker the difference between the wages required to be paid under this Contract and the wages actually paid such worker for the total number of hours worked and that the Owner may disburse such amount so withheld by it for and on account of the Contractor to the employee to whom such amount is due. The Contractor further agrees that the amounts to be withheld pursuant to this Article may be in addition to other amounts that may be retained by the Owner pursuant to other provisions of this Contract.

42. COMPUTATION OF WAGES ON 8 – HOUR DAY

The wages of each laborer and mechanic engaged in work on the project under this Contract shall be computed on a basis of eight (8) hours per day, eight (8) hours continuous employment except for lunch periods, constituting a day's work.

Legal holiday work shall be paid for at the regular governing per diem wage rates.

Work in excess of 40 hours per week shall be paid for at 1 ½ times the basic rate of pay.

43. OVERTIME WORK AND WORK ON SUNDAYS AND LEGAL HOLIDAYS

The Contractor will not be permitted to work on Sundays or legal holidays except in an emergency and then only upon written permission of the Engineer.

Any work necessary to be performed after regular working hours and when permitted on Sundays or legal holidays, shall be performed without additional expense to the Owner.

No work on any Contract item will be permitted before daylight or later than one hour after sundown.

44. CONTRACT SECURITY

The Contractor shall furnish a performance bond and payment bond in an amount equal to one hundred percent (l00%) of the amount of the Contract as security for the faithful performance of the Contract, including the payment of all persons performing labor on the project and furnishing of materials in connection with this Contract. All Bonds must be executed in five (5) original counterparts by a corporate surety authorized to do business in the State of Texas. Bonds executed by individuals or any other than recognized and authorized corporate surety companies will not be acceptable.

45. DELAYS

The Contractor shall receive no compensation for delays or hindrances to the work, except when, in the judgment of the Engineer, direct or unavoidable extra cost to the Contractor is caused by such hindrances or delays. When such extra compensation is claimed, a written statement thereof shall be presented by the Contractor, as provided in Paragraph 18 hereof. Such claim, if found correct, will be approved, and the decision of the Engineer whether extra cost has been incurred and the amount thereof, shall be final. If delays are caused by specific orders to stop work, given by the Engineer, or by the performance of extra work, or by unforeseen causes beyond the control of the Contractor, or by the failure of the Owner to provide materials or necessary instructions for carrying on the work, or to provide the necessary right-of-way or site for installation,

then delay will entitle the Contractor to an equivalent extension of time. Application for extension of time must be approved by the Owner and, shall not release the Sureties from their obligations, which shall remain in full force until the discharge of the Contract.

LATE COMPLETION; LIQUIDATED DAMAGES:

It is hereby understood and mutually agreed, by and between Contractor 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." Contractor 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 Contractor 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.

In the event Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the City, then Contractor and Contractor'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 calendar day that Contractor 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 Contractor only those monies deemed appropriate by the City, in its sole discretion, to compensate Contractor for any work actually performed, less any liquidated damages Contractor owes the City.

The said amount is fixed and agreed upon by and between Contractor 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.

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 Contractor shall not be charged with liquidated damages or any excess cost when the City determines, in its sole discretion, that Contractor is without fault and Contractor's reasons for the time extension are acceptable to the City. Provided, further, that Contractor shall not be charged with liquidated damages of any 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 Contractor, 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.

Provided, further, that Contractor shall, within ten (10) calendar 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 Contractor within a reasonable time of its decision in the matter.

CONTRACTOR 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, CONTRACTOR 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 CONTRACTOR AS LIQUIDATED DAMAGES FOR CONTRACTOR'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.

CONTRACTOR SHALL RECEIVE NO FINANCIAL COMPENSATION FOR DELAY OR HINDRANCE TO THE WORK. IN NO EVENT SHALL THE CITY BE LIABLE TO CONTRACTOR 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. CONTRACTOR'S SOLE REMEDY IN ANY SUCH CASE SHALL BE AN EXTENSION OF TIME.

46. ERRORS AND OMISSIONS

The Contractor will not be permitted to take advantage of any error or omission in these specifications. Suitable instructions will be given by the Engineer when such error or omission is discovered.

47. SPECIFICATIONS AND DRAWINGS

The Contractor shall keep on the work a copy of the Specifications and Drawings, and shall at all times give the Engineer access thereto. Any drawings or plans listed in the detailed specifications shall be regarded as part thereof and of the Contract. Anything mentioned in these specifications and not mentioned or shown in the drawings, or shown in the drawings and not mentioned in these specifications, shall be done as though shown or mentioned in both. The Engineer will furnish from time to time, such detailed drawings, plans, profiles and information as he may consider necessary for the Contractor's guidance.

In the event of any discrepancy between the plans and these specifications, the decisions of the Engineer will be decisive thereon. The written dimensions on the plans are to be taken as correct, but the Contractor is required to check carefully all dimensions before beginning work thereon. Should any errors or omissions be discovered, the Engineer's attention shall be called to the same, and the proper corrections made. All notes on the plans shall be carefully observed by the Contractor and are a part of the Contract.

48. CONSTRUCTION STAKING

The Engineer will furnish a complete set of plans and profiles and set control stakes at fifty foot (50') intervals along the entire length of the project and at such control points he deems necessary for proper execution of the work. The Contractor will thereafter be required to lay out the work accurately and furnish at his own expense, all lines, levels, and dimensions necessary to the proper and correct execution of the entire work and be responsible for any errors resulting from his own work.

The Contractor shall give the Engineer at least 36 hours notice in writing before requiring stakes to be set on any new portion of the work, and he shall state clearly in such notice the exact locality or localities where such stakes are needed for immediate use.

The Contractor must satisfy himself, before commencing work, as to the meaning or correctness of all stakes or marks, and no claim will be entertained by the Owner for or on account of any alleged inaccuracies, or for the alterations subsequently rendered necessary on account of such alleged inaccuracies unless the Contractor notifies the Engineer thereof in writing before commencing to work thereon.

The Contractor will at all times conduct the work in such a manner as to prevent damage to construction stakes set by the Engineer. When construction stakes are damaged to such extent that they must be reset, as a result of carelessness or negligence on the part of the Contractor or his workmen, the costs thereof shall be kept by the Engineer and shall be deducted from the moneys due or to become due the Contractor under the terms of his contract.

Benchmark and survey stakes shall be preserved by the Contractor, and in case of their destruction or removal by him or his employees, they will be replaced by the Engineer at the Contractor's expense.

49. SANITATION

The Contractor shall provide suitable drinking water receptacles or containers equipped with dust-tight covers and spigots or faucets. A supply of sanitary paper drinking cups shall be kept on hand for general use near the drinking water containers. The use of common drinking cups or tin cups will not be permitted.

The Contractor shall furnish "Porta-Johns" or other approved sanitary facilities for use by all workers on the Project. Such facilities shall be placed and kept in close proximity of the site where work is being performed. Such facilities shall be properly serviced and maintained.

The Engineer may establish such other sanitary rules and regulations as may seem necessary and desirable to the safe prosecution of the work, such rules and regulations to apply to all forces employed under this Contract, and if, the Contractor fails to observe and enforce these rules, the Engineer may enforce them at the expense of the Contractor.

50. WATER FOR CONSTRUCTION

The Contractor may obtain all water necessary for construction purposes from the Municipal Waterworks System at the regular customer service rate, but the Contractor must make all necessary arrangements with the Director of Utilities for necessary connections and meters. The Contractor must make his own provisions and provide such equipment as is necessary for conveying water from point of service to point of use. No extra compensation will be allowed and the Contractor shall anticipate the expense connected herewith and absorb said expense in the prices bid for the various bid items.

51. SEQUENCE AND SPEED OF WORK

The Engineer shall direct the order and sequence of the work. If at any time before the commencement or during the progress of the work, the materials and appliances used appear to the Engineer as insufficient and improper for securing the quality of work required or the required rate of progress, he may order the Contractor to increase their efficiency or to improve their character and the Contractor shall conform to such order. The

failure of the Engineer to demand any increase of such efficiency or improvement shall not release the Contractor from his obligations to secure the quality of work or the rate of progress specified.

52. INSPECTION AND TESTING OF MATERIAL

The sampling and testing of materials used or proposed to be used in the construction of this project will be made by the Engineer, his designated representative or certified testing laboratory personnel in accordance with methods prescribed by the American Society of Testing Materials and/or the American Association of State Highway Officials, with subsequent approved revisions made prior to the date of the Proposal. The selection of the method of test shall be designated by the Engineer. The Contractor shall bear the cost of all tests required before a material or a method is approved for use on the job, unless the Owner specifically agrees to bear the cost of these tests.

All tests required by the Owner after materials and/or methods have been approved and after they have been incorporated or used in the job will be paid for by the Owner, except if the Owner's tests reveal non-conformance with the specifications, subsequent tests on that part of the work required to determine if the replaced or reworked material meets the specifications, will be paid for by the Contractor. The City will pay only one time for any required testing.

The following is a summary of test required for the approval of materials or methods:

Material	**Test**
Subgrade	Maximum density, optimum moisture
Caliche Base:	Maximum density, optimum moisture, hardness, gradation, liquid limit, plasticity index, Texas Triaxial Classification
Aggregates for hot-mix:	Gradation, unit weight, abrasion, soundness, liquid limit, plasticity index, density
Asphalt, emulsions and tars:	Certified plant test and certificates of compliance with each shipment
Hot- Mix asphaltic concrete:	Design mix, swell test, stripping test
Portland cement concrete pavement:	Design mix with test cylinders

Any materials shipped by the Contractor from the factory prior to having satisfactorily passed such testing and inspection by the Owner's representative or prior to the receipt of notice from said representative that such testing and inspection will not be required, shall not be incorporated in the work.

The Owner may, at its discretion, approve materials and/or methods for use on this project without testing when they are from sources previously tested and approved for City of Midland projects.

53. CONSTRUCTION SCHEDULE

It shall be the responsibility of the Contractor to furnish the Construction Engineer prior to construction a schedule out – lining the anticipated time each phase of construction will begin and be completed, including sufficient time being allowed for clean – up.

54. PROFILES AND ELEVATIONS

Profiles and elevations of the ground are shown on the plans hereto attached. These profiles and elevations are believed to be reasonably correct, but are not guaranteed to be absolutely so, and are represented only as an approximation. Elevations are referred to datum given by the Engineer.

55. CLEANUP

During the progress of the work, the Contractor shall maintain the work area in a reasonably clean and safe condition. Dirt, debris, excess excavation and other objectionable materials shall be removed from the site and disposed of on a daily basis.

After completion of all the work contemplated to be done in accordance with the detailed plans and these specifications, the premises and area along the entire line of the work shall be thoroughly cleaned up and all remaining structural materials, excess or surplus excavation and debris of any nature shall be removed and disposed of in a satisfactory manner and as directed by the Engineer. The site of all work shall appear neat and finished. All portions of the project when completed shall be ready for use or occupancy.

No compensation or payment shall be made for any cleanup work. The price for such cleanup work shall be absorbed in the items covered in the proposal.

56. GUARANTEE

The contractor shall and hereby does guarantee: (1) all work performed by him directly and all work performed by his subcontractors; (2) that all material specified; and (3) that any defect due to improper workmanship or material discovered and made known to him within one year (1) f the date of final acceptance of the improvements shall be repaired, replaced, corrected or otherwise made good by him without additional expense to the Owner. The Contractor shall, in case of work performed by his subcontractors and where guarantees are required, secure guarantees from said subcontractors and deliver copies of same to the Engineer upon completion of the work.

57. WAIVER OF ATTORNEY FEES:

BY EXECUTING THIS CONTRACT, CONTRACTOR AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST THE OWNER, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THE CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE CONTRACT. THE CONTRACTOR SPECIFICALLY AGREES THAT IF THE CONTRACTOR 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, THE CONTRACTOR AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH CONTRACTOR MIGHT OTHERWISE BE ENTITLED.

CONTRACTOR AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. THE CONTRACTOR ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THE CONTRACT. THE CONTRACTOR FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN

THE OWNER AND THE CONTRACTOR. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF SOVEREIGN IMMUNITY.

THE CONTRACTOR AND OWNER ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION.

58. 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. 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. The obligations and undertakings of each of the parties to this Contract shall be deemed to have occurred in Midland County, Texas. This Contract shall be governed by, interpreted, enforced and construed under the law of the State of Texas. 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 that would direct application of the laws of another jurisdiction.

59. SOVEREIGN IMMUNITY

By executing this Contract, the City is not waiving its right of sovereign immunity. The City is retaining its immunity from suit. The City is not granting consent to be sued by legislative resolution or action.

THERE IS NO WAIVER OF SOVEREIGN IMMUNITY.

60. NO THIRD – PARTY BENEFICIARY

The 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.

61. 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, Contractor or his legal representative, shall give the City Manager or any other reasonable official of the City, 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 and 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 Contractor will settle, the physical and mailing addresses of Contractor at the time and date the claim was presented and the physical and mailing addresses of Contractor for the six months immediately preceding the occurrence of such damages, and the names and addresses of the witnesses upon whom the Contractor 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 City from any liability whatsoever. The City is under no obligation to provide notice to Contractor that Contractor'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, Contractor's failure to comply with the requirements herein shall perpetually bar Contractor'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. Contractor agrees that the requirements of this entire Agreement are reasonable.

62. ASSIGNMENT

Contractor 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 the owner. The issue on whether or not to grant consent to an assignment is in the sole discretion of the owner.

63. 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 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.

64. PROMPT PAY ACT

The owner and contractor agree that Texas Government Code, Chapter 2251, Payment for Goods and Services (the "Prompt Pay Act") does not waive governmental immunity.

65. OTHER FEDERAL REQUIREMENTS

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.

Updated October 2022

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 **_Michigan Avenue Utility Improvements Project_** to be performed as outlined in the Plans and Specifications, which are necessary to satisfactorily complete the work.

The project will include the removal, abandonment, replacement, relocation, and installation of existing and proposed water infrastructure and appurtenances including all necessary mobilization, saw-cutting, pavement removal, excavation, embedment, backfill, pavement repair, sidewalk repair, concrete joint sealing, erosion control, traffic control, coordination with City of Midland staff and organizations such as OSHA, franchise utilities, etc. as needed, One Call (Texas 811) notifications for pending work, notifications to adjacent property owners as directed by City of Midland Staff, and all other work to be performed as outlined in the Construction Drawings and Specifications, to satisfactorily complete the work.

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, for all Proposal Bid Items except those specifically listed below, which will be the only Proposal Bid Items to be paid upon material delivery for this project:

Miscellaneous Bid Items: 1

Water Bid Items: 1 – 12 & 14 – 19

Retainage will apply the same to all bid items and invoices regardless of whether an invoice is for bid items paid upon material delivery or not.

Any and all payments for bid items that are paid upon material delivery are paid with the expectation that the material will be installed per the construction drawings and specifications, and that the material delivered will be protected and kept in good condition by the Contractor until it is installed. Material that is not property stored or protected and becomes weathered or damaged before installation must be replaced with new material meeting the standards and requirements of the construction drawings and specifications before it can be installed, and this will be done by the Contactor at no additional cost to the City of Midland.

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.

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 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 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.

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 _270_ 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.

PROPOSAL

TO: Honorable Mayor and City Council
City of Midland
Midland, Texas

Gentlemen: The undersigned bidder, having examined the drawings, specifications and contract documents, the location of the proposed work, and being fully advised as to the extent and character of the work, proposes to furnish all material, equipment, and to perform all labor and work necessary for the completion of the construction of the work described by and in accordance with the attached drawings, specifications, and contract, for the following prices, to wit:

Project Name: Michigan Avenue Utility Improvements

Project Number: PU21-02

Base Bid: Miscellaneous Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	9 MO	Mobilization, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per month. (Pay Note M1)	$_____	$_____
2)	180 LF	16" PVC Pipe Casing, SDR 26 ASTM D2241, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note M2)	$_____	$_____
3)	9 MO	Erosion/Sediment Control, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per month. (Pay Note M3)	$_____	$_____
4)	9 MO	Traffic Control, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per month. (Pay Note M4)	$_____	$_____

Base Bid: Miscellaneous Items				
Item No.	Quantity	Description	Unit Price	Total Amount
5)	9 MO	Job Site Safety, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per month. (Pay Note M5)	$_____	$_____
6)	N/A	Material Mark-up, complete and in place, for the sum of: _____percent. (Pay Note M6)	%_____	$_N/A_____
7)	N/A	Labor Mark-up (Regular Work Hours), complete and in place, for the sum of: _____percent. (Pay Note M7)	%_____	$_N/A_____
8)	N/A	Equipment Rental Mark-up (Non-Standard Equipment Only), complete and in place, for the sum of: _____percent. (Pay Note M8)	%_____	$_N/A_____
Total Miscellaneous Items 1-8		$_____		

Base Bid: Demolition Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	1,940 LF	Removal & Disposal of Existing Water Main, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note D1)	$_____	$_____
2)	180 CY	Flowable Fill for Existing Pipes Abandoned In Place, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per cubic yard. (Pay Note D2)	$_____	$_____
3)	7 EA	Removal & Disposal of Existing Fire Hydrant Assembly, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note D3)	$_____	$_____
4)	2,700 SY	Removal & Dispose of Existing Unclassified Pavement, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note D4)	$_____	$_____
5)	80 LF	Removal & Dispose of Existing Concrete Curb & Gutter, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note D5)	$_____	$_____
6)	2 SY	Removal & Disposal of Existing Concrete Sidewalk & Ramps, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note D6)	$_____	$_____
Total Demolition Items 1-6			$_____	

Base Bid: Water Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	100 LF	16" AWWA C-900 DR18, PVC, Water Main, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note W1)	$_____	$_____
2)	800 LF	12" AWWA C-900 DR18, PVC, Water Main, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note W1)	$_____	$_____
3)	4,660 LF	8" AWWA C-900 DR18, PVC, Water Main, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note W1)	$_____	$_____
4)	280 LF	6" AWWA C-900 DR18, PVC, Water Main, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note W1)	$_____	$_____
5)	2 EA	16" Gate Valve & Vault (MJxMJ/FL), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note W2)	$_____	$_____
6)	4 EA	12" Gate Valve & Box (MJxMJ/FL), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note W3)	$_____	$_____

Base Bid: Water Items				
Item No.	Quantity	Description	Unit Price	Total Amount
7)	36 EA	8" Gate Valve & Box (MJxMJ/FL), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note W3)	$_____	$_____
8)	9 EA	6" Gate Valve & Box (MJxMJ/FL), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note W3)	$_____	$_____
9)	7 EA	Fire Hydrant Assembly, (≤ 5' Water Main Bury Depth), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note W4)	$_____	$_____
10)	7 VF	Fire Hydrant Riser, (> 5' Water Main Bury Depth), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per vertical foot. (Pay Note W5)	$_____	$_____
11)	2.80 TON	Ductile Iron Fittings, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per ton. (Pay Note W6)	$_____	$_____

Base Bid: Water Items				
Item No.	Quantity	Description	Unit Price	Total Amount
12)	7 EA	Dresser Coupling, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note W7)	$_____	$_____
13)	7 EA	Connect to Existing Water Main, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note W8)	$_____	$_____
14)	4 EA	12”x2” Tapping Saddle for water service connection, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note W9)	$_____	$_____
15)	8 EA	8”x2” Tapping Saddle for water service connection, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note W9)	$_____	$_____
16)	12 EA	2” Water Service Connection, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note W10)	$_____	$_____

Base Bid: Water Items				
Item No.	Quantity	Description	Unit Price	Total Amount
17)	320 LF	2" Water Service Lateral, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note W11)	$_____	$_____
18)	12 EA	Water Meter Installation (New Service Lateral), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note W12)	$_____	$_____
19)	1 EA	12" Gate Valve & Box Replacement / Installation (Stand Alone), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note W13)	$_____	$_____
20)	5,840 LF	Open Trenching of Water Main, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note W14)	$_____	$_____
Total Water Items 1-20		$_____		

Base Bid: Paving Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	100 LF	Concrete Curb & Gutter Repair, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note P1)	$_____	$_____
2)	50 SY	Concrete Pedestrian Access Ramp Repair, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P2)	$_____	$_____
3)	50 SY	4" Concrete Sidewalk Repair, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P3)	$_____	$_____
4)	50 SY	3" Type C HMAC Asphalt Pavement Repair (PG64-22), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P4)	$_____	$_____
5)	2,700 SY	2" Type D HMAC Asphalt Pavement Repair (PG70-22), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P5)	$_____	$_____
6)	540 GAL	Bituminous Prime Coat (MC-30, 0.20 Gal / SY), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per gallon. (Pay Note P6)	$_____	$_____
7)	5 GAL	Tack Coat (MC-30, 0.10 Gal / SY), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per gallon. (Pay Note P7)	$_____	$_____

Base Bid: Paving Items				
Item No.	Quantity	Description	Unit Price	Total Amount
8)	2,720 SY	Flowable Fill / 2-Sack Backfill, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P8)	$_____	$_____
Total Paving Items 1-8		$_____		

Bid Price For:	
1. Miscellaneous Items	$_____
2. Demolition Items	$_____
3. Water Items	$_____
4. Paving Items	$_____
Total Price	$_____

In addition to providing the individual prices for the items above, Contract shall write the total bid amount in the sum of

_____dollars

and _____ cents total.

The undersigned bidder hereby declares that he has visited the site of the work and has carefully examined the contract documents pertaining to the work covered by the above bid. The selected contractor will receive written notice to proceed.

Bidder agrees to substantially complete all work within _270_ calendar days after receipt of notice to proceed.

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.

Enclosed herewith in this proposal is a cashier's check, cash or bid bond on a form approved by the City Attorney, for

_____dollars

and _____ cents total. ($_____)

which it is agreed shall be collected and retained by the owner as liquidated damages in the event this proposal is accepted by the Owner within thirty days (30) after the date advertised for the reception of bids and the undersigned fails to execute the contract and required bonds with the owner, under the conditions thereof, within (15) days after the date said proposal is accepted; otherwise said check or bond shall be returned to the undersigned on demand.

_____

Name of Contractor

Submitted By	Print Name and Title	
Mailing Address		
City	State	Zip

PAY NOTES

Michigan Avenue Utility Improvements

Bid Item		Pay Quantity Note
Miscellaneous Items		
1	Mobilization	M1
2	16" PVC Pipe Casing, SDR 26 ASTM D2241	M2
3	Erosion/Sediment Control	M3
4	Traffic Control	M4
5	Job Site Safety	M5
6	Material Mark-up	M6
7	Labor Mark-up (Regular Work Hours)	M7
8	Equipment Rental Mark-up (Non-Standard Equipment Only)	M8
Demolition Items		
1	Removal & Disposal of Existing Water Main	D1
2	Flowable Fill for Existing Pipes Abandoned In Place	D2
3	Removal & Disposal of Existing Fire Hydrant Assembly	D3
4	Removal & Disposal of Existing Unclassified Pavement	D4
5	Removal & Disposal of Existing Concrete Curb & Gutter	D5
6	Removal & Disposal of Existing Concrete Sidewalk & Ramps	D6
Water Items		
1	16" AWWA C-900 DR18, PVC, Water Main	W1
2	12" AWWA C-900 DR18, PVC, Water Main	W1
3	8" AWWA C-900 DR18, PVC, Water Main	W1
4	6" AWWA C-900 DR18, PVC, Water Main	W1
5	16" Gate Valve & Vault (MJxMJ/FL)	W2
6	12" Gate Valve & Box (MJxMJ/FL)	W3
7	8" Gate Valve & Box (MJxMJ/FL)	W3
8	6" Gate Valve & Box (MJxMJ/FL)	W3
9	Fire Hydrant Assembly (≤ 5' Water Main Bury Depth)	W4
10	Fire Hydrant Riser (> 5' Water Main Bury Depth)	W5
11	Ductile Iron Fittings	W6
12	Dresser Coupling	W7
13	Connect to Existing Water Main	W8
14	12"x2" Tapping Saddle	W9
15	8"x2" Tapping Saddle	W9
16	2" Water Service Connection	W10
17	2" Water Service Lateral	W11
18	Water Meter Installation (New Service Lateral)	W12
19	12" Gate Valve & Box Replacement / Installation (Stand Alone)	W13
20	Open Trenching of Water Main	W14
Paving Items		
1	Concrete Curb & Gutter Repair	P1
2	Concrete Pedestrian Access Ramp Repair	P2
3	4" Concrete Sidewalk Repair	P3
4	3" Type C HMAC Asphalt Pavement Repair (PG64-22)	P4
5	2" Type D HMAC Asphalt Pavement Repair (PG70-22)	P5
6	Bituminous Prime Coat (MC-30, 0.20 Gal / SY)	P6
7	Tack Coat (MC-30, 0.10 Gal / SY)	P7
8	Flowable Fill / 2-Sack Backfill	P8

PAY QUANTITY NOTES

M1 Includes the necessary equipment, labor, materials, and incidentals for all Mobilization to the job site complete and in place. Measurement and payment to be made per month.

M2 Includes the necessary equipment, labor, materials, and incidentals for the installation of Pipe Casing per the construction drawings and City of Midland standards and specifications, including all spacers, grout, embedment, detector wire, tracer tape, and appurtenances. Measurement and payment to be per linear foot measured along the ground surface following the pipe centerline through all valves, fittings, structures, and appurtenances.

M3 Includes the necessary equipment, labor, materials, and incidentals to implement the Erosion Control Plan per the construction drawings and City of Midland standards and specifications. Measurement and payment to be made per month.

M4 Includes the necessary equipment, labor, materials, and incidentals to implement the Traffic Control per the approved Traffic Control Plan. Any required traffic control devices are to meet the City of Midland Traffic Division Standards. Measurement and payment to be made per month.

M5 Includes the necessary equipment, labor, materials, and incidentals to implement Job Site Safety and to provide a safe work environment for the project work area (including all personal protection equipment, trench safety, etc.) per the construction drawings and in compliance with all applicable Federal, State, and Local requirements or regulations including those of OSHA and the City of Midland. JOB SITE SAFETY IS THE RESPONSABILITY OF THE CONTRACTOR. Measurement and payment to be made per month.

M6 Includes the Material Mark-up for materials and material sizes (pipe, valve, manhole, etc.) required to complete work for improvements not covered by the bid items listed in the Proposal for this project per the construction drawings and the City of Midland standards and specifications. Measurement and payment to be made per the cost of the material in question plus the set percent increase established by this bid item. The Contractor must provide a copy of the invoice for the material cost from the supplier to the Engineer of Record or the City of Midland designee before this bid item may be claimed for any material. This will be applied solely at the discretion of the Engineer of Record or the City of Midland designee.

M7 Includes the Labor Mark-up (Regular Work Hours) for labor required to complete work for improvements not covered by the bid items listed in the Proposal for this project per the construction drawings and the City of Midland standards and specifications. Measurement and payment to be made per the cost of labor in question plus the set percent increase established by this bid item. The Contractor must provide a typical hourly pay rate for work crews prior to the percent increase along with the number of workers on the crew and the number of hours worked by the crew for the project in question to the Engineer of Record or the City of Midland designee before this bid item may be claimed for any labor. This will be applied solely at the discretion of the Engineer of Record or the City of Midland designee.

M8 Includes the Equipment Rental Mark-up (non-standard equipment only) required to complete work for improvements not covered by the bid items listed in the Proposal for this project per the construction drawings and the City of Midland standards and specifications. Measurement and payment to be made per the cost of the equipment rental in question plus the set percent increase established by this bid item. The Contractor must provide a copy of the invoice for the rented equipment from the equipment supplier to the Engineer of Record or the City of Midland designee before this bid item may be claimed for any rented equipment. This will be applied solely at the discretion of the Engineer of Record or the City of Midland designee.

D1 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Utility Mains per the construction drawings and City of Midland standards and specifications, including the removal and disposal of all pipes, fittings, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all valves, manholes, fittings, junctions, structures, and appurtenances.

D2 Includes the necessary equipment, labor, materials, and incidentals for the placement of Flowable Fill for Existing Pipes Abandoned In Place (Portland Cement 2-Sack = 188 LBS/CY) per the construction drawings and City of Midland standards and specifications, including all plugging or caping the pipe to be abandoned, and appurtenances. Measurement and payment to be made per cubic yard volume of flowable fill placed in pipe abandoned in place.

D3 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Fire Hydrant Assembly per the construction drawings and City of Midland standards and specifications. Fire hydrant assemblies are to be returned to the City Utility Maintenance Department unless otherwise directed by the Engineer of Record or their representative. This includes removal and disposal of all structures, fittings, pipes, and appurtenances. Measurement and payment to be per each fire hydrant assembly removed.

D4 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Unclassified Pavement per the construction drawings and City of Midland standards and specifications including all saw-cutting and appurtenances. Depths given are approximate and pavement material is to be removed in its entirety. No additional compensation will be made for increased pavement depth removal. Saw-cut pavement edges are to be full pavement depth, cleanly cut, and clearly defined edges free of breaks. Measurement and payment to be made per square yard of unclassified pavement removed.

D5 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Concrete Curb & Gutter per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per linear foot.

D6 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Concrete Sidewalk & Ramps per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per square yard.

W1 Includes the necessary equipment, labor, materials, and incidentals for the installation of Water Mains per the construction drawings and City of Midland standards and specifications, including all embedment, detector wire, tracer tape, necessary testing, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all valves, fittings, structures, and appurtenances.

W2 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Gate Valve & Vault per the construction drawings and City of Midland standards and specifications, including all embedment, vault, joint restraint, thrust blocking, concrete collar, and appurtenances. Measurement and payment to be made per each valve and vault installed. Includes valves associated with tapping sleeves.

W3 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Gate Valve & Box per the construction drawings and City of Midland standards and specifications, including all embedment, valve box, joint restraint, thrust blocking, concrete collar, and appurtenances. Measurement and payment to be made per each valve and box installed. Includes valves associated with tapping sleeves.

W4 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Fire Hydrant Assembly to a depth of 5' per the construction drawings and City of Midland standards and specifications, including all risers, embedment, gravel sump, thrust blocking, necessary testing, and appurtenances. Measurement and payment to be made per each fire hydrant assembly installed.

W5 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Fire Hydrant Riser (> 5' Water Main Bury Depth) per the construction drawings and City of Midland standards and specifications, including all embedment and appurtenances. Measurement and payment to be made per vertical foot of riser below a water main bury depth of 5' measured from the water main invert and rounded up to the nearest 0.5'.

W6 Includes the necessary equipment, labor, materials, and incidentals for the installation of Ductile Iron Fittings per the construction drawings and City of Midland standards and specifications, including all embedment, wrapping, thrust blocking, joint restraints, and appurtenances. All fittings are to be C153 ductile iron compact fittings. Fitting weights are established from Tyler Union Quality Waterworks Products Catalog PC-U2014, December, 2014 and payment will be made at the standard compact weight. Nuts, bolds, glands, and other associated accessories are not included as part of the fitting weight and are considered subsidiary to the weight of the fitting. Any additional required fittings not shown on the drawings will be paid for at weights established in the Tyler Union Waterworks Catalog.

W7 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Dresser Coupling per the construction drawings and City of Midland standards and specifications, including all embedment, wrapping, thrust blocking, and appurtenances. Measurement and payment to be made per each dresser coupling installed.

W8 Includes the necessary equipment, labor, materials, and incidentals to Connect to Existing Water Main per the construction drawings and City of Midland standards and specifications, including all fittings, repairs, and appurtenances. Measurement and payment to be made per each connection made.

W9 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Tapping Saddle for a water service connection per the construction drawings and City of Midland standards and specifications, including all embedment, thrust blocking, and appurtenances. Measurement and payment to be per each tapping saddle installed.

W10 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Water Service Connection per the construction drawings and City of Midland standards and specifications, including all brass goods from the corporation stop to the brass angle valve (inclusive), as well as the installation of a new meter box and all appurtenances. Measurement and payment to be made per each water service connection installed.

W11 Includes the necessary equipment, labor, materials, and incidentals for the installation of Water Service Lateral pipe per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, backfill, polyethylene service line or other pipe, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all valves, fittings, and appurtenances.

W12 Includes the necessary equipment, labor, materials, and incidentals for a new Water Meter Installation as part of a new water service lateral installation per the construction drawings and City of MIdland standards and specifications, including all appurtenances. The new water meter will be provided by the City of Midland. Measurement and payment to be per each water meter set.

W13 Includes the necessary equipment, labor, materials, and incidentals for a Gate Valve & Box Replacement / Installation (Stand Alone) per the construction drawings and City of Midland standards and specifications, including all saw-cutting, pavement removal, unclassified excavation, removal of fittings, removal of structures, embedment, box, joint restraint, thrust blocking, concrete collar, and appurtenances. Measurement and payment to be made per each valve and box replaced or installed. Includes valves associated with tapping sleeves.

W14 Includes the necessary equipment, labor, materials, and incidentals for Open Trenching of Water Main per the construction drawings and City of Midland standards and specifications, including all unclassified excavation, backfill not including flowable fill backfill, providing trench safety and protection for workers to install pipe, structures, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all structures, fittings, and appurtenances.

P1 Includes the necessary equipment, labor, materials, and incidentals for Concrete Curb & Gutter Repair per the construction drawings and City of Midland standards and specifications including all forming, placement, jointing, fiber reinforcement, finishing, and appurtenances. Measurement and payment to be made per linear foot measured along the back-of-curb.

P2 Includes the necessary equipment, labor, materials, and incidentals for Concrete Pedestrian Access Ramp Repair per the construction drawings and City of Midland standards and specifications, including all forming, placement, jointing, fiber reinforcement, finishing, and appurtenances. Measurement and payment to be made per square yard.

P3 Includes the necessary equipment, labor, materials, and incidentals for Concrete Sidewalk Repair per the construction drawings and City of Midland standards and specifications, including all forming, placement, jointing, fiber reinforcement, finishing, and appurtenances. Measurement and payment to be made per square yard.

P4 Includes the necessary equipment, labor, materials, and incidentals for the installation of Type "C" HMAC Asphalt Pavement Repair (110 LBS / SY at 1" thick, PG 64-22) per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P5 Includes the necessary equipment, labor, materials, and incidentals for the installation of Type "D" HMAC Asphalt Pavement Repair (110 LBS / SY at 1" thick, PG 70-22) per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P6 Includes the necessary equipment, labor, materials, and incidentals for application of Bituminous Prime Coat (MC-30, 0.20 GAL / SY) per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per gallon of material applied at the designated rate.

P7 Includes the necessary equipment, labor, materials, and incidentals for application of Tack Coat (MC-30, 0.10 GAL / SY) per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per gallon of material applied at the designated rate.

P8 Includes the necessary equipment, labor, materials, and incidentals for installation of Flowable Fill / 2-Sack Backfill (Portland Cement 2 Sack = 188 LBS/CY) per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

BID BOND

THE STATE OF TEXAS §

COUNTY OF MIDLAND § SURETY NO _____

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 for the construction of Michigan Avenue Utility Project.

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 AGREE 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 of such events, shall be entitled and is hereby given the right to collect the full amount of this Bid Bond as liquidated damage.

PROVIDED, further that if any legal action be filed upon this Bond venue shall lie in Midland County, Texas.

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

CONTRACT

THE STATE OF TEXAS §

COUNTY OF MIDLAND §

THIS CONTRACT, made and entered into this _____ day of _____, 20_____, by and between the City of Midland of the County of Midland and State of Texas, acting through its Mayor thereunto duly authorized so to do, Party of the First Part, hereinafter termed OWNER, and _____ of the City _____, County of _____, State of _____, Party of the Second Part, herein-after termed CONTRACTOR.

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the Party of the first Part (OWNER), and under the conditions expressed in the bond bearing even date herewith, the said Party of the Second Part (CONTRACTOR), hereby agrees with the said Party of the First Part (OWNER) to commence and complete the construction of certain improvements described as follows: Michigan Avenue Utility Improvements together with appurtenances and incidentals.

Conditions of the Contract and at his (or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendent, labor, insurance and other accessories and services necessary to complete the said construction in accordance with the conditions and prices stated in the Proposal attached hereto, and in accordance with the Notice to the Contractors, General and Special Conditions of Agreement, Plans and other drawings and printed or written explanatory matter thereof, and the Specifications and addenda therefore as prepared by Engineering and Transportation Department of the City of Midland, Texas, herein entitled the ENGINEER, together with the CONTRACTOR'S written Proposal, the General Conditions of the Contract, and the Performance and Payment Bonds hereto attached; all of which are made a part hereof and collectively evidence and constitute the entire Contract.

The CONTRACTOR hereby agrees to commence work within fifteen (15) calendar days after the written notice to do so and to substantially complete the same within 270 calendar days after receipt of notice to proceed, subject to such extensions of time as are provided by the General and Special Conditions.

The OWNER agrees to pay the CONTRACTOR in current funds the price or prices shown in the proposal, which forms a part of this Contract, such payments to be subject to the General and Special Conditions of the Contract.

The SUM TOTAL of this Contract shall be: _____.

INSURANCE

Contractor 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 an occurrence basis. This insurance shall name the City as an additional insured and waive subrogation in favor of the City.

The Business Automobile Liability insurance provided by Contractor 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. The insurance shall name the City as an additional insured and waive subrogation in favor of the City.

The Workers' Compensation coverage provided by Contractor shall inure to the benefit of employees injured during the course and scope of their employment by Contractor pursuant to this Contract. The Workers' Compensation shall waive all rights of subrogation in favor of the City.

All insurance required pursuant to this Contract shall provide for a waiver of subrogation in favor of the City. All insurance required pursuant to this Contract, except for Workers' Compensation Insurance, shall name the City as an additional insured on a claims occurred basis. City shall be provided the notice by Contractor's insurance provider not later than thirty (30) days prior to any reduction or termination of such coverage.

Contractor 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, Contractor shall provide one or more certificates of insurance specifically stating that these requirements have been met and subject to the approval of the City. The City shall not be required to provide any insurance whatsoever pursuant to this Contract.

The Contractor certifies that the certificate of insurance provided as required herein complies with the requirements of Senate Bill 425, passed during the 82nd regular session of the Texas Legislature, and effective January 1, 2012. The Contractor shall not use an unapproved certificate of insurance or insert inappropriate language on a certificate. Compliance with state law is the sole responsibility of the Contractor.

WAIVER OF ATTORNEY FEES

WAIVER OF ATTORNEY FEES: BY EXECUTING THIS CONTRACT, CONTRACTOR AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST THE OWNER, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THE CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE CONTRACT. THE CONTRACTOR SPECIFICALLY AGREES THAT IF THE CONTRACTOR 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 AMEDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, THE CONTRACTOR AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH CONTRACTOR MIGHT OTHERWISE BE ENTITLED.

CONTRACTOR AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. THE CONTRACTOR ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THE CONTRACT. THE CONTRACTOR FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN THE OWNER AND THE CONTRACTOR. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF SOVEREIGN IMMUNITY.

THE CONTRACTOR AND OWNER ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION.

SOVEREIGN IMMUNITY

By executing this Contract, the City is not waiving its right of sovereign immunity. The City is retaining its immunity from suit. The City is not granting consent to be sued by legislative resolution or action.

THERE IS NO WAIVER OF SOVEREIGN IMMUNITY.

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. 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. The obligations and undertakings of each of the parties to this Contract shall be deemed to have occurred in Midland County, Texas.

COMPLIANCE – Contractor agrees that it shall comply with Texas Government Code Section 2252.908, *et seq.*, as amended. Contractor agrees that it shall comply with Texas Local Government Code Section 176.006, *et seq.*, as amended.

VERIFICATION

To the extent that Sections 2271.002 and 2274.002 of the Texas Government Code (collectively, the "Anti-Boycott Statutes") apply to this Contract, Contractor hereby verifies:

- that Contractor does not boycott Israel and will not boycott Israel during the term of this Contract;
- that Contractor does not boycott energy companies and will not boycott energy companies during the term of this Contract; and
- that Contractor 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 Contractor shall be deemed to have not made such verification.

RECORDS RETENTION AND PRODUCTION OF INFORMATION

To the extent that this Contract is a contract described by Section 552.371 of the Texas Government Code, Contractor shall (1) preserve all contracting information related to the Contract as provided by the records retention requirements applicable to the City of Midland for the duration of the contract, (2) promptly provide to the City of Midland any contracting information related to the Contract that is in the custody or possession of Contractor on request of the City of Midland, and (3) on completion of the Contract, either (i) provide at no cost to the City of Midland all contracting information related to the Contract that is in the custody or possession of Contractor, or (ii) preserve the contracting information related to the Contract as provided by the records retention requirements applicable to the City of Midland.

PUBLIC INFORMATION

To the extent that this Contract is a contract described by Section 552.371 of the Texas Government Code, Contractor 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 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.

IN WITNESS WHEREOF, the parties to these presents have executed this Agreement in the year and day first above written.

Parties of the First Part (Owner)

By: _____
Patrick Payton, Mayor

ATTEST:

_____
Amy Turner, City Secretary

APPROVED ONLY AS TO FORM:

By: _____
John Ohnemiller, City Attorney

By: _____
Party of the Second Part (CONTRACTOR)

By: _____
Title

THE 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 foregoing instrument, and acknowledged to me that he executed the same as an 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 _____ day of _____, 20_____

_____
Notary Public

Form Revised October 2022

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 ___Michigan Avenue Utility Improvements_____ , 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

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 Michigan Avenue Utility Improvements, 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

CERTIFICATE OF PAYMENT

THE STATE OF TEXAS §

COUNTY OF MIDLAND §

Michigan Avenue Utility Improvements

The undersigned states that all debts, bills, and expenses that were incurred by the undersigned, his agents, or subcontractors employed by him, for labor, wages, materials and other purposes furnished for the above project have been paid and satisfied in full.

The undersigned, as general contractor for the above described project agrees to indemnify, hold harmless and defend the City, its officers, agents, and employees, from and against all claims and suits for damages, expenses, including court costs and attorney fees, arising out of or resulting from the undersigned contractor, his agents or subcontractors employed by him for expenses, warranties for items furnished, or labor performed and for any party that has supplied materials in connection with the repair or construction of the above referenced premises.

The undersigned contractor agrees to waive any and all claims it may have against the City, associated with, resulting from or arising out of the work performed at the above premises.

Further, the undersigned states that all labor performed by the undersigned, his agents, and subcontractors employed by him, has been completed in the usual and customary workmanlike manner and all work performed is accompanied with the usual and appropriate warranties for such work or repair, absent any disclaimer previously approved by the City of Midland.

I, the undersigned, release and relinquish unto the City of Midland, and their assigns the above described lien upon the above referenced property and hereby certify that all debts, bills, and expenses incurred by the undersigned, his agents, or subcontractors employed by him in connection with work done at the above

premises have been fully paid, in exchange for payment in full to be made by the City of Midland for the performance on the above described premises.

WITNESS MY HAND on this _____ day of _____, 20_____.

_____
Signature

_____
Typed or Printed Name

_____
Title

_____
Name of Company

SUBSCRIBED AND SWORN to before me on the _____ day of _____, 20_____.

_____
Notary Public, State of Texas

_____
Typed or printed name

_____
My Commission expires:

Form Revised October 2022

PREPARATION OF RIGHT OF WAY

1. GENERAL

Includes the preparation of right-of-way for construction by clearing, grubbing, removing and disposing of all obstructions and objectionable material from the right-of-way and designated easements, which is not specifically provided for on the plans.

Obstructions and objectionable material refer to all objects or material that do not meet the quality of standards for the courses of pavement to be constructed or which protrude into the excavation for slopes.

Measurement and Payment - Measurement and payment will be at the units and prices for the applicable bid item in the proposal.

When no specific bid items are included in the bid proposal for work specified under this section this work shall be considered as incidental to other items of work and the cost shall be included in the bid for these items. No separate payment will be made.

2. CONSTRUCTION METHODS

Removal - Obstructions and objectionable material to be removed by blading, plowing, bulldozing, or other methods approved in writing by the Engineer. The use of explosives will not be permitted. Solid objects must be removed to a depth of at least one (1) foot below the finished slope or subgrade elevation. Hollow objects must be removed entirely.

Disposal - Material to be removed from the right-of-way becomes the property of the Contractor. If disposal areas are available, they will be indicated on the plans.

Preservation of Trees and Shrubs - Trees and shrubs to be preserved in the right of way are shown on the plans and must be protected from injury during construction.

Removal of Concrete - Cut concrete at the right-of-way line straight and vertical by sawing or other approved methods prior to the removal of concrete in the right-of-way.

EXCAVATION, EMBANKMENT AND PREPARATION OF SUBGRADE 1
1. GENERAL 2
2. CONSTRUCTION METHODS 2

EXCAVATION, EMBANKMENT AND PREPARATION OF SUBGRADE

1. GENERAL

Includes the excavation, embankment and preparation of subgrade determined by the lines, grades and sections shown on the plans and in accordance with the provisions of the specifications.

Excavation - Includes excavation to planned grade, disposal of the material, removal of unsuitable subgrade material and borrow material when required in the construction. All excavation to be classified as common.

Embankment - Consists of excavated or borrow materials placed and compacted in horizontal layers in accordance with the specifications.

Subgrade - The upper eight inches (8") of embankment or the upper eight inches (8") below the roadway excavation finished grade. The subgrade shall extend from six inches (6") back of curb to six inches (6") back of curb where curb and gutter is to be constructed.

Measurement and Payment - Measurement and payment to be at the units and prices for the applicable bid items in the proposal.

2. CONSTRUCTION METHODS

Excavation - Made at the location and to the lines and grades shown on the plans in areas previously prepared in accordance with provisions of Section 2A. Dispose of excess material not required in the embankment and material that is unsuitable for subgrade. Excavation tolerance to be plus or minus 1/10 foot from the plan grade.

The area between the curb and property line shall be excavated or filled, whichever is necessary, to curb height at back of curb and finished to a straight even surface to the property line. The minimum elevation at the property line shall be the elevation of the top of the curb. The maximum elevation at the property line shall be equal to a rise of 1/4 inch per foot from the back of the curb to the property line.

During the excavation of this project, it will be required that all parkways be excavated and shaped at the same time the roadway is excavated. Excess excavation will be disposed of at locations approved by the Engineer.

Embankment shall be constructed at the locations and to the lines and grades shown on the plans in areas previously prepared in accordance with Section 2A of these specifications. Top eight inches (8") of natural ground to be compacted

to embankment density requirements. Embankment shall be constructed from suitable material obtained from the excavation or borrow free of roots, rocks in excess of three inches (3"), debris and other objectionable material. Excavation deficiencies shall be supplemented from a borrow source approved by the Engineer. Embankment shall be constructed in uniform horizontal layers not to exceed eight inches (8") of loose depth and compact with suitable equipment to a minimum of ninety percent (90%) AASHTO T180. The materials shall be processed by aeration or watering to bring the material to the approximate optimum moisture. Dry layers will not be permitted. Soft spots that develop in the embankment shall be removed and replaced with suitable material. No payment will be made for removal of soft spots. Tolerance for embankment grading shall be one-half foot (1/2) plus or minus the plan grade.

Preparation of Subgrade - Eight inches (8") of the upper portion of the embankment or excavation shall be shaped and compacted to a minimum density of 95 percent (95%) AASHTO T180 and finished within a tolerance of one-half inch (1/2") in ten feet (10'). The finished subgrade shall be protected and maintained in a satisfactory condition until covered by succeeding construction.

Compaction Tests - Field density tests will be made by the Owner or by a laboratory selected by the Owner. The Contractor shall notify the Engineer when compaction has been achieved. The Contractor shall allow 24 hours for scheduling of test. Prior to the taking of subgrade density test, the entire subgrade will be tested by proof-rolling using a pneumatic roller weighing not less than 50,000 lbs. gross with tire pressure being not less than 110 psi. Any soft spots, pumping, or other evidence of weakness shall be remedied before density tests are made. Proof rolling shall be in the presence of the Engineer or his duly authorized representative.

The City will pay the cost of initial density tests made on the subgrade. If the subgrade fails to meet the density requirements on the first test, the contractor will be required to have subsequent density tests made by the commercial lab selected by owner. The cost of all subsequent density tests will be born by the contractor.

08/07

CONCRETE CURB AND GUTTER, SIDEWALKS AND DRIVEWAYS,

VALLEY GUTTERS, CENTER DRAINS AND RIP RAP

1. GENERAL

Includes the construction of concrete curb and gutter, sidewalks, driveways, valley gutters, center drains and rip rap in accordance with lines, grades and the sections shown on the plans and constructed in full compliance with provisions of the specifications.

A proven performance record by the Texas Highway Department shall be supplied by material producers for all materials supplied by them.

2. MATERIALS

Concrete - All concrete other than rip rap shall be Class "A" concrete in accordance with Texas Highway Department specifications Item No. 421. Concrete for rip rap shall be the class as shown on the plans and detail drawings. When no concrete class is shown the plans concrete for rip rap shall be Class "B" concrete.

Concrete batch designs shall be furnished for each project and shall include all classes of concrete proposed for use on the project.

Reinforcing Steel - Reinforcing steel shall be deformed bars or wire mesh fabric conforming to the requirements of "Texas State Department of Highways and Public Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges" Item No. 440 and shall be of the sizes and grades as shown on the plans.

The contractor, at his option, may use fiber reinforcing in lieu of the wire mesh for all concrete slab on grade. When fiber reinforcing is used, it shall be "Fiber Mesh" or "Caprolan RC" or approved equal. The material and rate of application shall be approved by the Engineer prior to its use.

Expansion Joints - Bituminous pre-molded joint filler shall be composed of top grade fiber, treated by special impregnation system with water repellent bituminous materials. It shall be a non-extruding type, resilient, expanding on release of compression, preventing open joint crevices. The pre-molded joint filler shall be of such character, that it will not be deformed by handling during hot weather, nor shall it become brittle in cold weather. It shall be free from visible external defects such as holes, ragged or untrue edges, breaks, cracks or tears. It may be covered on both sides with paper to facilitate handling.

The joint filler shall be accurately cut to the dimensions and shapes required. It shall be of the thickness required by the plans, or as specified elsewhere.

3. CONSTRUCTION METHODS

GENERAL

No concrete shall be placed when, in the Engineers opinion, weather or other conditions would be detrimental to the structure placed. No concrete shall be placed on grade when the ground temperature is 35^{o} F or lower. Concrete may be placed when the ground temperature is rising from 35^{o} F. Concrete placed in cold weather shall be protected from freezing for 72 hours after being placed.

CURB AND GUTTER

EXCAVATION AND SUBGRADE - Excavation for curb, gutter, and combined curb and gutter shall be done with the subgrade excavation for the street. Street subgrade shall extend from six inches (6") back of curb to (6") back of curb and shall be compacted for a full width to a minimum of 95% AASHTO T180-61. Where subgrade is more than three inches (3") below bottom of curb, fill shall be compacted caliche base constructed from six inches (6") back of curb to six inches (6") back of curb as specified for base course.

Whenever subgrade or base is dry or dusty, it shall be thoroughly moistened, not made muddy, before the concrete is placed.

Forms - Forms shall be of steel, of a type to be approved by the Engineer, except that curves may be formed with wood sections built up or laminated, upon prior approval by the Engineer.

The forms shall be attached securely to stakes, shall be set true to line and grade, and braced sufficiently to remain true during the placing and tamping of the concrete. Forms shall be thoroughly cleaned and oiled before each use.

Curves - All changes in direction of the curbs shall be by means of true circular curves of the radii as shown on the plans.

Expansion Joints - Expansion joints shall be placed between curb and gutter sections at the tangent points of all curves, at each side of the inlet boxes, drives, alleyways, and at intervals of not more than forty feet (40') in straight runs. The expansion material shall be pre-molded three-fourths inch (3/4") in thickness, and shall conform to the requirements of expansion material as specified herein. It shall be cut to the full size and shape or the cross section of the curb and gutter, less one-half inch (1/2") from the finished surface thereof. The edges of sections against the joint shall be finished with an edging tool and the joint raked clean of concrete.

Finishing - There shall be provided on the job a metal screed or mule designed to give proper shape to the curb and gutter. It shall be bent to the exact shape of the finished curb and gutter and the forward edge turned up slightly to prevent disturbing the mortar. It shall be designed to ride on the forms and when properly manipulated shall leave the curb and gutter in its proper shaped condition. An "S" trowel shall be used to finish the surface and minor imperfections shall be corrected with a mason's trowel. Care shall be taken to finish

the gutter flow line to a true, uniform grade. All edges shall be finished with an edging tool, and joints marked with a jointer. Joint marks shall coincide with actual joints and shall be straight and true.

Curing - The completed curb and gutter, shall be cured in accordance with the requirements of the item "Membrane Curing", Texas Highway Department Item 531.

DRIVEWAYS AND ALLEY RETURNS

Driveways and alley returns shall be constructed of Class "A" concrete to the lines and grades as shown on the plans and detail sheets. All driveways and alley returns shall be reinforced as shown on the detail drawings.

Excavation and Subgrade - Excavation shall be accomplished in the same manner as for streets and curbs. The subgrade for all driveways and alley returns shall be compacted to 95% modified proctor density for 8 inches depth.

Driveways for single family residences and property used for two family residential purposes (duplexes) may be placed on the compacted subgrade. All other driveways shall be considered as commercial driveways and shall be constructed on 6 inches compacted flexible base.

Flexible Base - Commercial driveways and alley returns shall be constructed on 6 inches of flexible base conforming to Section 2-C- Flexible Base, Caliche.

Forms - Forms shall be constructed of steel or, when approved by the engineer, wood conforming to the requirements for curb and gutter forms.

Expansion Joints - Expansion joints shall be placed at the ends of abutting curb and gutter at the end of radii for all driveways and alley returns. In addition, expansion joints shall be placed at the ends of abutting sidewalk sections and at any point where the driveway or alley return abuts another concrete structure. Expansion joint material shall be pre-molded three fourths inch (3/4") in thickness, cut to the shape and dimensions required and shall extend the full depth of the concrete.

Finishing - Shaping and finishing of driveways and alley returns shall be accomplished by using a screed to shape the driveway or alley return to the lines and grade required. Finishing shall be accomplished by use of wooden floats and stiff bristled brushes or brooms. The last finish shall be by brushing or brooming in
A direction transverse to the direction of traffic.

During the entire finishing process care shall be taken to maintain the true gutter invert in line with the street curb and gutter.

Curing - Finished driveways and alley returns shall be cured in accordance with the requirements "membrane curing" "Texas Department of Highways and Public Transportation, 1982 Standard Specifications for Highways, Streets and Bridges", Item Number 531.

CONCRETE VALLEY GUTTERS, CENTER DRAINS AND DRAINWAYS

Concrete slab type street drainage structures with or without curbs, shall be constructed of Class "A" concrete to the lines and grades as shown on the plans and detail sheets or as may be established in the field by the engineer.

Subgrade excavation preparation and compaction and flexible base shall be the same as specified for street construction. All drainage structures within the roadway shall be constructed on a flexible caliche base so that the thickness of the concrete slab plus base is equal to the thickness of the hot mix asphaltic concrete surface plus base.

Forms - Forms shall be as specified for curb and gutter.

Reinforcing - All slab type drainage structures shall be reinforced as shown on the plans and detail drawings. Care shall be taken to maintain all reinforcing in good condition and at its proper location within the slab.

Expansion Joints - Expansion joint material shall be as specified for curb and gutter and for driveways and alley returns.

Expansion joints for valley gutter shall be placed at the ends of radii and at the juncture between the fillet and the cross valley as shown on the detail sheet.

For center drains, expansion joints shall be placed at the ends of widened or transition sections and at each end of a section containing a manhole or other structure and at intervals of sixty feet (60') measured along the center line of the drain.

Additional expansion joints shall be placed where drainage slabs abut backs of curbs, sidewalks and at contact points with other concrete structures.

Contraction Joints - Contraction joints shall be spaced at 15' intervals along the center line of center drains. These contraction joints shall be saw cut 3/8" wide minimum and 1/4 the depth of the slab using an approved concrete saw.

Saw cut contraction joints shall be made after the concrete has set sufficiently to prevent excessive raveling during sawing and shall be completed before the concrete is 48 hours old.

Finishing - Finishing shall be the same as for alley returns and driveways with the last finishing operation for structures subject to vehicular traffic being by broom or stiff brush in a direction transverse to the direction of traffic.

Curing - Curing shall be the same as for curb and gutter and driveways and alley returns.

SIDEWALKS

Sidewalks shall be constructed of Class A" concrete to the lines and grades as shown on the plans and detail drawings or as may be established in the field by the engineer. Sidewalks shall be constructed parallel to the back of the curb and on a grade parallel to

the top of curb grade. The minimum thickness for any sidewalk is 4 inches. The minimum width of any sidewalk is 4 feet.

Excavation and Subgrade - Excavation for sidewalk shall be made with street excavation where applicable. Care shall be exercised in excavating for sidewalks. Any over excavation or any fill required for sidewalk must be brought to grade in lifts not to exceed two inches (2") and thoroughly tamped. Subgrade for sidewalks shall be compacted to at least the density of the adjacent soil or to 85% modified proctor whichever is greater.

When a sidewalk is to be constructed on an embankment the fill must extend at least 3 feet beyond the edge of the sidewalk.

If the subgrade is dry or dusty it must be thoroughly moistened but not made muddy before concrete is placed.

Forms - Forms for sidewalks may be either steel or wood. Forms must be in good shape and true to line and grade. If nominal 2" x 4" lumber is used the subgrade must be finished one half inch (1/2") below the bottom of the form to provide the required 4 inch thickness.

Expansion Joints - Expansion joint material shall be pre-molded conforming to these specifications and shall be one half inch (1/2") thick. The expansion joint shall extend the full depth of the sidewalk.

Expansion joints shall be placed at points where the sidewalk contacts the back of curb, at all junctures between sidewalks all directions, and at all points where the sidewalk abuts a driveway, alley return or other concrete structure including fence foundations.

Transverse expansion joints shall be constructed in the sidewalk at intervals not exceeding twenty eight feet (28') as measured along the centerline of the walk except for sidewalks that are constructed wider than four feet (4') in which case expansion joints may be placed at intervals that are multiples of the width but not exceeding thirty feet (30').

Contraction Joints - Contraction joints consisting of trowel cuts one and one half inches (1-1/2") deep shall be spaced at four foot (4') intervals along the sidewalk. Contraction joints shall be edged using an edging tool with a 1/4 inch or 3/8 inch radius.

For sidewalks wider than four feet (4') contraction joints may be placed at intervals equal to the width of the walk up to but not exceeding ten feet (10').

Finishing - Sidewalks shall be "struck off" with a screed to provide an even surface and float finished using a wooden float.

The final finish on the sidewalk shall be accomplished by brooming or brushing using a stiff bristled brush or broom with the final strokes being in the transverse direction.

Curing - Curing shall be as specified for curb and gutter and driveways and alley returns.

CONCRETE RIP RAP

Concrete rip rap shall be constructed of concrete of the class and to the line and grades as shown on the plans.

Excavation and Subgrade - Care shall be taken not to over excavate for rip rap. The subgrade for rip rap shall be compacted to at least the density of the adjacent undisturbed soil or 85% modified proctor whichever is higher.

Forms - Forms, where required, may be either steel or wood. Forms must be in good condition and true to line and grade.

Expansion Joints - Expansion joints, where required, will meet the requirements of expansion joints materials as specified herein and will be placed as shown on the plans or directed by the engineer.

Finishing - Finishing shall be by screed and wooden float to produce true uniform surface.

Curing - Curing shall be as specified for other concrete herein.

Slope Paving - Slope paving may be required behind the curb or behind sidewalks where street paving requires deeper cuts in developed areas. Slope paving shall be constructed of Class "A" concrete and shall be constructed to the lines and grades as shown on the plans or as established in the field. Slope pavement shall be four inches (4") thick and shall be constructed in accord with the specifications for sidewalks.

When no slope grade is given on the plans the slope gradient shall be l:l.

Unless listed separately on the bid proposal, slope pavement shall be measured and paid for as sidewalk.

4. BACKFILL AND CLEANUP

GENERAL

Backfill and clean up are an integral part of the various items covered by this specification and must be completed for each item before that item will be considered for payment.

CONCRETE STRUCTURES WITHIN THE PAVED AREA OF STREETS

Backfill and clean up for concrete structures within the paved areas of streets, alleys, etc. shall receive special attention to assure the integrity of the street pavement.

Structures constructed in previously paved areas shall have sufficient surface removed along with base and subgrade where necessary to set full face forms for the concrete. As soon as the forms are removed all loose material shall be removed from the form trench and the trench filled to the base level with Portland cement stabilized backfill material

consisting of two (2) sacks Portland cement to one (l) cubic yard of caliche base material or one (l) cubic yard "blow sand". When the cement stabilized backfill has cured the pavement edge shall be saw cut to provide true and straight lines and the pavement restored to its original or revised grade using Hot mix asphaltic concrete conforming to the requirements of Section 2-F of these specifications.

For structures constructed on previously prepared subgrade or base course, clean up and backfill shall be considered complete when the subgrade or base course has been made ready to receive the next course.

When a structure is constructed on a finished base course and it is necessary to remove base material to set forms, backfill and cleanup shall be as described for previously paved areas and shall be considered complete when the base course is made ready to receive the surface course or courses.

BACKFILL BEHIND CURBS AND ALONG SIDEWALKS

Backfill behind curbs and along sidewalks that is to be grassed shall be made using good top soil. Top soil shall be free of caliche, rocks, clods, lumps, debris and other objectionable material. This backfill shall be compacted to at least the density of undisturbed adjacent soil but not less than 85% modified proctor.

Backfill behind curbs and along sidewalks that is to receive paving shall be constructed to conform to the base and subgrade of the adjacent paving and shall be compacted to 95% modified proctor. Or the contractor may elect to backfill to the top of the base with two (2) sack cement stabilized backfill.

In undeveloped areas and in areas where no sidewalks exist the contractor shall slope from the back of the curb to a maximum height of 1/4 inch per foot rise from the top of the curb to the property line on a straight line grade. The minimum elevation at the property lines shall be top of curb elevation.

In deeper cut areas slope paving may be required. When slope paving is required it shall be constructed to the lines and grades shown on the plans. Backfill and shaping beyond the slope paving shall be in accord with the applicable portions of this specification.

CONCRETE CURB AND GUTTER, SIDEWALKS AND DRIVEWAYS **1**

VALLEY GUTTERS, CENTER DRAINS AND RIP RAP **1**

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2. MATERIALS 1
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CURB AND GUTTER *2*
DRIVEWAYS AND ALLEY RETURNS *3*
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4. BACKFILL AND CLEANUP 6

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CONCRETE STRUCTURES

1. GENERAL

This specification covers concrete structures including but not limited to junction boxes, culverts, head walls, cast in place manholes, valve vaults, meter vaults and retaining walls.

2. MATERIALS

CONCRETE

Concrete for cast in place manholes, junction boxes, storm sewer inlet boxes, valve vaults and direct traffic culvert and bridge decks shall be a modified class "C" concrete using a minimum of 6 sacks cement per cubic yard with a maximum water content of 5 gallons per sack of cement and producing a concrete with 4000 psi 28 day compressive strength.

Concrete for other structures shall be class "A" as specified in "Texas State Department of Highways and Public Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges" item number 421. Concrete for riprap shall be class "B".

Reinforcing steel shall conform to the requirements of item number 440 or "Texas State Department of Highways and Public Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges" and shall be of the sizes and grades as shown on the plans.

3. CONSTRUCTION

Construction of concrete structures shall be in accordance with the provisions of item 420 "Texas State Department of Highways and Public Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges".

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FLEXIBLE BASE, CALICHE

1. GENERAL

This item consists of the construction of a caliche flexible base course to the lines, grades and thickness shown on the plans and in accordance with the provisions of the specifications.

Qualification of Material Source - There will be no designated material sources, but the source proposed by the Contractor must be approved by the Engineer. The contractor shall furnish evidence of capability to crush and screen the material with suitable equipment.

Measurement and Payment - Measurement and payment to be at the units and price for the applicable bid item in the proposal.

2. MATERIALS

Material from the approved source shall meet the following requirements when tested in accordance with the referenced testing standards:

Gradation - Tested by ASTM C 136-67 to meet the following gradation limits:

Sieve Size	Percent Passing
1-3/4"	100.0
7/8"	65-90
3/8"	50-70
No. 4	30-60
No. 40	15-35

Liquid Limit and Plasticity Index **-** Tested by ASTM D423-66 and D 424-59.

Liquid Limit - 30.0 Maximum
Plasticity Index - 10.0 Maximum
Triaxial Classification - Tested by Texas Highway Department Method TEX 117-E, Part II - minimum class 3.0.

Source Quality Control - The contractor shall exercise caution in the operation of the material source to prevent the inclusion of inferior materials.

3. CONSTRUCTION

A. The subgrade shall be finished true to the lines and grades as shown on the plans or as established by the Engineer and finished within specified tolerances and properly maintained to prevent drying and/or loosening of the surface.

No base material may be dumped on any subgrade until it has been tested and approved by the Engineer.

B. Flexible caliche base material shall be placed in uniform courses and processed to provide a uniformly mixed base course of the proper moisture content for compaction. The processing and compaction procedure used shall provide a uniform base course compacted to ninety-five percent (95%) modified proctor density (YACHT T180) minimum. The minimum thickness of any one compacted course shall be three inches (3"). The maximum thickness of any one compacted course shall be eight inches (8").

Any soft or segregated spots that appear in the base shall be removed, replaced or reprocessed and recompacted prior to final finishing of the base. The finished base shall conform to the lines and grades as shown on the plans or established by the Engineer. Finished tolerances shall not exceed one half inch (1/2") in ten feet (10').

The finished base shall be primed as soon after finishing as practical and shall be protected until the hot mix asphaltic concrete surface is applied. In no case will prime be applied until the finished base has been approved by the Engineer.

4. TESTING

A. All test for approval of the source shall be performed by a commercial lab selected by the owner and shall be paid for by the contractor.

B. Gradation and soil constants tests (ASTM C-136, D423 and D424) and THD Triaxial Test (THD TEX117-E Part II) will be performed for source approval. Should the appearance, workability or other visual checks indicate a possible change in the material being furnished, the Engineer may require the contractor to retest the material for source approval.

C. Field quality control test will consist of the finish tolerance test and density test.

The finish tolerance test will be performed by the contractor at his expense using a 10' rolling straight edge. This test shall be performed at the direction of the Engineer or his representative. When required, the test shall consist of checking one path in each lane with the rolling straight edge.

Density test will be made by the City or a commercial laboratory chosen by the City using Troxler 3411-B nuclear density gauges or approved equal at the minimum rate of one test for each 1000 square yards of base. In no case shall less than three tests be run on any one area processed as a unit. The City will bear the cost of the first test or set of tests only. If the base fails the first test the contractor, at his own expense, will be required to have all subsequent tests performed by the commercial laboratory chosen by the city.

8/07

BITUMINOUS PRIME

1. GENERAL

This item consists of the application of a bituminous prime coat to the finished caliche base in accordance with the provisions of the Specifications.

Qualification of Material Source - Material shall be supplied by a producer with a proven performance record of acceptance by the Texas Highway Department.

Measurement and Payment - Measurement and payment will be at the units and price for the applicable bid item in the proposal.

2. MATERIALS

Cut-back asphalt grade MC-30, Texas Highway Department Item 300.

Source Quality Control - Certificates of compliance to be furnished by the producer to the Engineer.

3. CONSTRUCTION METHODS

Condition of Base - The surface of the base shall be tightly compacted to the line and grade shown on the plans and within the tolerances of the specifications. The surface shall be clean and the base shall contain sufficient moisture to assure the proper penetration of the prime.

The prime shall be applied with an approved distributor to the surface of the base at a rate of between 0.15 and 0.40 gallon per square yard. The application rate shall be varied to meet field conditions and to obtain uniform coverage, and adequate penetration. Properly applied prime coat should penetrate from 3/8" to 1/2" into the base and should cure in approximately 72 hours with ambient temperatures at or near 70 degrees F. The prime shall be applied at a temperature within the range of temperatures recommended in Item 300 of Texas Highway Department Standard Specifications. The temperature shall be varied within this range to provide a viscosity that will assure even spreading and penetration of the base. Air Temperatures at the time of application shall be above 50'F.

BITUMINOUS TACK

1. GENERAL

This item consists of the application of a bituminous tack coat to the primed base or existing asphaltic concrete or Portland cement concrete pavement in accordance with the provisions of the specification.

Qualification of Material Source - Material shall be supplied by producer with a proven performance record of acceptance by the Texas Highway Department.

Measurement and Payment - Measurement and payment will be at the units and price for the applicable bid item in the proposal.

2. MATERIALS

Cut-back asphalt grade RC-250, Texas Highway Department Item 300.

3. CONSTRUCTION METHODS

Conditions of Surface - Prior to application of tack to the base course the prime must be completely penetrated into the base and the surface cleaned of foreign objects.

The tack shall be applied with an approved distributor at a rate of between 0.05 and 0.10 gallons per square yard. The temperature of application shall be within the range recommended by the Texas Highway Department in Item 300. The surface temperature to which tack is being applied shall be above 50 degrees F. at the time of application.

When the asphaltic concrete surface is being placed on primed caliche base, use of the tack coat may be waived by the Engineer if the contractor can show that adequate adhesion of the surface being placed to the base course is achieved without it.

Tack coat shall be placed on all asphaltic concrete or portland cement concrete surfaces on which an additional course of asphaltic concrete surfacing is to be placed. The tack coat shall be rolled with a pneumatic roller to assure even distribution over the entire surface and to achieve proper penetration into and adhesion to the surface being overlayed.

HOT MIX ASPHALTIC CONCRETE

I. GENERAL

Includes the construction of the hot mix asphaltic concrete surface in accordance with lines, grades and the sections shown on the plans and with the provisions of the specifications.

Qualification of Material Sources - Producers of oil asphaltic concrete mixture to have a proven record of acceptance by the Texas Highway Department.

Measurement and Payment - Measurement and payment to be at the units and price for the applicable bid item in the proposal.

2. MATERIALS

Oil Asphalt - Oil asphalt grade AC-l0 or AC-20, Texas Highway Department Item 300. When no asphalt grade is shown on the plans, and unless directed otherwise by the Engineer, asphalt for this project shall be grade AC-10.

Coarse Aggregate - Crushed stone or crushed gravel with a minimum of 75 percent of the aggregates having two or more crushed faces. Additional requirements:

(a) Los Angeles Abrasion: ASTM C l3l, Wear not to exceed 40.

(b) Decantation: Maximum 2.0 percent by weight

Fine Aggregates - Natural sand and screenings crushed from the same or similar material meeting the requirements of the course aggregates. Additional requirements.

(a) Plasticity Index: Maximum of 6.

(b) Sand Equivalents: Minimum of 50 for each individual fine aggregate.

Paving Mixtures - The paving mixture(s) shall be as shown on the plans and details. If no mixtures are shown on the plans surface or wearing courses up to l-3/4 inches thick shall be Type D, base courses up to 2 inches thick shall be Type C and base courses over 2 inches thick shall be Type B or Type A.

(a) Gradation: The master gradations for the paving mixtures are:

TYPE "A" (Coarse Graded Base Course):	Percent Aggregate by weight or volume
Passing 2" sieve	100
Passing l-3/4" sieve	95 to 100
Passing l-3/4" sieve, retained on 7/8" sieve	16 to 42
Passing 7/8" sieve, retained on 3/8" sieve	16 to 42
Passing 3/8" sieve, retained on No. 4 sieve	10 to 26
Passing No. 4 sieve, retained on No. l0 sieve	5 to 21
Total retained on No. l0 sieve	68 to 84
Passing No. l0 sieve, retained on No. 40 sieve	5 to 21
Passing No. 40 sieve, retained on No. 80 sieve	3 to 16
Passing No. 80 sieve, retained on No. 200 sieve	2 to 16
Passing No. 200 sieve	1 to 8

The asphaltic material shall form from 3.5 to 7 percent of the mixture by weight.

TYPE "B" (Fine graded Base or Leveling-up course)	Percent Aggregate by Weight or Volume
Passing l" sieve	100
Passing 78" sieve	95 to 100
Passing 7/8" sieve, retained on 3/8" sieve	21 to 53
Passing 3/8" sieve, retained on No. 4 sieve	11 to 42
Passing No. 4 sieve, retained on No. l0 sieve	5 to 26
Total retained on No. l0 sieve	58 to 74
Passing No. l0 sieve, retained on No. 40 sieve	6 to 32
Passing No. 40 sieve, retained on No. 80 sieve	4 to 21
Passing No. 80 sieve, retained on No. 200 sieve	3 to 21
Passing No. 200 sieve	1 to 8

The asphaltic material shall form from 3.5 to 7 percent of the mixture by weight.

Type "C" (Coarse Graded Surface Course):	Percent Aggregate by Weight or Volume
Passing 7/8" sieve	100
Passing 5/8" sieve	95 to 100
Passing 5/8" sieve, retained on 3/8" sieve	16 to 42
Passing No. 4 sieve, retained on No. l0 sieve	11 to 37
Total retained on No. l0 sieve	54 to 74
Passing No. l0 sieve, retained on No. 40 sieve	6 to 32
Passing No. 40 sieve, retained on No. 80 sieve	4 to 27
Passing No. 80 sieve, retained on No. 200 Sieve	3 to 27
Passing No. 200 sieve	1 to 8

The asphaltic material shall form from 3.5 to 7 percent of the mixture by weight.

TYPE "D" (Fine Graded Surface Course):	Percent Aggregate by Weight or Volume
Passing l/2" sieve	100
Passing 3/8" sieve	85 to 100
Passing 3/8" sieve, retained on 4" sieve	21 to 53
Passing No. 4 sieve, retained on No. l0 sieve	54 to 74
Total retained on No. l0 sieve	54 to 74
Passing No. l0 sieve, retained on No. 40 sieve	6 to 32
Passing No. 40 sieve, retained on No. 80 sieve	4 to 27
Passing No. 80 sieve, retained on No. 200 sieve	3 to 27
Passing No. 200 sieve	1 to 8

The asphaltic material shall form from 4 to 8 percent of the mixture by weight.

TYPE "F" (Fine Graded Surface Course):	Percent Aggregate by Weight or Volume
Passing 3/8" sieve	100
Passing No. 4 sieve	95 to 100
Passing No. 4 sieve, retained on No. l0 sieve	58 to 73
Passing No. l0 sieve, retained on No. 40 sieve	6 to 26
Passing No. 40 sieve, retained on No. 80 sieve	3 to 13
Passing No. 80 sieve, retained on No. 200 sieve	2 to 11
Passing No. 200 sieve	1 to 8

The asphaltic material shall form from 3.5 to 6.5 percent of the mixture by weight.

(b) Tolerances: Deviations from job mix formula limited to:

(l) Sizes larger than the l0 sieve- Plus or Minus 4 percent.

(2) No. l0 sieve and smaller - Plus or Minus 3 percent.

(3) The deviation from the job mix formula shall be further limited in that the total deviation from the job mix formula between any two adjacent aggregate grades shall not exceed the allowable deviation for either one.

(4) Asphalt - Plus or Minus 0.3 percent.

(c) Density - The mixture shall be designed to produce an acceptable mixture within tolerance, at or near optimum density. The mixture molded in the laboratory should have the following percent of maximum theoretical density:

Minimum	Maximum	Optimum
96	98	97

(d) Stability: Minimum of 35 Hveem

Source Quality Control - Paving mixture and plant tests to be performed by laboratory selected and paid by the Owner, except as noted.

Job Mix Formula - The contractor shall submit a job mix formula, prepared by laboratory chosen by the owner, at least l0 days in advance of laying operations to allow time for review by the engineer. Substitution of one or more materials will require a new job mix formula and must be approved by the engineer.

The design of job mix formula whether for original submittal or revisions shall be paid for by the contractor.

Plant Tests - Check of raw material uniformity, quality and flow, hot bin gradations, temperature of mixture, mixture tests for density, stability and percent asphalt and other necessary tests to be performed bythe laboratory selected by the owner for each day's production.

Oil Asphalt - Producer to furnish certificates of compliance to the Engineer.

3. CONSTRUCTION METHODS

A. GENERAL

Condition of Base - The surface of the base shall be tight and free of debris. The prime coat shall be uniformly distributed, well penetrated and completely cured prior to application of the tack coat. If the mixture will adhere to the surface of the base without the application of a tack coat, the tack coat can be eliminated. If the surface of the base is one half (l/2") inch or more lower than the proposed bottom of the asphaltic concrete it shall be corrected by placing and compacting a level up course of the asphaltic concrete before the mat is placed on it.

Stockpiling, Storage, Batching and Mixing - Shall meet the requirements of Item 340, "Texas Highway Department l982 Standard Specifications for Road and Bridge Construction.

Weather Limitations - Shall be the requirements of Item 340,"Texas Highway Department l982 Standard Specifications for Road and Bridge Construction." With the added provision that no asphaltic concrete shall be placed when the surface on which the mat is to be placed is below 50 degrees F.

Thickness - Shall be as shown on plans. Unless shown otherwise on the plans, the maximum compacted thickness of any one course of asphaltic concrete shall be two and one-half (2-l/2) times the maximum aggregate size of the mixture being placed. The minimum shall be one (l) inch or one and one fourth (1-1/4) times the maximum particle size which ever is greater.

B. PLACING

Placing of Asphaltic Concrete shall be accomplished using an approved self propelled spreading and finishing machine with a heated vibrating screed capable of producing a surface that will meet the requirements of the typical cross section and the surface test, and when the mixture is dumped directly into the finishing machine shall have adequate power to propel the delivery vehicles in a satisfactory manner. The finishing machine shall be equipped with a flexible spring and/or hydraulic type hitch sufficient in design and capacity to maintain contact between the rear wheels of the hauling equipment and the pusher rollers of the finishing machine while the mixture is being unloaded.

The use of any vehicle which requires dumping directly into the finishing machine and which the finishing machine cannot push or propel in such a manner as to obtain the desired lines and grades without resorting to hand finishing will not be allowed. Vehicles dumping directly or indirectly into the finishing machine shall be so designed and equipped that unloading into the finishing machine can be mechanically and/or automatically operated in such a manner that overloading the finishing machine being used cannot occur and the required lines and grades shall be obtained without resorting to hand finishing.

Automatic screed controls will be required and shall meet the requirements item, 528 "automatic screed controls for asphaltic concrete spreading and finishing machines "Texas Department of Highways and Public Transportation 1982 Specifications for Construction of Highways, Streets and Bridges".

The screed shall be ski controlled using a ski of not less than l8' in length. Curb shoe control will not be allowed.

The spreading and finishing machine shall be maintained in good working order and operated by competent trained personnel.

The Engineer may require the contractor to place a test strip to prove the capability of the machine and the competency of the operating personnel to produce a satisfactory finished surface.

In dips and on curved surfaces where the ski control cannot be used, the surface will be controlled using a l0' straight edge.

Fillet areas, turn outs and other areas not accessible to the spreading machine may be hand laid provided a satisfactory surface is produced.

C. COMPACTION AND FINISHING

Compaction Requirements - The asphaltic concrete surface shall be compacted so that the compacted mixture will contain not more than seven percent (7%) nor less than three percent (3%) air voids.

The surface of the pavement, after compaction, shall be smooth and true to the established line, grade and cross section, and when tested with a l0 foot rolling straightedge, except as provided herein, the maximum deviation shall not exceed l/8 inch in l0 feet, and any surface not meeting this requirement shall be corrected as directed by the engineer.

Raking and Leveling - Minor leveling may be accomplished using asphalt rakes prior to compacting the surface. The surface shall be leveled by loosening the surface of the asphaltic concrete using an asphalt rake then adding or removing material and smoothing the surface. Any large aggregate worked to the surface in this process shall be removed before compaction. The large aggregate shall not be spread over the new asphaltic concrete surface.

Edges and joints with compacted asphalt or concrete gutters shall be carefully squared and excess material removed before compaction. Care shall be taken to see that NO excess material laps over onto the surface of existing asphaltic concrete paving or concrete gutters. Large aggregate worked to the surface in this process shall be removed. It shall not be spread over the new asphaltic concrete surface.

Rolling - In general rolling shall conform to the requirements of item 340 of the Texas Department of Highways and Transportation 1982 Specifications for Construction of Highways, Streets an Bridges except as modified herein.

It shall be the responsibility of the contractor to have rolling equipment available on the job to properly compact the paving mixture in place as required without delay to the lay down operation. Rollers provided shall meet the qualifications for their type as follows:

PNEUMATIC TIRE ROLLERS: The rollers shall be acceptable medium pneumatic tire rollers conforming to the requirements of the item, "Rolling (pneumatic tire)", Type B, unless otherwise specified on plans.

TWO AXLE TANDEM ROLLER: This roller shall be an acceptable power driven tandem roller weighing not less than 8 tons.

THREE WHEEL ROLLER: This roller shall be an acceptable power driven three wheel roller weighing not less than l0 tons.

THREE AXLE TANDEM ROLLER: This roller shall be an acceptable power driven three axle roller weighing not less than l0 tons.

Vibrating rollers will not be used without prior written approval of the engineer. Written approval will be granted only upon demonstration by the contractor that the roller and operator can produce a satisfactory surface within the tolerances of these specifications. Only the operator or operators thus approved will be allowed to operate the vibrating roller on this project.

Areas not accessible to standard rollers shall be compacted using trench rollers, impact tampers, hand tamps or other approved means that will produce the density and surface required.

JOINTS- Shall be carefully rolled to provide compaction of the asphalt against the existing surface or face of the concrete gutter. Joints between concrete gutters and Hot Mix Asphaltic Concrete shall be placed so that the HMAC will be approximately l/2 inch higher than the concrete when compaction is completed. At transverse joints such as valley gutters and fillet areas where finishing asphalt paving 1/2 inch above the edge of concrete will adversely affect ride quality the asphalt shall be finished 1/4 inch above the edge of the concrete.

Transverse joints shall be rolled in the transverse direction with the first pass extending approximately six (6") inches onto the new asphalt each additional pass shall extend approximately twelve (12") inches further onto the new asphalt until the full width of the roller is on the new asphalt. Longitudinal rolling may begin then.

All transverse joints shall be checked with a l0" straight edge while the material is

still hot enough to roll. Any corrections shall be made by loosening the material using an asphalt rake and adding or removing material and recompacting the surface. The surface shall be rechecked and when the joint is acceptable the asphalt spreading machine may proceed with the pass.

Final or finish rolling shall be accomplished using a two axle tandem roller to remove roller marks. This rolling shall be accomplished after the surface has cooled sufficient to minimize further marking but before it is too cool to respond to rolling.

STRAIGHTEDGES AND TEMPLATES - The contractor shall provide acceptable l0 foot straightedge for surface testing. Satisfactory templates shall be provided as required by the Engineer.

4. FIELD QUALITY CONTROL

Test Lots - Field Quality Control Tests shall be made by lot with a lot being the amount of contiguous surface laid in one day. No lot shall exceed l0,000 S.Y. If a days laying exceeds l0,000 S.Y., that days laying shall be divided into two approximately equal lots. The same lot divisions shall be used for all Quality Control Tests. Each separate block or combination of contingeous (blocks) of paving shall be considered as a separate lot even though they may be placed in a single day and do not comprise l0,000 S.Y. of surface.

Surface Tests - Surface tolerance tests will be performed in both longitudinal and transverse directions. The test for longitudinal surface tolerance will be performed with a ten-foot rolling straightedge furnished by the contractor, and calibrated and used in accordance with the manufacturer's recommendation or other approved method.

The maximum allowable deviation in surface shall be 1/8 inch in 10 feet. Tests for longitudinal surface tolerance will be performed by the contractor, accompanied by the engineer within 24 hours of the completion of a lot. One path in each lane for the length of the entire lot will be tested. The location of the test path (Distance from centerline or pavement edge) will be determined by the engineer through the use of random numbers. Any deviations in the surface finish of a roadway wearing course which exceeds l/4 inch must be corrected. After corrections have been made, the entire lot must meet the l/8 inch surface tolerance.

Thin course "scab on" patching will NOT be permitted. Corrections may be made by planning, milling and patching or by removing and replacing affected surface area.

When milling and patching is used to correct surface defects the minimum depth of removal shall be l".

For milling and patching or surface removal the area removed or milled shall be sufficiently large to avoid the appearance of patching.

When planning is used to correct defects the thickness of the remaining paving shall meet the thickness requirements as shown on the plans.

Surface tolerance test will be performed on the last or wearing course only.

Asphaltic concrete pavement constructed under these specifications that does not meet the surface tolerance requirements and is allowed to remain in place will be paid for at a reduced rate determined by multiplying the price bid for the wearing surface course by a surface tolerance quality factor. This rate shall apply to the entire lot.

Lower courses will not be affected by this quality factor but will be paid for at the price bid or such price as it may be affected by other quality factors.

The surface tolerance quality factor will be determined according to the following schedule:

Linear % of pavement exceeding 1/8 inch surface tolerance	Surface tolerance quality factor
0.0 to 1.0	1.0
1.1 to 1.5	0.9
1.6 to 2.5	0.8
over 2.5	0.5

Roadway surface requirements will not be applied for paved drives, aprons, turnouts, and other irregular sections, however, asphaltic concrete shall be placed in such a manner as to provide a neat and uniform appearance and shall be compacted by methods satisfactory to the engineer.

The contractor may request permission to reconstruct a portion of the pavement when, in his opinion, the surface tolerance quality factor can be improved. Upon approval of the engineer, the contractor shall take sufficient tests to isolate the portion or portions of pavement to be pre- constructed and remove and reconstruct the pavement. All costs in connection with this reconstruction are to be born by the contractor. The minimum width of this reconstruction shall be l/2 the street width unless approved otherwise in writing by the engineer. The portions reconstructed shall be re-tested and the surface tolerance quality factor recomputed using the new information along with the test from the area within the portion of the lot not reconstructed.

When other quality factor reductions are provided for on the plans or in the specifications the effect shall be cumulative ie: QFl x QF2 x QF3 x ....x QFn x unit price.

No payment will be made for pavement with a combined quality factor of less than 0.5.

Thickness Test - Thickness test will be made by the engineer on each course of asphaltic concrete laid. Test specimens shall be made by a commercial laboratory selected by the owner. Test specimens shall be cores having a minimum nominal diameter of 6". These cores shall be made in the presence of the inspector at locations designated by the inspector using an approved power operated coring machine.

For thickness and compaction test, each lot shall be divided into approximately equal sublots corresponding in width to each pass of the lay down machine and containing up to but not exceeding 2,000 square yards each. If a lot contains less than 2,000 square yards the engineer may, at his option, divide the lot into two equal sublots, or, if the contractor has a record of satisfactory workmanship, the engineer may waive tests on said lots.

The engineer will locate one test spot for each l,000 S.Y. and/or fraction thereof in each sub-lot using random numbers. If a spot thus located falls within one foot of a longitudinal joint or lip of gutter or within two feet of an unsupported edge or within l5 feet of the beginning or ending edge of a pass, the engineer will relocate the spot using random numbers. The commercial laboratory chosen by the owner will remove the test specimen from each designated spot, mark the specimen and the adjacent pavement for future reference and perform the required tests. Test specimens shall be removed with special caliper type tongs having circular jaws of the diameter of the specimen being removed. These jaws shall grip at least 1/2 of the circumference of the specimen. Screw drivers or other type of prying instruments shall not be used to remove the specimens.

The thickness of a specimen shall be determined by averaging four (4) measurements made at ninety degree (90) intervals around the specimen. Any thickness less than design thickness shall be considered as deficient.

For hot mix asphaltic concrete pavement less than 2 inches thick the maximum allowable deficiency in any one test specimen is l/8 inch provided that no more than twenty five percent (25%) of the specimens tested show a deficiency. For pavement in excess of 2 inches in thickness the maximum allowable deficiency in any one specimen shall be l/8 inch plus l/l6 inch for each additional inch of thickness provided that no more than twenty five percent (25%) of the test specimens show a deficiency.

When a test specimen has a greater deficiency and less than (25%) of the test specimens show a deficiency the contractor shall, at his own expense, determine the extent of the deficiency and correct it by removing and replacing the surface. The minimum width for such correction will be the full width of the pass or passes of the lay down machine in which the deficiency occurs.

The minimum length of such correction shall be three times the width removed. When more than (25%) of the test specimens show a deficiency the surface may at

the engineers option be declared uniformly deficient and the contractor shall correct the deficiency by removing and reconstructing the surface or by constructing an overlay of not less than l inch thickness over the deficient area. The construction of an overlay will require milling at lip lines and dips.

The corrected surface shall meet all the requirements of these specifications.

Asphaltic concrete pavement constructed under these specifications that is less than design thickness, if allowed to remain in place, will be paid for at a reduced rate determined by multiplying the unit price bid in the bid proposal by a thickness quality factor. This rate shall apply to the entire lot in which the deficiency is found.

The thickness quality factor for hot mix asphaltic concrete pavement less than 2 inches in thickness shall be:

Thickness Deficiency	Quality Factor
Maximum l/8" for any one specimen with no more than 25% of the specimens showing a deficiency.	l.0
Pavement not meeting the 25% limitation with an average specimen deficiency up to l/8 inch.	0.75
Average specimen deficiency of l/8 inch to l/4 inch	.55
Average deficiency of more than l/4 inch	0.0

The thickness quality factor for hot mix asphaltic concrete more than 2 inches thick will be l.0 if the maximum deficiency for any one specimen is l/8 inch plus l/l6 inch for each additional inch of thickness over 2 inches and not more than twenty five percent (25%) of the test specimens in the lot are deficient. For thickness test that fall outside this area either by single specimen thickness deficiency or more than twenty five percent (25%) of the specimens showing deficiency the thickness quality factor shall be computed as follows:

$$\text{Thickness Quality Factor} = \frac{1}{\left(\frac{1}{\text{Thickness Ratio}}\right)^2}$$

The thickness ratio for a lot is the average specimen thickness for that lot, with no allowance for thickness in excess of design, divided by the design thickness. For determining the average specimen thickness, those specimens in excess of design thickness shall be considered at design thickness.

The minimum thickness quality factor for which payment will be allowed is .55. Any pavement with a thickness quality factor below .55 will be considered as having a thickness quality factor of 0. This shall apply only if the contractor requests, in writing, to have this paving remain in place and this request is approved in writing by the engineer.

When the deficient area is in a lower course of a multi-course paving structure the contractor may reduce or correct the deficiency by increasing the thickness of the subsequent course or courses as follows:

When subsequent course is	Maximum increase in course thickness
Type B	1/2"
Type C	3/8"
Type D	1/4"

When corrected in this manner the thickness quality factor shall be determined using the combined thickness of the corrected courses and shall apply to all unit prices applicable to this lot.

The contractor may request permission to reconstruct a portion of the pavement when, in his opinion, the thickness quality factor can be improved. Upon approval of the engineer, the contractor shall take sufficient tests to isolate the portion or portions of pavement to be reconstructed and remove and reconstruct the pavement. All cost in connection with this reconstruction are to be born by the contractor. The minimum width of this reconstruction shall be l/2 the street width unless approved otherwise in writing by the engineer. The portions reconstructed shall be retested and the thickness quality factor recomputed using the new information along with the test from the area within the portion of the lot not reconstructed.

When other quality factor reductions are provided for on the plans or in the specifications the effect shall be cumulative ie: QFl x QF2 x QF3 x....x QFn x unit price.

No payment will be made for pavement with a combined quality factor of less than 0.5.

Compaction Test: Compaction test will be made by the commercial laboratory chosen by the owner on the core samples removed from the paving for thickness testing.

The percent air voids will be calculated using maximum theoretical specific gravity of the mixture.

The contractor may attempt to correct deficiencies in compaction by additional pneumatic rolling upon written permission of the engineer. Requests for permission to conduct additional rolling shall be submitted, in writing, to the engineer no later than three days following notification of the deficiency by the commercial laboratory and the additional rolling shall be completed within ten (l0) days following said notification weather permitting.

In no case shall the additional rolling be delayed beyond thirty (30) days from the date the surface was laid. All cost for additional rolling and additional coring and testing of the re-rolled surface shall be born by the contractor.

Asphaltic concrete pavement not meeting this specification and that is allowed to remain in place shall be paid for at a reduced rate determined by multiplying the price bid in the bid proposal by a compaction quality factor determined according to the following schedule:

Percent air voids (average of all specimens for the lot)	Compaction Quality factor	
less than 3	0	
3.0 to 8.0	1.0	
8.1 to 9.0	0.9	
9.1 to 10.0	0.7	
10.1 to 11.0	0.5	and the engineer may require a chip seal to be applied at the contractor's expense
More than 11		0 and the engineer may require a chip seal to be applied at the contractor's expense.

NOTE: HMAC surfacing with between 11% and 15% air voids may, upon written request by the Contractor, be reviewed by the Engineer to determine if it may be left in place. The Engineer's review will consider the type of street and expected traffic conditions among other factors and a written determination will be issued. If the surface is allowed to remain in place, a chip seal will be required at the Contractor's expense. The quality factor for this paving will remain at 0.

The reduced rate shall apply to the entire lot.

The effect of compaction quality factors shall be cumulative and shall be applied as described for surface quality factors and thickness quality factors.

Cost for Field Quality Control - The surface tolerance test shall be made by the contractor at his expense.

The initial thickness and compaction test will be made at no cost to the contractor except for the cost of materials and labor to repair the holes left when cores are removed.

The cost of all thickness test to isolate a deficient area and the cost of retesting the corrected area shall be born by the contractor.

The cost of all retesting of compaction after additional rolling to correct compaction deficiencies shall be born by the contractor.

Areas reconstructed to remedy deficiencies shall meet all the requirements of these specifications and shall be tested in the same manner as original construction. The cost of all tests on reconstructed areas shall be born by the contractor.

5. ADDITIVES

Anti-stripping: An approved liquid anti-stripping agent shall be added to the asphalt used in the hot mix asphaltic concrete. The rate of application shall be in accordance with the manufacturer's recommendation. The minimum anti-stripping agent added shall be one-half (l/2) of l%.

The anti-stripping agent used shall have a proven record when used with similar aggregate and shall be approved by the engineer in writing prior to the date set for reception of bids.

DOUBLE COURSE ASPHALT SURFACE TREATMENT

1. SCOPE

The work to be done under this section consists of furnishing all labor, materials and equipment necessary to construct a Double Asphalt Surface Treatment on the prepared base course in accordance with the sections shown on the plans and as specified herein or as directed by the Engineer.

2. MATERIALS

2.1 Asphalt

The asphalt used shall be of the grade and type specified below. The material shall be homogeneous and free from water, shall not foam when heated to 347° F., and shall meet the following requirements.

Viscosity Grade AC-5
Texas Highway Department 1982 Specifications

Viscosity 140 F. Stokes	500 +/- 100	
	Min.	Max.
Viscosity 140 F. Stokes	1.4	--
Penetration 77° F. 100 g. 5 sec.	135	--
Flash Point C.O.C.F.	425	--
Solubility in trichlorethylene percent	99.0	--

Tests on residues from thin film oven test:

Viscosity 140 F. Stokes	--	1500
Ductility, 77° F. 5 cms per min. cms.	100	--

Spot Test – negative for all grades.

2.2 Aggregate

All aggregate shall be composed of sound and durable particles of crushed stone or crushed gravel. At least eighty-five percent (85%) of the particles of the aggregate retained on the No. 4 sieve shall have one or more crushed faces. Aggregate particles shall be free from organic matter, clay, loam, or pebbles coated therewith, and shall not contain more that (5%) of slate, shale, schist or soft particles of sandstone. The aggregates shall have a percent of wear of not more than thirty-five (35). (Los Angeles Abrasion Tests of Coarse Aggregate, AASHO Designation

T-96 as revised). Crushed limestone will not be acceptable for this project.

Double Asphalt Surface Treatment

No. 1 Aggregate –	Retained on ¾" Sieve -	0% by weight
(Texas Highway	Retained on 5/8" Sieve -	0 – 2% by weight
Department 1982	Retained on ½" Sieve -	20, 35% by weight
Grade 3)	Retained on 3/8" Sieve -	85 – 100% by weight
	Retained on ¼" Sieve	95 – 100% by weight
	Retained on No. 10 Sieve-	99-100% by weight

No. 2 Aggregate -	Retained on ½" Sieve -	0% by weight
(Texas Highway	Retained on 3/8" Sieve -	0 – 5% by weight
Department 1982	Retained on No. 4 Sieve -	40 – 85% by weight
Grade 5)	retained on No. 10 Sieve -	98 –100% by weight
	Retained on No. 20 Sieve-	99 100% by weight

3. CONSTRUCTION METHODS

3.1 Preparation of base

If the surface of the base course is not in proper condition for placement of surfacing, it shall first be brought true to the section and grade as established. The base shall be checked, and any deviation in excess of ¼-inch from grade or from true cross section shall be corrected by scarifying then adding or removing material, reshaping and re-compacting by sprinkling and rolling. No "scab" or "featheredge" patches will be permitted. After correction of any defects in the base, it shall be cleaned of dirt, dust, or other deleterious material by sweeping or other approved methods and primed.

The base course shall be primed with MC-30 Asphalt as directed by the Engineer. The asphalt used shall meet the 1982 Texas Highway Department Specifications Item 300.

The base course shall be checked at least 24 hours in advance of placing the surfacing and any defects shall be repaired and re-primed. Immediately prior to placing the surfacing, the base shall be cleaned of all dirt, dust, or other deleterious materials by sweeping with rotary and hand brooms or other approved methods.

Prime coats shall not be applied more than 7 days in advance of placing the surface course. Areas that have been primed longer than the time

specified above prior to placing the surface course shall be re-primed at the Contractor's expense.

3.2 Handling and Applying Asphalt

All storage tanks, piping, retorts, booster tanks, and distributors used in storing or handling asphalt shall be kept clean and in good operating condition at all times, and they shall be operated in such a manner that there will be no contamination of the asphalt with foreign material. Asphalt shall not be heated above 400° F. at any time, and when applied, it shall be at a temperature of not less than 300° F. and not more than 350° F. The Engineer will select the temperature of application, and the Contractor shall apply the asphalt at a temperature within 15° of the temperature selected. All asphalt material heated above 400° F. will be rejected. Re-circulating heating equipment shall be equipped with recording temperature gauges.

The prime coat shall not be applied when the air temperature is below 50° F. and falling or when in the opinion of the Engineer weather conditions are not suitable. Prime coat shall not be applied when the temperature of the surface on which it is to be applied is less than 40° F. The prime coat shall be applied at least 24 hours in advance of placing the surface course. Prime coat shall be applied with an approved distributor at a rate of 0.30 gallon per square yard, or as directed by the Engineer.

Double Asphalt Surface Treatment shall not be applied when the temperature of the surface on which it is to be placed is below 50° F. and is falling but may be applied when the air temperature is above 40° F. and rising. No asphalt shall be placed when general weather conditions, in the opinion of the engineer, are unsuitable. No double asphalt surface treatment shall be placed from September 30 to April 15.

Asphalt shall be applied on the clean surface by an approved type of self-propelled pressure distributor so operated as to distribute the material in the quantity specified, evenly and smoothly, under a pressure necessary for proper distribution. The Contractor shall provide necessary facilities for determining the temperature of the asphalt in all of the heating equipment and in the distributor, for determining the rate and pressure at which it is applied, and for securing uniformity at the junction of two distributor loads. The beginning and ending of each shot of asphalt shall start and stop on a strip of heavy craft paper of not less than thirty (30) inches in width.

In areas inaccessible to the distributor, asphalt shall be applied by means of a hose and spray nozzles attached to the distributor. Care shall be

taken during application of any asphalt to shield the curb and gutter from the asphalt spray; satisfactory means of handling this matter will be insisted upon.

3.3 Application of Aggregate

Immediately after making the first application of asphalt, the surface shall be covered with No. 1 aggregate. The aggregate shall be spread with an approved self-propelled continuous feet aggregate spreader box, or approved equal, at rates as specified below or as directed by the Engineer. If necessary to obtain uniform distribution of aggregates, hand brooming and hand spotting of aggregates will be required. After completion of placing the aggregates, all areas shall be bull-wheeled with a three- wheeled roller weighing not less than 8 tons followed immediately by two complete passes with an approved self propelled pneumatic roller.

The second application of asphalt shall then be made and the No. 2 aggregate shall be applied in the same manner as stated above for the No. 1 aggregate. The Contractor shall be responsible for the maintenance of the surface and the distribution of the excess aggregate until the work is accepted.

On the two successive days following completion of the work as specified above, all areas shall be rolled with at least four complete coverage's with a pneumatic roller. This rolling shall be done in the warm part of the day.

3.4 Rate of Application of Materials

The asphalt and aggregate shall be applied at the rates specified in the following schedule:

Double Asphalt Surface Treatment

Application	Aggregate Gal. Asphalt/Sq. Yd.	Aggregate Cu. Yd. To Sq. Yds.	Designation
First	0.30	1:70	No. 1
Second	0.40	1:110	No. 2

3.5 Cleanup

After completion of the asphalt surfacing, all debris resulting from the construction shall be cleaned up and removed from the site of the work to

an approved place of disposal. The ditches, shoulders and back slopes shall be bladed and graded to true grades and cross sections as shown on the plans. The entire premises of the work shall be left in a clean condition satisfactory to the Engineer, and all costs of cleanup shall be included in the contract unit prices for the items of work involved.

DOUBLE COURSE ASPHALT SURFACE TREATMENT 1
1. SCOPE 1
2. MATERIALS 1
2.1 Asphalt 1
Viscosity Grade AC-5 1
Texas Highway Department 1982 Specifications 1
Viscosity 140 F. Stokes 1.4 --..... 1
2.2 Aggregate 1
Double Asphalt Surface Treatment 2
3. CONSTRUCTION METHODS 2
3.1 Preparation of base 2
3.2 Handling and Applying Asphalt 3
3.3 Application of Aggregate 4
3.4 Rate of Application of Materials 4
Double Asphalt Surface Treatment 4
3.5 Cleanup 4

3/2006

PREPARATION OF ASPHALTIC CONCRETE SURFACE FOR OVERLAY OR SEAL COAT

1. GENERAL

This item includes patching, milling and incidentals to prepare the asphaltic concrete surface for tack coating and overlay or for application of a seal coat.

2. MATERIALS

a. Asphalt

Asphalt for hot mix asphaltic concrete shall be Grade ACl0 Texas Highway Department Item 300.

Asphaltic concrete shall be Type D or Type F Texas Highway Department Item 340 except when the overlay is the second phase of phased construction in which case the asphaltic concrete for full depth patching shall be the grade as shown on the plans.

b. Portland Cement Stabilized Base

Cement stabilized base shall conform to Texas Highway Department Item 274 and shall consist of caliche base materials described in Section 2-C of this specification. Stabilized using 2 sacks of Portland cement per cubic yard. Cement stabilized base may be blade mixed at or near the job site if the contractor can produce a uniformly mixed acceptable product by this method.

3. PATCHING

a. Patching Surface Raveling

Where, in the opinion of the engineer, surface raveling has caused sufficient loss of material to require patching, the contractor shall thoroughly clean the area to be patched by brooming, and/or compressed air nozzle. When the patched area is completely free of loose aggregate and other foreign matter the contractor shall lightly brush the area with emulsified asphalt type SS1 and apply Type F hot mix asphaltic concrete. The asphaltic concrete shall be raked using an asphalt rake and finished smooth a little higher than the existing surrounding surface and compacted using a steel wheel roller and/or a pneumatic roller. Rollers shall be sufficient size and weight to achieve

adequate compaction. Small areas may be compacted using vibrating plate compacters when approved by the Engineer.

b. Patching Deteriorated Surface

When, in the opinion of the engineer, the surface has deteriorated to a point where replacement is required the engineer shall mark the area to be removed and replaced. The contractor shall saw cut for the full depth of the asphaltic concrete and remove said pavement. The saw cut shall be rectangular in shape with the edges being parallel to and at 90` to the centerline of the street. The minimum width for any patch shall be one (l') foot. After the surface has been removed the base shall be carefully smoothed and all loose base material shall be removed. When needed the base shall be reprimed using a light shot of RC 250 or MC 30 asphalt. After the prime coat has penetrated the base material, the contractor shall apply tack coat to the sawed edges of the surface and place Type D asphaltic concrete to a sufficient depth above the existing surface to provide a compacted surface slightly higher than the adjacent surface. The patch shall be compacted to a density of 92% to 97% Rice density using steel wheel and or pneumatic rollers.

c. Patching Deteriorated Substructure

When the base and or subgrade have failed and are to be removed, the contractor shall remove the surface as specified for deteriorated surface patching. The weakened base shall be removed to a uniform depth to expose undamaged base or subgrade. The minimum depth of removal shall be six (6") inches. The base and subgrade thus removed shall be replaced with Portland cement stabilize base and compacted to 95% modified proctor density and finished at the level of the abutting base. The finished base shall be primed and the surface replaced as specified for patching deteriorated surface.

4. MILLING

Surface milling shall be accomplished using approved asphalt milling machines. The maximum depth of milling shall be one (l") inch.

Milling shall be as directed by the engineer to remove asphaltic concrete placed at valley gutters, gutters and at the ends of the first phase of phased construction for drainage and to remove the asphaltic concrete placed for a smooth connection between that phase and the existing paving. The Engineer may also direct milling to

remove ridges and ruts that have formed on the pavement surface.

The Contractor shall be responsible for controlling the milling operation so that only these areas which require milling are milled. No measurement or payment will be made for milling where only superficial surface marks are left and from which no material is removed. When milling is required to remove ridges and ruts the low areas between ridges and ruts will be considered as "milled surface" for payment.

If a smooth straight joint can not be made by milling the contractor may be required to saw cut a one (l") inch depth groove at the edge of the milled area and remove material between the saw cut and the milled area by hand. No separate payment will be made for this saw cut when required.

5. MEASUREMENT AND PAYMENT

a. Patching Surface Raveling

Measurement will be made of the actual square footage of surface area patched. Payment will be made at the price bid per square foot for patching surface raveling in the bid proposal.

b. Patching Deteriorated Surface

Measurement will be made of the square yards of street surface replaced.

Payment will be made for the actual number of square yards of street surface replaced at the price bid per square yard for patching deteriorated surface in the bid proposal.

c. Portland Cement Stabilized Base

Measurement will be made of the actual cubic yards of compacted cement stabilized base in place.

Payment will be made at the price per cubic yard bid for compacted in place Portland cement stabilized base in the bid proposal.

d. Saw Cutting

Measurement will be made of the actual length of full depth saw cut made as directed by the engineer. No measurement will be made of the sawing required to square up poor milling edges.

Payment will be made at the price per linear foot of full depth saw cutting for the actual number of feet of saw cut as measured above.

No payment will be made for saw cutting required to square up the edges left by improper, inadequate or poor quality milling.

e. Milling

Measurement will be made of the actual area milled. No measurement will be made of areas where milling leaves only superficial surface marks from which no material was removed.

Payment will be made for the actual number of square yards of surface milling as measured above at the unit price bid per square yard of surface milling in the bid proposal.

01/04

SEAL COAT

I. DESCRIPTION

This item shall consist of the application of liquid asphalt to the existing pavement surface followed by placement of cover aggregate and rolled to increase adhesion, together with other operations necessary to form a complete durable seal coat.

II. MATERIALS

A. Asphaltic Materials

The material shall be homogeneous, shall be free from water, shall not foam when heated to 347 degrees F and shall meet the following requirements:

		VISCOSITY GRADE	
TEST		AC-5 Min/Max	AC-10 Min/Max
Viscosity, 140 F stokes		500+100	1000+200
Viscosity, 275 stokes		1.4	1.9
Penetration, 77F, 100g, 5 sec.		135	85
Flash Point, C.O.C.F.		425	450
Solubility in trichlorethylene	%	99.0	99.0
Tests on residues from thin film oven test: Viscosity, 140 F stokes		1500	3000
Ductility, 77 F 5cms per min, cms		100	70
Spot Test		Negative for all grades	

B. Storage, Heating and Application Temperatures

Asphalt materials should be applied at the temperature which provides proper and uniform distribution and within practical limits avoiding higher temperatures than necessary. Satisfactory application usually should be obtained within the recommended ranges shown below. No material shall be heated above the following maximum temperatures:

Applications and Mixing

TYPE-GRADE	Recommended Range, F	Maximum Allowable, F	Heating and Storage Maximum, F
AC-5, 10	275-350	375	400

NOTE:Heating of asphalt materials (except emulsions) constitutes a fire hazard to various degrees. Proper precautions should be used in all cases and especially with RC cutbacks.

Warning to Contractors: Attention is called to the fact that asphaltic materials are very flammable. The utmost care shall be taken to prevent open flames from coming in contact with the asphaltic materials or the gases of same. The Contractor shall be responsible for damages from any fires or accidents which may result from heating the asphaltic materials.

C. Additives

1. Latex Additive: A minimum of two percent by weight latex additive (solids basis) shall be added to AC-5 asphalt when specified on the plans or in other specifications in the contract. The latex additive shall be governed by the following specifications:

The latex is to be an anionic emulsion of butadiene-styrene low-temperature copolymer in water, stabilized with fatty-acid soap so as to have good storage stability, and possessing the following properties:

Monomer ratio, B/S 70/30
Minimum solids content 67%
Solids content per gal @ 67% ..... 5.3 lbs
Coagulum on 80-mesh screen ..... 0.1% max

Type Anti-oxidant ..... staining
Mooney Viscosity of Polymer
(M/L4 @ 212 F) ....100 min
pH of Latex ..... 9.4 - 10.5
Surface Tension ..... 28-42 dynes/cm^2
Brookfield Viscosity
of Latex ..... 1200 ps max @ 67% solids

The finished latex-asphalt shall meet the following requirements:

Viscosity at 140 F, stokes ..... 1500 max
Ductility at 39.2F, 1cm per min, cm..... 100 min

2. Anti-stripping Agent. An approved liquid anti-stripping agent shall be added to the asphalt used on this project when called for on the plans or elsewhere in the specifications or bid proposal. The rate of application shall be in accordance with the manufacturers recommendations. The minimum anti-stripping agent added shall be one/half (1/2) of 1%. The anti-stripping agent shall be Permatac or approved equal.

D. Regular Aggregate

Regular aggregate shall be Type B Grade 4 or Grade 5 crushed gravel, or crushed stone as specified in Item 302 of the Texas State Department of Highways and Public Transportation (T.S.D.H.P.T.) 1982 Standard Specification for Construction of Highways, Streets, and Bridges with the following exceptions:

1. Limestone other than natural limestone rock asphalt will not be approved for use on this project.

2. Aggregate shall contain not more than 1% by weight of organic matter, clays, loam or pebbles coated therewith and shall contain not more than 5% by weight of any one of or combination of slate, shale, schist or soft particles of sandstone when tested in accordance with Test Method Tex-217-F.

3. Aggregate Gradation, expressed as a percentage of weight, shall be as follows:

Grade 4	Percent by Weight		
Retained on 5/8" sieve			0
Retained on 1/2" sieve	0	-	2
Retained on 3/8" sieve	5	-	35
Retained on No. 4 sieve	80	-	100
Retained on No. 10 sieve	98	-	100
Passing No. 200 sieve	0	-	0.5

Grade 5	Percent by Weight		
Retained on 1/2" sieve			0
Retained on 3/8" sieve	0	-	5
Retained on No. 4 sieve	40	-	85
Retained on No. 10 sieve	98	-	100
Retained on No. 20 sieve	99	-	100

When no aggregate grade is shown on the plans or called for elsewhere in the specifications or bid proposal, Grade 5 aggregate will be furnished.

4. The percent of wear, as determined by ASTM C-131, shall not exceed 25%.

5. The percent loss of the aggregate, as determined by ASTM C-88 using a magnesium sulfate solution and a four cycle test, shall not exceed 30%.

E. Precoated Aggregate

Precoated aggregate shall be Type PB Grade 4 or Grade 5 crushed gravel, or crushed stone as specified in Item 304 of the T.S.D.H.P.T. 1982 Standard Specification for Construction of Highways, Streets, and Bridges with the following exceptions:

1. Those exceptions listed in Paragraph II 2(B) above.

2. The precoated aggregate shall be coated with 1.0 to 2.0 per cent by weight of asphaltic cement of Grade AC-20.

F. Joint Paper

Paper used for starting and stopping asphalt application, as well as making fabricated paper discs to protect manhole covers and valve covers, shall be a non-absorbent, high grade 60# Kraft paper, 30" in width.

The contractor shall cover all manhole and valve box lids with paper discs, furnished by Contractor, immediately before application of asphalt and remove same immediately after application of rock.

G. Delivery Tickets

A legible copy of the delivery tickets for all materials to be used on this project shall be furnished to the City's representative at the time materials are delivered to the project stock pile and storage site.

III. CONSTRUCTION METHODS

A. Equipment

In general, all equipment used on this project shall be in good working order and in sufficient quantity to insure proper expedition of the seal operation.

1. Asphalt Handling Equipment

The asphalt distributor shall have been recently calibrated and the Engineer shall be furnished an accurate and satisfactory record of such calibration. The distributor shall be an approved type of self-propelled pressure distributor so operated as to distribute the material in the quantity specified, evenly and smoothly, under a pressure necessary for proper distribution. The Contractor shall provide all necessary facilities for determining the temperature of the asphaltic material in all of the heating equipment and in the distributor, for determining the rate at which asphalt is applied, and for securing uniformity at the junction of two distributor loads. All storage tanks, piping, retorts, booster tanks, and distributors used in storing or handling asphaltic material shall be kept clean and in good operating

condition at all times, and they shall be operated in such manner that there will be no contamination of the asphalt with foreign material. It shall be the responsibility of the Contractor to provide and maintain in good working order a recording thermometer at the storage heating unit at all times.

2. Drag Broom

A drag broom shall be required if the aggregate is not properly distributed. The drag broom shall be furnished at no additional cost to the City.

3. Pneumatic-tire Roller

Pneumatic-tire rollers shall be of the self-propelled type consisting of not less than 7 pneumatic-tired wheels, running on axles in such manner that the rear group of tires will not follow in the tracks of the forward group, and mounted on a rigid frame and provided with a loading platform or body suitable for ballast loading. The roller shall be not less that 10 tons in weight and carry not less than 50 pounds pressure in each tire.

4. Aggregate Spreader

Aggregate spreader shall be an approved self-propelled continuous feed aggregate spreader. The spreader shall be equipped with a disposable trash box for placing debris removed from spreader box scalping screen.

5. Miscellaneous Equipment

The Contractor shall have available for immediate use at no additional cost one rock blade and one drag broom if their use is required by the Engineer. These pieces of equipment shall not be pulled by rollers. In addition, the Contractor shall furnish one tail gate aggregate spreader and one dump truck, equipped to receive the tail gate spreader.

6. Truck Scale

A truck scale conforming to the requirements of item 520 of "Texas State Department of Highways and Public Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges" shall be furnished by the Contractor at aggregate stockpile sites.

B. Surface Preparation

The City of Midland will sweep all streets to be sealed ahead of the Contractor. This sweeping by the City of Midland is not intended to be a final cleaning preparation for the application of asphalt but is intended as an aid to the Contractor.

Prior to placing the seal coat, loose dirt and other objectionable material shall be removed from the existing surface by the Contractor. The surface will be cleaned with rotary brooms. Hand brooms will be used in areas not accessible to the rotary broom. The Engineer shall approve all streets before application of any asphalt.

C. Application of Bituminous Material

Paper shall be spread on the surface for a sufficient distance back form the end of each application so that flow through sprays may be started and stopped on the paper, and so that all sprays will operate properly over the entire length being treated.

No asphaltic material shall be applied when the total of air temperature plus pavement surface temperature is less than 120" F.

No equipment or vehicular traffic shall be allowed to cross over joint paper in place, except the distributor.

Immediately following the application of asphaltic material, the Contractor shall remove all joint paper and load same on a designated vehicle. At the end of each day, all paper shall be disposed of at the City Landfill.

Following all preparation outlined above, the Contractor shall immediately apply asphaltic materials at the specified rates and temperatures designated by the Engineer.

If the Contractor employs only one distributor in the seal operation, he shall be required to seal all designated filets and street stubs in the seal area before moving to another section of the City. If two distributors are used, one distributor will be employed only to seal filets and street stubs.

The use of a second distributor to seal filets and street stubs shall require the following additional equipment; one dump truck equipped with tailgate spreader, and one self-propelled pneumatic roller. All rolling shall be deferred until aggregate is dry.

D. Application of Aggregate

Aggregate shall be immediately and uniformly applied and spread by an approved self-propelled continuous-feed aggregate -8- spreader, unless otherwise authorized by the Engineer. Aggregate shall be applied at the approximately rate directed by the Engineer.

Vehicles used to transport aggregate from stockpiled area to spreading machine shall be weighed and a weight ticket issued for each load. Weight tickets shall show truck identification No., tare weight of truck, gross weight, and net weight of aggregate. The weight ticket shall be delivered to the city's representative at the aggregate spreader.

E. Rolling

A minimum of three (3) rollers shall be employed by the Contractor. Rolling shall be controlled by the Engineer during the entire project. The speed of all rollers will be held to a maximum of 5 miles per hour during the rolling process. When surface moisture is present on aggregate, "Rolling shall be deferred until aggregate is dry.

F. Stockpiling

All aggregate stockpiles shall be placed on a paved surface or areas acceptable to the Engineer.

When dust from the aggregate creates a nuisance or when aggregate fails to adhere to the asphalt the Engineer may require the Contractor to "water down" the aggregate stock pile.

When, directed by the Engineer, or desired by the Contractor, aggregate stockpiles will be "watered down". When the "watered down" aggregate does not adhere to the asphalt properly the Engineer may direct that water for this purpose contain 5% EA10S emulsified asphalt and/or an approved wetting agent. The Engineer may direct the contractor to increase the amount of emulsified asphalt added to the water if, in his opinion, desired results are not being achieved. No separate payment shall be made for emulsified asphalt, water or wetting agent but the cost shall be considered as an incidental cost for furnishing satisfactory aggregate.

G. Cleanup

Clean up shall be maintained on a timely manner as the work progresses. All debris scattered on the sidewalks and driveways shall be swept up by the Contractor. Sweeping debris onto freshly sealed streets shall not be allowed.

City forces will remove excess aggregate from the street and gutters after the project is completed.

H. Maintenance

The Contractor will be required to maintain all sealed streets until final acceptance of the project by the Engineer. Maintenance shall consist of adding additional coverstone when required, rolling, pony blading, or drag brooming.

IV. MEASUREMENT

Asphaltic material shall be measured in gallons at the applied temperature at the point of application.

Aggregate shall be measured by the ton in vehicles as delivered to the aggregate spreader and applied on the street. Trucks will not be allowed to leave the construction area with a partial load. If it becomes necessary for a truck to leave the area because of mechanical failure or other reasons, a second weigh ticket for that truck will be required.

Rolling shall be measured by the hours of actual rolling for each roller.

V. PAYMENT

Payment shall be made as provided under "Measurement" at the unit price bid for "aggregate", "asphalt", and "rolling" and shall be full compensation for furnishing and incorporating the materials "Aggregate" and "Asphalt" (and additives where applicable) into a composite product; for delivering, stockpiling; for brooming, compaction, and rolling; for cleaning the existing surface; for cleaning excess bituminous material; cleaning gutters; for cleaning sidewalks and driveways; for cleaning stockpile sites; for all required maintenance; for pony blading; for drag brooming; for adding additional cover aggregate; for all labor, equipment, supervision, tools, overhead, profit, and any other incidentals necessary to complete the work required under the conditions of these plans and specifications to the satisfaction of the Engineer.

08/07

ASPHALT - RUBBER SEAL COAT

(Stress Absorbing Membrane)

1. SCOPE

This specification covers the material, equipment, and construction procedures for a Stress Absorbing Membrane (seal coat).

2. PREQUALIFICATION OF A NEW ASPHALT-RUBBER MATERIAL

Pre-qualification of a new asphalt-rubber material or applicator may be requested at any time. Pre-qualification will be based on three controlled field applications evaluated after three years' performance under traffic. New asphalt-rubber material that has been evaluated and pre-qualified by an agency recognized nationally may be pre-qualified by that agency upon disclosure of suitable evidence of successful performance. Notwithstanding other agency pre-qualification, the City reserves the right to withhold pre-qualification pending the performance evaluation of local controlled field applications.

3. MATERIALS

3.1 Asphalt

The grade of asphalt cement for the asphalt-rubber mixture shall be AC - 5 or AC - 10 which shall comply with the requirements of Item 300 "Asphalt, oils and emulsions" of Texas State Department of Highways and Public Transportation 1982 Standard Specification for Construction of Highways, Streets and Bridges. The grade selected shall be based on laboratory testing by the asphalt-rubber supplier, to insure compatibility with the granulated reclaimed rubber.

If indicated necessary by laboratory testing, an approved anti-stripping additive may be added to the asphalt cement up to 1.0 percent by weight of asphalt.

3.2 Granulated Reclaimed Rubber

The granulated reclaimed rubber used shall be produced primarily from the processing of automobile and truck tires. The rubber shall be produced by ambient temperature grinding processes only.

The gradation of the granulated reclaimed rubber when tested in accordance with ASTM C-136 and using a 50 gram +/- 1 gram sample, shall meet the

following requirements:

Sieve Sizes	Percent Passing
#8	100
#10	95 - 100
#16	40 - 60
#30	0 - 10
#50	0 - 5

The use of rubber from multiple sources is acceptable provided that the overall blend of rubber meets the gradation requirements.

The individual granulated rubber particles, irrespective of diameter, shall not be greater in length than 3/16 inch (5mm).

The granulated rubber shall have a specific gravity of 1.15 +/- 0.05 and shall be free of loose fabric, wire and other contaminants except that up to 4 percent (by weight of rubber) calcium carbonate or talc may be added to prevent rubber particles from sticking together. The rubber shall be sufficiently dry so as to be free flowing and not produce a foaming problem when blended with the hot asphalt cement.

The granulated reclaimed rubber shall be accepted by certification from the rubber supplier.

3.3 **Diluent**

The diluent shall have the following properties:

Flash Point	130^{o} F Minimum
Initial Boiling Point (ASTM D-86)	340^{o} F Minimum
Dry Point (ASTM D-86)	390^{o} - 415^{o} F
Total Saturates	85% Minimum

3.4 **Asphalt - Rubber**

The asphalt-rubber supplier shall furnish to the engineer a minimum of 10 days before the beginning of membrane placement, the asphalt-rubber mix formulation which shall contain the following information:

Asphalt Cement
Source of Asphalt Cement

Grade of Asphalt Cement
Percentage of Asphalt Cement by total weight of the asphalt-rubber mixture.

Granulated Reclaimed Rubber
Source of Granulated Rubber
Grade of Granulated Rubber
Percentage of Granulated Rubber by total weight of the asphalt-rubber mixture.

If granulated rubber from more than one source is utilized the above information will be required for each granulated rubber used.

Diluent
Source of Diluent
Grade of Diluent
Percentage of Diluent allowable by volume of the asphalt-rubber mixture.

3.5 **Cover Aggregate**

Aggregate shall be composed of a clean and durable crushed rock, crushed gravel or crushed slag conforming to Item 304 "Aggregate for Surface Treatments (pre-coated)" of Texas State Department of Highways and Public Transportation 1982 Standard Specification for Construction of Highways, Streets and Bridges, grade No. 3 or No. 4.

Proposed aggregate samples shall be submitted to the asphalt-rubber supplier a minimum of 21 days prior to application, to test for aggregate stripping characteristics. The results shall be submitted to the engineer. Anti-strip will be included as a contingency bid item.

4. **EQUIPMENT**

4.1 **General**

The equipment used by the contractor shall include a self propelled rotary power broom or mobile pickup broom for pavement cleaning and excess cover material removal.

4.2 **Asphalt-Rubber Equipment**

All equipment utilized in the production and application of the asphalt-rubber shall be so designed and accessible that the Engineer can readily determine

the percentage by weight for each material being incorporated into the mixture and shall be as described as follows:

4.2.1 An asphalt heating tank with a hot oil heat transfer system or retort heating system capable of heating asphalt cement to the necessary temperature for blending with the granulated rubber. This unit shall be capable of heating a minimum of 3,000 gallons of asphalt cement.

4.2.2 An asphalt-rubber mechanical blender with a two stage continuous mixing process capable of producing a homogenous mixture of asphalt cement and granulated rubber, at the mix design specified ratios, as directed by the engineer. This unit shall be equipped with a granulated rubber feed system capable of supplying the asphalt cement feed system, as not to interrupt the continuity of the blending process. A separate asphalt cement feed pump and finished product pump are required. This unit shall have both an asphalt cement totaling meter in gallons and a flow rate meter in gallons per minute.

4.2.3 A truck mounted self powered distributor truck equipped with a retort heating unit, and an internal mixing device capable of maintaining a uniform mixture of asphalt cement and granulated rubber. It shall be equipped with a full circulating spreader bar and a pumping system capable of applying asphalt-rubber material within +/- .05 gallons per square yard tolerance of the specified application rate and must give a uniform covering of the surface to be treated. The distributor shall have a boot board on the rear of the vehicle and a bootman shall accompany the distributor. The bootman shall ride in a position so that all spray bar tips are in full view and readily accessible for unplugging if a plugged tip should occur. The distributor shall also include a tachometer, pressure gauge, volume measuring device and a thermometer.

4.3 Cover Material Spreader

The cover material (chip) spreader shall be a self-propelled machine with an aggregate receiving hopper in the rear, belt conveyors to carry the aggregate to the front, and a spreading hopper equipped with a full-width distribution auger and spread roll. The spreader shall be in good mechanical condition and be capable of applying the cover material uniformly across the spread at the specified rate.

4.4 Rolling Equipment

A minimum of three operational self-propelled pneumatic-tired rollers shall be used for the required rolling of the cover material. The pneumatic tired rollers shall carry a minimum loading of 3,000 pounds on each wheel and a

minimum air pressure of 100 pounds per square inch in each tire.

4.5 **Hauling Equipment**

Trucks for hauling cover material shall be tailgate discharge and shall be equipped with a device to lock onto the hitch at the rear of the cover material spreader. Haul trucks shall also be compatible with the cover aggregate spreader so that the dump bed will not push down on the spreader when fully raised or have too short a bed which results in aggregate spillage while dumping into the receiving hopper.

5. **CONSTRUCTION**

5.1 **General**

Streets to receive the asphalt-rubber stress absorbing membrane or seal coat shall be prepared in accord with Section 2-C-1 "Preparation of Asphaltic Concrete Surface for Overlay or Seal Coat" of these specifications.

Immediately prior to the application of the asphalt-rubber membrane, the surface shall be thoroughly cleaned in order to insure adequate adhesion of the asphalt-rubber to the pavement.

Due to the handling characteristics of asphalt-rubber, when radii and other irregular areas are to be sealed it is recommended that this be done with an RS or CRS chip seal emulsion or paving grade asphalt cement.

5.2 **Asphalt-Rubber Mixing and Reaction**

The percentage of granulated rubber shall be 23 percent plus or minus 3 percent by weight of total asphalt-rubber mixture, the exact granulated rubber content shall be as determined by the mix design submitted by the asphalt-rubber supplier. During membrane placement the granulated rubber percentage shall not fluctuate more than 1 percent by weight of total asphalt-rubber mixture.

The temperature of the asphalt cement shall be between 350^{o} and 400^{o} F at the addition of the granulated rubber. The asphalt and rubber shall be combined and mixed together in the asphalt-rubber blending unit and reacted in the distributor for a period of time as required by the engineer which shall be based on laboratory testing by the asphalt-rubber supplier. The temperature of the asphalt-rubber mixture shall be above 350^{o} F during the reaction period.

After the reaction between asphalt cement and granulated rubber has occurred, the viscosity of the hot asphalt-rubber-mixture may be adjusted for spraying and/or better "wetting" of the cover material by the addition of a diluent. The diluent shall comply with the requirements of Section 3.3 and shall not exceed 7.5 percent by volume of the hot asphalt-rubber mixture.

When a job delay occurs after full reaction, the asphalt-rubber may be allowed to cool. The asphalt-rubber shall be reheated slowly just prior to application but not to a temperature exceeding 350° F. An additional quantity of diluent not exceeding 3 percent by volume of the hot asphalt-rubber mixture may be added after reheating.

5.3 Application of Asphalt-Rubber Material

Placement of the asphalt-rubber membrane shall be made only under the following conditions.

1. The pavement surface temperature shall be 45° F and rising.

2. The pavement surface is clean and absolutely dry.

3. The wind conditions are not excessive.

4. All construction equipment such as asphalt-rubber distributor, cover material spreader, haul trucks with cover material, and rollers are in position and ready to commence membrane placement operations.

5. Rain is not imminent.

The asphalt-rubber mixture shall be applied at a temperature of 300° to 350° F at a rate of between .55 and .65 gallons per square yard. Transverse joints shall be constructed by placing building paper across and over the end of the previous asphalt-rubber application. Once the spraying has progressed beyond the paper, the paper shall be removed immediately and disposed of as directed by the engineer. All longitudinal joints shall not exceed a four inch overlap.

5.4 Application of Cover Material

Cover material shall be applied immediately to the asphalt-rubber after spreading at a rate of 25 to 35 pounds per square yard.
At the time of application to the asphalt-rubber, cover material shall be

surface dry so as to gain proper adhesion to the asphalt-rubber material.

5.5 Rolling

At least three operational pneumatic-tired rollers complying with the requirements of Section 4.4 shall be provided to accomplish the required embedment of the cover material. At some project locations or where production rates dictate, fewer rollers may be utilized as directed by the engineer. At no time shall there be less than two operational pneumatic tired rollers on a project.

Sufficient rollers shall be used for the initial rolling to cover the width of the aggregate spread with one pass. The first pass shall be made immediately behind the cover material spreader, and if the spreading is stopped for an extended period, the cover material spreader shall be moved ahead or off the site so that all cover material may be immediately rolled. Four complete passes with rollers shall be made with all rolling completed within one hour after the application of the cover material.

5.6 Traffic Control

Except when it is necessary that hauling equipment must travel on the newly applied membrane, traffic of all types must be kept off the membrane until it has had time to set properly. The speed of all hauling equipment shall not exceed 15 miles per hour when traveling over a membrane which is not adequately set. The minimum traffic free period shall not be less than one hour.

5.7 Removing Loose Cover Material

Sweeping can begin a minimum of one hour after membrane placement.

5.8 Method of Measurement and Basis of Payment

5.8.1 Asphalt-Rubber

a) Measurement will be made of the actual number of gallons of Asphalt-Rubber including asphalt placed in accord with these specifications.

b) Payment will be made at the price bid per gallon of Asphalt-Rubber in the bid proposal and will be full compensation for furnishing all asphalt, rubber, extender and for all labor,

equipment and incidentals for placing the asphalt-rubber on the Street surface.

5.8.2 **Cover Aggregate**

a) Measurement will be made of the actual number of tons of pre-coated aggregate placed in accord with these specifications.

b) Payment will be made at the price bid per ton of pre-coated aggregate in the bid proposal and shall be full compensation for furnishing all pre-coated aggregate and for all labor and equipment including rollers and rolling for the complete surface in place.

5.8.3 **Rolling**

a) No measurement will be made of rolling but rolling shall be considered as incidental to placing of the cover aggregate.

b) No separate payment will be made for rolling. The cost of rolling shall be included in the price per ton of cover aggregate in the bid proposal.

5.8.4 **Anti strip agent**

a) Anti stripping agent, when used, shall be measured by the gallon.

b) Payment for anti stripping agent shall be made at the price per gallon of anti stripping agent bid in the bid proposal.

08/07

POLYMER MODIFIED SLURRY SEAL (MICRO-SURFACE)

I. SCOPE

This specification covers the design, application, testing, quality control and measurement and payment for a complete in place "polymer modified micro surface" constructed on existing paved surfaces cleaned and prepared in accordance with the item 2-C-1 "PREPARATION OF ASPHALTIC CONCRETE SURFACE FOR OVERLAY OR SEAL".

2. DESCRIPTION

This specification covers all materials, equipment, construction and application procedures for rut filling and/or surfacing of existing paved surfaces. The micro-surfacing shall be a mixture of cationic polymer modified asphalt emulsion, mineral aggregate, mineral filler, water and other additives, properly proportioned, mixed and spread on the paved surface in accordance with this guideline and as directed by the Engineer.

3. MATERIALS

3.1 Emulsified Asphalt

(1.) The emulsified asphalt shall be a cationic emulsified type, designated as CSS-1P and shall comply with the following requirements.

	Min.	Max.
Viscosity, Saybolt Furol, 25 C (77 F), Sec.	**20**	**100**
Storage Stability test, one day, percent	**-**	**1**
Particle charge test		**Positive**
Sieve test, percent	**-**	**0.1**
Distillation:		**-** **-**
Oil distillate, by volume of emulsion, %	**-**	**0.5**
Residue, %		**62** **-**
Test on Residue from Distillation:		
Penetration, 77 F, 100 g, 5 seconds	**55**	**90**
Ductility, 77 F, 5 cm/min, cm	**70**	**-**
Solubility in trichloroethylene , %	**97**	**-**
Softening Point, R. & B., F	**135**	**-**
Viscosity, absolute 60 C (140 F), Poise		**8000** **-**

This standard distillation procedure shall be modified as follows: The temperature on the lower thermometer shall be brought slowly to 350 degrees plus or minus 10 degrees F and maintained at this point for 20 minutes. Complete the total distillation in 60 plus or minus 5 minutes from the first application of heat.

(2). The emulsion shall be modified with an approved Polymer. The distillation residue of the modified emulsion shall contain a minimum of three percent (3%) polymer solids by weight. The modified emulsion shall pass all applicable storage and settlement tests. The polymer material shall be milled into the emulsion or blended into the asphalt cement prior to the emulsification process. The cement-mixing test shall be waived for this emulsion.

(3). The polymer modified emulsified asphalt shall be so formulated that when the paving mixture is applied with the relative humidity at not more than 50% and the ambient temperature at least 75^{o} F, the paving mixture will sufficiently cure so that uniformly moving traffic can be allowed in approximately one hour. Locations such as driveways, Intersections and where sharp turning may take place or where vehicles may accelerate sharply, additional curing time may be required.

(4). The contractor shall notify the Engineer of the source of his asphaltic material prior to the design or production of the surfacing mixture and this source shall not be changed during the course of the project, except on written permission by the Engineer.

3.2 Mineral Aggregate

(1) Description. One Hundred percent (100%) of the mineral aggregate shall be crushed and shall be composed of clean, tough and durable particles of traprock, granite, sandstone or other approved aggregates. A sand equivalent of 65 or higher is required. The aggregate shall have a weight loss of not more than 12% when sodium sulfate is used or 18% when magnesium sulfate is used in accordance with Test Method Tex-411-A, using 5 cycles. The aggregate shall be one that has proven resistant to polishing in roadway surfacing.

(2.) Grades. When tested by Test Method Tex-200-F, Part I, the gradation requirements shall be as follows:

Grade 1 (Fine Graded Surface Course)	Percent Aggregate By Weight
Passing 3/8" sieve	100
Passing No. 4 sieve	98-100
Passing No. 8 sieve	75 -90
Passing No. 16 sieve	50- 75
Passing No. 30 sieve	30- 50
Passing No. 50 sieve	18- 35
Passing No. 200 sieve	5 -15

Grade 2 (Coarse Graded Surface Course)	Percent Aggregate By Weight
Passing 1/2" sieve	100
Passing 3/8" sieve	99-100
Passing No.4 sieve	86- 94
Passing No. 8 sieve	45- 65
Passing No. 16 sieve	25- 46
Passing No. 30 sieve	15 - 35
Passing No. 50 sieve	10 - 25
Passing No. 200 sieve	5- 15

(3.) Mineral Filler. Mineral filler shall be non-air entrained Portland cement that is free of lumps or foreign matter.

3.3 Water

The water shall be portable and shall be free of harmful soluble salts.

3.4 Other Additives

Additives supplied by the emulsion manufacturer may be added to the emulsion mix or to any of the component materials to provide control of the set time in the field.

4. LABORATORY EVALUATION

4.l General

Before work commences, the contractor shall submit a signed mix design covering the specific materials to be used on the project. This design shall be performed by the contractors or suppliers laboratory or by a qualified laboratory chosen by the owner. Once the materials are approved, no substitution will be permitted, unless first tested and approved by the laboratory preparing the mix design. The cost of mix design shall be born by the contractor.

4.2 Designing Job Mix

The qualified laboratory shall develop the job mix design and present certified test results for the contractor approval. Compatibility of the aggregate and modified CSS-1P shall be verified by the mix design. The mix design must be made using samples taken from the actual materials proposed for use in the project and in accordance with the procedures and requirements of Article 5.1 below.

5. PAVING MIXTURE

5.1 Mixture Design.

The mix shall be designed in accordance with Texas State Highway Department Bulletin C-14 and Test Method Tex-204-F, using Test Method Tex-227-F to supplement Test Method Tex-201-F and Tex-202-F to conform to the requirements herein. The above laboratory mixing and curing procedures may be modified as approved by the Engineer. The emulsified asphalt content will be selected by the Engineer to provide an optimum laboratory compacted density within the range of 94 to 97%. A minimum Hveem stability of 35 is required for placements exceeding a depth of twice the maximum aggregate size.

This is a mix design requirement, to be verified by testing of trial batch material prior to placement of project material. Hveem Stability testing will be performed by the selected laboratory. The Engineer will determine the frequency of job control density and stability testing. The Contractor shall furnish the mix design for the type of mixture specified together with applicable design worksheets and data. The Bulk Specified Gravity will be determined for each aggregate to be used in the design mixture. If the determined values vary by 0.300 or more, the mixture design will be by the Volumetric Method, Test Method Tex-204-F, Part II. To substantiate the design, trial mixtures will be produced and tested using all of the proposed project materials and equipment prior to any placement. The Engineer may waive trial mixtures if the same design has been proven to be in conformance with these requirements.

5.2 Composition of Mixture.

The Engineer shall approve the design mix and all micro-surfacing materials and methods prior to use and shall designate the proportions to be used within the following limits.

Residual Asphalt	**6 to 9 percent by weight of dry aggregate or 13.5 to 23 percent by volume of the aggregate**
Mineral Filler	**0.5% to 3.0% by dry weight of aggregate**
Modifier	**As required to provide the specified properties**
Water	**As required to provide proper consistency**

5.3 Type

The paving mixture shall consist of a uniform mixture of coarse aggregate, fine aggregate and asphaltic material. The mix may also contain mineral filler and/or additives when required.

The mixture shall be designed so that the mineral aggregate will produce a gradation, which conforms to the limitations for the master grading for the type specified herein. The gradation will be determined in accordance with Test Method Tex-200-F (Dry Sieve Analysis) and shall be based upon aggregate only. The amount of asphaltic material shall conform to the limitation for the type specified.

The aggregate grade shall be as shown on the plans. If no grade is shown on the plan grade 2 aggregate shall be used.

5.4 Tolerances

The aggregate portion of the paving mixture produced shall not vary from the design gradation by more than the tolerances that follow. The material passing the No. 200 sieve is further restricted to conform to the limitations for the master grading for the type specified. The asphaltic material portion of the paving mixture shall not vary from the design amount by more than the allowed tolerance and is also restricted to conform to the master limits. The method of test for determining the aggregate gradation and asphalt content of the mixture shall be Test Method Tex-210-F or other methods of proven accuracy.

	Percent by Weight or Volume as Applicable
Passing 3/8" sieve, retained on No. 4 sieve	**Plus or minus 5**

Passing No. 4 sieve, retained on No. 8 sieve	**Plus or minus 5**
Total retained on No. 8 sieve	**Plus or minus 5**
Passing No. 8 sieve, retained on No. 16 sieve	**Plus or minus 3**
Passing No. 16 sieve, retained on No. 30 sieve	**Plus or minus 3**
Passing No. 30 sieve, retained on No. 50 sieve	**Plus or minus 3**
Passing No. 50 sieve, retained on No. 200 sieve	**Plus or minus 3**
Passing No. 200 sieve	**Plus or minus 2**

Asphaltic Material Plus or minus 0.5 by wt. or l.2 by vol.

6. EQUIPMENT

6.1 General.

All equipment for the handling of all materials and mixing and placing of the mixture shall be maintained in good repair and operating condition and subject to the approval of the Engineer. Any equipment found to be defective and potentially affecting the quality of the paving mixture will be replaced or, at the option of the Contractor, satisfactorily repaired. It will be the contractor responsibility to prove to the Engineer that the repaired equipment is properly functional.

6.2 Mixing and Proportioning Equipment.

(1.) The material shall be mixed by a self-propelled micro-surfacing mixing machine which shall be a continuous flow mixing unit able to accurately deliver and proportion the aggregate, emulsified asphalt, mineral filler, field control additive and water to a revolving multi-blade twin shafted mixer and discharge the mixed product on a continuous flow basis. The machine shall have sufficient storage capacity for aggregate, emulsified asphalt, mineral filler, field control additive and water to maintain an adequate supply to the proportioning controls. The machine shall be equipped with self-loading devices, which provide for the loading of all materials while continuing to lay micro surfacing.

The machine shall be equipped with opposite side driving stations to optimize longitudinal alignment. The machine shall be equipped to allow the mix operator to have full hydrostatic control of the forward and reverse speed during application of the micro-surfacing material.

The self-loading devices, opposite side driving stations and forward and reverse speed controls shall be original equipment manufacturer design.

(2). Individual volume or weight controls for proportioning each material to be added to the mix shall be provided. Each material control device shall be calibrated and properly marked.

(3) The aggregate feed to the mixer shall be equipped with a revolution counter or similar device so the amount of aggregate used may be determined at any time.

(4) The emulsion pump shall be a positive displacement type and shall be equipped with a revolution counter or similar device so that the amount of emulsion used may be determined at any time.

(5.) The mixing machine shall be equipped with a water pressure system and nozzle type spray bar to provide a water spray immediately ahead of and outside the spreader box.

(6.) The mixing machine shall be equipped with an approved fines feeder that shall provide a uniform, positive, accurately metered, predetermined amount of the specified mineral filler.

6.3 Spreading Equipment.

The paving mixture shall be spread uniformly by means of a mechanical type spreader box attached to the mixer, equipped with paddles, screws or augers to agitate and spread the materials throughout the box. A front seal shall be provided to insure no loss of the mixture at the road contact surface. The rear seal shall act as a final strike off and shall be adjustable and shall break in the middle so that the screed can be adjusted to fit the crown of the street including inverted crowns. The rear seal carrier shall be capable of being fitted with a rubber seal or a steel strike off bar.

The spreading equipment shall be readily adjustable in width so that laying widths can be changed without undue delay before starting each pass if necessary.

The spreader box and rear strike-off shall be so designed and operated that a uniform consistency is achieved to produce a free flow of material to the rear strike-off. The seam where two spreads join, shall be neat appearing and uniform.

7. STOCKPILING AND STORAGE.

7.1 Aggregate Storage.

If the mineral aggregates are stored or stockpiled, they shall be handled in such a manner as to prevent segregation, mixing of the various materials or sizes, and contamination with foreign materials. The grading of aggregates proposed for use and as supplied to the mixing plant shall be uniform. Suitable equipment of acceptable size shall be furnished by the Contractor to work the stockpiles and prevent segregation of the aggregates. The mineral aggregate shall be screened and weighed at the contractor stockpile prior to job site delivery. The Engineer shall approve screens and scales.

7.2 Storage and Heating of Asphaltic Materials.

The asphaltic material storage shall be ample to meet the requirements of the plant. Asphalt shall not be heated to a temperature in excess of that specified
in the Item "Asphalt's, Oils and Emulsions" Texas Highway Department 1982 Standard Specifications. All equipment used in the storage and handling of asphaltic material shall be kept in a clean condition at all times and shall be operated in such manner that there will be no contamination with foreign matter.

8. CONSTRUCTION METHODS

8.1 General

It shall be the responsibility of the Contractor to produce, transport, and place the specified paving mixture in accordance with these specifications and as approved by the Engineer.

8.2 Street Preparation

Prior to starting the micro-surfacing operation, streets designated to be surfaced shall be prepared in accordance with item 2-C-1 "Preparation of Asphaltic Concrete Surface for Overlay or Seal".

8.3 Weather Limitations.

The material shall be spread only when the atmospheric temperature is at least fifty (50 degrees) F and rising and the weather is not foggy or rainy. No material will be placed when the surface on which it is to be placed is below 50^{o} F.

8.4 Final Surface Preparation

Immediately before placing the micro-surface, the area to be sealed shall be thoroughly cleaned of all vegetation, loose aggregate and soil, and moistened. Water for prewetting the surface shall be applied immediately ahead of the spreader box by use of a pressure spray bar equipped with nozzles that produce a fine mist. The rate of application of water shall be sufficient to dampen the entire surface without any free flowing water ahead of the spreader box. The rate of the mist spray shall be adjusted from time to time during the placing operation to accommodate changes in temperature, surface texture, humidity and dryness of the pavement surface.

8.5 Placing the Mix

(1). The mixture shall be spread to fill cracks and minor surface irregularities and leave a uniform skid resistant application of aggregate and asphalt on the surface. The finished surface shall be neat in appearance without drag marks, excessive buildup or other detracting irregularities.

(2). The speed of operation of the surfacing equipment shall be controlled by the mixer operator at forward speeds between 85 and 225 feet per minute depending on conditions and appearance of the newly placed surface.

If transverse rippling occurs the speed of the equipment shall be reduced until the ripples disappear.

(3). The Engineer shall designate either rubber seal/screed or the steel strike off screed according to the Project requirements.

(4). The depth of mixture in the spreader box shall be carefully controlled to prevent transverse ridging and premature setup of material in the corners of the box and ahead of the screed. In general the depth of mixture in the box should be approximately to the mid point of the auger-agitator.

(5). Auxiliary equipment shall be kept in good working order and free of leaks. Any truck or transport used to bring materials on to the street being surfaced that develops leaks either of the material being transported or fuel and/or oil leaks will be removed from the job site and not allowed to return until it has been thoroughly repaired.

Scales and screens used at the contractors stockpile and storage site shall be kept in good working order.

(6). Spills of surfacing materials or fuel, oil or other detrimental substances on the street ahead of the surfacing operation shall be thoroughly removed before the surface is placed. This may required the operation to be shut down until the street has been cleaned.

(7). No excessive streaks shall be left in the finished surface. When such excessive streaking occurs, the operation shall be immediately stopped and corrective action is taken before resuming the operation.

8.6 Joints

(1). Longitudinal joints shall be placed on lane lines. On residential streets an eight-foot parking lane will be assumed with the centerline being the other lane line.

(2). All longitudinal and transverse joints shall be straight and neat in appearance without excessive build up or bare spots. Any irregularity shall be corrected immediately before the material has started to set up.

(3). The overlap at longitudinal joints shall not exceed 4 inches. When the overlapped pass is only partially set care shall be exercised to avoid skid marks. Any skid marks that occur shall be immediately corrected by removing any partially set material that has been displaced and placing fresh mix in the mark and shaping by use of Lutes, squeegees, hand drags, etc.

Overlapping of longitudinal joints shall not leave a visible build up. Any buildup shall be immediately removed by use of lutes, squeegees, hand drags, shovels or other approved means.

8.7 Mix Stability

The modified mixture shall posses sufficient stability so that premature breaking of the material in the spreader box does not occur. The mixture shall be homogeneous during and following mixing and spreading; it shall be free of excess water or emulsion and free of segregation of the emulsion and aggregate fines from the coarser aggregate.

8.8 Hand Work

Areas that cannot be reached with the mixing machine shall be surfaced using hand squeegees to provide complete and uniform coverage. The area to be hand-worked shall be lightly dampened prior to mix placement. Care shall be exercised to leave no unsightly appearance from handwork. The same type finish as applied by the spreader box shall be required. Handwork shall be completed during the machine applying process.

8.9 Lines

Care shall be taken to insure straight lines along curbs and shoulders. No runoff on these areas will be permitted. Lines at intersections will be kept straight to provide a good appearance.

8.10 Work Force

The contractor shall maintain a work force of adequate size to accomplish the work as specified herein, including the loading and transporting of materials to the job site, the placing of the micro surface, the monitoring of joints and surface and the correction of any deficiencies that occur.

If, at any time, the Engineer or his representative determines that the work force is not adequate to perform all the tasks required for the proper completion of the micro surfacing, work on the project will be halted until adequate personnel are provided and/or modifications in procedure are implemented that will assure proper placement of the surfacing material.

8.11 Scratch or Level up course

A scratch or level up course will be required on certain streets as shown on the plans and/or as directed by the Engineer. This course shall be the same material as the polymer modified surface course and will be placed in the same manner except the spreader shall be equipped with a steel strike off screed. This screed shall be set to run as close to the pavement surface as practical.

The appearance of this course is not as critical as the final surface so long as any marks or blemishes that occur are not of such magnitude that they will affect the appearance of the final course.

8.12 Correction of Deficiencies and Blemishes

After the laydown work is completed and before final acceptance by the

Engineer, spot application of micro- surfacing material may be required to correct any deficiencies such as streaks, scuff marks, tire tracks, gaps, etc. to improve the ride quality and overall appearance. The spot application shall be performed with a full width spreader box when required.

9. QUALITY CONTROL

9.1 Materials

The contractor will permit the Engineer and/or the Independent laboratory to take samples of the aggregate and asphalt emulsion used in the project at the Engineers discretion. Gradation and sand equivalent tests may be run on the aggregate and residual asphalt content tests on the emulsion. Test results will be compared to specifications. Tests will be run at the expense of the owner. The owner must notify the contractor immediately if any test fails to meet the specifications.

9.2 Polymer Modified Micro-Surfacing

Samples of the material may be taken directly from the mixing unit(s). Consistency and residual asphalt content tests may be made on the samples and compared to the specifications. Tests will be run at the expense of the owner. The owner must notify the contractor immediately if any test fails to meet specifications.
The Engineer may use the recorders and measuring facilities of the unit to determine application rates, asphalt emulsion content, mineral filler and additive.

9.3 Non-Compliance

If any two successive tests fail on the stockpile material, the job shall be stopped. It is the responsibility of the contractor, at his own expense, to prove to the Engineer that the conditions have been corrected. If any two successive tests on the mix from the same machine fail, the use of the machine shall be suspended. It will be the responsibility of the contractor, at his own expense, to prove to the Engineer that the problems have been corrected and that the
machine is working properly.

10. CLEAN UP

10.1 Protecting and Cleaning Manholes and Valves

Prior to beginning the sealing operation the contractor shall locate all manhole covers and valve boxes in the area to be sealed. Placing one or

more layers of heavy craft paper or other suitable material over them shall protect manhole covers and valve boxes. The protective covering shall be secured in place so that it does not move or tear during the sealing operation. The contractor shall remove the protective covering and any seal material placed over manhole covers and valve boxes as soon as the seal has set sufficiently to prevent damage to the adjoining seal in the process. The edges around manhole covers and valve boxes shall be neat and smooth and shall conform to the shape and size of the manhole cover or valve box.

10.2 Streets

Clean up along streets shall be accomplished as the work progresses and any excess material that is raked onto or otherwise placed on adjoining concrete curb and gutter, valley gutters or fillet areas or on adjacent asphalt or concrete paving shall be removed before it breaks or sets up.

Before a section of street is opened to traffic all clean up work shall be completed on that section.

11. MEASUREMENT AND PAYMENT

11.1 General

Payment will be made for these items listed in the bid proposal only. All work, materials, labor and appurtenance required to complete the project as shown on the plans or called for in the specifications but not listed in the bid proposal shall be considered as incidental and no separate payment will be made. The cost of these incidentals must be included in the price bid for the various items listed in the bid proposal.

11.2 Measurements

(1). Measurement will be made of the actual number of tons of each type or grade of the Composite Polymer Modified Slurry Seal (Micro-Surface) complete in place. For this specification a ton is considered 2000 lbs. and the composite slurry seal mixture is defined as the asphalt,
aggregate and additives.

All materials shall be weighed on certified public scales or the contractor shall place a set of standard truck scales at a site approved by the Engineer. Scales shall conform to the requirements of the item "Weighing and measuring equipment" Texas Highway Department 1982 Standard Specifications.

(2). Aggregate - The quantity of aggregate used in the accepted portions of the work shall be measured by net ticket weight of each individual load of
aggregate shipped to the project from the approved job site scale.

The weight of mineral additive used shall be calculated and included in the total aggregate weight.

(3). Polymer Modified Asphalt Emulsion. The quantity of polymer modified asphalt emulsion in the accepted portion of the work shall be measured by tons of material based on the accepted load tickets issued from the manufacturer. At the completion of the project any unused emulsion shall be weighed back and that quantity deducted from the accepted asphalt emulsion quantity delivered.

11.3 Payment

Payment will be made for the number of tons of micro surface measured at the applicable unit price bid per ton of micro surface in the bid proposal. This payment shall be full and complete compensation for the complete in place micro surface.

08/07

P.V.C. PIPE CASINGS

1. SCOPE

   This item consists of furnishing and installing PVC pipe for casing for future water and electric lines at locations shown on the plans or as directed by the Engineer.

2. MATERIAL

   Pipe shall be ASTM D 1785 schedule 40 PVC pipe or ASTM D 2241 PVC SDR 32.5 pressure pipe. The ASTM designation and schedule or SDR shall be clearly marked on the outside of the pipe.

3. CONSTRUCTION

   Pipe shall be laid in straight alignment and grade in trenches as narrow as the diameter of the pipe can be laid. Pipe shall be placed after the sub grade is prepared but before base material is placed. Bedding under the pipe shall be a minimum of 2 inches in thickness and shall be carefully graded and leveled before pipe is placed. Joints shall be water tight. They may be solvent cement welded using approved materials, or may be made using a gasketed collars or push on gasketed bell and spigot. When collars are used care shall be exercised to assure that the collar is centered over the joint. All joints shall be made in accord with the manufacturer's recommendations. After pipe has been joined and inspected the pipe shall be encased in bedding/encasement material to a thickness of 3 inches above the pipe. Care shall be exercised to be sure the encasement material is worked in under the haunches of the pipe and compacted along the side of the pipe to assure adequate lateral support. The balance of the trench shall be back filled using cement stabilized backfill consisting of 2 sacks of Portland cement to 1 cubic yard of blow sand or crushed caliche mixed with sufficient water to form a stiff place able mixture that can be consolidated in the trench by rodding or vibrating. The back fill shall be "struck off" at the finished sub grade level using square point shovels or suitable screeds. The ends of the pipe shall be tightly plugged to prevent the entrance of water debris or other foreign material. These plugs shall be PVC or rubber stoppers designed to endure until the water lines and/ or electric lines are places.

4. MEASUREMENT AND PAYMENT

   Casing pipe shall be measured by the linear foot along the center of the pipe and shall be paid for at the unit price in the bid proposal.

WATER LINE SPECIFICATIONS

1. SCOPE OF WORK

The work covered by this section consists of all water pipe lines and piping, including valves, valve boxes, tapping sleeves, fire hydrants and other accessories, required to complete the project. The contractor shall furnish all materials, labor, superintendence, tools, equipment and incidentals necessary for the complete construction of this work in accordance with the drawings and these specifications.

2. PIPE AND MATERIAL

2.1 General

Pipe shall be polyvinyl chloride (PVC) AWWA C900, ductile iron AWWA C-151 or steel cylinder concrete pipe AWWA C-303.

2.2 Polyvinyl Chloride (PVC) Pipe

A. PVC pipe furnished for use on this project shall conform to the requirements of AWWA C900 Polyvinyl Chloride (PVC) Pressure Pipe, 4 in. through 12 in., for water distribution pressure class 150, DR18. and shall be NSF approved for potable water supply.

B. The pipe furnished shall have an integral bell designed for joint assembly using elastomeric seals.

C. Markings for the pipe shall include all the requirements of AWWA C900 and the MSF approval stamp.

D. Elastomeric seals shall be furnished by the pipe manufacturer. Seals shall be manufactured to conform with the requirements of ASTM F4 77 and shall be specifically designed for use with the pipe furnished.

E. Lubricants intended for use with PVC pipe and seals (gaskets) shall be compatible with both PVC and the seal material. Lubricant shall not support growth of bacteria and shall not adversely affect the potable quality of the water that is to be transported.

F. Pipe laying lengths shall be 20'.

G. Service taps on PVC water lines shall be made using hinged type or double strap type saddles. Tapping saddles shall support the full circumference of the pipe and shall have a bearing area of sufficient width along the axis of the pipe to prevent distortion of the pipe when saddle is tightened.

No direct taps into the wall of PVC pipe will be permitted.

Seals for tapping saddles shall be recessed into the body of the saddle and shall be

a rubber - compound conforming to the requirements of ASTM F477.

Tapping saddles shall be SMITH-BLAIR Taper Seal Style 313 or DMD Dresser style 194 or approved equal.

H. Tapped connections for water mains and fire lines made on PVC water mains shall be accomplished using full bodied ductile iron tapping sleeves of a pressure rating equal to or greater than the pressure rating of the pipe specified.

I. Bedding for AWWA C900 PVC water pipe shall extend from a minimum depth of 4 inches below the outside of the water line to a minimum cover of 6 inches over the top outside of the water line.

J. AWWA C900 PVC water pipe shall be installed in accord with the applicable requirements for installing ductile iron pipe.

Care shall be taken to install each joint of PVC water pipe to, but not beyond the factory insertion mark on the pipe.

When a joint of PVC water pipe must be cut, the end of the pipe shall be carefully beveled to match the factory bevel on the uncut pipe. An insertion mark matching the factory insertion mark on the uncut pipe must be made before the pipe is inserted into the bell.

When PVC water pipe is to be inserted into a ductile iron fitting or valve, the factory bevel must be removed to form a square plain end pipe.

2.2 (a) Metallic Marking Tape (For PVC Water Pipe)

2.2(a).1 General

When non-metallic pipelines are to be installed, then the Contractor shall furnish and lay, above the pipeline, a continuous strip of metallic identification tape.

2.2 (a).2 Tape Material

The metallic identification tape shall be at least two inches (2”) in width and shall be of corrosive resistant metal of sufficient thickness to be stable and reflect electronic signals to electronic pipeline detector when buried to a dept of twenty-four (24”) below normal ground level.

The metallic tape shall be painted blue on one side and shall have 1-inch high letters painted continuously on the same side of the tape which read, “CAUTION: BURIED WATER LINE BELOW” or other words to this effect.

The marking tape shall be “Detectable Warning Tape”, as manufactured by the Omega Marking Company, or equal approved by the Engineer.

2.2(a).3 Construction Methods

The Contractor shall backfill over non-metallic pipelines to a depth which is less than twenty-four (24”) and not more than twelve inches (12) from the top of the cut of the ditch section in which the pipeline is laid. Contractor shall stop the backfilling material to a generally uniform level. All machine tamping, jetting and other compaction activities shall be accomplished up to this point of height in the backfilling the marking tape is placed in the trench.

The Contractor shall then lay the marking tape in the pipe trench and shall be held in position by the spot placement of backfill materials over it to keep it from sliding t the sides and/or from being blown about in the ditch by the wind. The tape shall be lid with the painted side, which shall also be the side with the identification lettering on it, in the “up” position. The tape shall be laid in the flat position and kept there until backfill is accomplished.

The Contractor shall then complete the backfilling operation in such a manner that the marking tape is not cut, crimped, ruptured or separated by the backfilling work.

2.2(a).4 Measurement and Payment

No separate pay item will be provided for furnish and placing the marking tape. This item shall be considered subsidiary to the non-metallic pipe being placed.

2.3 Ductile Iron Pipe

A. All ductile iron pipe used in the construction of water works improvements shall be Cement Lined and shall be manufactured in accordance with and shall meet the requirements of AWWA Specification C-l5l.

B. Pipe shall be cast in lengths of not less than l2 feet and shall be designed for a working pressure of l50 pounds per square inch. Thickness of ductile iron pipe shall be as shown on the plans and bid proposal or shall be computed in accordance with AWWA Specification C-l50, based on l50 pounds per square inch working pressure for 10 feet of cover and laying condition 2.

C. All ductile iron pipe shall have an exterior, bituminous coating and an inside cement-mortar lining in accordance with the requirements of AWWA Specification C-l04.

2.4 Polyethylene Plastic Tubing

Service lines shall be constructed with polyethylene plastic tubing as specified in ASTM D 2737 with a rating of l60 psi.

2.5 Ductile Iron Pipe Fittings

All fittings for ductile iron pipe and PVC pipe shall be ductile iron and shall be mechanical joint all connections except tees for fire hydrant leads unless shown otherwise on the plans. Tees for connecting fire hydrant leads shall be MJ- with a flange outlet.

All ductile iron fittings shall conform to AWWA Specification C-110, designed for a working pressure of 250 psi. All ductile iron fittings shall have an external coating and shall be cement lined in accordance with the specifications for coating and lining the pipe.

2.6 Pretensioned Concrete Cylinder Pipe

A. The contractor shall furnish and install all concrete cylinder pipe and fittings, including connections and appurtenances complete as shown on the plans and specified herein.

B. The contractor shall submit six (6) sets of full and complete shop drawings on the concrete cylinder pipe and fittings. All of the drawings and data shall be complete and shall include a complete description of the pipe offered, including cuts, tabulated layout and all pertinent engineering data required for a complete evaluation of the submittal. Submittal data shall be in such form and so presented that the Engineer may readily review the data.

C. Prior to delivery of the pipe to the project site, the manufacturer shall furnish an affidavit certifying that all pipe, fittings, and specials, and other products and materials furnished, comply with the applicable provisions of this specification.

D. The pipe manufacturer shall furnish a factory trained, job experienced field representative who shall visit the project periodically during the course of installation. He shall also be subject to call by the contractor and/or engineer to advise and assist with the solution of field problems.

During visits, the representative shall observe all phases of the project including location and condition of pipe strung ahead of the contractor, trench width, if applicable, bedding and backfill, assembly of pipe joints and protection of steel. If, in the opinion of the representative any phase of the installation is unsatisfactory, he shall so advise the contractor's superintendent and also advise the owner or engineer's representative on the job site.

E. All closure sections shall be the jack on type and "field welding" will not be permitted without the written permission of the engineer.

F. Pipe manufacturer will install all necessary taps for the contractor to disinfect and field hydrostatic test the pipe.

G. Pretensioned concrete cylinder pipe, fittings and specials shall be designed, fabricated and tested in accordance with the latest requirements of AWWA C-303, "Reinforced Concrete Pressure Pipe Steel Cylinder Type, Pretensioned, for Water and Other Liquids" with additional requirements or modifications as described herein.

H. Pretensioned concrete cylinder pressure pipe shall be designed for l50 psi, working pressure and manufactured in 32 foot nominal lengths in accordance with the provisions of AWWA Standard C-303.

I. Inspection and Testing

(1) The owner reserves the option to have an independent testing laboratory, at the owner's expense, inspect pipe and fittings at the pipe manufacturer's plant to ensure compliance with the applicable specifications. The owner's testing laboratory and Engineer shall have free access to those parts of the manufacturer's plant that are necessary to ensure compliance with the governing standard. The pipe manufacturer shall notify the owner, in writing, at least two weeks ahead of pipe fabrication as to start of fabrication and fabricating schedule so that the owner can advise the manufacturer as to owners' decision regarding tests to be performed by an independent testing laboratory. In event the owner elects to retain an independent testing laboratory to make material tests and weld test, it is the intent that the tests be limited to one spot testing of each category unless the tests do not show compliance with the standard. If these tests do not show compliance, the owner reserves the right to have the laboratory make additional tests and observations to ensure compliance of the finished product with the standard.

(2) In any event, the manufacturer shall perform the tests described in AWWA C 303, and furnish the owner with a copy of the test reports, if requested, at the expense of the pipe manufacturer. The pipe manufacturer shall furnish the owner with affidavit of compliance as outlined in the standard.

(3) All welds for water tightness in special pipe and fittings that have not been hydrostatically tested may be examined by use of visible dye penetrant system meeting requirement of ASTM El65; however, collar reinforcement and all other lap welds shall be tested by introducing air under l0 psi pressure between the collar and cylinder and checking for leaks around and through the welds with soap solution.

The area to receive the dye penetrant shall be cleaned free from contaminants that might interfere with the penetrant process. The temperature of the steel in the weld area shall be between 60 and l25 degrees F. when the penetrant is applied. Dwell time of six hours shall be allowed after application of the penetrant and developer before interpreting the results.

Defects that are found shall be repaired and the test repeated until all defects

are eliminated. Colored penetrant shall be removed before fittings are lined.

2.7 Casing Pipe

Casing pipe to be installed in bore or open cut may be limited service pipe, corrugated galvanized steel pipe or new straight seam or spiral welded steel pipe. Casing pipe shall be furnished in thickness or gage as shown on the plans.

Limited service pipe proposed for use on this project must be approved a minimum of four (4) working days prior to the time of opening bids and shall be in good condition and shall meet the same service requirements as the corrugated galvanized steel or welded steel pipe.

Welded steel casing pipe shall be coated inside and out using a coal tar epoxy or shall be bituminous coated in side and out by the hot dip method.

2.8 Bedding Materials

A. All water pipelines placed on this project shall be bedded with crushed stone bedding materials to the minimum as shown on the plans and in the Detail Drawings.

B. Granular material furnished for foundation, bedding, encasement, backfill, or other purposes as may be specified, shall consist of any natural or synthetic mineral aggregate such as, crushed gravel, crushed rock, crushed stone, or slag, and shall conform to the following specifications and/or gradation.

Note, all materials used for these purposes shall be crushed and shall have at least two broken faces. Pea gravel will NOT be allowed.

	Foundation	Bedding	Encasement	Backfill
ASTM c33 Grade #57	X			
ASTM C33 Grade #67	X			
ASTM C33 Grade #8		X	X	
THD 1982 ITEM 302 Type "D" Grade #4		X	X	
THD 1982 Item 302 Type "D" Grade #5			X	
Crusher Fines**			*X	X

* 100 percent of crusher fines that are to be used within 12 inches of the top of pipe must pass the 3/4" sieve.

** Approximate Gradation for Crusher Fines

Sieve Size	% Passing
2 inch	100
#4	35 - 100
#10	20 - 100
#40	5 - 35
#200	4 - 10

Crushed stone material proposed as an alternate for use on this project and not meeting the above specifications must be approved in writing at least 48 hours prior to the time scheduled for opening bids.

C. Granular materials provided for Foundation, Bedding, Encasement, or backfill use as required by the contract, either as part of the pipe item work unit or as a separate contract item, shall be classified as to use in accordance with the following:

MATERIAL USE DESIGNATION	ZONE DESIGNATION
Granular Foundation	Placed below the bottom of pipe grade as replacement for unsuitable or unstable soils, to achieve better foundation support.
Granular Bedding	Placed below the midpoint of the pipe prior to pipe installation, to facilitate proper shaping and achieve uniform pipe support. Also for Class B Bedding where specified.
Granular Encasement	Placed below an elevation one half (6") foot above the top of pipe, after pipe installation, for protection of the pipe and to assure proper filling of voids and thorough consolidation of backfill.
Granular Backfill	Placed below the surface base course, if any, as the second stage of backfill, to minimize trench settlement and provide support for surface improvements.

In each case above, unless otherwise indicated, the lower limits of any particular zone shall be the top surface of the next lower course as constructed. The upper limits of each zone are established to define variable needs for material gradation and compaction or void content, taking into consideration the sequence of construction and other conditions. The material use and zone designations described above shall only serve to fulfill the objectives and shall not be construed to restrict the use of any particular material in other zones where the gradation requirements are met.

3. **VALVES AND VALVE BOXES**

3.1 General

A. Valves 4" through l2" shall be resilient seated gate valves with non-rising stems and shall open by turning to the left (counter clock wise).

B. Valves l4" and larger shall be resilient seated butterfly valves and have operators suitable for direct burial and shall open by turning to the left (counter clock wise).

All valves except valves for use in fire hydrant leads shall have mechanical joint ends unless shown otherwise on the plans. Valves for use in fire hydrant leads shall be flange by mechanical joint.

C. All valves and fire hydrants shall be spray coated with a two component thermal setting epoxy to cover all interior wetted ferrous surfaces. Finished coating shall have a minimum thickness of 4 mils. The coating shall conform to the coating section of these specifications.

D. All valves for buried service shall be equipped with 2" square AWWA operating nuts.

3.2 Gate Valves

A. Gate valves shall be iron body, resilient **wedge gate** and shall be in compliance with AWWA Standard C-509-80 or latest revision thereof and shall have the following design features:

B. All valves shall have a working pressure of 200 psi and shall be bottle tight tested at this pressure from both directions. The gate body shall also be hydrostatically tested at 400 psi. Zero leakage will be required in all tests. The body, bonnet, and stuffing box shall be flange together with ASTM A-307 Grade B bolts and nuts to insure repairability.

C. Stems shall be machined from modified manganese bronze rod with an integral forged thrust collar machined to size.

D. Stem seals shall be dual "O" ring type.

E. Valve discs shall be rubber encapsulated or have disc seat rings molded of natural rubber, internally steel reinforced retained to the disc by self-locking type 304 stainless steel screws. Valve gates shall seat against a machined epoxy coated mating surface in the body of the valve.

F. All internal ferrous metal surfaces (machined or cast) shall be factory spray coated with a two component thermosetting epoxy to a nominal thickness of 4 mils and the exterior shall be coated with asphalt varnish as specified for coating of the pipe. (See Sec. 3.4 of these specifications for epoxy coating).

G. Valves shall be Mueller A-**2360** or Dresser-M&H **4067** or approved equal. Any alternate (approved equal) to these specifications **shall have completely interchangeable parts with either of the specified valves.**

3.3 Butterfly Valves

A. General - All butterfly valves shall be of the rubber seated tight-closing type. They shall meet or exceed AWWA Standard C-504, Class l50B. Both valve ends shall be mechanical-joint per AWWA Standard C-lll. Accessories (bolts, glands, and gaskets) shall be supplied by the valve manufacturer.

B. All valves must use full AWWA C-504 Class l50 B valve shaft diameter, and full Class l50 B underground service operator torque rating throughout entire travel, to provide capability for operation in emergency service.

C. Valve body shall be high strength cast iron ASTM A 126 Class B with l8-8 type 304 stainless steel body seat. Valve vane shall be high strength cast iron ASTM A 48 Class 40 or ASTM A 536, Grade 65-45-l2 ductile iron having rubber seat mechanically secured with an integral l8-8 stainless steel clamp ring and l8-8 stainless steel self locking screws.

D. Rubber seat shall be a full circle 360^{o} seat not penetrated by the valve shaft. Valve shall have permanently set two way thrust bearing. Packing shall be designed for permanent duty in underground service.

E. Valve operator shall be of the traveling nut type, sealed, gasketed and lubricated for underground service. It shall be capable of withstanding an overload input torque of 450 ft. lbs. at full open or closed position without damage to the valve or valve operator. It shall be designed to resist submergence in water to 25 ft. head pressure. Number of turns to operate valve shall be as listed below in order to closely resemble conventional distribution valve practices and to minimize water hammer:

Pipe and Valve Size	Turns to close	Pipe and Valve Size	Turns to Close
4" - 6"	16-1/2	14" - 16"	48"
8"	24	18" - 20"	72
10" - 12"	36	24"	90

F. Valves shall be capable of easy closure by one man using standard valve key, even under emergency line-break conditions as severe as those that would - cause a valve maximum opening torque requirement of as much as two times AWWA Class l50 B.

G. All valves shall be tested bottle-tight at rated working pressure by the manufacturer as follows:

l4" up. . . . . l50 psi

In addition a hydrostatic test with vane partially open shall be given to the assembled valve as follow:

l4" up. . . . . 300 psi

H. Valve shafts shall be l8-8 type 304 stainless steel. Shaft bearings shall be of the self lubricating sleeve type.

I. Valve discs or vanes for valves 30" and larger shall be the flow through (bridge or truss) type.

J. Butterfly valves shall be Dresser-M&H Model "450", "4500" or "l450" or Mueller line seal III or approved equal. Alternates (approved equal) to these specifications must be approved in writing 48 hours prior to time bids are received.

3.4 Coating

A. The coating shall be a two part thermosetting epoxy protective coating and shall function as a physical, chemical and electrical barrier between the base metal to which it is applied and the surroundings.

B. The coating shall be non-toxic and shall not impart taste to water. The coating must be formulated from materials deemed acceptable per the FOOD AND DRUG ADMINISTRATION DOCUMENT TITLE 2l of the FEDERAL REGULATIONS ON FOOD ADDITIVES SECTION l2l.25l4 entitled, RESINS AND POLYMERIC COATINGS.

C. The coating shall have a satin finish and shall be suitable for field over coating and touchup with same coating material without sanding or special surface preparation, or application of heat in excess of room temperature.

D. The coating shall have a successful record of performance in valves, pipe or other allied equipment for a minimum of two years.

E. The coating adhesion to the substrate shall exceed cohesion of the coating film as demonstrated by the following test:

(1) Prepare test panel and apply coating per manufacturer's recommendation.

(2) After sample has properly cured per manufacturer's recommendation, scribe an "X" using a sharp knife or scalpel through the coating to the metal substrate.

(3) Then with the point of the knife at the juncture of two scribes, attempt to lift off coating. Coating should not lift off substrate or between coats readily, but should break up leaving coating material on the substrate of this damaged area.

(4) No disbandment of the film shall be noted as tested above after immersion in tap water for l500 hours at l00`F.

F. A falling sand abrasion test using ASTM D968 shall produce an abrasion coefficient of 25-30 liters/mil. As an alternative, a Taber Abrader Test should find 3.5 - 3.7 milligrams coating loss per l00 cycles when using a CSF l0 Wheel (l000 gram weight).

3.5 Valve Boxes

All valves to be used in buried service shall be enclosed in cast iron valve boxes. Care shall be taken to place and maintain the 2" square operating nut in the center of the valve box. The valve box shall be two piece cast iron suitable for use with PVC pipe box risers. The 6 inch diameter cover shall be marked " Water". The PVC riser pipe shall be furnished in lengths as required (minimum pipe cover 42") PVC pipe for valve box riser may be ASTM C-900, ASTM D1785 schedule 40, ASTM D2241 pressure class 125 or ASTM D3034 DR 35. Valve boxes shall have a concrete ring 8" thick and having a radius equal to the radius of the valve box plus one foot (1') cast around them. Valve boxes placed in unpaved areas shall be set level with or slightly higher than the finished ground elevation. Valve boxes set in paved areas shall match the finished pavement surface.

3.6 Fire Hydrants

A. Fire hydrants shall conform to the requirements of AWWA C 502 dry barrel type. The fire hydrants shall be designed for a depth of bury of 4.5 feet, however the depth of bury may vary according to field conditions and extensions or shorter bury depth may be required.

B. The hydrants shall have a 5-l/4 inch valve opening, two 2-l/2 inch hose nozzles and one 4-l/2 inch pumper nozzle.

C. Hose threads shall be National Standard threads.

D. The hydrants shall be sized for 6-inch mains and shall have an inlet connection compatible with the type pipe used. All gaskets, nuts, bolts and other jointing materials shall be considered part of the fire hydrant installation.

E. Operating nut shall be standard l-l/2 inch pentagon opening counter-clockwise. The hydrant shall close with the pressure.

F. Hydrants shall be painted Federal Safety Yellow.

G. Fire hydrants shall have all interior wetted ferrous surfaces epoxy coated as required in the general and coating section of this item.

H. The hydrants shall have a minimum of two (2) drain holes located on opposite sides of the hydrant. The entire drainage channel must be made of non-corrosive material and sealed by acceptable resilient material (metal and/or leather seals are not acceptable).

I. The hydrants shall have a breakable safety flange and breakable stem coupling which breaks cleanly upon impact.

J. The hydrants shall be AWWA improved type hydrants and shall have self-oiling reservoirs.

K. Fire hydrants shall be the Mueller Centurion, the Dresser -M & H 929 Reliant, or The American Darling.

4. EXCAVATION, TRENCHING BEDDING AND BACKFILLING

4.l Trenching

A. The trench shall be excavated to the lines and grades as established by the engineer and as shown on the plans. The depth of cover for all main lines on which the grades and elevations are not shown on the plans, shall in general be Forty-two (42) inches. The amount of cover may vary over or under 42 inches as directed by the engineer but in no case will the amount of cover be less than thirty-six (36) inches. Depth of cover for service lines shall be as shown on the detail drawings.

B. Water lines constructed in proposed streets and service drives shall have the depth of cover measured from the finished grade. The contractor is hereby cautioned that proposed street finished grades are sometimes cut below the existing ground elevation.

C. The minimum width of the trench shall be the outside diameter of the pipe plus twelve (l2) inches for pipe diameter through l8", the outside diameter of the pipe plus eighteen (l8) inches for pipe diameters over l8". The trenching equipment shall be maintained on a sufficiently level road bed to provide substantially vertical trench walls. The maximum horizontal offset of the trench wall from bottom of trench to the top of the trench (under-cutting) shall be four (4) inches.

D. The trench shall be over excavated to an even grade to the depth of required bedding so that the bottom of the pipe will rest on a uniform thickness of bedding material on the bottom of trench throughout the entire length of the pipe. In order to obtain a true even grade, the bedding material shall be fine graded by hand. On lines that are to be laid to established grades batter boards shall be set at fifty foot intervals and the trench graded to the established grade.

E. Any part of the trench excavated below grade shall be corrected by filling with bedding material. The bedding material shall be thoroughly compacted.

E. If large rock, rock fragments or other unyielding materials are encountered in the bottom of the trench they shall be removed to a depth of six inches below grade, and the void filled with thoroughly compacted approved bedding material.

G. Bell holes of ample dimensions shall be dug at each joint to permit the jointing of pipe to be made properly and of sufficient depth to prevent the bell of the pipe from resting on undisturbed materials.

H. Wherever necessary to prevent caving, the trench shall be adequately braced and sheeted. Trench safety shall be in accordance with item l4 "Shoring and Sheeting of this specification.

I. Trench digging machinery may be used to make the trench excavations except in places where operation of same would cause damages to trees, buildings or other existing structures either above or below ground. In such instances hand trenching methods shall be employed.

J. All excavated material shall be stockpiled in a manner that will not endanger the work or existing structures and that will cause the least amount of obstructions to walks and driveways.

K. There will be no classification of the excavated materials and the term excavation shall include all materials encountered in excavating the trenches or structural excavations.

L. The contractor shall take all necessary precautions for protecting paved areas from being damaged by the trenching and backfilling equipment. Any damage done to any paved area, outside of the area set forth in the plans, as a result of the construction work shall be repaired by the contractor at his own expense.

M. Where the lines are located behind curbs, the contractor shall take special precautions to protect trees and shrubs. Care shall be exercised to cause as little damage to lawns as possible.

Where lines cross under curbs, gutters or curbs and gutters, tunneling will be required.

N. Blasting for excavation of solid rock will be permitted only after securing the

approval of the Director of Engineering and Transportation and the engineer and only when proper precautions are taken for protection of persons and property. The hours of blasting will be fixed by the engineer. Any damage caused by blasting shall be paid for by the contractor. The method or procedure relative to blasting shall conform to all state laws and local ordinances.

O. The contractor will be required to locate all known utility lines, including consumer service lines, far enough in advance of the trenching to make proper provisions for protecting the lines and to allow for any deviations that may be required from the established lines and grades.

P. The contractor shall not be allowed to disrupt the service on any utility lines except consumers service lines, which may be taken out of service for short periods of time, if the contractor obtains permission from the engineer and from the owner of the premises being served by the utility.

Q. The contractor shall immediately notify the proper utility company of any damage to utility lines, in order that service may be reestablished with the least possible delay. Repair of any damage to existing lines and the repair of consumer lines which are authorized to be cut or temporarily taken out of service shall be made by the contractor at his own expense, and as directed by an official representative of the utility company involved.

R. All utility lines shall be properly supported to prevent settlement or damage to the line both during and after construction.

S. Any permanent relocations of existing utility lines shall be done by the proper utility company without expense to the contractor.

4.2 Backfill General

A. All pipeline excavations shall be backfilled in a manner that will restore pre-existing conditions as the minimum requirement and fulfill all supplementary requirements indicated in the Plans and Specifications. The backfilling operations shall be started as soon as conditions will permit on each section of pipeline to provide continuity in subsequent operations and restore normal public service as soon as practicable on a section-by- section basis. All operations shall be pursued diligently, with proper and adequate equipment, to assure acceptable results.

B. Depositing of the backfill shall be done so the shock of falling material will not injure the structure. Grading over and around all parts of the work shall be done as directed by the Engineer.

C. Whenever soil types which are determined by the Inspector to be undesirable for backfill are excavated from the trench, such material shall be hauled away and deposited where directed by the Inspector at no additional compensation.

D. In the absence of special work item requirements the backfilling shall be accomplished with the use of suitable materials selected from the excavated

materials to the extent available and practical. Should the materials available from the trench section be unsuitable or insufficient, the required additional materials shall be furnished from outside sources at the Owners expense.

E. Suitable material shall be defined as a mineral soil reasonable free of foreign materials (rubbish, debris, etc.) frozen clumps, oversize stone, rock, concrete or bituminous chunks and other unsuitable materials, that may damage the pipe installation, prevent thorough compaction, or increase the risks of after settlement unnecessarily. Material selection shall be such as to make the best and fullest utilization of what is available, taking into consideration particular needs of different backfill zones. Material containing stone, rock, or chunks of any sort shall only be utilized where and to the extent there will be no detrimental effects.

F. Backfill materials shall be carefully placed in relatively uniform depth layers spread over the full width and length of the trench section in a manner and/or sequence that will provide simultaneous support on both sides of the pipeline. Each layer shall be compacted effectively, by approved mechanical of hand methods, until there is no further visual evidence of increased consolidation. Compaction of the in place layer shall be completed acceptably before placing material for a succeeding layer thereon. The manner of placement, layer thickness, compaction equipment, and procedure effectiveness shall be subject to approval of the Engineer. Water jetting or flooding shall NOT be used to compact trench backfill.

G. Within the pipe bedding and encasement zones described as that portion of the trench which is below an elevation one foot above the top of the pipe, the materials placed shall be limited in particular size to 3/4 inch maximum. For larger pipe in access of 18 inches in diameter the Engineer may allow particle sizes up to 2 inches maximum if it can be shown that the backfill can be satisfactorily compacted without leaving voids or damaging pipe or joints. Above these zones, the placement of material containing stones, boulders, chunks, etc. shall be governed by the layer thickness and compaction equipment capabilities.

H. Compaction of materials placed within the pipe bedding and encasement zones shall be accomplished with portable or hand equipment methods to achieve thorough consolidation under and around the pipe and avoid damage to the pipe. Above the pipe zone material, the use of heavy roller type compaction equipment shall be limited to safe pipe loading.

I. The maximum loose thickness of each backfill layer shall be l2 inches, except that l6 inches will be permitted for Granular Materials placed above an elevation one foot above the top of pipe, and with the provision that, by authority of the Engineer in consideration of the demonstrated capability of special type vibratory compactors, these maximums may be increased at his discretion. "Hydro tamps" or "vibra tamp: or other heavy vibrating equipment shall not be used until the backfill has reached a depth of four (4) feet above the top of the pipe.

J. All surplus or waste materials remaining after completion of the backfilling operations shall be disposed of in an acceptable manner within 24 hours after

completing the backfill work on each particular pipeline section. Disposal at any location within the project limits shall be as specified, or as approved by the Engineer; otherwise, disposal shall be accomplished outside the project limits at the Contractor's discretion. The backfilling and surplus or waste disposal operations shall be a part of the work required under the pipeline installation items, not as work that may be delayed until final cleanup.

K. Until final acceptance of the project, the Contractor shall assume full Responsibility and expense for all backfill settlement and shall refill and restore the work as directed to maintain an acceptable surface condition. All additional materials required shall be furnished without additional cost to the Owner.

4.3 Backfill Procedure above Pipe Zone, in Public Rights-of-way and other areas where settlement is important.

A. Backfill above the pipe zone shall be made using Portland cement stabilized backfill or crushed stone screening (crusher fines).

B. Backfill around structures such as manholes, junction boxes, transformer boxes and valve boxes shall be made using portland cement stabilized backfill material or crushed stone screening (crusher fines).

C. The minimum depth of stabilized backfill or crusher fines shall be twelve (12") inches.

When utilities are being constructed under existing paving, the stabilized backfill or crusher fines shall extend from top of the pipe zone to the top of the base course.

When utilities are being constructed under existing unpaved streets that are not scheduled for immediate pavement construction, the stabilized backfill or crusher fines shall extend from the top of the pipe zone to the existing roadway surface.

When utilities are being constructed in new streets that are scheduled for immediate paving or in streets in a new subdivision for which a paving contract with the property developer has been approved the stabilized backfill or crusher fines shall extend from the top of the pipe zone to the bottom edge of the eight (8") inches of subgrade, or, if the paving contractor has constructed a portion of the roadway prior to the construction of the utilities stabilized backfill shall extend to the top of the course the contractor has finished. In no case shall the backfill extend above the top of the base course.

If the final course of asphaltic concrete has been placed, the street or alley surface shall **NOT** be cut for utility installation.

In new streets where stabilized backfill is required only to the bottom of the subgrade course, the minimum depth of stabilized backfill may be reduced to six (6") inches in which case the maximum depth of the "pipe zone" shall be limited to six (6") inches above the top of the utility line or conduit.

D. Backfill Materials

(1) Portland cement stabilized backfill shall consist of caliche base material, blow sand or native soil stabilized by the addition of Portland cement. Crushed stone or concrete aggregate shall **NOT** be used.

The Contractor shall submit a mix design prepared by an approved Commercial Laboratory that will produce a minimum 7 day compressive strength of 150 psi. In no case shall the minimum cement content of the mix be less than 1 sack per cubic yard.

(2) Cement used in Portland cement stabilized backfill shall be Type I or Type II conforming to the requirements of ASTM Designation C150.

(3) Caliche used for Portland cement stabilized backfill shall be crushed material con-forming to Texas State Department of Highways and Transportation 1982Standard Specifications for Construction of Highways, Streets and Bridges Item 248 Type F, Grade 2.

(4) Blow sand used for Portland cement stabilized backfill shall be clean, free from organic matter, clay lumps, rock and other deleterious matter.

(5) Native soil used for Portland cement stabilized backfill shall be clean, free from clods and organic matter, and rock in excess of 2".

(6) Crushed stone screening (crusher fines) used for back fill shall be sharp grained particles of crushed stone conforming to the following gradation

Sieve Size	% Passing
2"	100
#4	35-100
#10	20-100
#40	5-35
#200	4-10

and may be the by product of crushing stone for other purposes or may be stone specifically crushed for use in backfill. Crusher fines not meeting these specifications may be approved for backfill upon demonstration that the desired results will be obtained.

E. Backfill Construction

(1) Portland cement stabilized caliche backfill or Portland cement stabilized native soil backfill may be constructed using either the "dry" method or the "wet" method.

(a) The dry method of stabilized backfill construction consists of dry mixing of the cement and caliche, sand or soil to produce a homogenous mixture then adding and mixing sufficient water for proper compaction and hydration of the cement. The water content of the mixture will be approximately one to two percent above the optimum moisture for soil compaction. The mixing may be accomplished by using batch mixers or on the job site by "blade Mixing" or other suitable method to produce the desired backfill material. The mixed material shall be placed in lifts of up to a maximum of 12 inches and compacted to ninety five (95%) modified proctor density by use of suitable compacting equipment.

(b) In the "wet" method of cement stabilized backfill construction, the materials shall be mixed in an approved concrete batching plant or mixer to the consistency of concrete and placed as concrete would be placed. The slump of the backfill material shall be such that all voids will be filled, approximately four (4") to six (6") inches. The backfill shall be consolidated by rodding or by the use of mechanical vibrators.

(c) The mix design used must be for the method of placement chosen.

(2) Portland cement stabilized blow sand backfill shall be mixed and placed by the "wet" method as described above.

(3) Crushed stone screening (crusher fines) shall be wetted uniformly throughout with sufficient moisture to assure proper compaction before being placed in the trench.

The moistened crushed stone screening (crusher fines) shall be placed in maximum lifts of twelve (12") inches and consolidated using vibratory type compaction equipment except when it has been demonstrated that the compaction equipment employed will adequately compact deeper lifts in which case the maximum depth of a lift shall be limited by the capabilities of the equipment used.

Tests to determine the compacted density of the backfill shall be ordered by the Engineer if in his opinion the compaction is not adequate. Test showing a minimum compacted density of 90% modified proctor will be deemed adequate compaction.

5. INSTALLATION OF DUCTILE IRON PIPE

5.1 Pipe Laying - General

A. All pipe and accessories shall be unloaded, handled, laid, jointed, tested for defects and for leakage and chlorinated in the manner herein specified.

B. The pipe, fittings, valves, and accessories shall be inspected upon delivery and during the progress of the work and any material found to be defective will be rejected by the engineer and the contractor shall remove such defective material from the site of the work.

C. The contractor shall be responsible for all material furnished by him and he shall replace at his own expense all such material that is found to be defective in manufacturer or has become damaged in handling after delivery.

D. All pipe, fittings, valves, and other accessories shall, unless otherwise directed, be unloaded at the point of delivery, hauled to and distributed at the site of the work by the contractor. Loading and unloading, of pipe and fittings shall be by hoisting or by sliding, or rolling on skidways in such a manner as to avoid shock or damage to the material. Under no circumstances shall pipe or fittings be dropped. Pipe handled on skidways must not be skidded or rolled against pipe already on the ground.

The pipe, fittings and accessories shall be placed along the site in such a manner as to be kept as free as possible from dirt, sand, mud, and other foreign matter.

E. All pipe shall be laid and maintained to the lines and grades shown on the plans
or as established on the ground by the engineer.

F. Wherever it is necessary to deflect pipe from a straight line either in a vertical or horizontal plane to avoid obstructions, to plumb valves and hydrants, or where vertical or horizontal curves are shown or permitted, the degree of deflection at each joint shall not exceed the maximum deflection recommended by the manufacturer of the particular kind of pipe being laid and the degree of deflection shall be approved by the engineer.

G. After the trench grade has been completed and all bell holes dug and the grade inspected, the pipes and accessories my be placed in the trench. All pipe, fittings, valves, and hydrants shall be carefully lowered into the trench piece by piece by means of derricks, ropes, or other suitable tools or equipment, in such a manner as to prevent damage to the material in any way. Under no circumstances shall pipe or accessories be dropped or dumped in the trench.

H. Before lowering into trench the pipe shall be again inspected for defects and the pipe while suspended shall be lightly hammered to detect cracks. Any defective, damaged or unsound pipe and materials shall be rejected.

I. All foreign matter or dirt shall be removed from the inside of the pipe and from all bells, spigots or parts of the pipe used in forming the joint, before the pipe is lowered into the trench, and it shall be kept clean by approved means during and after laying.

5.2 Laying and Jointing Ductile Iron Pipe

A. Unless otherwise directed, pipe shall be laid with bells facing in direction of laying; and for lines on appreciable slopes, bells shall, at the discretion of the engineer, face up grade. Cutting of pipe for inserting valves, fittings or closure pieces shall be done in a neat and workmanlike manner without damage to the pipe or the cement lining.

B. The jointing shall be completed for all pipe laid each day. No open joints will be left in the trench overnight. At times when pipe laying is not in progress, the open ends of pipe shall be closed by approved means. No trench water shall be permitted to enter the pipe.

C. No pipe shall be laid in water, or when the trench conditions or weather is unsuitable for such work, except by written permission of the engineer.

D. Rubber Gasket joints for cast iron or ductile iron pressure pipe and fittings shall conform to AWWA Standard C-lll.

E. Before laying the pipes, all lumps, blisters and excess coal tar coating shall be removed from the bell and spigot ends of each pipe; the outside of the spigot and the inside of the bell shall be wire brushed and wiped clean and dry. Pipe ends shall be kept clean until joints are made.

F. The pipe and fittings shall be properly aligned and free to move in any direction while bolting, and the bolts shall be gradually tightened at a uniform rate around the entire flange.

G. Flange joints where used shall be bolted with flange bolts of best quality mild steel and of the size and length required by AWWA C-ll5: Bolts and nuts shall be provided with standard hexagonal heads. Gasket rings shall be used and shall be made of best quality rubber composition sheet packing one-eighth (l/8) inch thick, of a brand and quality approved by the engineer.

H. Standard plugs shall be inserted into the bells of all dead end pipes, tees, or crosses and spigot ends shall be capped. Plugs or caps shall be jointed to the pipe or fittings in the same manner used in joining the pipe.

6. SPECIFICATIONS FOR INSTALLING PRETENSIONED CONCRETE CYLINDER PIPE

6.l General

The applicable portions of the specifications for installing ductile iron pipe shall apply except as amended or supplemented herein.

6.2 Pipe Laying

A. Pipe and fittings shall be handled with care at all times to avoid damage. They shall be lifted by hoists or slide or rolled on skid-ways in such manner as to avoid shock. Under no circumstances shall they be dropped. Pipe must not be skidded or rolled against other pipe or object.

B. Just before making the joint, the bell and spigot rings shall be thoroughly cleaned by wire-brushing until clean and dry. The gasket and the inside surface of the bell shall be lubricated with a light film or soft vegetable soap compound (flax soap) to facilitate telescoping the joint. The rubber gasket shall be stretched uniformly as it is placed in the spigot groove to insure a uniform volume of rubber around the circumference of the groove.

C. The joint shall be telescoped by pulling directly along the centerline of the pipe so that the spigot enters squarely into the bell. After the spigot has been telescoped into the bell, the bell end of the pipe being laid shall be moved in accordance with the plans to secure proper grade and alignment. After the joint is in place, a thin metal feeler gauge shall be used to check the position of the rubber gasket around the circumference of the joint.

D. The inside joint recess shall be filled immediately prior to placing the pipe together by buttering the bell end with mortar. After the joint is engaged, the joint mortar of pipe l8" in diameter and larger shall be finished off smooth by hand. The mortar in pipe smaller than l8" in diameter shall be smoothed and cleaned with a swab.

E. After the spigot has been telescoped into the bell, the joint checked and found satisfactory, a canvas wrapper shall be placed around the pipe, covering the joint. The canvas type wrapper shall be of the quality manufactured by the Mar-Mac Manufacturing Company or approved equal burlap type, and shall be hemmed at each edge to allow threading with a steel strap to securely fasten the wrapper around the pipe by means of a stretcher and sealer.

The wrapper shall have a minimum width of 7" and sufficient length to encircle the pipe leaving enough space between the ends at the top to allow the cement mortar to be poured. The entire joint shall be poured with cement mortar and rodded or agitated to eliminate voids and settlement. Prior to pouring the cement mortar the joint shall be thoroughly cleaned and saturated with clean water. Any joint showing shrinkage or excessive cracking shall be cleaned and remade. In hot weather,

additional measures may be required to obtain the best quality of joint, such as additional wet burlap, curing membrane, or immediate careful and well controlled backfilling of the joint with damp earth.

F. The mortar used at the exterior joint shall consist of one part Portland cement to 2-l/2 parts fine, sharp, clean sand and mixed with water to the consistency of thick cream. Mortar required at the joint shall not be placed in freezing weather unless adequately protected from freezing.

G. The joints for pipe to be installed in casing shall be made as for pipe laid in trench except that the outside portion of the joint shall be wrapped in a special polyurethane wrap impregnated with unhydrated cement manufactured for this purpose, prior to being jacked into the casing pipe. The wrap shall be "Flex-Protex" as manufactured by Mar-Mag Mfg. Corporation or approved equal. The interior of the joints shall be mortared after the pipe to be installed in casing has been jacked into place. The pipe shall not be moved after interior mortaring is completed. After the water line has been installed in the casing the ends of the casing shall be sealed using concrete or cement mortar.

H. Steel cylinder reinforced concrete pipe shall not be pressure tested until it has been in place a minimum of l4 days.

I. The contractor shall fill the steel cylinder reinforced concrete pipe under slight pressure and allow approximately 24 hours for water absorption by concrete lining before performing pressure test.

7. SETTING VALVES, VALVE BOXES, FIRE HYDRANTS AND FITTINGS

7.1 General

Valves and fittings shall be set at the locations shown on the plans or at locations as established by the engineer, and shall be set and jointed to the pipe in the manner heretofore specified for pipe installation. All valves buried in the ground shall have a cast iron valve box set over the valve and set to grade. All valves shall be set vertical, unless otherwise specified, and shall be thoroughly inspected and checked for operation before installation.

7.2 Valve Boxes

Cast Iron valve boxes shall be firmly supported and maintained centered and plumb over the wrench nut of the valve, with box cover flush with the surface of the ground or street paving.

Valve boxes shall be supported by a ring of concrete as shown on the plans and Detail Drawings. This ring shall be Class "A" concrete having a minimum thickness of six (6") inches and shall extend a minimum of twelve (12") inches in all directions from the outside diameter of the valve box and shall be supported on thoroughly compacted backfill.

7.3 Setting Fire Hydrants

A. Fire hydrants shall be located at points shown on the plans, the exact location of the hydrant to be established by the engineer. All hydrants shall be set plumb, to the grade as established by the engineer, and shall have their nozzles parallel with and/or at right angles to the curb, with the pumper nozzle facing the curb. The hydrants shall be supported in such a manner as not to cause a strain on the fire hydrant lead or branch.

The bowl of the hydrant shall be well braced against unexcavated earth at the end of the trench with concrete blocking. The concrete blocking shall be placed so as not to interfere with the hydrant drains and so that the joints or flanges are accessible.

B. Each hydrant shall be connected to the main with a six (6) inch ductile iron branch controlled by an independent six (6) inch gate valve. Each hydrant shall be set upon a stone or concrete slab not less than four (4) inches thick and not less than one square foot of surface area. Where solid rock exists in the bottom of the trench and same is excavated to the proper depth to form a foundation for the hydrant, the slab of stone or concrete may be omitted.

C. There shall be placed around the base of the hydrant not less than seven (7) cubic feet of sound broken stone or clean gravel, or other suitable material to provide reservoir capacity so that the hydrant will completely drain when closed. The gravel or broken stone shall reach from the bottom of the trench to at least six (6) inches above the waste opening in the hydrant. Each hydrant shall be operated by the contractor to prove to the inspector that the drain hole has not been plugged with concrete or other material.

8. **ANCHORAGE OF BENDS, TEES AND PLUGS, ETC.**

Reaction or thrust blocking shall be applied to all pipe lines at all tees, plugs, caps, valves, fire hydrants, and at bends deflecting ll-1/4 degrees or more. Concrete shall be used for blocking the pipe and fittings. Concrete for thrust block shall have a minimum compressive strength of 3,000 psi and shall conform to Texas Highway Department Class "A" concrete. Before thrust blocking is placed the element to be blocked shall be carefully wrapped in polyethylene sheeting having a minimum thickness of 3 mils. The blocking shall be placed between solid ground and the fitting to be anchored; the area of bearing on pipe and on the ground in each instance shall be that required by the engineer. The blocking shall be so placed that the pipe and fitting joints will be accessible for repair.

9. DISINFECTION OF PIPE LINES

The contractor shall furnish all labor, equipment, and materials necessary to the disinfecting of the new pipe lines which shall be disinfected before being placed in service. The lines shall be disinfected by the application of a chlorinating agent. The chlorinating agent may be a liquid chlorine, liquid chlorine gas water mixture, or a calcium hypochlorite solution, which shall be fed into the lines through a suitable solution feed device, or other methods approved by the engineer. The chlorinating agent shall be readily dissolvable and of a type that will rapidly mix with the water as it is loaded into the water line. Tablets or other solid form shall not be used unless they are dissolved before being placed into the line. The chlorinating agent shall be applied at or near the point from which the line is being filled, and through a corporation stop or other approved connection inserted in the horizontal axis of the newly laid pipe. The water being used to fill the line shall be controlled to flow into the section to be disinfected very slowly, and the rate of application of the chlorinating agent shall be in such proportion to the rate of water entering the pipe that the chlorine dose applied to the water entering the line shall be at least 50 parts per million. The treated water shall be retained in the pipe lines for a period of not less than twenty four (24) hours. At the end of the retention period all treated water shall be thoroughly flushed from the lines until the replacement water in the lines shall have a chlorine residual of not more than 0.2 parts per million. Where it is necessary to place the new lines in service in less than 24 hours, the concentration of chlorine may be increased to 300 ppm and the lines flushed and placed in service in 3 hours. Disinfecting procedures shall conform to AWWA C 60l.

l0. HYDROSTATIC TESTS

All pipe lines constructed under this contract before being accepted, shall be tested at l20% design pressure as described in the following paragraphs. This test shall apply to all newly laid pipe or any valved sections thereof.

The required test pressure (l80 pounds per square inch) shall be maintained over a continuous period of not less than eight (8) hours.

Each valved section of pipe shall be slowly filled with water, being certain that all air is expelled from the pipe by using hydrants, blow-offs or taps at points of highest elevation in the line. The specified pressure shall be applied by means of a pump and flow meter (gpm and amount) connected to the pipe in a manner satisfactory to the engineer. The contractor shall furnish all necessary equipment, materials and labor to satisfactorily make the hydrostatic tests.

After the line section to be tested has been brought to pressure, a visual inspection shall be made of all joints, fittings, valves, and appurtenance. Any leaks thus located shall be corrected before continuing with the test.

If the test indicates a leakage in excess of a rate equal to twenty-five (25) gallons per inch of nominal diameter of pipe line per mile per day (maximum 600 gallon per mile per day total leakage) the cause of such leaks shall be determined and corrected and the line retested until satisfactory results are obtained.

11. **REMOVING AND REPLACING PAVEMENT**

A. When it is necessary to cut existing paving to install utilities the paving shall be repaired as soon after the backfill is consolidated or the cement stabilized backfill has reached sufficient strength as practical. The repair shall be made using Texas Highway Department Type "D" Hot Mix Asphaltic Concrete and shall have a minimum thickness equal to the thickness of the existing surface.

B. Edges along the trenches and around pits shall be saw cut to remove damaged edges and/or surface. Saw cuts shall be straight and parallel to or at right angles to the street or alley center line in so far as practical. Meandering, zig-zag or notched saw lines will not be permitted. The saw cuts shall be such that a minimum of 6" of surface is removed beyond the edges of the trench.

C. The edges of the saw cut and surface of the backfill material shall be tack coated prior to the placing of hot mix asphaltic concrete. The tack coat shall be either RC-250 cut back asphalt or RS2h emulsified asphalt or approved equal. When emulsified asphalt is used for tack coat the asphaltic concrete shall not be placed until the break of the emulsion is complete and all free water has evaporated or has been removed.

D. After the tack coat is cured the hot mix asphaltic concrete shall be placed uniformly throughout the repair area. The edges of the repair shall be squared up and the hot mix asphaltic concrete thoroughly compacted. Any large aggregate that is separated from the mix during the leveling process shall be removed from the surface and disposed of off the project. Care shall be taken that none of the mix over laps the old paving. Any mix that has "scabbed" onto the paving shall be removed before the section is reopened to traffic.

Sufficient mix shall be placed so that the finished repair is from one eight (1/8") inch to one quarter (1/4") inch above the old paving surface to allow for further consolidation by traffic.

12. **TUNNELING UNDER UTILITY LINES, ETC**.

Where pipes, conduits or concrete curbs, gutters or other obstructions are encountered in the construction, the cost of tunneling under such obstructions shall be included as a part of the cost of the pipe line, or other pay items, complete in place.

13. **HIGHWAY CROSSING**

A. The City of Midland will obtain any required permits from the State Highway Department for installation of the water line along and across the highway right-of-way. It shall be the contractor's duty and responsibility to coordinate the time of making the crossing and the manner of handling traffic.

B. Installations of the casing pipe shall be accomplished by boring or open cut trench as indicated on the drawings and in accordance with the Texas Department of Transportation permit and requirements. Equipment used shall be of such size and capacity as to allow the placement of the casing to proceed in a safe and expeditions manner. Installation of the casing and the excavation and removal of the materials

within the casing shall proceed simultaneously.

The boring shall proceed from a pit provided for the boring equipment and workmen. Excavation and location of the pit shall be approved by the Engineer. Boring without the concurrent installation of the casing pipe will not be permitted. The use of water or other fluids in connection with the boring operation will be permitted only to the extent of lubricating cuttings. Jetting will not be permitted. Overcutting in excess of one inch shall be remedied by concrete pressure grouting the entire length of the installation. All joints for casing pipe installed in bore shall be welded. Care shall be taken to keep the casing pipe on the proper line and grade.

C. After the casing pipe has been installed and is accepted by the Engineer, the pipe shall be shoved through the casing. The pipe shall be pushed or pulled through the casing by exerting pressure on the barrel of the pipe and not on the bell, and shall be done in such a manner that the joint is always in compression during the shoving operation. Hardwood, or other suitable material skids shall be banded with stainless steel bands to each joint of pipe In accordance with the pipe manufacturers recommendation. The hardwood skids shall be of sufficient dimensions to allow the bell of the pipe to clear the casing pipe by at least one-half inch. The length of the skid shall be in accordance with the pipe manufacturers recommendations. A minimum of three bands shall be used to secure the skids to the pipe. The skids shall be such that the carrier pipe will be centered in the casing pipe. The design of skids and bonding techniques shall be submitted to the Engineer for approval prior to use.

In general waterline installation in the casing pipe shall conform to AWWA C 600-Section 6 requirements.

After completion of pipe installation in casing, the ends of the casing shall be sealed off by use of concrete grout. The minimum compressive strength of the grout shall be 2,000 psi in 28 days.

14. **SHORING & SHEETING**

14.1 Description

This item shall govern for the Trench Safety Systems required for the construction of all trench excavation to be utilized in the project and including all additional excavation and backfill necessitated by the safety system. A trench shall be defined as a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet. The depth is five feet or more.

Trench Safety Systems include but are not limited to sloping, sheeting, trench boxes or trench shields, sheet piling, cribbing, bracing, shoring, dewatering or diversion of water to provide adequate drainage.

l4.2 Construction Methods

Trench safety systems shall be accomplished in accordance with the detailed specifications set out in the provisions of Excavation, Trench, and Shoring, Federal Occupational Safety and Health Administration (OSHA) Standards, 29CFR, Part 1926, Subpart P, as amended, including Proposed Rules published in the Federal Register (Vol. 52, No. 72) on Tuesday, October 31, l989. The sections that are incorporated into these specifications by reference include Sections 1926-650 through 1926-652. Legislation that has been enacted by the Texas Legislature, being Tex. Rev. Civ. Stat. Ann. arts. 1015q, 2368a.6 (Vernon Supp. 1988) with regard to Trench Safety Systems, is hereby incorporated, by reference into these specifications.

A reproduction of the OSHA Publication 2226 is attached for the convenience of the Contractor. The City assumes no responsibility for the accuracy of the reproduction or that it reflects current law. The Contractor is responsible for obtaining a copy of this section of the Federal Register for his use.

If the contractor elects to use a trench protective system that, in the Proposed Rules, requires "Design by a qualified person or a qualified engineer," [For example see 1926.652(b) (3) and 1926.652(c) (4)], "a qualified person or qualified engineer" shall be a Professional Engineer registered in the State of Texas. The Contractor is responsible for obtaining boring and soil analysis as required for the planned design. The trench excavation is to be designed in conformance with OSHA standards and regulations.

14.3 Safety Program

The Contractor shall submit a safety program specifically for the construction of trench excavation. The trench safety program shall be in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.

14.4 Inspection

The Contractor shall make daily inspections of the Trench Safety Systems to ensure that the systems meet OSHA requirements. Daily inspection is to be made by a "competent person" provided by the Contractor. If evidence of possible cave-ins, or slides, is apparent, all work in the trench shall cease until the necessary precautions have been taken by the Contractor to safeguard personnel entering the trench. It is the sole duty, responsibility and prerogative of the Contractor, not the owner or the Engineer, to determine the specific applicability of the designed trench safety systems to each field condition encountered on the project. The Contractor shall maintain a permanent record of daily inspections.

14.5. Safety Restrictions - work near high voltage lines

The following procedures will be followed regarding the subject item on this contract:

A. Warning signs 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."

B. All equipment except back hoes or dippers that may be operated within ten feet of high voltage lines shall have an insulating cage-type of guard about the boom or arm and insulator links on the lift hook connections.

C. When necessary to work within six feet of high voltage electric lines, notification shall be given the power company 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.

D. 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.

l5. MEASUREMENT AND PAYMENT

l5.l General

The unit price or lump sum price bid on each item, as stated in the proposal, shall include furnishing all labor, superintendence, machinery, equipment, and materials necessary to complete the various items of work in accordance with the plans and specifications. Cost of work or materials shown on the plans and called for in the specifications and on which no separate payment is made shall be included in the bid price on the various pay items.

l5.2 Water Lines

A. Measurement

The length of pipe lines for the various sizes, classes and types to be paid for will be determined by measurement along the center lines of the pipe installed, measurement being made from the center of fitting to center of fitting or end of pipe, without any deduction for the length of intermediate fittings or valves including pipe installed in casing.

B. Payment

Furnishing and installing approved type pipe of the various sizes and classes shown on the plans or as required will be paid for at the unit price bid per linear foot for furnishing and installing the various sizes and classes of approved pipe complete in place. The unit price bid shall be complete compensation for furnishing and installing the pipe complete in place including all excavation, backfilling, testing and disinfection of lines and shall include any and all incidental work not otherwise included in the bid items or otherwise provided for in the specifications.

l5.3 Solid Rock Excavation

All excavation for pipe trenches shall be unclassified and no extra compensation will be made for solid rock excavation. The contractor is expected to make boring of his own and satisfy himself to the character of material which will be encountered.

l5.4 Gate Valves or Butterfly Valves

A. Measurement

Gate valves or butterfly valves will be counted in the field after installation by the size and type specified and actually installed.

B. Payment

The unit price bid for each type and size valve shall be complete compensation for furnishing and installing the valves, complete in place, including the furnishing and installation of cast iron valve boxes on all valves to the finished grade of the adjacent surface. All valves in paved areas shall be set to finish pavement grades

l5.5 Fire Hydrants

A. Measurement

Fire hydrants will be counted in the field after installation in accordance with the plans and specifications.

B. Payment

The unit price bid shall be complete compensation for furnishing and installing the fire hydrants, complete in place, each, including lead pipe the gravel drain, concrete blocking, extension or additional bury depth as required for a complete installation.

I5.6 Service Connections

A. Measurement

The number of service connections of the type and size specified to be paid for will be counted in the field after complete installation.

B. Payment

The unit price bid shall be complete compensation for furnishing and installing the service connections, complete in place, including the meter box and lid, service line, corporation stop, meter stop and incidentals required for a complete installation.

I5.7 Ductile Iron Fittings

A. Measurement

The weight of the various ductile iron fittings and specials were estimated by using the standard weights for cast iron fittings as established by the American Water Works Association or American Standard Association. Measurement of ductile iron fittings will be made by counting the actual number of fittings installed and multiplying the number of fittings by the catalog weights for those types of fittings actually installed. Allowance will be made for glands and bolts.

B. Payment

The ductile iron fittings or specials required in the construction of the various size pipe lines as shown on the plans or as required will be paid for at the unit price bid per ton for furnishing and installing the ductile iron fittings complete in place. The unit price shall also include all materials, excavation, backfilling, concrete blocking and other incidental work required for the complete installation.

I5.8 Steel Cylinder Concrete Pipe Fittings

A. Measurement

No separate measurement or count of fittings and specials for steel cylinder concrete pipe will be made.

B. Payment

No separate payment will be made for fittings or specials for steel cylinder concrete pipe used on this project, but the cost of same shall be included in the price bid per linear foot for the various classes and sizes of pipe in the bid proposal.

l5.9 Casing Pipe In Bored Hole Or Open Cut

A. Measurement

Measurement of the casing pipe, of the type and size specified, shall be made by the linear foot of casing installed complete in bored hole or installed complete in open cut.

B. Payment

The unit price bid per linear foot for casing in bored hole or for casing in open cut shall be complete compensation for furnishing and installing the casing, complete in place, including all pits, boring equipment, materials and labor required for a complete installation. Payment for carrier pipe installed in the casing will be made as stated under Waterlines above.

l5.l0 Paving Cut and Repair

A. Measurement

Measurement of paving cut and repair will be made by the square yard for replacing pavement of the type specified. The area of the pavement replaced shall be determined by actual measurements on the ground; however, measurement will be limited to areas within widths of cuts as shown on the plans unless additional widths are authorized by the engineer. Any pavement removed or damaged outside of the aforementioned limits shall be replaced as prescribed with these specifications, but will not be measured for payment.

B. Payment

The unit price bid, per square yard, shall be complete compensation for cutting and removing the pavement, and constructing the concrete base and surfacing of the type specified, all as specified herein and as shown on the plans.

15.ll Trench Safety Systems, Sheeting and Shoring

A. Measurement

Trench Safety Systems shall be measured by the linear foot along the centerline of trench including manholes and other line structures.

B. Payment

Payment for Trench Safety Systems, measured as prescribed above, shall be made at the unit price bid per linear foot of "Trench Safety Systems: Payment of all work prescribed under this item shall be full compensation for the Trench Safety Systems including all Engineering cost and any additional excavation and backfill required, for furnishing, placing, maintaining and removing all shoring, sheeting, or bracing; for dewatering or diversion of water; for all jacking and jack removal; and for all other labor, materials, tools, equipment and incidentals necessary to complete the work.

Revised 08/07

GRAVITY FLOW PIPE SEWERS AND FITTINGS
FOR WASTE WATER AND STORM WATER

PART I – GENERAL

1.01 SCOPE

A. The work covered by this specification shall include the furnishing of all material, labor and equipment to construct, complete in place, all Gravity sewers including jointing, gaskets, fittings, castings, mortar, concrete, the placing of sewer pipe, and the construction of manholes and other appurtenance, all in accordance with the details shown on the plans and these specifications for the drainage of sanitary and/or storm sewage.

B. Sanitary and storm sewer lines constructed under these specifications shall be straight in grade and alignment between manholes. Manholes shall be constructed at any change in grade and at any change in alignment. In general manholes are to be constructed at 300 feet intervals or less with the maximum distance between manholes being 350 feet when approved by the Engineer.

1.02 QUALITY ASSURANCE

A. The Contractor, at the Engineer's request, shall furnish a certificate from the manufacturer of the pipe and fittings that the manufacturer is fully competent and capable of manufacturing sewer pipe, fittings, and accessories of the type, size and grade proposed for use in this project that are of uniform texture and strength that will fully comply with these specifications and have so manufactured this class of pipe in sufficient quantities to be certain that it will meet all normal field conditions of usage. The manufacturer must have adequate equipment and quality control facilities to be sure that each extrusion casting or run of pipe is uniform in texture, dimensions, and strength.

B. All PVC, HDPE, or plastic resin based pipe and fittings shall be covered during storage to protect them from excessive heat and direct sunlight.

C. All pipe and accessories shall be stored above ground and fully supported so that they will not bend or deflect excessively under their own weight.

D. Pipe in any way damaged or deformed during storage shall not be incorporated into this project, but at the direction of the Engineer, shall be permanently removed from the job site and project area.

1.03 TYPE OF PIPE

A. Pipe for sanitary sewers 15 inches in diameter and less shall be PVC. Pipe for storm drains 15 inches in diameter and less may be corrugated steel pipe when called for on the plans and in the bid proposal. Pipe 18 inches in diameter and larger shall be of the type shown on the plans and bid proposal.

B. The contractor may be allowed to bid a choice of two or more of the pipe materials when pipe 18 inches in diameter and larger are proposed for use on a project. When such choice is allowed the permissible choices will be clearly stated on the plans and/or bid proposal and a blank space will be provided for the contractor to write in the type of pipe proposed for use on the project. When such blank spaces are provided, the contractor must choose one of the permitted pipe materials as specified in part 2 “Materials” of these specifications and write in the type of pipe bid. Failure to write in the type of pipe bid may be reason to disqualify the bid. One or more types of pipe 18 inches in diameter and larger may be excluded from consideration on any given project by notes on the plans and/or the bid proposal.

PART 2 – MATERIALS

2.01 POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS FOR SANITARY AND STORM SEWERS

A. GRAVITY SEWERS

(1) Pipe and fittings in nominal diameters from 4-inch through 15-inch shall be manufactured in accordance with ASTM D3034, “Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings” and pipe and fittings in diameter 18” through 36” shall be manufactured in accordance with ASTM F-679 or ASTM F-794, closed profile, subject to the modifications and limitations below.

B. MODIFICATIONS AND LIMITATIONS

(1) The concrete slab manhole tops shall be reinforced with number 4 steel reinforcing bars spaced at 12 inches on center each way. Additional diagonal bars shall be placed on 4 sides around the manway opening. The diagonal bars shall be number 4 rebar with a minimum length equal to the diameter of the manway opening plus 4 inches. The steel reinforcing mat shall be placed in the bottom of the slab with 1-1/2 inches protective covering.

(2) The term Dimension Ratio (DR) or standard dimension ratio (SDR) is the ratio of the average outside pipe diameter to the minimum wall thickness rounded to the nearest 0.5. The maximum DR for PVC sewer pipe shall be 35. PVC pipe sewers that will have less than 4 feet of cover shall be DR26.

(3) PVC pipe manufactured under ASTM F679 or F794 shall have a wall thickness that will meet or exceed the D.R. and stiffness specified herein. The minimum pipe stiffness for pipe having a DR of 26 shall be 115 psi. The minimum pipe stiffness for DR 35 pipe shall be 46 psi.

(4) Where DR 26 pipe is specified, all necessary fittings shall be the same as for SDR 35 PVC pipe.

(5) Minimum wall thickness for ASTM D-3034 PVC pipe shall be as follows:

Nominal Size (in.)	Min. Wall Thickness (in.)	
	DR 26	DR 35
4	0.162	0.120
6	0.241	0.180
8	0.323	0.240
10	0.404	0.300
12	0.481	0.360
15	0.588	0.437

The minimum wall thickness for PVC pipe meeting ASTM F-679 or F-794 requirements shall be the thickness as set forth in said ASTM specification that will meet or exceed the pipe stiffness and DR required.

(5) The identification markings as shown in Section 12 of ASTM 3034 shall note the specified DR of 26 where applicable.

(6) All pipe and fittings shall have the dimensions for inside diameter, outside diameter, etc. as shown in ASTM D3034 and/or ASTM F-679 except that the inside diameter DR 26 may be reduced by the added wall thickness.

(7) The pipe and fittings shall be homogeneous throughout and free from visible cracks, holes, foreign inclusions, or other injurious defects. The pipe shall be as uniform as commercially practical in color, opacity, density, and other physical properties.

(8) The Contractor shall provide wyes, tees, bends, adapters, and any other fittings called for in the specifications and/or shown on the plans or directed by the Engineer.

(9) The standard length of ASTM, D-3034 SDR 35 or SDR 26 PVC pipe under this specification shall be 20 feet with a minimum of 10 feet, except that all pipe used in service lines shall not exceed 10 feet in length unless otherwise approved by the Engineer. The standard laying length for ASTM F-679 PVC pipe shall be 13 feet. The Engineer must approve other laying lengths.

C. SEWER LATERALS AND CONNECTIONS

Pipe and fittings for service lines shall be the same material and thickness class as required for the main sewer. Schedule 40 PVC pipe may be used for 4" service lines when PVC pipe meeting requirements of ASTM 3034, SDR 35 is required.

D. JOINING SYSTEMS

(1) PIPE JOINTS

The pipe shall be joined with an integral bell, bell and spigot type rubber gasket joint. Each integral bell joint shall consist of a formed bell complete with a single rubber o-ring gasket. Gaskets shall be manufactured in accordance with ASTM F477 and shall be installed in accordance with the pipe manufacturer's instructions using all the necessary materials, lubricants and equipment recommended by the manufacturer.

For pipe 18" through 36" gaskets shall be factory installed and chemically bonded to the bell end of the pipe.

Lubricant shall be water soluble, non-toxic and have no deteriorating effects on gasket or pipe materials and shall not support the growth of bacteria. Lubricant shall be suitable for use at temperatures from 5^{o} to 120^{o} F (-15^{o} to 50^{o} C). Containers shall be labeled with the manufacturer's name and identified as PVC pipe joint lubricant. Each lubricant container shall have printed instructions for usage and joint assembly.

Field welded joints will not be allowed.

(2) FITTING JOINTS

All fittings shall utilize rubber gasket joints of the same type design and specifications as pipe joints.

(3) PIPE SPIGOT

The pipe spigot shall have a bevel and an insertion stop mark. The assembled joint shall be designed so the gasket shall be radially compressed to assure a positive water-tight seal for all installation conditions recommended by the manufacturer and under all combinations of production tolerances for the joint components. Each size joint shall be qualified to no leakage under various test conditions in conformance with ASTM Specification D-3212, "Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals."

E. INSPECTION AND TESTING

(1) INSPECTION REQUIREMENTS

Certification: as the basis of the acceptance of the material, the manufacturer will furnish a certificate of conformance to these specifications. The manufacturer will furnish other conformance certification in the form of affidavit of conformances, test results, and copies of test reports.

(2) PHYSICAL TEST REQUIREMENTS

For each 4,000 linear feet of pipe manufactured of each class and size of pipe, the following certified test data shall be required:

1. The basic dimensions shall be measured.
2. The allowable crush load (lbs/ft ^{2}) shall be calculated.
3. Impact resistance, fusion quality and ductility shall be tested.

F. MARKING AND DELIVERY

Each pipe shall be identified with the name of manufacturer, nominal size, cell classification, ASTM designation F794, Uni-Bell Plastic Pipe Association designation Uni-B-9, the pipe stiffness designation “PS-46 psi” and manufacturer’s date code.

1. MANHOLE CONNECTIONS

The Contractor shall provide smooth pieces of pipe for connecting sewer line into manholes. The Contractor shall be required to assist the manhole gasket supplier with the nominal outside diameter of these smooth pieces of pipe, as manufactured. There shall be only one plain end thickness for each diameter of pipe specified for the project.

2. DELIVERY

All pipe couplings and fittings shall be prepared for standard commercial shipment.

The pipe shall be inspected upon delivery to the job site for final acceptance. The contractor shall be responsible for all material furnished by him and he shall replace, at his own expense, all such material that is found to be defective in manufacture or which has become damaged in handling until final acceptance has been made. Pipe, which exhibits excessive ovalty or curvature, shall be rejected.

PVC pipe and fittings shall be covered during storage to protect them from excessive heat and direct sunlight.

All pipe and accessories shall be stored above ground and fully supported so as not to bend or deflect excessively under its own weight.

2.01(a) Metallic Marking Tape (For PVC Sewer Pipe)

2.01 (a).1 General

When non-metallic pipelines are to be installed, then the Contractor shall furnish and lay, above the pipeline, a continuous strip of metallic identification tape.

2.01 (a).2 Tape Material

The metallic identification tape shall be at least two inches (2”) in width and shall be of corrosive resistant metal of sufficient thickness to be stable and reflect electronic signals to electronic pipeline detector when buried to a dept of twenty-four (24”) below normal ground level.

The metallic tape shall be painted green on one side and shall have 1-inch high letters painted continuously on the same side of the tape which read, “CAUTION: BURIED SEWER LINE BELOW” or other words to this effect.

The marking tape shall be “Detectable Marking Tape”, as manufactured by the Omega Marking Company, or equal approved by the Engineer.

2.01(a).3 Construction Methods

The Contractor shall backfill over non-metallic pipelines to a depth which is less than twenty-four (24”) and not more than twelve inches (12) from the top of the cut of the ditch section in which the pipeline is laid. Contractor shall stop the backfilling material to a generally uniform level. All machine tamping, jetting and other compaction activities shall be accomplished up to this point of height in the backfilling the marking tape is placed in the trench.

The Contractor shall then lay the marking tape in the pipe trench and shall be held in position by the spot placement of backfill materials over it to keep it from sliding t the sides and/or from being blown about in the ditch by the wind. The tape shall be lid with the painted side, which shall also be the side with the identification lettering on it, in the “up” position. The tape shall be laid in the flat position and kept there until backfill is accomplished.

The Contractor shall then complete the backfilling operation in such a manner that the marking tape is not cut, crimped, ruptured or separated by the backfilling work.

2.01(a).4 Measurement and Payment

No separate pay item will be provided for furnish and placing the marking tape. This item shall be considered subsidiary to the non-metallic pipe being placed.

2.02 CORRUGATED STEEL PIPE (CSP) FOR STORM SEWERS AND CULVERTS ONLY

1. PIPE

A. STEEL SHEET STOCK

(1) Corrugated steel pipe shall be manufactured using galvanized steel sheet AASHTO M 218 or aluminized steel sheet AASHTO M 274.

(2) The lining for smooth lined corrugated steel pipe shall be polymer coated on both sides. The minimum thickness of the polymer coating shall be 10 mils.

B. PIPE DESIGNATION

(1) Pipe furnished shall be manufactured in accordance with AASHTO Specification M 36.

(2) Corrugated steel pipe shall be one or more of the following type as designated in AASHTO M 36.

Type I - Full circular cross section having helical corrugations.

Type IA - Full circular smooth lined pipe constructed of an outer shell having helical corrugations with a smooth sheet lining attached to the outer shell at helical lock seams.

Type IR - Full circular cross section with helical rib protruding outward.

Type II - Type I pipe formed into a pipe arch.

Type IIA - Type IA pipe formed into a pipe arch.

The type of pipe furnished on this project will be as shown on the plans and in the bid proposal.

When no type of pipe is called for on the plans or in the bid proposal helically corrugated circular single wall pipe (Type I or Type IR) shall be furnished.

C. MANUFACTURERS CERTIFICATION

(1) The pipe manufacturer will be required to certify the adequacy of the pipe furnished for the application and design life of the project.

(2) The design life for storm sewers constructed under this specification is 50 years.

(3) The pipe manufacturer will be required to run soil pH, soil resistivity and such other test as they deem necessary to design pipe thickness and protective coatings required to assure the adequacy of the pipe supplied.

D. CORRUGATION AND MINIMUM THICKNESS

(1) Thickness used in this specification refers to the bare steel thickness before coating is applied. The minimum thickness for any single wall corrugated steel pipe furnished under this specification is 16 gage.

(2) All corrugated steel pipe furnished under these specifications shall have helical corrugations.

(3) Circular corrugated steel pipe 48” in diameter and smaller shall have 2-2/3” x ½” corrugation and shall be a minimum of 16 gage in thickness.

Circular corrugated steel pipe larger than 48” in diameter may have either 2-2/3 x ½” or 3” x 1” corrugations. The minimum thickness for corrugated steel pipe larger than 48” in diameter and having 2-2/3 x ½” corrugation shall be as follows:

54” Diameter - 12 gage
60” Diameter - 10 gage
66” through 90” Diameter - 8 gage

The minimum thickness for circular corrugated steel pipe having 3” x 1” corrugation and diameters of 54” through 90” shall be 14 gage.

(4) For smooth lined corrugated steel pipe the minimum thickness for the lining shall be 20 gage and the minimum thickness for the outer shell shall be 18 gage.

The corrugations for the outer shell shall be 2-2/3” x ½” for pipe 48” diameter and smaller. Larger diameter pipe may use 3” x 1” corrugations in the outer shell. The sum of the thickness for the outer shell and the liner shall be a minimum of one thickness unit greater than the thickness that would be required for single wall pipe of the same diameter or span.

(5) Spiral rib steel pipe (Type IR) shall have outward projecting spiral corrugations of ¾” x 1” at 11-1/2” on center in accord with AASHTO specification M 36 or ¾” x ¾” at 7-1/2” on center as described in AASHTO specification M 196.

The minimum thickness for spiral rib pipe 48” in diameter and smaller shall be 16 gage.

The minimum thickness for spiral rib pipe 54” and 60” in diameter shall be 14 gage.

The minimum thickness for spiral rib pipe 66” and 72” in diameter shall be 12 gage.

The minimum thickness for spiral rib pipe larger than 72” in diameter shall be as shown on the plans.

(6) The corrugations and minimum thickness of corrugated steel pipe arch shall be in accord with the following table:

EQUIV. Dia. (in.)	2-2/3" x ½" Corrugations Span (in.)	Rise (in.)	Gage	3" x 1" Nominal Size Span (in.)	Rise (in.)	Gage
15"	17	13	14			
18"	21	15	14			
24"	28	20	14			
30"	35	24	14			
36"	42	29	14	40	31	16
42"	49	33	12	40	36	14
48"	57	38	10	53	41	12
54"	64	43	10	60	46	12
60"	71	47	8	66	51	12
66"	77	52	8	73	55	12
72"	83	57	8	81	59	12
78"				87	63	12
84"				95	67	12
90"				103	71	12

When 2-2/3" x ½" corrugations are called for on the plans and/or on the bid schedule the substitution of 3" x 1" corrugations will be allowed only upon the demonstration by the contractor that there is sufficient head room to accommodate the higher rise for arch pipe of this cross section.

E. END TREATMENT AND JOINING

(1) The ends of all corrugated steel pipe furnished for this project shall be rolled to provide circumferential corrugations for coupling. The end corrugations for all pipe 48" in diameter and less shall be 2-2/3 x ½". The end corrugations for single wall helically corrugated steel pipe or for smooth lined corrugated steel pipe 54" in diameter and larger shall be the same pitch as the pipe furnished and may be either 2-2/3" x ½" or 3" x 1". The end corrugations for spiral rib (Type IR) corrugated steel pipe shall be 2-2/3" x ½" or 3" x 1" for pipe 54" and larger in diameter.

(2) Coupling bands shall be made of the same material as the pipe and shall be not more than 3 nominal sheet thicknesses lighter than the pipe joined and in no case less than .052 inch.

Jointing devices for joining corrugated steel pipe shall have a gasket and shall produce a joint meeting the infiltration/exfiltration requirements of these specifications.

If it should be necessary to cut a joint of Helically corrugated pipe and join the unreformed end to another section of pipe or fitting extra width bands will be required and special care must be taken to insure a water tight connection.

Locking bands shall be corrugated and shall securely fit into at least one full annular corrugation. The corrugations on the locking band must match the corrugations on the pipe being joined.
The minimum width for locking bands is as follows:

for 2-2/3 x ½ inch corrugations	10-1/2 inches
3 x 1 inch corrugation	12 inches

For helical corrugations that have not been reformed the coupling bands must be at least 2 inches wider than the widths listed above.

Unless shown otherwise on the plans all bolts for coupling or locking bands shall be ½ inch in diameter. Bands 12 inches wide or less shall have a minimum of 2 bolts. Bands wider than 12 inches shall have a minimum of 3 bolts.

Bolts must be galvanized in accordance with AASHTO Designation M232 or ASTM A164 Type RS.

(3) Gaskets for corrugated steel pipe shall be closed cell expanded rubber and shall be formed into a continuous band. Gaskets may be either “O” ring or flat band as recommended by the pipe manufacturer. Flat band gaskets shall be a minimum of 7” wide and 3/8” thick. “O” ring gaskets shall be 13/16” diameter minimum for pipe 36” in diameter or less and 7/8” for pipe larger than 36” diameter and having ½” deep corrugations. “O” ring gaskets shall be a minimum of 1-3/8” diameter for pipe having 1” deep corrugations. When “O” ring gaskets are furnished, an additional flat gasket shall be furnished and placed between the overlapping ends of the coupling band. This flat gasket shall completely fill the gap between the “O” rings. All gasket materials shall be capable of producing a water tight joint that will meet the leakage requirements of these specifications.

2. CORRUGATED STEEL MANHOLE FITTINGS, AND CLEAN OUTS

A. FABRICATION

(1) Corrugated steel manholes and fittings shall be constructed of the same material and type of pipe furnished for the storm sewer line with the exception that manhole risers shall be helical corrugated single wall circular pipe when used with pipe arch sewers or smooth lined corrugated steel pipe. The thickness of the manhole riser shall be the same as would be required for the same type and diameter pipe if it were used for the storm sewer.

(2) Cleanouts for use on shallow storm sewer and inlet leads shall be manufactured from pipe meeting the requirements of these specifications. Cleanouts shall be constructed to the dimensions and in accord with the details shown on the plans.

B. CONNECTION TO MANHOLES AND CLEANOUTS

(1) Stub outs from manholes and cleanouts for connection to storm sewers and inlet leads shall have annular corrugations and shall be compatible with the type and size of pipe being connected. Stub outs provided for connection to PVC pipe storm sewers and inlet leads shall be sized so that the PVC pipe can be inserted into the stub leaving the least amount of annular space between the PVC pipe and the CSP practical. The PVC pipe shall be connected using an approved molded rubber or PVC sleeve connector clamped to both pipes with stainless steel straps.

The connector shall be a flexible coupling as manufactured by Fernco, 300 S. Dayton St., Davison, MI., or approved equal.

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C. LEAKAGE

Manholes, fittings and cleanouts shall meet the leakage requirements of these specifications.

D. SHOP DRAWINGS

The contractor shall submit shop drawings of all manholes, fittings and cleanouts for approval prior to their fabrication. A minimum of 5 sets of drawings for each manhole, each fitting and each cleanout shall be submitted.

E. CONCRETE SLAB TOPS

A reinforced concrete slab top shall be constructed for each manhole and cleanout. The slab shall extend to one foot (1') outside the riser section on all sides and shall have an eccentric 2' diameter opening for the manway located at the outside edge of the riser section. For manholes and cleanouts designated for standard manhole rings and covers the concrete top shall be 8 inches thick and shall be finished smooth to receive the manhole ring.

For manholes designated to receive pressure type manhole rings and covers the concrete slab top shall be a minimum of 12 inches thick and shall have L bolts imbedded in the concrete to fit the requirements of the manhole ring furnished. The slab shall be finished smooth to receive the manhole ring. The manhole ring shall be securely bolted to the slab and sealed using "Ram Nek" or an approved equal bitumastic sealer between the manhole ring and the concrete slab.

The concrete slab manhole tops shall be reinforced with number 4 steel reinforcing bars spaced at 12 inches on center each way. Additional diagonal bars shall be placed on 4 sides around the manway opening. The diagonal bars shall be number 4 rebar with a minimum length equal to the diameter of the manway opening plus 4 inches. The steel reinforcing mat shall be placed in the bottom of the slab with 1-1/2 inches protective covering.

F. PRESSURE MANHOLE RING AND COVER

(1) Pressure type manhole rings and covers shall be Western Iron Works No. 380-24P or approved equal. The manhole cover shall be sealed with an "O" ring gasket in a ring groove and shall be secured to the ring by six (6) 5/8-inch stainless steel bolts.

(2) The ring shall have six (6) 1-1/4 inch bolt holes in the flange for securing the ring to the concrete slab top on the manhole.

3. CORRUGATED STEEL PIPE SLOTTED DRAIN

(1) Corrugated steel pipe slotted drains shall be fabricated from full circle corrugated steel pipe conforming to these specifications.

(2) C.S.P. Slotted drains shall be of a type as manufactured by "Contech Construction Products, Inc.", "Texas Corrugators", "Caldwell Culvert Company" or approved equal.

(3) The upstream end of CSP slotted drains shall be equipped with a bend and a ring and cover of the some size as the pipe from which the slotted drain was fabricated to allow cleaning equipment to be inserted into the slotted drain. The ring and cover shall be Nenah Foundry Co. R-5901 open grate or R-5900 solid lid or approved equal. Unless shown otherwise on the plans the open grate shall be furnished.

(4) When slotted drain is to be connected to PVC leads, molded rubber or PVC flexible connector as specified for connections to manholes and cleanouts shall be furnished.

4. DAMAGED COATING

A. PROTECTION OF PIPE

(1) Pipe fittings and specials shall be handled and stored in a manner that will minimize damage to the coating.

(2) The fabrication process shall be designed to minimize the burning of coatings during welding.

(3) Pipe and/or fittings showing excessive abuse or damage will be rejected.

B. REPAIRING DAMAGE

(1) Pipe on which the metallic coating has been burned by welding or has been otherwise damaged in fabricating or handling, shall be repaired. The repair shall be done so that the completed pipe shall show careful finished workmanship in all particulars.

(2) The damaged area shall be cleaned to bright metal by blast cleaning, power disk sanding, or wire brushing. The cleaned area shall extend at least ½ inch into the undamaged section of the coating. The cleaned area shall be coated within 24 hours and before any rusting or soiling.

(3) Zinc-rich paint shall be applied to a dry film thickness of at least 0.005 inches over the damaged section and surrounding cleaned area. Zinc-rich paint shall be used for repair of damage to all types of metallic coating -zinc, aluminum, and aluminum-zinc alloy.

2.03 CAST-IN-PLACE CONCRETE SEWER PIPE (NON-REINFORCED) FOR STORM SEWERS ONLY

1. DESCRIPTION

This item shall cover machine cast-in-place monolithic non-reinforced concrete pipe, which shall consist of Portland cement concrete placed in a prepared trench at such locations and grades shown on the plans and intended to be used for the conveyance of storm water. Items and item numbers referred to in this specification are the items as given in the "Texas State Department of Highways and Public Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges."

2. MATERIALS

The cast-in-place pipe shall be constructed of Class "C" concrete. The concrete shall meet the requirements of Item 421, "Concrete for Structures," and Special Provision thereto, except as otherwise noted herein or on the plans. Type III Portland Cement shall be used.

The minimum compressive strength for concrete used in this item is 4000 psi. Backfilling operations may proceed when the concrete has reached 2000 psi compressive strength.

The coarse aggregate grading for pipe diameters 48 inches or less shall conform to that of Aggregate Grade No. 3, one inch (1") maximum size aggregate under Item 421. For pipe diameters over 48 inches, Coarse Aggregate No. 2, one and one third inch (1-1/3") maximum size aggregate shall be used.

No concrete having a slump in excess of 2" will be permitted for use in pipes with diameters of 48 inches and over. For pipes with diameters less than 48 inches, no concrete having a slump in excess of 3" will be permitted for use. At the option of the Contractor, sections of precast reinforced concrete pipe (D-load) may be substituted for cast-in-place concrete pipe. Pipe and installation shall conform to the requirements of Item 465, "Pipe Sewers." Backfill shall be in accordance with the requirements for other storm sewers in these specifications using crusher fines (chat).

3. PIPE MAKING EQUIPMENT

The pipe shall be constructed with equipment specially designed for constructing cast-in-place monolithic concrete pipe. The equipment shall be acceptable to the Engineer and the Contractor may be required to furnish evidence of successful operation in other work of the equipment he proposes to use. Equipment not suitable to produce the quality of work required for the pipeline will not be permitted to operate on the project.

4. DIMENSIONS AND TOLERANCES

The design shell thickness shall be as specified in Table 1.

TABLE I

Internal Diameter inches	Min. Shell Thickness inches
18	2
24	2-1/2
30	3
36	3-1/2
42	4
48	5
54	5-1/2
60	6
66	6-1/2
72	7
84	8
96	9
108	10
120	11

Variation in the internal diameter shall not exceed plus or minus 3 percent. The maximum allowable deviation form the true grade of the design invert of the pipe shall not exceed ½ inch either side of true grade. Where deviation from true grade occurs, true grade shall be re-established at a maximum departure of one-eighth inch per foot.

5. EXCAVATION AND BACKFILL

Excavation shall be in accordance with the requirement for other types of storm drains, except as modified herein. The trench shall be excavated in the lines and grades shown on the plans or as directed by the Engineer. The width of the trench shall be sufficient to accommodate travel of the pipe machine only. The bottom of the trench shall be shaped to the nominal outside circumference of the pipe. Excavation shall be performed from the outlet to the inlet. If the trench is over-excavated for the bottom 210 degrees of the pipe the excess area shall be filled with concrete. If rock is encountered, it will be removed at least 6 inches below the bottom of the pipe and the trench refilled with material sufficiently compacted to

allow operation of the machine and provide a smooth firm surface. The sidewall of the pipe shall be placed against undisturbed material.

Backfill material will be a crusher fine (chat) as described elsewhere in these Specifications. No backfill other than permitted for curing purposes shall be placed until the line has been inspected and approved by the Engineer. The trench may be completely backfilled after the pipe has been in place at least 24 hours and concrete strength requirements have been reached. Light traffic, axle load less than 6,000 pounds, may be routed over the pipe after backfill has been completed for twenty-four (24) hours. Unrestricted traffic may be permitted over the pipe after the backfill has been in place for forty-eight (48) hours.

All backfill material shall be mechanically compacted to 95% modified proctor or as directed by the Engineer.

6. CONSTRUCTION

All surfaces against which concrete are to be placed shall be free from standing water, mud, and debris. Absorptive surfaces against which concrete are to be placed shall be moistened thoroughly so that moisture will not be drawn from the freshly placed concrete.

The concrete shall be placed in one operation around the full circumference of the pipe by means of a traveling form. The forms shall be of sufficient strength to withstand vibrating or tamping the concrete and to permit workmen to walk on the forms without causing springing or bulging at any point.

As the traveling form moves forward, forms shall be placed inside the newly formed pipe to support a minimum of 230 degrees of the upper portion of the pipe.

The concrete shall be vibrated, rammed, tamped or worked with suitable appliances until the concrete has been consolidated to the maximum practicable density, free of rock pockets, and closes snugly against all surfaces or forms and provides a bond between the pipe shell and supporting earth.

When placing operations cease for any reason, the end of the pipe shall be left rough with a slope of approximately 45 degrees. The ends of the pipeline shall be covered with canvas or other suitable cover material to prevent excessive loss of moisture from the interior of the pipe already placed.

When starting pipe laying operation from a previously laid cast-in-place pipe or section of pre-cast pipe, a construction joint shall be made by excavating a “bell” completely around the end of the existing pipe and constructing a concrete collar to extend at least one foot either side of the joint with a minimum thickness equal to that of the wall of the pipe. The end of the existing pipe shall be clean and damp before continuing pipe making operations. Cleaning of the construction joint shall consist of removing all latency, loose or defective concrete, coatings, and any other deleterious materials.

All forms shall be clean and shall be placed at the trench side at the location of their proposed use for inspection by the Engineer. Forms, which are defective in any way, will not be used, and upon condemnation they shall be removed from the site of the work. The forms shall not vary more than ½ inch from the lower edge of a straightedge laid parallel to the centerline of the form, and shall be free of any holes larger than 5/8 inch in greatest dimension. The pipe machine shall be thoroughly clean and serviced prior to the placing of the concrete. Particular attention will be given to all parts of the machine with which concrete comes into contact.

Concrete chutes or trunks shall be provided to reach within 1 foot of the pipe machine hopper. The end of the chute or trunk shall discharge the concrete at the center of the hopper. Provisions shall be maintained to minimize segregation of the concrete mix in all phases of the operation.

Delays in placing shall be handled as follows or as otherwise directed. The concrete hopper on the pipe laying machine shall be kept ½ full at all times, provided, however, that when placing operations cease or are delayed for any reason for more than 20 minutes, the pipe machine shall be pulled forward until all the concrete is exhausted and until the top troweling skirt is clear of the concrete. If the pipe laying operation proceeds within one hour of the time of the last placement, no further steps need to be taken. However, if longer than one hour has elapsed, then a construction joint must be made as previously described. The end of the pipe shall be left rough and at the natural slope when the machine is moved forward.

All junctions of pipe shall be provided for at the time the cast-in-place pipe is placed.

Inside forms shall be removed from the pipe not sooner than 4 hours nor longer than 24 hours after placement of the concrete. Care shall be taken when removing forms to prevent damage to the pipe. The inside of the pipe shall be carefully inspected for imperfections in placement, and any required repairs or smoothing shall be made immediately to provide a uniform interior surface. No wash, mortar or concrete shall be applied to a surface not properly moistened or cleaned. Visible cracks shall be brushed with cement paste or chipped out and pointed up with cement mortar. Any cracks that appear to go through the shell shall be grooved and filled with mortar. All construction operations and methods for providing a watertight pipeline shall be the responsibility of the Contractor. Mortar shall consist of one part cement; two parts well graded sand passing 1/8-inch sieve. Wash shall consist of four parts cement, one part fire clay. The finished surface of the concrete pipe shall be substantially free of fractures, cracks and surface roughness.

7. CURING CONCRETE

Immediately after the concrete is placed the exposed surface of the concrete shall be cured by covering the top with a sheet of polyethylene film sealed with dirt along the edges. During the curing period following the placement of the concrete, the ends of the pipeline and all other openings into the pipeline shall be covered with canvas or other suitable material, except at locations where work is actually in progress. The inside surface of the pipeline shall not be cured.

8. MANHOLES AND BENDS

Manhole bases shall be hand formed on top of the pipe as soon as the pipe-placing machine has passed. Where required, the extra width for manholes shall be excavated ahead of the pipe placing operation. The base for the manhole shall be formed to receive a standard precast concrete barrel section and shall be shaped and smoothed so that the joint can be sealed water tight by use of “Ram Nek” or other approved joint sealing material.

Bends may be formed and cast in place or fabricated using precast reinforced concrete pipe (load D). Design and shop drawings shall be submitted to and approved by the Engineer before the bends are fabricated or cast.

9. MEASUREMENT

Measurement of manholes shall be as specified elsewhere in these specifications. Measurement of bends shall be as for other storm sewer pipe. The method of pipe measurement shall conform to that for other types of storm drainpipe in the section or storm drains in these specifications.

10. PAYMENT

Payment for cast-in-place non-reinforced pipe sewers, measured as prescribed above, will be made at the unit price bid per linear foot for the various sizes of “Pipe Sewers (Cast-in-Place)” complete in place. Payment for manholes shall be as specified elsewhere in these specifications.

Such payment shall be full compensation for furnishing all concrete materials, precast reinforced concrete pipe used in place of cast-in-place pipe, and for all other materials, tools, labor, equipment, and incidentals required to perform the applicable work prescribed herein.

When precast reinforced concrete pipe at the Contractor’s option is used in a line of cast-in-place pipe the additional excavation for the pipe will be subsidiary.

2.04 CENTRIFUGALLY CAST FIBERGLASS REINFORCED RESIN PIPE SEWERS

A. DIRECT BURY PIPES

1. GENERAL

All pipes, joints and fittings shall be manufactured in accordance with the requirements of the applicable standard given below except as noted herein:

Service	Standard
Non pressure Sanitary Sewer	ASTM D3262
Sewer Force Main and Effluent Lines	ASTM D3754

Pipes shall be centrifugally cast, fiberglass-reinforced polyester resin as manufactured by Hobas USA, Inc. or approved equal.

Minimum pipe stiffness when tested in accordance with ASTM D2412 shall be 46 psi.

2. MATERIALS

The manufacturer shall use only approved polyester resin systems for which he can provide a proven history of performance in these particular applications. The historical data shall have been acquired from a composite material of similar construction and composition as the proposed product.

The reinforcing glass fibers used to manufacture the components shall be of highest quality commercial grade of E-glass filaments with binder and sizing compatible with impregnating resins. Sand shall be minimum 98% silica with a maximum moisture content of 0.2%

3. DIMENSIONS

Pipe outside diameters shall be in accordance with AWWA Standard C151 and C950. For diameters larger than covered in those documents, OD's shall be as shown in Table 1.

TABLE I

*WP/s		0/46		50/46		100/46		150/46		200/46	
Nomin Pipe Sz. (in.)	Pipe OD (in.)	Min. wall (in.)	Wgt. (lb/ ft)	Min. Wall (in.)	Wgt. (lb/ ft)	Min. Wall (in.)	Wgt. (lb/ ft)	Min. Wall (in.)	Wgt. (lb/ ft)	Min. Wall (in.)	Wgt (lb/ ft.)
18	19.50	.42	20	.41	20	.40	19	.38	18	.37	18
20	21.60	.46	25	.45	24	.43	23	.42	22	.40	21
24	25.80	.54	35	.53	34	.51	33	.49	31	.47	30
30	32.00	.66	54	.65	53	.62	51	.60	49	.57	47
36	38.30	.78	77	.77	76	.74	73	.71	70	.68	67
42	44.50	.90	104	.88	101	.85	98	.82	94	.78	89
48	50.80	1.02	134	1.00	131	.96	126	.93	122	.88	115
54	57.10	1.14	169	1.12	166	1.08	160	1.04	155	.99	147
60	62.90	1.26	209	1.23	204	1.19	197	1.14	188	1.09	180
66	69.20	1.38	249	1.35	243	1.30	234	1.25	228		
72	75.40	1.50	298	1.47	292	1.41	280	1.36	270		
78	81.60	1.62	352	1.58	343	1.52	331	1.47	320		
84	88.00	1.74	409	1.70	399	1.64	385				
90	94.30	1.86	468	1.82	458	1.75	440				
96	100.6	1.98	531	1.94	520	1.87	501				

- **Maximum nominal working pressure in psi/pipe stiffness in psi**

Pipe shall be supplied in nominal lengths of 20 feet. Actual laying length shall be the nominal plus or minus 2 inches. At least 90% of the total footage of each size and class of pipe, excluding special order lengths, shall be furnished in nominal length sections.

4. **PRESSURE CLASS & TESTING FOR SEWER FORCE MAINS AND EFFLUENT LINES**

The pipe nominal pressure class (PN) shall be equal to or greater than the maximum sustained operating pressure of the line. The minimum pressure rating for non-pressure pipe shall be 15 psi.

The maximum transient (operating plus surge) pressure of the line shall not exceed the pipe nominal pressure class by more than 40%.

Pipe hoop tensile strength for pressure pipe shall be verified as specified in the applicable standard (D3754 or C950) or by random burst testing at the same sampling frequency. All pipes shall be capable of withstanding a test pressure of 2 times the maximum sustained operating pressure of the line without leaking or cracking. This performance shall be periodically verified at the factory for pressure pipe at least once per lot as defined in D3754, section 7.1.

A. JOINTS

Unless otherwise specified, the pipe shall be field connected with fiberglass sleeve couplings that utilize elastomeric sealing gaskets made of EPDM rubber compound as the sole means to maintain joint water tightness. The joints must meet the performance requirements of ASTM D4161.

B. FITTINGS

Flanges, elbows, reducers, tees, wyes, laterals and other fittings shall, when installed, be capable of withstanding all operating conditions. Acceptable configurations include contact molded or metered fiberglass or properly protected standard ductile iron.

Unbalanced thrust forces shall be restrained with thrust blocks or other approved suitable methods. Fiberglass tees, wyes, laterals, or other similar fittings shall be fully encased in reinforced concrete designed to withstand the pressure forces.

2.05 POLYETHYLENE SEWER PIPE

A. SCOPE

(1) This specification covers Polyethylene (PE) pipe with a corrugated outer wall and a smooth interior wall, for use with non-pressure sanitary sewer systems. The PVC fittings and joints are included in the specification.

B. MATERIAL AND MANUFACTURING

1. PIPE MATERIALS

The pipe shall be made from clean virgin Polyethylene compounds having a cell classification of 324420C as defined by ASTM D-3350.

2. FITTING MATERIALS

The fittings shall be made from clean virgin polyvinyl chloride (PVC) compounds having a cell classification of 12454B, 1245C or 13343C as defined by ASTM D-1784.

Pipe shall be manufactured by simultaneous extrusion of the corrugated and smooth walls with the smooth inner wall fused to the outer corrugated wall.

Fittings shall be molded or fabricated.

3. JOINING MATERIALS

a. Gaskets
b. Elastomeric gaskets shall meet the requirements of ASTM F-477.
c. Lubricants

The lubricants used for assembly shall have no detrimental effect on the gasket or the pipe, and shall be per published recommendations of the pipe manufacture.

4. MATERIAL CERTIFICATION

A manufacture's or an independent laboratory certification shall be furnished to the purchaser/engineer that the products were manufactured, sampled, tested, and inspected at the time of manufacture in accordance with this specification.

C. PIPE DIMENSIONS

Pipe dimensions shall meet the following requirements when tested in accordance with ASTM D-2122.

Nominal Size	Avg. O.D.	Avg. I.D.
4	4.790 (121.7)	4.00 (101.6)
6	6.930 (176.0)	6.00 (152.4)
8	9.145 (232.2)	8.00 (203.2)
10	11.405 (289.7)	10.00 (254.0)
12	14.450 (367.0)	12.00 (304.8)
15	17.530 (445.3)	15.00 (381.0)
18	21/150 (537.2)	18.00 (457.2)

D. INSTALLATION

1. Joint Tightness

Minimum joint performance shall show no leakage when tested in accordance with ASTM D-3212.

2. Supplier Assistance

A manufacturers representative of the above referenced pipe material shall be present at the beginning of the installation as required by the Design Engineer or Contractor and shall remain on site until released by the Design Engineer or Field Inspector/Engineer.

2.06 INLETS FOR STORM SEWERS

A. CURB TYPE INLETS

(1) Curb inlets shall be constructed at the locations and to the lines and grades or shown on the plans or as directed by the Engineer.

(2) Curb inlets shall be constructed of reinforced class “C” concrete in accordance with Section 1-B “Concrete Structures” and the plans and detail drawings.

(3) The curb section and the curb inlet shall conform to the curb and gutter section in which it is placed in so far as it is possible.

B. GRATE TYPE INLETS

(1) Grate inlets shall be constructed at the locations and the lines and grades as shown on the plans or as directed by the Engineer.

(2) Concrete boxes for grate inlets shall be constructed of reinforced Class “C” concrete in accordance with Section 1-B “concrete Structures” and the plans and detail drawings.

(3) Grates shall be constructed of ASTM A-48 gray iron having minimum tensile strength of 35,000 psi or ductile iron having a minimum tensile strength of 60,000 psi and a yield strength of 40,000 psi.

The size, style, shape, type, weight and class shall be as shown on the plans.

Grate frames shall be as manufactured for the grate by the grate fabricator. If more than one type or style or frame is available, the type and/or style shall be as indicated on the plans.

C. COMBINATION INLETS

(1) Combination curb and grate inlets shall be constructed at the locations and to the lines and grades as shown on the plans or as directed by the Engineer.

(2) Combination inlets shall be constructed in accordance with the applicable requirements for “Curb type inlets” and “Grate type inlets” above.

D. INLET LEADS

(1) Inlet leads may be PVC pipe or CSP as shown on the plans and called for in the bid proposal.

(2) Inlet leads shall be constructed in accordance with the specifications for type of material used and the plans and detail drawings.

(3) Where two or more leads are joined together to form a single lead to the storm sewer they shall be joined at a cleanout unless shown otherwise on the plans.

(4) Inlet leads shall be connected to the storm sewer at a manhole. The leads shall enter the manhole at a point that will match the .8 points of the two pipes as near as practical.

E. CLEANOUT FOR STORM SEWER INLET LEADS

Cleanouts at the juncture of inlet leads shall be constructed in accordance with the dimensions and requirements shown on the plans and detail drawings.

F. CORRUGATED STEEL SLOTTED DRAINS

(1) Corrugated steel slotted drains shall be as specified in section 2.02-3 of these specifications and shall be furnished in the lengths and diameters as shown on the drawings and in the bid proposal.

(2) Corrugated steel slotted drains are approved for nuisance water inlets only and are sized to allow for considerable clogging before they will cease to function in this capacity.

2.07 MANHOLES

1. GENERAL

A. **CONCRETE MANHOLES ARE NOT TO BE USED FOR SANITARY SEWERS AFTER DECEMBER 31, 2002. FIBERGLASS MANHOLES ARE TO BE USED FOR ALL SANITARY SEWERS**. Concrete manholes can be used for storm water sewers.

All manholes furnished for this project shall be precast unless noted otherwise on the plans and or bid proposal.

Precast manholes shall conform to the requirements of ASTM Specification C-478 with the modifications given in this article.

Concrete used for precast manholes shall have a minimum 28-day compressive strength of 4,000 psi and shall have a minimum cement content of 7 sacks per cubic yards.

All manhole sections shall be furnished with tongue and groove type joints suitable for sealing water tight with rubber or bituminous joint sealer or gaskets.

B. When cast in place components for manholes are called for on the plans the concrete used shall have a minimum 28 day compressive strength of 4,000 psi and a minimum cement content of 7 sacks per cubic yard and shall conform to the requirements of ASTM Specification C-478 with wall thickness as shown on the plans and detail drawings.

Aggregate for the concrete shall meet the sodium sulfate and magnesium sulfate test as required in ASTM Specification C-33.

C. Mortar for filling and shaping the inverts in precast manhole bases and for mortaring precast grade rings and cast iron rings and covers shall consist of one part Portland cement ASTM C150 Type 1 to 3 parts washed sand mixed with just enough water to make a workable mix.

D. Manholes for corrugated steel pipe may be precast concrete or corrugated steel as described in Article 2.02. The type and material shall be as shown on the plans and called for on the bid proposal.

2. PRECAST MANHOLES

A. Manhole base sections shall be cast with an integral floor and shall be constructed in accordance with the details shown on the plans.

B. Manhole riser sections shall be constructed in accordance with the plans and details and these specifications. When pipe openings are required in manhole riser sections they shall be of the same type and meet the same requirements as the pipe openings in the precast bases.

Manhole riser sections for each manhole shall be furnished in the proper combination of lengths to construct the manhole in conjunction with the other components to the finished grade shown on the plans.

C Eccentric cone sections shall be constructed in the same manner as other components except the top of the cone will have a flat surface to accommodate the manhole ring and cover or grade adjusting rings instead of a tongue or groove.

Generally openings will not be required in the wall of the cone section of the manhole.

D. Manhole grade rings shall comply with all the requirements for manhole riser sections except they shall be cast smooth both sides without tongues and/or grooves.

Manhole grade rings shall be sized to fit the smooth small end of the cone section and shall be cast in heights of 2", 4" or 6".

E. Joint seals for precast concrete manholes shall be a bitumastic sealer such as Ram-Nek or approved equal, a soft rubber sealer such as Butyl-Lok or approved equal or an approved "O" ring gasket or a combination of the above if required to achieve a water tight joint.

F. All water tight Storm Sewer Manholes constructed on this project shall have Neenah R-1755-C watertight manhole rings and covers or approved equal.

No separate payment will be made for the protective plastic manhole linings or for the water tight manhole rings and covers but the cost of these items shall be included in the price bid for water tight Storm Sewer Manholes.

In addition to the markings required by ASTM Specification C-478, all components of each manhole shall be, marked with location identifying information such as manhole number or line number and station value where manhole is to be installed. If the manhole has openings for installation of branch lines above the base section, each manhole section shall be clearly marked with the sequence of installation to assure the branch opening will be at the correct elevation.

3. FIBERGLASS MANHOLES

A. SCOPE

Fiberglass reinforced polyester manholes shall be manufactured from commercial grade polyester resin or other suitable polyester or vinyl resins, with fiberglass reinforcements and in accordance with the latest edition of ASTM D 3 753 (Standard Specification for Glass-Fiber Reinforced Polyester Manholes). Fiberglass manholes shall be used with fiberglass or plastic sewer pipe.

B. MATERIALS

1. **Resin:** The resins used shall be a commercial grade unsaturated polyester resin.

2. **Reinforcing Materials**: The reinforcing materials shall be commercial Grade "E" type glass in the form of mat, continuous roving, chopped roving, roving fabric, or a combination of the above, having a coupling agent that will provide a suitable bond with the resin and leave a resin rich surface.

3. **Surfacing Materials**: If reinforcing materials are used on the surface exposed to the contained substance, they shall be a commercial grade chemical-resistant glass organic surfacing mat having a coupling agent that will provide a suitable bond with the resin and leave a resin rich surface.

4. **Fillers and Additives**: Fillers, when used, shall be inert to the environment and wet well construction. Additives, such as thixotropic agents, catalysts, promoters, etc., may be added as required by the specific manufacturing process to be used. The resulting reinforced plastic material must meet the requirement of this specification.

C. FABRICATION

1. **Exterior Surface**: The exterior surface shall be relatively smooth with no sharp projections. Handwork finish is acceptable if enough resin is present to eliminate fiber show. The exterior surface shall be free of blisters larger than ½ inch in diameter, de-lamination and fiber show.

2. **Interior Surface**: The interior surface shall be resin rich with no exposed fibers. The surface shall be free of crazing, de-lamination, blisters larger than ½ inch in diameter, and wrinkles of 1/8 inch or greater in depth. Surface pits shall be permitted up to 6 per square foot if they are less than ¾ inch in diameter and less than 1/16 inch deep.

3. **Defects not permitted**:

Exposed fibers: glass fibers not wet out with resin.
Resin runs: runs of resin and sand on the surface
Dry areas: areas with glass not wet out with resin.
De-lamination: separation in the laminate.
Blisters: light colored areas larger than ½ inch in diameter.
Crazing: cracks caused by sharp objects
Pits or Voids: air pockets.
Wrinkles: smooth irregularities in the surface.
Sharp projection: fiber or resin projection necessitation gloves for handling.

D. PHYSICAL REQUIREMENTS

1. **Load Rating**: The complete manholes shall have a minimum dynamic-load rating of 16,000 ft-lbs. when tested in accordance with this standard. In order to establish this rating, the complete manhole shall not leak, crack, or suffer other damage when load

tested to 40,000 ft-lbs. and shall not deflect vertically downward more than ¼ inch at the point of load application when loaded to 24,000 lbs.

2. **Stiffness**: The manhole cylinder shall have a minimum pipe stiffness value as shown below when tested in accordance with A.S.T.M. 3753 8.5 (note 1)

Depth Ft.	F/dy.psi
3 – 6.5	0.75
7 – 12.5	1.26
13 – 20.5	2.01
21 – 25.5	3.02
26 – 35	5.24

3. **Soundness:** In order to determine soundness, apply an air or water pressure test to the manhole test sample. Test pressure shall not be less than 3 psig or greater than 5 psig. While holding at the established pressure, inspect the entire manhole for leaks. Any leakage through the laminate is cause for failure of the test. Refer to A.S.T.M. 3753 8.6.

4. **Chemical Resistance**: The fiberglass manhole and all related components shall be fabricated from corrosion proof material suitable for atmospheres containing hydrogen sulfide and dilute sulfuric acid as well as other gases associated with the wastewater collection.

5. **Physical Properties**:

	Hoop Direction	Axial Direction
a. Tensile Strength (pi)	18,000	5,000
b. Tensile Modulus (pi)	0.6×10^6	0.7×10^6
c. Flexural Strength (psi)	26,000	4,500
d. Flexural Modulus (psi)	1.4×10^6	0.7×10^6
e. Compressive (psi)	18,000	10,000

6. **Minimum Wall Thickness**: Shall be 0.48” nominal at all depths of the manholes.

E. TEST METHODS: All tests shall be performed as specified in A.S.T.M 3753 latest edition, section 8. Test method D-790 (see note 5) and test method D-695.

F. QUALITY CONTROL: Each completed manhole shall be examined for dimensional requirements, hardness, and workmanship. All required A.S.T.M 3753 testing shall be completed and records of all testing shall be kept and copies of test records shall be presented to customer upon formal written request within a reasonable time period.

G. CERTIFICATIONS: As a basis of acceptance the manufacturer shall provide a independent certification which consist of a copy of the manufacturer’s test report and accompanied by a copy of the test results that the manhole has been sampled, tested,

and inspected in accordance with the provisions of this specification and meets all requirements.

H. SHIPPING AND HANDLING: Do not drop or impact the fiberglass manhole. Fiberglass manhole may be lifted by inserting a 4" x 4" x 30" timber into the top of manhole with cable attached or by a sling or "choker" connection around center of manhole, lift as required. Use of chains or cables in contact with the manhole surface is prohibited.

I. CONCRETE:

1. **Fiberglass Bottom**: Manholes may have fiberglass bottoms that are a minimum of 6" below the OD of the pipe invert when concrete is used to form the invert. Manufactured fiberglass inverts and bench areas are allowed, or concrete may be used to form bench area and invert. Concrete is to be used on top of anti-flotation ring and around the reducer section as required for buoyancy.

2. **Concrete Bottom**: Lower manhole into wet concrete until it rests at the proper elevation, with a minimum of 4 inches of fiberglass manhole inserted into the wet concrete below flow line, then move manhole to plumb. The concrete shall extend a minimum of one foot from the outside wall of the manhole and a minimum of 6 inches above incoming lines. On the inside concrete shall form the bench and invert area and rise a minimum of 4 inches above incoming lines. If required by Engineer concrete may be used around reducer section for buoyancy control.

BACKFILL:

1. **Backfill Material**: Unless shown otherwise on drawings and approved by the Engineer, sand, crushed stone, or crushed gravel shall be used for backfill around the manhole for a minimum distance of one foot from the outside surface and extending from the bottom of the excavation to the top of the reducer section. Suitable material chosen from the excavation may be used for the remainder of the backfill. The material chosen shall be free of large lumps or clods, which will not readily break down under compaction. This material will be subject to approval by Engineer.

2. **Backfill Procedure**: Backfill shall be placed in layers of not more than 12 loose measure inches and mechanically tamped to 95% Modified Proctor Density, unless otherwise approved by Engineer. Backfill shall be placed in such a manner as to prevent any wedging action against the fiberglass manhole structure.

K. MARKING and IDENTIFICATION: Each manhole shall be marked on the inside and outside with the following information:

Manufacturer's name or trademark
Manufacturer's factory location
Manufacturer's serial number
Total length

4. MANHOLE RINGS AND COVERS

A. Manhole rings and covers furnished for this project shall be pattern No. 300-24 as produced by Western Iron Works, Inc., 21 E. 6th St., San Angelo, Texas 76903-5493 or Bass and Hays Foundry, Inc., 238 South Bagdad Rd., Grand Prairie, Texas 75050, or approved equal.

B. WATER TIGHT MANHOLE COVERS

(1) Water tight manhole rings and covers furnished for this project shall be number R-1755-C as manufactured by Neenah Foundry Company, P.O. Box 729, Neenah, Wisconsin 54957, or approved equal.

(2) When watertight replacement sanitary sewer manhole rings and covers are called for on the plans and in the bid proposal they shall be Neenah Foundry Co. No. R-1755-C or approved equal.

No separate payment will be made for adjusting to grade of the replacement watertight manhole rings and covers. The contractor shall schedule this work to coincide with other manhole and water valve adjustments and any costs that might be involved shall be included in the price bid for replacement water tight manhole rings and covers.

(3) Manhole vents shall be used in conjunction with watertight rings and covers spaced every third manhole or as indicated on the plans. Vents shall be constructed as indicated on City design and construction standards.

C. Pressure type manhole rings and covers may be required for certain storm sewer applications. When pressure type manhole rings and covers are called for on the plans and/or bid schedule they shall be Western Iron Works Pattern #380-24P or approved equal. The manhole cover shall be sealed with an “O” ring gasket in a ring groove and shall be secured to the ring by six (6) five-eighths inch (5/8”) stainless steel bolts. The ring shall have six (6) one and one quarter inch (1-1/4”) bolt holes in the flanges for securing the ring to the concrete slab top on the manhole.

D. All manhole covers except grate type shall have two blind pick holes or pick bar cast into them. The blind pick holes or pick bars shall be placed on opposite sides of the cover.

E. All manhole covers except grate type shall have cast into their tops in letters 2 inches high minimum one of the following:

CITY OF MIDLAND
SANITARY SEWER
OR
CITY OF MIDLAND
STORM DRAIN

which ever is applicable.

2.08 GRANULAR MATERIALS

A. GRANULAR MATERIAL GRADATION CLASSIFICATIONS:

Granular materials furnished for foundation, bedding, encasement, backfill, or other purposes as may be specified, shall consist of any natural or synthetic mineral aggregate such as sharp grained sand, crushed gravel, crushed rock, crushed stone, or slag, and shall conform to the following specifications and/or gradation.

Note all materials used for these purposes shall be crushed and shall have at least two broken faces. Pea gravel will NOT be allowed.

	Foundation	Bedding	Encasement	Backfill
ASTM C33 Grade #57	x			
ASTM C33 Grade #67	x			
ASTM C33 Grade #8		x	x	
THD 1982 Item 302 Type D Grade 4		x	x	
THD 1982 Item 302 Type D Grade 5			x	
Crusher fines**			*x	x

*100 percent of crusher fines that are to be used within 12 inches of the top of pipe must pass the ¾" sieve.

** Approximate Gradation for Crusher Fines.

Sieve Size	% Passing
2 inch	100
# 4	35 - 100
# 10	20 - 100
# 40	5 - 35
#200	4 - 10

Crushed stone material proposed as an alternate for use on this project and not meeting the above specifications must be approved in writing at least 48 hours prior to the time scheduled for opening bids.

B. GRANULAR MATERIAL USE DESIGNATIONS:

Granular materials provided for Foundation, Bedding, Encasement, or Backfill use as required by the contract, either as part of the pipe item work unit or as a separate contract item, shall be classified as to use in accordance with the following:

MATERIAL USE DESIGNATION	ZONE DESIGNATION
Granular Foundation	Placed below the bottom of pipe grade as replacement for unsuitable or unstable soils, to achieve better foundation support.
Granular Bedding	Placed below the midpoint of the pipe prior to pipe installation, to facilitate proper shaping and achieve uniform pipe support. Also for Class B bedding where specified.
Granular Encasement	Placed below an elevation one half foot (6") above the top of pipe, after pipe installation, for protection of the pipe and to assure proper filling of voids and thorough consolidation of backfill.

In each case above, unless otherwise indicated, the lower limits of any particular zone shall be the top surface of the next lower course as constructed. The upper limits of each zone are established to define variable needs for material gradation and compaction or void content, taking into consideration the sequence of construction and other conditions. The material use and zone designations described above shall only serve to fulfill the objectives and shall not be construed to restrict the use of any particular material in other zones where the gradation requirements are met.

PART 3 – EXECUTION

3.01 LOCATION OF WORK

A. The work will be located as shown on the plans.

B. It may be necessary for the Engineer to shift lines as reasonable amount to avoid an obstruction to the construction or to reduce right of way difficulties. The Contractor will not be allowed any additional compensation due to shift of lines. Additional compensation will be allowed only for lengthening of lines.

3.02 PROTECTION OF SURFACE STRUCTURES

A. All surface structures and features located outside the permissible excavation limits for underground installations, together with those within the construction areas which are indicated in the Plans as being saved, shall be properly protected against damage and shall not be disturbed or removed without approval by the Engineer.

B. Obstructions such as street signs, guard posts, mail boxes and other items of prefabricated construction may be temporarily removed during construction provided that essential service is maintained in a relocated setting as

approved by the Engineer and that non-essential items are properly stored for the duration of construction. Upon completion of the underground work, all such items shall be replaced in their proper setting. This removal, relocation and replacement shall be at the sole expense of the Contractor.

In the event of damage to any surface structures or improvements, either privately or publicly owned, in the absence of construction necessity, the Contractor will be required to replace or repair the damaged property to the satisfaction of the Engineer and without cost to the Owner.

3.03 INTERFERENCE OF UNDERGROUND STRUCTURES

A. When any underground structure interferes with the planned placement of the pipeline or appurtenances to such an extent that alterations in the work are necessary to eliminate the conflict or avoid endangering effects on either the existing or proposed facilities, the Contractor shall immediately notify the Engineer and the Owner of the affected structure. When any existing facilities are endangered by the Contractor's operations, he shall cease his operations at the site and take such precautions as may be necessary to protect the in place structures until a decision is made as to how the conflict will be resolved.

B. Without specific authorization from the Engineer, no essential utility service shall be disrupted, nor shall any change be made in either the existing structures or the planned installations to overcome the interference. Alterations in existing facilities will be allowed only to the extent that service will not be curtailed unavoidably and then only when the encroachment or relocation will satisfy all applicable regulations and conditions.

C. Wherever alterations are required as a result of unforeseen underground interference not due to any fault or negligence of the Contractor, the Engineer will issue a written order covering any additional or extra work involved and specifying the revised basis of payment, if any. Any alterations made strictly for the convenience of the Contractor shall be subject to prior approval and shall be at the Contractor's expense.

D. No extra compensation will be allowed for delays caused by the interference of underground structures.

3.04 SEPARATION BETWEEN SANITARY SEWERS AND WATER MAINS

A. Sanitary sewers and service lines shall be installed so that the separation between the sewer and water mains is not less than 9 feet in all directions. The 9 feet shall be measured between the nearest outside edges of the pipe.

B. When the required 9 foot minimum separation cannot be maintained and a sanitary sewer must be constructed parallel to a water main, the sanitary sewer shall be constructed of ductile iron or PVC pipe meeting AWWA specification or having NSF approval for potable water pipe, with a pressure rating of 100 psi for both the pipe and the joint. The sanitary sewer line shall

be installed in a separate trench and may be placed no closer than 2 feet vertically and 4 feet horizontally from the water main, with the separation being measured from the nearest outside walls of the pipes. The sanitary sewer shall be constructed lower than the water main.

C. When a sanitary sewer must cross a water main and the 9 feet required separation cannot be maintained, the sanitary sewer may be constructed with a minimum clear separation between the outside diameters of the two pipes of 6 inches if that part of the sanitary sewer within 9 feet of the water main is constructed of ductile iron pipe or PVC pipe meeting AWWA specifications, having a 150 psi pressure rating and equipped with pressure type joints. One length of the sewer pipe must be centered on the water main and where possible, the sanitary sewer should pass under the water line.

D. When the 9 foot required separation cannot be maintained and a sanitary sewer force main must be constructed parallel to a water main, the sanitary sewer force main shall be constructed of ductile iron or PVC pipe meeting AWWA specifications and having a pressure rating of 150 psi and equipped with pressure type joints. The force main must be constructed with a minimum vertical separation of 2 feet and a minimum horizontal separation of 4 feet measured between the outside diameters of the pipes. The force main must be constructed lower than water main.

Table I showing separation of water and sewer lines and construction materials allowed:

TABLE 1
SEPARATION OF WATER AND SEWER LINES

Condition	Location	Material		Separation (Min.)		Comments
		Water	Sewer	Vert.	Horiz.	
NEW WATER AND NEW SEWER SYSTEM						
New Water & New Sewer Gravity Sanitary Sewer Parallel to Water Main	Water above Sewer	Std.	CI DI PVC 150 PSI	2’	4’	Separate Trenches
Gravity Sanitary Sewer Crossing Water Main	Water above Sewer or Sewer above Water	Std	CI DI PVC. 150 PSI	6”	NA	Center one joint of sewer pipe on water main
Gravity Sewer Crossing Water Main	Water above Sewer	Std	ABS, Clay Conc. composite	2’	NA	Cement stabilize sand initial backfill zone each side of crossing. Center of sewer for 9 ft one joint of sewer pipe on water Main
NEW WATER AND EXISTING SANITARY SEWER						
New Water Parallel Existing Sewer	Water above Sewer	Std.	Clay, Conc. ABS CI DI PVC	2’	4’	If sewer shows no sign of leakage, then leave sewer alone. If Sewer shows signs of leakage, then repair or replace.
New Water Crossing Existing Sewer	Water above Sewer	Std	Clay, ABS Conc. composite	2”	NA	If sewer shows no sign of leakage, then leave sewer alone if sewer shows signs of leakage then repair or replace.
New Water Crossing Existing Sewer	Sewer above Water	Std	Clay, ABS Conc. composite	2’	NA	Replace existing sewer with one joint CI,DI,PVC-150 Centering over waterline
New Water Parallel to Existing Sewer	Sewer above Water	Std	Clay, ABS Conc. composite	2’	4’	Replace existing sewer with CI, DI, PVC – 150 PSI or Cement Stabilized sand back- fill initial Backfill none of sewer where parallel closer than 9 ft., or Encase the water in 150 PSI Pipe two nominal sizes larger.

EXISTING WATER AND NEW SANITARY SEWER						
New Sewer parallel Existing Water	Water above Sewer Or Sewer above Water	Std	CI DI PVC 150 PSI	2'	4'	Separate trenches
New Sewer crossing Existing Water	Water above Sewer or Sewer above water	Std	CI DI PVC 150 PSI	6"	NA	Center one joint of sewer pipe on water main.
New Sewer crossing Existing Water	Water Above Sewer	Std	Clay, ABS Conc. composite	2'	NA	Cement Stabilize sand initial backfill zone of sewer for 9 ft each side of crossing. Center one joint of sewer pipe on water main.

3.05 EXCAVATION

A. Excavation of every description and of whatever materials encountered shall be made to the alignment and depth shown on the plans or as directed by the Engineer. Excavation shall be made by open cut. Sides of trenches shall be kept as nearly vertical as possible and the trench shall be so braced, sheeted and drained that workmen may work safely and efficiently therein. The trenches shall be sufficiently straight between designated angle points to permit the pipe to be laid true to line in the approximate center of the trench.

B. The trench width may vary with and depend upon the depth of trench, the diameter of pipe to be laid and the nature of the material to be excavated; but in any case shall be of ample width to permit the pipe to be laid and jointed properly and the backfill to be placed and compacted properly. The minimum width of unsheeted trench shall be 18 inches. The maximum clear width of trench at the top of the pipe shall be not more than two (2) feet greater than the outside diameter of the pipe for pipes up to 33" diameter except by consent of the Engineer. Whenever, for any reason, the maximum trench width is exceeded, the Contractor shall provide, at his own expense, pipe of higher class and/or bedding adequate to sustain the increased soil load as calculated by the Engineer.

C. Trenches shall be undercut to provide for the class bedding specified and/or shown on the plans. Bell holes shall be excavated to insure the pipe resting for its entire length upon the bedding material. Where trenches are under-cut beyond the depth required for bedding the trench shall be brought to grade by using crushed aggregate as specified for foundation herein. The use of loose native soil will NOT be permitted for this purpose.

D. No pipe shall be laid in water. Where the ground water table is at or above trench bottom, the Contractor shall de-water the trench to permit the pipe to be laid on a solid foundation.

   Costs for de-watering by whatever method selected shall be considered incidental to the price bid per foot of pipe.

   The Contractor shall discharge pumps to the natural drainage channels, or if permitted, to other sewer or drains.

Where sewer pipelines are located in or across streambeds or drainage ditches, the Contractor shall divert the stream flow and de-water each section as the work progresses.

E. Temporary support, adequate protection and maintenance of all underground and surface utility structures, drains, sewers, and other obstructions encountered in the progress of the work shall be furnished by the Contractor at his own expense under the direction of the Engineer.

F. Whenever wet, soft or unstable soil, incapable of properly supporting the pipe, manholes or other structure is encountered in the trench, a further depth and/or width shall be excavated and refilled to trench bottom grade with gravel or other approved suitable material thoroughly compacted to assure a firm foundation for the pipe.

G. Rock, boulders and large stones shall be removed to provide a clearance of at least six (6) inches below the outside barrel of the pipes, valves, or fittings and to a clear width of six (6) inches on each side of all pipe and appurtenances for pipe 15 inches in diameter or less, and a clear width of nine (9) inches on each side of all pipe and appurtenances for pipe larger than 15 inches in diameter. Adequate clearance for properly joining pipe laid in rock trenches shall be provided at bell holes. The space between the rock at the bottom of the trench and the bottom of the pipe barrel shall be filled with compacted bedding material.

H. The Engineer shall be notified of any need for blasting to remove materials which cannot be broken up mechanically, and there shall be no blasting operations conducted until the Engineer's approval has been secured. Blasting operations will be allowed only when proper precautions are taken to protect life and property, and then shall be restricted as the Engineer directs. The Contractor shall assume full responsibility for any damage caused by blasting, regardless of the requirements for notification and approval. The Contractor shall secure any required permits for blasting and shall conduct blasting operations in conformance with all applicable State and local laws, regulations and ordinances.

I. In the event the Contractor desires to employ tunneling in locations other than as shown on the Plans in order to avoid replacement of sidewalks, etc., he shall do so only upon receipt of specific permission from the Engineer. Tunneling of this nature shall be considered incidental.

J. Excavated materials will be classified for reuse as being either suitable or unsuitable for backfill or other specified use.

3.06 SPECIAL SAFETY PROVISIONS

1. TRENCH SAFETY SYSTEMS

A. DESCRIPTION

This item shall govern for the Trench Safety Systems required for the construction of all trench excavation to be utilized in the project and including all additional excavation and backfill necessitated by the safety system. A trench shall be defined as a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet. The depth is five feet or more. Trench Safety Systems include but are not limited to sloping, sheeting, trench boxes or trench shields, sheet piling, cribbing, bracing, shoring, de-watering or diversion of water to provide adequate drainage.

B. CONSTRUCTION METHODS

Trench safety systems shall be accomplished in accordance with the detailed specifications set out in the provisions of Excavation, Trench, and Shoring, Federal Occupational Safety and Health Administration (OSHA) Standards, 29CFR, Part 1926, Subpart P, as amended, including Proposed Rules published in the Federal Register (Vol. 52, No. 72) on Tuesday, October 31, 1989. The sections that are incorporated into these specifications by reference include Sections 1926-650 through 1926-652. Legislation that has been enacted by the Texas Legislature, being Tex. Rev. Civ. Stat. Ann. Arts. 1015q, 2368a.6 (Vernon Supp. 1988) with regard to Trench Safety Systems, is hereby incorporated, by reference into these specifications.

A reproduction of the OSHA Publication 2226 is attached for the convenience of the Contractor. The City assumes no responsibility for the accuracy of the reproduction or that it reflects current law. The Contractor is responsible for obtaining a copy of this section of the Federal Register for his use.

If the contractor elects to use a trench protective system that, in the Proposed Rules, requires “Design by a qualified person or a qualified engineer,” [For example see 1926.652 (b) (3) and 1926.652 (c) (4)], a “qualified person or qualified engineer” shall be a Professional Engineer registered in the State of Texas. The Contractor is responsible for obtaining boring and soil analysis as required for the planned design. The trench excavation is to be designed in conformance with OSHA standards and regulations.

C. TRENCH SAFETY PROGRAM

The Contractor shall submit a safety program specifically for the construction of trench excavation. The trench safety program shall be in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.

D. INSPECTION

The Contractor shall make daily inspections of the Trench Safety Systems to ensure that the systems meet OSHA requirements. Daily inspection is to be made by a "competent person" provided by the Contractor. If evidence of possible cave-ins, or slides, is apparent, all work in the trench shall cease until the necessary precautions have been taken by the Contractor to safeguard personnel entering the trench. It is the sole duty, responsibility and prerogative of the Contractor, not the owner or the Engineer, to determine the specific applicability of the designed trench safety systems to each field condition encountered on the project. The Contractor shall maintain a permanent record of daily inspections.

2. SAFETY RESTRICTIONS - work near high voltage lines

The following procedures will be followed regarding the subject item on this contract:

A. Warning signs 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."

B. All equipment except back hoes or dippers that may be operated within ten feet of high voltage lines shall have an insulating cage-type of guard about the boom or arm and insulator links on the lift hook connections.

C. When necessary to work within six feet of high voltage electric lines, notification shall be given the power company 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.

D. 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.

3.07 PIPE LAYING

A. All gravity pipe shall be laid using approved grade boards, furnished and set by the Contractor at no additional cost to the Owner, according to the grade stakes established by the Engineer. The maximum spacing of grade boards shall be fifty (50) feet. No sewer shall be laid unless there is a minimum of three grade boards set to check the proper grade and alignment ahead. The Contractor shall provide and use a suitable grade rod to insure the proper grade of the pipe.

B. The Contractor may use the laser beam method of setting a line and grade for the sewer by using the laser beam coaxially through the center of the sewer being laid. The laser beam projector is to be rigidly mounted to its support platforms, with a two-point suspension, or equivalent, assuring that all ground and equipment vibrations are kept to an absolute minimum. The Contractor shall furnish all equipment including equipment necessary to control atmospheric conditions in the pipe to keep line and grade to acceptable standards of accuracy. Competent experienced people who have been properly trained to operate the equipment used must operate the laser beam system.

C. The Contractor shall stake check pegs at all manholes throughout the job. Check pegs midway between manholes and any other checkpoints deemed necessary to assure accuracy of the equipment shall be provided by the contractor.

D. Each piece of pipe and special fitting shall be carefully inspected before it is placed and no defective pipe shall be laid in the trench. Pipe laying shall proceed upgrade, starting at the lower end of the grade and with the bells uphill. No pipe shall be laid except in the presence of an inspector representing the Engineer. Any pipe laid except in the presence of an inspector representing the Engineer shall be subject, at the contractor's expense, to a television camera inspection and survey by the city. Trench bottoms found to be unsuitable for foundations after pipe laying operations have started shall be corrected and brought to exact line and grade with approved compacted granular material as specified for foundation in Item 2.07 A. of these specifications.

E. Pipe laying shall proceed up-grade with spigot or tongue ends pointing in the direction of flow. The spigot shall be centered in the bell, and pipe shoved into position, and brought into true alignment. It shall be secured there with bedding material carefully tamped under and on each side of it, excepting at bell holes. Care shall be taken to prevent dirt from entering the joint space.

F. Any defective or damaged pipe discovered after the line is laid or any gravity pipe, which has had its grade or joint, disturbed after laying shall be removed and replaced or relayed. The section of line in which such damaged or displaced section is discovered shall be retested after corrections are made.

G. Where excavation for buildings or other portions of the work have been carried below the line and grades of the pipe, thorough tamping of approved crushed stone backfill and the use of adequate bracing and blocking under the pipe will be required to insure against settling and shearing of the pipe. In areas where noted on plans, Portland cement stabilized material or concrete shall be used for backfill to provide adequate bracing for pipe and protection of structures.

H. All manhole connections for PVC or other Polymer based pipe shall be made using "A Lok Gaskets" or "Kor-N-Seal" boots or other approved water stop devices. Only Portland cement grout that expands upon curing or approved non-shrink grout will be incorporated into any manhole connection.

I. Connections to manholes for other types of pipe shall be in accord with the pipe manufacturers specifications and other applicable requirements of these specifications. The resulting joint shall meet the leakage test requirements of these specifications.

J. The exposed end of all pipes shall be fully protected with a stopper or bulkhead at the end of each day's work to prevent earth, debris, small animals, or other substances from entering the pipe. The interior of the sewer shall be carefully freed from all dirt, jointing compound, or superfluous material of every description as the work progresses.

3.08 CONNECTION AND ASSEMBLY OF JOINTS

1. JOINING PVC OR OTHER POLYMER BASED PIPE

A. The type of joint and the material to be used shall be as shown on the plans or specified herein. Factory cast compression joints shall be free of dirt and lubricated before inserting the barrel into the bell. After the spigot is centered in the bell, the pipe shall be shoved home solidly by using a wood block and bar. The Contractor shall keep the ends of the pipe closed to prevent dirt and other material from entering the pipe during placement. All joints must be water tight, and any leaks or defects discovered must be repaired immediately. Any pipe, which has been disturbed after being laid, must be taken up, the joint cleaned and properly relayed as directed by the Engineer.

Lubricant used shall be as recommended by the pipe manufacturer.

B. Field-cut pipe must be beveled for insertion into the gasketed bell or coupling. Bevels can be made with a hand or power tool. Bevels shall be made to pipe manufacturer's specifications. If pipe manufacturers specifications are not available the bevel may be made at 15 degrees to the longitudinal axis of the pipe through one half (l/2) the wall thickness.

C. After pipe has been cut and beveled, a new full insertion mark located as recommended by the pipe manufacture shall be made using a felt tip pen. The contractor may determine the location of the insertion mark by measuring the mark location on a factory marked joint of pipe if manufacturer's specifications are not available.

2. JOINTING CORRUGATED STEEL PIPE

A. Gaskets for corrugated steel pipe shall be "O" Ring or sleeve types. Sleeve gasket shall be carefully placed on one joint of pipe. When the pipe is aligned and brought end to end the gasket shall be carefully centered over the joint between the ends of the pipe. "O" ring gasket shall be installed in accordance with the manufacturer's recommendation.

B. When "O" ring gaskets are furnished a flat gasket shall be furnished and placed between the overlapping portions of the band. The gasket shall extend the full width of the band and shall be of sufficient depth to assure a watertight joint.

C. The coupling band shall be carefully centered over the joints and tightened to the pipe manufacturer specifications. Care shall be taken during the tightening process to assure a snug uniform fit for the entire circumference of the pipe.

3. PROTECTING AND COVERING JOINTS

A. The contractor shall keep the ends of the pipe closed during the time of construction to prevent the entry of dirt, debris, small animals and other foreign objects.

B. Joints shall not be covered until approved by Engineer or his representative. Connections, which are for future use, shall be properly capped.

3.09 CONNECTIONS TO EXISTING STRUCTURES

A. Where shown on the plans, the contractor shall connect the new sewer to existing manholes. If no stub out is present in the existing manhole for such connection, the contractor shall construct such connection by making a hole in the side of the existing manhole using a coring machine or other approved method and installing a “KOR N Seal” boot as manufactured by N.P.C. Systems, Inc. or other approved water tight manhole connector.

The contractor shall use caution in constructing the connection to the existing manhole. Damage to the manhole that, in the opinion of the Engineer, would impair the use and/or function of the manhole shall be just cause to require the contractor to reconstruct the manhole at contractor’s expense. Such damage shall include but not be limited to cracking of the manhole riser section, spalling around the connection significantly reducing manhole wall thickness or excessive oversize in the opening for the new connection requiring any filler other than the manhole connector and/or non-shrink grout specified.

The contractor shall make such changes in the invert of the manhole as may be necessary to provide a smooth flow of the water through the manhole. Any connection to existing structures required in the Plans shall be accomplished by the Contractor and shall be incidental item with no direct compensation being made unless listed as a pay item in the bid proposal.

B. If the work consists of the construction of a sewer that is to replace an existing sewer, all of the existing service lines shall be kept in operation and connected to the new line.

C. Connections shall be made to all existing sewer lines in the vicinity of the work by removing a section of the sewer for the existing line and inserting in the space a tee branch of proper size, or by the construction of a manhole, regulator chamber of other structure as shown on the Drawings.

D. Connections to building services shall be made in a neat and workman like manner. Clean out plugs shall be installed wherever feasible, by making the connections with a standard wye or tee-wye. When clean out plugs are installed they should be located as near the right of way line as practical.

3.10 BACKFILL OPERATIONS

1. GENERAL

A. All pipeline excavations shall be backfilled in a manner that will restore pre-existing conditions as the minimum requirement and fulfill all supplementary requirements indicated in the Plans and Specifications. The backfilling operations shall be started as soon as conditions will permit on each section of pipeline, so as to provide continuity in subsequent operations and restore normal public service as soon as practicable on a section-by-section basis. All operations shall be pursued diligently, with proper and adequate equipment, to assure acceptable results.

B. For this specification backfill is defined as any material placed in the trench above the bedding zone other than the pipe or conduit and appurtenance.

For flexible pipe the backfill between the bedding material and the crown of the pipe shall be crushed stone suitable for encasement as specified in article 2.07 of the specifications. When Portland cement stabilized backfill is used above the pipe zone; the crushed stone encasement shall extend to 1' above the crown of the pipe.

C. Depositing of the backfill shall be done so the shock of falling material will not injure the structure. Grading over and around all parts of the work shall be done as directed by the Engineer.

D. Whenever soil types which are determined by the Inspector to be undesirable for backfill are excavated from the trench, such material shall be hauled away and deposited at locations shown on the plans or as directed by the Engineer at no additional compensation.

E. Backfill materials placed in the pipe zone shall be carefully placed in relatively uniform depth layers spread over the full width and length of the trench section in a manner and/or sequence that will provide simultaneous support on both sides of the pipeline. Each layer shall be compacted effectively, by approved mechanical of hand methods, until there is no further visual evidence of increased consolidation. Above the pipe zone the backfill material shall be placed uniformly across and along the trench in depth suitable for the compaction method used and compacted to a minimum of the density specified for the material used and the trench location. Compaction of the in place layer shall be completed acceptably before placing material for a succeeding layer thereon.

The manner of placement, layer thickness, compaction equipment, and procedure effectiveness shall be subject to approval of the Engineer. Water jetting or flooding shall NOT be used to compact trench backfill.

F. Compaction of materials placed within the pipe bedding and encasement zones shall be accomplished with portable or hand equipment methods, so as to achieve thorough consolidation under and around the pipe and avoid damage to the pipe. Above the pipe zone, the use of heavy roller type compaction equipment shall be limited to safe pipe loading.

G. The maximum loose thickness of each backfill layer placed above the pipe zone shall be 12 inches, except that 16 inches will be permitted for Granular Materials placed above an elevation one foot above the top of pipe, and with the provision that, by authority of the Engineer and in consideration of the demonstrated capability of special type vibratory compactors, these maximums may be increased at his discretion. “Hydro tamps”, “vibra tamps” or other heavy compacting equipment shall not be used until the backfill has reached a depth of four (4) feet above the top of the pipe.

H. All surplus or waste materials remaining after completion of the backfilling operations shall be disposed of in an acceptable manner within 24 hours after completing the backfill work on each particular pipeline section. Disposal at any location within the project limits shall be as specified, or as approved by the Engineer; otherwise, disposal shall be accomplished outside the project limits at the Contractor’s discretion. The backfilling and surplus or waste disposal operations shall be a part of the work required under the pipeline installation items, not as work that may be delayed until final cleanup.

I. For the duration of the warranty period of the project, the Contractor shall assume full responsibility and expense for all backfill settlement and shall refill and restore the work as directed to maintain an acceptable surface condition. All additional materials required shall be furnished without additional cost to the Owner.

2. BACKFILL IN PUBLIC RIGHTS-OF-WAY AND OTHER AREAS WHERE SETTLEMENT IS CRITICAL

A. GENERAL REQUIREMENTS

(1). Backfill above the pipe zone in public rights-of-way and under paved parking lots, near structures or other utilities where settlement can cause damage shall be made using Portland cement stabilized backfill or crushed stone screenings (crusher fines).

The pipe zone is defined as that portion of the trench extending from the bottom of the trench to 12” above the crown of the pipe or conduit.

(2) Backfill around structures such as manholes, junction boxes, transformer boxes and valve boxes shall be made using Portland cement stabilized backfill material or crushed stone screening (crusher fines).

(3) The minimum depth of stabilized backfill or crusher fines shall be twelve (12”) inches.

When utilities are being constructed under existing paving, the stabilized backfill or crusher fines shall extend from top of the pipe zone to the top of the base course.
When utilities are being constructed under existing unpaved streets that are not scheduled for immediate pavement construction, the stabilized backfill or crusher fines shall extend from the top of the pipe zone to the existing roadway surface.

When utilities are being constructed in streets that are scheduled for immediate paving, the stabilized backfill or crusher fines shall extend from the top of the pipe zone to the bottom edge of the eight (8”) inches of subgrade, or, if the paving contractor has constructed a portion of the roadway prior to the construction of the utilities the backfill shall extend to the top of the course the contractor has finished, or the top of the base course, which ever is lower.

If the final course of asphaltic concrete has been placed, the street or alley surface shall not be cut for utility installation.

In streets where stabilized backfill is required only to the bottom of the subgrade course, the minimum depth of stabilized backfill may be reduced to six (6”) inches in which case the maximum depth of the “pipe zone” shall be limited to six (6”) inches above the top of the utility line or conduit.

B. BACKFILL MATERIALS

(1) Portland cement stabilized backfill shall consist of caliche base material, blow sand or native soil stabilized by the addition of Portland cement. Crushed stone or concrete aggregate shall NOT be used.

When Portland cement stabilized backfill is to be used, the contractor shall submit a mix design prepared by an approved commercial laboratory for approval before the trenching operation is begun. When native soil is to be used samples may be taken along the proposed route by boring or other approved means. Samples must be representative of the full trench depth.

The mix design shall be such that the minimum 7-day compressive strength is 150 psi when tested according to test method Tex 418-A.

The minimum cement content for Portland cement stabilized backfill shall be 1 sack per cubic yard.

Cement used in Portland cement stabilized backfill shall be Type I or Type II conforming to the requirements of ASTM Designation C150.

Caliche used for Portland cement stabilized backfill shall be crushed material conforming to Texas State Department of Highways and Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges Item 248 Type F, Grade 2.

Blow sand used for Portland cement stabilized backfill shall be clean, free from organic matter, clay lumps, rock and other deleterious matter.

Native soil used for Portland cement stabilized backfill shall be clean, free of clods and organic matter, and free of rock in excess of 2”.

(2) Crushed stone screening (crusher fines) used for back fill shall be sharp grained particles of crushed stone conforming to the requirements of Article 2.07 of these specifications.

(3) Trencher excavated rock material shall be screened so that the largest diameter material is less than 2". The screened rock material used for backfill shall have sufficient moisture added so that the backfill will bind with the fines. The rock material backfill shall be tamped or compacted in two (2) foot lifts. A sheeps foot roller shall not be used unless there is two (2) feet or more compacted backfill above the pipe bedding.

C. BACKFILL CONSTRUCTION

(1) Portland cement stabilized caliche backfill or Portland cement stabilized native soil backfill may be constructed using either the "dry" method or the "wet" method.

(a) The dry method of stabilized backfill construction consists of dry mixing of the cement and caliche or soil to produce a homogenous mixture then adding and mixing sufficient water for proper compaction and hydration of the cement. The water content of the mixture will be approximately one to two percent above the optimum moisture for soil compaction. The mixing may be accomplished by using batch mixers or on the job site by "blade mixing" or other suitable method to produce the desired backfill material. The mixed material shall be placed in lifts of up to a maximum of 12 inches and compacted to ninety-five (95%) modified proctor densities by use of suitable compacting equipment.

(b) In the "wet" method of cement stabilized backfill construction, the materials shall be mixed in an approved concrete batching plant or mixer to the consistency of concrete and placed as concrete would be placed. The slump of the backfill material shall be such that all voids will be filled, approximately four (4") to six (6") inches. The backfill shall be consolidated by rodding or by the use of mechanical vibrators.

Portland cement stabilized blow sand backfill shall be mixed and placed by the "wet" method as described above.

Crushed stone screening (crusher fines) shall be wetted uniformly throughout with sufficient moisture to assure proper compaction before being placed in the trench. The moistened crushed stone screening (crusher fines) shall be placed in maximum lifts of twelve inches and consolidated using vibratory type compaction equipment except when it has been demonstrated that the compaction equipment employed will adequately compact deeper lifts in which case the maximum depth of a lift shall be limited by the capabilities of the equipment used.

Tests to determine the compacted density of the backfill shall be ordered by the Engineer if in his opinion the compaction is not adequate. Test showing a minimum compacted density of 90%-modified proctor will be deemed adequate.

3. BACKFILL OUTSIDE OF PUBLIC RIGHTS-OF-WAY WHERE SETTLEMENT IS NOT CRITICAL

A. In areas outside of public rights-of-way and in the absence of special work item requirements the backfilling shall be accomplished with the use of suitable materials selected from the excavated materials to the extent available and practical. Should the materials available from the trench section be unsuitable or insufficient, the required additional materials shall be furnished from outside sources at the Owners expense.

B. Suitable material shall be defined as a mineral soil reasonably free of foreign materials (rubbish, debris, etc.) frozen clumps, oversize stone, rock, concrete or bituminous chunks and other unsuitable materials, that may damage the pipe installation, prevent thorough compaction, or increase the risks of after settlement unnecessarily. Material selection shall be such as to make the best and fullest utilization of what is available, taking into consideration particular needs of different backfill zones. Material containing stone, rock, or chunks of any sort shall only be utilized where and to the extent there will be no detrimental effects.

C. The backfill material placed in this area shall be compacted by suitable means to a minimum density equal to the density of the undisturbed surrounding soil. City Engineer MUST approve water flooding as a means of compaction.

4. TRENCH BACKFILL BEHIND CURB AND GUTTER

A. When utilities are placed behind the curb in paved streets and other landscaped areas the backfill shall be the same as elsewhere in the right-of-way or other applicable location except that in grassed areas and in flower beds the top six (6") inches of backfill shall be good quality top soil. When utilities are placed behind the curb in grassed or landscaped areas where no sidewalk is to be constructed and the edge of the trench is a minimum of 2 feet from the back of curb or where sidewalk is to be constructed and the minimum distance from both the back of curb and the edge of the sidewalk to the edge of the trench is 2 feet the contractor may elect to use suitable native soil for backfill. The native soil backfill shall be compacted to 95% modified proctor density to within 6" of the top of curb height. The top 6" of backfill shall be good topsoil and shall be compacted to the density of the adjacent soil.

B. Sidewalks shall be repaired by removing and replacing the complete section or sections that have been damaged. Strip patching through sidewalks will not be permitted.

The replacement sidewalk shall be of the same design and section as the walk removed and shall be of equal or better workmanship.

C. When utilities are placed in paved areas behind curbs the pavement shall be repaired as specified for street pavement.

D. Grassed areas and flowerbeds shall be restored as nearly as possible to the original condition. Care shall be taken to avoid damage to sprinkler systems.

Mail boxes and other appurtenance in the construction area. Any damage to said items shall be repaired immediately.

E. All repairs made behind the curb shall be to the satisfaction of the property owner responsible for their maintenance and/or to the satisfaction to the City Engineer.

3.11 INLET STRUCTURES AND LEADS AND CLEANOUTS FOR STORM SEWERS

A. Corrugated Galvanized Steel Slotted Drains for Nuisance water inlets only.

(1) Slotted drains shall be the sizes and lengths as shown on the plans and constructed at the locations as shown on the plans or at locations to be established on the job site.

(2) Slotted drains shall not be installed under asphalt pavement but shall have a section of concrete gutter constructed around it as shown on the detail drawings.

Slotted drains shall be protected from the entrance of debris, concrete or HMAC by closing the slot with one or two layers of heavy duct tape or similar material. In addition, the slot for slotted drain shall have a 2-½ inch or ¾ inch board attached to use as a guide for placing and edging the concrete.

Unless otherwise approved or directed by the Engineer the removal of tape and planking from the slotted drain should be accomplished as part of the final clean up.

B. Curb inlets, grate inlets and combination inlets

(1) General

Curb inlets, grate inlets and combination inlets may be pre-cast or cast-in-place at the contractor's option unless specifically shown otherwise on the plans and bid proposal.

(2) Pre-cast inlet boxes

(a) Construction and finish for pre-cast inlet boxes shall conform to details shown on the plans and all applicable requirements for pre-cast manholes.

(b) Tops for curb inlets and combination inlets may be cast in place or pre-cast. Extra care will be required in setting pre-cast tops to assure curb and gutter match.

(c) Pipe connections, bedding, setting and backfill for pre-cast inlets shall be in accord with the applicable requirements for pre-cast manholes article 3.12 of these specifications.

(3) Cast in place inlets

(a) Cast in place inlets shall be constructed of class "C" reinforced concrete as specified in item 1-B "Concrete for Structure" in these specifications.

(b) Forms for cast in place inlets shall be straight, clean and in good condition. Forms shall be properly cleaned and oiled before concrete is placed.

(c) Construction joints may be placed in cast in place inlets at locations shown on the plans. When construction joints are used, extra care will be required to assure that the joints are watertight.

(d) Cast in place inlets may be cast without outside forms if the soil conditions are such that true vertical walls can be cut and will stand during construction without sloughing or otherwise incorporation foreign materials into the concrete.

(e) When inlets are cast without outside forms, a plastic sheet lining may be required to prevent excessive loss of moisture from the concrete and/or to prevent incorporation of foreign material into the concrete.

A. Inlet Leads

(1) Inlet leads shall be constructed of corrugated steel pipe, PVC pipe or other material as called for on the plans and in the bid proposal.

(2) Construction of inlet leads shall be in accord with the applicable requirements for the type of pipe used.

(3) Junctions where two or more inlet leads are joined shall be made at clean outs or manholes.

B. Cleanouts

(1) Clean outs shall be constructed in accord with the plans and detail drawings.

(2) Construction and connections shall be in accord with the applicable specifications for construction of corrugated steel pipe manholes.

3.12 SANITARY SEWER SERVICES AND PLUGGED STUBS

A. Sanitary Sewer Services:

(1) On new sewer main construction all sewer laterals shall be constructed as part of the initial installation. Sewer wye fittings for sewer laterals in new construction shall be molded or fabricated with all gasketed connections. Four (4”) inch laterals shall be installed at all single-family residences and duplex. Laterals installed for apartment complexes, commercial and industrial areas shall be a minimum of six (6”) inches. Depth of laterals will be determined by depth of sewer main and applicable building codes. Laterals shall be installed using tee wyes or wyes and bends so that they will be at 90 degrees to the sewer main. Laterals shall extend to 3’ minimum beyond the property line of the served lot or tract. The contractor shall install sewer laterals according to the typical sewer lateral detail and the most current revisions of the Plumbing Code.

(2) Taps into existing lines shall use a gasketed fitting in conjunction with a full circle repair sleeve coupling, except that taps into existing ductile iron sewer may be made using the Genco Model DF sewer pipe saddle (The General Engineering Co., Frederic, MD Drawing No. R-3220-D dated 12/29/82) or approved equal.

(3) Cemented mitered connections without socket reinforcement shall not be permitted. The contractor will be permitted to use fittings, which are prefabricated, using pipe sections, molded saddles and PVC solvent cement, provided the solvent cement used in fabrication has cured for at least 24 hours prior to the installation. All solvent cement fittings shall e manufactured in the shop under controlled conditions.

(4) All caps and plugs shall be braced, staked, anchored, wired on or otherwise secured to the pipe to prevent leakage under maximum anticipated thrust from internal abnormal operating conditions or test pressures from water or air.

(5) It shall be the duty of the Contractor to keep a record of sewer service wye locations with respect to the nearest downstream manhole, but the Engineer will record ties on the end of all sewer services at the property line. When installing sewer services the Contractor shall, before backfilling, contact the Engineer or his representatives, and assist him in making ties to the end of the service in the open trench. At least two ties shall be made for each service, and if backfilling proceeds before such ties are made, the Contractor shall dig up the end of all such services, with no additional compensation, for the purpose of making ties. During backfilling the Contractor shall furnish and place a vertical steel post or 2 inch by 2 inch wooden stake set flush with finished ground surface, and extending down to the end of the sewer service, a nail shall be placed in the top of the stake to allow location of the service by metal finder.

(6) The main sewer service connection shall consist of installing an in-line wye section in the main sewer line at designated locations. Saddle wye installations will be permitted only when specifically called for. Orientation of service connection fittings shall be as shown in the standard drawings unless otherwise directed by the Engineer.

(7) Where the depth of cover over the main sewer invert is greater than 8 feet (or such other maximum as may be indicated), the service connection shall be extended outward then upward by use of bends to prevent excess loading on the sewer main in accordance with the details shown in the drawings.

(8) The Contractor shall provide the necessary wyes, tees and bends to bring the service to the proper place at the property line.

(9) Wherever service line connections to the main sewer are permitted or required to be made by the open cutout method in the absence of a built-in tee or wye fitting, the connection shall be made by using an approved type coring machine or by other approved methods producing a uniform, smooth circular cut-out as required for proper fit. The cutout discs shall be retrieved and shall not be allowed to remain within the main sewer pipe. The saddle tee shall be securely fastened to the main sewer pipe by means of epoxy resin or other approved adhesive. The entire connection fitting shall be encased in concrete to a minimum thickness of six inches and as may be shown in the standard drawings.

(10)Wherever service line connections to the main sewer are required to be made by means of built-in branch tee or wye fittings, the Contractor shall, in the absence of such fitting, remove a section of the main sewer pipe and replace it with the required branch tee wye or wye section connected by means of an approved sleeve coupling.

(11)Connections of service lines to the main sewer are required to be made by means of built-in branch tee or wye fittings, the Contractor shall, in the absence of such fitting, remove a section of the main sewer pipe and replace it with the required branch tee wye or wye section connected by means of an approved sleeve coupling.

(12)The end of all service connections shall be plugged with PVC plug and sealed with plastic joint material.

(13)Crushed stone bedding and backfill material, concrete encasement and protection, etc., for service line installation shall be the same as for the sewer lines.

(14)No service connections or laterals shall be covered until they have been inspected and located by the Engineer.

B. INSTALLATION OF PLUGGED STUBS ON SANITARY SEWERS

Plugged pipe stubs for future connections to manholes and sewerage structures shall be installed where shown on the Drawings or directed by the Engineer. The pipe stubs shall be installed in accordance with the specifications and details shown on the Drawings for connecting the type of pipe used to manholes.

3.13 MANHOLES

1. General

The manholes shall be constructed at the locations shown on the plans or as directed by the Engineer and in accordance with the details shown on the plans and as specified herein. After the excavation has been completed, the subgrade for the manhole base shall be graded and leveled. A crushed stone foundation having a minimum thickness of 6 inches shall then be placed on the subgrade. The crushed stone foundation shall be leveled and consolidated before the section of the manhole is placed. Pre-cast base sections shall sit in place level and plumb and to the lines and grade as shown on the plans. Cast in place bases shall be placed around the existing sewer line in accord with the plans and detail sheet. When pre-cast manhole bases are used, riser construction may proceed when the base is set on line and grade. When cast in place manhole bases are used, riser construction may proceed when the base has set sufficiently to support the weight of the riser.

Manholes shall be of the type and material shown on the plans and called for in the bid proposal and shall conform to these specifications.

All lift holes shall be filled with approved non shrink grout and bituminous material before final acceptance. Use of bituminous material or other flowable material alone to plug lift holes will not be permitted. Voids in the invert around the sewer pipe on the

inside wall of the manhole shall be grouted with cement rich grout, to conform to the rest of the wash, in accordance with the standard manhole details.

The backfill around the manhole shall be done in accordance with the details shown on the plans and trench backfill specifications.

The Contractor shall take whatever precautions necessary to protect the manholes that are under construction. At the end of the day or at such time as the Contractor deems necessary, all manholes not completed shall be covered, sealed, plugged, etc. to prevent the inflow of storm water or other objectionable material, and to prevent animals and humans from getting into the manhole.

2. PRE-CAST CONCRETE

A. Pre-cast tub bottom sections of manholes shall be set on a crushed stone foundation or bedding according to the details shown on the plans. Care shall be exercised to assure true alignment and grade for the pipe openings.

The invert of the manhole shall be constructed of cement rich grout and shall be formed to true lines; grades and curvature to assure smooth flow through the manhole. The invert shall have a steel trowel finish.

Joints for pre-cast concrete manhole riser sections shall be made Watertight by use of bitumastic or rubber sealers or “O” ring gaskets. Both sides of the tongue and groove joint shall be painted with a bitumastic primer before assembly.

The bitumastic or rubber sealer shall be clean and pliable and shall deform under the pressure of joint closure to assure a complete water tight seal. Care shall be exercised to assure proper alignment of the joint. The walls of the completed manhole shall be straight and vertical.

B. Pre-cast eccentric cone sections and precast slab manhole tops with eccentrically located manway shall be set with the manway adjacent to the up stream side of the manhole. The joints between the cone or slab top and the manhole riser shall be sealed in the same manner as the joints between the riser section. Care shall be taken in placing the cone and or slab tops to assure the manhole ring and cover can be set to match the finished paving.

C. Pre-cast grade rings will be used, when required, to bring the manhole ring and cover up to the finished grade. Grade rings may be set using cement rich grout or bitumastic seal and such as Ram-Nek or approved equal. When cement rich grout is used, care shall be taken that the space between the cone or slab top and the first grade ring and between the grade rings are completely filled without voids.

When bitumastic sealer is used the joints shall be constructed in the same manner as the joints between the riser sections.

When pre-cast manholes with PVC or other approved polymer lining are called for on the plans and bid proposal and are furnished under this contract they shall be constructed as other pre-cast concrete manholes.

In addition the joints in the lining shall be sealed by hot air welding, use of epoxy coating, or other approved means.

3. CAST IN PLACE MANHOLE BASES

A. Cast in place manhole bases shall be used only where shown on the plans or as directed by the Engineer and shall be constructed in accord with the details shown on the plans.

B. Special care shall be taken in casting the surfaces that will mate with the first risersection to assure a smooth even fit and a watertight joint.

C. The first riser section to be used with cast in place manhole bases shall be castwithout tongue or groove. The joint between the riser section and the cast in place base shall be sealed with a bitumastic or rubber sealant in the same manner as the joints in the pre-cast riser sections.

D. Care shall be taken in forming the invert of the manhole around existing sewers to assure adequate opening for the insertion of a “go – no go” mandrel or other testing equipment and cleaning tools.

4. MANHOLE RING AND COVER

A. The tops of the manhole frame and cover (ring) shall be built to the grade shown on the plans. The cast iron frame shall be firmly embedded in mortar.

B. When pressure type manhole rings and cover are specified on storm sewer manholes they shall be bolted to the concrete slab top using the “L” bolts cast into the slab for this purpose. The joint between the ring and the concrete slab top shall be made watertight using a bitumastic or rubber seal and conforming to the requirements of these specifications.

5. CORRUGATED STEEL MANHOLES

A. Corrugated steel manholes shall be constructed in accord with the details shown on the plans and in accord with the applicable requirements for the construction of corrugated steel pipe sewers.

B. Care shall be taken during the placing of backfill around corrugated steel pipe manholes to maintain the horizontal and vertical alignment of the manhole.

C. Since full contact of the flat top slab with the cement stabilized backfill is critical the backfill shall be finished smooth and to the proper grade. A thin layer of cement rich grout shall be placed on the cement stabilized backfill immediately prior to placing the concrete slab top. The grout shall be sufficient t fill all voids between the backfill and the slab and of a consistency to be forced into the voids under the weight of the slab.

3.14 TESTING GRAVITY SEWER MAINS AND MANHOLES

A. Upon completion of the sewer construction including all wyes and service laterals and before any house drains or services are connected, all sewers shall be cleaned and lamped. All runs of sewer between manholes shall be straight and true. Leakage tests shall be made to determine the amount of ground water infiltration into the sewers. Infiltration tests shall be made when groundwater level is 18 inches or more above the top of the outside of the pipe. Measurement will be taken by means of a weir placed in the lines. The maximum allowable rate of leakage shall be 25 gallons per inch diameter per mile of pipe per 24 hours, for any section of pipe with a maximum total leakage of 200 gallons per mile per 24 hours for sanitary sewers with the exception that the maximum leakage for storm drains shall be 200 gallons per inch of diameter per mile per 24 hours with a total maximum leakage of 6,000 gallons per mile per 24 hours.

When the groundwater is not at sufficient height for infiltration testing the Contractor shall use exfiltration to test the sewer lines.

B. In lieu of the infiltration or exfiltration tests the Contractor may perform air tests on the sewers.

C. If the infiltration, exfiltration, or air tests fail to meet requirements specified herein, the Engineer reserves the right to request television work to be done to locate leaks. The Contractor shall furnish all materials and equipment necessary to accomplish all infiltration, exfiltration, air or television testing.

The Contractor shall receive no additional compensation for this testing or inspection work or for repairs of corrective work required to be done to the sewers. The exfiltration tests shall be used in areas where no ground water is present.

D. Test Procedure Hydrostatic (Exfiltration)

(1) The test section shall be bulk headed and the pipe subject to a hydrostatic pressure produced by a head of water at a depth of three (3) feet above the invert of the sewer at the upper manhole under test. In areas where ground water exists, this head of water shall be three feet above the existing water table.

(2) This head of water shall be maintained for a period of one hour during which it is presumed that full absorption of the concrete manhole body has taken place and thereafter for a further period of one (1) hour for the actual test of leakage. Fiber glass manholes are exempt from the one hour absorption requirement. During this one (1) hour test period, the measured maximum allowable rate of exfiltration for any section of sewer shall be the same as allowed for the infiltration test.

E. TEST PROCEDURE AIR

(1) Where the Contractor elects to air test, he shall perform these tests with equipment similar to Air-Loc equipment manufactured by Cherne Industrial, Inc. Hopkins, Minnesota.

(2) The air test shall be made when the sewer is clean. The line shall be plugged at each manhole with pneumatic balls. Low pressure air shall be introduced into the plugged line until the internal air pressure reaches 4.0 psig greater than the average

back pressure of any ground water pressure that may submerge the pipe. At least two (2) minutes shall be allowed for the air temperature to stabilize before readings are taken and the timing started.

(3) When testing pipes 14 inches and less in diameter between consecutive manholes, the portion being tested shall pass if it does not lose air at a rate to cause the pressure to drop from 4.0 to 3.0 psig (greater than the average back pressure of any groundwater that may submerge the pipe) in less time than listed as calculated from Table 1.

When testing pipes greater than 15 inches in diameter between consecutive manholes the portion being tested shall pass if it does not lose air at a rate to cause the pressure to drop from 3.5 psig 3.0 psig (greater than the average back pressure of any groundwater that may submerge the pipe) in less time than that shown in or calculated from Table II.

TABLE I
Specification Time Required for a 1.0 PSIG Pressure Drop for Size and Length of Pipe indicated for Q = 0.0015

Specification Time for Length (L) Shown (min: sec)											
1	2	3	4 (xL)	100 ft.	150 ft.	200 ft.	250 ft.	300 ft.	350 ft.	400 ft.	450 ft.
4	3:46	597	.380	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	5:40	398	.854	5:40	5:40	5:40	5:40	5:40	5:40	5:42	5:42
8	7:34	298	1.520	7:34	7:34	7:34	7:34:	7:36	8:52	10:08	11:24
10	9:26	239	2.374	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	199	3.418	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	159	5.342	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04
18	17:00	133	7.692	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41
21	19:50	114	10.470	19:50	26:10	34:54	43:37	52:21	61:00	69:48	78:31
24	22:40	99	13.674	22:47	34:11	45:34	56:58	68:22	79:46	91:10	102:33
27	25:30	88	17.306	28:51	43:16	57:41	72:07	86:32	100:57	115:22	129:48
30	28:20	80	21.366	35:37	53:25	71:13	89:02	106:50	124:38	142:26	160:15
33	31:10	72	25.852	43:05	64:38	86:10	107:43	129:16	150:43	172:21	193:53
36	34:00	66	30.768	51:17	75:55	102.34	128:12	153:50	179:29	205:07	230:46

1. Pipe Diameter (in.)
Minimum Time (min:sec)
Length for Minimum Time (ft.)
Time for Longer Length (sec)

NOTE: When using column 4 multiply the number in column 4 opposite the pipe diameter by the length of pipe of that diameter and sum the times for the various pipe size in the run being tested. Computations shall include lengths for service connection laterals.

Table II
Specification Time Required for 0.5 PSIG Pressure Drop for Size and Length of Pipe Indicated for Q + 0.0015

Specification Time for Length (L) Shown (min: sec)											
1	2	3	4 (xL)	100 ft.	150 ft.	200 ft.	250 ft.	300 ft.	350 ft.	400 ft.	450 ft.
4	1:53	597	.190	1:53	1:53	1:53	1:53	1:53	1:53	1:53	1:53
6	2:50	398	.427	2:50	2:50	2:50	2:50	2:50	2:50	2:51	3:12
8	3:47	298	.760	3:47	3:47	3:47	3:47	3:48	4:26	5:04	5:42
10	4:43	239	1.187	4:43	4:43	4:43	4:57	5:56	6:55	7;54	8:54
12	5:40	199	1.709	5:40	5:40	5:40	7:08	8:33	9:58	11:24	12:50
15	7:05	159	2.671	7:05	7:05	8:54	11:08	13:21	15:35	17:48	20:02
18	8:30	133	3.846	8:30	9:37	12:49	16:01	19:14	22:26	25:38	28:51
21	9:55	114	5.235	9:55	13:05	17:27	21:49	26:11	30:32	34:54	39:16
24	11:20	99	6.837	11:24	17:57	22:48	28:30	34:11	39:53	45:35	51:17
27	12:45	88	8.653	14:25	21:38	28:51	36:04	43:16	50:30	57:42	46:54

30 33 36	14:10 15:35 17:00	80 72 66	10.683 12.926 15:384	17:48 21:33 25:39	26:43 32:19 38:28	35:37 43:56 51:17	44:31 53:52 64:06	53:25 64:38 75:55	62:19 75:24 89:44	71:13 86:10 102:34	80:07 96:57 115:23

1 Pipe Diameter (in.)
2 Minimum Time (min:sec)
3 Length for Minimum Time (ft.)
4 Time for Longer Length (sec)

NOTE: When using column 4 multiply the number in column 4 opposite the pipe diameter by the length of pipe of that diameter and sum the times for the various pipe size in the run being tested. Computations shall include lengths for service connection laterals. All service plugs shall be secured in place to prevent displacement during testing operation.

F: DEFLECTION TEST

Deflection tests shall be performed on all flexible pipe, the tests shall be conducted after the backfill has been in place at least 30 days. No pipe shall exceed a deflection of 5 percent. The deflection tests shall be run using a Go-No-Go mandrel having a diameter equal to 95 percent of the inside diameter of the pipe. The tests shall be performed without mechanical pulling device, any pipe not meeting the deflection test shall be excavated and re-bedded at no cost to the owner.

The Contractor at no additional cost to the owner shall furnish the Go-No-GO Mandrel.

Upon completion of all tests, the Contractor shall provide personnel to remove each manhole cover in the presence of the Engineer's representative for inspection and depth measurement.

G. TESTING SANITARY SEWER MANHOLES

All sanitary sewer manholes shall be tested for water tightness by one of the following methods.

Manholes, except those in streets scheduled for immediate paving, shall be complete, having all adjusting rings and cover rings in place and shall be backfilled prior to testing.

Manholes in streets scheduled for immediate paving shall be complete as described above except those acceptance tests shall be made at the top of the cone section.

(1.) Vacuum Test

a. General

This item will govern the testing of all sanitary sewer manholes. All connections to manholes including drop connections shall be in place before testing.

b. Equipment

Equipment for vacuum testing manholes shall be:
MANHOLE VACUUM TESTER as manufactured by:

P.A. Glazier, Inc.
P.O. Box 1002
Worcester, MA. 01613

Or

THE CHERNE AIR-LOC MANHOLE TESTER as manufactured by:

Cherne Industries, Inc.
5700 Lincoln Dr.
Minneapolis, MN 55436-1695

Or approved equal.

c. Preparation for Testing

All connections to the manhole; except plugged stubs for future line extensions, shall be plugged using suitable pneumatic plugs. Line plugs shall be placed at a point outside of the manhole wall (approximately 8" to 10" into the sewer pipe). Drop connections shall be plugged at a point up stream from the drop.
All plugs, pipe connections and plugged stub outs shall be adequately braced to prevent them being drawn into the manhole when vacuum is applied.

d. Testing

The contractor shall set the test equipment in place and operate it in accord with the manufacturer instructions. A copy of these instructions shall be kept on the job site and shall be available to the inspector when tests are performed. When equipment is properly set up a vacuum of 10" of mercury (Hg) shall be drawn and the vacuum line valve closed. After the vacuum pump is shut off the hose shall be disconnected before the test is started.

Note: Vacuum must be at 10" Hg when test is started. The contractor may wish to draw up to 10.5" Hg vacuum and then bleed back to 10" Hg before starting the test. The test shall pass when the minimum time for the vacuum to drop from 10" Hg to 9" Hg is greater than the time shown in the following table:

TABLE 1: Minimum test times for various manhole diameters.

	DIAMETER		
Depth Feet	48"	60"	72"
8'	0:20	0:26	0:33
10'	0:25	0:33	0:41
12'	0:30	0:39	0:49
14'	0:35	0:46	0:57
16'	0:40	0:52	1:05
18'	0:45	0:59	1:13
20'	0:50	1:05	1:21
* ADD	0:05	0:06.5	0:08

Any manhole that fails the test shall be repaired and retested until it passes the test.

e. Contractors Optional Test

The contractor, at his option may wish to test manholes before they are backfilled to assure himself that the manhole is sound.
Manholes that fail the test prior to being backfilled may be repaired under vacuum by coating the area of the leak with a liquid quick setting grout allowing the grout to be drawn into the opening until the leak is stopped.

Manholes will not be accepted on the bases of this test.

f. Fiberglass Manholes

Fiberglass manholes may be tested in the same manner as concrete manholes except that all repairs to the fiberglass body of the manhole shall be made using materials furnished by the manufacturer. Repairs shall be made in accord with the manufacturer instructions.

g. No separate payment will be made for vacuum testing of manholes, but the cost shall be considered incidental to furnishing and construction of manholes as bid in the bid proposal.

2. HYDROSTATIC TESTING

a. General

This item shall govern the hydrostatic testing of manholes and may be used as an alternative to vacuum testing by the contractor.

All connections to manholes including drop connections shall be in place prior to testing manholes.

b. Testing

All connections to the manhole, except plugged stubs installed for future line extensions, shall be plugged upstream from the drop.

Plugs in pipe connections must be placed outside the manhole wall (approximately 8” to 10” into the pipe).

The manhole shall then be filled to the top of the cast iron ring (or top of the cone section for manholes in streets scheduled for immediate paving) and allowed to stand for a minimum of one hour to allow for absorption by the components of the manhole. The inspector may extend the absorption period if it appears that the manhole has not reached a stable state.

The manhole shall then be refilled to the top of the ring (or cone) and allowed to stand for up to 24 hours.

The manhole shall be checked at the end of 4 hours and will be deemed to have passed if no perceptible loss has occurred – if loss has occurred the manhole will be checked after the 24 hour period and will be considered to have passed if loss does not exceed the following schedule

Depth Ft.	Loss Inches
0 - 10’	.2
10 – 20’	.4
20 - 30’	.6

c. No separate payment will be made for Hydrostatic Testing of manholes but the cost shall be considered as incidental to furnishing and constructing manholes as bid in the bid proposal.

H. TELEVISING NEW SEWER LINES

It is the city’s intention to televise all new sanitary sewer lines for record purposes.

Immediately after the contractor completes all testing of sanitary sewer lines and manholes he shall leave all manholes accessible for televising and make allowances for the city’s camera crews working on the project site.

The contractor at his own expense before final acceptance must correct any defects discovered during the televising of sanitary sewers.

3.15 RESTORATION

A. Whenever any surface improvements such as pavement, curbing, pedestrian walks, fencing, or turf have been removed, damaged or otherwise disturbed by the Contractor’s operations, they shall be repaired or replaced to the Engineers satisfaction, to restore the improvement in kind and structure to the pre-existing condition. Each item of restoration work shall be done as soon as practicable after completion of installation and backfilling operations on each section of pipeline.

B. In absence of specific payment provisions, as separate Contract Items, the restoration work shall be compensated for as part of the work required under those Contract Items, which necessitated the destruction and replacement or repair, and there will be no separate payment therefor. If separate pay items are provided for restoration work, only that portion of the repair or reconstruction, which was necessitated by the contract, will be measured for payment. Any improvements removed or damaged unnecessarily shall be replaced or repaired at the Contractor’s expense.

C. Turf restoration shall be accomplished by sod replacement except where seeding is specifically allowed or required.

Caliche or gravel surfaced streets and driveway shall be restored to their original condition by salvaging and replacing the pre-existing caliche or gravel. If the Contractor does not salvage sufficient material during excavation operation, he will be required to furnish material to restore the surface to the depth of the original section. This caliche or gravel restoration shall be considered a part of excavation and backfill and no extra compensation will be made.

E. Bituminous and concrete surfaced streets and driveways will be restored to equal or better condition than existed prior to sewer construction. Measurement will be made of the actual quantities required to be replaced by the sewer construction and paid for at the price bid in the appropriate bid items in the proposal.

No measurement or payment will be made for work done outside the lines considered necessary for sewer construction. The Contractor will be required to replace damage outside these lines at his own expense.

F. Reconstruction of caliche base courses and concrete or bituminous surface courses shall be in substantial compliance with all applicable City of Midland Specifications pertaining to the item being restored.

3.16 CLEANUP

After completing each section of the sewer line, the Contractor shall remove all debris, construction materials, and equipment from the site of the work, grade and smooth over the surface on both sides of the line and leave the entire right-of-way in a clean, neat, and serviceable condition. No separate compensation shall be made for clean up.

3.17 PAYMENT

A. General

Payment in accordance with the following items, at the unit price bid for the work, shall constitute full and complete payment for the entire project including all incidental terms necessary for the complete and successful prosecution of the work in accordance with the intent of the plans and specifications.

Materials and work required to complete the project for which there is no bid item in the bid proposal shall be considered as incidental and the cost shall be included in the prices bid for the various items in the bid proposal.

Where payment is to be made on a unit price basis, it shall be made on the actual measured quantities as constructed in the work.

B. Sewer Pipe in Place

Unit prices bid shall cover furnishing and installation of pipe and jointing materials, including tests and all other necessary work and material to install the pipe complete in place at the depth specified. The unit of work shall be the lineal foot of the various types and sizes as shown in the proposal form. The pipe installation shall be measured

along the centerline of the sewer from center to center of manholes with no deduction in footage for manholes, wye branches, riser bases or other structure.

C. Foundation Corrections Materials

Payment for foundation correction materials shall be made at the unit price bid per cubic yard for material furnished and placed to pro vide adequate pipe base in unstable soil. The unit price shall include extra excavation below pipe grade, the material, placing and tamping.

Additional material required to backfill excess depth of excavation caused by neglect or error on the part of the Contractor or wet conditions, shall be furnished and placed at his own expense.

Removal of Street Surfacing

The Contractor shall receive no extra compensation for the removal of street surfacing including cutting of a straight edge.

E. Trench Safety Systems, Sheeting and Shoring

Measurement: Trench Safety Systems shall be measured by the linear foot of "Trench Safety Systems": Payment for work prescribed under this item shall be full compensation for the Trench Safety Systems including any Engineering and/or consulting fees and any additional excavation and backfill required, for furnishing, placing, maintaining and removing all shoring, sheeting, or bracing; for de-watering or diversion of water; for all jacking and jack removal; and for all other labor, materials, tools, equipment and incidentals necessary to complete the work.

F. Manholes

Payment will be made for the various types of manholes at the unit prices bid for the various types of manholes 0 to 6' deep which price shall include excavation, furnishing and installing all materials pumping where necessary, and backfilling and all incidentals for the complete manhole in place. Measurement for manholes over 6 feet in depth shall be made of the depth of manhole in excess of six (6) feet. Manholes will be measured from the invert to the top of the casting as set.

Payment will be made for the manhole depth in excess of 6 feet at the vertical foot price bid in the bid proposal for extra depth of manhole over 6 feet for each type of manhole furnished.

G. Drop Connections to Manholes

Payment shall be made for drop connections to manhole for each drop connection made as counted in the field at the price bid in the proposal.

Said payment shall be complete compensation for furnishing all materials and fittings and making all connections to the manhole including 2' of vertical depth as measured from the invert of the incoming line to the invert of the manhole.

H. Drop Section for Manholes

Drop sections shall be paid for on a vertical footage basis as measured from the invert of the incoming line to the invert of the manhole less 2 feet and shall be paid for at the price bid per vertical foot for the various size drop connections in the bid proposal.

The price bid per vertical foot includes all fittings, granular material, if used and concrete and shall be full compensation for the complete in service drop connection.

I. Service Lines

Service lines will be measured from centerline of the sewer main to the plug end and paid for at the unit price bid per linear foot of each type of pipe as specified and as shown on the typical details.

J. Barricading and Traffic Control

The lump sum price bid in the bid proposal shall be full compensation for furnishing flag persons when required and all barricades, signs and other barricading and traffic control devices and for furnishing barricading plans and erecting and maintaining all such devices and signs as required for the duration of the period.

Updated
08/07

CITY OF MIDLAND
MICHIGAN AVENUE UTILITY IMPROVEMENTS
PROJECT NUMBER: PU21-02
SEPTEMBER 2022

PATRICK PAYTON
MAYOR

ROBERT PATRICK
CITY MANAGER

1 - SCOTT DUFFORD 2 - JOHN NORMAN
3 - JACK LADD 4 - LORI BLONG
AT LARGE - ROBIN POOL
AT LARGE - DAN CORRALES
COUNCIL MEMBERS



VICINITY MAP
N.T.S.

CONTRACTOR_____

DATE CONTRACTOR BEGAN WORK_____

DATE WORK WAS COMPLETED_____

DATE WORK WAS ACCEPTED_____

FINAL CONTRACT COST_____

INDEX OF SHEET

SHEET NUMBER	SHEET TITLE
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C101	GENERAL NOTES
C102	GENERAL NOTES
C110	EXISTING CONDITIONS / MASTER LAYOUT
C111	EXISTING CONDITIONS / MASTER LAYOUT
C120	EROSION CONTROL PLAN
C121	EROSION CONTROL PLAN
C122	EROSION CONTROL DETAILS AND NOTES
C130	DEMOLITION PLAN
C131	DEMOLITION PLAN
C200	WATER MAIN-1 P&P
C201	WATER MAIN-1 P&P
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C300	UTILITY DETAILS
C301	UTILITY DETAILS
C302	UTILITY DETAILS
C303	UTILITY DETAILS
C304	UTILITY DETAILS
C305	UTILITY DETAILS

100% SUBMITTAL

Andrew L. Mellen
PROJECT ENGINEER

DATE MM/DD/2022
PACKET

MIDLAND
Utilities Department
8.250

JOSH FERGUSON, P.E.
ENGINEERING SERVICES DEPARTMENT

CARL CRAIGO, P.E.
DIRECTOR OF UTILITIES

APPROVED AS NOTED
10.06.2022
CITY OF MIDLAND ENGINEERING

October 25, 2022

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1				

DRAWN BY: MJD
CHECKED BY: ALM
APPROVED BY: ALM
DATE: 01/03/2022
JOB: 210128

COVER SHEET
UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED
PROFESSIONAL ENGINEER
09/03/2022

SHEET C100 OF 23

P:\2021\210128\CITY OF MIDLAND-MICHIGAN AVENUE WATER MAIN REPLACEMENT\DRAWINGS\CIVIL CONSTRUCTION PLANS\UTILITY CONSTRUCTION PLANS\210128 C100 COVER SHEET.DWG
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GENERAL NOTES:

a. THIS DESIGN IS FOR PUBLIC WATER IMPROVEMENTS AT MICHIGAN AVENUE FROM N. "A" STREET TO N. WEATHERFORD STREET.

b. ALL CONSTRUCTION IS TO COMPLY WITH CITY OF MIDLAND STANDARDS AND SPECIFICATIONS WHEREVER APPLICABLE. ALL OTHER STANDARDS AND REQUIREMENTS ARE TO COMPLY WITH ALL APPLICABLE FEDERAL AND STATE REGULATIONS, REQUIREMENTS, AND STANDARDS. WHEREVER CITY OF MIDLAND STANDARDS AND FEDERAL OR STATE REQUIREMENTS DIFFER THE MORE RESTRICTIVE STANDARD, REQUIREMENT, OR REGULATION WILL GOVERN.

c. ALL BEARINGS, DIMENSIONS, AND COORDINATES SHOWN IN THIS CONSTRUCTION DRAWING SET ARE RELATED TO TEXAS STATE PLAN COORDINATE SYSTEM, TEXAS CENTRAL ZONE, NORTH AMERICAN DATUM 1983. ALL ELEVATIONS ARE RELATED TO NORTH AMERICAN VERTICAL DATUM 1988.

d. EXISTING UTILITIES, INFRASTRUCTURE, AND OTHER OBJECTS INDICATED IN THESE PLANS HAVE BEEN LOCATED USING CITY OF MIDLAND RECORDS, SITE INSPECTIONS, AND SPOT SURVEYS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THIS INFORMATION PRIOR TO CONSTRUCTION AND NOTIFYING ENGINEER OF ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND PROJECT DESIGN.

e. CONTRACTOR IS TO TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING FACILITIES THAT ARE ENCOUNTERED REGARDLESS OF WHETHER OR NOT THEY APPEAR IN THIS CONSTRUCTION DRAWING SET.

f. CONTRACTOR IS TO NOTIFY ALL AFFECTED PROPERTIES AT LEAST 48 HOURS IN ADVANCE OF ANY UNKNOWN OR PLANNED INTERRUPTION OF SERVICE OR ACCESS DUE TO ANY CONSTRUCTION ACTIVITY PERFORMED BY CONTRACTOR.

g. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A TRAFFIC CONTROL PLAN TO THE CITY OF MIDLAND FOR REVIEW AND APPROVAL PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY.

h. ANY ISSUES, CONFLICTS, OR DISCREPANCIES ENCOUNTERED IN THE FIELD THAT CONFLICT WITH THIS CONSTRUCTION DRAWING SET ARE TO BROUGHT TO ENGINEER'S ATTENTION PRIOR TO MAKING ANY DESIGN CHANGES IN THE FIELD.

i. OSHA REQUIREMENTS AND ALL OTHER APPLICABLE FEDERAL, STATE, OR CITY OF MIDLAND REQUIREMENTS ARE TO BE FOLLOWED AND COMPLIED WITH AT ALL TIMES.

j. TRAFFIC CONTROL FOR THIS PROJECT WILL BE CONTRACTOR'S RESPONSIBILITY. CONTRACTOR MUST SUBMIT TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH TMUTCD, TO CITY OF MIDLNAD FOR REVIEW AND APPROVAL NO LESS THAN TWO (2) BUSINESS DAYS BEFORE CONTRACTOR BEGINS ANY CONSTRUCTION ACTIVITY.

k. MATERIAL STORAGE IS TO BE PLACED IN WORK ZONE IDENTIFIED IN APPROVED TRAFFIC CONTROL PLAN.

l. OSHA REQUIREMENTS AND ALL OTHER APPLICABLE FEDERAL, STATE, OR CITY OF MIDLAND SAFETY REQUIREMENTS ARE TO BE FOLLOWED AND COMPLIED WITH AT ALL TIMES.

m. CONTRACTOR MUST COMPLY WITH ALL STAKING AND TESTING REQUIREMENTS AS DESCRIBED IN PROJECT BID PACKET.

n. CONTRACTOR IS REMINDED THAT THIS PROJECT IS LOCATED IN AN URBAN ENVIRONMENT. TREES AND OVERHEAD LINES ARE COMMON, AND CONTRACTOR IS TO PROVIDE PROPER EQUIPMENT TO COMPLETE ALL REQUIRED WORK FOR THIS PROJECT IN AN URBAN ENVIRONMENT.

DEMOLITION NOTES:

A. CONTRACTOR IS TO NOTIFY ENGINEER OF ANY ADDITIONAL DEMOLITION THAT MAY BE NEEDED AND RECEIVE WRITTEN CONFIRMATION THAT SUCH DEMOLITION IS APPROVED PRIOR TO ANY ADDITIONAL DEMOLITION TAKING PLACE.

B. CONTRACTOR IS TO TAKE CARE NOT TO DAMAGE OR REMOVE ANY EXISTING INFRASTRUCTURE OR PROPERTY, PUBLIC OR PRIVATE, THAT IS NOT INDICATED BY THIS CONSTRUCTION DRAWING SET. ANY SUCH DAMAGE OR REMOVAL MUST BE REPLACED OR REPAIRED BY CONTRACTOR AT THEIR SOLE EXPENSE TO EQUAL OR BETTER CONDITION.

C. EXISTING WATER MAIN PIPE IDENTIFIED FOR REMOVAL IS TO BE REMOVED IN ITS ENTIRETY, INCLUDING ANY FITTINGS STRUCTURES, AND APPURTENANCES.

D. EXISTING WATER MAIN IDENTIFIED TO BE ABANDONED IN PLACE MUST BE COMPLETELY FILLED WITH FLOWABLE FILL 2-SACK (2 SACK = 188 POUNDS PER CUBIC YARD) AND BE CAPPED AT EACH END OF WATER MAIN ABANDONED IN PLACE.

E. ALL SAW-CUTTING IS TO HAVE CLEAN AND STRAIGHT EDGES AND IS CONSIDERED INCIDENTAL TO ALL PAVEMENT REMOVAL.

F. ALL TRENCH PAVEMENT REPAIRS ARE TO INCLUDE 1.0' T-TOPPING ON EITHER SIDE OF ANY TRENCH EXCAVATION.

G. ALL EXISTING FIRE HYDRANTS REMOVED ARE TO BE RETURNED TO THE CITY OF MIDLAND.

H. ALL EXISTING WATER METERS REMOVED ARE TO BE RETURNED TO CITY OF MIDLAND UNLESS SPECIFICALLY NOTED OTHERWISE IN THIS CONSTRUCTION DRAWING SET OR PROJECT BID PACKET.

CONSTRUCTION NOTES:

1. SEE SHEET C110 FOR CONTROL POINTS.
2. CONCRETE COLLARS FOR VALVE COVERS WILL NOT BE REQUIRED FOR THIS PROJECT. CONCRETE COLLARS FOR VALVE COVERS WILL BE PLACED WITH THE FUTURE MICHIGAN AVENUE PAVING PROJECT.
3. ANY AND ALL FLOWABLE FILL 2-SACK (2 SACK = 188 POUNDS PER CUBIC YARD) MUST BE CURED FOR NO LESS THAN THREE (3) DAYS PRIOR TO PLACEMENT OF ANY PAVEMENT OVER FLOWABLE FILL MATERIAL.
4. ALL NEW WATER MAINS TO MAINTAIN MINIMUM COVER OF 3.5' AND MINIMUM VERTICAL SEPARATION OF 2.0' ABOVE EXISTING WASTEWATER MAINS UNLESS OTHERWISE INDICATED IN THIS CONSTRUCTION DRAWING SET.
5. ALL DIMENSIONS MEASURED TO CURB ARE MEASURED TO BACK-OF-CURB.
6. ALL DIMENSIONS BETWEEN UTILITIES ARE MEASURED TO UTILITY CENTERLINE.
7. ALL FITTINGS INSTALLED ARE TO BE WRAPPED.
8. ALL NEW OR EXISTING VALVE, MANHOLE JUNCTION, INLET, AND METER COVERS MUST BE ADJUSTED TO FINISHED GRADE AND BE SET FLUSH WITH ADJACENT FINISHED SURFACE WHETHER FINISHED SURFACE IS PAVED OR UNPAVED.
9. ALL CONCRETE FIBER REINFORCEMENT IS TO BE INSTALLED AT A RATE OF 3.0-POUNDS OF FIBER REINFORCEMENT PER EACH 1.0-CUBIC YARD OF CONCRETE PLACED (3.0-LBS / 1.0-CY) UNLESS OTHERWISE NOTED IN THIS CONSTRUCTION DRAWING SET.
10. ALL CONCRETE PAVEMENT, FILLET, VALLEY GUTTER, APPROACH, AND COLLAR JOINTS ARE TO BE SEALED PER CITY STANDARDS.
11. CONTRACTOR IS TO MATCH DESIGN GRADES AND ELEVATIONS SHOWN ON THIS CONSTRUCTION DRAWING SET.
12. CONTRACTOR IS TO MATCH EXISTING GRADES AT ALL LOCATIONS INDICATED, INCLUDING FOR ALL GRADE DAYLIGHTING.
13. COORDINATE ALL SIGNAL POLE, SIGNAL CONDUIT, STRIPING, TRAFFIC SIGN, OR OTHER TRAFFIC INFRASTRUCTURE ISSUES WITH CITY TRAFFIC ENGINEER AND NOTIFY CITY INSPECTOR.
14. NOTIFY CITY INSPECTOR OF ALL FRANCHISE UTILITY OR PRIVATE INFRASTRUCTURE ISSUES AND COORDINATE WITH BOTH CITY AND FRANCHISE UTILITY OR PRIVATE INFRASTRUCTURE OWNER.
15. CONTRACTOR IS TO COORDINATE WITH CITY FIRE DEPARTMENT FOR ANY FIRE HYDRANT OR FIRE LINE TESTING. FIRE DEPARTMENT TO INSTALL COLORED RING OR BONNET ON FIRE HYDRANT ONCE TESTED.
16. PLACE ORANGE FENCING AROUND SIDEWALK, WHEELCHAIR RAMPS, AND OTHER PEDESTRIAN AREAS THAT POSE HAZARDS TO PEDESTRIAN TRAFFIC AS DIRECTED.

CITY OF MIDLAND APPROVED 10.06.2022 ENGINEERING

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DRAWN BY: MJD
CHECKED BY: ALM
APPROVED BY: ALM
DATE: 01/03/2022
JOB: 210128

GENERAL NOTES

UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED
PROFESSIONAL ENGINEER
09/09/2022

SHEET C101 OF 23

P:\2021\210128 CITY OF MIDLAND-MICHIGAN AVENUE WATER MAIN REPLACEMENT\DRAWINGS\CIVIL CONSTRUCTION PLANS\210128 C101 GENERAL NOTES.DWG
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PAVING NOTES:

A. ALL NEW PAVEMENT AND CONCRETE ARE TO BE PLACED CLEANLY AND FLUSH WITH ALL ADJACENT, EXISTING PAVEMENT OR CONCRETE INCLUDING CURBS.

B. EXISTING STAND-UP CURBS ARE 7.0" CURBS RATHER THAN CURRENT 6.0" CITY STANDARD CURBS IN THIS AREA. MATCH EXISTING CURB HEIGHT THROUGHOUT.

C. ALL CONCRETE PAVEMENT JOINTS ARE TO BE SEALED IN COMPLIANCE WITH CITY OF MIDLAND STANDARDS. THIS REQUIREMENT DOES NOT APPLY TO PEDESTRIAN ACCESS RAMP, SIDEWALK, OR CURB JOINTS.

D. ONLY USE AND PLACE APPROVED EXPANSION JOINT MATERIAL AS INDICATED ON CONSTRUCTION DRAWINGS BETWEEN EXISTING CURB AND PROPOSED CURB.

E. ALL PEDESTRIAN ACCESS RAMPS AND SIDEWALKS ARE TO BE INSTALLED IN COMPLIANCE WITH ALL APPLICABLE ADA REQUIREMENTS. ALL SIDEWALK IS TO BE INSTALLED FLUSH WITH ADJACENT TOP-OF-CURB WHEN LOCATED NEXT TO CURB. SIDEWALK NOT LOCATED NEXT TO CURB IS TO BE PLACED FLUSH WITH EXISTING GROUND SURFACE. ENGINEER IS TO BE NOTIFIED PRIOR TO INSTALLATION IF ANY SIDEWALK SLOPE EXCEEDS 5.0% SLOPE WHEN FOLLOWING EXISTING GROUND SURFACE, AND NO SIDEWALK IS TO HAVE CROSS-SLOPE GREATER THAN 2.0%.

F. PAVEMENT PATCH AREA AND BOUNDARIES ARE IDENTICAL TO PAVEMENT REMOVAL AREA AND BOUNDARIES BETWEEN EXISTING CURBS. TYPICAL PAVEMENT PATCH WIDTH IS 4 FEET.

G. ALL ASPHALT TRENCH REPAIRS ARE TO UTILIZE 2" TYPE D HMAC HOT MIX ASPHALT UNLESS OTHERWISE NOTED IN CONSTRUCTION DRAWINGS.

H. WHEN PLACED ADJACENT TO CONCRETE PAVEMENT, CURB JOINT SPACING IS TO MATCH CONCRETE PAVEMENT SPACING. WHEN PLACED SEPARATELY FROM PAVEMENT, CURB JOINTS ARE TO BE SPACED NO CLOSER THAN 2.0' AND NO FURTHER THAN 10.0' APART.

I. CURB JOINTS ARE TO BE TOOL JOINTS EXCEPT FOR EVERY 6TH CONTROL JOINT, WHICH IS TO BE AN EXPANSION JOINT. UTILIZE EXPANSION JOINTS AT ALL JOINTS BETWEEN NEW AND EXISTING CURB-AND-GUTTER.

J. UTILIZE SAWCUT OR TOOL JOINTS IN SIDEWALK SPACED EVERY 5.0' WITH AN EXPANSION JOINT FOR EVERY 12TH JOINT OF SIDEWALK.

K. ALL CONCRETE PAVEMENT AND SIDEWALK SURFACES ARE TO BE BROOM FINISHED.

MASTER WATER LAYOUT NOTES:

1. ALL HORIZONTAL SEPARATION DIMENSIONS BETWEEN NEW AND EXISTING UTILITIES ARE APPROXIMATE.
2. ALL PROPOSED WATER IMPROVEMENTS ARE TO CONNECT TO EXISTING WATER SYSTEM REGARDLESS OF DIMENSIONS SHOWN.
3. ALL FIRE HYDRANTS ARE TO BE PAINTED YELLOW PRIOR TO DELIVERY BY SUPPLIER TO CONTRACTOR OR JOB SITE.
4. INSTALL TRACER TAPE AND TRACER WIRE ALONG ALL UNDERGROUND WATER PIPE IN COMPLIANCE WITH CITY DETAILS 310(A), 310(B), AND 320.
5. ALL THRUST BLOCKING AT FITTINGS IS TO BE FORMED WHEN PLACED.

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F:\2021\210128-CITY OF MIDLAND-MICHIGAN AVENUE WATER MAIN REPLACEMENT\DRAWINGS\CIVIL CONSTRUCTION PLANS\210128 C102 GENERAL NOTES.DWG

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CHECKED BY: ALM
APPROVED BY: ALM
DATE: 01/03/2022
JOB: 210128

GENERAL NOTES

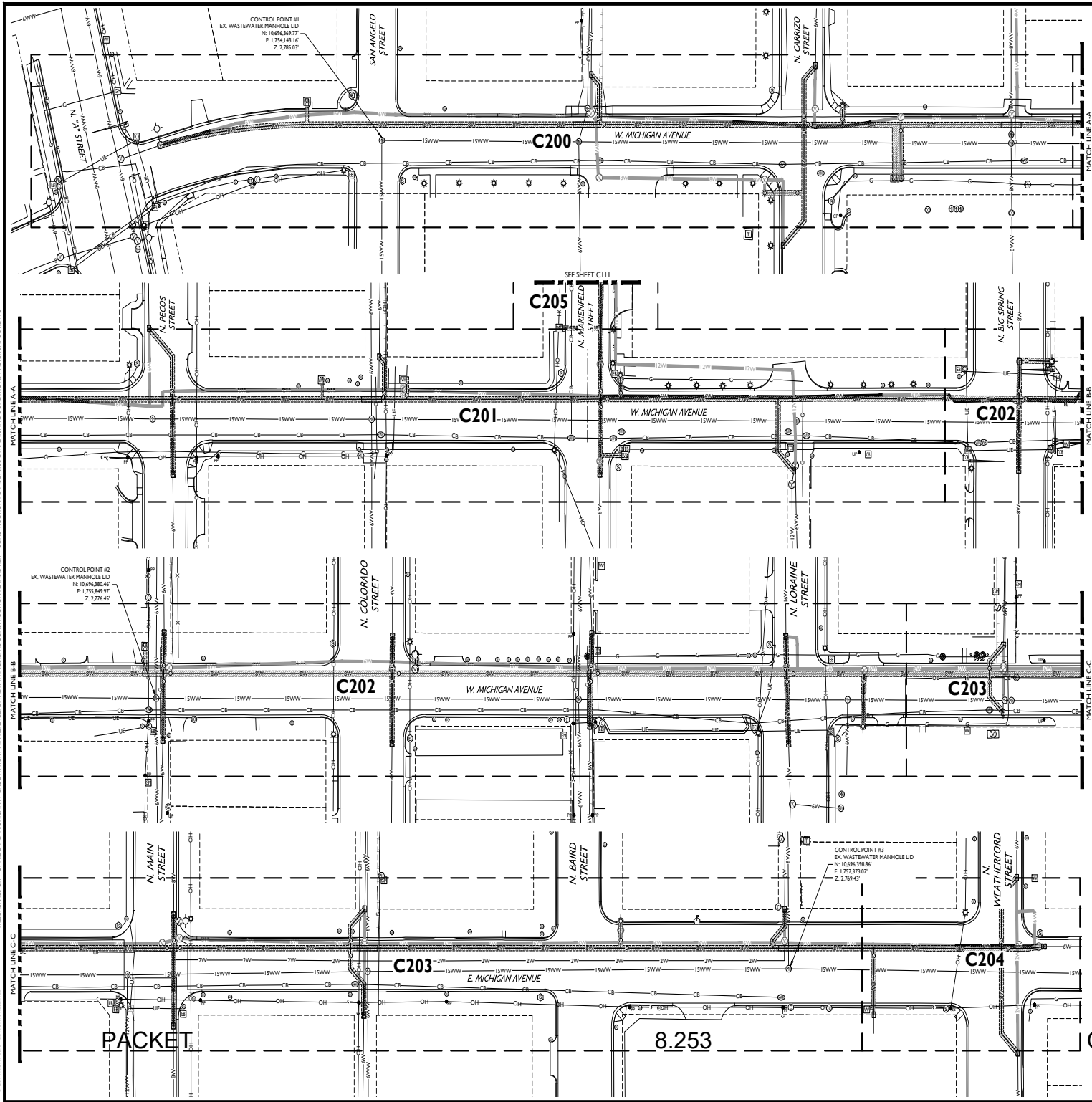
UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

CITY OF MIDLAND APPROVED 10.06.2022 ENGINEERING
APPROVED BY THE CITY OF MIDLAND FOR CONFORMANCE WITH CITY ORDINANCES

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED
PROFESSIONAL ENGINEER
09/09/2022

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SHEET C102 OF 23



LEGEND

- DENOTES EXISTING WATER VALVE
- DENOTES EXISTING FIRE HYDRANT
- DENOTES EXISTING WATER METER
- DENOTES EXISTING POST INDICATOR VALVE
- DENOTES EXISTING WASTEWATER MANHOLE
- DENOTES EXISTING WASTEWATER CLEANOUT
- DENOTES EXISTING POWER POLE
- DENOTES EXISTING UTILITY POWER POLE
- DENOTES EXISTING LIGHT POLE
- DENOTES EXISTING GUY ANCHOR
- DENOTES EXISTING TRANSFORMER PAD
- DENOTES EXISTING ELECTRIC BOX
- DENOTES EXISTING TRAFFIC CONTROL BOX
- DENOTES EXISTING FIBER OPTIC MARKER
- DENOTES EXISTING SOUTHWESTERN BELL MANHOLE
- DENOTES EXISTING CABLE BOX
- DENOTES EXISTING CABLE SIGN
- DENOTES EXISTING TELEPHONE PEDESTAL
- DENOTES EXISTING GAS METER
- DENOTES EXISTING GAS MARKER
- DENOTES EXISTING GAS RISER
- DENOTES EXISTING CAMERA POST
- DENOTES EXISTING STREET SIGN
- DENOTES EXISTING STOP SIGN
- DENOTES EXISTING TRAFFIC SIGNAL LIGHT
- DENOTES EXISTING LOT LINES
- DENOTES EXISTING OVERHEAD ELECTRIC LINE
- DENOTES EXISTING GAS LINE
- DENOTES EXISTING 4" WATER MAIN
- DENOTES EXISTING 6" WATER MAIN
- DENOTES EXISTING 8" WATER MAIN
- DENOTES EXISTING 16" WATER MAIN
- DENOTES EXISTING 6" WASTEWATER MAIN
- DENOTES EXISTING 8" WASTEWATER MAIN
- DENOTES EXISTING 15" WASTEWATER MAIN
- DENOTES PROPOSED FIRE HYDRANT
- DENOTES PROPOSED WATER VALVE
- DENOTES PROPOSED WATER METER
- DENOTES PROPOSED 6" WATER MAIN
- DENOTES PROPOSED 8" WATER MAIN
- DENOTES PROPOSED 16" WATER MAIN

EXISTING CONDITION NOTES:

1. EXISTING CONDITIONS SHOWN ARE BASED ON AVAILABLE PREVIOUS DESIGN DRAWINGS, CITY OF MIDLAND GIS DATA, SPOT SURVEY DATA, AND SITE VISITS. CONTRACTOR IS TO FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
2. EXISTING GAS AND COMMUNICATION LINES WERE LOCATED FROM ONE-CALL MARKINGS. CONTRACTOR IS TO TAKE ALL NECESSARY STEPS AND PRECAUTIONS TO ENSURE THE SAFETY OF BOTH THE PUBLIC AND THE CONTRACTOR'S WORKERS WHEN ANY TRENCHING OR OTHER WORK IS TAKING PLACE NEAR THESE LINES.

CITY OF MIDLAND APPROVED ENGINEERING 10.06.2022

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BY	APPR.	DATE

REVISIONS

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APPROVED BY: ALM
DATE: 01/03/2022
JOB: 210128

EXISTING CONDITIONS / MASTER LAYOUT

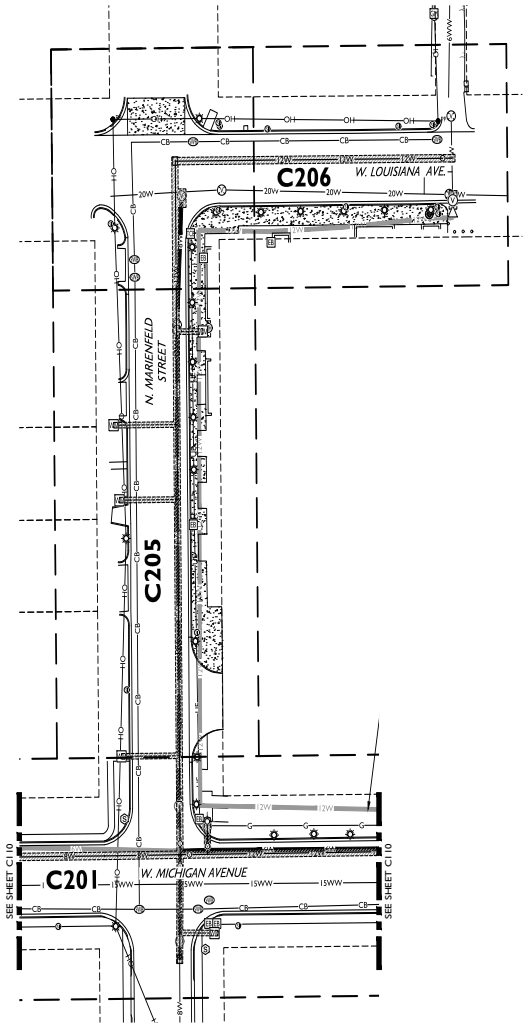
UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

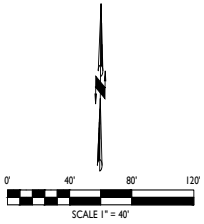
STATE OF TEXAS ANDREW L. MELLEN 106572 LICENSED PROFESSIONAL ENGINEER
09/09/2022

SHEET C110 OF 23

P:\2021\210128\CITY OF MIDLAND-MICHIGAN AVENUE WATER MAIN REPLACEMENT\DRAWINGS\CIVIL CONSTRUCTION PLANS\UTILITY CONSTRUCTION PLANS\210128 C110 EXISTING CONDITIONS MASTER LAYOUT.DWG

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LEGEND

- DENOTES EXISTING WATER VALVE
- DENOTES EXISTING FIRE HYDRANT
- DENOTES EXISTING WATER METER
- DENOTES EXISTING POST INDICATOR VALVE
- DENOTES EXISTING WASTEWATER MANHOLE
- DENOTES EXISTING WASTEWATER CLEANOUT
- DENOTES EXISTING POWER POLE
- DENOTES EXISTING UTILITY POWER POLE
- DENOTES EXISTING LIGHT POLE
- DENOTES EXISTING GUY ANCHOR
- DENOTES EXISTING TRANSFORMER PAD
- DENOTES EXISTING ELECTRIC BOX
- DENOTES EXISTING TRAFFIC CONTROL BOX
- DENOTES EXISTING FIBER OPTIC MARKER
- DENOTES EXISTING SOUTHWESTERN BELL MANHOLE
- DENOTES EXISTING CABLE BOX
- DENOTES EXISTING CABLE SIGN
- DENOTES EXISTING TELEPHONE PEDESTAL
- DENOTES EXISTING GAS METER
- DENOTES EXISTING GAS MARKER
- DENOTES EXISTING GAS RISER
- DENOTES EXISTING CAMERA POST
- DENOTES EXISTING STREET SIGN
- DENOTES EXISTING STOP SIGN
- DENOTES EXISTING TRAFFIC SIGNAL LIGHT
- DENOTES EXISTING LOT LINES
- DENOTES EXISTING OVERHEAD ELECTRIC LINE
- DENOTES EXISTING GAS LINE
- DENOTES EXISTING 4" WATER MAIN
- DENOTES EXISTING 6" WATER MAIN
- DENOTES EXISTING 8" WATER MAIN
- DENOTES EXISTING 16" WATER MAIN
- DENOTES EXISTING 6" WASTEWATER MAIN
- DENOTES EXISTING 8" WASTEWATER MAIN
- DENOTES EXISTING 15" WASTEWATER MAIN
- DENOTES PROPOSED FIRE HYDRANT
- DENOTES PROPOSED WATER VALVE
- DENOTES PROPOSED WATER METER
- DENOTES PROPOSED 6" WATER MAIN
- DENOTES PROPOSED 8" WATER MAIN
- DENOTES PROPOSED 16" WATER MAIN

EXISTING CONDITION NOTES:

1. EXISTING CONDITIONS SHOWN ARE BASED ON AVAILABLE PREVIOUS DESIGN DRAWINGS, CITY OF MIDLAND GIS DATA, SPOT SURVEY DATA, AND SITE VISITS. CONTRACTOR IS TO FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
2. EXISTING GAS AND COMMUNICATION LINES WERE LOCATED FROM ONE-CALL MARKINGS. CONTRACTOR IS TO TAKE ALL NECESSARY STEPS AND PRECAUTIONS TO ENSURE THE SAFETY OF BOTH THE PUBLIC AND THE CONTRACTOR'S WORKERS WHEN ANY TRENCHING OR OTHER WORK IS TAKING PLACE NEAR THESE LINES.

CITY OF MIDLAND APPROVED ENGINEERING 10.06.2022

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Tel: (432) 262-0999 Fax: (432) 262-0989
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REVISIONS

DRAWN BY: MJD
CHECKED BY: ALM
APPROVED BY: ALM
DATE: 01/03/2022
JOB: 210128

EXISTING CONDITIONS / MASTER LAYOUT

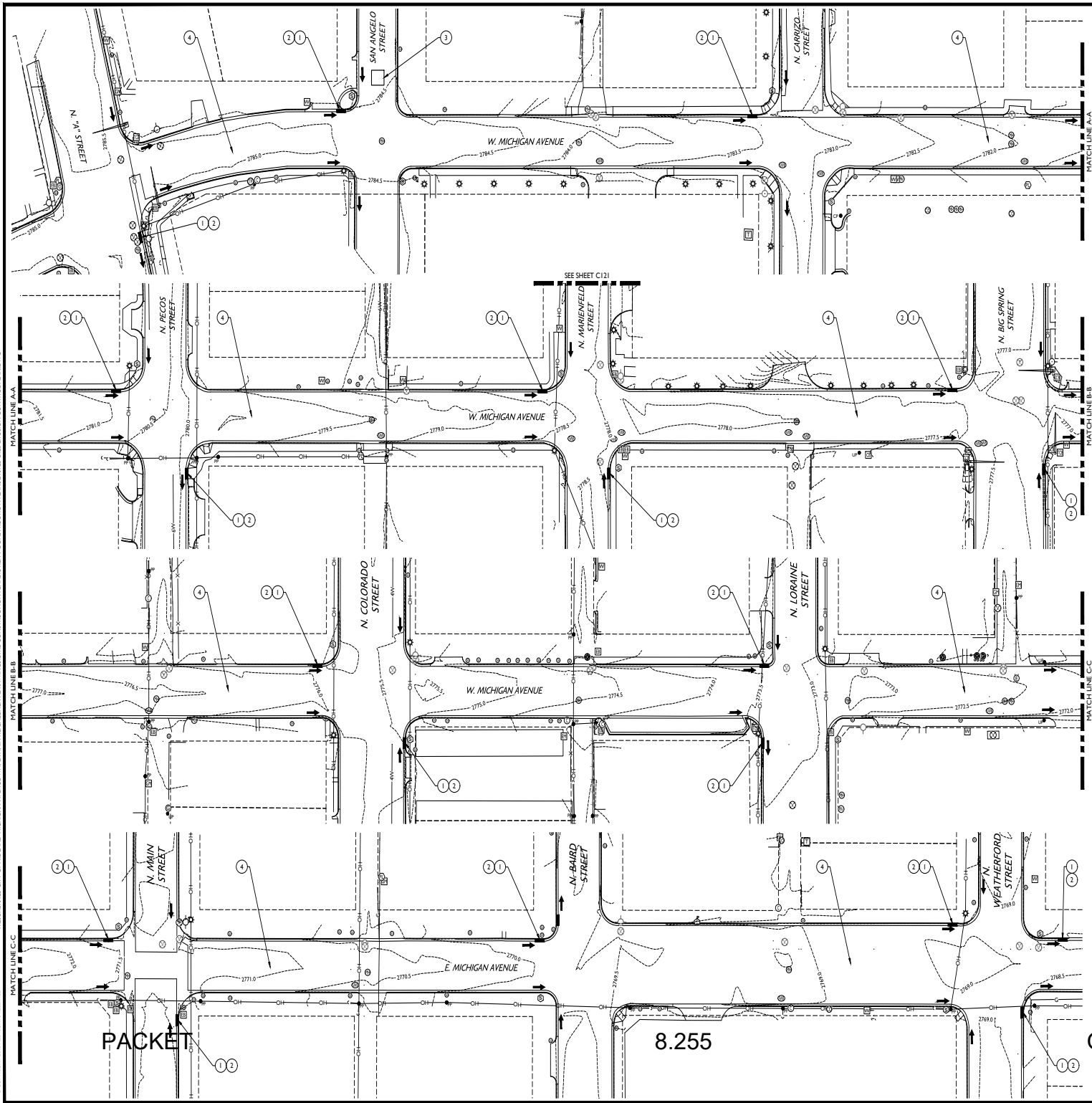
UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED
PROFESSIONAL ENGINEER
09/09/2022

SHEET C1.11 OF 23

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SCALE 1" = 40'

LEGEND

- DENOTES EXISTING WATER VALVE
- DENOTES EXISTING FIRE HYDRANT
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- DENOTES EXISTING GAS METER
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- DENOTES EXISTING CAMERA POST
- DENOTES EXISTING STREET SIGN
- DENOTES EXISTING STOP SIGN
- DENOTES EXISTING TRAFFIC SIGNAL LIGHT
- DENOTES EXISTING LOT LINES
- OH — DENOTES EXISTING OVERHEAD ELECTRIC LINE
- G — DENOTES EXISTING GAS LINE
- 4W — DENOTES EXISTING 4" WATER MAIN
- 6W — DENOTES EXISTING 6" WATER MAIN
- 8W — DENOTES EXISTING 8" WATER MAIN
- 6WW — DENOTES EXISTING 6" WASTEWATER MAIN
- 8WW — DENOTES EXISTING 8" WASTEWATER MAIN
- 15WW — DENOTES EXISTING 15" WASTEWATER MAIN
- DENOTES EXISTING FLOW DIRECTION ARROWS
- DENOTES PROPOSED GRAVEL BAG

CITY OF MIDLAND APPROVED 10.06.2022 ENGINEERING

NOTES:

1. SEE SHEET C122 FOR EROSION CONSTRUCTION NOTES AND DETAILS.

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CHECKED BY: ALM
APPROVED BY: ALM
DATE: 01/03/2022
JOB: 21012B

EROSION CONTROL PLAN

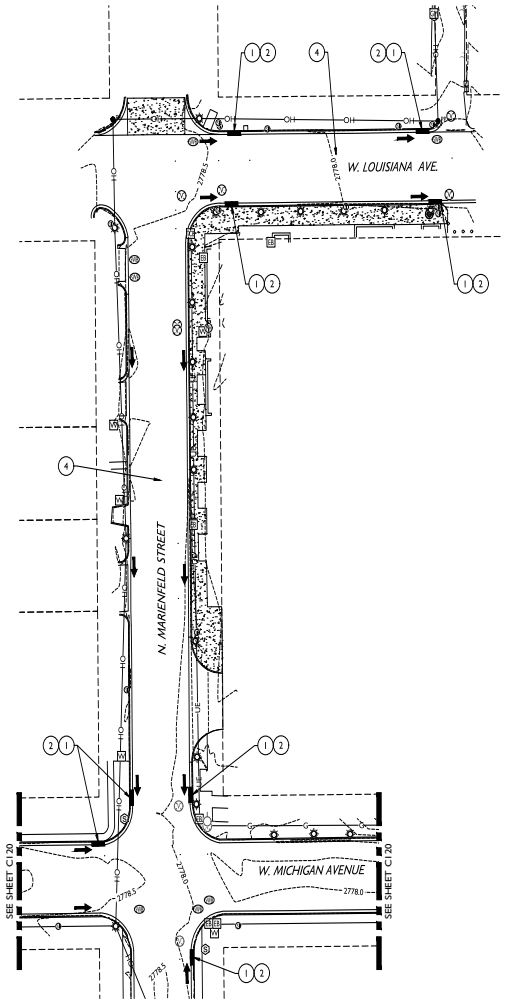
UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

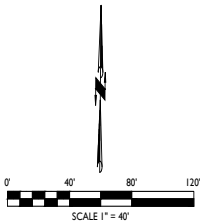
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LICENSED
PROFESSIONAL ENGINEER
09/09/2022

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LEGEND

- DENOTES EXISTING WATER VALVE
- DENOTES EXISTING FIRE HYDRANT
- DENOTES EXISTING WATER METER
- DENOTES EXISTING POST INDICATOR VALVE
- DENOTES EXISTING WASTEWATER MANHOLE
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- DENOTES EXISTING GAS LINE
- DENOTES EXISTING 4" WATER MAIN
- DENOTES EXISTING 6" WATER MAIN
- DENOTES EXISTING 8" WATER MAIN
- DENOTES EXISTING 6" WASTEWATER MAIN
- DENOTES EXISTING 8" WASTEWATER MAIN
- DENOTES EXISTING 15" WASTEWATER MAIN
- DENOTES EXISTING FLOW DIRECTION ARROWS
- DENOTES PROPOSED GRAVEL BAG

NOTES:

1. SEE SHEET C122 FOR EROSION CONSTRUCTION NOTES AND DETAILS.

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BY	APPR.	DATE

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DATE:	01/03/2022
JOB:	21012B

EROSION CONTROL PLAN

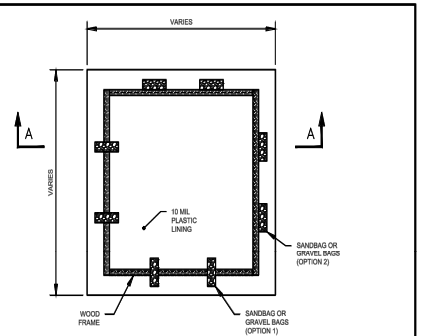
UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

STATE OF TEXAS
ANDREW L. MELLEN
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LICENSED
PROFESSIONAL ENGINEER
09/09/2022

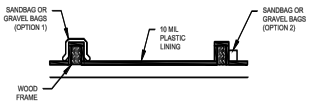
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ELEVATED WASHOUT

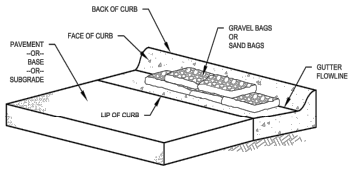


SECTION 'A-A'

NOTES:

1. THIS WASHOUT CONFIGURATION MAY BE USED IN PAVED AREAS.
2. SECURE WASHOUT STRUCTURES AND LININGS WITH SANDBAGS OR GRAVEL BAGS AROUND THE ENTIRE WASHOUT PERIMETER.
3. FILL BAGS TO 60% CAPACITY WITH CLEAN GRAVEL OR CLEAN SAND.
4. PLACE BAGS WITH BAG OPENINGS SECURED AND FACE UP, AND SO THAT EACH BAG IS FLAT AND HAS GREATEST POSSIBLE SURFACE AREA CONTACT WITH THE SURFACE.
5. GRAVEL TO BE NO LESS THAN 1" DIAMETER OR GREATER THAN 2" DIAMETER.
6. WOOD FRAME IS TO BE EQUAL TO OR BETTER THAN TWO-STACKED 2 X12 ROUGH WOOD FRAME.
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.

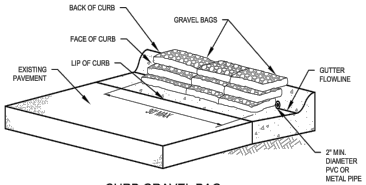
DRAWN: DPM	CHECKED: JCF	APPROVED: JEO	
	EFFECTIVE DATE: PRELIMINARY/WE. UTIL. IMP.]	SCALE: NTS	DETAIL:
MIDLAND Engineering Services	CONCRETE WASHOUT OPTION 3		715



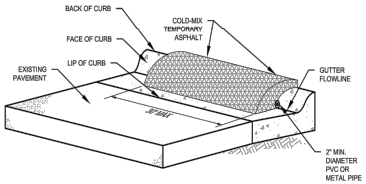
NOTES:

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	
	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
MIDLAND Engineering Services	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	
	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
MIDLAND Engineering Services	TEMPORARY CURB PROTECTION		713

NOTE:

CARE SHOULD BE TAKEN TO AVOID PLACING LARGE QUANTITIES OF SPOILS ON THE ROAD AND OTHER EXCAVATED AREAS. THE AREAS BEING EXCAVATED SHOULD REMAIN CLEAN TO THE MAXIMUM EXTENT PRACTICABLE.

PERMANENT BMP CONSTRUCTION NOTES:

1. GRAVEL BAGS ARE TO BE INSTALLED AT THE NEAREST DOWNSTREAM INTERSECTION FROM ANY PROJECT CONSTRUCTION ACTIVITY.
2. PRIOR TO ANY ANTICIPATED RAIN EVENT, GRAVELS BAGS ARE TO BE INSTALLED AT THE NEAREST DOWNSTREAM INTERSECTION FROM ANY UNCOMPACTED, UNSTABILIZED TRENCHES. REMOVAL OF SEDIMENT FROM GUTTERS IS TO BE DONE AFTER EVERY RAIN EVENT, OR MORE OFTEN IF DEEMED NECESSARY BY CONTRACTOR, INSPECTOR, OR ENGINEER.
3. LOCATED CONCRETE WASHOUT WITHIN PROJECT AREA AND SHIFT AS NECESSARY FOR CONSTRUCTION ACTIVITY. ALL WASHOUT AND OTHER SPOILS ARE TO BE REMOVED FROM SITE. CONCRETE TRUCKS ARE NEVER TO WASHOUT INTO ON-SITE TRENCHES.
4. GENERAL PROJECT WORK ZONE AREA SHOWN FOR REFERENCE. ACTUAL PROJECT WORK ZONE AREA LIMITS TO BE DETERMINED PRIOR TO STARTING CONSTRUCTION ACTIVITY.

GRAVEL BAG INSTALLATION NOTES:

1. GRAVEL BURLAP BAGS SHALL BE PLACED ALONG CURB AND GUTTER AS SHOWN.
2. SUFFICIENT SPACE SHALL BE PROVIDED UPSLOPE FROM BAGS SO THAT PONDING CAN OCCUR.
3. BAGS SHALL BE PLACED FLAT SO THAT THE MAXIMUM POSSIBLE AREA IS IN CONTACT WITH THE GROUND.
4. BAGS SHALL BE REPLACED ONCE EVERY THREE MONTHS, OR MORE OFTEN IF DEEMED NECESSARY BY THE CONTRACTOR, INSPECTOR OF ENGINEER.
5. BAG INSPECTIONS FOR RIPS, TEARS, LEAKS, AND OTHER DAMAGE ARE TO BE CONDUCTED AFTER EVERY RAIN EVENT. THE RESULTS OF THESE INSPECTIONS ARE TO BE DOCUMENTED IN THE SWPPP INSPECTION REPORT.
6. BAG OPENINGS SHALL FACE UP SO THAT THEY ARE NOT IN CONTACT WITH THE GROUND.
7. BAGS SHALL BE FILLED TO 60 PERCENT MAXIMUM CAPACITY WITH 80 PERCENT OR MORE OF THE AGGREGATE BETWEEN THE No. 4 SIEVE AND 3 INCHES IN SIZE.
8. PLACEMENT OF GRAVEL BAGS SHOULD NOT BLOCK ADA WALKING PATHS.

EROSION CONTROL NOTES:

A. INSTALL EROSION CONTROL MEASURES PRIOR TO BEGINNING ANY OTHER PROJECT CONSTRUCTION ACTIVITY.

B. CONTRACTOR IS TO PLACE AND MAINTAIN SANDBAG BMPS AT FIRST CURB OPENING DOWNSTREAM OF ACTIVE CONSTRUCTION AREA. WHEN CONSTRUCTION ACTIVITY OCCURS ON BOTH SIDES OF ROAD THEN CURB OPENINGS ON BOTH SIDES MUST HAVE SANDBAGS PLACED.

C. EROSION CONTROL MEASURES MUST BE MAINTAINED BY CONTRACTOR AT ALL TIMES. REPAIRS TO EXISTING EROSION CONTROL MEASURES MUST BE MADE BY CONTRACTOR IMMEDIATELY UPON DISCOVERING SUCH REPAIRS ARE NEEDED. EXISTING EROSION CONTROL MEASURES MUST BE INSPECTED BY CONTRACTOR IMMEDIATELY FOLLOWING ANY STORM EVENT.

D. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AT THE SOLE DISCRETION OF THE ENGINEER IF AT ANY TIME THE ENGINEER BELIEVES THE EXISTING EROSION CONTROL MEASURES ARE INSUFFICIENT FOR THE NEEDS OF THE PROJECT SITE.

E. CONTRACTOR IS TO MAINTAIN A REASONABLY CLEAN PROJECT SITE AT ALL TIMES. ANY SEDIMENT, DEBRIS, ETC. OUTSIDE PROJECT SITE ARE TO BE REMOVED PROMPTLY.

F. ANY ON-SITE STORAGE OF SPOILS, MATERIALS, OR EQUIPMENT ARE TO BE LOCATED WITHIN APPROVED STORAGE DESIGNATED AS PART OF WORK ZONE AREA.

G. ALL STOCKPILES ARE TO BE SURROUNDED BY SILT FENCE OR EQUIVALENT MEASURES AS APPROVED BY ENGINEER TO PROPERLY CONTROL SEDIMENT RUNOFF.

H. CONCRETE TRUCKS CANNOT UNDER ANY CIRCUMSTANCE WASHOUT IN UTILITY TRENCH. CONTRACTOR IS TO PROVIDE A WASHOUT CONTAINER FOR CONCRETE TRUCKS AND MUST REMOVE ALL WASHOUT AND SPOILS FROM PROJECT SITE.

I. CONTRACTOR IS REQUIRED AT A MINIMUM TO REMOVE AND DISPOSE OF ACCUMULATED SILT, SEDIMENT, OR OTHER DEBRIS FROM EROSION CONTROLS WHEN SILT, SEDIMENT, OR OTHER DEBRIS HAVE REACHED A HEIGHT EQUAL TO HALF THAT OF EROSION CONTROL PLACED OR IMPEED THEIR EFFECTIVENESS.

J. CONTRACTOR IS TO REMOVE ALL TEMPORARY EROSION CONTROL MEASURES FROM PROJECT SITE UPON COMPLETION OF CONSTRUCTION ACTIVITY ONCE PROJECT SITE IS STABILIZED. THIS IS CONSIDERED SUBSIDIARY TO THIS PROJECT SCOPE.

K. DAMAGES TO ADJACENT PROPERTY OR TO RECEIVING WATERS CAUSED BY IMPROPERLY INSTALLED OR POORLY MAINTAINED EROSION CONTROL MEASURES ARE SOLE RESPONSIBILITY OF CONTRACTOR.

GENERAL NOTES:

1). IT IS THE INTENT OF THE INFORMATION PROVIDED ON THIS SHEET AND WITHIN THE SPECIFICATIONS TO BE USED AS THE GENERAL GUIDELINES OF THE STORM WATER POLLUTION PREVENTION PLAN FOR THIS PROJECT TO ESTABLISH A MINIMUM BASIS OF THE COMPLIANCE WITH TPDES REGULATIONS. THE CONTRACTOR SHALL FILE NOTICE OF INTENT (NOI) TO BE COVERED BY TCDES CONSTRUCTION GENERAL PERMIT, TXR 150000.

2). THE STORM WATER POLLUTION PREVENTION PLAN SHOULD ADDRESS THREE GOALS: TO DIVERT WATER FROM UPSLOPE AREAS AROUND DISTURBED AREAS OF THE SITE, TO LIMIT EXPOSURE OF DISTURBED AREAS TO THE SHORTEST DURATION POSSIBLE, AND TO REMOVE SEDIMENT FROM STORM WATER BEFORE IT LEAVES THE SITE.

3). THE CONTRACTOR SHALL MAKE THE STORM WATER POLLUTION PREVENTION PLAN AVAILABLE UPON REQUEST, TO THE TCEQ.

4). THE CONTRACTOR MUST AMEND THE STORM WATER POLLUTION PREVENTION PLAN WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE OF THE PLAN, OR WHEN THE EXISTING PLAN PROVES INEFFECTIVE. MODIFICATIONS INCLUDING DESIGN AND ALL ADDITIONAL MATERIALS AND WORK SHALL BE ACCOMPLISHED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. NO CHANGE TO EROSION CONTROL MEASURES SHOWN ON THESE PLANS AND SPECIFICATIONS SHALL BE MADE WITHOUT CONSENT OF OWNER AND ENGINEER.

5). STABILIZATION MEASURES ARE TO BE INSPECTED AT A MINIMUM OF ONCE EVERY SEVEN DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCHES. REPAIRS OF INADEQUACIES REVEALED BY THE INSPECTIONS MUST BE IMPLEMENTED WITHIN SEVEN CALENDAR DAYS FOLLOWING THE INSPECTION.

6). AN INSPECTION REPORT THAT SUMMARIZES INSPECTION ACTIVITIES AND IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE MAINTAINED AND MADE PART OF THE PLAN.

7). ALL CONTRACTORS AND SUBCONTRACTORS IDENTIFIED IN THE PLAN MUST CERTIFY AS TO AN UNDERSTANDING OF THE NPDES CONSTRUCTION GENERAL PERMIT BEFORE CONDUCTING ANY ACTIVITY IDENTIFIED IN THE STORM WATER POLLUTION PREVENTION PLAN.

8). THE CONTRACTOR SHALL IMPLEMENT APPROPRIATE CONSTRUCTION SITE MANAGEMENT PRACTICES TO PREVENT THE DISCHARGE OF OILS, GREASE, PAINTS, GASOLINE, AND OTHER POLLUTANTS TO STORM WATER. APPROPRIATE PRACTICES CAN INCLUDE: DESIGNATION OF EQUIPMENT MAINTENANCE AND REPAIR, REGULAR COLLECTION OF WASTE, CONVENIENTLY LOCATED WASTE RECEPTACLES, AND DESIGNATING AND CONTROL EQUIPMENT WASHING.

9). THE CONTRACTOR SHALL AMEND OR MODIFY THIS PLAN AS REQUIRED BY CONSTRUCTION MEANS, METHODS, AND SEQUENCE. MODIFICATIONS SHALL NOT COMPROMISE THE INTENT OF THE REQUIREMENTS OF THE LAW AND THIS PLAN. MODIFICATIONS SHALL NOT BE BASIS FOR ADDITIONAL COST TO THE OWNER.

10). AREAS OF CONSTRUCTION ELSEWHERE ON THE JOB SITE SHALL CONFORM TO THE DETAILS SHOWN ON THE PLANS.



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October 25, 2022

8.257

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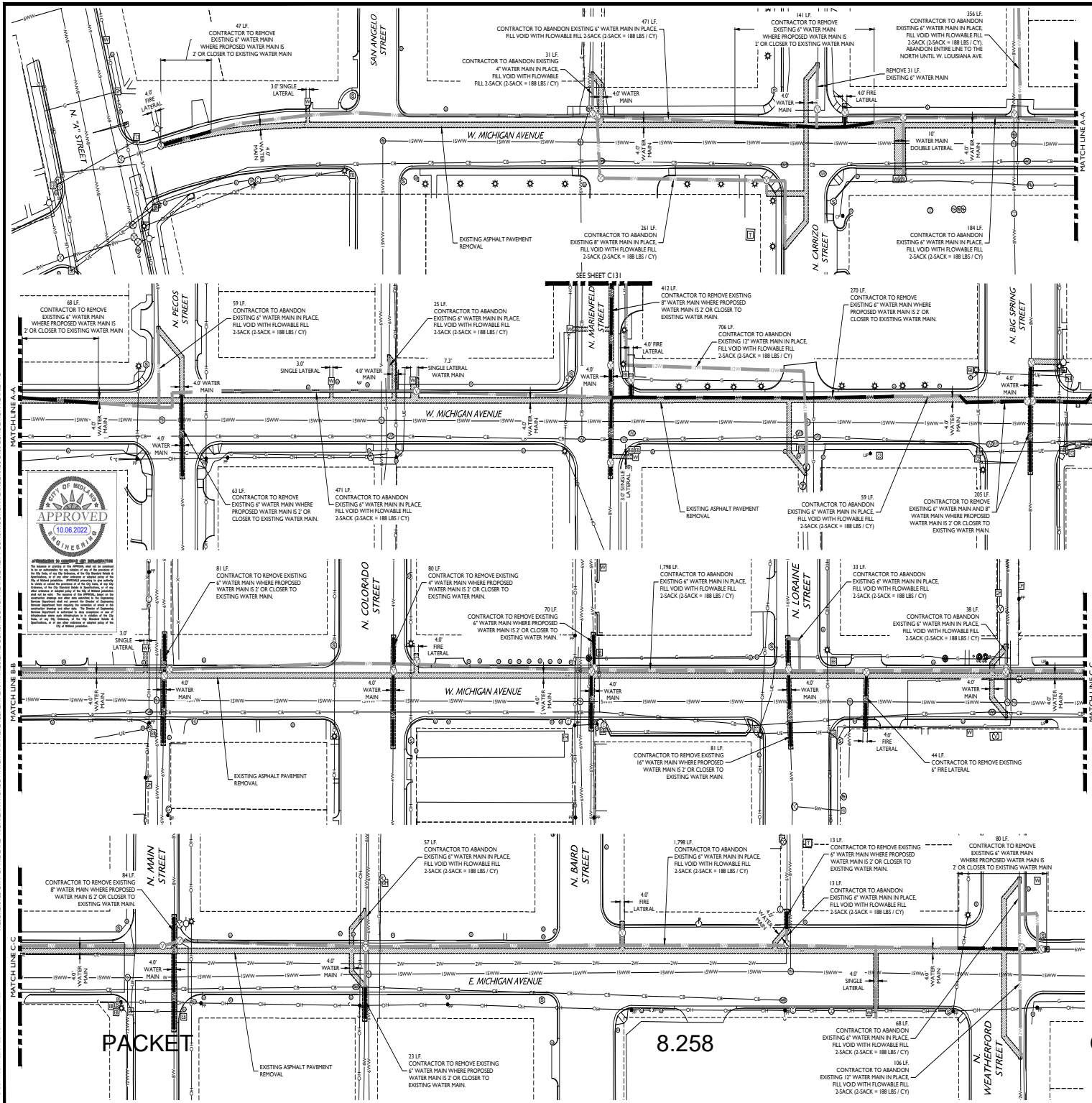
DRAWN BY: MJD
CHECKED BY: ALM
APPROVED BY: ALM
DATE: 01/03/2022
JOB: 210128

EROSION CONTROL DETAILS AND NOTES

UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED
PROFESSIONAL ENGINEER
09/03/2022

SHEET C122 OF 23



0' 40' 80' 120'

SCALE 1" = 40'

LEGEND

- DENOTES EXISTING WATER VALVE
- DENOTES EXISTING FIRE HYDRANT
- DENOTES EXISTING WATER METER
- DENOTES EXISTING POST INDICATOR VALVE
- DENOTES EXISTING WASTEWATER MANHOLE
- DENOTES EXISTING WASTEWATER CLEANOUT
- DENOTES EXISTING POWER POLE
- DENOTES EXISTING UTILITY POWER POLE
- DENOTES EXISTING LIGHT POLE
- DENOTES EXISTING GUY ANCHOR
- DENOTES EXISTING TRANSFORMER PAD
- DENOTES EXISTING ELECTRIC BOX
- DENOTES EXISTING TRAFFIC CONTROL BOX
- DENOTES EXISTING FIBER OPTIC MARKER
- DENOTES EXISTING SOUTHWESTERN BELL MANHOLE
- DENOTES EXISTING CABLE BOX
- DENOTES EXISTING CABLE SIGN
- DENOTES EXISTING TELEPHONE PEDESTAL
- DENOTES EXISTING GAS METER
- DENOTES EXISTING GAS MARKER
- DENOTES EXISTING GAS RISER
- DENOTES EXISTING CAMERA POST
- DENOTES EXISTING STREET SIGN
- DENOTES EXISTING STOP SIGN
- DENOTES EXISTING TRAFFIC SIGNAL LIGHT
- DENOTES EXISTING LOT LINES
- OH — DENOTES EXISTING OVERHEAD ELECTRIC LINE
- G — DENOTES EXISTING GAS LINE
- 4W — DENOTES EXISTING 4" WATER MAIN
- 6W — DENOTES EXISTING 6" WATER MAIN
- 8W — DENOTES EXISTING 8" WATER MAIN
- 6WW — DENOTES EXISTING 6" WASTEWATER MAIN
- 8WW — DENOTES EXISTING 8" WASTEWATER MAIN
- 15WW — DENOTES EXISTING 15" WASTEWATER MAIN

DEMOLITION GENERAL NOTES:

A. ALL DEMOLITION DIMENSIONS ARE APPROXIMATE BASED ON THE MOST RELIABLE DATA AVAILABLE. CONTRACTOR IS TO FIELD VERIFY ACTUAL DIMENSIONS AND NOTIFY ENGINEER OF QUANTITY INCREASES OR DISCREPANCIES.

B. ALL SAW-CUTS FOR PAVEMENT REMOVAL ARE TO BE CUT IN CLEAN, STRAIGHT LINES.

C. NO EXISTING INFRASTRUCTURE IS TO BE REMOVED THAT IS NOT NOTED FOR REMOVAL ON THIS SHEET WITHOUT WRITTEN CONFIRMATION FROM ENGINEER PRIOR TO SUCH REMOVAL TAKING PLACE. ANY EXISTING INFRASTRUCTURE DAMAGE OR REMOVED BY CONTRACTOR THAT IS NOT NOTED ON THIS SHEET MUST BE REPAIRED OR REPLACED TO EQUAL OR BETTER CONDITION AT CONTRACTOR'S SOLE EXPENSE.

D. NOTIFY ENGINEER OF ANY CONFLICTS OR DISCREPANCIES BEFORE REMOVING ANYTHING NOTED FOR REMOVAL.

E. TYPICAL TRENCH PAVEMENT REPAIR WIDTH IS ANTICIPATED TO BE 4.0' FOR WATER MAIN AND FIRE LATERAL TRENCHES, AND 3.0' FOR WATER SERVICE LATERAL TRENCHES. CONTRACTOR IS TO OBTAIN PERMISSION FROM ENGINEER PRIOR TO INCREASING TYPICAL TRENCH PAVEMENT REPAIR WIDTHS.

F. SEE SHEETS C130 & C131 FOR EXISTING WATER MAIN DEMOLITION CALL OUT NOTES.

G. REMOVE OLD EXISTING WATER SERVICE LATERALS, METERS, AND METER BOXES PER PLANS. PLACE NEW WATER METERS AND BOXES IN SAME LOCATION AS EXISTING METERS. NEW METERS ARE TO BE CONNECTED TO EXISTING ON-SITE PLUMBING.

* CONTRACTOR IS TO INSPECT EXISTING METER AND METER BOX BEFORE PROCEEDING WITH THEIR REMOVAL. IF EXISTING ON-SITE PLUMBING APPEARS TO BE DAMAGED OR LEAKING PRIOR TO CONSTRUCTION ACTIVITY OCCURRING, THEN CONTRACTOR IS TO NOTIFY CITY INSPECTOR AND WAIT FOR DIRECTION FROM CITY BEFORE PROCEEDING.

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TEXAS SURVEY FIRM #: 10194514
Tel: (432) 262-0999 Fax: (432) 262-0989
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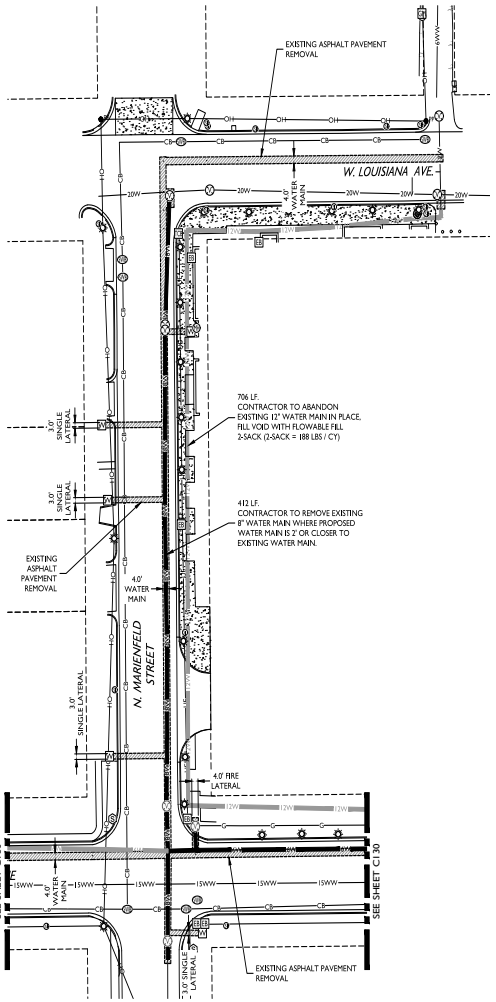
DEMOLITION AND PAVING PLAN

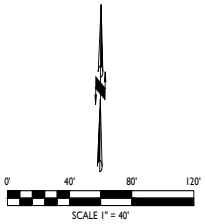
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SHEET C130 OF 23

P:\2021\210128\CITY OF MIDLAND-MICHIGAN AVENUE\8 WATER MAIN REPLACEMENT\DWG\SIV\CIVIL CONSTRUCTION PLANS\210128 C130 DEMOLITION PLAN.DWG
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PACKET 8.258 October 25, 2022





LEGEND

- DENOTES EXISTING WATER VALVE
- DENOTES EXISTING FIRE HYDRANT
- DENOTES EXISTING WATER METER
- DENOTES EXISTING POST INDICATOR VALVE
- DENOTES EXISTING WASTEWATER MANHOLE
- DENOTES EXISTING WASTEWATER CLEANOUT
- DENOTES EXISTING POWER POLE
- DENOTES EXISTING UTILITY POWER POLE
- DENOTES EXISTING LIGHT POLE
- DENOTES EXISTING GUY ANCHOR
- DENOTES EXISTING TRANSFORMER PAD
- DENOTES EXISTING ELECTRIC BOX
- DENOTES EXISTING TRAFFIC CONTROL BOX
- DENOTES EXISTING FIBER OPTIC MARKER
- DENOTES EXISTING SOUTHWESTERN BELL MANHOLE
- DENOTES EXISTING CABLE BOX
- DENOTES EXISTING CABLE SIGN
- DENOTES EXISTING TELEPHONE PEDESTAL
- DENOTES EXISTING GAS METER
- DENOTES EXISTING GAS MARKER
- DENOTES EXISTING GAS RISER
- DENOTES EXISTING CAMERA POST
- DENOTES EXISTING STREET SIGN
- DENOTES EXISTING STOP SIGN
- DENOTES EXISTING TRAFFIC SIGNAL LIGHT
- DENOTES EXISTING LOT LINES
- DENOTES EXISTING OVERHEAD ELECTRIC LINE
- DENOTES EXISTING GAS LINE
- DENOTES EXISTING 4" WATER MAIN
- DENOTES EXISTING 6" WATER MAIN
- DENOTES EXISTING 8" WATER MAIN
- DENOTES EXISTING 6" WASTEWATER MAIN
- DENOTES EXISTING 8" WASTEWATER MAIN
- DENOTES EXISTING 15" WASTEWATER MAIN

ESTIMATED DEMOLITION QUANTITIES		
QUANTITY	UNIT	DESCRIPTION
2,645	SY	EXISTING ASPHALT PAVEMENT REMOVAL
4870	LF	ABANDON EXISTING WATER MAIN IN PLACE, FILL VOID FLOWABLE FILL 2-SACK (2-SACK = 188 LBS / CY)
1761	LF	REMOVE EXISTING WATER MAIN

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CITY OF MIDLAND APPROVED ENGINEERING 10.06.2022

APPROVED FOR CONFORMITY WITH ORDINANCES

The issuance or granting of this APPROVAL shall not be construed to be or authorization for any violation of any of the provisions of the City Code, or any City Ordinance, or the Standard Specifications, or of any other ordinance or regulation of the City of Midland jurisdiction. APPROVALS presumes that all work performed will be in accordance with the Standard Specifications of the City Standard Details & Specifications, and other ordinances or related acts of the City of Midland jurisdiction. The City of Midland Engineering Services Department and its construction inspectors and other acts committed by the Engineering Services Department shall not prevent the Director of Engineering Services Department from requiring the correction of errors in the construction drawings and other acts. The Director of Engineering Services Department is authorized to stop acceptance of any of infrastructure where such infrastructure is in violation of the City Code, of any City Ordinance, of the City Standard Details & Specifications, or of any other adopted policy of the City of Midland jurisdiction.

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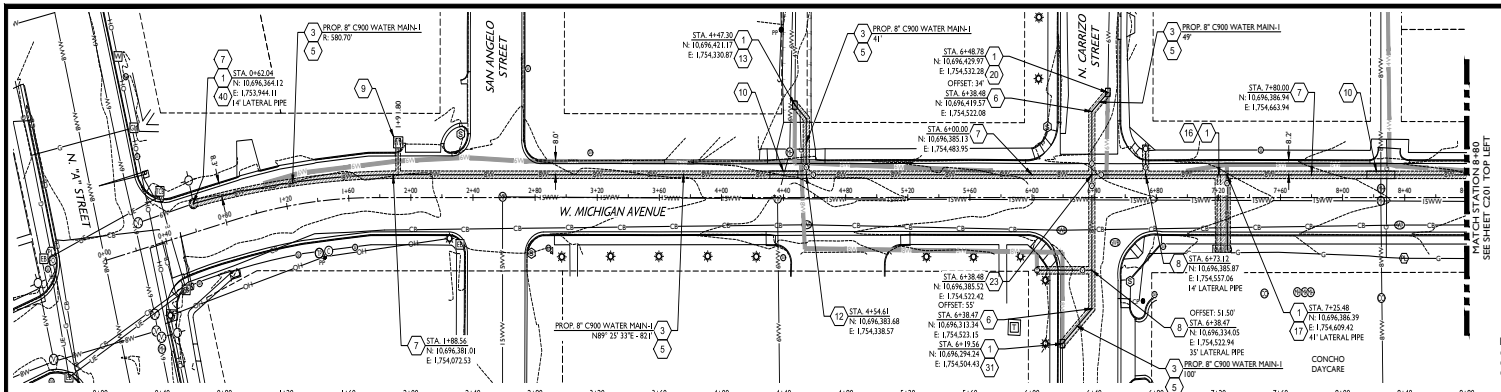
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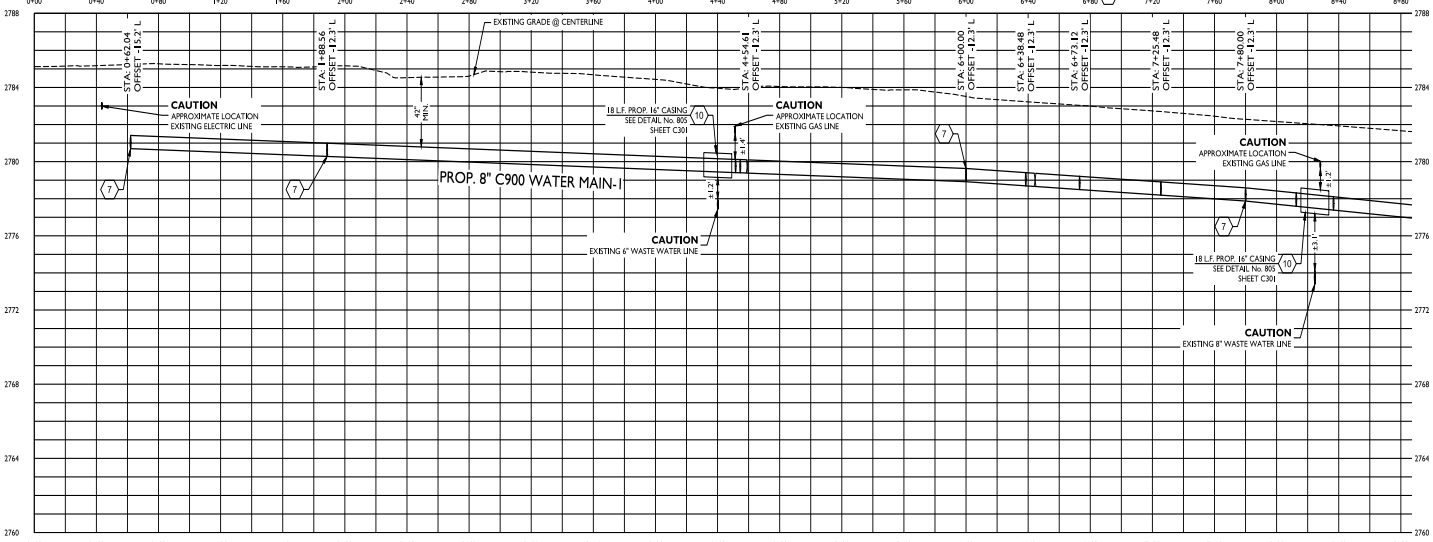
SHEET C131 OF 23

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NOTE:
CONCHO DAYCARE CAN ONLY BE OUT OF WATER FOR ONE HOUR DURING HOURS OF OPERATION



HORIZONTAL SCALE 1" = 40'
VERTICAL SCALE 1" = 4'

LEGEND

- DENOTES EXISTING WATER VALVE
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- DENOTES EXISTING LOT LINES
- DENOTES EXISTING OVERHEAD ELECTRIC LINE
- DENOTES EXISTING GAS LINE
- DENOTES EXISTING 4" WATER MAIN
- DENOTES EXISTING 6" WATER MAIN
- DENOTES EXISTING 8" WATER MAIN
- DENOTES EXISTING 16" WATER MAIN
- DENOTES EXISTING 6" WASTEWATER MAIN
- DENOTES EXISTING 8" WASTEWATER MAIN
- DENOTES EXISTING 15" WASTEWATER MAIN
- DENOTES PROPOSED FIRE HYDRANT
- DENOTES PROPOSED WATER VALVE
- DENOTES PROPOSED WATER METER
- DENOTES PROPOSED 6" WATER MAIN
- DENOTES PROPOSED 8" WATER MAIN
- DENOTES PROPOSED 16" WATER MAIN

ENGINEER'S UTILITY NOTES:

- CONTRACTOR TO VERIFY ALL EXISTING UTILITY TIE-IN CONNECTIONS AND VERIFY LOCATION AND ELEVATION PRIOR TO CONSTRUCTION.
- CITY OF MIDLAND TO BE NOTIFIED 48 HOURS BEFORE ANY CONSTRUCTION BEGINS.
- PIPE DEFLECTION IS TO BE PER MANUFACTURER'S RECOMMENDATIONS OR PER CITY REQUIREMENTS, WHICHEVER ALLOWS THE LESSER AMOUNT OF DEFLECTION.
- ALL UTILITIES TO BE INSTALLED PER TEXAS ADMINISTRATIVE CODE (TAC) STANDARD SEPARATION SPECIFICATIONS.
- A TWO (2) FOOT MINIMUM VERTICAL SEPARATION IS TO BE PROVIDED BETWEEN ANY SEWER MAIN/LINE CROSSING A WATER MAIN/LINE.
- EXCEPTIONS OR DEVIATIONS FROM THE ABOVE MINIMUM CLEARANCES MUST BE APPROVED AND SHOWN ON THE APPROVED WATER AND SEWER PLANS. WHEN UTILITY CONFLICTS ARE FOUND DURING CONSTRUCTION, ALL CHANGES AND REVISIONS MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
- ANY AND ALL MORE STRINGENT REQUIREMENTS REQUIRED BY FEDERAL, STATE, COUNTY OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
- ALL CONSTRUCTION IN THE RIGHT OF WAY IS TO CONFORM TO THE CITY OF MIDLAND STANDARDS.
- CONCRETE OR ASPHALT DAMAGED DURING THE COURSE OF CONSTRUCTION IS TO BE REMOVED AND REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE ENGINEER OR THE CITY OF MIDLAND PRIOR TO FINAL INSPECTION.
- WATER IS TO BE C-900 PVC PIPE UNLESS NOTED OTHERWISE.
- THE CONTRACTOR IS TO PROVIDE ALL THRUST BLOCKING AT ALL FITTINGS AND BENDS AS REQUIRED. COMPLY WITH DETAILS IN THE CITY OF MIDLAND'S DESIGN & CONSTRUCTION STANDARDS.
- THE CONTRACTOR IS TO KEEP ALL EXISTING WATER AND SEWER MAINS IN SERVICE DURING CONSTRUCTION.

WATER CONSTRUCTION NOTES:

TYP. (1) CAUTION: CONTRACTOR TO VERIFY UTILITY SIZE, LOCATION, ELEVATION AND TYPE PRIOR TO CONSTRUCTION AND INFORM ENGINEER OF CONFLICTS.

2. INSTALL 16" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
3. INSTALL 8" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
4. INSTALL 6" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
5. INSTALL METALLIC TRACER TAPE. CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. INSTALL 8" 45° HORIZONTAL BEND (M)x(M) PER CITY OF MIDLAND PER CITY OF MIDLAND DETAIL No. 616 ON SHEET C304.
7. BEGIN/END WATER MAIN DEFLECTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
8. INSTALL 1 EA. 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "E" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL FIRE HYDRANT ASSEMBLY PER CITY OF MIDLAND DETAIL No. 603 SEE SHEET C302. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
9. INSTALL NEW 2" WATER METER AND NEW WATER SERVICE LATERAL TO REPLACE EXISTING WATER METER AND WATER SERVICE LATERAL PER CITY OF MIDLAND DETAIL No. 604 (A) & 604(B) SEE SHEET C302. ANY SIDEWALK DISTURBED HAS TO BE REPLACED PER CITY OF MIDLAND DETAIL No. 225 SEE SHEET C304. REPLACE SIDEWALK TO NEAREST JOINT. CONTRACTOR TO INFORM EXISTING BUSINESS 3 DAYS PRIOR TO CONSTRUCTION.
10. INSTALL 16" DIAMETER AWWA C900 DR-18 PVC PIPE CASING PER CITY OF MIDLAND DETAILS 307 & 308 ON SHEETS C300. FOR TYPICAL ENCASEMENT, SEE CITY OF MIDLAND DETAIL 805 ON SHEET C301.
11. INSTALL 12" 45° HORIZONTAL BEND (M)x(M) PER CITY OF MIDLAND PER CITY OF MIDLAND DETAIL No. 616 ON SHEET C304.
12. INSTALL 1 EA. 8"x8" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 2 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
13. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 4" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x4" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
14. INSTALL 1 EA. 8"x8" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
15. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
16. RECONNECT EXISTING/NEW 2" WATER SERVICE LATERAL TO PROPOSED 8" WATER MAIN PER CITY OF MIDLAND DETAIL No. 604 (A) & 604(B) SEE SHEET C302.
17. INSTALL 1 EA. 8"x4" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "F" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. RECONNECT EXISTING PIV ASSEMBLY PER CITY OF MIDLAND DETAIL F01 SEE SHEET C305. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
18. INSTALL 1 EA. 45° VERTICAL BEND (M)x(M) PER CITY OF MIDLAND DETAIL No. 612 AND 613 SEE SHEET C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
19. INSTALL 1 EA. 45° VERTICAL BEND (M)x(M) PER CITY OF MIDLAND DETAIL No. 612 AND 613 SEE SHEET C303. INSTALL 1 EA. 8"x8" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
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21. INSTALL 1 EA. 8"x8" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
22. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 8" WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
23. INSTALL 1 EA. 8"x8" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
24. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
25. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 4" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x4" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
26. INSTALL 1 EA. 16"x16" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "A" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 16" HORIZONTAL GATE VALVES WITH VALVE BOXES (M)x(M). (EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B), 609 SEE SHEET C303. INSTALL 1 EA. 16"x8" REDUCERS (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
27. TIE-IN PROPOSED 16" WATER MAIN TO EXISTING 16" WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 16" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
28. INSTALL 1 EA. 12"x12" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
29. TIE-IN PROPOSED 6" WATER MAIN TO EXISTING 6" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. ~~INSTALL 1 EA. 6" DRESSER COUPLING.~~ INSTALL 2 EA. 6" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
30. INSTALL 1 EA. 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 6" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 1 EA. 6" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
31. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 8" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. ~~INSTALL 1 EA. 8" DRESSER COUPLING.~~ INSTALL 2 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
32. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 2" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x2" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
33. TIE-IN PROPOSED 12" WATER MAIN TO EXISTING 12" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. ~~INSTALL 1 EA. 12" DRESSER COUPLING.~~ INSTALL 2 EA. 12" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
34. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
35. INSTALL 12" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
36. INSTALL 1 EA. 12"x12" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 12" GATE VALVES WITH VALVE BOXES (M)x(M). INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEET C303. INSTALL 2 EA. 12"x8" REDUCERS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
37. INSTALL 1 EA. 12"x12" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 1 EA. 12"x8" REDUCER. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
38. INSTALL 1 EA. 8"x4" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "E" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL FIRE HYDRANT ASSEMBLY PER CITY OF MIDLAND DETAIL No. 603 SEE SHEET C302. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
39. INSTALL 12" 90° BEND (M)x(M) PER CITY OF MIDLAND DETAIL No. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
40. CONTRACTOR TO TIE-IN EXISTING WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR PRESSURE COUPLING. FIELD VERIFY EXISTING CONDITIONS PIPE AND MATERIALS. ~~INFORM THE ENGINEER OF RECORD OF ANY DEVIATION TO A DRESSER COUPLING SOLUTION.~~ EXISTING TEE FITTING, VALVE, AND FIRE HYDRANT AT TIE-IN TO REMAIN.
41. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 12" CAP AND BLOCKING PER CITY OF MIDLAND DETAIL 617 SEE SHEET C302.
42. CONTRACTOR TO REMOVE EXISTING WATER VALVE AND CAP EXISTING TEE.

APPROVED AS NOTED
10.06.2022
ENGINEERING

ADMINISTRATION OF CONSTRUCTION OBSERVATION
The issuance or granting of this APPROVAL shall not be construed to be a permit for, or an approval of, any violation of any provision of the Code of Ordinances, City of Midland, Texas, or of any other ordinance or regulation of the City of Midland. The issuance of this APPROVAL based on the construction drawings and other data submitted to the Engineering Department shall not prevent the City of Midland Engineering Services Department from requiring the correction of errors in the construction drawings and other data. The Director of Engineering Services is authorized to enforce any provision of the Code of Ordinances, City of Midland, Texas, or any other ordinance or regulation of the City of Midland pertaining to the construction of public improvements.

811 Know what's below. Call before you dig.

PACKET 8.260 October 25, 2022

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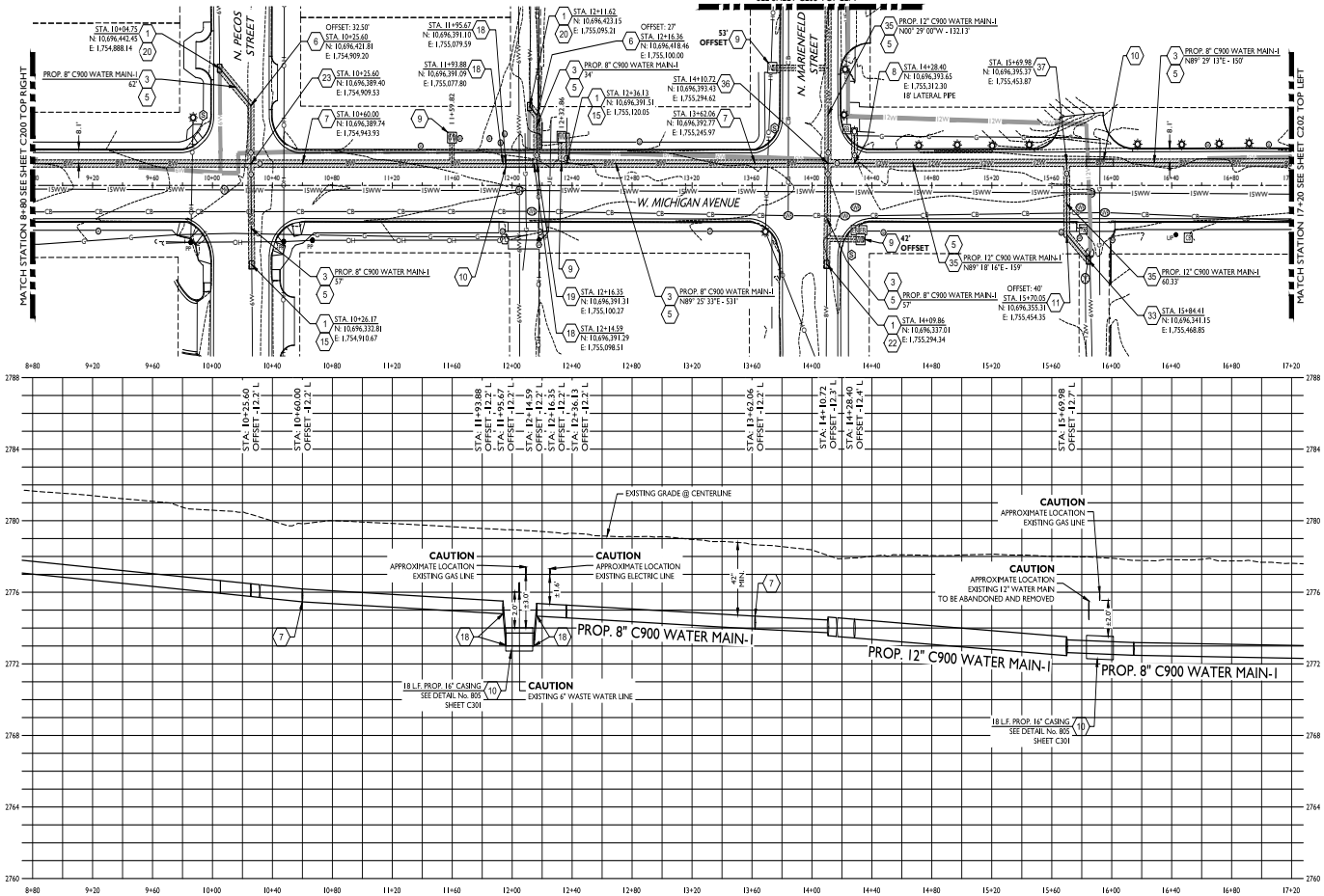
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APPROVED BY: ALM
DATE: 01/03/2022
JOB: 210128

WATER MAIN-1 PLAN & PROFILE

UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED
PROFESSIONAL ENGINEER
09/09/2022

SHEET C200 OF 23



ENGINEER'S UTILITY NOTES:

- CONTRACTOR TO VERIFY ALL EXISTING UTILITY, TIE-IN CONNECTIONS AND VERIFY LOCATION AND ELEVATION PRIOR TO CONSTRUCTION.
- CITY OF MIDLAND TO BE NOTIFIED 48 HOURS BEFORE ANY CONSTRUCTION BEGINS.
- PIPE DEFLECTION IS TO BE PER MANUFACTURER'S RECOMMENDATIONS OR PER CITY REQUIREMENTS, WHICHEVER ALLOWS THE LESSER AMOUNT OF DEFLECTION.
- ALL UTILITIES TO BE INSTALLED PER TEXAS ADMINISTRATIVE CODE (TAC) STANDARD SEPARATION SPECIFICATIONS.
- A TWO (2) FOOT MINIMUM VERTICAL SEPARATION IS TO BE PROVIDED BETWEEN ANY SEWER MAIN/LINE CROSSING A WATER MAIN/LINE.
- EXCEPTIONS OR DEVIATIONS FROM THE ABOVE MINIMUM CLEARANCES MUST BE APPROVED AND SHOWN ON THE APPROVED WATER AND SEWER PLANS. WHEN UTILITY CONFLICTS ARE FOUND DURING CONSTRUCTION, ALL CHANGES AND REVISIONS MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
- ANY AND ALL MORE STRINGENT REQUIREMENTS REQUIRED BY FEDERAL, STATE, COUNTY OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
- ALL CONSTRUCTION IN THE RIGHT OF WAY IS TO CONFORM TO THE CITY OF MIDLAND STANDARDS.
- CONCRETE OR ASPHALT DAMAGED DURING THE COURSE OF CONSTRUCTION IS TO BE REMOVED AND REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE ENGINEER OR THE CITY OF MIDLAND PRIOR TO FINAL INSPECTION.
- WATER IS TO BE C-900 PVC PIPE UNLESS NOTED OTHERWISE.
- THE CONTRACTOR IS TO PROVIDE ALL THRUST BLOCKING AT ALL FITTINGS AND BENDS AS REQUIRED, COMPLY WITH DETAILS IN THE CITY OF MIDLAND'S DESIGN & CONSTRUCTION STANDARDS.
- THE CONTRACTOR IS TO KEEP ALL EXISTING WATER AND SEWER MAINS IN SERVICE DURING CONSTRUCTION.

WATER CONSTRUCTION NOTES:

TYP. (1) CAUTION: CONTRACTOR TO VERIFY UTILITY SIZE, LOCATION, ELEVATION AND TYPE PRIOR TO CONSTRUCTION AND INFORM ENGINEER OF CONFLICTS.

2. INSTALL 16" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
3. INSTALL 8" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
4. INSTALL 6" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
5. INSTALL METALLIC TRACER TAPE. CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. INSTALL 8" 45° HORIZONTAL BEND (M)x(M) PER CITY OF MIDLAND PER CITY OF MIDLAND DETAIL No. 616 ON SHEET C304.
7. BEGIN/END WATER MAIN DEFLECTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
8. INSTALL 1 EA. 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "F" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL FIRE HYDRANT ASSEMBLY PER CITY OF MIDLAND DETAIL No. 603 SEE SHEET C302. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
9. INSTALL NEW 2" WATER METER AND NEW WATER SERVICE LATERAL TO REPLACE EXISTING WATER METER AND WATER SERVICE LATERAL PER CITY OF MIDLAND DETAIL No. 604 (A) & 604(B) SEE SHEET C302. ANY SIDEWALK DISTURBED HAS TO BE REPLACED PER CITY OF MIDLAND DETAIL No. 225 SEE SHEET C304. REPLACE SIDEWALK TO NEAREST JOINT. CONTRACTOR TO INFORM EXISTING BUSINESS 3 DAYS PRIOR TO CONSTRUCTION.
10. INSTALL 16" DIAMETER AWWA C900 DR-18 PVC PIPE CASING PER CITY OF MIDLAND DETAILS 307 & 308 ON SHEETS C300. FOR TYPICAL ENCASEMENT, SEE CITY OF MIDLAND DETAIL 805 ON SHEET C301.
11. INSTALL 12" 45° HORIZONTAL BEND (M)x(M) PER CITY OF MIDLAND PER CITY OF MIDLAND DETAIL No. 616 ON SHEET C304.
12. INSTALL 1 EA. 8"x8" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 2 EA. 8" GATE VALVE WITH VALVE BOXES (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
13. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 4" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x4" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
14. INSTALL 1 EA. 8"x8" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
15. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT. INSTALL 1 EA. 8"x6" REDUCER (M)x(M) PER CITY OF MIDLAND DETAIL No. 616 SEE SHEET C304. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
16. INSTALL 1 EA. 16"x16" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "A" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 16" HORIZONTAL GATE VALVES WITH VALVE BOXES (M)x(M). (1 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M). PER CITY OF MIDLAND DETAIL No. 608(A), 608(B), 609 SEE SHEET C303. INSTALL 1 EA. 16"x8" REDUCERS (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
17. TIE-IN PROPOSED 16" WATER MAIN TO EXISTING 16" WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 16" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
18. INSTALL 1 EA. 12"x12" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
19. TIE-IN PROPOSED 6" WATER MAIN TO EXISTING 6" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. ~~INSTALL 1 EA. 6" DRESSER COUPLING~~ INSTALL 2 EA. 6" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
20. INSTALL 1 EA. 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 6" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 1 EA. 6" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
21. INSTALL 1 EA. 8"x8" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
22. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 8" WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
23. INSTALL 1 EA. 8"x8" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
24. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 8" WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
25. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 4" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x4" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
26. INSTALL 1 EA. 16"x16" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "A" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 16" HORIZONTAL GATE VALVES WITH VALVE BOXES (M)x(M). (1 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M). PER CITY OF MIDLAND DETAIL No. 608(A), 608(B), 609 SEE SHEET C303. INSTALL 1 EA. 16"x8" REDUCERS (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
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28. INSTALL 1 EA. 12"x12" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
29. TIE-IN PROPOSED 6" WATER MAIN TO EXISTING 6" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS ~~INSTALL 1 EA. 6" DRESSER COUPLING~~ INSTALL 2 EA. 6" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
30. INSTALL 1 EA. 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 6" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 1 EA. 6" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
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32. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 2" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x2" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
33. TIE-IN PROPOSED 12" WATER MAIN TO EXISTING 12" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. ~~INSTALL 1 EA. 12" DRESSER COUPLING.~~ INSTALL 2 EA. 12" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
34. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
35. INSTALL 12" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
36. INSTALL 1 EA 12"x12" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 12" GATE VALVES WITH VALVE BOXES (M)x(M). INSTALL 1 EA 8" GATE VALVE WITH VALVE BOX (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 1 EA. 12"x8" REDUCERS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
37. INSTALL 1 EA 12"x12" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 1 EA. 12"x8" REDUCER. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
38. INSTALL 1 EA 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "E" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL FIRE HYDRANT ASSEMBLY PER CITY OF MIDLAND DETAIL No. 603 SEE SHEET C302. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
39. INSTALL 12" 90° BEND (M)x(M) PER CITY OF MIDLAND DETAIL No. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
40. CONTRACTOR TO TIE-IN EXISTING WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR PRESSURE COUPLING. FIELD VERIFY EXISTING CONDITIONS PIPE AND MATERIALS. ~~INFORM TIE ENGINEER OF RECORD OF ANY DEVIATION TO A DRESSER COUPLING SOLUTION.~~ EXISTING TEE FITTING, VALVE, AND FIRE HYDRANT AT TIE-IN TO REMAIN.
41. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 12" CAP AND BLOCKING PER CITY OF MIDLAND DETAIL 617 SEE SHEET C302.
42. CONTRACTOR TO REMOVE EXISTING WATER VALVE AND CAP EXISTING TEE.

LEGEND

- DENOTES EXISTING WATER VALVE
- DENOTES EXISTING FIRE HYDRANT
- DENOTES EXISTING WATER METER
- DENOTES EXISTING POST INDICATOR VALVE
- DENOTES EXISTING WASTEWATER MANHOLE
- DENOTES EXISTING WASTEWATER CLEANOUT
- DENOTES EXISTING POWER POLE
- DENOTES EXISTING UTILITY POWER POLE
- DENOTES EXISTING LIGHT POLE
- DENOTES EXISTING GUY ANCHOR
- DENOTES EXISTING TRANSFORMER PAD
- DENOTES EXISTING ELECTRIC BOX
- DENOTES EXISTING TRAFFIC CONTROL BOX
- DENOTES EXISTING FIBER OPTIC MARKER
- DENOTES EXISTING SOUTHWESTERN BELL MANHOLE
- DENOTES EXISTING CABLE BOX
- DENOTES EXISTING CABLE SIGN
- DENOTES EXISTING TELEPHONE PEDESTAL
- DENOTES EXISTING GAS METER
- DENOTES EXISTING GAS MARKER
- DENOTES EXISTING GAS RISER
- DENOTES EXISTING CAMERA POST
- DENOTES EXISTING STREET SIGN
- DENOTES EXISTING STOP SIGN
- DENOTES EXISTING TRAFFIC SIGNAL LIGHT
- DENOTES EXISTING LOT LINES
- DENOTES EXISTING OVERHEAD ELECTRIC LINE
- DENOTES EXISTING GAS LINE
- DENOTES EXISTING 4" WATER MAIN
- DENOTES EXISTING 6" WATER MAIN
- DENOTES EXISTING 8" WATER MAIN
- DENOTES EXISTING 16" WATER MAIN
- DENOTES EXISTING 6" WASTEWATER MAIN
- DENOTES EXISTING 8" WASTEWATER MAIN
- DENOTES EXISTING 15" WASTEWATER MAIN
- DENOTES PROPOSED FIRE HYDRANT
- DENOTES PROPOSED VALVE
- DENOTES PROPOSED WATER METER
- DENOTES PROPOSED 6" WATER MAIN
- DENOTES PROPOSED 8" WATER MAIN
- DENOTES PROPOSED 16" WATER MAIN

APPROVED AS NOTED 10.06.2022 CITY OF MIDLAND ENGINEERING

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF MIDLAND STANDARD SPECIFICATIONS AND DETAILS AND ALL OTHER APPLICABLE CITY, STATE AND FEDERAL REGULATIONS. THE ACCEPTANCE OF THESE PLANS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO COMPLY WITH ALL APPLICABLE REGULATIONS. THE ENGINEER OF RECORD SHALL BE NOTIFIED OF ANY DEVIATIONS FROM THE APPROVED PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND SURVEYING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND BARRICADING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION AND TRENCH SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONFINED SPACE ENTRY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL HAZARDOUS MATERIALS. INSTALL 1 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.

PACKET 8261 October 25, 2022

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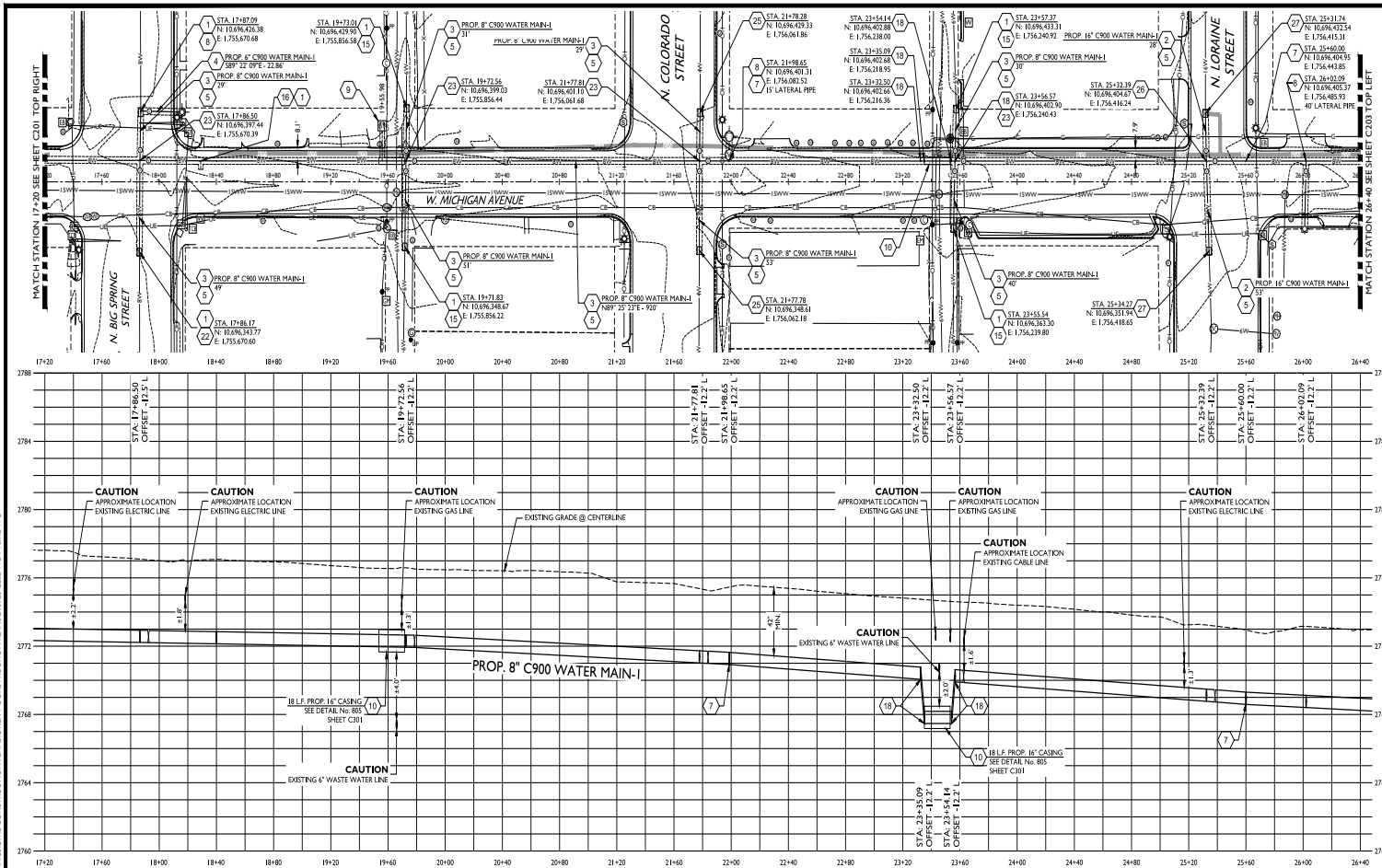
WATER MAIN-I PLAN & PROFILE

UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

SHEET C201 OF 23

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F:\2021\21012B CITY OF MIDLAND-MICHIGAN AVENUE WATER MAIN I\B-ENGINEERING\CIVIL CONSTRUCTION PLANS\21012B C201 WL-1 PMP.DWG



LEGEND

- DENOTES EXISTING WATER VALVE
- DENOTES EXISTING FIRE HYDRANT
- DENOTES EXISTING WATER METER
- DENOTES EXISTING POST INDICATOR VALVE
- DENOTES EXISTING WASTEWATER MANHOLE
- DENOTES EXISTING WASTEWATER CLEANOUT
- DENOTES EXISTING POWER POLE
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- DENOTES EXISTING CABLE BOX
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- DENOTES EXISTING CAMERA POST
- DENOTES EXISTING STREET SIGN
- DENOTES EXISTING STOP SIGN
- DENOTES EXISTING TRAFFIC SIGNAL LIGHT
- DENOTES EXISTING LOT LINES
- OH — DENOTES EXISTING OVERHEAD ELECTRIC LINE
- G — DENOTES EXISTING GAS LINE
- 4W — DENOTES EXISTING 4" WATER MAIN
- 6W — DENOTES EXISTING 6" WATER MAIN
- 8W — DENOTES EXISTING 8" WATER MAIN
- 16W — DENOTES EXISTING 16" WATER MAIN
- 6WW — DENOTES EXISTING 6" WASTEWATER MAIN
- 8WW — DENOTES EXISTING 8" WASTEWATER MAIN
- 15WW — DENOTES EXISTING 15" WASTEWATER MAIN
- DENOTES PROPOSED FIRE HYDRANT
- DENOTES PROPOSED WATER VALVE
- DENOTES PROPOSED WATER METER
- 6W — DENOTES PROPOSED 6" WATER MAIN
- 8W — DENOTES PROPOSED 8" WATER MAIN
- 16W — DENOTES PROPOSED 16" WATER MAIN

ENGINEER'S UTILITY NOTES:

- CONTRACTOR TO VERIFY ALL EXISTING UTILITY TIE-IN CONNECTIONS AND VERIFY LOCATION AND ELEVATION PRIOR TO CONSTRUCTION.
- CITY OF MIDLAND TO BE NOTIFIED 48 HOURS BEFORE ANY CONSTRUCTION BEGINS.
- PIPE DEFLECTION IS TO BE PER MANUFACTURER'S RECOMMENDATIONS OR PER CITY REQUIREMENTS, WHICHEVER ALLOWS THE LESSER AMOUNT OF DEFLECTION.
- ALL UTILITIES TO BE INSTALLED PER TEXAS ADMINISTRATIVE CODE (TAC) STANDARD SEPARATION SPECIFICATIONS.
- A TWO (2) FOOT MINIMUM VERTICAL SEPARATION IS TO BE PROVIDED BETWEEN ANY SEWER MAIN/LINE CROSSING A WATER MAIN/LINE.
- EXCEPTIONS OR DEVIATIONS FROM THE ABOVE MINIMUM CLEARANCES MUST BE APPROVED AND SHOWN ON THE APPROVED WATER AND SEWER PLANS. WHEN UTILITY CONFLICTS ARE FOUND DURING CONSTRUCTION, ALL CHANGES AND REVISIONS MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
- ANY AND ALL MORE STRINGENT REQUIREMENTS REQUIRED BY FEDERAL, STATE, COUNTY OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
- ALL CONSTRUCTION IN THE RIGHT OF WAY IS TO CONFORM TO THE CITY OF MIDLAND STANDARDS.
- CONCRETE OR ASPHALT DAMAGED DURING THE COURSE OF CONSTRUCTION IS TO BE REMOVED AND REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE ENGINEER OR THE CITY OF MIDLAND PRIOR TO FINAL INSPECTION.
- WATER IS TO BE C-900 PVC PIPE UNLESS NOTED OTHERWISE.
- THE CONTRACTOR IS TO PROVIDE ALL THRUST BLOCKING AT ALL FITTINGS AND BENDS AS REQUIRED. COMPLY WITH DETAILS IN THE CITY OF MIDLAND'S DESIGN & CONSTRUCTION STANDARDS.
- THE CONTRACTOR IS TO KEEP ALL EXISTING WATER AND SEWER MAINS IN SERVICE DURING CONSTRUCTION.

WATER CONSTRUCTION NOTES:

TYP.

1. CAUTION. CONTRACTOR TO VERIFY UTILITY SIZE, LOCATION, ELEVATION AND TYPE PRIOR TO CONSTRUCTION AND INFORM ENGINEER OF CONFLICTS.
2. INSTALL 16" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
3. INSTALL 8" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
4. INSTALL 6" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
5. INSTALL METALLIC TRACER TAPE. CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. INSTALL 8" 45° HORIZONTAL BEND (M)x(M) PER CITY OF MIDLAND PER CITY OF MIDLAND DETAIL No. 616 ON SHEET C304.
7. BEGINNEND WATER MAIN DEFLECTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
8. INSTALL 1 EA. 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "F" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL FIRE HYDRANT ASSEMBLY PER CITY OF MIDLAND DETAIL No. 603 SEE SHEET C302. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
9. INSTALL NEW 2" WATER METER AND NEW WATER SERVICE LATERAL TO REPLACE EXISTING WATER METER AND WATER SERVICE LATERAL PER CITY OF MIDLAND DETAIL No. 604 (A) & 604(B) SEE SHEET C302. ANY SIDEWALK DISTURBED HAS TO BE REPLACED PER CITY OF MIDLAND DETAIL No. 225 SEE SHEET C304. REPLACE SIDEWALK TO NEAREST JOINT. CONTRACTOR TO INFORM EXISTING BUSINESS 3 DAYS PRIOR TO CONSTRUCTION.
10. INSTALL 16" DIAMETER AWWA C900 DR-18 PVC PIPE CASING PER CITY OF MIDLAND DETAILS 307 & 308 ON SHEETS C300. FOR TYPICAL ENCASEMENT, SEE CITY OF MIDLAND DETAIL 805 ON SHEET C301.
11. INSTALL 12" 45° HORIZONTAL BEND (M)x(M) PER CITY OF MIDLAND PER CITY OF MIDLAND DETAIL No. 616 ON SHEET C304.
12. INSTALL 1 EA. 8"x8" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 2 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M), (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
13. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 4" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x4" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
14. INSTALL 1 EA. 8"x8" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
15. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
16. RECONNECT EXISTING/NEW 2" WATER SERVICE LATERAL TO PROPOSED 8" WATER MAIN PER CITY OF MIDLAND DETAIL No. 604 (A) & 604(B) SEE SHEET C302.
17. INSTALL 1 EA. 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "F" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. RECONNECT EXISTING PV ASSEMBLY PER CITY OF MIDLAND DETAIL F01 SEE SHEET C305. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
18. INSTALL 1 EA. 45° VERTICAL BEND (M)x(M) PER CITY OF MIDLAND DETAIL No. 612 AND 613 SEE SHEET C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
19. INSTALL 1 EA. 45° VERTICAL BEND (M)x(M) PER CITY OF MIDLAND DETAIL No. 612 AND 613 SEE SHEET C303. INSTALL 1 EA. 8"x8" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
20. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 3 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
21. INSTALL 1 EA. 8"x8" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
22. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 8" WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
23. INSTALL 1 EA. 8"x8" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
24. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
25. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
26. INSTALL 1 EA. 16"x16" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "A" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 16" HORIZONTAL GATE VALVES WITH VALVE BOXES (M)x(M), 1 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M). PER CITY OF MIDLAND DETAIL No. 608(A), 608(B), 609 SEE SHEET C303. INSTALL 1 EA. 16"x8" REDUCERS (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
27. TIE-IN PROPOSED 16" WATER MAIN TO EXISTING 16" WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 16" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
28. INSTALL 1 EA. 12"x12" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
29. TIE-IN PROPOSED 6" WATER MAIN TO EXISTING 6" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. ~~INSTALL 1 EA. 6" DRESSER COUPLING.~~ INSTALL 2 EA. 6" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
30. INSTALL 1 EA. 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 6" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 1 EA. 6" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
31. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 8" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. ~~INSTALL 1 EA. 8" DRESSER COUPLING.~~ INSTALL 2 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
32. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 2" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x2" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
33. TIE-IN PROPOSED 12" WATER MAIN TO EXISTING 12" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. ~~INSTALL 1 EA. 12" DRESSER COUPLING.~~ INSTALL 2 EA. 12" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
34. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
35. INSTALL 12" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
36. INSTALL 1 EA. 12"x12" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 12" GATE VALVES WITH VALVE BOXES (M)x(M). INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEET C303. INSTALL 2 EA. 12"x8" REDUCERS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
37. INSTALL 1 EA. 12"x12" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 1 EA. 12"x8" REDUCER. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
38. INSTALL 1 EA. 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "E" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL FIRE HYDRANT ASSEMBLY PER CITY OF MIDLAND DETAIL No. 603 SEE SHEET C302. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
39. INSTALL 12" 90° BEND (M)x(M) PER CITY OF MIDLAND DETAIL No. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
40. CONTRACTOR TO TIE-IN EXISTING WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR PRESSURE COUPLING. FIELD VERIFY EXISTING CONDITIONS PIPE AND MATERIALS. ~~INFORM THE ENGINEER OF RECORD OF ANY DEVIATION TO A DRESSER COUPLING SOLUTION.~~ EXISTING TEE FITTING, VALVE, AND FIRE HYDRANT AT TIE-IN TO REMAIN.
41. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 12" CAP AND BLOCKING PER CITY OF MIDLAND DETAIL 617 SEE SHEET C302.
42. CONTRACTOR TO REMOVE EXISTING WATER VALVE AND CAP EXISTING TEE.

APPROVED AS NOTED
10.06.2022
CITY OF MIDLAND ENGINEERING

ATTENTION TO CONTRACTOR AND SUBCONTRACTOR
The issuance or granting of this approval and/or permit by the City of Midland does not relieve the contractor or subcontractor of any responsibility for the safety of persons or property or for compliance with the requirements of the City of Midland, State of Texas, or any other governmental entity. The contractor or subcontractor shall comply with all applicable laws, ordinances, regulations, standards, and codes of the City of Midland, State of Texas, and any other governmental entity. The City of Midland does not assume any responsibility for the contractor's or subcontractor's means, methods, techniques, sequences or procedures of construction or safety precautions or programs in connection with the construction. The issuance of this approval and/or permit by the City of Midland does not relieve the contractor or subcontractor of any responsibility for the safety of persons or property or for compliance with the requirements of the City of Midland, State of Texas, or any other governmental entity. The City of Midland does not assume any responsibility for the contractor's or subcontractor's means, methods, techniques, sequences or procedures of construction or safety precautions or programs in connection with the construction. The issuance of this approval and/or permit by the City of Midland does not relieve the contractor or subcontractor of any responsibility for the safety of persons or property or for compliance with the requirements of the City of Midland, State of Texas, or any other governmental entity. The City of Midland does not assume any responsibility for the contractor's or subcontractor's means, methods, techniques, sequences or procedures of construction or safety precautions or programs in connection with the construction.

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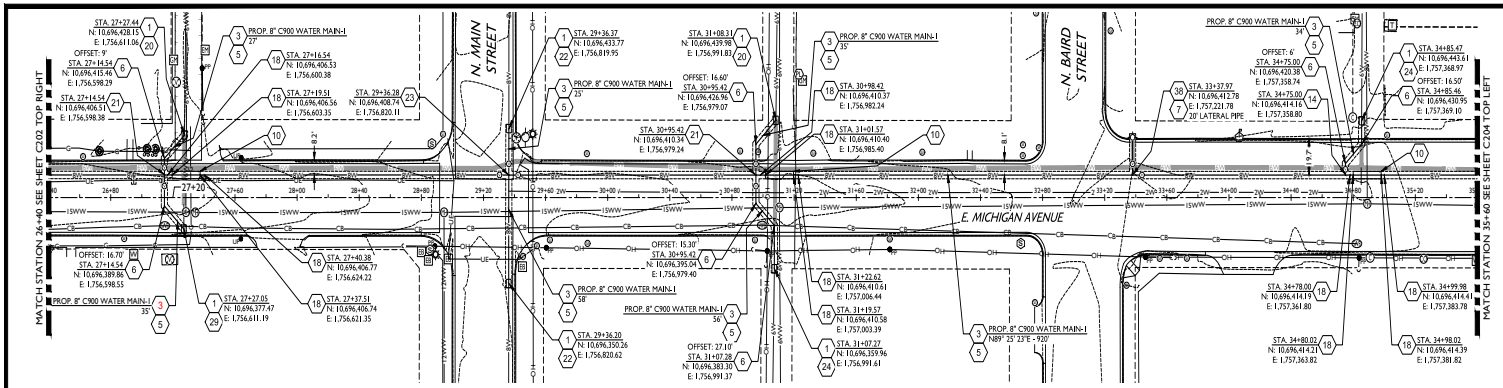
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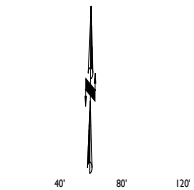
WATER MAIN-I PLAN & PROFILE

UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

SHEET C202 OF 23

P:\2021\21012B CITY OF MIDLAND-MICHIGAN AVENUE WATER MAIN I\EB\ACE\INTDWG\ENGR\CIVIL CONSTRUCTION PLANS\21012B C202 WL-1 PM.DWG
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PACKET 8.262 October 25, 2022





LEGEND

- DENOTES EXISTING WATER VALVE
- DENOTES EXISTING FIRE HYDRANT
- DENOTES EXISTING WATER METER
- DENOTES EXISTING POST INDICATOR VALVE
- DENOTES EXISTING WASTEWATER MANHOLE
- DENOTES EXISTING WASTEWATER CLEANOUT
- DENOTES EXISTING POWER POLE
- DENOTES EXISTING UTILITY POWER POLE
- DENOTES EXISTING LIGHT POLE
- DENOTES EXISTING GUY ANCHOR
- DENOTES EXISTING TRANSFORMER PAD
- DENOTES EXISTING ELECTRIC BOX
- DENOTES EXISTING TRAFFIC CONTROL BOX
- DENOTES EXISTING FIBER OPTIC MARKER
- DENOTES EXISTING SOUTHWESTERN BELL MANHOLE
- DENOTES EXISTING CABLE BOX
- DENOTES EXISTING CABLE SIGN
- DENOTES EXISTING TELEPHONE PEDESTAL
- DENOTES EXISTING GAS METER
- DENOTES EXISTING GAS MARKER
- DENOTES EXISTING GAS RISER
- DENOTES EXISTING CAMERA POST
- DENOTES EXISTING STREET SIGN
- DENOTES EXISTING STOP SIGN
- DENOTES EXISTING TRAFFIC SIGNAL LIGHT
- DENOTES EXISTING LOT LINES
- DENOTES EXISTING OVERHEAD ELECTRIC LINE
- DENOTES EXISTING GAS LINE
- DENOTES EXISTING 4" WATER MAIN
- DENOTES EXISTING 6" WATER MAIN
- DENOTES EXISTING 8" WATER MAIN
- DENOTES EXISTING 16" WATER MAIN
- DENOTES EXISTING 6" WASTEWATER MAIN
- DENOTES EXISTING 8" WASTEWATER MAIN
- DENOTES EXISTING 15" WASTEWATER MAIN
- DENOTES PROPOSED FIRE HYDRANT
- DENOTES PROPOSED WATER VALVE
- DENOTES PROPOSED WATER METER
- DENOTES PROPOSED 6" WATER MAIN
- DENOTES PROPOSED 8" WATER MAIN
- DENOTES PROPOSED 16" WATER MAIN

ENGINEER'S UTILITY NOTES:

- CONTRACTOR TO VERIFY ALL EXISTING UTILITY TIE-IN CONNECTIONS AND VERIFY LOCATION AND ELEVATION PRIOR TO CONSTRUCTION.
- CITY OF MIDLAND TO BE NOTIFIED 48 HOURS BEFORE ANY CONSTRUCTION BEGINS.
- PIPE DEFLECTION IS TO BE PER MANUFACTURER'S RECOMMENDATIONS OR PER CITY REQUIREMENTS, WHICHEVER ALLOWS THE LESSER AMOUNT OF DEFLECTION.
- ALL UTILITIES TO BE INSTALLED PER TEXAS ADMINISTRATIVE CODE (TAC) STANDARD SEPARATION SPECIFICATIONS.
- A TWO (2) FOOT MINIMUM VERTICAL SEPARATION IS TO BE PROVIDED BETWEEN ANY SEWER MAIN/LINE CROSSING A WATER MAIN/LINE.
- EXCEPTIONS OR DEVIATIONS FROM THE ABOVE MINIMUM CLEARANCES MUST BE APPROVED AND SHOWN ON THE APPROVED WATER AND SEWER PLANS. WHEN UTILITY CONFLICTS ARE FOUND DURING CONSTRUCTION, ALL CHANGES AND REVISIONS MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
- ANY AND ALL MORE STRINGENT REQUIREMENTS REQUIRED BY FEDERAL, STATE, COUNTY OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
- ALL CONSTRUCTION IN THE RIGHT OF WAY IS TO CONFORM TO THE CITY OF MIDLAND STANDARDS.
- CONCRETE OR ASPHALT DAMAGED DURING THE COURSE OF CONSTRUCTION IS TO BE REMOVED AND REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE ENGINEER OR THE CITY OF MIDLAND PRIOR TO FINAL INSPECTION.
- WATER IS TO BE C-900 PVC PIPE UNLESS NOTED OTHERWISE.
- THE CONTRACTOR IS TO PROVIDE ALL THRUST BLOCKING AT ALL FITTINGS AND BENDS AS REQUIRED, COMPLY WITH DETAILS IN THE CITY OF MIDLAND'S DESIGN & CONSTRUCTION STANDARDS.
- THE CONTRACTOR IS TO KEEP ALL EXISTING WATER AND SEWER MAINS IN SERVICE DURING CONSTRUCTION.

WATER CONSTRUCTION NOTES:

TYP. 1. CAUTION: CONTRACTOR TO VERIFY UTILITY SIZE, LOCATION, ELEVATION AND TYPE PRIOR TO CONSTRUCTION AND INFORM ENGINEER OF CONFLICTS.

2. INSTALL 16" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
3. INSTALL 8" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
4. INSTALL 6" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
5. INSTALL METALLIC TRACER TAPE. CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. INSTALL 8" 45° HORIZONTAL BEND (M&M) PER CITY OF MIDLAND PER CITY OF MIDLAND DETAIL No. 616 ON SHEET C304.
7. BEGINEND WATER MAIN DIRECTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
8. INSTALL 1 EA. 8"x6" TEE (M&M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL FIRE HYDRANT ASSEMBLY PER CITY OF MIDLAND DETAIL No. 603 SEE SHEET C302. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
9. INSTALL NEW 2" WATER METER AND NEW WATER SERVICE LATERAL TO REPLACE EXISTING WATER METER AND WATER SERVICE LATERAL PER CITY OF MIDLAND DETAIL No. 604 (A) & 604(B) SEE SHEET C302. ANY SIDEWALK DISTURBED HAS TO BE REPLACED PER CITY OF MIDLAND DETAIL No. 225 SEE SHEET C304. REPLACE SIDEWALK TO NEAREST JOINT. CONTRACTOR TO INFORM EXISTING BUSINESS 3 DAYS PRIOR TO CONSTRUCTION.
10. INSTALL 16" DIAMETER AWWA C900 DR-18 PVC PIPE CASING PER CITY OF MIDLAND DETAILS 307 & 308 ON SHEETS C300. FOR TYPICAL ENCASEMENT, SEE CITY OF MIDLAND DETAIL 805 ON SHEET C301.
11. INSTALL 12" 45° HORIZONTAL BEND (M&M) PER CITY OF MIDLAND PER CITY OF MIDLAND DETAIL No. 616 ON SHEET C304.
12. INSTALL 1 EA. 8"x8" TEE (M&M) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 2 EA. 8" GATE VALVES WITH VALVE BOXES (M&M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
13. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 4" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" 45° BEND (M&M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x4" REDUCER (M&M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
14. INSTALL 1 EA. 8"x8" TEE (M&M) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M&M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
15. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x6" REDUCER (M&M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
16. RECONNECT EXISTING/NEW 2" WATER SERVICE LATERAL TO PROPOSED 8" WATER MAIN PER CITY OF MIDLAND DETAIL No. 604 (A) & 604(B) SEE SHEET C302.
17. INSTALL 1 EA. 8"x6" TEE (M&M) PER CITY OF MIDLAND DETAIL "F" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. RECONNECT EXISTING PIV ASSEMBLY PER CITY OF MIDLAND DETAIL F01 SEE SHEET C305. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
18. INSTALL 1 EA. 45° VERTICAL BEND (M&M) PER CITY OF MIDLAND DETAIL No. 612 AND 613 SEE SHEET C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
19. INSTALL 1 EA. 45° VERTICAL BEND (M&M) PER CITY OF MIDLAND DETAIL No. 612 AND 613 SEE SHEET C303. INSTALL 1 EA. 8"x8" TEE (M&M) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M&M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
20. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" 45° BEND (M&M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x6" REDUCER (M&M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
21. INSTALL 1 EA. 8"x8" CROSS (M&M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 8" GATE VALVES WITH VALVE BOXES (M&M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
22. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 8" WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
23. INSTALL 1 EA. 8"x8" CROSS (M&M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 3 EA. 8" GATE VALVES WITH VALVE BOXES (M&M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
24. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x6" REDUCER (M&M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
25. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 4" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x4" REDUCER (M&M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
26. INSTALL 1 EA. 16"x16" CROSS (M&M) PER CITY OF MIDLAND DETAIL "A" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 16" HORIZONTAL GATE VALVES WITH VALVE BOXES (M&M). ~~INSTALL 1 EA. 8" GATE VALVES WITH VALVE BOXES (M&M).~~ PER CITY OF MIDLAND DETAIL No. 608(A), 608(B), 609 SEE SHEET C303. INSTALL 1 EA. 16"x8" REDUCERS (M&M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
27. TIE-IN PROPOSED 16" WATER MAIN TO EXISTING 16" WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 16" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
28. INSTALL 1 EA. 12"x12" TEE (M&M) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M&M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
29. TIE-IN PROPOSED 6" WATER MAIN TO EXISTING 6" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS ~~INSTALL 1 EA. 6" DRESSER COUPLING~~. INSTALL 2 EA. 6" 45° BEND (M&M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
30. INSTALL 1 EA. 8"x6" TEE (M&M) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 6" GATE VALVE WITH VALVE BOX (M&M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 1 EA. 6" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
31. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 8" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. ~~INSTALL 1 EA. 8" DRESSER COUPLING~~. INSTALL 2 EA. 8" 45° BEND (M&M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
32. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 2" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" 45° BEND (M&M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304 INSTALL 1 EA. 8"x2" REDUCER (M&M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
33. TIE-IN PROPOSED 12" WATER MAIN TO EXISTING 12" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. ~~INSTALL 1 EA. 12" DRESSER COUPLING~~. INSTALL 2 EA. 12" 45° BEND (M&M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
34. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8" 45° BEND (M&M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x6" REDUCER (M&M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
35. INSTALL 12" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
36. INSTALL 1 EA. 12"x12" CROSS (M&M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 12" GATE VALVES WITH VALVE BOXES (M&M). INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M&M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEET C303. INSTALL 2 EA. 12"x8" REDUCERS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
37. INSTALL 1 EA. 12"x12" TEE (M&M) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M&M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 1 EA. 12"x8" REDUCER. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
38. INSTALL 1 EA. 8"x6" TEE (M&M) PER CITY OF MIDLAND DETAIL "E" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M&M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL FIRE HYDRANT ASSEMBLY PER CITY OF MIDLAND DETAIL No. 603 SEE SHEET C302. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
39. INSTALL 12" 90° BEND (M&M) PER CITY OF MIDLAND DETAIL No. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
40. CONTRACTOR TO TIE-IN EXISTING WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR PRESSURE COUPLING. FIELD VERIFY EXISTING CONDITIONS PIPE AND MATERIALS ~~INFORM THE ENGINEER OF RECORD OF ANY DEVIATION TO A DRESSER COUPLING SOLUTION.~~ EXISTING TEE FITTING, VALVE, AND FIRE HYDRANT AT TIE-IN TO REMAIN.
41. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M&M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 12" CAP AND BLOCKING PER CITY OF MIDLAND DETAIL 617 SEE SHEET C302.
42. CONTRACTOR TO REMOVE EXISTING WATER VALVE AND CAP EXISTING TEE.

APPROVED AS NOTED 10.06.2022 CITY OF MIDLAND ENGINEERING

ATTENTION IS DIRECTED TO THE FOLLOWING:
The review of plans and specifications by the City of Midland Engineering Department is for the purpose of determining compliance with the City of Midland Design and Construction Standards and is not for the purpose of determining the adequacy of the plans and specifications. The issuance of the APPROVAL based on the construction drawings and other data submitted to the Engineering Department does not relieve the Engineer of Record or the Engineering Services Department from requiring the correction of errors in the construction drawings and other data. The Director of Engineering Services and the City Engineer shall not be responsible for the methods or techniques there used, the safety of any City Employee, of the City Standard Details & Specifications, or any other persons or property owned by the City of Midland jurisdiction.

811 Know what's below. Call before you dig.

PACKET 8.263 October 25, 2022

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P:\2021\21018\28 CITY OF MIDLAND-MICHIGAN AVENUE WATER MAIN IMPR\ACTIVE\MAVRNG\SIVIL CONSTRUCTION PLANS\21028 C203 WL-1 PMP.DWG

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BY	APPR.	DATE

REVISIONS

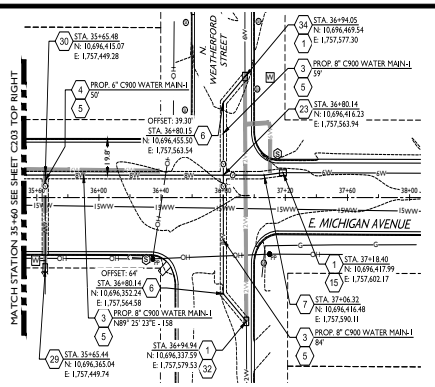
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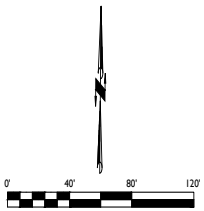
WATER MAIN-I PLAN & PROFILE

UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

STATE OF TEXAS ANDREW L. MELLEN 106572 LICENSED PROFESSIONAL ENGINEER 09/03/2022

SHEET C203 OF 23





LEGEND

- DENOTES EXISTING WATER VALVE
- DENOTES EXISTING FIRE HYDRANT
- DENOTES EXISTING WATER METER
- DENOTES EXISTING POST INDICATOR VALVE
- DENOTES EXISTING WASTEWATER MANHOLE
- DENOTES EXISTING WASTEWATER CLEANOUT
- DENOTES EXISTING POWER POLE
- DENOTES EXISTING UTILITY POWER POLE
- DENOTES EXISTING LIGHT POLE
- DENOTES EXISTING GUY ANCHOR
- DENOTES EXISTING TRANSFORMER PAD
- DENOTES EXISTING ELECTRIC BOX
- DENOTES EXISTING TRAFFIC CONTROL BOX
- DENOTES EXISTING FIBER OPTIC MARKER
- DENOTES EXISTING SOUTHWESTERN BELL MANHOLE
- DENOTES EXISTING CABLE BOX
- DENOTES EXISTING CABLE SIGN
- DENOTES EXISTING TELEPHONE PEDESTAL
- DENOTES EXISTING GAS METER
- DENOTES EXISTING GAS MARKER
- DENOTES EXISTING GAS RISER
- DENOTES EXISTING CAMERA POST
- DENOTES EXISTING STREET SIGN
- DENOTES EXISTING STOP SIGN
- DENOTES EXISTING TRAFFIC SIGNAL LIGHT
- DENOTES EXISTING LOT LINES
- DENOTES EXISTING OVERHEAD ELECTRIC LINE
- DENOTES EXISTING GAS LINE
- DENOTES EXISTING 4" WATER MAIN
- DENOTES EXISTING 6" WATER MAIN
- DENOTES EXISTING 8" WATER MAIN
- DENOTES EXISTING 16" WATER MAIN
- DENOTES EXISTING 6" WASTEWATER MAIN
- DENOTES EXISTING 8" WASTEWATER MAIN
- DENOTES EXISTING 15" WASTEWATER MAIN
- DENOTES PROPOSED FIRE HYDRANT
- DENOTES PROPOSED VALVE
- DENOTES PROPOSED WATER METER
- DENOTES PROPOSED 6" WATER MAIN
- DENOTES PROPOSED 8" WATER MAIN
- DENOTES PROPOSED 16" WATER MAIN

ENGINEER'S UTILITY NOTES:

- CONTRACTOR TO VERIFY ALL EXISTING UTILITY TIE-IN CONNECTIONS AND VERIFY LOCATION AND ELEVATION PRIOR TO CONSTRUCTION.
- CITY OF MIDLAND TO BE NOTIFIED 48 HOURS BEFORE ANY CONSTRUCTION BEGINS.
- PIPE DEFLECTION IS TO BE PER MANUFACTURER'S RECOMMENDATIONS OR PER CITY REQUIREMENTS, WHICHEVER ALLOWS THE LESSER AMOUNT OF DEFLECTION.
- ALL UTILITIES TO BE INSTALLED PER TEXAS ADMINISTRATIVE CODE (TAC) STANDARD SEPARATION SPECIFICATIONS.
- A TWO (2) FOOT MINIMUM VERTICAL SEPARATION IS TO BE PROVIDED BETWEEN ANY SEWER MAINLINE CROSSING A WATER MAINLINE.
- EXCEPTIONS OR DEVIATIONS FROM THE ABOVE MINIMUM CLEARANCES MUST BE APPROVED AND SHOWN ON THE APPROVED WATER AND SEWER PLANS. WHEN UTILITY CONFLICTS ARE FOUND DURING CONSTRUCTION, ALL CHANGES AND REVISIONS MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
- ANY AND ALL MORE STRINGENT REQUIREMENTS REQUIRED BY FEDERAL, STATE, COUNTY OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
- ALL CONSTRUCTION IN THE RIGHT OF WAY IS TO CONFORM TO THE CITY OF MIDLAND STANDARDS.
- CONCRETE OR ASPHALT DAMAGED DURING THE COURSE OF CONSTRUCTION IS TO BE REMOVED AND REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE ENGINEER OR THE CITY OF MIDLAND PRIOR TO FINAL INSPECTION.
- WATER IS TO BE C-900 PVC PIPE UNLESS NOTED OTHERWISE.
- THE CONTRACTOR IS TO PROVIDE ALL THRUST BLOCKING AT ALL FITTINGS AND BENDS AS REQUIRED, COMPLY WITH DETAILS IN THE CITY OF MIDLAND'S DESIGN & CONSTRUCTION STANDARDS.
- THE CONTRACTOR IS TO KEEP ALL EXISTING WATER AND SEWER MAINS IN SERVICE DURING CONSTRUCTION.

WATER CONSTRUCTION NOTES:

TYP. (1) CAUTION: CONTRACTOR TO VERIFY UTILITY SIZE, LOCATION, ELEVATION AND TYPE PRIOR TO CONSTRUCTION AND INFORM ENGINEER OF CONFLICTS.

2. INSTALL 16" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
3. INSTALL 8" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
4. INSTALL 6" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
5. INSTALL METALLIC TRACER TAPE. CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. INSTALL 8" 45° HORIZONTAL BEND (M)x(M) PER CITY OF MIDLAND PER CITY OF MIDLAND DETAIL No. 616 ON SHEET C304.
7. BEGIN/END WATER MAIN DEFLECTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
8. INSTALL 1 EA. 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "F" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL FIRE HYDRANT ASSEMBLY PER CITY OF MIDLAND DETAIL No. 603 SEE SHEET C302. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
9. INSTALL NEW 2" WATER METER AND NEW WATER SERVICE LATERAL TO REPLACE EXISTING WATER METER AND WATER SERVICE LATERAL PER CITY OF MIDLAND DETAIL No. 604 (A) & 604(B) SEE SHEET C302. ANY SIDEWALK DISTURBED HAS TO BE REPLACED PER CITY OF MIDLAND DETAIL No. 225 SEE SHEET C304. REPLACE SIDEWALK TO NEAREST JOINT. CONTRACTOR TO INFORM EXISTING BUSINESS 3 DAYS PRIOR TO CONSTRUCTION.
10. INSTALL 16" DIAMETER AWWA C900 DR-18 PVC PIPE CASING PER CITY OF MIDLAND DETAILS 307 & 308 ON SHEETS C300. FOR TYPICAL ENCASEMENT, SEE CITY OF MIDLAND DETAIL 805 ON SHEET C301.
11. INSTALL 12" 45° HORIZONTAL BEND (M)x(M) PER CITY OF MIDLAND PER CITY OF MIDLAND DETAIL No. 616 ON SHEET C304.
12. INSTALL 1 EA. 8"x8" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 2 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
13. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 4" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x4" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
14. INSTALL 1 EA. 8"x8" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
15. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x6" REDUCER (M)x(FL). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
16. RECONNECT EXISTING/NEW 2" WATER SERVICE LATERAL TO PROPOSED 8" WATER MAIN PER CITY OF MIDLAND DETAIL No. 604 (A) & 604(B) SEE SHEET C302.
17. INSTALL 1 EA. 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "F" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. RECONNECT EXISTING FIV ASSEMBLY PER CITY OF MIDLAND DETAIL F01 SEE SHEET C305. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
18. INSTALL 1 EA. 45° VERTICAL BEND (M)x(M) PER CITY OF MIDLAND DETAIL No. 612 AND 613 SEE SHEET C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
19. INSTALL 1 EA. 45° VERTICAL BEND (M)x(M) PER CITY OF MIDLAND DETAIL No. 612 AND 613 SEE SHEET C303. INSTALL 1 EA. 8"x8" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
20. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
21. INSTALL 1 EA. 8"x8" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
22. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 8" WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
23. INSTALL 1 EA. 8"x8" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 3 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
24. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS ON 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
25. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS ON 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
26. INSTALL 1 EA. 16"x16" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "A" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 16" HORIZONTAL GATE VALVES WITH VALVE BOXES (M)x(M), 1 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M). PER CITY OF MIDLAND DETAIL No. 608(A), 608(B), 609 SEE SHEET C303. INSTALL 1 EA. 16"x8" REDUCERS (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
27. TIE-IN PROPOSED 16" WATER MAIN TO EXISTING 16" WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 16" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
28. INSTALL 1 EA. 12"x12" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
29. TIE-IN PROPOSED 6" WATER MAIN TO EXISTING 6" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS ~~INSTALL 1 EA. 6" DRESSER COUPLING.~~ INSTALL 2 EA. 6" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
30. INSTALL 1 EA. 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 6" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 1 EA. 6" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
31. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 8" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. ~~INSTALL 1 EA. 8" DRESSER COUPLING.~~ INSTALL 2 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
32. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 2" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x2" REDUCER (M)x(FL). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
33. TIE-IN PROPOSED 12" WATER MAIN TO EXISTING 12" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. ~~INSTALL 1 EA. 12" DRESSER COUPLING.~~ INSTALL 2 EA. 12" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
34. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
35. INSTALL 12" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
36. INSTALL 1 EA. 12"x12" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 12" GATE VALVES WITH VALVE BOXES (M)x(M), INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEET C303. INSTALL 2 EA. 12"x8" REDUCERS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
37. INSTALL 1 EA 12"x12" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 1 EA. 12"x8" REDUCER. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
38. INSTALL 1 EA. 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "E" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL FIRE HYDRANT ASSEMBLY PER CITY OF MIDLAND DETAIL No. 603 SEE SHEET C302. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
39. INSTALL 12" 90° BEND (M)x(M) PER CITY OF MIDLAND DETAIL No. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
40. CONTRACTOR TO TIE-IN EXISTING WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR PRESSURE COUPLING. FIELD VERIFY EXISTING CONDITIONS PIPE AND MATERIALS. ~~INFORM THE ENGINEER OF RECORD OF ANY DEVIATION TO A DRESSER COUPLING SOLUTION.~~ EXISTING TEE FITTING, VALVE, AND FIRE HYDRANT AT TIE-IN TO REMAIN.
41. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 12" CAP AND BLOCKING PER CITY OF MIDLAND DETAIL 617 SEE SHEET C302.
42. CONTRACTOR TO REMOVE EXISTING WATER VALVE AND CAP EXISTING TEE.

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BY	APPR.	DATE	REVISIONS

DRAWN BY:	MJD
CHECKED BY:	ALM
APPROVED BY:	ALM
DATE:	01/03/2022
JOB:	210128

WATER MAIN-I PLAN & PROFILE

UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

CITY OF MIDLAND APPROVED AS NOTED 10.06.2022 ENGINEERING
APPROVAL IS CONDITIONAL ONLY AND NOT A RELEASE FOR CONSTRUCTION. The issuance or granting of this approval shall not be construed to be an admission or acceptance by the City of Midland of any violation of any provision of any ordinance, code, or regulation of the City of Midland. Approval of these plans does not relieve the Owner, Engineer, or Contractor of responsibility for any errors or omissions contained therein. Approval of these plans does not constitute approval of any violation of any ordinance, code, or regulation of the City of Midland. Approval of these plans does not grant any permission to violate or cancel the provisions of any other ordinance or related policy of the City of Midland jurisdiction and not be used. The issuance of this approval, based on these plans, shall not prevent the City of Midland, through the Engineering Services Department from requiring the correction of errors in the construction drawings and elsewhere if the design of the proposed improvements is found to be in violation of the Standard Details & Specifications, or any other ordinance, code, or regulation adopted by the City of Midland jurisdiction.

STATE OF TEXAS ANDREW L. MELLEN 106572 LICENSED PROFESSIONAL ENGINEER 09/09/2022

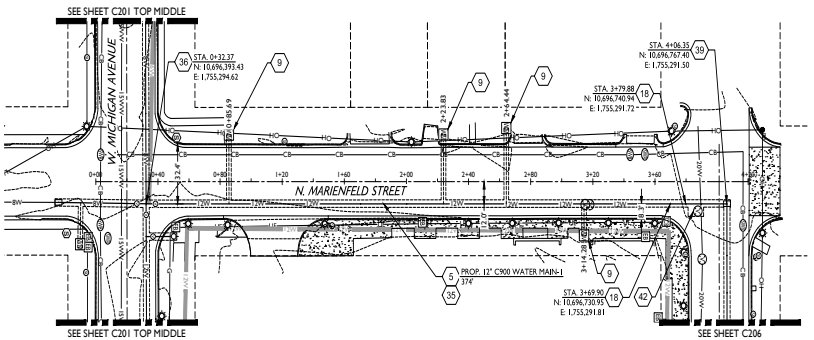
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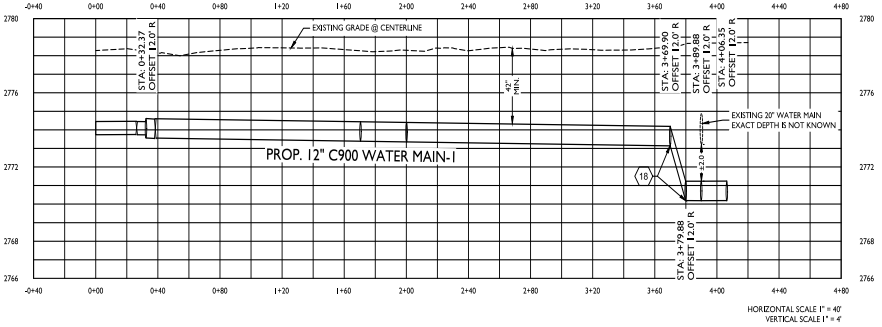
SHEET C204 OF 23

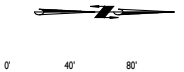
PACKET 8.264 October 25, 2022

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LEGEND

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- DENOTES EXISTING FIBER OPTIC MARKER
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- DENOTES EXISTING STOP SIGN
- DENOTES EXISTING TRAFFIC SIGNAL LIGHT
- DENOTES EXISTING LOT LINES
- OH — DENOTES EXISTING OVERHEAD ELECTRIC LINE
- G — DENOTES EXISTING GAS LINE
- 4W — DENOTES EXISTING 4" WATER MAIN
- 6W — DENOTES EXISTING 6" WATER MAIN
- 8W — DENOTES EXISTING 8" WATER MAIN
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- 6WW — DENOTES EXISTING 6" WASTEWATER MAIN
- 8WW — DENOTES EXISTING 8" WASTEWATER MAIN
- 15WW — DENOTES EXISTING 15" WASTEWATER MAIN
- DENOTES PROPOSED FIRE HYDRANT
- DENOTES PROPOSED WATER VALVE
- DENOTES PROPOSED WATER METER
- 6W — DENOTES PROPOSED 6" WATER MAIN
- 8W — DENOTES PROPOSED 8" WATER MAIN
- 16W — DENOTES PROPOSED 16" WATER MAIN

ENGINEER'S UTILITY NOTES:

- CONTRACTOR TO VERIFY ALL EXISTING UTILITY TIE-IN CONNECTIONS AND VERIFY LOCATION AND ELEVATION PRIOR TO CONSTRUCTION.
- CITY OF MIDLAND TO BE NOTIFIED 48 HOURS BEFORE ANY CONSTRUCTION BEGINS.
- PIPE DEFLECTION IS TO BE PER MANUFACTURER'S RECOMMENDATIONS OR PER CITY REQUIREMENTS, WHICHEVER ALLOWS THE LESSER AMOUNT OF DEFLECTION.
- ALL UTILITIES TO BE INSTALLED PER TEXAS ADMINISTRATIVE CODE (TAC) STANDARD SEPARATION SPECIFICATIONS.
- A TWO (2) FOOT MINIMUM VERTICAL SEPARATION IS TO BE PROVIDED BETWEEN ANY SEWER MAIN/LINE CROSSING A WATER MAIN/LINE.
- EXCEPTIONS OR DEVIATIONS FROM THE ABOVE MINIMUM CLEARANCES MUST BE APPROVED AND SHOWN ON THE APPROVED WATER AND SEWER PLANS. WHEN UTILITY CONFLICTS ARE FOUND DURING CONSTRUCTION, ALL CHANGES AND REVISIONS MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
- ANY AND ALL MORE STRINGENT REQUIREMENTS REQUIRED BY FEDERAL, STATE, COUNTY OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
- ALL CONSTRUCTION IN THE RIGHT OF WAY IS TO CONFORM TO THE CITY OF MIDLAND STANDARDS.
- CONCRETE OR ASPHALT DAMAGED DURING THE COURSE OF CONSTRUCTION IS TO BE REMOVED AND REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE ENGINEER OR THE CITY OF MIDLAND PRIOR TO FINAL INSPECTION.
- WATER IS TO BE C-900 PVC PIPE UNLESS NOTED OTHERWISE.
- THE CONTRACTOR IS TO PROVIDE ALL THRUST BLOCKING AT ALL FITTINGS AND BENDS AS REQUIRED. COMPLY WITH DETAILS IN THE CITY OF MIDLAND'S DESIGN & CONSTRUCTION STANDARDS.
- THE CONTRACTOR IS TO KEEP ALL EXISTING WATER AND SEWER MAINS IN SERVICE DURING CONSTRUCTION.

WATER CONSTRUCTION NOTES:

TYP. (1) CAUTION: CONTRACTOR TO VERIFY UTILITY SIZE, LOCATION, ELEVATION AND TYPE PRIOR TO CONSTRUCTION AND INFORM ENGINEER OF CONFLICTS.

2. INSTALL 16" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
3. INSTALL 8" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301 . CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTING OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
4. INSTALL 6" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
5. INSTALL METALLIC TRACER TAPE. CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. INSTALL 8" 45° HORIZONTAL BEND (M)x(M) PER CITY OF MIDLAND PER CITY OF MIDLAND DETAIL No. 616 ON SHEET C304.
7. BEGIN/END WATER MAIN DEFLECTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
8. INSTALL 1 EA. 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "F" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL FIRE HYDRANT ASSEMBLY PER CITY OF MIDLAND DETAIL No. 603 SEE SHEET C302. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
9. INSTALL NEW 2" WATER METER AND NEW WATER SERVICE LATERAL TO REPLACE EXISTING WATER METER AND WATER SERVICE LATERAL PER CITY OF MIDLAND DETAIL No. 604 (A) & 604(B) SEE SHEET C302. ANY SIDEWALK DISTURBED HAS TO BE REPLACED PER CITY OF MIDLAND DETAIL No. 225 SEE SHEET C304. REPLACE SIDEWALK TO NEAREST JOINT. CONTRACTOR TO INFORM EXISTING BUSINESS 3 DAYS PRIOR TO CONSTRUCTION.
10. INSTALL 16" DIAMETER AWWA C900 DR-18 PVC PIPE CASING PER CITY OF MIDLAND DETAILS 307 & 308 ON SHEETS C300. FOR TYPICAL EXCASEMENT, SEE CITY OF MIDLAND DETAIL 805 ON SHEET C301.
11. INSTALL 12" 45° HORIZONTAL BEND (M)x(M) PER CITY OF MIDLAND PER CITY OF MIDLAND DETAIL No. 616 ON SHEET C304.
12. INSTALL 1 EA. 8"x8" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 2 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
13. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 4" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x4" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
14. INSTALL 1 EA. 8"x8" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
15. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
16. RECONNECT EXISTING/NEW 2" WATER SERVICE LATERAL TO PROPOSED 8" WATER MAIN PER CITY OF MIDLAND DETAIL No. 604 (A) & 604(B) SEE SHEET C302.
17. INSTALL 1 EA. 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "F" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. RECONNECT EXISTING HY ASSEMBLY PER CITY OF MIDLAND DETAIL 901 SEE SHEET C305. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
18. INSTALL 1 EA. 45° VERTICAL BEND (M)x(M) PER CITY OF MIDLAND DETAIL No. 612 AND 613 SEE SHEET C302. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
19. INSTALL 1 EA. 45° VERTICAL BEND (M)x(M) PER CITY OF MIDLAND DETAIL No. 612 AND 613 SEE SHEET C303. INSTALL 1 EA. 8"x8" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
20. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
21. INSTALL 1 EA. 8"x8" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
22. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 8" WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
23. INSTALL 1 EA. 8"x8" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 3 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
24. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
25. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 4" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x4" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
26. INSTALL 1 EA. 16"x16" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "A" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 16" HORIZONTAL GATE VALVES WITH VALVE BOXES (M)x(M) ~~,~~ 1 EA. 8" GATE VALVES WITH VALVE BOXES (M)x(M). PER CITY OF MIDLAND DETAIL No. 608(A), 608(B), 609 SEE SHEET C303. INSTALL 1 EA. 16"x8" REDUCERS (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
27. TIE-IN PROPOSED 16" WATER MAIN TO EXISTING 16" WATER MAIN, CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 16" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
28. INSTALL 1 EA. 12"x12" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
29. TIE-IN PROPOSED 6" WATER MAIN TO EXISTING 6" WATER MAIN, ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS ~~INSTALL 1 EA. 6" DRESSER COUPLING.~~ INSTALL 2 EA. 6" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
30. INSTALL 1 EA. 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 6" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 1 EA. 6" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
31. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 8" WATER MAIN, ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. ~~INSTALL 1 EA. 8" DRESSER COUPLING.~~ INSTALL 2 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
32. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 2" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x2" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
33. TIE-IN PROPOSED 12" WATER MAIN TO EXISTING 12" WATER MAIN, ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. ~~INSTALL 2 EA. 12" DRESSER COUPLING.~~ INSTALL 2 EA. 12" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
34. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8" 45° BEND (M)x(M) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x6" REDUCER (M)x(M). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
35. INSTALL 12" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
36. INSTALL 1 EA. 12"x12" CROSS (M)x(M) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 12" GATE VALVES WITH VALVE BOXES (M)x(M), INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(M) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEET C303. INSTALL 2 EA. 12"x8" REDUCERS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
37. INSTALL 1 EA. 12"x12" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 1 EA. 12"x8" REDUCER. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
38. INSTALL 1 EA. 8"x6" TEE (M)x(FL) PER CITY OF MIDLAND DETAIL "E" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL FIRE HYDRANT ASSEMBLY PER CITY OF MIDLAND DETAIL No. 603 SEE SHEET C302. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
39. INSTALL 12" 90° BEND (M)x(M) PER CITY OF MIDLAND DETAIL No. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
40. CONTRACTOR TO TIE-IN EXISTING WATER MAIN, CONTRACTOR TO PREPARE EXISTING PIPE FOR PRESSURE COUPLING. FIELD VERIFY EXISTING CONDITIONS PIPE AND MATERIALS ~~IMPORTANT TO THE ENGINEER OF RECORD OF ANY DEVIATION TO A DRESSER COUPLING SOLUTION.~~ EXISTING TEE FITTING, VALVE, AND FIRE HYDRANT AT TIE-IN TO REMAIN.
41. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M)x(FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 12" CAP AND BLOCKING PER CITY OF MIDLAND DETAIL 617 SEE SHEET C302.
42. CONTRACTOR TO REMOVE EXISTING WATER VALVE AND CAP EXISTING TEE.

APPROVED AS NOTED
10.06.2022
ENGINEERING

ATTENTION TO CONTRACTOR AND SUBCONTRACTOR
The issuance or approval of this approval and not be construed to be a permit for, or an approval of, any violation of any provision of the City Standard Codes or of any other ordinance or statute of the City of Midland jurisdiction.

Know what's below. Call before you dig.

PACKET 8265 October 25, 2022

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P:\2021\21201.28 CITY OF MIDLAND-MICHIGAN AVENUE WATER MAIN IMPROVEMENTS\ENGINEERING\CIVIL CONSTRUCTION PLANS\21028 C205 WL-1 PMP.DWG

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ENGINEERING / SURVEY / WATER RESOURCES
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Midland, Texas 79701
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TEXAS SURVEY FIRM #: 10194514
Tel: (432) 262-0999 Fax: (432) 262-0989
www.Maverick-Eng.com

BY	APPR.	DATE

REVISIONS

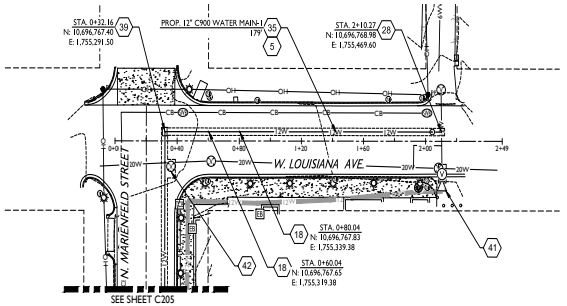
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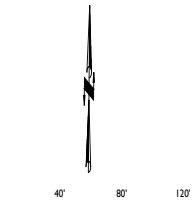
WATER MAIN-1 PLAN & PROFILE

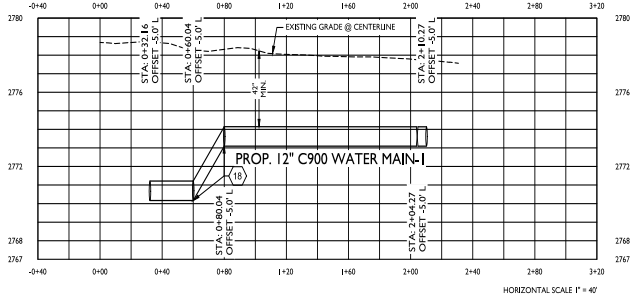
UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED
PROFESSIONAL ENGINEER
09/09/2022

SHEET C205 OF 23







LEGEND

- DENOTES EXISTING WATER VALVE
- DENOTES EXISTING FIRE HYDRANT
- DENOTES EXISTING WATER METER
- DENOTES EXISTING POST INDICATOR VALVE
- DENOTES EXISTING WASTEWATER MANHOLE
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WATER CONSTRUCTION NOTES:

TYP (1) CAUTION. CONTRACTOR TO VERIFY UTILITY SIZE, LOCATION, ELEVATION AND TYPE PRIOR TO CONSTRUCTION AND INFORM ENGINEER OF CONFLICTS.

2. INSTALL 16" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
3. INSTALL 8" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTING OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
4. INSTALL 6" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
5. INSTALL METALLIC TRACER TAPE. CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. INSTALL 8" 45° HORIZONTAL BEND (M&M) PER CITY OF MIDLAND PER CITY OF MIDLAND DETAIL No. 616 ON SHEET C304.
7. BEGIN/END WATER MAIN DEFLECTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
8. INSTALL 1 EA. 8"x6" TEE (M&FL) PER CITY OF MIDLAND DETAIL "F" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL FIRE HYDRANT ASSEMBLY PER CITY OF MIDLAND DETAIL No. 603 SEE SHEET C302. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
9. INSTALL NEW 2" WATER METER AND NEW WATER SERVICE LATERAL TO REPLACE EXISTING WATER METER AND WATER SERVICE LATERAL PER CITY OF MIDLAND DETAIL No. 604 (A) & 604(B) SEE SHEET C302. ANY SIDEWALK DISTURBED HAS TO BE REPLACED PER CITY OF MIDLAND DETAIL No. 225 SEE SHEET C304. REPLACE SIDEWALK TO NEAREST JOINT. CONTRACTOR TO INFORM EXISTING BUSINESS 3 DAYS PRIOR TO CONSTRUCTION.
10. INSTALL 16" DIAMETER AWWA C900 DR-18 PVC PIPE CASING PER CITY OF MIDLAND DETAILS 307 & 308 ON SHEETS C300. FOR TYPICAL ENCASHMENT, SEE CITY OF MIDLAND DETAIL 805 ON SHEET C301.
11. INSTALL 12" 45° HORIZONTAL BEND (M&M) PER CITY OF MIDLAND PER CITY OF MIDLAND DETAIL No. 616 ON SHEET C304.
12. INSTALL 1 EA. 8"x8" TEE (M&FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 2 EA. 8" GATE VALVES WITH VALVE BOXES (M&MJ). (M&FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
13. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 4" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" x 45° BEND (M&MJ) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x4" REDUCER (M&MJ). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
14. INSTALL 1 EA. 8"x8" TEE (M&MJ) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M&FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
15. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x6" REDUCER (M&MJ). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
16. RECONNECT EXISTING/NEW 2" WATER SERVICE LATERAL TO PROPOSED 8" WATER MAIN PER CITY OF MIDLAND DETAIL No. 604 (A) & 604(B) SEE SHEET C302.
17. INSTALL 1 EA. 8"x6" TEE (M&FL) PER CITY OF MIDLAND DETAIL "F" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. RECONNECT EXISTING HY ASSEMBLY PER CITY OF MIDLAND DETAIL 901 SEE SHEET C305. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
18. INSTALL 1 EA. 45° VERTICAL BEND (M&MJ) PER CITY OF MIDLAND DETAIL No. 612 AND 613 SEE SHEET C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
19. INSTALL 1 EA. 45° VERTICAL BEND (M&MJ) PER CITY OF MIDLAND DETAIL No. 612 AND 613 SEE SHEET C303. INSTALL 1 EA. 8"x8" TEE (M&FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M&FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
20. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" 45° BEND (M&MJ) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x6" REDUCER (M&MJ). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
21. INSTALL 1 EA. 8"x8" CROSS (M&MJ) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 8" GATE VALVES WITH VALVE BOXES (M&MJ) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
22. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 8" WATER MAIN. CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
23. INSTALL 1 EA. 8"x8" CROSS (M&MJ) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 3 EA. 8" GATE VALVES WITH VALVE BOXES (M&MJ) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
24. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x6" REDUCER (M&MJ). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
25. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 4" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8"x4" REDUCER (M&MJ). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
26. INSTALL 1 EA. 16"x16" CROSS (M&MJ) PER CITY OF MIDLAND DETAIL "A" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 16" HORIZONTAL GATE VALVES WITH VALVE BOXES (M&MJ). 1 EA. 8" GATE VALVES WITH VALVE BOXES (M&MJ). PER CITY OF MIDLAND DETAIL No. 608(A), 608(B), 609 SEE SHEET C303. INSTALL 1 EA. 16"x8" REDUCERS (M&MJ). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
27. TIE-IN PROPOSED 16" WATER MAIN TO EXISTING 16" WATER MAIN, CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 16" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
28. INSTALL 1 EA. 12"x12" TEE (M&FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M&FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
29. TIE-IN PROPOSED 6" WATER MAIN TO EXISTING 6" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. ~~INSTALL 1 EA. 6" DRESSER COUPLING.~~ INSTALL 2 EA. 6" 45° BEND (M&MJ) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
30. INSTALL 1 EA. 8"x6" TEE (M&FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 6" GATE VALVE WITH VALVE BOX (M&FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 1 EA. 6" DRESSER COUPLING. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
31. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 8" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. ~~INSTALL 1 EA. 8" DRESSER COUPLING.~~ INSTALL 2 EA. 8" 45° BEND (M&MJ) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
32. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 2" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 2 EA. 8" 45° BEND (M&MJ) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x2" REDUCER (M&MJ). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
33. TIE-IN PROPOSED 12" WATER MAIN TO EXISTING 12" WATER MAIN. ~~CONTRACTOR TO PREPARE EXISTING PIPE FOR DRESSER COUPLING.~~ FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. ~~INSTALL 2 EA. DRESSER COUPLING.~~ INSTALL 2 EA. 12" 45° BEND (M&MJ) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
34. TIE-IN PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN. FIELD VERIFY EXISTING CONDITIONS, PIPE AND MATERIALS. INSTALL 1 EA. 8" 45° BEND (M&MJ) PER CITY OF MIDLAND DETAIL NO. 616 SEE SHEET C304. INSTALL 1 EA. 8"x6" REDUCER (M&MJ). DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
35. INSTALL 12" DIAMETER AWWA C900 DR-18 PVC WATER MAIN. WATER MAIN BEDDING SHALL CONFORM TO THE CITY OF MIDLAND DESIGN AND CONSTRUCTION STANDARDS DETAIL NO. 310(A) AND 310(B) SEE SHEET C301. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICE DURING CONSTRUCTION. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
36. INSTALL 1 EA. 12"x12" CROSS (M&MJ) PER CITY OF MIDLAND DETAIL "B" No. 601 SEE SHEET C302, DETAIL No. 614 SEE SHEET C304. INSTALL 2 EA. 12" GATE VALVES WITH VALVE BOXES (M&MJ). INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M&MJ) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 2 EA. 12"x8" REDUCERS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
37. INSTALL 1 EA. 12"x12" TEE (M&FL) PER CITY OF MIDLAND DETAIL "C" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M&FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 1 EA. 12"x8" REDUCER. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
38. INSTALL 1 EA. 8"x6" TEE (M&FL) PER CITY OF MIDLAND DETAIL "E" No. 601 SEE SHEET C302, DETAIL No. 615 SEE SHEET C304. INSTALL 1 EA. 8" GATE VALVE WITH VALVE BOX (M&FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL FIRE HYDRANT ASSEMBLY PER CITY OF MIDLAND DETAIL No. 603 SEE SHEET C302. LATERAL PIPE TO BE C-900 PVC, LENGTH PER PLANS. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
39. INSTALL 12" 90° BEND (M&MJ) PER CITY OF MIDLAND DETAIL No. 616 SEE SHEET C304. DEFLECT LINE A MAXIMUM OF 5° PER FITTINGS OR 1° PER JOINTS TO ADJUST FOR HORIZONTAL AND/OR VERTICAL ALIGNMENT.
40. CONTRACTOR TO TIE-IN EXISTING WATER MAIN, CONTRACTOR TO PREPARE EXISTING PIPE FOR PRESSURE COUPLING. FIELD VERIFY EXISTING CONDITIONS PIPE AND MATERIALS. ~~INFORM THE ENGINEER OF RECORD OF ANY DEVIATION TO A DRESSER COUPLING SOLUTION.~~ EXISTING TEE FITTING, VALVE, AND FIRE HYDRANT AT TIE-IN TO REMAIN.
41. INSTALL 1 EA. 12" GATE VALVE WITH VALVE BOX (M&FL) PER CITY OF MIDLAND DETAIL No. 608(A), 608(B) SEE SHEETS C303. INSTALL 12" CAP AND BLOCKING PER CITY OF MIDLAND DETAIL 617 SEE SHEET C302.
42. CONTRACTOR TO REMOVE EXISTING WATER VALVE AND CAP EXISTING TEE.

APPROVED AS NOTED
CITY OF MIDLAND
10.06.2022
ENGINEERING
ADMINISTRATION TO CONSTRUCTION CITY JURISDICTION
The review is limited to the extent of the City Standard Details & Specifications of the City of Midland, Texas. The Engineer of Record is responsible for the accuracy and adequacy of the design, dimensions and notes on this sheet. The issuance of this APPROVAL based on the construction drawings and other data submitted to the Engineering Division does not relieve the Engineer of Record or any other City Service Department from requiring the correction of errors in the construction drawings and other data. The Director of Engineering Services or his designated representative shall be notified prior to construction shown and referenced on this sheet of the State, of any City Ordinance, of the City Standard Details & Specifications, or of any other ordinances or adopted codes of the City of Midland jurisdiction.

811 Know what's below. Call before you dig.

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BY	APPR.	DATE

REVISIONS

DRAWN BY: MJD
CHECKED BY: ALM
APPROVED BY: ALM
DATE: 01/03/2022
JOB: 21012B

WATER MAIN-I PLAN & PROFILE

UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

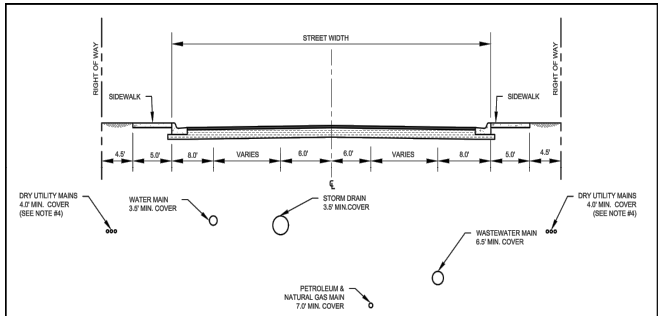
STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED
PROFESSIONAL ENGINEER
09/09/2022

SHEET C206 OF 23

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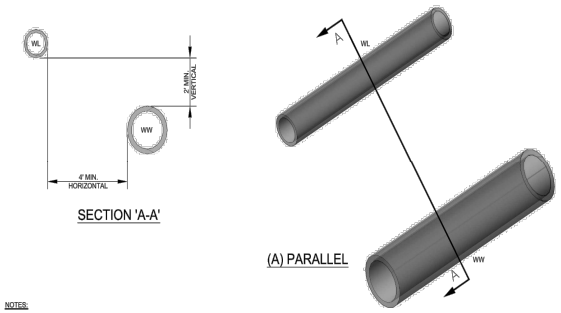
PACKET 8 266 October 25, 2022



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.

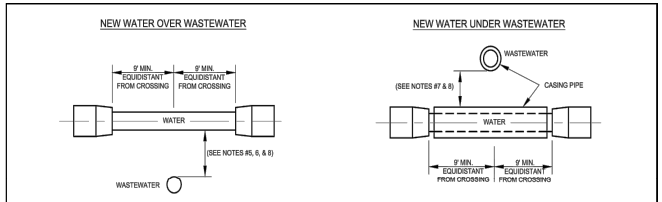
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
LOCAL STREET UTILITY MAIN SPACING			DETAIL: 304



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.

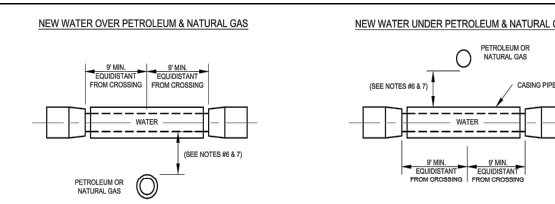
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
PARALLEL WATER & WASTEWATER SPACING			DETAIL: 306



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
NEW WATER MAIN CROSSING WASTEWATER MAIN			DETAIL: 307



NOTES:

1. SEE CITY DETAIL 808 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 808.
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: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
NEW WATER MAIN CROSSING PETROLEUM AND NATURAL GAS LINE			DETAIL: 308

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F:\2021\210128 CITY OF MIDLAND\MICHIGAN AVENUE WATER MAIN REPLACEMENT\DRAWINGS\CIVIL CONSTRUCTION PLANS\210128 C300 UTILITY DETAILS.DWG

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NO.	REVISIONS	BY	APPR.	DATE

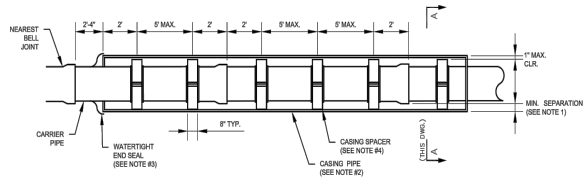
DRAWN BY: MJD
CHECKED BY: ALM
APPROVED BY: ALM
DATE: 01/03/2022
JOB: 210128

UTILITY DETAILS
UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

CITY OF MIDLAND, TEXAS
APPROVED
10.06.2022
ENGINEERING

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED
PROFESSIONAL ENGINEER
09/09/2022

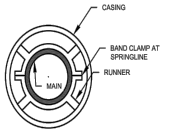
SHEET C300 OF 23



CROSS SECTION VIEW

NOTES:

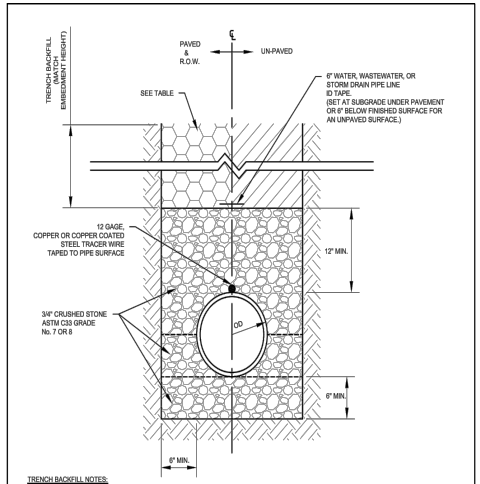
1. CASING PIPE TO BE MINIMUM TWO (2) NOMINAL SIZES LARGER IN DIAMETER THAN CARRIER PIPE.
2. CASING PIPE TO BE NO LESS THAN 12" DIAMETER PIPE. 12"-16" DIAMETER CASING PIPE MAY BE STEEL OR PVC PIPE. CASING PIPE LARGER THAN 16" DIAMETER MUST BE STEEL PIPE. STEEL CASING PIPE TO BE MINIMUM 1/4" WALL THICKNESS. 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 HOPE 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'

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	TYPICAL PIPE CASING DETAIL		805
APPROVED: MCC			

MIDLAND Engineering Services

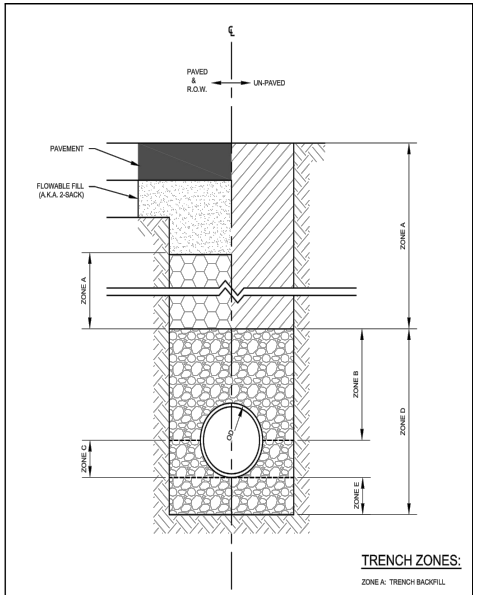


TRENCH BACKFILL NOTES:

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	
EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:	
TRENCHING AND BEDDING		310(A)	

MIDLAND Engineering Services

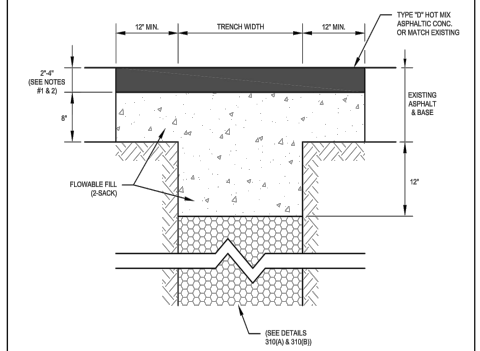


TRENCH ZONES:

ZONE A: TRENCH BACKFILL
ZONE B: PIPE BACKFILL
ZONE C: HAUNCHING
ZONE D: PIPE EMBEDMENT
ZONE E: BEDDING

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:	
TRENCHING AND BEDDING		310(B)	

MIDLAND Engineering Services

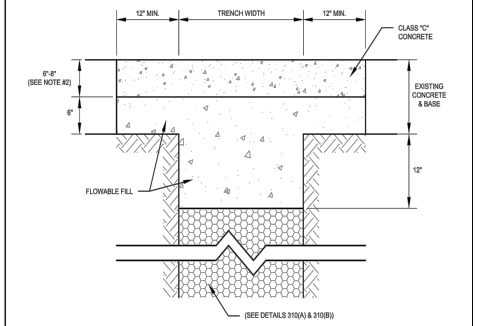


NOTES:

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	
EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:	
ASPHALT TRENCH PAVEMENT REPLACEMENT		311	

MIDLAND Engineering Services



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	
EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:	
CONCRETE TRENCH PAVEMENT REPLACEMENT		312	

MIDLAND Engineering Services

CITY OF MIDLAND APPROVED 10.06.2022 ENGINEERING

APPROVED for compliance with ordinances

The issuance or granting of this APPROVAL shall not be construed to be an authorization for any violation of any of the provisions of the City Code, of any City Ordinance, of the City Standard Details & Specifications, or of any other ordinance or adopted policy of the City of Midland jurisdiction. APPROVALS proceeding to plan authority is visible or cancel the provisions of of the City Code, of any City Ordinance, of the City Standard Details & Specifications, or of any other ordinance or adopted policy of the City of Midland jurisdiction shall not be valid. The issuance of this APPROVAL based on the representations made by the Engineer of Record to the Development Services Department shall not prevent the Director of Engineering Services Department from requiring the correction of errors in the construction documents and other data which are in violation of the provisions allowed or adopted by the City Council of Engineering infrastructure where such infrastructure is in violation of the City Code, of any City Ordinance, of the City Standard Details & Specifications, or of any other ordinance or adopted policy of the City of Midland jurisdiction.

PACKET

8.268 October 25, 2022

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DRAWN BY:	MJD
CHECKED BY:	ALM
APPROVED BY:	ALM
DATE:	01/03/2022
JOB:	21012B

UTILITY DETAILS

UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED
PROFESSIONAL ENGINEER
09/09/2022

SHEET C301 OF 23

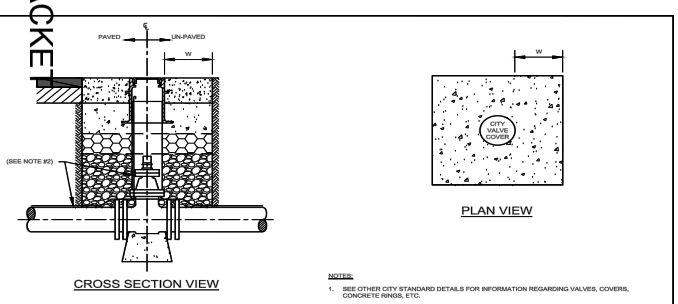
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P:\2021\21012B\CITY OF MIDLAND-MICHIGAN AVENUE WATER MAIN REPLACEMENT\DRAWINGS\CIVIL CONSTRUCTION PLANS\UTILITY CONSTRUCTION PLANS\21012B C301 UTILITY DETAILS.DWG

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F:\2021\210128-CITY OF MIDLAND-MICHIGAN AVENUE WATER MAIN REPLACEMENT\DRAWINGS\CIVIL CONSTRUCTION PLANS\UTILITY CONSTRUCTION PLANS\210128 C302 UTILITY DETAILS.DWG

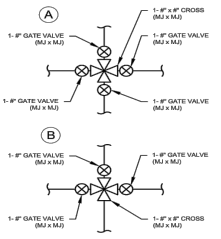
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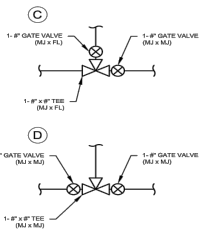
NOTES:
1. SEE OTHER CITY STANDARD DETAILS FOR INFORMATION REGARDING VALVES, COVERS, CONCRETE RINGS, ETC.
2. TRACER WIRE PER DETAIL 310 (A) TO BE TAPED TO SIDE OF VALVE BOX AND STOP 1.0" - 2.0" SHORT OF VALVE BOX COVER. TRACER WIRE TO REMAIN ENTIRELY WITHIN VALVE BOX.
3. MATERIALS AND CONSTRUCTION METHODS 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: JEO	EFFECTIVE DATE: PRELIMINARY/E UTIL IMP	SCALE: NTS	DETAIL:
VALVE DETECTOR WIRE END			320

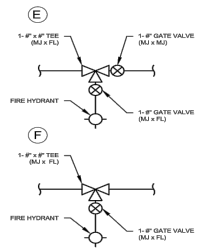
CROSS FITTING RESTRAINTS



TEE FITTING RESTRAINTS



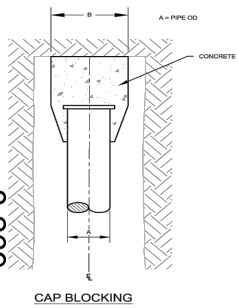
FIRE HYDRANT RESTRAINTS



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.

DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
TYPICAL FITTING RESTRAINT CONFIGURATIONS			601

8.269



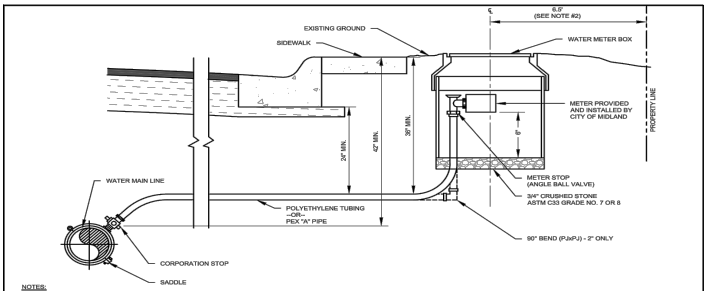
CAP BLOCKING

PIPE OD A	BLOCKING DIMENSIONS	
	B	*C
4"	1'-0"	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.

DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
BLOCKING FOR CAP			617



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.

DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
1" AND 2" WATER METER AND SERVICE CONNECTION			604(A)

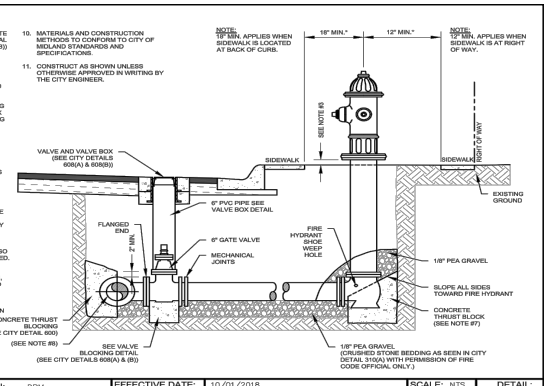
APPROVED COMPONENT LIST

7" WATER METER SERVICE	7" WATER METER SERVICE
SADDLE (OPTION 1): DUCTILE IRON, MUEULA, BRASS OC THREAD STEEL STRAP 1. FORD F202S SADDLE 2. FORD F202S SADDLE 3. A.Y. MCDONALD SERIES 4606A 4. OR APPROVED EQUAL	SADDLE (OPTION 1): DUCTILE IRON, MUEULA, BRASS OC THREAD STEEL STRAP 1. FORD F202S SADDLE 2. FORD F202S SADDLE 3. A.Y. MCDONALD SERIES 4606A 4. OR APPROVED EQUAL
1. FORD 3006SS SADDLE 2. A.Y. MCDONALD SERIES 3995 3. A.Y. MCDONALD SERIES 4. OR APPROVED EQUAL	1. FORD 3006SS SADDLE 2. A.Y. MCDONALD SERIES 3995 3. A.Y. MCDONALD SERIES 4. OR APPROVED EQUAL
CORPORATION STOP: 1. FORD FB1000-7-Q-NL 2. A.Y. MCDONALD SERIES 74701B-22 1 3. A.Y. MCDONALD SERIES 74703B-22 1 4. OR APPROVED EQUAL	CORPORATION STOP: 1. FORD FB1000-7-Q-NL 2. A.Y. MCDONALD SERIES 74701B-22 2 3. A.Y. MCDONALD SERIES 74703B-22 2 4. OR APPROVED EQUAL
CURB STOP METER VALVE: 1. FORD B44-444W-Q-NL 2. A.Y. MCDONALD SERIES 74603B-22 1 3. OR APPROVED EQUAL	CURB STOP METER VALVE: 1. FORD B44-777W-Q-NL 2. A.Y. MCDONALD SERIES 74603B-22 2 3. OR APPROVED EQUAL
METER BOX: 1. ENT. JORDAN 3219709402 2. OR APPROVED EQUAL	METER BOX: 1. ENT. JORDAN 3224409401 2. OR APPROVED EQUAL
SERVICE LINE: 1. 1" POLYETHYLENE TUBING MUNICIPEX "A" PIPE 2. OR APPROVED EQUAL	SERVICE LINE: 1. 2" POLYETHYLENE TUBING MUNICIPEX "A" PIPE 2. OR APPROVED EQUAL

NOTES:
1. ALL COMPONENTS OF ANY WATER METER SERVICE LINE MUST COME FROM THE SAME BRAND WHEREVER POSSIBLE.
2. PLASTIC SWEP ALL ELBOWS.
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	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
1" AND 2" WATER METER AND SERVICE CONNECTION			604(B)

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.



DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
FIRE HYDRANT NEW WATER MAIN			603

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CITY OF MIDLAND APPROVED ENGINEERING (10.06.2022)

2022 October 25

09/09/2022

ANDREW L. MEDLIN 108572 LICENSED PROFESSIONAL ENGINEER

STATE OF TEXAS REGISTERED

SHEET C302 OF 23

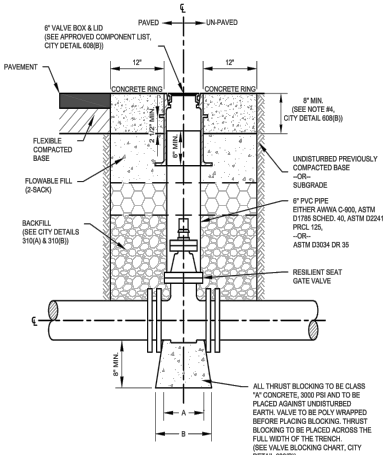
UTILITY DETAILS

UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

DRAWN BY:	MJD
CHECKED BY:	ALM
APPROVED BY:	ALM
DATE	01/03/2022
JOB	210128

Δ	REVISIONS	BY	APPR.	DATE

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MIDLAND Engineering Services	DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
	CHECKED: JCF	TYPICAL VALVE AND VALVE BOX	DETAIL: 608(A)
	APPROVED: MCC		

APPROVED COMPONENT LIST			
NO.	VALVES	VALVE COVERS	VALVE BOX
1	MUELLER 2360 MJ	MUELLER 2360 FL X FL	BASS & HAYS STANDARD 390-1 "SHORTY"
2	M & H 4067 MJ	M & H 4067-0	OR APPROVED EQUAL
3	CLOW 2838 MJ	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"

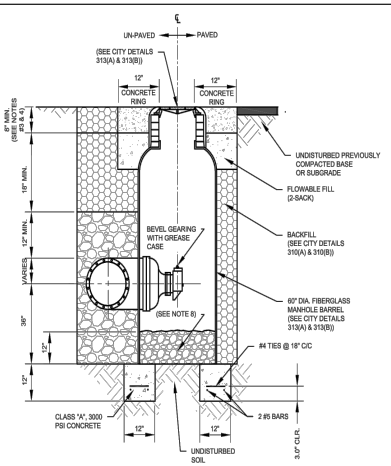
NOTES:

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	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
	CHECKED: JCF	TYPICAL VALVE AND VALVE BOX DETAILS	DETAIL: 608(B)
	APPROVED: MCC		

CITY OF MIDLAND TEXAS
APPROVED
10.06.2022
ENGINEERING

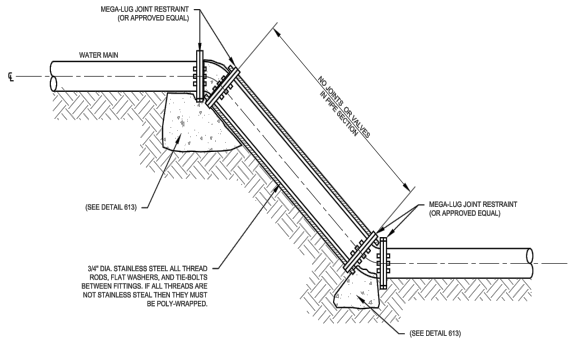
APPROVAL IS CONDITIONAL UPON DEMONSTRATION
The issuance or granting of this APPROVAL shall not be construed to be a permit for, or an approval of, any violation of any section of the City Code, of any City Ordinance, or the City Standard Details & Specifications, or of any other ordinance or adopted policy of the City of Midland jurisdiction. APPROVAL expressly by any authority having jurisdiction, of any violation of any section of the City Code, of any Ordinance, of the City Standard Details & Specifications, or of any other ordinance or adopted policy of the City of Midland jurisdiction shall not be valid. The issuance of the APPROVAL, based on the construction documents and other data, shall not prevent the Director of Engineering Services Department from requiring the correction of errors in the construction documents and other data. The Director of Engineering Services Department is authorized to stop installation or use of infrastructure which such infrastructure is in violation of the City Code, of any City Ordinance, or the City Standard Details & Specifications, or of any other ordinance or adopted policy of the City of Midland jurisdiction.



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.

MIDLAND Engineering Services	DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
	CHECKED: JCF	HORIZONTAL GATE VALVE AND VAULT	DETAIL: 609
	APPROVED: MCC		



NOTES:

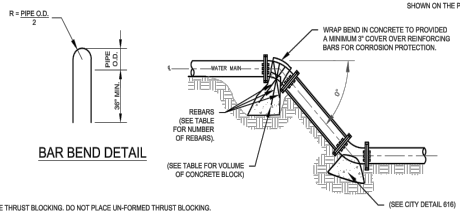
1. FORM ALL CONCRETE THRUST BLOCKING. DO NOT PLACE UN-FORMED THRUST BLOCKING.
2. ALL THRUST BLOCKING TO BE CLASS "A" CONCRETE, 3000 PSI, AND TO BE PLACED AGAINST UNDISTURBED EARTH. USE FIBER REINFORCEMENT THROUGHOUT.
3. FITTINGS TO BE POLY WRAPPED BEFORE BLOCKING IS PLACED.
4. MATERIALS AND CONSTRUCTION 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
	CHECKED: JCF	WATER MAIN VERTICAL OFFSET	DETAIL: 612
	APPROVED: MCC		

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.



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
	CHECKED: JCF	BLOCKING FOR VERTICAL BEND	DETAIL: 613
	APPROVED: MCC		

8.270

October 25, 2022

MAVERICK
ENGINEERING / SURVEY / WATER RESOURCES
1909 West Wall Street, Suite "K"
Midland, Texas 79701
TEXAS ENGINEER FIRM #: F-15089
TEXAS SURVEY FIRM #: 10194514
Tel: (432) 262-0999 Fax: (432) 262-0989
www.Maverick-Eng.com

REVISIONS	BY	APPR.	DATE	
1				

DRAWN BY: MJD
CHECKED BY: ALM
APPROVED BY: ALM
DATE: 01/03/2022
JOB: 2101.28

UTILITY DETAILS

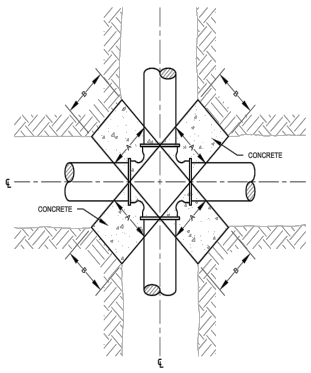
UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED
PROFESSIONAL ENGINEER
09/09/2022

SHEET
C303
OF 23

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F:\2021\2101.28 CITY OF MIDLAND - MICHIGAN AVENUE WATER MAIN REPLACEMENT\DRAWINGS\CIVIL CONSTRUCTION PLANS\UTILITY CONSTRUCTION PLANS\2101.28 C-303 UTILITY DETAILS.DWG



CROSS BLOCKING

CROSS BLOCKING
DESIGN 180 PSI LINE PRESSURE
SOIL BEARING CAP 2K/SF

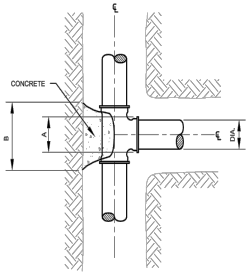
CROSS DIA.	BLOCKING DIMENSIONS		
	A	B	*C
4"x 4"	0'-11"	1'-0"	1'-0"
6"x 6"	1'-2"	1'-7"	1'-0"
8"x 8"	1'-4"	2'-2"	2'-2"
10"x 10"	1'-8"	2'-8"	2'-8"
12"x 12"	1'-10"	3'-2"	3'-2"
14"x 14"	2'-2"	3'-8"	3'-8"
16"x 16"	2'-4"	4'-3"	4'-3"

*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 CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
BLOCKING FOR CROSS			DETAIL: 614



TEE

"T" BLOCKING
DESIGN 180 PSI LINE PRESSURE
SOIL BEARING CAP 2K/SF

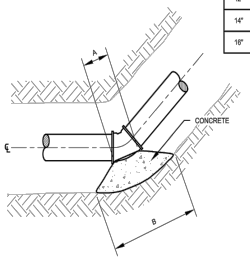
"T" RUN DIA.	STEM DIA.	BLOCKING DIMENSIONS		
		A	B	*C
TEE				
4"	ALL	11"	1'-0"	1'-0"
6"	ALL	1'-2"	1'-7"	1'-0"
8"	ALL	1'-4"	2'-2"	2'-2"
10"	ALL	1'-8"	2'-8"	2'-8"
1'-0"	THRU 8"	1'-10"	1'-10"	1'-8"
1'-0"	OVER 6"	1'-10"	3'-2"	3'-2"
1'-2"	THRU 8"	2'-2"	2'-2"	1'-11"
1'-2"	OVER 8"	2'-2"	3'-8"	3'-8"
1'-4"	THRU 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 CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
BLOCKING FOR TEE			DETAIL: 615



BLOCKING FOR HORIZONTAL BENDS
DESIGN 180 PSI LINE PRESSURE
SOIL BEARING CAP 2K/SF

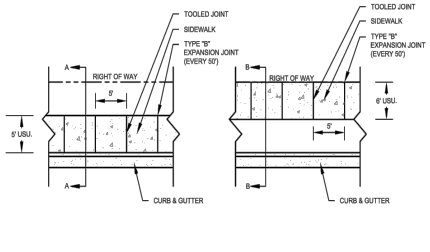
DIA. OF PIPE	DEGREE OF BEND											
	11 1/4°			22 1/2°			45°			90°		
	A	B	*C	A	B	*C	A	B	*C	A	B	*C
4"	0'-4"	1'-0"	1'-0"	0'-5"	1'-0"	1'-0"	0'-6"	1'-0"	1'-0"	0'-11"	1'-3"	1'-3"
6"	0'-7"	1'-0"	1'-0"	0'-7"	1'-0"	1'-0"	0'-8"	1'-0"	1'-0"	1'-3"	1'-11"	1'-11"
8"	0'-8"	0'-10"	1'-2"	0'-9"	1'-4"	1'-4"	0'-10"	1'-10"	1'-10"	1'-8"	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'-6"	3'-9"	3'-9"			

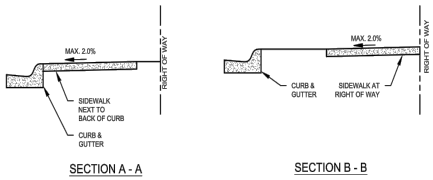
*C - VERTICAL DEPTH OF CONCRETE BEARING ON UNDISTURBED EARTH

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

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 CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
STANDARD SIDEWALK			DETAIL: 225

CITY OF MIDLAND APPROVED 10.06.2022 ENGINEERING

APPROVED SUBJECT TO COMPLIANCE WITH ORDINANCES

The issuance or granting of this APPROVAL shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of the City Code, of any City Ordinance, or of the Standard Details & Specifications, or of any other ordinance or adopted policy of the City of Midland jurisdiction. It shall not prevent the City from requiring the correction of errors in the construction drawings and other data submitted to the Engineering Services Department from issuing the correction of errors in the construction drawings and other data. The Director of Engineering Services may revoke any APPROVAL issued under the provisions of this Code whenever there is a violation of the City Code, of any City Ordinance, of the City Standard Details & Specifications, or of any other ordinance or adopted policy of the City of Midland jurisdiction.

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED
PROFESSIONAL ENGINEER
09/09/2022

MAVERICK
ENGINEERING / SURVEY / WATER RESOURCES
1909 West Wall Street, Suite "K"
Midland, Texas 79701
TEXAS ENGINEER FIRM #: F-15089
TEXAS SURVEY FIRM #: 10194514
Tel: (432) 262-0999 Fax: (432) 262-0989
www.Maverick-Eng.com

BY	APPR.	DATE	REVISIONS

DRAWN BY: MJD
CHECKED BY: ALM
APPROVED BY: ALM
DATE: 01/03/2022
JOB: 2101.28

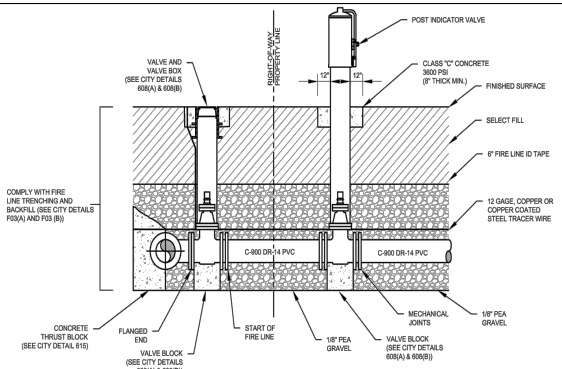
UTILITY DETAILS

UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

SHEET C304 OF 23

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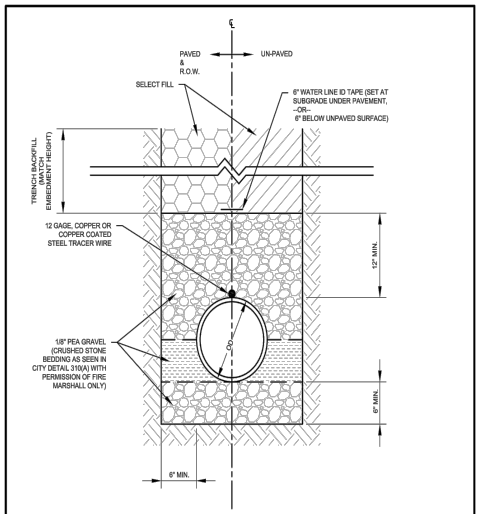
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NOTES:

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.

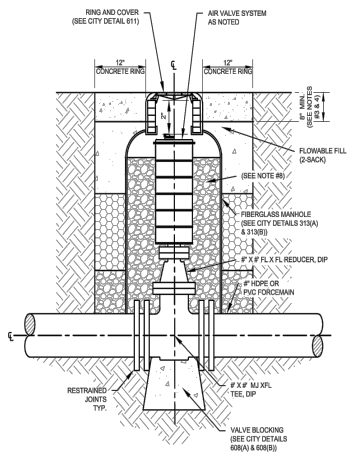
DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	FIRE SERVICE LINE		F01
APPROVED: MCC			



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.

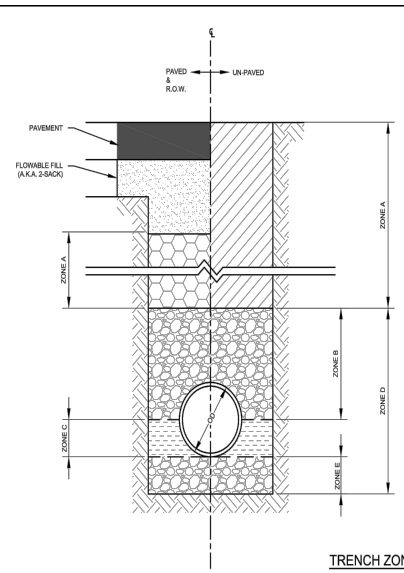
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:	
FIRE LINE TRENCHING AND BEDDING		F03(A)	



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	
EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:	
WATER AIR RELIEF VALVE		610	



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	
EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:	
FIRE LINE TRENCHING AND BEDDING		F03(B)	

CITY OF MIDLAND APPROVED ENGINEERING (10.06.2022)

THE APPROVAL OF THESE CONSTRUCTION PLANS BY THE CITY OF MIDLAND DOES NOT PERMIT ANY VIOLATION OF ANY FEDERAL, STATE OR LOCAL LAWS, ORDINANCES, OR RULES OF THE CITY OF MIDLAND. IN ADDITION, THE APPROVAL OF THESE CONSTRUCTION PLANS DOES NOT PERMIT ANY VIOLATION OF ANY RULE, REGULATION, STANDARD, OR SPECIFICATION OF THE CITY OF MIDLAND ENGINEERING STANDARDS MANUAL OR ANY OTHER ORDINANCE OR ADOPTED POLICY OF THE CITY OF MIDLAND.

MAVERICK
ENGINEERING / SURVEY / WATER RESOURCES
1909 West Wall Street, Suite "K"
Midland, Texas 79701
TEXAS ENGINEER FIRM #: F-15089
TEXAS SURVEY FIRM #: 10194514
Tel: (432) 262-0999 Fax: (432) 262-0989
www.Maverick-Eng.com

BY	APPR.	DATE	REVISIONS

DRAWN BY: MJD
CHECKED BY: ALM
APPROVED BY: ALM
DATE: 01/03/2022
JOB: 21018

UTILITY DETAILS

UTILITY CONSTRUCTION PLANS
MICHIGAN AVENUE UTILITY IMPROVEMENTS
MIDLAND, TEXAS

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED
PROFESSIONAL ENGINEER
09/09/2022

SHEET C305 OF 23

F:\2021\21018\CITY OF MIDLAND-MICHIGAN AVENUE WATER MAIN REPLACEMENT\DRAWINGS\CIVIL CONSTRUCTION PLANS\UTILITY CONSTRUCTION PLANS\21018 C305 UTILITY DETAILS.DWG
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City Council Meeting

Item Number: 9

Meeting Date: October 25, 2022

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: RESOLUTION AUTHORIZING THE PURCHASE OF TWO HUNDRED EIGHT (208) GETAC LAPTOPS AND ACCESSORIES THROUGH THE TEXAS DEPARTMENT OF INFORMATION RESOURCES FROM SHI-GOVERNMENT SOLUTIONS, INC., AT A TOTAL COST OF $609,625.05 FOR THE POLICE DEPARTMENT (DISTRICT: NONE) (GENERAL SERVICES)

Purpose:

Resolution authorizing the purchase of two hundred eight (208) Getac Laptops and accessories for the Police Department from SHI Government Solutions, Inc. through the Texas Department of Information Resources (DIR) contract DIR-TSO-4025 for a cost of $609,625.05.

Recommended City Council Action:

Approve

Fiscal Impact:

Funds are available in the Technology Fund.

Discussion:

Staff is recommending the purchase of two hundred eight (208) Getac Laptops and accessories for the Police Department from SHI Government Solutions, Inc. through the Texas Department of Information Resources (DIR) contract DIR-TSO-4025. 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. Please see the attached memo from Jennifer Frescaz, Chief Information Officer, for further information.

Therefore, please consider a resolution authorizing the purchase of two hundred eight (208) Getac Laptops and accessories for the Police Department from SHI Government Solutions, Inc. through the Texas Department of Information Resources (DIR) contract DIR-TSO-4025 for a cost of $609,625.05.

Tina Jaug

City Manager's Office

DATE: September 28, 2022

TO: Erika Martinez, Purchasing Manager

FROM: Jennifer Frescaz, Chief Information Officer

SUBJECT: Request the approval of the purchase of Getac laptops and accessories for the Police Department from SHI Government Solutions via DIR-TSO-4025

Consider a resolution approving the purchase of Getac S410G4 laptops from SHI Government Solutions via DIR contract DIR-TSO-4025.

Staff has selected two laptop models, one for Police, Municipal Court, and one for Fire. The Getac S410 model for Police has been in use since the initial replacements in 2017 and 2018. The S410-G4 model is the update to the existing device. The purchase includes all laptops and accessories.

The total cost for the laptops and associated equipment is $609,625.05 and is budgeted in the Technology Fund.

RESOLUTION NO. _____

RESOLUTION AUTHORIZING THE PURCHASE OF TWO HUNDRED EIGHT (208) GETAC LAPTOPS AND ACCESSORIES THROUGH THE TEXAS DEPARTMENT OF INFORMATION RESOURCES FROM SHI-GOVERNMENT SOLUTIONS, INC., AT A TOTAL COST OF $609,625.05 FOR THE POLICE DEPARTMENT

WHEREAS, the Texas Department of Information Resources ("DIR") is a cooperative program in which the City participates on purchases; and

WHEREAS, SHI-Government Solutions, Inc., has agreed to provide two hundred eight (208) Getac laptops and accessories through the DIR for the Police Department at a total cost of $609,625.05; and

WHEREAS, the City Council finds the price proposed for the purchase of two hundred eight (208) Getac laptops and accessories for the Police Department through the DIR to be fair and reasonable; and

WHEREAS, the City Council finds it to be in the public interest to authorize the purchase of two hundred eight (208) Getac laptops and accessories for the Police Department through the DIR from SHI-Government Solutions, Inc.;

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 two hundred eight (208) Getac laptops and accessories for the Police Department through the DIR from SHI-Government Solutions, Inc, at a total cost of $609,625.05.

SECTION TWO. That upon receipt of proper invoice or statement approved by te City Manager, the City Comptroller is hereby authorized and directed to pay SHI-Government Solutions, Inc., from funds available in the Technology Fund.

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., 2022, by

the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

Pricing Proposal
Quotation #: 22553204
Created On: 9/26/2022
Valid Until: 10/14/2022

TX-City of Midland

Dusty Burns
P.O. BOX 1152
ATTN: ACCOUNTS PAYABLE
Midland, TX 79702
United States
Phone: 432.685.7487
Fax:
Email: dburns@midlandtexas.gov

Inside Account Manager

Lauren Allen
290 Davidson Ave
Somerset, NJ 08873
Phone: 732-868-6210
Fax:
Email: lauren_allen@shi.com

All Prices are in US Dollar (USD)

	Product	Qty	Your Price	Total
1	GETAC : S410G4 Basic i5-1135G7, Windows Hello Webcam, W 10 Pro x64 with 16GB RAM, 512GB PCIe SSD (SR HD LCD + Tchscreen + Stylus), US KBD + US PC mbrn Backlit KBD, WIFI + BT + 4G LTE w/ GPS / Glonass + Passthrough, Thunderbolt 4, HDMI, RJ45, 3ylw Getac - Part#: SP27TCQASCXX Contract Name: Emergency Preparedness (Synnex) Contract #: DIR-TSO-4075	208	$2,595.55	$539,874.40
2	GETAC : (Bumper to Bumper)- Semi-Rug Laptop (Year 1,2 & 3) Getac - Part#: GE-SVSRNFW3Y Contract Name: Emergency Preparedness (Synnex) Contract #: DIR-TSO-4075	208	$314.12	$65,336.96
3	GETAC : Getac 11-16V, 22-32V DC Vehicle adapter / Charger (120W for Docking Station) Getac - Part#: GAD2X4 Contract Name: Emergency Preparedness (Synnex) Contract #: DIR-TSO-4075	3	$96.24	$288.72
4	GETAC : S410G4 - Office Dock with 120W AC adapter (US) Getac - Part#: GDODU4 Contract Name: Emergency Preparedness (Synnex) Contract #: DIR-TSO-4075	3	$262.49	$787.47
5	GETAC : S410 Havis Vehicle Dock w/ RF (black) Vehicle adapter sold separate Getac - Part#: OHHGTC6193 Contract Name: Emergency Preparedness (Synnex) Contract #: DIR-TSO-4075	3	$1,112.50	$3,337.50
			Total	$609,625.05

Additional Comments

By accepting, using, or deploying the software, hardware or third party services resold under this ordering document (each, a "Product"), as well as any related maintenance or support services, Customer will be bound by

any OEM terms and conditions applicable to such Product (the "OEM Terms"). If, in order to procure such Product for or resell such Product to Customer, SHI is required by the OEM to agree to or otherwise purports to accept the OEM Terms and be bound thereby, SHI shall do so on behalf of Customer, and Customer shall indemnify, defend and hold harmless SHI from and against any claims, actions, liabilities, losses and damages that SHI suffers under the OEM Terms which arise out of or in connection with Customer's use or deployment of such Product, including any costs associated with periodic payments for, or the autorenewal of, a license to or subscription for such Product. For the avoidance of doubt, Customer is solely responsible for compliance with any autorenewal provisions contained in the OEM Terms, including providing timely notice to the OEM of Customer's intent not to renew a license to or subscription for a Product.

Please note, if Emergency Connectivity Funds (ECF) will be used to pay for all or part of this quote, please let us know as we will need to ensure compliance with the funding program.

Hardware items on this quote may be updated to reflect changes due to industry wide constraints and fluctuations.

The products offered under this proposal are resold in accordance with the terms and conditions of the Contract referenced under that applicable line item.

City Council Meeting

Item Number: 10

Meeting Date: October 25, 2022

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: RESOLUTION APPROVING A CONTRACT WITH MID-TEX OF MIDLAND, INC., THROUGH THE PURCHASING ASSOCIATION OF COOPERATIVE ENTITIES, FOR THE REPAIR AND REPLACEMENT OF EXPANSION JOINT SEALANT AT ASTOUND BROADBAND STADIUM FOR A TOTAL COST OF $228,323.00; APPROVING $23,000.00 FOR PROJECT-RELATED EXPENSES; AND APPROPRIATING FUNDS FOR SAID CONTRACT (DISTRICT 4) (GENERAL SERVICES)

Purpose:

Resolution awarding a contract for Astound Broadband Stadium Expansion Joint Sealant replacement and repairs to Mid-Tex of Midland, Inc., through Purchasing Association of Cooperative Entities (PACE) contract P00250-G5-MTN for the amount of $228,323.00; approving $23,000.00 for project related expenses; and appropriating funds for said project.

Recommended City Council Action:

Approve

Fiscal Impact:

Funding is available in the Scharbauer Sports Complex Fund Unappropriated Fund Balance and will be transferred and appropriated to a project in the Capital Projects Fund.

Discussion:

Staff is recommending awarding a contract for Astound Broadband Stadium Expansion Joint Sealant replacement and repairs through Purchasing Association of Cooperative Entities (PACE) contract P00250-G5-MTN for the cost of $228,323.00. We are members of the Purchasing Association of Cooperative Entities (PACE) 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. Please see attached memo from Cristina Burns, Community Services Director, for additional information.

Therefore, please consider a resolution awarding a contract for Astound Broadband Stadium Expansion Joint Sealant replacement and repairs to Mid-Tex of Midland, Inc. of Midland, Texas through Purchasing Association of Cooperative Entities (PACE) contract P00250-G5-MTN for the cost of $228,323.00; approving $23,000.00 for project related expenses; and appropriating funds for said project.

Tina Gaug

City Manager's Office

Scharbauer Sports Complex Division
Interoffice Memorandum

Date: October 13, 2022

To: Morris Williams Jr., Deputy City Manager

From: Cristina Burns, Community Services Director

Subject: Accept Proposal – Astound Broadband Stadium Expansion Joint Sealant replacement and repairs

The vertical and horizontal expansion joints in the east and west seating areas above the concourse in Astound Broadband Stadium need replacement. The lack of material in the expansion joints allows water to leak down into the concession stands and the area beneath the stadium seating area, and is causing damage to that infrastructure.

Mid-Tex of Midland has submitted a bid proposal in the amount of $228,323.00 for the work to make the needed repairs. This proposal is through the PACE eGordian purchasing co-op, Contract # P00250-G5-MTN.

Bids for the work included removal and replacement of all expansion joint materials, removal and replacement of seating in the areas where repairs will be made, and repairs to all damaged finishes in the concession and kitchen areas on the west side of the stadium.

Staff recommends accepting the Mid-Tex of Midland Proposal in the amount of $228,323.00. An additional amount of $23,000.00 is requested in the project to cover any work to be completed outside of the contract with Mid-Tex, such as materials testing. Total project funding requested is $251,323.00.

$251,323.00 is available in the Scharbauer Sports Complex unappropriated fund balance and is hereby appropriated and will be transferred to a project.

RESOLUTION NO. _____

RESOLUTION APPROVING A CONTRACT WITH MID-TEX OF MIDLAND, INC., THROUGH THE PURCHASING ASSOCIATION OF COOPERATIVE ENTITIES, FOR THE REPAIR AND REPLACEMENT OF EXPANSION JOINT SEALANT AT ASTOUND BROADBAND STADIUM FOR A TOTAL COST OF $228,323.00; APPROVING $23,000.00 FOR PROJECT-RELATED EXPENSES; AND APPROPRIATING FUNDS FOR SAID CONTRACT

WHEREAS, the Purchasing Association of Cooperative Entities ("PACE") 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, Mid-Tex of Midland, Inc., has submitted a total proposed cost to the City of $228,323.00 for the repair and replacement of expansion joint sealant at Astound Broadband Stadium through PACE; and

WHEREAS, the Council finds the price proposed by Mid-Tex of Midland, Inc., through PACE for the repair and replacement of expansion joint sealant at Astound Broadband Stadium to be fair and reasonable; and

WHEREAS, the City Council finds it to be in the public interest to approve a contract with Mid-Tex of Midland, Inc., for the repair and replacement of expansion joint sealant at Astound Broadband Stadium through PACE; and

WHEREAS, the City Council finds it to be in the public interest to approve $23,000.00 for project-related expenses;

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

SECTION ONE. That the City Manager and City Secretary are hereby authorized and directed to execute and attest, respectively, on behalf of the City of Midland, a contract with Mid-Tex of Midland, Inc., for the repair and replacement of expansion joint sealant at Astound Broadband Stadium through PACE for a total cost of $228,323.00. Said contract being attached hereto as Exhibit A and incorporated herein for all purposes.

SECTION TWO. That the sum of $23,000.00 for project-related expenses is hereby approved.

SECTION THREE. That the amount of $251,323.00 shall be transferred and appropriated from the Scharbauer Sports Complex Unappropriated Fund Balance to a project established by the City of Midland Finance Department in the Capital Projects Fund.

SECTION FOUR. That the City Comptroller is hereby authorized and directed to pay Mid-Tex of Midland, Inc., in accordance with the provisions of the above-referenced contract, from funds available in the project established by the City of Midland Finance Department 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., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

THE CITY OF MIDLAND

CONTRACT

Contract No. 23000655

THIS CONTRACT, effective the 26 day of October, 2022, by and between the City of Midland, hereinafter referred to as "CITY", and Mid-Tex of Midland, Inc., hereinafter referred to as "COMPANY", is made for the following considerations:

1. **Cost:** Total Proposal: $ 228,323.00 DOLLARS

2. **Scope of Work:** COMPANY shall perform all work described for Astound Broadband Stadium Expansion Joint Sealant replacement and repairs in the following documents, attached hereto and incorporated herein by reference for all legal 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 Cristina Burns 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 120 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:** After all work is completed by COMPANY, including all Change Orders altering the original scope and amount of said contract are completed, and CITY has inspected and approved that the work is completed and in compliance with the contract and all subsequent Change Orders, CITY shall thereafter issue payment to COMPANY in the amount of the contract and all Change Orders. CITY shall be the final judge of when the work is completed by COMPANY. CITY, in its sole discretion, shall determine if the work under the contract and under any Change Orders has been done to CITY's requirements. CITY may make periodic payments to COMPANY, however such periodic payments may only be made pursuant to this paragraph, and only after all work and all Change Orders are completed by COMPANY and approved by CITY. For contracts exceeding $25,000 and construction time exceeds ninety days, 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 Owner'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. **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.

18. 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.

19. **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.

20. **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.

21. **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.

22. **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**.

23. **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.

24. **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.

25. **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.

26. **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.

27. **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.

28. **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.

29. 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.

30. **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.

31. **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.

32. **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.

33. 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: _____
Robert Patrick, City Manager

ATTEST

_____
Amy M. Turner, City Secretary

APPROVED ONLY AS 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 Mid-Tex of Midland, Inc., 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 A

Mid-Tex of Midland, Inc.
5206 West Wadley
Midland, Texas 79707
Phone: (432) 697-2282
Fax: 694-9627

BID PROPOSAL

October 7, 2022 **REVISED**

Client:
City of Midland
P.O. Box 1152
Midland, Texas 79702

Project:
Joint Sealant Replacement
Astound Stadium
Project Number:

Attention: Ms. Laurie Williams 685-7370, Fax: 685-7380 lwilliams@midlandtexas.gov

Mid-Tex of Midland, Inc. hereby proposes to furnish all labor, material and necessary incidentals to complete the following renovations as requested and as listed below:

Replace vertical expansion joint sealants on east and west seating areas $228,323.00
Replace horizontal expansion joint sealants on east and west seating areas
Replace damaged finishes in concession & kitchen areas on the west side

Horizontal joint replacement will require the removal and re-installation of seating to access the joints needed for repairs. This is included in the estimate.

eGordian fee included
Workman's comp and liability insurance
Supervision, clean-up & haul trash
PACE eGordian Contract #: P00250-G5-MTM

ALL OF THE ABOVE FOR THE LUMP SUM COST OF: ***$228,323.00***

All material is Guaranteed to be as specified. All work to be completed in a professional workmanlike manner according to standard practices. Deviations from the above specifications involving extra expense, will be executed only upon written orders, and will become an extra charge to this estimate. All agreements contingent upon strikes, accidents, or delays beyond our control.
Invoices due and payable upon completion of work. Finance charges of maximum allowable by law will be levied on all balances 30 days past due.
This estimate is valid for thirty (30) days.

Respectfully;

T. Alan White alan@midtexofmidland.com
President

Approved;

Date Approved:

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.

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

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

"General Decision Number: TX20220261 08/05/2022

Superseded General Decision Number: TX20210261

State: Texas

Construction Type: Building

County: Midland County in Texas.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

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 $15.00 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 2022.
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 $11.25 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 2022.

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 https://www.dol.gov/agencies/whd/government-contracts.

Modification Number	Publication Date
0	01/07/2022
1	02/25/2022

2 08/05/2022

BOIL0074-003 01/01/2021

	Rates	Fringes
BOILERMAKER	$ 29.47	24.10

ENGI0178-005 06/01/2020

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
(1) Tower Crane	$ 32.85	13.10
(2) Cranes with Pile Driving or Caisson Attachment and Hydraulic Crane 60 tons and above	$ 28.75	10.60
(3) Hydraulic cranes 59 Tons and under	$ 32.35	13.10

* IRON0084-011 06/01/2022

	Rates	Fringes
IRONWORKER, ORNAMENTAL	$ 26.76	7.88

PLUM0404-001 09/01/2020

	Rates	Fringes
PLUMBER	$ 26.05	8.81

* SUTX2014-037 07/21/2014

	Rates	Fringes
BRICKLAYER	$ 20.00	0.00
CARPENTER	$ 13.82 **	0.00
CEMENT MASON/CONCRETE FINISHER	$ 13.76 **	0.00
ELECTRICIAN	$ 23.18	6.31
INSULATOR - MECHANICAL (Duct, Pipe & Mechanical System Insulation)	$ 19.77	7.13
IRONWORKER, REINFORCING	$ 12.27 **	0.00
IRONWORKER, STRUCTURAL	$ 22.16	5.26
LABORER: Common or General	$ 11.80 **	0.00
LABORER: Mason Tender - Brick	$ 11.38 **	0.00
LABORER: Mason Tender - Cement/Concrete	$ 10.58 **	0.00
LABORER: Pipelayer	$ 12.49 **	2.13
LABORER: Roof Tearoff	$ 11.28 **	0.00
OPERATOR:		

Backhoe/Excavator/Trackhoe.....$ 14.25 ** 0.00

OPERATOR: Bobcat/Skid Steer/Skid Loader.....$ 13.93 ** 0.00

OPERATOR: Bulldozer.....$ 18.29 1.31

OPERATOR: Drill.....$ 16.22 0.34

OPERATOR: Forklift.....$ 14.83 ** 0.00

OPERATOR: Grader/Blade.....$ 13.37 ** 0.00

OPERATOR: Loader.....$ 13.55 ** 0.94

OPERATOR: Mechanic.....$ 17.52 3.33

OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....$ 16.03 0.00

OPERATOR: Roller.....$ 12.70 ** 0.00

PAINTER (Brush, Roller, and Spray).....$ 15.00 0.73

PIPEFITTER.....$ 25.80 8.55

ROOFER.....$ 14.75 ** 0.00

SHEET METAL WORKER (HVAC Duct Installation Only).....$ 22.73 7.52

SHEET METAL WORKER, Excludes HVAC Duct Installation.....$ 19.50 0.00

TILE FINISHER.....$ 11.22 ** 0.00

TILE SETTER.....$ 14.74 ** 0.00

TRUCK DRIVER: Dump Truck.....$ 12.39 ** 1.18

TRUCK DRIVER: Flatbed Truck.....$ 19.65 8.57

TRUCK DRIVER: Semi-Trailer Truck.....$ 12.50 ** 0.00

TRUCK DRIVER: Water Truck.....$ 12.00 ** 4.11

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 ($15.00) or 13658 ($11.25). 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 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"

THE CITY OF MIDLAND

CONTRACT

Contract No. 23000655

THIS CONTRACT, effective the 26 day of October, 2022, by and between the City of Midland, hereinafter referred to as "CITY", and Mid-Tex of Midland, Inc., hereinafter referred to as "COMPANY", is made for the following considerations:

1. **Cost:** Total Proposal: $ 228,323.00 DOLLARS

2. **Scope of Work:** COMPANY shall perform all work described for Astound Broadband Stadium Expansion Joint Sealant replacement and repairs in the following documents, attached hereto and incorporated herein by reference for all legal 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 Cristina Burns 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 120 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:** After all work is completed by COMPANY, including all Change Orders altering the original scope and amount of said contract are completed, and CITY has inspected and approved that the work is completed and in compliance with the contract and all subsequent Change Orders, CITY shall thereafter issue payment to COMPANY in the amount of the contract and all Change Orders. CITY shall be the final judge of when the work is completed by COMPANY. CITY, in its sole discretion, shall determine if the work under the contract and under any Change Orders has been done to CITY's requirements. CITY may make periodic payments to COMPANY, however such periodic payments may only be made pursuant to this paragraph, and only after all work and all Change Orders are completed by COMPANY and approved by CITY. For contracts exceeding $25,000 and construction time exceeds ninety days, 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 Owner'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. **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.

18. 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.

19. **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.

20. **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.

21. **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.

22. **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**.

23. **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.

24. **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.

25. **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.

26. **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.

27. **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.

28. **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.

29. 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.

30. **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.

31. **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.

32. **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.

33. 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: _____
Robert Patrick, City Manager

ATTEST

_____
Amy M. Turner, City Secretary

APPROVED ONLY AS 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 Mid-Tex of Midland, Inc., 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 A

Mid-Tex of Midland, Inc.
5206 West Wadley
Midland, Texas 79707
Phone: (432) 697-2282
Fax: 694-9627

BID PROPOSAL

October 7, 2022 **REVISED**

Client:
City of Midland
P.O. Box 1152
Midland, Texas 79702

Project:
Joint Sealant Replacement
Astound Stadium
Project Number:

Attention: Ms. Laurie Williams 685-7370, Fax: 685-7380 lwilliams@midlandtexas.gov

Mid-Tex of Midland, Inc. hereby proposes to furnish all labor, material and necessary incidentals to complete the following renovations as requested and as listed below:

Replace vertical expansion joint sealants on east and west seating areas $228,323.00
Replace horizontal expansion joint sealants on east and west seating areas
Replace damaged finishes in concession & kitchen areas on the west side

Horizontal joint replacement will require the removal and re-installation of seating to access the joints needed for repairs. This is included in the estimate.

eGordian fee included
Workman's comp and liability insurance
Supervision, clean-up & haul trash
PACE eGordian Contract #: P00250-G5-MTM

ALL OF THE ABOVE FOR THE LUMP SUM COST OF: ***$228,323.00***

All material is Guaranteed to be as specified. All work to be completed in a professional workmanlike manner according to standard practices. Deviations from the above specifications involving extra expense, will be executed only upon written orders, and will become an extra charge to this estimate. All agreements contingent upon strikes, accidents, or delays beyond our control.
Invoices due and payable upon completion of work. Finance charges of maximum allowable by law will be levied on all balances 30 days past due.
This estimate is valid for thirty (30) days.

Respectfully;

T. Alan White alan@midtexofmidland.com
President

Approved;

Date Approved:

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.

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

"General Decision Number: TX20220261 08/05/2022

Superseded General Decision Number: TX20210261

State: Texas

Construction Type: Building

County: Midland County in Texas.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

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 $15.00 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 2022.
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 $11.25 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 2022.

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 https://www.dol.gov/agencies/whd/government-contracts.

Modification Number	Publication Date
0	01/07/2022
1	02/25/2022

2 08/05/2022

BOIL0074-003 01/01/2021

	Rates	Fringes
BOILERMAKER	$ 29.47	24.10

ENGI0178-005 06/01/2020

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
(1) Tower Crane	$ 32.85	13.10
(2) Cranes with Pile Driving or Caisson Attachment and Hydraulic Crane 60 tons and above	$ 28.75	10.60
(3) Hydraulic cranes 59 Tons and under	$ 32.35	13.10

* IRON0084-011 06/01/2022

	Rates	Fringes
IRONWORKER, ORNAMENTAL	$ 26.76	7.88

PLUM0404-001 09/01/2020

	Rates	Fringes
PLUMBER	$ 26.05	8.81

* SUTX2014-037 07/21/2014

	Rates	Fringes
BRICKLAYER	$ 20.00	0.00
CARPENTER	$ 13.82 **	0.00
CEMENT MASON/CONCRETE FINISHER	$ 13.76 **	0.00
ELECTRICIAN	$ 23.18	6.31
INSULATOR - MECHANICAL (Duct, Pipe & Mechanical System Insulation)	$ 19.77	7.13
IRONWORKER, REINFORCING	$ 12.27 **	0.00
IRONWORKER, STRUCTURAL	$ 22.16	5.26
LABORER: Common or General	$ 11.80 **	0.00
LABORER: Mason Tender - Brick	$ 11.38 **	0.00
LABORER: Mason Tender - Cement/Concrete	$ 10.58 **	0.00
LABORER: Pipelayer	$ 12.49 **	2.13
LABORER: Roof Tearoff	$ 11.28 **	0.00
OPERATOR:		

Backhoe/Excavator/Trackhoe.....$ 14.25 ** 0.00

OPERATOR: Bobcat/Skid Steer/Skid Loader.....$ 13.93 ** 0.00

OPERATOR: Bulldozer.....$ 18.29 1.31

OPERATOR: Drill.....$ 16.22 0.34

OPERATOR: Forklift.....$ 14.83 ** 0.00

OPERATOR: Grader/Blade.....$ 13.37 ** 0.00

OPERATOR: Loader.....$ 13.55 ** 0.94

OPERATOR: Mechanic.....$ 17.52 3.33

OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....$ 16.03 0.00

OPERATOR: Roller.....$ 12.70 ** 0.00

PAINTER (Brush, Roller, and Spray).....$ 15.00 0.73

PIPEFITTER.....$ 25.80 8.55

ROOFER.....$ 14.75 ** 0.00

SHEET METAL WORKER (HVAC Duct Installation Only).....$ 22.73 7.52

SHEET METAL WORKER, Excludes HVAC Duct Installation.....$ 19.50 0.00

TILE FINISHER.....$ 11.22 ** 0.00

TILE SETTER.....$ 14.74 ** 0.00

TRUCK DRIVER: Dump Truck.....$ 12.39 ** 1.18

TRUCK DRIVER: Flatbed Truck.....$ 19.65 8.57

TRUCK DRIVER: Semi-Trailer Truck.....$ 12.50 ** 0.00

TRUCK DRIVER: Water Truck.....$ 12.00 ** 4.11

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 ($15.00) or 13658 ($11.25). 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 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"

City Council Meeting

Item Number: 11

Meeting Date: October 25, 2022

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: RESOLUTION AWARDING A CONTRACT FOR THE UTILITY EXTENSION PROGRAM 05 PROJECT TO ENTRENCH INC. AT A TOTAL COST NOT TO EXCEED $2,500,000.00 PER CONTRACTUAL TERM; AND APPROPRIATING AND TRANSFERRING FUNDS (DISTRICT: ALL) (GENERAL SERVICES)

Purpose:

Resolution awarding the execution of a contract for the Utility Extension Program (UEP) 05 Project for an amount not to exceed $2,500,000.00 with an option to renew the program for no more than two (2) additional one (1) year terms for an amount not to exceed $2,500,000.00 per term.

Recommended City Council Action:

Approve

Fiscal Impact:

Funding is available in the Utilities Admin FY23 Operating Fund and will be transferred and appropriated to a project for the said purposes.

Discussion:

The City Manager approved plans and specifications and authorized advertisement for bids for the Utility Extension Program (UEP) 05 Project. The bid request was sent to eighty-eight (88) companies. We received four (4) bids. Staff recommends awarding a contract to Entrench, Inc. Please see the attached memo from Joshua Ferguson, Assistant City Engineer, for more information.

Therefore, please consider a resolution awarding a contract to Entrench Inc. of Hobbs, New

Mexico for the Utility Extension Program (UEP) 05 Project in an amount not to exceed $2,500,000.00 with an option to renew the program for no more than two (2) additional one (1) year terms for an amount not to exceed $2,500,000.00 per term

Tina Gaus

City Manager's Office

INTEROFFICE MEMORANDUM

TO: Erika Martinez; City of Midland, Purchasing Manager

FROM: Joshua C. Ferguson, P.E.; City of Midland, Assistant City Engineer

SUBJECT: Utility Extension Program 05 ♦ Engr. Project No. U22-01 ♦ Bid Tabulation ♦ Funding #_____

DATE: October 11, 2022

Erika,

Engineer staff has reviewed the bid tabulation for the Utility Extension Program 05. Entrench, Inc. of Hobbs, New Mexico, is the apparent successful low bidder. Staff recommends awarding the Utility Extension Program 05 to Entrench, Inc.

Entrench, Inc. has an established history with the City of Midland of performing work of similar scale and scope to the Utility Extension Program 05. Furthermore, the unit prices appear to be in line with current pricing trends.

Funding is available for this project.

The agreement specifies awarding an amount not to exceed $2,500,000.00 with a construction period beginning within 15 calendar days of a written notice to proceed for construction and an initial construction deadline of September 30, 2023 with an option of renewing the program for no more than two (2) additional one (1) year terms after the initial construction deadline for an amount not to exceed $2,500,000.00 per term.

Joshua C. Ferguson, P.E.
City Engineer

Cc: Jose Ortiz
Regina Stephenson

RESOLUTION NO. _____

RESOLUTION AWARDING A CONTRACT FOR THE UTILITY EXTENSION PROGRAM 05 PROJECT TO ENTRENCH INC. AT A TOTAL COST NOT TO EXCEED $2,500,000.00 PER CONTRACTUAL TERM; AND APPROPRIATING AND TRANSFERRING FUNDS

WHEREAS, the City Manager approved the plans and specifications and advertised for competitive bids for the Utility Extension Program 05 Project (the "Project"); and

WHEREAS, Bid No. U22-01 was opened on October 5, 2022, with the lowest responsible bidder being Entrench Inc. ("Contractor"), having submitted a bid of $4,235,395.00 to establish unit prices as shown on the bid tabulation attached hereto as Exhibit "A" and incorporated herein for all legal purposes; and

WHEREAS, the total cost of the work to be completed, according to the previously advertised plans and specifications and the unit prices in Exhibit "A", shall not exceed $2,500,000.00 per contractual term; and

WHEREAS, the City Council finds it to be in the public interest to execute a contract with Contractor for said Project;

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, a contract with Contractor for said Project at a total cost not to exceed $2,500,000.00 per contractual term, said contract being on file in the office of the City Secretary, referenced by the date and number of this resolution.

SECTION TWO. Funding is available in the Utilities Admin FY23 Operating Fund and shall be transferred and appropriated to a project for the said purposes.

SECTION THREE. That the City Comptroller is hereby authorized and directed to pay Contractor pursuant to the terms of said contract in an amount not to exceed $2,500,000.00 per contractual term from funds available in the project established for the

Project 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., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, Assistant City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

_____
Carl Craigo, Utilities Director

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

U22-01 UTILITY EXTENSION PROGRAM 05

City of Midland - Engineering Services; October 5, 2022

BID TAB					Boler Equipment Services			Entrench Inc.			Red Deer Construction LLC			TEC Excavation Inc.		
Bid Item	Pay Note	Description	Quantity	Units	Unit Price	Bid Total	Actual Bid Total	Unit Price	Bid Total	Actual Bid Total	Unit Price	Bid Total	Actual Bid Total	Unit Price	Bid Total	Actual Bid Total
1	M1	20" Steel Pipe Casing, 1/4" Wall Thickness	80	LF	$ 19,760.00	$ 19,760.00	$ 1,580,800.00	$ 255.00	$ 20,400.00	$ 20,400.00	$ 184.00	$ 14,720.00	$ 14,720.00	$ 210.00	$ 16,800.00	$ 16,800.00
2	M1	16" Steel Pipe Casing, 1/4" Wall Thickness	80	LF	$ 16,800.00	$ 16,800.00	$ 1,344,000.00	$ 195.00	$ 15,600.00	$ 15,600.00	$ 137.00	$ 10,960.00	$ 10,960.00	$ 170.00	$ 13,600.00	$ 13,600.00
3	M1	12" Steel Pipe Casing, 1/4" Wall Thickness	80	LF	$ 13,200.00	$ 13,200.00	$ 1,056,000.00	$ 135.00	$ 10,800.00	$ 10,800.00	$ 90.00	$ 7,200.00	$ 7,200.00	$ 124.00	$ 9,920.00	$ 9,920.00
4	M1	16" PVC Pipe Casing, SDR 26 ASTM D2241	40	LF	$ 9,760.00	$ 9,760.00	$ 390,400.00	$ 155.00	$ 6,200.00	$ 6,200.00	$ 173.00	$ 6,920.00	$ 6,920.00	$ 220.00	$ 880.00	$ 8,800.00
5	M1	12" PVC Pipe Casing, SDR 26 ASTM D2241	80	LF	$ 13,840.00	$ 13,840.00	$ 1,107,200.00	$ 90.00	$ 7,200.00	$ 7,200.00	$ 97.00	$ 7,760.00	$ 7,760.00	$ 150.00	$ 12,000.00	$ 12,000.00
6	M2	Cement Stabilized Sand Bedding (2.5-Sack)	80	LF	$ 4,400.00	$ 4,400.00	$ 352,000.00	$ 24.00	$ 1,920.00	$ 1,920.00	$ 161.00	$ 12,880.00	$ 12,880.00	$ 20.00	$ 1,600.00	$ 1,600.00
7	M3	Erosion/Sediment Control	40	EA	$ 24,400.00	$ 24,400.00	$ 976,000.00	$ 250.00	$ 10,000.00	$ 10,000.00	$ 1,000.00	$ 40,000.00	$ 40,000.00	$ 500.00	$ 20,000.00	$ 20,000.00
8	M4	Traffic Control for Collector/Local Road Conditions	40	EA	$ 148,600.00	$ 148,600.00	$ 5,944,000.00	$ 2,500.00	$ 100,000.00	$ 100,000.00	$ 3,450.00	$ 138,000.00	$ 138,000.00	$ 2,000.00	$ 80,000.00	$ 80,000.00
9	M5	Traffic Control for Alley/Easement Conditions	15	EA	$ 7,125.00	$ 7,125.00	$ 106,875.00	$ 1,000.00	$ 15,000.00	$ 15,000.00	$ 1,850.00	$ 27,750.00	$ 27,750.00	$ 750.00	$ 11,250.00	$ 11,250.00
10	M6	Job Site Safety	40	EA	$ 32,000.00	$ 32,000.00	$ 1,280,000.00	$ 750.00	$ 30,000.00	$ 30,000.00	$ 750.00	$ 30,000.00	$ 30,000.00	$ 500.00	$ 20,000.00	$ 20,000.00
11	M7	Additional Labor, Downtown Area, Water Improvements	440	LF	$ 22,000.00	$ 22,000.00	$ 9,680,000.00	$ 30.00	$ 13,200.00	$ 13,200.00	$ 55.00	$ 24,200.00	$ 24,200.00	$ 40.00	$ 17,600.00	$ 17,600.00
12	M8	Additional Labor, Downtown Area, Wastewater Improvements	440	LF	$ 23,760.00	$ 23,760.00	$ 10,454,400.00	$ 40.00	$ 17,600.00	$ 17,600.00	$ 55.00	$ 24,200.00	$ 24,200.00	$ 40.00	$ 17,600.00	$ 17,600.00
13	M9	Material Mark-Up	-	%	18%	-	-	15%	-	-	25%	-	-	15%	-	-
14	M10	Labor Mark-Up (regular work hours)	-	%	18%	-	-	15%	-	-	25%	-	-	15%	-	-
15	M11	Equipment Rental Mark-up (non-standard equipment only)	-	%	18%	-	-	15%	-	-	25%	-	-	15%	-	-
1	D1	Removal & Disposal of Existing Utility Mains	120	LF	$ 2,430.00	$ 2,430.00	$ 291,600.00	$ 15.00	$ 1,800.00	$ 1,800.00	$ 20.00	$ 2,400.00	$ 2,400.00	$ 15.00	$ 1,800.00	$ 1,800.00
2	D2	Flowable Fill for Existing Utility Mains Abandoned In Place	40	CY	$ 4,320.00	$ 4,320.00	$ 172,800.00	$ 130.00	$ 5,200.00	$ 5,200.00	$ 297.00	$ 11,880.00	$ 11,880.00	$ 165.00	$ 6,600.00	$ 6,600.00
3	D3	Removal & Disposal of Existing 60" Manhole (0'-5' Depth)	10	EA	$ 19,250.00	$ 19,250.00	$ 192,500.00	$ 2,200.00	$ 22,000.00	$ 22,000.00	$ 2,150.00	$ 21,500.00	$ 21,500.00	$ 2,050.00	$ 20,500.00	$ 20,500.00
4	D3	Removal & Disposal of Existing 48" Manhole (0'-5' Depth)	10	EA	$ 12,750.00	$ 12,750.00	$ 127,500.00	$ 1,500.00	$ 15,000.00	$ 15,000.00	$ 1,650.00	$ 16,500.00	$ 16,500.00	$ 2,050.00	$ 20,500.00	$ 20,500.00
5	D4	Removal & Disposal of Existing 60" Manhole Additional Depth (>5')	40	VF	$ 12,000.00	$ 12,000.00	$ 480,000.00	$ 500.00	$ 20,000.00	$ 20,000.00	$ 255.00	$ 10,200.00	$ 10,200.00	$ 300.00	$ 12,000.00	$ 12,000.00
6	D4	Removal & Disposal of Existing 48" Manhole Additional Depth (>5')	40	VF	$ 10,000.00	$ 10,000.00	$ 400,000.00	$ 250.00	$ 10,000.00	$ 10,000.00	$ 230.00	$ 9,200.00	$ 9,200.00	$ 300.00	$ 12,000.00	$ 12,000.00
1	W1	16" Ductile Iron Pipe Pressure Class 150, Water Main	160	LF	$ 33,600.00	$ 33,600.00	$ 5,376,000.00	$ 195.00	$ 31,200.00	$ 31,200.00	$ 163.00	$ 26,080.00	$ 26,080.00	$ 185.00	$ 29,600.00	$ 29,600.00
2	W1	12" Ductile Iron Pipe Pressure Class 150, Water Main	80	LF	$ 12,960.00	$ 12,960.00	$ 1,036,800.00	$ 145.00	$ 11,600.00	$ 11,600.00	$ 127.00	$ 10,160.00	$ 10,160.00	$ 145.00	$ 11,600.00	$ 11,600.00
3	W1	10" Ductile Iron Pipe Pressure Class 150, Water Main	80	LF	$ 8,960.00	$ 8,960.00	$ 716,800.00	$ 105.00	$ 8,400.00	$ 8,400.00	$ 103.00	$ 8,240.00	$ 8,240.00	$ 127.00	$ 10,160.00	$ 10,160.00
4	W1	8" Ductile Iron Pipe Pressure Class 150, Water Main	80	LF	$ 8,960.00	$ 8,960.00	$ 716,800.00	$ 85.00	$ 6,800.00	$ 6,800.00	$ 92.00	$ 7,360.00	$ 7,360.00	$ 120.00	$ 9,600.00	$ 9,600.00
5	W1	6" Ductile Iron Pipe Pressure Class 150, Water Main	80	LF	$ 8,000.00	$ 8,000.00	$ 640,000.00	$ 75.00	$ 6,000.00	$ 6,000.00	$ 80.00	$ 6,400.00	$ 6,400.00	$ 105.00	$ 8,400.00	$ 8,400.00
6	W1	16" AWWA C-900 DR18, PVC, Water Main	100	LF	$ 22,400.00	$ 22,400.00	$ 2,240,000.00	$ 145.00	$ 14,500.00	$ 14,500.00	$ 213.00	$ 21,300.00	$ 21,300.00	$ 215.00	$ 21,500.00	$ 21,500.00
7	W1	12" AWWA C-900 DR18, PVC, Water Main	720	LF	$ 93,600.00	$ 93,600.00	$ 67,392,000.00	$ 85.00	$ 61,200.00	$ 61,200.00	$ 128.00	$ 92,160.00	$ 92,160.00	$ 134.00	$ 96,480.00	$ 96,480.00
8	W1	10" AWWA C-900 DR18, PVC, Water Main	80	LF	$ 7,920.00	$ 7,920.00	$ 633,600.00	$ 75.00	$ 6,000.00	$ 6,000.00	$ 98.00	$ 7,840.00	$ 7,840.00	$ 115.00	$ 9,200.00	$ 9,200.00
9	W1	8" AWWA C-900 DR18, PVC, Water Main	720	LF	$ 64,800.00	$ 64,800.00	$ 46,656,000.00	$ 65.00	$ 46,800.00	$ 46,800.00	$ 79.00	$ 56,880.00	$ 56,880.00	$ 98.00	$ 70,560.00	$ 70,560.00
10	W1	6" AWWA C-900 DR18, PVC, Water Main	720	LF	$ 55,440.00	$ 55,440.00	$ 39,916,800.00	$ 50.00	$ 36,000.00	$ 36,000.00	$ 61.00	$ 43,920.00	$ 43,920.00	$ 85.00	$ 61,200.00	$ 61,200.00
11	W2	16" Tapping Sleeve	10	EA	$ 82,950.00	$ 82,950.00	$ 829,500.00	$ 6,990.00	$ 69,900.00	$ 69,900.00	$ 11,000.00	$ 110,000.00	$ 110,000.00	$ 7,200.00	$ 72,000.00	$ 72,000.00
12	W2	12" Tapping Sleeve	15	EA	$ 103,185.00	$ 103,185.00	$ 1,547,775.00	$ 4,925.00	$ 73,875.00	$ 73,875.00	$ 9,070.00	$ 136,050.00	$ 136,050.00	$ 5,800.00	$ 87,000.00	$ 87,000.00
13	W2	10" Tapping Sleeve	10	EA	$ 47,620.00	$ 47,620.00	$ 476,200.00	$ 3,800.00	$ 38,000.00	$ 38,000.00	$ 8,058.00	$ 80,580.00	$ 80,580.00	$ 4,900.00	$ 49,000.00	$ 49,000.00
14	W2	8" Tapping Sleeve	15	EA	$ 55,410.00	$ 55,410.00	$ 831,150.00	$ 2,550.00	$ 38,250.00	$ 38,250.00	$ 6,537.00	$ 98,055.00	$ 98,055.00	$ 3,500.00	$ 52,500.00	$ 52,500.00
15	W2	6" Tapping Sleeve	15	EA	$ 45,075.00	$ 45,075.00	$ 676,125.00	$ 1,710.00	$ 25,650.00	$ 25,650.00	$ 5,160.00	$ 77,400.00	$ 77,400.00	$ 2,900.00	$ 43,500.00	$ 43,500.00
16	W3	16" Gate Valve & Vault (MJxMJ/FL)	10	EA	$ 343,800.00	$ 343,800.00	$ 3,438,000.00	$ 9,200.00	$ 92,000.00	$ 92,000.00	$ 49,000.00	$ 490,000.00	$ 490,000.00	$ 29,200.00	$ 292,000.00	$ 292,000.00
17	W4	12" Gate Valve & Box (MJxMJ/FL)	15	EA	$ 94,995.00	$ 94,995.00	$ 1,424,925.00	$ 6,200.00	$ 93,000.00	$ 93,000.00	$ 6,450.00	$ 96,750.00	$ 96,750.00	$ 4,800.00	$ 72,000.00	$ 72,000.00
18	W4	10" Gate Valve & Box (MJxMJ/FL)	15	EA	$ 69,735.00	$ 69,735.00	$ 1,046,025.00	$ 5,075.00	$ 76,125.00	$ 76,125.00	$ 5,400.00	$ 81,000.00	$ 81,000.00	$ 3,900.00	$ 58,500.00	$ 58,500.00
19	W4	8" Gate Valve & Box (MJxMJ/FL)	15	EA	$ 59,055.00	$ 59,055.00	$ 885,825.00	$ 3,100.00	$ 46,500.00	$ 46,500.00	$ 4,000.00	$ 60,000.00	$ 60,000.00	$ 2,600.00	$ 39,000.00	$ 39,000.00
20	W4	6" Gate Valve & Box (MJxMJ/FL)	30	EA	$ 90,180.00	$ 90,180.00	$ 2,705,400.00	$ 2,230.00	$ 66,900.00	$ 66,900.00	$ 3,200.00	$ 96,000.00	$ 96,000.00	$ 1,900.00	$ 57,000.00	$ 57,000.00
21	W5	Air Relief Valve & Vault (Water Main)	5	EA	$ 116,850.00	$ 116,850.00	$ 584,250.00	$ 21,750.00	$ 108,750.00	$ 108,750.00	$ 33,500.00	$ 167,500.00	$ 167,500.00	$ 18,200.00	$ 91,000.00	$ 91,000.00
22	W6	Fire Hydrant Assembly (≤ 5' Water Main Bury Depth)	30	EA	$ 194,460.00	$ 194,460.00	$ 5,833,800.00	$ 4,970.00	$ 149,100.00	$ 149,100.00	$ 6,150.00	$ 184,500.00	$ 184,500.00	$ 5,100.00	$ 153,000.00	$ 153,000.00
23	W7	Fire Hydrant Riser (> 5' Water Main Bury Depth)	60	VF	$ 76,380.00	$ 76,380.00	$ 4,582,800.00	$ 750.00	$ 45,000.00	$ 45,000.00	$ 800.00	$ 48,000.00	$ 48,000.00	$ 780.00	$ 46,800.00	$ 46,800.00
24	W8	Ductile Iron Fittings	4300	LBS	$ 36,550.00	$ 36,550.00	$ 157,165,000.00	$ 6.00	$ 25,800.00	$ 25,800.00	$ 16.50	$ 70,950.00	$ 70,950.00	$ 8.00	$ 34,400.00	$ 34,400.00
25	W9	Dresser Coupling	10	EA	$ 27,190.00	$ 27,190.00	$ 271,900.00	$ 900.00	$ 9,000.00	$ 9,000.00	$ 2,600.00	$ 26,000.00	$ 26,000.00	$ 1,800.00	$ 18,000.00	$ 18,000.00
26	W10	16" Tapping Saddle (2" or 1")	10	EA	$ 13,920.00	$ 13,920.00	$ 139,200.00	$ 1,700.00	$ 17,000.00	$ 17,000.00	$ 425.00	$ 4,250.00	$ 4,250.00	$ 675.00	$ 6,750.00	$ 6,750.00
27	W10	12" Tapping Saddle (2" or 1")	20	EA	$ 16,480.00	$ 16,480.00	$ 329,600.00	$ 975.00	$ 19,500.00	$ 19,500.00	$ 350.00	$ 7,000.00	$ 7,000.00	$ 620.00	$ 12,400.00	$ 12,400.00
28	W10	10" Tapping Saddle (2" or 1")	10	EA	$ 7,070.00	$ 7,070.00	$ 70,700.00	$ 800.00	$ 8,000.00	$ 8,000.00	$ 340.00	$ 3,400.00	$ 3,400.00	$ 600.00	$ 6,000.00	$ 6,000.00
29	W10	8" Tapping Saddle (2" or 1")	30	EA	$ 20,100.00	$ 20,100.00	$ 603,000.00	$ 575.00	$ 17,250.00	$ 17,250.00	$ 300.00	$ 9,000.00	$ 9,000.00	$ 570.00	$ 17,100.00	$ 17,100.00
30	W10	6" Tapping Saddle (2" or 1")	50	EA	$ 32,500.00	$ 32,500.00	$ 1,625,000.00	$ 490.00	$ 24,500.00	$ 24,500.00	$ 280.00	$ 14,000.00	$ 14,000.00	$ 550.00	$ 27,500.00	$ 27,500.00
31	W11	2" Water Service Connection, Long (> 20')	15	EA	$ 56,670.00	$ 56,670.00	$ 850,050.00	$ 1,350.00	$ 20,250.00	$ 20,250.00	$ 5,100.00	$ 76,500.00	$ 76,500.00	$ 2,500.00	$ 37,500.00	$ 37,500.00
32	W11	2" Water Service Connection, Short (≤ 20')	15	EA	$ 56,670.00	$ 56,670.00	$ 850,050.00	$ 1,550.00	$ 23,250.00	$ 23,250.00	$ 3,500.00	$ 52,500.00	$ 52,500.00	$ 2,500.00	$ 37,500.00	$ 37,500.00
33	W11	1" Water Service Connection, Long (> 20')	40	EA	$ 97,600.00	$ 97,600.00	$ 3,904,000.00	$ 1,300.00	$ 52,000.00	$ 52,000.00	$ 3,300.00	$ 132,000.00	$ 132,000.00	$ 1,500.00	$ 60,000.00	$ 60,000.00
34	W11	1" Water Service Connection, Short (≤ 20')	40	EA	$ 97,600.00	$ 97,600.00	$ 3,904,000.00	$ 1,050.00	$ 42,000.00	$ 42,000.00	$ 1,700.00	$ 68,000.00	$ 68,000.00	$ 1,500.00	$ 60,000.00	$ 60,000.00
35	W12	Flushing Station Installation, Long (> 20')	4	EA	$ 49,740.00	$ 49,740.00	$ 198,960.00	$ 1,400.00	$ 5,600.00	$ 5,600.00	$ 5,300.00	$ 21,200.00	$ 21,200.00	$ 10,300.00	$ 41,200.00	$ 41,200.00
36	W12	Flushing Station Installation, Short (≤ 20')	4	EA	$ 49,740.00	$ 49,740.00	$ 198,960.00	$ 1,800.00	$ 7,200.00	$ 7,200.00	$ 3,700.00	$ 14,800.00	$ 14,800.00	$ 10,200.00	$ 40,800.00	$ 40,800.00
37	W13	Sampling Station Installation, Long (> 20')	4	EA	$ 16,700.00	$ 16,700.00	$ 66,800.00	$ 2,200.00	$ 8,800.00	$ 8,800.00	$ 3,500.00	$ 14,000.00	$ 14,000.00	$ 3,000.00	$ 12,000.00	$ 12,000.00
38	W13	Sampling Station Installation, Short (≤ 20')	4	EA	$ 16,700.00	$ 16,700.00	$ 66,800.00	$ 2,650.00	$ 10,600.00	$ 10,600.00	$ 2,000.00	$ 8,000.00	$ 8,000.00	$ 2,900.00	$ 11,600.00	$ 11,600.00
39	W14	Water Meter Installation (New Service Lateral)	15	EA	$ 10,440.00	$ 10,440.00	$ 156,600.00	$ 550.00	$ 8,250.00	$ 8,250.00	$ 900.00	$ 13,500.00	$ 13,500.00	$ 440.00	$ 6,600.00	$ 6,600.00

BID TAB					Boler Equipment Services			Entrench Inc.			Red Deer Construction LLC			TEC Excavation Inc.		
Bid Item	Pay Note	Description	Quantity	Units	Unit Price	Bid Total	Actual Bid Total	Unit Price	Bid Total	Actual Bid Total	Unit Price	Bid Total	Actual Bid Total	Unit Price	Bid Total	Actual Bid Total
40	W15	Water Meter & Meter Box Installation (Existing Service Lateral)	15	EA	$ 34,230.00	$ 34,230.00	$ 513,450.00	$ 875.00	$ 13,125.00	$ 13,125.00	$ 1,500.00	$ 22,500.00	$ 22,500.00	$ 590.00	$ 8,850.00	$ 8,850.00
41	W16	Replace Water Meter In Existing Vault	15	EA	$ 34,230.00	$ 34,230.00	$ 513,450.00	$ 750.00	$ 11,250.00	$ 11,250.00	$ 1,500.00	$ 22,500.00	$ 22,500.00	$ 1,000.00	$ 15,000.00	$ 15,000.00
42	W17	Stand-Alone Add-On For Gate Valve & Vault Replacement / Installation	10	EA	$ 394,300.00	$ 394,300.00	$ 3,943,000.00	$ 49,000.00	$ 490,000.00	$ 490,000.00	$ 59,000.00	$ 590,000.00	$ 590,000.00	$ 29,000.00	$ 290,000.00	$ 290,000.00
43	W18	Stand-Alone Add-On For Gate Valve & Box Replacement / Installation	40	EA	$ 564,600.00	$ 564,600.00	$ 22,584,000.00	$ 3,500.00	$ 140,000.00	$ 140,000.00	$ 16,000.00	$ 640,000.00	$ 640,000.00	$ 7,300.00	$ 292,000.00	$ 292,000.00
44	W19	Stand-Alone Add-On For Water Service Connection	20	EA	$ 147,600.00	$ 147,600.00	$ 2,952,000.00	$ 1,900.00	$ 38,000.00	$ 38,000.00	$ 6,000.00	$ 120,000.00	$ 120,000.00	$ 5,000.00	$ 100,000.00	$ 100,000.00
45	W20	Open Trenching of Water Main (0' - 5' Deep)	1500	LF	$ 39,000.00	$ 39,000.00	$ 58,500,000.00	$ 20.00	$ 30,000.00	$ 30,000.00	$ 36.00	$ 54,000.00	$ 54,000.00	$ 10.00	$ 15,000.00	$ 15,000.00
46	W20	Open Trenching of Water Main (5' - 8' Deep)	440	LF	$ 12,760.00	$ 12,760.00	$ 5,614,400.00	$ 30.00	$ 13,200.00	$ 13,200.00	$ 38.00	$ 16,720.00	$ 16,720.00	$ 15.00	$ 6,600.00	$ 6,600.00
47	W20	Open Trenching of Water Main (8' - 10' Deep)	440	LF	$ 13,640.00	$ 13,640.00	$ 6,001,600.00	$ 45.00	$ 19,800.00	$ 19,800.00	$ 45.00	$ 19,800.00	$ 19,800.00	$ 21.00	$ 9,240.00	$ 9,240.00
48	W20	Open Trenching of Water Main (10' - 12' Deep)	440	LF	$ 14,960.00	$ 14,960.00	$ 6,582,400.00	$ 75.00	$ 33,000.00	$ 33,000.00	$ 52.00	$ 22,880.00	$ 22,880.00	$ 25.00	$ 11,000.00	$ 11,000.00
1	WW1	16" SDR 26 ASTM D2241, PVC, Wastewater Main	80	LF	$ 17,280.00	$ 17,280.00	$ 1,382,400.00	$ 160.00	$ 12,800.00	$ 12,800.00	$ 182.00	$ 14,560.00	$ 14,560.00	$ 230.00	$ 18,400.00	$ 18,400.00
2	WW1	12" SDR 26 ASTM D2241, PVC, Wastewater Main	80	LF	$ 10,160.00	$ 10,160.00	$ 812,800.00	$ 105.00	$ 8,400.00	$ 8,400.00	$ 91.00	$ 7,280.00	$ 7,280.00	$ 142.00	$ 11,360.00	$ 11,360.00
3	WW1	10" SDR 26 ASTM D2241, PVC, Wastewater Main	80	LF	$ 6,560.00	$ 6,560.00	$ 524,800.00	$ 85.00	$ 6,800.00	$ 6,800.00	$ 72.00	$ 5,760.00	$ 5,760.00	$ 130.00	$ 10,400.00	$ 10,400.00
4	WW1	8" SDR 26 ASTM D2241, PVC, Wastewater Main	160	LF	$ 12,800.00	$ 12,800.00	$ 2,048,000.00	$ 65.00	$ 10,400.00	$ 10,400.00	$ 59.00	$ 9,440.00	$ 9,440.00	$ 112.00	$ 17,920.00	$ 17,920.00
5	WW1	6" SDR 26 ASTM D2241, PVC, Wastewater Main	160	LF	$ 11,520.00	$ 11,520.00	$ 1,843,200.00	$ 50.00	$ 8,000.00	$ 8,000.00	$ 51.00	$ 8,161.00	$ 8,160.00	$ 103.00	$ 16,480.00	$ 16,480.00
6	WW1	15" SDR 26 ASTM D3034, PVC, Wastewater Main	80	LF	$ 12,160.00	$ 12,160.00	$ 972,800.00	$ 115.00	$ 9,200.00	$ 9,200.00	$ 117.00	$ 9,360.00	$ 9,360.00	$ 230.00	$ 18,400.00	$ 18,400.00
7	WW1	12" SDR 26 ASTM D3034, PVC, Wastewater Main	80	LF	$ 10,080.00	$ 10,080.00	$ 806,400.00	$ 90.00	$ 7,200.00	$ 7,200.00	$ 91.00	$ 7,280.00	$ 7,280.00	$ 142.00	$ 11,360.00	$ 11,360.00
8	WW1	10" SDR 26 ASTM D3034, PVC, Wastewater Main	80	LF	$ 6,560.00	$ 6,560.00	$ 524,800.00	$ 75.00	$ 6,000.00	$ 6,000.00	$ 72.00	$ 5,760.00	$ 5,760.00	$ 130.00	$ 10,400.00	$ 10,400.00
9	WW1	8" SDR 26 ASTM D3034, PVC, Wastewater Main	160	LF	$ 12,800.00	$ 12,800.00	$ 2,048,000.00	$ 50.00	$ 8,000.00	$ 8,000.00	$ 59.00	$ 9,440.00	$ 9,440.00	$ 112.00	$ 17,920.00	$ 17,920.00
10	WW1	6" SDR 26 ASTM D3034, PVC, Wastewater Main	160	LF	$ 11,520.00	$ 11,520.00	$ 1,843,200.00	$ 45.00	$ 7,200.00	$ 7,200.00	$ 51.00	$ 8,160.00	$ 8,160.00	$ 103.00	$ 16,480.00	$ 16,480.00
11	WW1	15" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	440	LF	$ 59,400.00	$ 59,400.00	$ 26,136,000.00	$ 105.00	$ 46,200.00	$ 46,200.00	$ 99.00	$ 43,560.00	$ 43,560.00	$ 150.00	$ 66,000.00	$ 66,000.00
12	WW1	12" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	440	LF	$ 50,600.00	$ 50,600.00	$ 22,264,000.00	$ 85.00	$ 37,400.00	$ 37,400.00	$ 81.00	$ 35,640.00	$ 35,640.00	$ 132.00	$ 58,080.00	$ 58,080.00
13	WW1	10" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	80	LF	$ 5,920.00	$ 5,920.00	$ 473,600.00	$ 70.00	$ 5,600.00	$ 5,600.00	$ 64.00	$ 5,120.00	$ 5,120.00	$ 123.00	$ 9,840.00	$ 9,840.00
14	WW1	8" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	440	LF	$ 33,440.00	$ 33,440.00	$ 14,713,600.00	$ 45.00	$ 19,800.00	$ 19,800.00	$ 54.00	$ 23,760.00	$ 23,760.00	$ 107.00	$ 47,080.00	$ 47,080.00
15	WW1	6" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	720	LF	$ 49,680.00	$ 49,680.00	$ 35,769,600.00	$ 40.00	$ 28,800.00	$ 28,800.00	$ 47.00	$ 33,840.00	$ 33,840.00	$ 98.00	$ 70,560.00	$ 70,560.00
16	WW1	4" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	220	LF	$ 11,880.00	$ 11,880.00	$ 2,613,600.00	$ 35.00	$ 7,700.00	$ 7,700.00	$ 42.00	$ 9,240.00	$ 9,240.00	$ 94.00	$ 20,680.00	$ 20,680.00
17	WW2	60" Fiberglass Manhole & Cover (0'-5' Deep)	10	EA	$ 108,320.00	$ 108,320.00	$ 1,083,200.00	$ 8,400.00	$ 84,000.00	$ 84,000.00	$ 12,500.00	$ 125,000.00	$ 125,000.00	$ 7,500.00	$ 75,000.00	$ 75,000.00
18	WW2	48" Fiberglass Manhole & Cover (0'-5' Deep)	30	EA	$ 248,880.00	$ 248,880.00	$ 7,466,400.00	$ 6,900.00	$ 207,000.00	$ 207,000.00	$ 9,800.00	$ 294,000.00	$ 294,000.00	$ 6,000.00	$ 180,000.00	$ 180,000.00
19	WW3	60" Fiberglass Manhole & Watertight Cover (0'-5' Deep)	5	EA	$ 54,530.00	$ 54,530.00	$ 272,650.00	$ 8,900.00	$ 44,500.00	$ 44,500.00	$ 12,750.00	$ 63,750.00	$ 63,750.00	$ 7,500.00	$ 37,500.00	$ 37,500.00
20	WW3	48" Fiberglass Manhole & Watertight Cover (0'-5' Deep)	5	EA	$ 40,530.00	$ 40,530.00	$ 202,650.00	$ 7,500.00	$ 37,500.00	$ 37,500.00	$ 10,050.00	$ 50,250.00	$ 50,250.00	$ 6,100.00	$ 30,500.00	$ 30,500.00
21	WW4	60" Fiberglass Manhole Additional Bury Depth (> 5' Deep)	40	VF	$ 40,400.00	$ 40,400.00	$ 1,616,000.00	$ 1,100.00	$ 44,000.00	$ 44,000.00	$ 1,800.00	$ 72,000.00	$ 72,000.00	$ 900.00	$ 36,000.00	$ 36,000.00
22	WW4	48" Fiberglass Manhole Additional Bury Depth (> 5' Deep)	120	VF	$ 85,440.00	$ 85,440.00	$ 10,252,800.00	$ 550.00	$ 66,000.00	$ 66,000.00	$ 1,500.00	$ 180,000.00	$ 180,000.00	$ 630.00	$ 75,600.00	$ 75,600.00
23	WW5	Connect To Existing Manhole	10	EA	$ 10,950.00	$ 10,950.00	$ 109,500.00	$ 900.00	$ 9,000.00	$ 9,000.00	$ 5,000.00	$ 50,000.00	$ 50,000.00	$ 1,600.00	$ 16,000.00	$ 16,000.00
24	WW6	Manhole Drop Structure (0'-5' Deep, External)	10	EA	$ 38,250.00	$ 38,250.00	$ 382,500.00	$ 1,200.00	$ 12,000.00	$ 12,000.00	$ 5,150.00	$ 51,500.00	$ 51,500.00	$ 3,500.00	$ 35,000.00	$ 35,000.00
25	WW7	Manhole Drop Structure Additional Bury Depth (> 5' Deep, External)	40	VF	$ 6,320.00	$ 6,320.00	$ 252,800.00	$ 750.00	$ 30,000.00	$ 30,000.00	$ 250.00	$ 10,000.00	$ 10,000.00	$ 480.00	$ 19,200.00	$ 19,200.00
26	WW8	Manhole Drop Structure (0'-5' Deep, Internal)	10	EA	$ 36,930.00	$ 36,930.00	$ 369,300.00	$ 500.00	$ 5,000.00	$ 5,000.00	$ 4,250.00	$ 42,500.00	$ 42,500.00	$ 2,250.00	$ 22,500.00	$ 22,500.00
27	WW9	Manhole Drop Structure Additional Bury Depth (> 5' Deep, Internal)	40	VF	$ 6,320.00	$ 6,320.00	$ 252,800.00	$ 250.00	$ 10,000.00	$ 10,000.00	$ 250.00	$ 10,000.00	$ 10,000.00	$ 840.00	$ 33,600.00	$ 33,600.00
28	WW10	6" Wastewater Service Connection, Long (> 20')	30	EA	$ 82,860.00	$ 82,860.00	$ 2,485,800.00	$ 1,050.00	$ 31,500.00	$ 31,500.00	$ 3,800.00	$ 114,000.00	$ 114,000.00	$ 1,600.00	$ 48,000.00	$ 48,000.00
29	WW10	6" Wastewater Service Connection, Short (≤ 20')	30	EA	$ 81,180.00	$ 81,180.00	$ 2,435,400.00	$ 750.00	$ 22,500.00	$ 22,500.00	$ 1,900.00	$ 57,000.00	$ 57,000.00	$ 1,600.00	$ 48,000.00	$ 48,000.00
30	WW10	4" Wastewater Service Connection, Long (> 20')	30	EA	$ 71,040.00	$ 71,040.00	$ 2,131,200.00	$ 850.00	$ 25,500.00	$ 25,500.00	$ 3,600.00	$ 108,000.00	$ 108,000.00	$ 1,400.00	$ 42,000.00	$ 42,000.00
31	WW10	4" Wastewater Service Connection, Short (≤ 20')	30	EA	$ 70,320.00	$ 70,320.00	$ 2,109,600.00	$ 625.00	$ 18,750.00	$ 18,750.00	$ 1,800.00	$ 54,000.00	$ 54,000.00	$ 1,400.00	$ 42,000.00	$ 42,000.00
32	WW11	Stand-Alone Add-On For Wastewater Service Connection	20	EA	$ 207,000.00	$ 207,000.00	$ 4,140,000.00	$ 750.00	$ 15,000.00	$ 15,000.00	$ 11,500.00	$ 230,000.00	$ 230,000.00	$ 3,900.00	$ 78,000.00	$ 78,000.00
33	WW12	Open Trenching of Wastewater Main (0'-5' Deep)	160	LF	$ 5,920.00	$ 5,920.00	$ 947,200.00	$ 35.00	$ 5,600.00	$ 5,600.00	$ 36.00	$ 5,760.00	$ 5,760.00	$ 11.00	$ 1,760.00	$ 1,760.00
34	WW12	Open Trenching of Wastewater Main (5'-8' Deep)	720	LF	$ 28,080.00	$ 28,080.00	$ 20,217,600.00	$ 45.00	$ 32,400.00	$ 32,400.00	$ 38.00	$ 27,360.00	$ 27,360.00	$ 18.00	$ 12,960.00	$ 12,960.00
35	WW12	Open Trenching of Wastewater Main (8'-10' Deep)	720	LF	$ 29,520.00	$ 29,520.00	$ 21,254,400.00	$ 65.00	$ 46,800.00	$ 46,800.00	$ 45.00	$ 32,400.00	$ 32,400.00	$ 21.00	$ 15,120.00	$ 15,120.00
36	WW12	Open Trenching of Wastewater Main (10'-12' Deep)	440	LF	$ 19,800.00	$ 19,800.00	$ 8,712,000.00	$ 75.00	$ 33,000.00	$ 33,000.00	$ 52.00	$ 22,880.00	$ 22,880.00	$ 25.00	$ 11,000.00	$ 11,000.00
37	WW12	Open Trenching of Wastewater Main (12'-14' Deep)	220	LF	$ 10,340.00	$ 10,340.00	$ 2,274,800.00	$ 95.00	$ 20,900.00	$ 20,900.00	$ 59.00	$ 12,980.00	$ 12,980.00	$ 32.00	$ 7,040.00	$ 7,040.00
38	WW12	Open Trenching of Wastewater Main (14'-16' Deep)	220	LF	$ 12,100.00	$ 12,100.00	$ 2,662,000.00	$ 125.00	$ 27,500.00	$ 27,500.00	$ 66.00	$ 14,520.00	$ 14,520.00	$ 37.00	$ 8,140.00	$ 8,140.00
39	WW12	Open Trenching of Wastewater Main (16'-18' Deep)	160	LF	$ 10,240.00	$ 10,240.00	$ 1,638,400.00	$ 175.00	$ 28,000.00	$ 28,000.00	$ 73.00	$ 11,680.00	$ 11,680.00	$ 45.00	$ 7,200.00	$ 7,200.00
40	WW12	Open Trenching of Wastewater Main (18'-20' Deep)	80	LF	$ 5,600.00	$ 5,600.00	$ 448,000.00	$ 200.00	$ 16,000.00	$ 16,000.00	$ 80.00	$ 6,400.00	$ 6,400.00	$ 54.00	$ 4,320.00	$ 4,320.00
1	P1	6" Concrete Pavement Repair	100	EA	$ 16,200.00	$ 16,200.00	$ 1,620,000.00	$ 75.00	$ 7,500.00	$ 7,500.00	$ 275.00	$ 27,500.00	$ 27,500.00	$ 135.00	$ 13,500.00	$ 13,500.00
2	P2	4" Concrete Sidewalk Repair	100	EA	$ 12,600.00	$ 12,600.00	$ 1,260,000.00	$ 60.00	$ 6,000.00	$ 6,000.00	$ 325.00	$ 32,500.00	$ 32,500.00	$ 110.00	$ 11,000.00	$ 11,000.00
3	P3	2" Asphalt Pavement Repair	2900	EA	$ 168,200.00	$ 168,200.00	$ 487,780,000.00	$ 34.00	$ 98,600.00	$ 98,600.00	$ 72.00	$ 208,800.00	$ 208,800.00	$ 65.00	$ 188,500.00	$ 188,500.00
4	P4	6" Base Rock Pavement Repair	1500	EA	$ 37,500.00	$ 37,500.00	$ 56,250,000.00	$ 21.00	$ 31,500.00	$ 31,500.00	$ 22.00	$ 33,000.00	$ 33,000.00	$ 20.00	$ 30,000.00	$ 30,000.00
5	P5	20" Flowable Fill / 2-Sack Backfill	3300	EA	$ 412,500.00	$ 412,500.00	$ 1,361,250,000.00	$ 130.00	$ 429,000.00	$ 429,000.00	$ 95.00	$ 313,500.00	$ 313,500.00	$ 95.00	$ 313,500.00	$ 313,500.00
					Base Bid Total =	$ 6,233,950.00	**$ 2,620,381,370.00**	Base Bid Total =	$ 4,235,395.00	**$ 4,235,395.00**	Base Bid Total =	$ 6,963,585.00	**$ 6,963,585.00**	Base Bid Total =	$ 4,785,510.00	**$ 4,785,510.00**
							$2,614,147,420.00			$0.00			$0.00			$0.00

SPECIFICATIONS

Project Name: Utility Extension Program 05
Project Number: U22-01

MAYOR

Patrick Payton

COUNCIL MEMBERS

District 1	Scott Dufford	District 3	Jack Ladd
District 2	John Norman	District 4	Lori Blong
At-Large	Dan Corrales	At Large	Robin Poole

ENGINEERING SERVICES DIRECTOR

Jose E. Ortiz, P.E.



Prepared by City of Midland, Texas
Engineering Services Division

September 2022

NOTICE TO BIDDERS

ATTENTION: All bidders who choose to mail bid packets must address them to one of the addresses below:

USPS Mailing Address:		***Physical Address for mail carriers other than USPS:***
City of Midland, Texas		**City of Midland, Texas**
Attn: City Secretary's Office	**OR**	**Attn: City Secretary's Office**
P O Box 1152		**300 North Loraine St, Suite 330**
Midland, TX 79702		**Midland, TX 79701**

If bid packets are delivered in person then bidders must drop the bid packets off at the first-floor front desk of City Hall before the bid opening deadline.

Sealed proposals, addressed to the Mayor and City Council of the City of Midland, Texas, for the furnishing of materials and labor together with other miscellaneous and appurtenant work will be received at the office of the City Secretary, City Hall, Midland, Texas, until 2:00 p.m. on the 5th day of October, 2022, and publicly opened and read aloud at that time.

ATTENTION: The public bid opening will be in the City Council Meeting Chambers

The Proposed Work provides for the furnishing of materials and labor for Utility Extension Program 05 together with other miscellaneous and appurtenant work.

ATTENTION: A NON-MANDATORY PRE-BID MEETING will be held at 3:00 p.m. on Wednesday, September 28th, 2022 in the basement conference room of City Hall, 300 N. Loraine Street, Midland, Texas. Bidders may attend the meeting in person.

ATTENTION: All questions submitted before or after the Non-Mandatory Pre-Bid Meeting must be submitted via email to the following email address:

jferguson@midlandtexas.gov

The deadline for submitting additional questions after the Non-Mandatory Pre-Bid Meeting is Noon on Friday, August 26, 2022. Questions submitted before the Noon deadline will be included in the Addendum that will go out that same day along with all discussion items, questions, answers, and any new information resulting from the Non-Mandatory Pre-Bid Meeting. Questions submitted after the Noon deadline will not receive any additional information and will instead only be directed to the information already provided.

Bids will be received on a unit price basis.

No Bid may be withdrawn within a period of 60 days after the date fixed for opening Bids.

"FAX" or telephone bids or modifications will not be accepted.

Bid Envelopes shall be plainly marked "Proposal for City of Midland".

ATTENTION: Information for bidders, proposal forms, specifications, and plans may be obtained by emailing purchasing@midlandtexas.gov.

A bid bond or proposal guaranty is to accompany the bid, thereby guaranteeing the good faith of the bidder and that the bidder will enter into the written contract. The guaranty is to amount to five percent (5%) of the total bid and must be in the form of cash or certified check, issued by a bank satisfactory to the City of Midland, or bid bond. If in the form of cash or certified check, it is expressly understood and agreed that the City of Midland is given the right to retain such as liquidated damages if such bidder withdraws its bid anytime after such bid is opened and before official rejection of such bid, or if successful in securing the awarded thereof, such bidder fails to enter into the contract and furnish satisfactory performance and payment bonds. If a bid bond is submitted, it shall be executed on forms contained in these contract documents by a corporate surety authorized to do business in the State of Texas and acceptable to the City of Midland.

WAIVER OF ATTORNEY FEES

BY SUBMITTING A BID, BIDDER AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST THE OWNER, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THE CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE CONTRACT. THE BIDDER SPECIFICALLY AGREES THAT IF THE BIDDER 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, THE BIDDER AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH BIDDER MIGHT OTHERWISE BE ENTITLED.

BIDDER AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. THE BIDDER ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THE CONTRACT. THE BIDDER FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN THE OWNER AND THE BIDDER. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF SOVEREIGN IMMUNITY.

THE BIDDER AND OWNER ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION.

WAIVER

BIDDER'S WAIVER:

BY SUBMITTING A BID, THE BIDDER AGREES TO WAIVE AND DOES HEREBY VOLUNTARILY AND INTENTIONALLY WAIVE, ABANDON AND RELINQUISH ANY CLAIM THE BIDDER HAS OR MAY HAVE IN THE FUTURE AGAINST THE CITY OF MIDLAND, TEXAS, AND THE CITY'S EMPLOYEES, AGENTS AND OFFICERS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE FOLLOWING:

1. **THE ADMINISTRATION, EVALUATION OR RECOMMENDATION OF ANY BID;**
2. **WAIVER OR DELETION OF ANY OF THE REQUIREMENTS UNDER THE BID DOCUMENTS OR THE CONTRACT DOCUMENTS;**
3. **ACCEPTANCE OR REJECTION OF ANY BIDS; OR**
4. **AWARD OF THE CONTRACT**

BY SUBMITTING A BID, THE BIDDER ACKNOWLEDGES THAT THE BIDDER UNDERSTANDS ALL OF THE TERMS OF THE BIDDING DOCUMENTS AND CONSENTS TO THE BIDDING PROCESS AND THE POSSIBILITY OF A NEGATIVE ASSESSMENT. BY SUBMITTING A BID, THE BIDDER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN THE BIDDER AND THE CITY OF MIDLAND, TEXAS. THE BIDDER AGREES THAT THIS IS THE INTENTIONAL RELINQUISHMENT OF A PRESENTLY EXISTING KNOWN RIGHT. BY SIGNING THE REQUEST FOR BID AND/OR BELOW, YOUR COMPANY AGREES TO THE ABOVE WAIVER(S).

City of Midland

Amy Turner
City Secretary

Form Revised September 2022

INSTRUCTION AND INFORMATION FOR BIDDERS

1. LOCATION AND EXTENT OF WORK

The work and construction contemplated to be accomplished under this Contract is located in the City of Midland, Texas, and consists of municipal public works projects as set forth in the proposal.

The location and details for the construction and related work are shown upon a set of drawings dated on or after September 1, 2022. These drawings and plans, together with the specifications, form a part of the Contract. Where figures are shown on the drawings, they shall take precedence over scaled distances and dimensions.

2. TIME AND PLACE OF RECEIVING BIDS

All bids shall be sealed, addressed to the Mayor and City Council of the City of Midland, Texas, and will be received by the City Secretary in her office at City Hall, 300 N. Loraine Street, Midland, Texas, mailing address is P.O. Box 1152, Midland, Texas 79702, until time stated on the Advertisement for Bids.

3. PREPARATION OF BID FORM

Bids shall be submitted only on the forms provided therefore in the Contract Documents, and must not be submitted in letter form or in any other form. They shall be filled out in ink in both script and figures. The Proposal form provided in the Contract Documents sets forth in detail the various items and approximate quantities thereof contained in the Project. Bids submitted in any other form will be considered irregular and will be returned to the Bidder without receiving consideration by the Owner.

All bids must be submitted in sealed envelopes bearing on the outside the name of the Bidder, his address, and the name of the Project for which the bid is submitted. It is the sole responsibility of the Bidder to see that his bid is received in proper time. Any bid received after the scheduled closing time for receipt of bids will be returned to the Bidder unopened.

The bid must be signed in the name of the Bidder and must bear the signature in longhand of the persons duly authorized to sign the bid.

Changes in or additions to the bid form, recapitulations of the work bid upon, alternative proposals, or any other modification of the bid form which is not specifically called for in the Contract Documents may result in the Owner's rejection of the bid as not being responsive to the invitation. No oral or telephonic modification of any bid submitted will be considered and a telegraphic modification may be considered only if the postmark evidences that a confirmation of the telegram duly signed by the Bidder was placed in the mail prior to the opening of bids.

The bid submitted must not contain any erasures, interlineations or other corrections unless each such correction is suitably authenticated by affixing in the margin immediately opposite the correction the surnames of the person or persons signing the bid.

4. EXAMINATION OF SITE, DRAWINGS, ETC

Each Bidder is requested to visit the site of the proposed work and fully acquaint himself with the conditions relating to the construction and labor so that he may fully understand the facilities, difficulties and restrictions attending the execution of the work under the Contract. Bidders shall thoroughly examine and be familiar with the Plans and the Specifications. The failure or omission of any Bidder to receive or examine any form, instrument, addendum or other document or to visit the site and acquaint himself with conditions there existing shall in no way relieve any Bidder from obligations with respect to his bid or to the Contract. The submission of a bid shall be taken as prima-facie evidence of compliance with this section.

5. WITHDRAWAL OF BIDS

Any Bidder may withdraw his bid, either personally, by written request, or by telegraphic request confirmed in the manner specified above, at any time prior to the scheduled closing time for receipt of bids.

6. AGREEMENT AND BONDS

The successful Bidder will be required to furnish a Performance Bond, and a Payment Bond, 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, and 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.

7. INTERPRETATION OF PLANS AND DOCUMENTS

If any person contemplating submitting a bid for the proposed Contract is in doubt as to the true meaning of any part of the Plans, Specifications, or other Contract Documents or finds discrepancies in, or omissions from the Plans or Specifications, he may submit to the Owner written request for an interpretation or correction thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation or correction of the Contract Documents will be made only by Addendum duly issued and a copy of such addendum will be mailed or delivered to each person receiving a set of such Contract Documents. The Owner will not be responsible for any other explanations or interpretations of the Contract Documents. No oral interpretations of any provision in the Contract Documents will be made to any Bidder.

8. BIDDERS INTERESTED IN MORE THAN ONE BID

No person, firm or corporation shall be allowed to make, or file more than one bid for the same work unless alternate bids are specifically called for. A person, firm or corporation that has submitted a sub-proposal to a Bidder, or that has quoted prices of materials to a Bidder is not thereby disqualified from submitting a sub-proposal or quoting prices to other Bidders or making a prime proposal.

9. AWARD OF CONTRACT

The Owner reserves the right to reject any or all bids submitted and not make an award. The Owner also reserves the privilege of accepting any item as a separate contract or the combination of items of a contract. The Owner and Bidder agree that, if the Contract is awarded, that it will be awarded to either the lowest responsible bidder/proposer, or to the bidder/proposer 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. Further, the Owner reserves all rights granted by Section 271.027 of the Texas Local Government Code. The Owner reserves the right to award the bid to the lowest responsible bidder.

10. OPENING OF BIDS

Bidders are invited to be present at the opening of the Proposals. All Proposals shall be made and received with the understanding that the Bidder accepts the terms and conditions contained in the Contract Documents.

11. COMPARISON OF BIDS

All bids will be compared on the basis of the Proposal.

12. BID GUARANTY

A Certified Check, Bank Money Order, issued by a bank satisfactory to the Owner, or a Bidder's Bond on the form provided and approved by the City Attorney, in the amount of five percent (5%) of the largest possible lump sum bid submitted, payable without recourse to the Owner, must accompany the Bidder's Proposal, as a guaranty that the Bidder will enter into a Contract and execute the required Performance 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 Proposals shall remain in effect for a period of thirty (30) days after date of bid opening.

13. CONTRACT DOCUMENTS

The complete Contract Documents may include the following: (1) Notice to Bidders, (2) Instructions and Information for Bidders, (3) Proposal, (4) Experience Record, (5) Bid Bond, (6) Contract Agreement, (7) Performance Bond, (8) Payment Bond, (9) Insurance Certificate, (10) General Conditions, (11) Special Conditions, (12) Detailed Specifications all of which are bound together, and/or (13) Certificate of Payment. The Contract Documents shall also include Drawings or Detailed Plans for the proposed work. A complete set of the Contract Documents and the detailed plans are on file in the Office of the City Secretary.

14. TIME ELEMENT

The work to be done under this Contract shall be commenced within fifteen (15) days from the date of the notice from the City to the Contractor to commence work. The Contractor shall commence performance of the Contract on the date stated in the City's notice to the Contractor to proceed and shall complete the performance of the Contract without delay.

15. PAYMENTS

Payments to the Contractor will be based upon the prices stated in the proposal and upon basis of the work performed as determined by the Engineer. The Engineer's determination shall be considered as final unless changes are authorized by the City in writing which shall affect the work. Upon issuance of the Certificate of Completion, the Engineer shall proceed to take final measurements and prepare a final statement of the value of all work performed and materials furnished under the terms of the agreement and shall certify same to the Owner who shall pay to the Contractor on or after the 30th day, and before the 35th day, after the date of the

Certificate of Completion, the balance due the Contractor under the terms of this agreement, provided he has fully performed his contractual obligations under the terms of this Contract, and said payment shall become due in any event upon said performance by the Contractor. Notwithstanding any provision of these Contract documents to the contrary, it is expressly understood and agreed by the parties hereto that neither the Certificate of Acceptance, nor the final or any other payment hereunder, nor any partial or total occupancy or possession of the project by the Owner, shall relieve the Contractor of his responsibility for completion of the entire project in a good workmanlike manner and in full compliance with the plans and specifications and the fulfillment of any warranties which may be required in the Contract documents.

Revised September 2022

NOTICE TO BIDDERS

IF THIS PURCHASE REQUIRES A CONTRACT, THE ATTACHED **CONTRACT AND INSURANCE REQUIREMENTS ARE NON-NEGOTIABLE**. MODIFICATIONS BY BIDDER/CONTRACTOR OF ANY MATERIAL TERM(S) TO THE CONTRACT DOCUMENTS WILL BE DEEMED A NON-RESPONSIVE BID. NON-RESPONSIVE BIDS WILL BE REJECTED. BIDDER/CONTRACTOR 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/CONTRACTOR 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/CONTRACTOR 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 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.**

Entrench, Inc.

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

10/04/2022

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.

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: _____

ENTRINC-01 SBOSWELL

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 10/3/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Stacey Boswell
Burke Insurance Group, LLC 1690 S. Telshor Blvd Las Cruces, NM 88011	PHONE (A/C, No, Ext): (575) 524-2222 2 FAX (A/C, No): E-MAIL ADDRESS: sboswell@burke-insurance.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Cincinnati Insurance Company (The)	10677
INSURER B : Builders Trust of NM	52519
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED

Entrench, Inc.
3311 N. Grimes
Hobbs, NM 88240

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT LOC OTHER:	X	X	EPP 0405600	10/1/2022	10/1/2023	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
A	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY SCHEDULED AUTOS X HIRED AUTOS ONLY X NON-OWNED AUTOS ONLY	X	X	EPP 0405600	10/1/2022	10/1/2023	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) Hired & Non-Own	$ 1,000,000 $ $ $ $ 1,000,000
	UMBRELLA LIAB OCCUR EXCESS LIAB CLAIMS-MADE DED RETENTION $						EACH OCCURRENCE AGGREGATE	$ $
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N N/A If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	X	WC-100-0006086-2022A	1/1/2022	1/1/2023	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 2,000,000 $ 2,000,000 $ 2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Project: Utility Extension Program 05

SEE ATTACHED ACORD 101

CERTIFICATE HOLDER

City of Midland
300 North Loraine
Midland, TX 79701

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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AGENCY CUSTOMER ID: ENTRINC-01 SBOSWELL

LOC #: 1

ADDITIONAL REMARKS SCHEDULE

AGENCY		NAMED INSURED
Burke Insurance Group, LLC		Entrench, Inc. 3311 N. Grimes Hobbs, NM 88240 Lea
POLICY NUMBER		
SEE PAGE 1		
CARRIER	NAIC CODE	EFFECTIVE DATE: SEE PAGE 1
SEE PAGE 1	SEE P 1	

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance

Description of Operations/Locations/Vehicles:
Ector County Utility District and S.W. Howell, Inc. are named as Additional Insured per Additional Insured Endorsement for ongoing and completed operation for General Liability as required by written contract. Ector County Utility District and S.W. Howell, Inc. are named as Additional Insured on all policies except Worker's Compensation per written contract. A waiver of subrogation exists in favor of Ector County Utility District and S.W. Howell, Inc. as to the general liability, auto, umbrella and workers compensation policies per written contract. The general liability, auto and umbrella policies are primary and non-contributory. Thirty (30) day written notice of cancellation applies, with the exception of 10 days for non-payment of premium.

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TECHNICAL SPECIFICATIONS

FOR: Utility Extension Program 05

All construction for this project must conform to the City of Midland "STANDARD SPECIFICATIONS" issued by the Engineering Services Department which are herein made a part of these specifications by reference.

The bidder/contractor is to pay particular attention to the following items in the "STANDARD SPECIFICATIONS" for this project.

1) Preparation of Right of Way
2) Excavation, Embankment and Preparation of Subgrade
3) Concrete Curb and Gutter, Sidewalks, Driveways, Valley Gutters, Center Drains and Rip Rap
4) Concrete Structures
5) Flexible Base, Caliche
6) Bituminous Prime
7) Bituminous Tack
8) Hot Mix Asphaltic Concrete
9) Double Course Asphalt Surface Treatment
10) Preparation of Asphaltic Concrete Surface for Overlay or Seal Coat
11) Seal Coat
12) Asphalt –Rubber Seal Coat
13) Polymer Modified Slurry
14) PVC Pipe Casings
15) Water Line Specifications
16) Gravity Flow Sewers for Waste Water and Storm Water

The "STANDARD SPECIFICATIONS" are available from the Department of Engineering Services, City Hall, 300 North Loraine Street, Suite 510, Midland, Texas.

GENERAL CONDITIONS AND PROVISIONS

1. DEFINITIONS

The following terms as used in this contract shall be defined and interpreted as follows:

(a) "Contract" or "This Contract" or "Agreement": The particular Contract executed by the Contractor and the Owner of which these general conditions are integral parts.

(b) "Contractor": The person, firm or corporation to whom this Contract is awarded by the Owner and who is a party thereto.

(c) "Owner", "City", or pronouns instead: The entity that is a party to this Contract, contracting under the official name of the City of Midland, Texas or the City Council of the City of Midland.

(d) The words "as directed", "as required", "as permitted", "acceptable to", "satisfactory", and the words of like import, shall mean that the direction, requirement or permission of the Engineer is intended.

(e) "Engineer": The word "Engineer" used in these specifications or in this Contract means the duly authorized representative or agent of the Owner supervising the performance of the Contract and representing the Owner in his Contractual relations and negotiations with the Contractor during the period of construction. The Engineer will be represented by assistants and inspectors authorized to act for him. On all questions concerning the acceptability of material or equipment, the classifications of material, the execution of the work, conflicting interest of Contractors performing related work and the determination of costs, the decision of the Engineer shall be final, but shall not relieve the Contractor of his responsibility for completion of the entire work in a good and workmanlike manner and in full compliance with the plans and specifications.

Inspectors are required to see that all the provisions of the Contract specifications are faithfully adhered to. Any inspector may, if authorized by the Engineer, stop the work entirely if there is not sufficient quantity of suitable and approved material on the ground to carry it on properly, or for any other good and sufficient cause. Any work done in the absence of an inspector may be ordered opened up for thorough examination, and must be rebuilt or replaced at the Contractors sole expense if found to be deficient or not in accordance with the plans and specifications. But no approval by an inspector shall be construed as an acceptance of defective or improper work or material, which must be rebuilt or properly replaced whenever discovered. Inspectors have not the power to give orders or directions under any possible circumstances, except as herein defined and provided, and on authority of the Engineer

(f) "Subcontractor": Any person, firm or corporation other than an employee of the contractor, supplying, for and under agreement either with the Contractor or any subcontractor of the Contractor, labor or material, or both, at the site of the project in connection with this Contract.

(g) "Project": The structure or improvement to be constructed in whole or in part through the performance of this Contract.

(h) "Work on the Project": Such work as is performed or ordinarily would be performed at the site of the project.

(i) "Surety": Any firm or corporation executing a Surety Bond or Bonds payable to the Owner securing the performance of the Contract either in whole or in part.

(j) Whenever certain articles are specifically mentioned, by brand name or name of the manufacturer, such materials shall be taken as standard and guide for quality, operation, capacity, etc. The term "or equal" shall mean that articles of equal characteristics as required, but of different brand or manufacturer, may be substituted and accepted, subject in all instances to the approval of the Engineer.

(k) "Special Provisions", "Special Conditions", "Project Specific Specification" or "Job Specific Specifications" are included as amendment of and/or additions to the General Conditions and/or Standard Specifications for the particular project in which they are included and will take precedence over the General Conditions and Standard Specifications only in so far as the amendments and/or additions. All other provisions in the General Conditions and/or Standard Specifications will not be affected.

(l) "Drawings" "Contract Drawings", "Plans" "Detail Drawings" "Detail Sheets" or "Plans and Details" refers to the set of drawings which show the details for the construction and related work anticipated on this project and upon which bids are being solicited.

2. CONFLICT OF PROVISIONS

Unless it is specifically provided otherwise, any provision in any other part of this Contract which may be in conflict or inconsistent with any provision in the General Conditions and Provisions shall be void to the extent only of such conflict or inconsistency.

3. DUTIES AND RESPONSIBILITIES OF THE CONTRACTOR

The Contractor shall have charge of and shall be responsible for the entire work under this Contract until its completion and acceptance by the city. A competent superintendent, foreman or other representative, invested with sufficient authority to conduct the work properly, shall be maintained on the work at all times.

It is expressly agreed and understood that no decision of the Engineer or any certificate issued nor payment made to the Contractor nor partial or entire use or occupancy of the work by the Owner, shall be an acceptance of any work or materials not in accordance with this Contract, nor constitute a waiver of the Contractor's responsibility to perform the entire work in a good and workmanlike manner and in accordance with the plans and specifications.

4. TIME ELEMENT

The work shall be commenced and finished within the time set out in the Form of Contract.

The time of completion of this Contract is an essential element and consideration. Since, therefore, time is of the essence thereof, and in the event of delay in the completion of the entire work required hereunder beyond the period prescribed, or beyond the period for which time may be extended by authority of the Owner for good cause shown, the Owner shall be paid damages for such delay. Inasmuch as the amount of such damages is difficult to ascertain, it is hereby stipulated and agreed that such damages shall be liquidated and the Owner shall be paid damages at the rate as set forth in the Special Provisions, said damages to be paid to the Owner for each and every day that the Contractor be in default in completing the entire work required under this Contract. The Owner shall have the right to deduct such amounts from any monies due, or which may become due, under

this Contract. In the event that no amount for such damages is shown in the Special Provisions of these specifications, it is agreed that the amount of damages shall be Five Hundred dollars ($500.00) per day.

If during the progress of the work weather conditions, or other circumstances beyond the control of the Contractor should prevail to the extent that the work cannot be prosecuted and completed within the time specified in the Contract, the Contractor shall file with the Engineer within one week of the occurrence of such delay a request for a credit on the time of completion. Unless the Contractor files such request, the liquidated damages specified above will be enforced.

5. PAYMENT TO CONTRACTOR

ESTIMATED QUANTITIES:

This Contract, including the specifications, plans and estimate, is intended to show clearly all work to be done and material to be furnished hereunder. Where the estimated quantities are shown for the various classes of work to be done and material to be furnished under this Contract, they are approximate and are to be used only as a basis for estimating the probable cost of the work and for comparing the proposals offered for the work. It is understood and agreed that the actual amount of work to be done and material to be furnished under this Contract may differ somewhat from these estimates, and that where the basis for payment under this Contract is the unit price method, payment shall be for the actual amount of such work done and the material furnished.

Where payment is based on the unit price method, the Contractor agrees that he will make no claim for damages, anticipated profits or otherwise on account of any differences which may be found between the quantities of work actually done, the material actually furnished under this Contract and the estimated quantities contemplated and contained in the proposal provided, however, that in case the actual quantity of any major item should become as much as twenty percent (20%) more than, or twenty percent (20%) less than the estimated or contemplated quantity for such items, then either party of this agreement, upon demand, shall be entitled to a revised consideration upon the portion of the work above or below twenty percent (20%) of the estimated quantity.

A "Major Item" shall be construed to be any individual item incurred in the proposal that has a total cost equal to or greater than five percent (5%) of the total Contract cost, computed on the basis of the proposal quantities and the Contract unit price.

Any revised consideration is to be determined by agreement between the parties, otherwise by the terms of this Contract, as provided under "Extra Work".

PAYMENT; RETAINAGE:

On or before the 1st day of each month the Contractor shall prepare an itemized statement showing the total value of the work completed by the Contractor up to and including the 25th day of the preceding month; said statement shall also include the value of all sound materials delivered on the site of the work that are to be fabricated into the work. NO ESTIMATE WILL BE MADE ON UNCOMPLETED PORTIONS OF THE WORK.

After all work is completed by Contractor, 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 Contractor in the amount of the contract and all Change Orders. The City shall be the final judge of when the

work is completed by Contractor. 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.

The City may make periodic payments to Contractor; 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 Contractor 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.

FINAL COMPLETION AND ACCEPTANCE:

Within ten (10) days after the Contractor has given the Engineer written notice that the work has been completed, or substantially completed, the Engineer and the Owner shall inspect the work and within said time, if the work be found to be completed or substantially completed in accordance with the Contract documents, the Engineer shall issue to the Owner and the Contractor his Certificate of Completion.

FINAL PAYMENT:

Upon the issuance of the Certificate of Completion, the Engineer shall proceed to make final measurements and prepare final statement of the value of all work performed and materials furnished under the terms of the Contract and shall certify same to the Owner, who shall pay to the Contractor the balance due the Contractor under the terms of this Contract, provided he has fully performed his obligations under the terms of this Contract. Notwithstanding any provision of these Contract Documents to the contrary, it is expressly understood and agreed by the parties hereto that neither the certificate of acceptance, nor the final or any other payment hereunder, nor any partial or total occupancy or possession of the project by the Owner, shall relieve the Contractor of his responsibility for completion of the entire project in a good and workmanlike manner and a full compliance with the plans and specifications and the fulfillment of any warranties which may be required in the Contract Documents.

6. OWNER'S RIGHT TO WITHHOLD CERTAIN AMOUNTS AND MAKE APPLICATION THEREOF

In addition to the amount which the Owner may otherwise retain under the Contract, the Owner may withhold a sufficient amount or amounts of any payment or payment otherwise due to the Contractor, as in this judgment may be necessary to cover:

(a) Payments which may be past due and payable for just claims against the Contractor or any subcontractor for labor or materials furnished for the performance of this Contract.

(b) For defective work not remedied.

(c) For failure of the Contractor to make proper payments to his subcontractors.

7. CERTIFICATE OF PAYMENT

Contractor shall, prior to issuance of final payment pursuant to the terms herein stated, provide proof satisfactory to the owner that all debts, bills and expenses incurred by the Contractor, his agents, employees or subcontractors employed by him, for labor, wages, materials and other purposes, in the furtherance of this

project, have been paid and satisfied in full. Satisfactory proof shall consist of an executed Certificate of Payment.

8. EXTRA, ADDITIONAL OR OMITTED WORK PAYMENT

The Owner, upon proper action by its governing body, may require changes in this Contract, or additions to, or deductions from the work to be performed or the materials to be furnished pursuant to this Contract. No employee, agent or representative of the Owner, with the exception of the governing body authorized to award this Contract, has any power to approve any change in this Contract and it is the responsibility of the Contractor before proceeding with any change to satisfy himself that the change has been properly authorized on behalf of the Owner. No charge for any extra work or other change in the Contract will be allowed unless the extra work or change has been authorized in writing by the Owner, or its duly authorized representative, and the price therefore is stated in such written authority.

Adjustments, if any, in the amounts to be paid the Contractor where such adjustments are made by reason of additions to or deductions from the quantities of units or items bid upon in the proposal schedules, shall be paid for in accordance with the provisions of the Specifications, at the unit and/or lump sum prices bid in such proposal schedules.

Adjustments, if any, in the amounts to be paid the Contractor where such adjustments are made by reason of additions of items not appearing in the proposal schedules, or addition of work of such a nature that unit and/or lumps sum prices contained in the proposal schedules cannot reasonably or equitably be applied to provide proper payment therefore, the payment to the Contractor for such work shall be determined by one or more of the following methods:

(a) By an acceptable lump sum proposal from the Contractor.

(b) By unit prices contained in the Contractor's proposal and incorporated in the Contract or fixed by subsequent agreement between the Owner and the Contractor.

(c) By a cost method pursuant to which the Contractor shall be paid the costs of the change or addition. He shall be required to keep and present in such form as the Owner may direct, a correct account of the cost of the change or addition, together with all vouchers therefore. The cost may include an allowance for overhead and profit not to exceed fifteen percent (15%) of the net cost.

In computing the cost, there shall be considered reasonable and proper net expenditures for labor, materials, power tools and equipment, pro rata charges for foremen, deductions for social security, old age and unemployment benefits and workmen's compensation insurance and surety bond premium. In computing cost of machinery and equipment involved in additional work, the amount to be paid shall be not more than one hundred percent (100%) of the latest schedule of "Equipment Ownership Expense" adopted by Associated General Contractors of America. No overhead and profit shall be allowed on the deductions for Social Security, old age and unemployment benefits. All other expenditures shall be treated as overhead costs.

No extra work shall be performed or change made unless in pursuance of a written order from the Owner stating that the extra work or change is authorized and no claim for an addition to the Contract sum shall be valid unless so ordered; provided, however, that nothing in this Article shall excuse the Contractor from proceeding with the prosecution of the work so changed.

The Contractor shall, when required by the Owner, furnish an itemized breakdown of the quantities and prices used in computing the value of any change, addition or deduction that might be ordered.

If the Contractor should claim that any instruction, request, drawing, specification, action, condition, omission, default, or other situation obligated or may obligate the Owner to pay additional compensation to the Contract, or constitutes a waiver of any provision in the Contract, he shall notify the Owner in writing of such claim within ten (10) days from the date he has actual or constructive notice of the factual basis supporting the claim. The Contractor's failure to notify the Owner within such ten (10) days period shall be deemed a waiver and relinquishment of any such claim against the Owner. The procedure for consideration of such claims shall be as stated in this Article.

9. ASSIGNMENT OF CONTRACT

The Contractor shall not assign this Contract or any part thereof, nor any monies due or to become due thereunder without the prior written consent of the Owner. No assignment of this Contract shall be valid unless it shall contain a provision that the funds to be paid to the assignee under the assignment are subject to a prior lien for services rendered or material supplied for performance of the work called for under this Contract in favor of all persons, firms, or corporations rendering such services or supplying such materials.

10. SUBCONTRACTORS

Specialty subcontractors may be utilized for the performance of such parts of the work under this Contract as, under normal practices, are performed by Specialty subcontractors, unless the Owner determines that the Contractor has heretofore customarily performed such specialty work with his own organization and is equipped to do so, or unless the Owner determines that performance of the specialty work by Specialty subcontractors will result in increased costs or inordinate delays.

The Contractor shall not subcontract any work to be performed or any materials to be furnished in the performance of this Contract without the prior written consent of the Owner. If the Contractor shall subcontract any part of this Contract, the Contractor shall be as fully responsible to the Owner for the acts and omissions of his subcontractor and of the persons either directly or indirectly employed by the subcontractor as he is for the acts and omissions of persons directly employed by himself. Nothing contained in this Contract shall create any Contractual relations between any subcontractor and the Owner. The Contractor shall ensure that the sub contractor has the insurance coverage required by this contract.

The Owner's consent to or approval of any subcontract under this Contract shall not in any way relieve the Contractor of his obligations under this Contract and no such consent or approval shall be deemed to waive any provisions of this Contract.

11. SUSPENSION OF WORK

Pending settlement of disputes on any point of controversy, the Engineer may suspend action on all or any part of the work. The Contractor shall not be entitled to any claim for loss or damage by reason of such, nor shall he be entitled to extension of time, although such extension of time may be granted by the Engineer if he deems it in the interest of the work.

12. RIGHT OF OWNER TO TERMINATE CONTRACT

If, in the opinion of the Engineer, the Contractor shall be improperly performing the work under this Contract, or shall neglect or refuse to take out or rebuild such work as shall have been rejected by the Engineer as being defective or unsuitable, or if, any time, the Engineer shall be of the opinion that the work is unnecessarily delayed and will not be finished within the prescribed time, or if the Contractor shall abandon the work, or shall neglect or refuse to comply with the instructions of the Engineer relative thereto, or shall fail in any manner to comply with the Specifications or Stipulations herein contained, the Engineer shall notify the Contractor to that effect in writing, and if the Contractor shall not within five (5) days thereafter take such measures as will, in the judgment of the Engineer, insure the satisfactory performance or construction of the work, the City may annul and cancel the Contract, in which event it shall notify the Contractor to discontinue all work under this Contract, and the Contractor shall immediately respect such notice and stop work and cease to have any rights to the possession of the ground and shall forfeit his Contract. Such annulment shall not entitle the Contractor to any claim for damages on account thereof, nor shall it affect the right of the City of Midland to recover damages on account of such failure. The City Council may thereupon advertise and re-let a new Contract for the uncompleted work without further ordinance, in the same manner as was followed in the letting of this Contract, and any excess of cost arising there from over and above what would have resulted from the prices set forth in this Contract will be charged against the Contractor and his surety or sureties hereto, who shall be liable therefore.

13. RIGHT OF CONTRACTOR TO TERMINATE CONTRACT

If the work should be stopped under an order of any court or other public authority for a period of three (3) months, through no act or fault of the Contractor or of anyone employed by him, or if the City should fail to make payment to the Contractor within thirty (30) days after such payment is due, as set out in the Contract, then the Contractor may, upon seven (7) days written notice to the City and the Engineer, stop work or terminate his Contract and recover from the City payment for all work executed and for any loss sustained upon any plant or materials and reasonable profit and damages.

14. INCIDENTAL WORK

Any and all minor details 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 and included with the work for which the prices are named in the Contract Documents. The Contractor will not be entitled to any extra or additional compensation therefore, unless specifically stated otherwise.

15. PERMITS – COMPLIANCE WITH LAW

The Contractor shall, at his expense, obtain all permits and licenses necessary for the performance of this Contract, and give all necessary notices, pay all fees required by law, and comply with all laws, ordinances, rules and regulations governing the Contractor's performance of the Contract.

Portions of this contract qualify for exemption pursuant to the provisions of the Texas Limited Sales, Excise and Use Tax Act. The Contractor shall obtain a sales tax exemption certificate from the City. All labor performed on the project and all materials incorporated into the project qualify for such tax exemption. However, equipment and parts for equipment purchased to be used on the project, but are not incorporated into the project; do not qualify for said tax exemption. Contractor shall issue a resale certificate in lieu of paying such sales tax for all

materials incorporated into the project. Further Contractor shall separate the charges for materials incorporated into the project from the charges for labor.

16. INSPECTION BY OWNER

The Owner and its representatives shall at all times have access to all parts of the work and to the shops wherein the work is in preparation for the purpose of inspection, and the Contractor shall at all times maintain proper facilities and provide safe access for such inspection.

The Owner shall have the right to reject materials and workmanship which are defective, or to require their correction. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the premises without charge to the Owner. If the Contractor does not correct such rejected work within a reasonable time, fixed by written notice, the Owner may correct same and charge the expense to the Contractor. No inspector shall have the power to waive the obligation resting upon the Contractor to furnish good material or do work as herein prescribed, and any failure or omission of any inspector or the Engineer to condemn any defective material or work shall not release the Contractor from the obligation to at once tear out, remove and properly rebuild the same at any time upon discovery of the defect and upon receipt of notice of the Engineer to do so.

Should it be considered necessary or advisable by the Owner at any time before final acceptance of the entire work to make an examination of work already completed by removing or tearing out any portion thereof, the Contractor shall on request promptly furnish all necessary facilities, labor and materials. If such work is found to be defective in any respect due to the fault of the Contractor or his subcontractor, he shall defray all the expenses of such examinations and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the additional cost of labor and materials necessarily involved in such examination and replacement, plus fifteen percent (15%) for overhead and profit, shall be allowed the Contractor.

Where the Specifications require work to be specifically tested or approved, it shall not be tested or covered up without timely notice to the Owner of its readiness for inspection and without the approval or consent thereto by the Owner. Should any such work be covered up without such notice, approval or consent, it must, if required by the Owner, be uncovered for examination at the Contractor's expense.

17. PATENTS

The Contractor shall hold and save the Owner and its officers, agents, servants, and employees harmless from liability of any nature or kind, including all costs and legal expenses, for or on account of, any patented or unpatented invention, process, article or appliance, manufactured for or used in the performance of the Contract, including its use by the Owner, unless otherwise specifically stipulated in the Contract.

18. MUTUAL RESPONSIBILITY OF CONTRACTORS

If, through acts of neglect on the part of the Contractor, any other Contractor or any subcontractor shall suffer loss or damage on the work, the Contractor agrees to settle with such other Contractor or subcontractor by agreement or arbitration, if such other Contractor or subcontractor will so settle. If such other Contractor or subcontractor shall assert any claim against the Owner on account of any damage alleged to have been so sustained, the Owner shall notify the Contractor, who shall indemnify and save harmless the Owner against any such claim.

The Contractor must ascertain to his own satisfaction the scope of the project and the nature of any other Contracts that have been or may be awarded by the Owner in the prosecution of the project to the end that the Contractor may perform this Contract in the light of such other Contract, if any.

Nothing herein contained shall be interpreted as granting the Contractor exclusive occupancy of the site of the project. The Contractor shall not cause any unnecessary hindrance or delay to any other Contractor working on the project. If the performance of any Contract for the project is likely to be interfered with by the simultaneous execution of some other Contract or Contracts, the Owner shall decide which Contractor shall cease work temporarily and which shall continue, or whether the work under the Contracts can be coordinated so that the Contractors may proceed simultaneously. The Owner shall not be responsible for any damages suffered or extra costs incurred by the Contractor, resulting directly or indirectly from the award or performance or attempted performance of any other Contract or Contracts on the project, or caused by any decision or omission of the Owner respective to the order of precedence in the performance of Contracts.

19. NOTICE AND SERVICE THEREOF

Any notice from one party to another under the Contract shall be in writing and shall be dated and signed by the party giving such notice or by duly authorized representative of such party. Any such notice shall not be effective for any purpose whatsoever unless served in the following manner; namely, if the notice is given to the Owner, (a) by personal delivery thereof to the individual duly authorized to direct and supervise the project of the Owner, or (b) by depositing the same in the United States Mail, enclosed in a sealed envelope, addressed to the City of Midland, 300 North Loraine Street, Midland, Texas, 79701, postage prepaid and certified; or if the notice is given to the contractor (a) by personal delivery thereof to the project superintendent or other person authorized to act for the contractor, or (b) by depositing the same in the United States Mail, enclosed in a sealed envelope, addressed to the Contractor at his regular place of business or at such other address as may have been established for the conduct of the work under this Contract, postage prepaid and certified; or (c) if the notice is given to the Surety or any other person by personal delivery to such Surety or other person, or by depositing the same in the United States Mail, enclosed in a sealed envelope addressed to such Surety or other person, at the address of such surety or other person last communicated by him to the party giving the notice, postage prepaid and certified.

20. QUALITY OF MATERIALS AND WORKMANSHIP

It is the intention of this Contract to have only first class materials and the best workmanship throughout, and the methods and appliances adopted by the Contractor must be such as will secure a satisfactory quality of work and will enable him to complete the work in the time agreed upon. If at any time such methods and appliances appear inadequate, the Engineer may order the Contractor to improve their character or increase their efficiency, and the Contractor must conform to such order; but the failure of the Engineer to order such improvement of methods or increase of efficiency will not relieve the Contractor from his obligations to perform good work or finish it in the time agreed upon. The Contractor shall submit samples or specimens of any and all materials proposed to be used in the work when required to do so by the Engineer. All materials must be of specified quality and fully equal to approved samples. All work must be done and completed in a thorough and workmanlike manner. All materials furnished and all work done must be satisfactory to the Engineer and will be subject to rigid inspection, and if not in accordance with the Specifications in the opinion of the Engineer, shall be made to conform thereto.

It is understood that except as otherwise specifically stated in the Contract, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence of temporary

construction of every nature, and all other services and facilities required for the completion of the Contract within the specified time.

21. SPECIAL METHODS

The Engineer may consent to special methods for carrying out the work in difficult cases, but the Contractor will not be relieved of responsibility for the result. The Contractor shall be responsible for the result of all work performed by him whether directed by the Engineer or not.

22. REMOVAL OR REPLACEMENT OF WORK DONE WITHOUT LINES OR GRADES

Any work done without lines or grades given by the Engineer or under his direction or without the supervision of an inspector, may be ordered removed and replaced by the Engineer at the Contractor's expense.

23. COVERING WORK

No work shall be covered until it has been examined and approved by the Engineer.

24. UNFAVORABLE WEATHER

During unfavorable weather and other adverse conditions, only such portions of the work may be done which will not be damaged thereby, unless by special means or precautions approved by the Engineer.

25. ALL WORK SUBJECT TO FINAL INSPECTION

Failure to neglect on the part of the Engineer or his inspectors to condemn or reject bad or inferior work or materials shall not be construed to imply his acceptance of such work or materials if it becomes evident at any time prior to the final acceptance of the work and the release of the Contractor.

26. PUBLIC CONVENIENCE

When materials for construction are brought on the work site they shall be neatly piled so as to cause as little obstruction to travel as possible, and so that they may be conveniently inspected.

No material or other obstruction shall be placed within five (5) feet of fire hydrants, which must at all times be readily accessible to the fire department, nor shall any material be piled within two (2) feet of any trees.

The Contractor shall be responsible for all damages to persons or property that occur as a result of his fault or negligence in connection with the prosecution of the Contract and shall be responsible for the proper care and protection of all materials delivered and work performed until completion, and final acceptance by the Owner.

The Contractor shall provide such heat, covering and enclosures as are necessary to protect all work and materials against damage by weather conditions.

The Contractor shall take adequate precautions to protect existing sidewalks, curbs, pavement, utilities, adjoining property, and structures, and avoid damage thereto, and he shall at his own expense completely repair any damage thereto caused by his operations.

If required by the Engineer, the Contractor shall shore up, brace, underpin, and protect as may be necessary, all foundations, and other parts of all existing structures adjacent and adjoining the site of the Project, which are in any way affected by the excavations or other operations connected with the completion of the work under this Contract. Whenever any notice is required to be given by the Owner or the Contractor to any adjoining or adjacent landowner or other party before commencement of any work under this Contract, such notice shall be given by the Contractor. The Contractor shall indemnify the Owner and save it harmless from any damages on account of settlement or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the Owner may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

During the progress of the work the convenience of the public and of the residents along streets must be provided as far as practicable. Convenient access to driveways, houses and buildings along streets must be maintained whenever possible.

Temporary approaches and crossings of streets and sidewalks must be provided and kept in good condition whenever practicable.

The Contractor shall provide and maintain such fences, barriers, "Street Closed" signs, red lights and watchmen as may be necessary to prevent avoidable accidents to residents and to the public.

The Contractor alone shall be held responsible for all injuries to persons, and for all damages to property of the City or others, caused by or resulting from the negligence of himself, his employees or agents during the progress of or connected with the prosecution of the work, whether within the limits of the work or elsewhere. He must restore all injured public or private property to a condition as good as it was when he entered upon the work, purchasing new materials to replace all that which is injured or destroyed during the course of the work.

In an emergency affecting the safety of life or property, including adjoining property, the Contractor, without special instructions or authorization from the Owner is authorized to act at his discretion to prevent such threatened loss or injury and he shall so act.

27. TRAFFIC CONTROL

It is the policy of the City of Midland to keep at least two travel lanes open to traffic at all times and where possible to have three travel lanes between 7:30 a.m. and 9:00 a.m. and 4 p.m. and 6 p.m. (Two (2) lanes in the direction of peak travel).

At least 48 hours before beginning work the contractor shall present a traffic control and/or barricade plan prepared as per the approved Barricading Standards to the Traffic Engineering Division for review and approval. When approved and barricades are in place, they shall be inspected by the Traffic Engineering Division prior to beginning work.

Traffic control signs, such as stop signs, yield signs, etc., are placed in various intersections for the safety and protection of the traveling public. The contractor shall not move, alter or damage said signs for any reason. If said signs must be removed for construction purposes, contractor shall notify the City of Midland, Traffic Division Operations Superintendent at least 48 hours (not including weekends) before construction activities are scheduled to begin. All construction barricading, warning signs, and other construction traffic control devices shall be in place and shall be in accordance with the Texas Manual on Uniform Traffic Control Devices and approved Barricading Standards included in plans before traffic signs can be removed. The contractor shall notify the Traffic Division Operations Superintendent at least 72 hours (not including weekends) before

scheduled removal of construction barricades, warning signs, and traffic control devices. But in all cases the contractor shall not remove said barricades, warning signs, and traffic control devices until the City of Midland's Traffic Department has replaced stop signs, yield signs, etc., in their proper location. The Contractor shall notify Traffic Engineering Division at least 24 hours in advance of any Traffic Signal modification due to construction (i.e. eliminating left turn phases). Notice shall also be given to the Traffic Engineering Division at least 24 hours prior to removing barricades at signalized intersections.

28. PROTECTION OF NEW WORK

All new work shall be carefully protected by the Contractor, and any work injured from any cause before the completion of the whole project must be rebuilt by the Contractor at his own expense.

29. MONUMENTS OR STAKES

The Contractor must carefully protect from disturbance or injury all monuments, stakes and bench marks, of City County, State or Federal Government and shall not excavate nearer than five (5) feet to any of them without the permission of the Engineer, or until they have been removed, witnessed or otherwise disposed of by the Engineer.

30. USE OF COMPLETED PORTIONS

The City shall have the right to take possession of and use any completed or partially completed portions of the work notwithstanding the time for completing the entire work on such portions may not have expired; but such taking possession and use shall not be deemed an acceptance of any work not completed in accordance with the Contract Documents. If such prior use increases the cost of, or delays the work, the Contractor shall be entitled to such extra compensation or extension of time, or both as the Engineer may determine.

The Owner, in taking possession of completed portions, shall agree to accept the decision of the Engineer on matters relating to responsibility for damages that may occur to any portions of the work during the period of possession preceding acceptance and final payment.

31. USE OF PREMISES

The Contractor shall confine his apparatus, storage of materials and construction operations to such limits as may be directed by the Owner, and shall not unreasonably encumber the premises with his materials.

The Contractor shall enforce any instructions of the Owner regarding advertising, fires, danger signals, barricades and smoking, and shall require all persons employed on the work to comply with all building, post or institutional regulations while on the premises.

32. SAFETY RESTRICTIONS

The following procedures will be followed regarding the subject item on this contract:

A warning sign painted yellow with black letters that are legible at twelve feet shall be placed inside and outside vehicles such as cranes, 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."

Equipment that may be operated within ten feet of high voltage lines shall have an insulating cage type of guard about the boom or arm, except back hoes or dippers, and insulator links on the lift hook connections.

When necessary to work within six feet of high voltage electric lines, notification shall be given to the power company who will erect temporary mechanical barriers, de – energize the line, or raise or lower the line. The notifying department

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.

No person shall work within six feet of high voltage line without precautions having been taken and protection provided as outlined in Paragraph (3) above.

33. INSURANCE REQUIREMENTS AND WORKERS COMPENSATION

INSURANCE REQUIREMENTS

Contractor 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 an occurrence basis. This insurance shall name the City as an additional insured and waive subrogation in favor of the City.

The Business Automobile Liability insurance provided by Contractor 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 the City as an additional insured and waive subrogation in favor of the City.

The Workers' Compensation coverage provided by Contractor shall inure to the benefit of employees injured during the course and scope of their employment by Contractor pursuant to this Contract. The Workers' Compensation shall waive all rights of subrogation in favor of the City.

All insurance required pursuant to this Contract shall provide for a waiver of subrogation in favor of the City. All insurance required pursuant to this Contract, except for Workers' Compensation Insurance, shall name the City as an additional insured on a claims occurred basis. City shall be provided the notice by Contractor's insurance provider not later than thirty (30) days prior to any reduction or termination of such coverage.

Contractor 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, Contractor shall provide one or more certificates of insurance specifically stating that these requirements have been met and subject to the approval of the City. The City shall not be required to provide any insurance whatsoever pursuant to this Contract.

The Contractor certifies that the certificate of insurance provided as required herein complies with the requirements of Senate Bill 425, passed during the 82nd regular session of the Texas Legislature, and effective January 1, 2012. The Contractor shall not use an unapproved certificate of insurance or insert inappropriate language on a certificate. Compliance with state law is the sole responsibility of the Contractor.

34. INDEMNIFICATION

INDEMNITY: THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND THE OWNER AND ALL OF THE OWNER'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, 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 THE CONTRACTOR, 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 CONTRACTOR WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST THE OWNER OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.

THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND THE OWNER AND ALL OF THE OWNER'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 THE OWNER, THE OWNER'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 THE CONTRACTOR OR THE CONTRACTOR'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 CONTRACTOR WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST THE OWNER OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.

THE CONTRACTOR AGREES THAT HE WILL INDEMNIFY AND SAVE THE OWNER 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, ALL SUPPLIES, INCLUDING COMMISSARY INCURRED IN THE FURTHERANCE OF THE PERFORMANCE OF THIS CONTRACT. WHEN OWNER SO DESIRES, THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE THAT ALL OBLIGATIONS OF THE NATURE HEREINABOVE DESIGNATED HAVE BEEN PAID, DISCHARGED OR WAIVED. THE CONTRACTOR, ITS SURETIES AND INSURANCE CARRIERS SHALL DEFEND, INDEMNIFY AND SAVE HARMLESS THE OWNER 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 THE CONTRACTOR 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 THE OWNER OR ANY OF ITS OFFICERS, AGENTS, OR EMPLOYEES INCLUDING ATTORNEY'S FEES.

35. RELEASE

NOTWITHSTANDING ANY OTHER PROVISION, CONTRACTOR HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES OWNER, OWNER'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH CONTRACTOR HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKING CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS OR OWNER'S NEGLIGENCE.

36. INDEPENDENT CONTRACTOR

It is expressly understood and agreed that Contractor shall perform all work and services described herein as an independent contractor and not as an officer, agent, servant or employee of the Owner; that Contractor 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 respondent superior shall not apply as between Owner and Contractor, its officers, agents, employees, contractors and subcontractors; and

that nothing herein shall be construed as creating a partnership or joint enterprise between Owner and Contractor. No person performing any of the work and services described hereunder by Contractor shall be considered an officer, agent, servant or employee of the Owner. Further, it is specifically understood and agreed that nothing in this Contract 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. Contractor 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. The Owner does not have the power to direct the order in which the work is done. The Owner shall not have the right to control the means, methods or details of the Contractor's work. Contractor shall assume exclusive responsibility for the work. Contractor is entirely free to do the work in its own way.

37. QUALIFICATIONS FOR EMPLOYMENT

Preference shall be given to qualified local residents in the employment of laborers and mechanics for work on the Project under this Contract. No person under the age of sixteen (16) years shall be employed on the project under this Contract. No person whose age or physical condition is such as to make his employment dangerous to his health or safety or to the health or safety of others shall be employed on the Project under this Contract: Provided, that this shall not operate against the employment of physically handicapped persons, otherwise employable, where such persons may be safely assigned to work which they can ably perform. No person currently serving sentence in a penal or correctional institution and no inmate of an institution for mentally defective shall be employed on the project under this contract.

38. PAYROLLS OF CONTRACTOR AND SUBCONTRACTORS

The Contractor and each of his subcontractors shall prepare payrolls for the workers on the Project. Not later than the seventh (7th) day following the payment of wages, the Contractor shall transmit to the Owner, if requested, a certified legible copy and two confirmed copies of such payroll.

Such copies of payrolls shall be accompanied by substantial proof that all bills for services rendered and materials supplied have been duly paid and by such other data as the Owner may require.

39. POSTING WAGE RATES

The Contractor shall post at appropriate conspicuous points at the site of the Project a schedule showing the wage rates for the various classes of laborers and mechanics to be engaged in work on the Project under this Contract and all deductions, if any, required by law to be made from unpaid wages actually earned by the laborers and mechanics so engaged.

40. PAYMENT OF EMPLOYEES

The Contractor shall post at appropriate conspicuous points at the site of the Project a schedule showing the wage rates for the various classes of laborers and mechanics to be engaged in work on the Project under this Contract and all deductions, if any, required by law to be made from unpaid wages actually earned by the laborers and mechanics so engaged.

41. WAGE UNDERPAYMENT AND ADJUSTMENTS

The Contractor agrees that, in case of underpayment of wages to any worker on the project under this Contract by the Contractor or any subcontractor, the Owner shall withhold from the Contractor out of payments due, an amount sufficient to pay such worker the difference between the wages required to be paid under this Contract and the wages actually paid such worker for the total number of hours worked and that the Owner may disburse such amount so withheld by it for and on account of the Contractor to the employee to whom such amount is due. The Contractor further agrees that the amounts to be withheld pursuant to this Article may be in addition to other amounts that may be retained by the Owner pursuant to other provisions of this Contract.

42. COMPUTATION OF WAGES ON 8 – HOUR DAY

The wages of each laborer and mechanic engaged in work on the project under this Contract shall be computed on a basis of eight (8) hours per day, eight (8) hours continuous employment except for lunch periods, constituting a day's work.

Legal holiday work shall be paid for at the regular governing per diem wage rates.

Work in excess of 40 hours per week shall be paid for at 1 ½ times the basic rate of pay.

43. OVERTIME WORK AND WORK ON SUNDAYS AND LEGAL HOLIDAYS

The Contractor will not be permitted to work on Sundays or legal holidays except in an emergency and then only upon written permission of the Engineer.

Any work necessary to be performed after regular working hours and when permitted on Sundays or legal holidays, shall be performed without additional expense to the Owner.

No work on any Contract item will be permitted before daylight or later than one hour after sundown.

44. CONTRACT SECURITY

The Contractor shall furnish a performance bond and payment bond in an amount equal to one hundred percent (l00%) of the amount of the Contract as security for the faithful performance of the Contract, including the payment of all persons performing labor on the project and furnishing of materials in connection with this Contract. All Bonds must be executed in five (5) original counterparts by a corporate surety authorized to do business in the State of Texas. Bonds executed by individuals or any other than recognized and authorized corporate surety companies will not be acceptable.

45. DELAYS

The Contractor shall receive no compensation for delays or hindrances to the work, except when, in the judgment of the Engineer, direct or unavoidable extra cost to the Contractor is caused by such hindrances or delays. When such extra compensation is claimed, a written statement thereof shall be presented by the Contractor, as provided in Paragraph 18 hereof. Such claim, if found correct, will be approved, and the decision of the Engineer whether extra cost has been incurred and the amount thereof, shall be final. If delays are caused by specific orders to stop work, given by the Engineer, or by the performance of extra work, or by unforeseen causes beyond the control of the Contractor, or by the failure of the Owner to provide materials or necessary instructions for carrying on the work, or to provide the necessary right-of-way or site for installation,

then delay will entitle the Contractor to an equivalent extension of time. Application for extension of time must be approved by the Owner and, shall not release the Sureties from their obligations, which shall remain in full force until the discharge of the Contract.

LATE COMPLETION; LIQUIDATED DAMAGES:

It is hereby understood and mutually agreed, by and between Contractor 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." Contractor 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 Contractor 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.

In the event Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the City, then Contractor and Contractor'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 calendar day that Contractor 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 Contractor only those monies deemed appropriate by the City, in its sole discretion, to compensate Contractor for any work actually performed, less any liquidated damages Contractor owes the City.

The said amount is fixed and agreed upon by and between Contractor 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.

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 Contractor shall not be charged with liquidated damages or any excess cost when the City determines, in its sole discretion, that Contractor is without fault and Contractor's reasons for the time extension are acceptable to the City. Provided, further, that Contractor shall not be charged with liquidated damages of any 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 Contractor, 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.

Provided, further, that Contractor shall, within ten (10) calendar 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 Contractor within a reasonable time of its decision in the matter.

CONTRACTOR 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, CONTRACTOR 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 CONTRACTOR AS LIQUIDATED DAMAGES FOR CONTRACTOR'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.

CONTRACTOR SHALL RECEIVE NO FINANCIAL COMPENSATION FOR DELAY OR HINDRANCE TO THE WORK. IN NO EVENT SHALL THE CITY BE LIABLE TO CONTRACTOR 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. CONTRACTOR'S SOLE REMEDY IN ANY SUCH CASE SHALL BE AN EXTENSION OF TIME.

46. ERRORS AND OMISSIONS

The Contractor will not be permitted to take advantage of any error or omission in these specifications. Suitable instructions will be given by the Engineer when such error or omission is discovered.

47. SPECIFICATIONS AND DRAWINGS

The Contractor shall keep on the work a copy of the Specifications and Drawings, and shall at all times give the Engineer access thereto. Any drawings or plans listed in the detailed specifications shall be regarded as part thereof and of the Contract. Anything mentioned in these specifications and not mentioned or shown in the drawings, or shown in the drawings and not mentioned in these specifications, shall be done as though shown or mentioned in both. The Engineer will furnish from time to time, such detailed drawings, plans, profiles and information as he may consider necessary for the Contractor's guidance.

In the event of any discrepancy between the plans and these specifications, the decisions of the Engineer will be decisive thereon. The written dimensions on the plans are to be taken as correct, but the Contractor is required to check carefully all dimensions before beginning work thereon. Should any errors or omissions be discovered, the Engineer's attention shall be called to the same, and the proper corrections made. All notes on the plans shall be carefully observed by the Contractor and are a part of the Contract.

48. CONSTRUCTION STAKING

The Engineer will furnish a complete set of plans and profiles and set control stakes at fifty foot (50') intervals along the entire length of the project and at such control points he deems necessary for proper execution of the work. The Contractor will thereafter be required to lay out the work accurately and furnish at his own expense, all lines, levels, and dimensions necessary to the proper and correct execution of the entire work and be responsible for any errors resulting from his own work.

The Contractor shall give the Engineer at least 36 hours notice in writing before requiring stakes to be set on any new portion of the work, and he shall state clearly in such notice the exact locality or localities where such stakes are needed for immediate use.

The Contractor must satisfy himself, before commencing work, as to the meaning or correctness of all stakes or marks, and no claim will be entertained by the Owner for or on account of any alleged inaccuracies, or for the alterations subsequently rendered necessary on account of such alleged inaccuracies unless the Contractor notifies the Engineer thereof in writing before commencing to work thereon.

The Contractor will at all times conduct the work in such a manner as to prevent damage to construction stakes set by the Engineer. When construction stakes are damaged to such extent that they must be reset, as a result of carelessness or negligence on the part of the Contractor or his workmen, the costs thereof shall be kept by the Engineer and shall be deducted from the moneys due or to become due the Contractor under the terms of his contract.

Benchmark and survey stakes shall be preserved by the Contractor, and in case of their destruction or removal by him or his employees, they will be replaced by the Engineer at the Contractor's expense.

49. SANITATION

The Contractor shall provide suitable drinking water receptacles or containers equipped with dust-tight covers and spigots or faucets. A supply of sanitary paper drinking cups shall be kept on hand for general use near the drinking water containers. The use of common drinking cups or tin cups will not be permitted.

The Contractor shall furnish "Porta-Johns" or other approved sanitary facilities for use by all workers on the Project. Such facilities shall be placed and kept in close proximity of the site where work is being performed. Such facilities shall be properly serviced and maintained.

The Engineer may establish such other sanitary rules and regulations as may seem necessary and desirable to the safe prosecution of the work, such rules and regulations to apply to all forces employed under this Contract, and if, the Contractor fails to observe and enforce these rules, the Engineer may enforce them at the expense of the Contractor.

50. WATER FOR CONSTRUCTION

The Contractor may obtain all water necessary for construction purposes from the Municipal Waterworks System at the regular customer service rate, but the Contractor must make all necessary arrangements with the Director of Utilities for necessary connections and meters. The Contractor must make his own provisions and provide such equipment as is necessary for conveying water from point of service to point of use. No extra compensation will be allowed and the Contractor shall anticipate the expense connected herewith and absorb said expense in the prices bid for the various bid items.

51. SEQUENCE AND SPEED OF WORK

The Engineer shall direct the order and sequence of the work. If at any time before the commencement or during the progress of the work, the materials and appliances used appear to the Engineer as insufficient and improper for securing the quality of work required or the required rate of progress, he may order the Contractor to increase their efficiency or to improve their character and the Contractor shall conform to such order. The

failure of the Engineer to demand any increase of such efficiency or improvement shall not release the Contractor from his obligations to secure the quality of work or the rate of progress specified.

52. INSPECTION AND TESTING OF MATERIAL

The sampling and testing of materials used or proposed to be used in the construction of this project will be made by the Engineer, his designated representative or certified testing laboratory personnel in accordance with methods prescribed by the American Society of Testing Materials and/or the American Association of State Highway Officials, with subsequent approved revisions made prior to the date of the Proposal. The selection of the method of test shall be designated by the Engineer. The Contractor shall bear the cost of all tests required before a material or a method is approved for use on the job, unless the Owner specifically agrees to bear the cost of these tests.

All tests required by the Owner after materials and/or methods have been approved and after they have been incorporated or used in the job will be paid for by the Owner, except if the Owner's tests reveal non-conformance with the specifications, subsequent tests on that part of the work required to determine if the replaced or reworked material meets the specifications, will be paid for by the Contractor. The City will pay only one time for any required testing.

The following is a summary of test required for the approval of materials or methods:

Material	**Test**
Subgrade	Maximum density, optimum moisture
Caliche Base:	Maximum density, optimum moisture, hardness, gradation, liquid limit, plasticity index, Texas Triaxial Classification
Aggregates for hot-mix:	Gradation, unit weight, abrasion, soundness, liquid limit, plasticity index, density
Asphalt, emulsions and tars:	Certified plant test and certificates of compliance with each shipment
Hot- Mix asphaltic concrete:	Design mix, swell test, stripping test
Portland cement concrete pavement:	Design mix with test cylinders

Any materials shipped by the Contractor from the factory prior to having satisfactorily passed such testing and inspection by the Owner’s representative or prior to the receipt of notice from said representative that such testing and inspection will not be required, shall not be incorporated in the work.

The Owner may, at its discretion, approve materials and/or methods for use on this project without testing when they are from sources previously tested and approved for City of Midland projects.

53. CONSTRUCTION SCHEDULE

It shall be the responsibility of the Contractor to furnish the Construction Engineer prior to construction a schedule out – lining the anticipated time each phase of construction will begin and be completed, including sufficient time being allowed for clean – up.

54. PROFILES AND ELEVATIONS

Profiles and elevations of the ground are shown on the plans hereto attached. These profiles and elevations are believed to be reasonably correct, but are not guaranteed to be absolutely so, and are represented only as an approximation. Elevations are referred to datum given by the Engineer.

55. CLEANUP

During the progress of the work, the Contractor shall maintain the work area in a reasonably clean and safe condition. Dirt, debris, excess excavation and other objectionable materials shall be removed from the site and disposed of on a daily basis.

After completion of all the work contemplated to be done in accordance with the detailed plans and these specifications, the premises and area along the entire line of the work shall be thoroughly cleaned up and all remaining structural materials, excess or surplus excavation and debris of any nature shall be removed and disposed of in a satisfactory manner and as directed by the Engineer. The site of all work shall appear neat and finished. All portions of the project when completed shall be ready for use or occupancy.

No compensation or payment shall be made for any cleanup work. The price for such cleanup work shall be absorbed in the items covered in the proposal.

56. GUARANTEE

The contractor shall and hereby does guarantee: (1) all work performed by him directly and all work performed by his subcontractors; (2) that all material specified; and (3) that any defect due to improper workmanship or material discovered and made known to him within one year (1) f the date of final acceptance of the improvements shall be repaired, replaced, corrected or otherwise made good by him without additional expense to the Owner. The Contractor shall, in case of work performed by his subcontractors and where guarantees are required, secure guarantees from said subcontractors and deliver copies of same to the Engineer upon completion of the work.

57. WAIVER OF ATTORNEY FEES:

BY EXECUTING THIS CONTRACT, CONTRACTOR AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST THE OWNER, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THE CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE CONTRACT. THE CONTRACTOR SPECIFICALLY AGREES THAT IF THE CONTRACTOR 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, THE CONTRACTOR AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH CONTRACTOR MIGHT OTHERWISE BE ENTITLED.

CONTRACTOR AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. THE CONTRACTOR ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THE CONTRACT. THE CONTRACTOR FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN

THE OWNER AND THE CONTRACTOR. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF SOVEREIGN IMMUNITY.

THE CONTRACTOR AND OWNER ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION.

58. 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. 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. The obligations and undertakings of each of the parties to this Contract shall be deemed to have occurred in Midland County, Texas. This Contract shall be governed by, interpreted, enforced and construed under the law of the State of Texas. 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 that would direct application of the laws of another jurisdiction.

59. SOVEREIGN IMMUNITY

By executing this Contract, the City is not waiving its right of sovereign immunity. The City is retaining its immunity from suit. The City is not granting consent to be sued by legislative resolution or action.

THERE IS NO WAIVER OF SOVEREIGN IMMUNITY.

60. NO THIRD – PARTY BENEFICIARY

The 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.

61. 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, Contractor or his legal representative, shall give the City Manager or any other reasonable official of the City, 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 and 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 Contractor will settle, the physical and mailing addresses of Contractor at the time and date the claim was presented and the physical and mailing addresses of Contractor for the six months immediately preceding the occurrence of such damages, and the names and addresses of the witnesses upon whom the Contractor 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 City from any liability whatsoever. The City is under no obligation to provide notice to Contractor that Contractor'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, Contractor's failure to comply with the requirements herein shall perpetually bar Contractor'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. Contractor agrees that the requirements of this entire Agreement are reasonable.

62. ASSIGNMENT

Contractor 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 the owner. The issue on whether or not to grant consent to an assignment is in the sole discretion of the owner.

63. 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 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.

64. PROMPT PAY ACT

The owner and contractor agree that Texas Government Code, Chapter 2251, Payment for Goods and Services (the "Prompt Pay Act") does not waive governmental immunity.

65. OTHER FEDERAL REQUIREMENTS

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.

Updated September 2022

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 **Utility Extension Program 05** will be the installation, replacement, and removal of water improvements, wastewater improvements, and other assorted utility structures and appurtenances including the necessary excavation, backfill, pavement repair, sidewalk repair, erosion controls, traffic controls, coordination with City of Midland staff and organizations such as TxDOT, OSHA, franchise utilities, etc. as needed, One Call (Texas 811) notifications for pending work, notifications to adjacent property owners as directed by City of Midland staff, and all other work to be performed as outlined in the Plans and Specifications, which are necessary to satisfactorily complete the work.

The Owner reserves the right to abandon, without obligation to the Contractor, any part of the program, or the entire program, at any time before the Contractor begins any construction work authorized by the Owner. This applies to the individual projects assigned throughout the course of this program, and does not refer to the start of work for the program as a whole.

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 sets 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:

The Contractor will receive full payment from the Owner for each work order when the work order is 100% complete. Payment will not be made prior to a work order being 100% complete, and payment will be made for material installed, not for material delivery. This will apply to all Proposal Bid Items except those specifically listed below, which will be the only Proposal Bid Items to be paid upon material delivery for this project:

Miscellaneous Bid Items: 1 – 5

Water Bid Items: 1 – 38 and 45 – 48

Wastewater Bid Items: 1 – 22 and 24 – 31

Any and all payments for bid items that are paid upon material delivery are paid with the expectation that the material will be installed per the construction drawings and specifications, and that the material delivered will be protected and kept in good condition by the Contractor until it is installed. Material that is not properly stored or protected and becomes weathered or damaged before installation must be replaced with new material meeting the standards and requirements of the construction drawings and specifications before it can be installed, and this will be done by the Contractor at no additional cost to the City of Midland.

Only one (1) Open Trench Depth bid item in the Proposal will apply at a time to any given length of open trench excavation. These bid items are not stacked when determining payment for open trench excavation.

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 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:

Traffic control for work performed in arterial streets under this program will be the City of Midland's responsibility. The Contractor is to coordinate construction activities with the Barricade Company operating at the City of Midland's direction for any work of this nature. If at any time or for any reason there should be traffic control in an arterial street handled by the Contractor rather than the City of Midland, then that traffic control is to adhere to the rest of the requirements outlined in 'Special Provisions, 7. Traffic Control' that follows after this paragraph.

Traffic control for work performed in non-arterial streets under this program will be the Contractor's responsibility, and that traffic control is to adhere to the rest of the requirements outline in 'Special Provisions, 7. Traffic Control' that follows after this paragraph.

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. COMPLETION OF WORK:

Any work assigned to the Contractor is to be considered part of a work order, and completion of the assigned work occurs when the work order is 100% complete. A work order may only be completed after all utility, paving, sidewalk, erosion control, traffic control, and site cleanup work has been completed. All work must be inspected by the City's Inspector or Engineer before being accepted, and the City's Inspector or Engineer and the Contractor must sign or initialize the finalized work order before it is considered 100% complete.

Work orders that are considered 100% complete and signed or initialized are final and no subsequent changes, additions, reductions, or corrections will be made to the quantities listed on the work orders. The only exception that may occur will be at the sole discretion of the Engineer, who may add quantities to the work order for work that was performed but not accounted for in the original signed or initialized work order.

Errors in the unit prices used to calculate totals for work orders may be corrected by the City's Inspector or Engineer after work orders are signed or initialized so long as no change is made to the original work order quantities – OR – the Contractor may request that a new work order with the correct unit prices be provided for fresh signatures or initials. Quantities for work orders will remain fixed after the original work order is signed or initialized regardless or whether or not corrections are made to the unit prices and returned for a second round of signatures or initials, except as stated in the previous paragraph.

9. 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.

10. 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 interruption.

11. 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.

12. 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.

13. CONSTRUCTION STAKING:

The Contractor has sole responsibility for 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.

14. SURVEY:

The Contractor has sole responsibility for construction 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.

15. 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.

16. 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.

17. 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.

18. 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 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 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.

19. 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.

20. 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.

21. INTENT OF THE PROPOSAL:

The intent of the Proposal is to determine the lowest responsible bidder based on the total or 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 in an amount not to exceed $2,500,000.00. The initial term of the contract will expire on September 31, 2023.

22. RENEWAL OF CONTRACT:

If the Owner and Contractor agree in writing, the contract may be renewed for up to two (2) additional one (1) year terms (for an amount not to exceed $2,500,000.00 per term).

All renewal time periods will begin on October 1st of the calendar year the renewal is agreed to and will end on September 30th of the following calendar year.

If the Owner and Contractor do not agree to renew the existing contract then the contract will expire at the end of the term for either the first award period or, if applicable, the first period of contract renewal.

23. WARRANTY PERIOD:

There is no warranty period for this program as all work performed is to be subject to City inspection prior to acceptance. Any work performed without City inspection is subject to re-excavation for inspection, removal, replacement, reinstallation, or any other work deemed necessary by the City Inspector or Engineer to address the failure by the Contractor to have the required inspection performed at the Contractor's sole expense.

24. 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.

PROPOSAL

TO: Honorable Mayor and City Council
City of Midland
Midland, Texas

Mayor and Members of Council: The undersigned bidder, having examined the drawings, specifications and contract documents, the location of the proposed work, and being fully advised as to the extent and character of the work, proposes to furnish all material, equipment, and to perform all labor and work necessary for the completion of the construction of the work described by and in accordance with the attached drawings, specifications, and contract, for the following prices, to wit:

Project Name: Utility Extension Program 05

Project Number: U22-01

Base Bid: Miscellaneous Items

Item No.	Quantity	Description	Unit Price	Total Amount
1)	80 LF	20" Steel Pipe Casing (1/4" Wall Thickness), furnished, installed, complete and in place, for the sum of: two hundred fifty dollars and zero cents per linear foot. (Pay Note M1)	$ 255.00	$ 20,400.00
2)	80 LF	16" Steel Pipe Casing (1/4" Wall Thickness), furnished, installed, complete and in place, for the sum of: one hundred ninety five dollars and zero cents per linear foot. (Pay Note M1)	$ 195.00	$ 15,600.00
3)	80 LF	12" Steel Pipe Casing (1/4" Wall Thickness), furnished, installed, complete and in place, for the sum of: one hundred thirty five dollars and zero cents per linear foot. (Pay Note M1)	$ 135.00	$ 10,800.00

Base Bid: Miscellaneous Items				
Item No.	Quantity	Description	Unit Price	Total Amount
4)	40 LF	16" PVC Pipe Casing, SDR 26 ASTM D2241, furnished, installed, complete and in place, for the sum of: one hundred fifty five dollars and zero cents per linear foot. (Pay Note M1)	$ 155.00	$ 6,200.00
5)	80 LF	12" PVC Pipe Casing, SDR 26 ASTM D2241, furnished, installed, complete and in place, for the sum of: ninety dollars and zero cents per linear foot. (Pay Note M1)	$ 90.00	$ 7,200.00
6)	80 LF	Cement Stabilized Sand Bedding (2.5-Sack) Encasement, furnished, installed, complete and in place, for the sum of: twenty four dollars and zero cents per linear foot. (Pay Note M2)	$ 24.00	$ 1,920.00
7)	40 EA	Erosion/Sediment Control, furnished, installed, complete and in place, for the sum of: two hundred fifty dollars and zero cents per each. (Pay Note M3)	$ 250.00	$ 10,000.00
8)	40 EA	Traffic Control for Collector/Local Road Conditions, furnished, installed, complete and in place, for the sum of: two thousand five hundred dollars and zero cents per each. (Pay Note M4)	$ 2,500.00	$ 100,000.00
9)	15 EA	Traffic Control for Alley/Easement Conditions, furnished, installed, complete and in place, for the sum of: one thousand dollars and zero cents per each. (Pay Note M5)	$ 1,000.00	$ 15,000.00

Base Bid: Miscellaneous Items				
Item No.	Quantity	Description	Unit Price	Total Amount
10)	40 EA	Job Site Safety, furnished, installed, complete and in place, for the sum of: seven hundred fifty dollars and zero cents per each. (Pay Note M6)	$ 750.00	$ 30,000.00
11)	440 LF	Additional Labor, Downtown Area, Water Improvements, furnished, installed, complete and in place, for the sum of: thirty dollars and zero cents per linear foot. (Pay Note M7)	$ 30.00	$ 13,200.00
12)	440 LF	Additional Labor, Downtown Area, Wastewater Improvements, furnished, installed, complete and in place, for the sum of: forty dollars and zero cents per linear foot. (Pay Note M8)	$ 40.00	$ 17,600.00
13)	N/A	Material Mark-up, complete and in place, for the sum of: fifteen percent. (Pay Note M9)	% 15	$ N/A
14)	N/A	Labor Mark-up (Regular Work Hours), complete and in place, for the sum of: fifteen percent. (Pay Note M10)	% 15	$ N/A
15)	N/A	Equipment Rental Mark-up (Non-Standard Equipment Only), complete and in place, for the sum of: fifteen percent. (Pay Note M11)	% 10	$ N/A
Total Miscellaneous Items 1-15		$ 247,920.00		

Base Bid: Demolition Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	120 LF	Removal & Disposal of Existing Utility Mains, complete and in place, for the sum of: fifteen dollars and zero cents per linear foot. (Pay Note D1)	$ 15.00	$ 1,800.00
2)	40 CY	Flowable Fill for Existing Pipes Abandoned In Place, furnished, installed, complete and in place, for the sum of: one hundred thirty dollars and zero cents per cubic yard. (Pay Note D2)	$ 130.00	$ 5,200.00
3)	10 EA	Removal & Disposal of Existing 60" Manhole, (0'-5' Deep), complete and in place, for the sum of: two thousand two hundred dollars and zero cents per each. (Pay Note D3)	$ 2,200.00	$ 22,000.00
4)	10 EA	Removal & Disposal of Existing 48" Manhole, (0'-5' Deep), complete and in place, for the sum of: one thousand five hundred dollars and zero cents per each. (Pay Note D3)	$ 1,500.00	$ 15,000.00
5)	40 VF	Remove & Disposal of Existing 60" Manhole Additional Depth, (> 5' Deep), complete and in place, for the sum of: five hundred dollars and zero cents per vertical foot. (Pay Note D4)	$ 500.00	$ 20,000.00
6)	40 VF	Remove & Disposal of Existing 48" Manhole Additional Depth, (> 5' Deep), complete and in place, for the sum of: two hundred fifty dollars and zero cents per vertical foot. (Pay Note D4)	$ 250.00	$ 10,000.00
Total Demolition Items 1-6		$ 74,000.00		

Base Bid: Water Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	160 LF	16" Ductile Iron Pipe Pressure Class 150, Water Main, furnished, installed, complete and in place, for the sum of: one hundred ninety five dollars and zero cents per linear foot. (Pay Note W1)	$ 195.00	$ 31,200.00
2)	80 LF	12" Ductile Iron Pipe Pressure Class 150, Water Main, furnished, installed, complete and in place, for the sum of: one hundred forty five dollars and zero cents per linear foot. (Pay Note W1)	$ 145.00	$ 11,600.00
3)	80 LF	10" Ductile Iron Pipe Pressure Class 150, Water Main, furnished, installed, complete and in place, for the sum of: one hundred five dollars and zero cents per linear foot. (Pay Note W1)	$ 105.00	$ 8,400.00
4)	80 LF	8" Ductile Iron Pipe Pressure Class 150, Water Main, furnished, installed, complete and in place, for the sum of: eighty five dollars and zero cents per linear foot. (Pay Note W1)	$ 85.00	$ 6,800.00
5)	80 LF	6" Ductile Iron Pipe Pressure Class 150, Water Main, furnished, installed, complete and in place, for the sum of: seventy five dollars and zero cents per linear foot. (Pay Note W1)	$ 75.00	$ 6,000.00

Base Bid: Water Items				
Item No.	Quantity	Description	Unit Price	Total Amount
6)	100 LF	16" AWWA C-900 DR18, PVC, Water Main, furnished, installed, complete and in place, for the sum of: one hundred forty five dollars and zero cents per linear foot. (Pay Note W1)	$ 145.00	$ 14,500.00
7)	720 LF	12" AWWA C-900 DR18, PVC, Water Main, furnished, installed, complete and in place, for the sum of: eighty five dollars and zero cents per linear foot. (Pay Note W1)	$ 85.00	$ 61,200.00
8)	80 LF	10" AWWA C-900 DR18, PVC, Water Main, furnished, installed, complete and in place, for the sum of: seventy five dollars and zero cents per linear foot. (Pay Note W1)	$ 75.00	$ 6,000.00
9)	720 LF	8" AWWA C-900 DR18, PVC, Water Main, furnished, installed, complete and in place, for the sum of: sixty five dollars and zero cents per linear foot. (Pay Note W1)	$ 65.00	$ 46,800.00
10)	720 LF	6" AWWA C-900 DR18, PVC, Water Main, furnished, installed, complete and in place, for the sum of: fifty dollars and zero cents per linear foot. (Pay Note W1)	$ 50.00	$ 36,000.00
11)	10 EA	16" Tapping Sleeve furnished, installed, complete and in place, for the sum of: six thousand nine hundred ninety dollars and zero cents per each. (Pay Note W2)	$ 6,990.00	$ 69,900.00

Base Bid: Water Items				
Item No.	Quantity	Description	Unit Price	Total Amount
12)	15 EA	12" Tapping Sleeve furnished, installed, complete and in place, for the sum of: four thousand nine hundred twenty five dollars and zero cents per each. (Pay Note W2)	$ 4,925.00	$ 73,875.00
13)	10 EA	10" Tapping Sleeve furnished, installed, complete and in place, for the sum of: three thousand eight hundred dollars and zero cents per each. (Pay Note W2)	$ 3,800.00	$ 38,000.00
14)	15 EA	8" Tapping Sleeve furnished, installed, complete and in place, for the sum of: two thousand five hundred fifty dollars and zero cents per each. (Pay Note W2)	$ 2,550.00	$ 38,250.00
15)	15 EA	6" Tapping Sleeve furnished, installed, complete and in place, for the sum of: one thousand seven hundred ten dollars and zero cents per each. (Pay Note W2)	$ 1,710.00	$ 25,650.00
16)	10 EA	16" Gate Valve & Vault (MJxMJ/FL), furnished, installed, complete and in place, for the sum of: nine thousand two hundred dollars and zero cents per each. (Pay Note W3)	$ 9,200.00	$ 92,000.00
17)	15 EA	12" Gate Valve & Box (MJxMJ/FL), furnished, installed, complete and in place, for the sum of: six thousand two hundred dollars and zero cents per each. (Pay Note W4)	$ 6,200.00	$ 93,000.00

Base Bid: Water Items				
Item No.	Quantity	Description	Unit Price	Total Amount
18)	15 EA	10" Gate Valve & Box (MJxMJ/FL), furnished, installed, complete and in place, for the sum of: five thousand seventy five dollars and zero cents per each. (Pay Note W4)	$ 5,075.00	$ 76,125.00
19)	15 EA	8" Gate Valve & Box (MJxMJ/FL), furnished, installed, complete and in place, for the sum of: three thousand one hundred dollars and zero cents per each. (Pay Note W4)	$ 3,100.00	$ 46,500.00
20)	30 EA	6" Gate Valve & Box (MJxMJ/FL), furnished, installed, complete and in place, for the sum of: two thousand two hundred thirty dollars and zero cents per each. (Pay Note W4)	$ 2,230.00	$ 66,900.00
21)	5 EA	Air Relief Valve & Vault (Water Main), furnished, installed, complete and in place, for the sum of: twenty one thousand seven hundred fifty dollars and zero cents per each. (Pay Note W5)	$ 21,750.00	$ 108,750.00
22)	30 EA	Fire Hydrant Assembly, (≤ 5' Water Main Bury Depth), furnished, installed, complete and in place, for the sum of: four thousand nine hundred seventy dollars and zero cents per each. (Pay Note W6)	$ 4,970.00	$ 149,100.00

Base Bid: Water Items				
Item No.	Quantity	Description	Unit Price	Total Amount
23)	60 VF	Fire Hydrant Riser, (> 5' Water Main Bury Depth), furnished, installed, complete and in place, for the sum of: seven hundred fifty dollars and zero cents per vertical foot. (Pay Note W7)	$ 750.00	$ 45,000.00
24)	4300 LBS	Ductile Iron Fittings, furnished, installed, complete and in place, for the sum of: six dollars and zero cents per pound. (Pay Note W8)	$ 6.00	$ 25,800.00
25)	10 EA	Dresser Coupling, furnished, installed, complete and in place, for the sum of: nine hundred dollars and zero cents per each. (Pay Note W9)	$ 900.00	$ 9,000.00
26)	10 EA	16" Tapping Saddle for water service connection (2" or 1"), furnished, installed, complete and in place, for the sum of: one thousand seven hundred dollars and zero cents per each. (Pay Note W10)	$ 1,700.00	$ 17,000.00
27)	20 EA	12" Tapping Saddle for water service connection (2" or 1"), furnished, installed, complete and in place, for the sum of: nine hundred seventy five dollars and zero cents per each. (Pay Note W10)	$975.00	$ 19,500.00

Base Bid: Water Items				
Item No.	Quantity	Description	Unit Price	Total Amount
28)	10 EA	10" Tapping Saddle for water service connection (2" or 1"), furnished, installed, complete and in place, for the sum of: eight hundred dollars and zero cents per each. (Pay Note W10)	$ 800.00	$ 8,000.00
29)	30 EA	8" Tapping Saddle for water service connection (2" or 1"), furnished, installed, complete and in place, for the sum of: five hundred seventy five dollars and zero cents per each. (Pay Note W10)	$ 575.00	$ 17,250.00
30)	50 EA	6" Tapping Saddle for water service connection (2" or 1"), furnished, installed, complete and in place, for the sum of: four hundred ninety dollars and zero cents per each. (Pay Note W10)	$ 490.00	$ 24,500.00
31)	15 EA	2" Water Service Connection, Long (> 20'), furnished, installed, complete and in place, for the sum of: one thousand three hundred fifty dollars and zero cents per each. (Pay Note W11)	$ 1,350.00	$ 20,250.00
32)	15 EA	2" Water Service Connection, Short (≤ 20'), furnished, installed, complete and in place, for the sum of: one thousand five hundred fifty dollars and zero cents per each. (Pay Note W11)	$ 1,550.00	$ 23,250.00

Base Bid: Water Items				
Item No.	Quantity	Description	Unit Price	Total Amount
33)	40 EA	1" Water Service Connection, Long (> 20'), furnished, installed, complete and in place, for the sum of: one thousand three hundred dollars and zero cents per each. (Pay Note W11)	$ 1,300.00	$ 52,000.00
34)	40 EA	1" Water Service Connection, Short (≤ 20'), furnished, installed, complete and in place, for the sum of: one thousand fifty dollars and zero cents per each. (Pay Note W11)	$ 1,050.00	$ 42,000.00
35)	4 EA	Flushing Station Installation, Long (> 20'), furnished, installed, complete and in place, for the sum of: one thousand four hundred dollars and zero cents per each. (Pay Note W12)	$ 1,400.00	$ 5,600.00
36)	4 EA	Flushing Station Installation, Short (≤ 20'), furnished, installed, complete and in place, for the sum of: one thousand eight hundred dollars and zero cents per each. (Pay Note W12)	$ 1,800.00	$ 7,200.00
37)	4 EA	Sampling Station Installation, Long (> 20'), furnished, installed, complete and in place, for the sum of: two thousand two hundred dollars and zero cents per each. (Pay Note W13)	$ 2,200.00	$ 8,800.00
38)	4 EA	Sampling Station Installation, Short (≤ 20'), furnished, installed, complete and in place, for the sum of: two thousand six hundred fifty dollars and zero cents per each. (Pay Note W13)	$ 2,650.00	$ 10,600.00

Base Bid: Water Items				
Item No.	Quantity	Description	Unit Price	Total Amount
39)	15 EA	Water Meter Installation (New Service Lateral), furnished, installed, complete and in place, for the sum of: five hundred fifty dollars and zero cents per each. (Pay Note W14)	$ 550.00	$ 8,250.00
40)	15 EA	Water Meter & Meter Box Installation (Existing Service Lateral), furnished, installed, complete and in place, for the sum of: eight hundred seventy five dollars and zero cents per each. (Pay Note W15)	$ 875.00	$ 13,125.00
41)	15 EA	Replace Water Meter In Existing Vault, furnished, installed, complete and in place, for the sum of: seven hundred fifty dollars and zero cents per each. (Pay Note W16)	$ 750.00	$ 11,250.00
42)	10 EA	Stand-Alone Gate Valve & Vault Replacement / Installation Add-On, furnished, installed, complete and in place, for the sum of: forty nine thousand dollars and zero cents per each. (Pay Note W17)	$ 49,000.00	$ 490,000.00
43)	40 EA	Stand-Alone Gate Valve & Box Replacement / Installation Add-On, furnished, installed, complete and in place, for the sum of: three thousand five hundred dollars and zero cents per each. (Pay Note W18)	$ 3,500.00	$ 140,000.00

Base Bid: Water Items				
Item No.	Quantity	Description	Unit Price	Total Amount
44)	20 EA	Stand-Alone Water Service Connection Add-On, furnished, installed, complete and in place, for the sum of: one thousand nine hundred dollars and zero cents per each. (Pay Note W19)	$ 1,900.00	$ 38,000.00
45)	1500 LF	Open Trenching of Water Main (0' – 5' Deep), furnished, installed, complete and in place, for the sum of: twenty dollars and zero cents per linear foot. (Pay Note W20)	$ 20.00	$ 30,000.00
46)	440 LF	Open Trenching of Water Main (5' – 8' Deep), furnished, installed, complete and in place, for the sum of: thirty dollars and zero cents per linear foot. (Pay Note W20)	$ 30.00	$ 13,200.00
47)	440 LF	Open Trenching of Water Main (8' – 10' Deep), furnished, installed, complete and in place, for the sum of: forty five dollars and zero cents per linear foot. (Pay Note W20)	$ 45.00	$ 19,800.00
48)	440 LF	Open Trenching of Water Main (10' – 12' Deep), furnished, installed, complete and in place, for the sum of: seventy five dollars and zero cents per linear foot. (Pay Note W20)	$ 75.00	$ 33,000.00
Total Water Items 1-48		$ 2,238,925.00		

Base Bid: Wastewater Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	80 LF	16" SDR 26 ASTM D2241, PVC, Wastewater Main, furnished, installed, complete and in place, for the sum of: one hundred sixty dollars and zero cents per linear foot. (Pay Note WW1)	$ 160.00	$ 12,800.00
2)	80 LF	12" SDR 26 ASTM D2241, PVC, Wastewater Main, furnished, installed, complete and in place, for the sum of: one hundred five dollars and zero cents per linear foot. (Pay Note WW1)	$ 105.00	$ 8,400.00
3)	80 LF	10" SDR 26 ASTM D2241, PVC, Wastewater Main, furnished, installed, complete and in place, for the sum of: eighty five dollars and zero cents per linear foot. (Pay Note WW1)	$ 85.00	$ 6,800.00
4)	160 LF	8" SDR 26 ASTM D2241, PVC, Wastewater Main, furnished, installed, complete and in place, for the sum of: sixty five dollars and zero cents per linear foot. (Pay Note WW1)	$ 65.00	$ 10,400.00
5)	160 LF	6" SDR 26 ASTM D2241, PVC, Wastewater Main, furnished, installed, complete and in place, for the sum of: fifty dollars and zero cents per linear foot. (Pay Note WW1)	$ 50.00	$ 8,000.00

Base Bid: Wastewater Items				
Item No.	Quantity	Description	Unit Price	Total Amount
6)	80 LF	15" SDR 26 ASTM D3034, PVC, Wastewater Main, furnished, installed, complete and in place, for the sum of: one hundred fifteen dollars and zero cents per linear foot. (Pay Note WW1)	$ 115.00	$ 9,200.00
7)	80 LF	12" SDR 26 ASTM D3034, PVC, Wastewater Main, furnished, installed, complete and in place, for the sum of: ninety dollars and zero cents per linear foot. (Pay Note WW1)	$ 90.00	$ 7,200.00
8)	80 LF	10" SDR 26 ASTM D3034, PVC, Wastewater Main, furnished, installed, complete and in place, for the sum of: seventy five dollars and zero cents per linear foot. (Pay Note WW1)	$ 75.00	$ 6,000.00
9)	160 LF	8" SDR 26 ASTM D3034, PVC, Wastewater Main, furnished, installed, complete and in place, for the sum of: fifty dollars and zero cents per linear foot. (Pay Note WW1)	$ 50.00	$ 8,000.00
10)	160 LF	6" SDR 26 ASTM D3034, PVC, Wastewater Main, furnished, installed, complete and in place, for the sum of: forty five dollars and zero cents per linear foot. (Pay Note WW1)	$ 45.00	$ 7,200.00

Base Bid: Wastewater Items				
Item No.	Quantity	Description	Unit Price	Total Amount
11)	440 LF	15" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main, furnished, installed, complete and in place, for the sum of: one hundred five dollars and zero cents per linear foot. (Pay Note WW1)	$ 105.00	$ 46,200.00
12)	440 LF	12" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main, furnished, installed, complete and in place, for the sum of: eighty five dollars and zero cents per linear foot. (Pay Note WW1)	$ 85.00	$ 37,400.00
13)	80 LF	10" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main, furnished, installed, complete and in place, for the sum of: seventy dollars and zero cents per linear foot. (Pay Note WW1)	$ 70.00	$ 5,600.00
14)	440 LF	8" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main, furnished, installed, complete and in place, for the sum of: forty five dollars and zero cents per linear foot. (Pay Note WW1)	$ 45.00	$ 19,800.00
15)	720 LF	6" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main, furnished, installed, complete and in place, for the sum of: forty dollars and zero cents per linear foot. (Pay Note WW1)	$ 40.00	$ 28,800.00

Base Bid: Wastewater Items				
Item No.	Quantity	Description	Unit Price	Total Amount
16)	220 LF	4" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main, furnished, installed, complete and in place, for the sum of: thirty five dollars and zero cents per linear foot. (Pay Note WW1)	$ 35.00	$ 7,700.00
17)	10 EA	60" Fiberglass Manhole & Cover, (0'-5' Deep), furnished, installed, complete and in place, for the sum of: eight thousand four hundred dollars and zero cents per each. (Pay Note WW2)	$ 8,400.00	$ 84,000.00
18)	30 EA	48" Fiberglass Manhole & Cover, (0'-5' Deep), furnished, installed, complete and in place, for the sum of: six thousand nine hundred dollars and zero cents per each. (Pay Note WW2)	$ 6,900.00	$ 207,000.00
19)	5 EA	60" Fiberglass Manhole & Watertight Cover, (0'-5' Deep), furnished, installed, complete and in place, for the sum of: eight thousand nine hundred dollars and zero cents per each. (Pay Note WW3)	$ 8,900.00	$ 44,500.00
20)	5 EA	48" Fiberglass Manhole & Watertight Cover, (0'-5' Deep), furnished, installed, complete and in place, for the sum of: seven thousand five hundred dollars and zero cents per each. (Pay Note WW3)	$ 7,500.00	$ 37,500.00

Base Bid: Wastewater Items				
Item No.	Quantity	Description	Unit Price	Total Amount
21)	40 VF	60" Fiberglass Manhole Additional Bury Depth, (> 5' Deep), furnished, installed, complete and in place, for the sum of: one thousand one hundred dollars and zero cents per vertical foot. (Pay Note WW4)	$ 1,100.00	$ 44,000.00
22)	120 VF	48" Fiberglass Manhole Additional Bury Depth, (> 5' Deep), furnished, installed, complete and in place, for the sum of: five hundred fifty dollars and zero cents per vertical foot. (Pay Note WW4)	$ 550.00	$ 66,000.00
23)	10 EA	Connection to Existing Manhole, furnished, installed, complete and in place, for the sum of: nine hundred dollars and zero cents per each. (Pay Note WW5)	$ 900.00	$ 9,000.00
24)	10 EA	Manhole Drop Structure (0'-5' Deep, External), furnished, installed, complete and in place, for the sum of: one thousand two hundred dollars and zero cents per each. (Pay Note WW6)	$ 1,200.00	$ 12,000.00
25)	40 VF	Manhole Drop Structure Additional Bury Depth (> 5' Deep, External), furnished, installed, complete and in place, for the sum of: seven hundred fifty dollars and zero cents per vertical foot. (Pay Note WW7)	$ 750.00	$ 30,000.00
26)	10 EA	Manhole Drop Structure (0'-5' Deep, Internal), furnished, installed, complete and in place, for the sum of: five hundred dollars and zero cents per each. (Pay Note WW8)	$ 500.00	$ 5,000.00

Base Bid: Wastewater Items				
Item No.	Quantity	Description	Unit Price	Total Amount
27)	40 VF	Manhole Drop Structure Additional Bury Depth (> 5' Deep, Internal), furnished, installed, complete and in place, for the sum of: two hundred fifty dollars and zero cents per vertical foot. (Pay Note WW9)	$ 250.00	$ 10,000.00
28)	30 EA	6" Wastewater Service Connection, Long (> 20'), furnished, installed, complete and in place, for the sum of: one thousand fifty dollars and zero cents per each. (Pay Note WW10)	$ 1,050.00	$ 31,500.00
29)	30 EA	6" Wastewater Service Connection, Long (≤ 20'), furnished, installed, complete and in place, for the sum of: seven hundred fifty dollars and zero cents per each. (Pay Note WW10)	$ 750.00	$ 22,500.00
30)	30 EA	4" Wastewater Service Connection, Long (> 20'), furnished, installed, complete and in place, for the sum of: eight hundred fifty dollars and zero cents per each. (Pay Note WW10)	$ 850.00	$ 25,500.00
31)	30 EA	4" Wastewater Service Connection, Long (≤ 20'), furnished, installed, complete and in place, for the sum of: six hundred twenty five dollars and zero cents per each. (Pay Note WW10)	$ 625.00	$ 18,750.00
32)	20 EA	Stand-Alone Wastewater Service Connection Add-On, furnished, installed, complete and in place, for the sum of: seven hundred fifty dollars and zero cents per each. (Pay Note W11)	$ 750.00	$ 15,000.00

Base Bid: Wastewater Items				
Item No.	Quantity	Description	Unit Price	Total Amount
33)	160 LF	Open Trenching of Wastewater Main (0'-5' Deep), furnished, installed, complete and in place, for the sum of: thirty five dollars and zero cents per linear foot. (Pay Note WW12)	$35.00	$ 5,600.00
34)	720 LF	Open Trenching of Wastewater Main (5'-8' Deep), furnished, installed, complete and in place, for the sum of: forty five dollars and zero cents per linear foot. (Pay Note WW12)	$ 45.00	$ 32,400.00
35)	720 LF	Open Trenching of Wastewater Main (8'-10' Deep), furnished, installed, complete and in place, for the sum of: sixty five dollars and zero cents per linear foot. (Pay Note WW12)	$ 65.00	$ 46,800.00
36)	440 LF	Open Trenching of Wastewater Main (10'-12' Deep), furnished, installed, complete and in place, for the sum of: seventy five dollars and zero cents per linear foot. (Pay Note WW12)	$ 75.00	$ 33,000.00
37)	220 LF	Open Trenching of Wastewater Main (12'-14' Deep), furnished, installed, complete and in place, for the sum of: ninety five dollars and zero cents per linear foot. (Pay Note WW12)	$ 95.00	$ 20,900.00
38)	220 LF	Open Trenching of Wastewater Main (14'-16' Deep), furnished, installed, complete and in place, for the sum of: one hundred twenty five dollars and zero cents per linear foot. (Pay Note WW12)	$ 125.00	$ 27,500.00

Base Bid: Wastewater Items				
Item No.	Quantity	Description	Unit Price	Total Amount
39)	160 LF	Open Trenching of Wastewater Main (16'-18' Deep), furnished, installed, complete and in place, for the sum of: one hundred seventy five dollars and zero cents per linear foot. (Pay Note WW12)	$ 175.00	$ 28,000.00
40)	80 LF	Open Trenching of Wastewater Main (18'-20' Deep), furnished, installed, complete and in place, for the sum of: two hundred dollars and zero cents per linear foot. (Pay Note WW12)	$ 200.00	$ 16,000.00
Total Sewer Items 1-40		$ 1,101,950.00		

Base Bid: Paving Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	100 SY	6" Concrete Pavement Repair, furnished, installed, complete and in place, for the sum of: seventy five dollars and zero cents per square yard. (Pay Note P1)	$ 75.00	$ 7,500.00
2)	100 SY	4" Concrete Sidewalk Repair, furnished, installed, complete and in place, for the sum of: sixty dollars and zero cents per square yard. (Pay Note P2)	$ 60.00	$ 6,000.00
3)	2900 SY	2" Asphalt Pavement Repair, furnished, installed, complete and in place, for the sum of: thirty four dollars and zero cents per square yard. (Pay Note P3)	$ 34.00	$ 98,600.00
4)	1500 SY	6" Base Rock Pavement Repair (Flexible Base), furnished, installed, complete and in place, for the sum of: twenty one dollars and zero cents per square yard. (Pay Note P4)	$ 21.00	$ 31,500.00
5)	3300 SY	Flowable Fill / 2-Sack Backfill, furnished, installed, complete and in place, for the sum of: one hundred thirty dollars and zero cents per square yard. (Pay Note P5)	$ 130.00	$ 429,000.00
Total Paving Items 1-5			$ 572,600.00	

Bid Price For:	
1. Miscellaneous Items	$ 247,920.00
2. Demolition Items	$ 74,000.00
3. Water Items	$ 2,238,925.00
4. Wastewater Items	$ 1,101,950.00
6. Paving Items	$ 572,600.00
Total Price	$ 4,235,395.00

In addition to providing the individual prices for the items above, Contract shall write the total bid amount in the sum of

four million two hundred thirty five three hundred ninety five dollars

and zero cents total.

The undersigned bidder hereby declares that he has visited the site of the work and has carefully examined the contract documents pertaining to the work covered by the above bid. The selected contractor will receive written notice to proceed. The initial term of the contract shall expire on September 30, 2023. If the Owner and Contractor agree in writing, the contract may be renewed for up to two (2) additional one (1) year terms (at an amount not to exceed $2,500,000.00 per term.)

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.

Enclosed herewith in this proposal is a cashier's check, cash or bid bond on a form approved by the City Attorney, for

two hundred eleven thousand seven hundred sixty nine dollars

and seventy five cents total. ($ 211,769.75)

which it is agreed shall be collected and retained by the owner as liquidated damages in the event this proposal is accepted by the Owner within thirty days (30) after the date advertised for the reception of bids and the undersigned fails to execute the contract and required bonds with the owner, under the conditions thereof, within (15) days after the date said proposal is accepted; otherwise said check or bond shall be returned to the undersigned on demand.

Entrench, Inc.		
Name of Contractor	Alberto Caballero, President	
Submitted By	Print Name and Title	
3311 N Grimes St		
Mailing Address		
Hobbs	NM	88240
City	State	Zip

PAY NOTES

Utility Extension Program 05

Bid Item		Pay Quantity Note
Miscellaneous Items		
1	20" Steel Pipe Casing (1/4" Wall Thickness)	M1
2	16" Steel Pipe Casing (1/4" Wall Thickness)	M1
3	12" Steel Pipe Casing (1/4" Wall Thickness)	M1
4	16" PVC Pipe Casing, SDR 26 ASTM D2241	M1
5	12" PVC Pipe Casing, SDR 26 ASTM D2241	M1
6	Cement Stabilized Bedding (2.5-Sack)	M2
7	Erosion/Sediment Control	M3
8	Traffic Control for Collector/Local Road Conditions	M4
9	Traffic Control for Alley/Easement Conditions	M5
10	Job Site Safety	M6
11	Additional Labor, Downtown Area, Water Improvements	M7
12	Additional Labor, Downtown Area, Wastewater Improvements	M8
13	Material Mark-up	M9
14	Labor Mark-up (Regular Work Hours)	M10
15	Equipment Rental Mark-up (Non-Standard Equipment Only)	M11
Demolition Items		
1	Removal & Disposal of Existing Utility Mains	D1
2	Flowable Fill for Existing Pipes Abandoned In Place	D2
3	Removal & Disposal of Existing 60" Manhole (0'-5' Deep)	D3
4	Removal & Disposal of Existing 48" Manhole (0'-5' Deep)	D3
5	Removal & Disposal of Existing 60" Manhole Additional Depth (> 5' Deep)	D4
6	Removal & Disposal of Existing 40" Manhole Additional Depth (> 5' Deep)	D4

Water Items

1	16" Ductile Iron Pipe Pressure Class 150, Water Main	W1
2	12" Ductile Iron Pipe Pressure Class 150, Water Main	W1
3	10" Ductile Iron Pipe Pressure Class 150, Water Main	W1
4	8" Ductile Iron Pipe Pressure Class 150, Water Main	W1
5	6" Ductile Iron Pipe Pressure Class 150, Water Main	W1
6	16" AWWA C-900 DR18, PVC, Water Main	W1
7	12" AWWA C-900 DR18, PVC, Water Main	W1
8	10" AWWA C-900 DR18, PVC, Water Main	W1
9	8" AWWA C-900 DR18, PVC, Water Main	W1
10	6" AWWA C-900 DR18, PVC, Water Main	W1
11	16" Tapping Sleeve	W2
12	12" Tapping Sleeve	W2
13	10" Tapping Sleeve	W2
14	8" Tapping Sleeve	W2
15	6" Tapping Sleeve	W2
16	16" Gate Valve & Vault (MJxMJ/FL)	W3
17	12" Gate Valve & Box (MJxMJ/FL)	W4
18	10" Gate Valve & Box (MJxMJ/FL)	W4
19	8" Gate Valve & Box (MJxMJ/FL)	W4
20	6" Gate Valve & Box (MJxMJ/FL)	W4
21	Air Relief Valve & Vault (Water Main)	W5
22	Fire Hydrant Assembly (≤ 5' Water Main Bury Depth)	W6
23	Fire Hydrant Riser (> 5' Water Main Bury Depth)	W7
24	Ductile Iron Fittings	W8
25	Dresser Coupling	W9
26	16" Tapping Saddle (2" or 1")	W10
27	12" Tapping Saddle (2" or 1")	W10
28	10" Tapping Saddle (2" or 1")	W10
29	8" Tapping Saddle (2" or 1")	W10
30	6" Tapping Saddle (2" or 1")	W10
31	2" Water Service Connection, Long (> 20')	W11
32	2" Water Service Connection, Short (≤ 20')	W11
33	1" Water Service Connection, Long (> 20')	W11
34	1" Water Service Connection, Short (≤ 20')	W11
35	Flushing Station Installation, Long (> 20')	W12
36	Flushing Station Installation, Short (≤ 20')	W12
37	Sampling Station Installation, Long (> 20')	W13
38	Sampling Station Installation, Short (≤ 20')	W13
39	Water Meter Installation (New Service Lateral)	W14
40	Water Meter & Meter Box Installation (Existing Service Lateral)	W15
41	Replace Water Meter In Existing Vault	W16
42	Stand-Alone Add-On For Gate Valve & Vault Replacement / Installation	W17
43	Stand-Alone Add-On For Gate Valve & Box Replacement / Installation	W18
44	Stand-Alone Add-On For Water Service Connection	W19
45	Open Trenching of Water Main (0' - 5' Deep)	W20
46	Open Trenching of Water Main (5' - 8' Deep)	W20
47	Open Trenching of Water Main (8' - 10' Deep)	W20
48	Open Trenching of Water Main (10' - 12' Deep)	W20

Wastewater Items

1	16" SDR 26 ASTM D2241, PVC, Wastewater Main	WW1
2	12" SDR 26 ASTM D2241, PVC, Wastewater Main	WW1
3	10" SDR 26 ASTM D2241, PVC, Wastewater Main	WW1
4	8" SDR 26 ASTM D2241, PVC, Wastewater Main	WW1
5	6" SDR 26 ASTM D2241, PVC, Wastewater Main	WW1
6	15" SDR 26 ASTM D3034, PVC, Wastewater Main	WW1
7	12" SDR 26 ASTM D3034, PVC, Wastewater Main	WW1
8	10" SDR 26 ASTM D3034, PVC, Wastewater Main	WW1
9	8" SDR 26 ASTM D3034, PVC, Wastewater Main	WW1
10	6" SDR 26 ASTM D3034, PVC, Wastewater Main	WW1
11	15" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	WW1
12	12" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	WW1
13	10" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	WW1
14	8" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	WW1
15	6" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	WW1
16	4" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	WW1
17	60" Fiberglass Manhole & Cover (0'-5' Deep)	WW2
18	48" Fiberglass Manhole & Cover (0'-5' Deep)	WW2
19	60" Fiberglass Manhole & Watertight Cover (0'-5' Deep)	WW3
20	48" Fiberglass Manhole & Watertight Cover (0'-5' Deep)	WW3
21	60" Fiberglass Manhole Additional Bury Depth (> 5' Deep)	WW4
22	48" Fiberglass Manhole Additional Bury Depth (> 5' Deep)	WW4
23	Connect To Existing Manhole	WW5
24	Manhole Drop Structure (0'-5' Deep, External)	WW6
25	Manhole Drop Structure Additional Bury Depth (> 5' Deep, External)	WW7
26	Manhole Drop Structure (0'-5' Deep, Internal)	WW8
27	Manhole Drop Structure Additional Bury Depth (> 5' Deep, Internal)	WW9
28	6" Wastewater Service Connection, Long (> 20')	WW10
29	6" Wastewater Service Connection, Short (≤ 20')	WW10
30	4" Wastewater Service Connection, Long (> 20')	WW10
31	4" Wastewater Service Connection, Short (≤ 20')	WW10
32	Stand-Alone Add-On For Wastewater Service Connection	WW11
33	Open Trenching of Wastewater Main (0'-5' Deep)	WW12
34	Open Trenching of Wastewater Main (5'-8' Deep)	WW12
35	Open Trenching of Wastewater Main (8'-10' Deep)	WW12
36	Open Trenching of Wastewater Main (10'-12' Deep)	WW12
37	Open Trenching of Wastewater Main (12'-14' Deep)	WW12
38	Open Trenching of Wastewater Main (14'-16' Deep)	WW12
39	Open Trenching of Wastewater Main (16'-18' Deep)	WW12
40	Open Trenching of Wastewater Main (18'-20' Deep)	WW12

Paving Items

1	6" Concrete Pavement Repair	P1
2	4" Concrete Sidewalk Repair	P2
3	2" Asphalt Pavement Repair	P3
4	6" Base Rock Pavement Repair	P4
5	20" Flowable Fill / 2-Sack Backfill	P5

PAY QUANTITY NOTES

M1 Includes the necessary equipment, labor, materials, and incidentals for the installation of Pipe Casing per the construction drawings and City of Midland standards and specifications, including all spacers, grout, embedment, detector wire, tracer tape, and appurtenances. Measurement and payment to be per linear foot measured along the ground surface following the pipe centerline through all valves, fittings, structures, and appurtenances.

M2 Includes the necessary equipment, labor, materials, and incidentals for the installation of Cement Stabilized Bedding Encasement (Portland Cement 2.5 Sack Cement = 235 LBS/CY) per the construction drawings, City of Midland standards and specifications, and Texas Administrative Code Title 30, Ch. 290, Sub-Ch. D Rule§290.44(e)(4)(B)(v), including all embedment, detector wire, tracer tape, and appurtenances. Measurement and payment to be per linear foot measured along the ground surface following the pipe centerline through all valves, fittings, structures, and appurtenances.

M3 Includes the necessary equipment, labor, materials, and incidentals to implement the Erosion Control Plan per the construction drawings and City of Midland standards and specifications. Measurement and payment to be made per each block measured from street intersection to street intersection, or per each street crossing between blocks.

M4 Includes the necessary equipment, labor, materials, and incidentals to implement the Traffic Control for Collector/Local Road Conditions per the approved Traffic Control Plan. Any required traffic control devices are to meet the City of Midland Traffic Division Standards. Measurement and payment to be made per each block measured from street intersection to street intersection, or per each collector/local road crossed.

M5 Includes the necessary equipment, labor, materials, and incidentals to implement the Traffic Control for Alley/Easement Conditions per the approved Traffic Control Plan. Any required traffic control devices are to meet the City of Midland Traffic Division Standards. Measurement and payment to be made per each block measured from street intersection to street intersection, or per each alley/easement crossed.

M6 Includes the necessary equipment, labor, materials, and incidentals to implement Job Site Safety and to provide a safe work environment for the project work area (including all personal protection equipment, trench safety, etc.) per the construction drawings and in compliance with all applicable Federal, State, and Local requirements or regulations including those of OSHA and the City of Midland. JOB SITE SAFETY IS THE RESPONSABILITY OF THE CONTRACTOR. Measurement and payment to be made per each block measured from street intersection to street intersection, or per each street crossing between intersections.

M7 Includes the necessary equipment, labor, materials, and incidentals to complete work for water improvements in the downtown Midland area per the construction drawings and City of Midland standards and specifications. The downtown Midland area is considered to be the area bordered by Kansas Avenue to the north, Lamesa Road to the east, Front Street to the south, and 'A' Street to the west. Measurement and paument to be per linear foot measured along the ground surface following the water pipe centerline through all valves, fittings, structures, and appurtenances. This will be applied solely at the discretion of the Engineer or Records or the City of MIdland designee.

M8 Includes the necessary equipment, labor, materials, and incidentals to complete work for wastewater improvements in the downtown Midland area per the construction drawings and City of Midland standards and specifications. The downtown Midland area is considered to be the area bordered by Kansas Avenue to the north, Lamesa Road to the east, Front Street to the south, and 'A' Street to the west. Measurement and payment to be per linear foot measured along the ground surface following the wastewater pipe centerline through all structures and appurtenances. This will be applied solely at the discretion of the Engineer or Records or the City of MIdland designee.

M9 Includes the Material Mark-up for materials and material sizes (pipe, valve, manhole, etc.) required to complete work for improvements not covered by the bid items listed in the Proposal for this project per the construction drawings and the City of Midland standards and specifications. Measurement and payment to be made per the cost of the material in question plus the set percent increase established by this bid item. The Contractor must provide a copy of the invoice for the material cost from the supplier to the Engineer of Record or the City of Midland designee before this bid item may be claimed for any material. This will be applied solely at the discretion of the Engineer of Record or the City of Midland designee.

M10 Includes the Labor Mark-up (Regular Work Hours) for labor required to complete work for improvements not covered by the bid items listed in the Proposal for this project per the construction drawings and the City of Midland standards and specifications. Measurement and payment to be made per the cost of labor in question plus the set percent increase established by this bid item. The Contractor must provide a typical hourly pay rate for work crews prior to the percent increase along with the number of workers on the crew and the number of hours worked by the crew for the project in question to the Engineer of Record or the City of Midland designee before this bid item may be claimed for any labor. This will be applied solely at the discretion of the Engineer of Record or the City of Midland designee.

M11 Includes the Equipment Rental Mark-up (non-standard equipment only) required to complete work for improvements not covered by the bid items listed in the Proposal for this project per the construction drawings and the City of Midland standards and specifications. Measurement and payment to be made per the cost of the equipment rental in question plus the set percent increase established by this bid item. The Contractor must provide a copy of the invoice for the rented equipment from the equipment supplier to the Engineer of Record or the City of Midland designee before this bid item may be claimed for any rented equipment. This will be applied solely at the discretion of the Engineer of Record or the City of Midland designee.

D1 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Utility Mains per the construction drawings and City of Midland standards and specifications, including the removal and disposal of all pipes, fittings, structures, and appurtenances. All existing fire hydrants and meters removed are to be returned to the City of Midland. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all valves, manholes, fittings, junctions, structures, and appurtenances.

D2 Includes the necessary equipment, labor, materials, and incidentals for the placement of Flowable Fill for Existing Pipes Abandoned In Place (Portland Cement 2-Sack = 188 LBS / CY) per the construction drawings and City of Midland standards and specifications, including all plugging (wastewater) or capping (water) of the pipe to be abandoned, and appurtenances. Measurement and payment to be made per cubic yard volume of flowable fill placed in pipe abandoned in place.

D3 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Manholes to a depth of 5' per the construction drawings and City of Midland standards and specifications, including the removal and disposal of all drop structures, other structures, base, and appurtenances. Measurement and payment to be made per each manhole removed.

D4 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Manholes at depths exceeding 5' per the construction drawings and City of Midland standards and specifications, including the removal and disposal of all drop structures, other structures, and appurtenances. Measurement and payment to be made per vertical foot of existing manhole removed below a depth of 5' measured from the lowest invert at the manhole flowline and rounded up to the nearest 0.5'.

W1 Includes the necessary equipment, labor, materials, and incidentals for the installation of Water Mains per the construction drawings and City of Midland standards and specifications, including all embedment, detector wire, tracer tape, necessary testing, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all valves, fittings, structures, and appurtenances.

W2 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Tapping Sleeve per the construction drawings and City of Midland standards and specifications, including all joint restraints, embedment, thrust blocking, and appurtenances. Valves are addressed in a separate pay note. Measurement and payment to be made per each tapping sleeve installed.

W3 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Gate Valve & Vault per the construction drawings and City of Midland standards and specifications, including all embedment, vault, joint restraint, thrust blocking, concrete collar, and appurtenances. Measurement and payment to be made per each valve and vault installed. Includes valves associated with tapping sleeves. Stand alone valve replacements are addressed in a separate pay note.

W4 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Gate Valve & Box per the construction drawings and City of Midland standards and specifications, including all embedment, valve box, joint restraint, thrust blocking, concrete collar, and appurtenances. Measurement and payment to be made per each valve and box installed. Includes valves associated with tapping sleeves. Stand alone valve replacements are addressed in a separate pay note.

W5 Includes the necessary equipment, labor, materials, and incidentals for the installation of an Air Relief Valve & Vault (Water Force Main) per the construction drawings and City of Midland standards and specifications, including all embedment, wrapping, joint restraint, thrust blocking, backfill, concrete collar, and appurtenances. Measurement and payment to be made per each valve and vault installed.

W6 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Fire Hydrant Assembly to a depth of 5' per the construction drawings and City of Midland standards and specifications, including all risers, embedment, gravel sump, thrust blocking, necessary testing, and appurtenances. Measurement and payment to be made per each fire hydrant assembly installed.

W7 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Fire Hydrant Riser (> 5' Water Main Bury Depth) per the construction drawings and City of Midland standards and specifications, including all embedment and appurtenances. Measurement and payment to be made per vertical foot of riser below a water main bury depth of 5' measured from the water main invert and rounded up to the nearest 0.5'.

W8 Includes the necessary equipment, labor, materials, and incidentals for the installation of Ductile Iron Fittings per the construction drawings and City of Midland standards and specifications, including all embedment, wrapping, thrust blocking, joint restraints, and appurtenances. All fittings are to be C153 ductile iron compact fittings. Fitting weights are established from Tyler Union Quality Waterworks Products Catalog PC-U2014, December, 2014 and payment will be made at the standard compact weight. Nuts, bolds, glands, and other associated accessories are not included as part of the fitting weight and are considered subsidiary to the weight of the fitting. Any additional required fittings not shown on the drawings will be paid for at weights established in the Tyler Union Waterworks Catalog.

W9 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Dresser Coupling per the construction drawings and City of Midland standards and specifications, including all embedment, wrapping, thrust blocking, and appurtenances. Measurement and payment to be made per each dresser coupling / adaptor installed.

W10 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Tapping Saddle for a water service connection per the construction drawings and City of Midland standards and specifications, including all embedment, thrust blocking, and appurtenances. Measurement and payment to be made per each tapping saddle installed.

W11 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Water Service Connection per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, backfill, polyethylene service line or other pipe, brass goods from the corporation stop to the brass angle valve (inclusive), meter box, and all appurtenances. Measurement to be per linear foot measured along the ground surface following the pipe centerline through all valves, fittings, structures, and appurtenances, and payment to be made per each water service connection installed.

W12 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Flushing Station per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, backfill, polyethylene service line or other pipe, brass goods between the tapping saddle and flushing station, and all appurtenances. The flushing station will be provided by the City of Midland. Measurement to be per linear foot measured along the ground surface following the pipe centerline through all valves, fittings, structures, and appurtenances, and payment to be made per each flushing station installed.

W13 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Sampling Station per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, backfill, polyethylene service line or other pipe, brass goods between the tapping saddle and sampling station, and all appurtenances. The sampling station will be provided by the City of Midland. Measurement to be per linear foot measured along the ground surface following the pipe centerline through all valves, fittings, structures, and appurtenances, and payment to be made per each sampling station installed.

W14 Includes the necessary equipment, labor, materials, and incidentals for a new Water Meter Installation as part of a new water service lateral installation per the construction drawings and City of MIdland standards and specifications, including all appurtenances. The new water meter will be provided by the City of Midland. Measurement and payment to be per each water meter set.

W15 Includes the necessary equipment, labor, materials, and incidentals to set a new Water Meter and Meter Box for an existing water service lateral, or to replace an existing water meter and water meter box, per the construction drawings and City of MIdland standards and specifications, including all appurtenances. Return the existing water meter to the City of Midland. The new water meter will be provided by the City of Midland. Measurement and payment to be per each water meter and meter box set.

W16 Includes the necessary equipment, labor, materials, and incidentals to Replace Water Meter in Existing Vault per the construction drawings and City of MIdland standards and specifications, including all appurtenances. Return the existing water meter to the City of Midland. The new water meter will be provided by the City of Midland. Measurement and payment to be per each water meter replaced.

W17 Includes the additional necessary equipment, labor, materials, and incidentals for a Stand-Alone Gate Valve & Vault Replacement / Installation Add-On per the construction drawings and City of Midland standards and specifications, including all saw-cutting, pavement removal, unclassified excavation, removal of fittings, removal of structures, embedment, vault, joint restraint, thrust blocking, concrete collar, and appurtenances. Measurement and payment to be made per each valve and vault replaced or installed that is stand-alone and not connected to a larger water improvement project. Includes valves associated with tapping sleeves.

W18 Includes the additional necessary equipment, labor, materials, and incidentals for a Stand-Alone Gate Valve & Box Replacement / Installation Add-On per the construction drawings and City of Midland standards and specifications, including all saw-cutting, pavement removal, unclassified excavation, removal of fittings, removal of structures, embedment, box, joint restraint, thrust blocking, concrete collar, and appurtenances. Measurement and payment to be made per each valve and box replaced or installed that is stand-alone and not connected to a larger water improvement project. Includes valves associated with tapping sleeves.

W19 Includes the additional necessary equipment, labor, materials, and incidentals for a Stand-Alone Water Service Connection Add-On per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, backfill, polyethylene service line or other pipe, brass goods from the corporation stop to the brass angle valve (inclusive), meter box, and all appurtenances. Measurement and payment to be per each water service connection made that is stand-alone and not connected to a larger water improvement project.

W20 Includes the necessary equipment, labor, materials, and incidentals for Open Trenching of Water Main per the construction drawings and City of Midland standards and specifications, including all saw cutting, pavement removal, curb removal, sidewalk or ramp removal, unclassified excavation, backfill not including flowable fill backfill, providing trench safety and protection for workers to install pipe and other infrastructure, structures, and appurtenances. Depth measurement to be measured to the nearest 0.5' from the flowline of the pipe to the existing surface. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all valves, fittings, structures, and appurtenances.

WW1 Includes the necessary equipment, labor, materials, and incidentals for the installation of Wastewater Mains per the construction drawings and City of Midland standards and specifications, including all embedment, detector wire, tracer tape, necessary testing, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all structures and appurtenances.

WW2 Includes the necessary equipment, labor, materials, and incidentals for the installation of Fiberglass Manhole & Cover to a depth of 5' per the construction drawings and City of Midland standards and specifications, to the depth shown on the construction drawings and including all embedment, base, necessary testing, concrete collars, and appurtenances. Measurement and payment to be made per each manhole installed.

WW3 Includes the necessary equipment, labor, materials, and incidentals for the installation of Fiberglass Manhole & Watertight Cover to a depth of 5' per the construction drawings and City of Midland standards and specifications, to the depth shown on the construction drawings and including all embedment, base, necessary testing, concrete collars, and appurtenances. Measurement and payment to be made per each manhole installed.

WW4 Includes the necessary equipment, labor, materials, and incidentals for the installation of Fiberglass Manhole Additional Bury Depth (> 5' pipe invert bury depth) per the construction drawings and City of Midland standards and specifications, including all embedment and appurtenances. Measurement and payment to be made per vertical foot measured from the lowest flowlline invert at the manhole to 5' below the rim elevation.

WW5 Includes the necessary equipment, labor, materials, and incidentals to Connect to Existing Manhole per the construction drawings and City of Midland standards and specifications, including all coring, grouting, sealing, repairs, and appurtenances. Measurement and payment to be made per each connection made.

WW6 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Manhole Drop Structure (External) per the construction drawings and City of Midland standards and specifications, including all coring, repairs, and appurtenances for a vertical adjustment of up to 5'. Additional pipe required for a vertical adjustment of more than 5' will be addressed in a separate pay note. Measurement and payment of drop structures to be made per each drop structure installed.

WW7 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Manhole Drop Structure Additional Bury Depth (> 5' Deep, External) per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment of drop structures to be made per each vertical foot installed below a depth of 5' below the manhole rim elevation.

WW8 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Manhole Drop Structure (Internal) per the construction drawings and City of Midland standards and specifications, including all coring, repairs, and appurtenances for a vertical adjustment of up to 5'. Additional pipe required for a vertical adjustment of more than 5' will be addressed in a separate pay note. Measurement and payment of drop structures to be made per each drop structure installed.

WW9 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Manhole Drop Structure Additional Bury Depth (> 5' Deep, Internal) per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment of drop structures to be made per each vertical foot installed below a depth of 5' below the manhole rim elevation.

WW10 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Wastewater Service Connection to a wastewater main or manhole per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, backfill, pipe, coring, repairs, and appurtenances. Measurement to be made per linear foot measured along the ground surface following the pipe centerline through all structures and appurtenances, and payment to be made per each wastewater service connection installed.

WW11 Includes the additional necessary equipment, labor, materials, and incidentals for the installation for a Stand-Alone Wastewater Service Connection Add-On to a wastewater main or manhole per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, backfill, pipe, coring, repairs, and appurtenances. Measurement to be made per each wastewater service connection made that is stand-alone and not connected to a larger wastewater improvement project.

WW12 Includes the necessary equipment, labor, materials, and incidentals for Open Trenching of Wastewater Main per the construction drawings and City of Midland standards and specifications, including all pavement saw-cutting, pavement removal, curb removal, sidewalk or ramp removal, unclassified excavation, backfill not including flowable fill backfill, providing trench safety and protection for workers to install pipe and other infrastructure, structures, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all structures and appurtenances.

P1 Includes the necessary equipment, labor, materials, and incidentals for Concrete Pavement Repair per the construction drawings and City of Midland standards and specifications, including all forming, placement, jointing, fiber or rebar reinforcement, sealing, finishing, and appurtenances. Curb repair is included with this bid item and pay note. Concrete pavement joints are to typically be 10'x10' joints, and are to be no larger than 15'x15' joints. Concrete pavement joints are to typically be saw-cut or expansion joints, and must all be sealed with TxDOT DMS-6310 SL-2 sealant. Curb joint spacing is to match adjacent concrete pavement joints or be no more than 10'. Curb joints are to be expansion joints between new and existing curb, saw-cut joints everywhere else, and do not have to be sealed. Measurement and payment to be made per square yard measured along the ground surface.

P2 Includes the necessary equipment, labor, materials, and incidentals for Concrete Sidewalk Repair per the construction drawings and City of Midland standards and specifications, including all forming, placement, jointing, fiber reinforcement, finishing, and appurtenances. Concrete pedestrian access ramp repairs are included with this bid item and pay note. Measurement and payment to be made per square yard.

P3 Includes the necessary equipment, labor, materials, and incidentals for Asphalt Pavement Repair per the construction drawings and City of Midland standards and specifications, including all pavement, compaction, prime coat, tack coat, and appurtenances. Asphalt may be Type "D" HMAC Asphalt with PG 70-22, or either Type "B" or "C" HMAC Asphalt with PG 64-22. All asphalt is assumed to be 110 LBS / SY at 1" thick. Prime and tack coats are to be Bituminois Prime Coat (MC-30, 0.20 GAL / SY), and Tack Coat (MC-30, 0.10 GAL / SY). Measurement and payment to be made per square yard measured along the ground surface.

P4 Includes the necessary equipment, labor, materials, and incidentals for Base Rock Pavement Repair including the installation of base rock backfill (City base) per the construction drawings and City of Midland standards and specifications including all pavement, compaction, and appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P5 Includes the necessary equipment, labor, materials, and incidentals for installation of Flowable Fill / 2-Sack Backfill (Portland Cement 2 Sack = 188 LBS/CY) per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

CONTRACT

THE STATE OF TEXAS §

COUNTY OF MIDLAND §

THIS CONTRACT, made and entered into this 26th day of October, 2022, by and between the City of Midland of the County of Midland and State of Texas, acting through its Mayor thereunto duly authorized so to do, Party of the First Part, hereinafter termed OWNER, and Entrench, Inc. of the City Hobbs, County of Lea, State of New Mexico, Party of the Second Part, herein-after termed CONTRACTOR.

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the Party of the first Part (OWNER), and under the conditions expressed in the bond bearing even date herewith, the said Party of the Second Part (CONTRACTOR), hereby agrees with the said Party of the First Part (OWNER) to commence and complete the construction of certain improvements described as follows: Utility Extension Program 05 together with appurtenances and incidentals.

Conditions of the Contract and at his (or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendent, labor, insurance and other accessories and services necessary to complete the said construction in accordance with the conditions and prices stated in the Proposal attached hereto, and in accordance with the Notice to the Contractors, General and Special Conditions of Agreement, Plans and other drawings and printed or written explanatory matter thereof, and the Specifications and addenda therefore as prepared by Engineering and Transportation Department of the City of Midland, Texas, herein entitled the ENGINEER, together with the CONTRACTOR'S written Proposal, the General Conditions of the Contract, and the Performance and Payment Bonds hereto attached; all of which are made a part hereof and collectively evidence and constitute the entire Contract.

The CONTRACTOR hereby agrees to commence work within fifteen (15) calendar days after the written notice to do so. The initial term of the contract shall terminate on September 30, 2023, subject to such extensions of time as are provided by the General and Special Conditions.

The OWNER agrees to pay the CONTRACTOR in current funds the price or prices shown in the proposal, which forms a part of this Contract, such payments to be subject to the General and Special Conditions of the Contract.

The SUM TOTAL of this Contract shall be an amount not to exceed: $2,500,000 Dollars and 00 Cents.

The initial term of the contract shall expire on September 30, 2023. If the Owner and Contractor agree in writing, the contract may be renewed for up to two (2) additional one (1) year terms (at an amount not to exceed $2,500,000 per term).

INSURANCE

Contractor 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 an occurrence basis. This insurance shall name the City as an additional insured and waive subrogation in favor of the City.

The Business Automobile Liability insurance provided by Contractor 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. The insurance shall name the City as an additional insured and waive subrogation in favor of the City.

The Workers' Compensation coverage provided by Contractor shall inure to the benefit of employees injured during the course and scope of their employment by Contractor pursuant to this Contract. The Workers' Compensation shall waive all rights of subrogation in favor of the City.

All insurance required pursuant to this Contract shall provide for a waiver of subrogation in favor of the City. All insurance required pursuant to this Contract, except for Workers' Compensation Insurance, shall name the City as an additional insured on a claims occurred basis. City shall be provided the notice by Contractor's insurance provider not later than thirty (30) days prior to any reduction or termination of such coverage.

Contractor 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, Contractor shall provide one or more certificates of insurance specifically stating that these requirements have been met and subject to the approval of the City. The City shall not be required to provide any insurance whatsoever pursuant to this Contract.

The Contractor certifies that the certificate of insurance provided as required herein complies with the requirements of Senate Bill 425, passed during the 82nd regular session of the Texas Legislature, and effective January 1, 2012. The Contractor shall not use an unapproved certificate of insurance or insert inappropriate language on a certificate. Compliance with state law is the sole responsibility of the Contractor.

WAIVER OF ATTORNEY FEES

WAIVER OF ATTORNEY FEES: BY EXECUTING THIS CONTRACT, CONTRACTOR AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST THE OWNER, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THE CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE CONTRACT. THE CONTRACTOR SPECIFICALLY AGREES THAT IF THE CONTRACTOR 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 AMEDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, THE CONTRACTOR AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH CONTRACTOR MIGHT OTHERWISE BE ENTITLED.

CONTRACTOR AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. THE CONTRACTOR ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THE CONTRACT. THE CONTRACTOR FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN THE OWNER AND THE CONTRACTOR. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF SOVEREIGN IMMUNITY.

THE CONTRACTOR AND OWNER ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION.

SOVEREIGN IMMUNITY

By executing this Contract, the City is not waiving its right of sovereign immunity. The City is retaining its immunity from suit. The City is not granting consent to be sued by legislative resolution or action.

THERE IS NO WAIVER OF SOVEREIGN IMMUNITY.

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. 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. The obligations and undertakings of each of the parties to this Contract shall be deemed to have occurred in Midland County, Texas.

COMPLIANCE – Contractor agrees that it shall comply with Texas Government Code Section 2252.908, *et seq.*, as amended. Contractor agrees that it shall comply with Texas Local Government Code Section 176.006, *et seq.*, as amended.

VERIFICATION

To the extent that Sections 2271.002 and 2274.002 of the Texas Government Code (collectively, the "Anti-Boycott Statutes") apply to this Contract, Contractor hereby verifies:

- that Contractor does not boycott Israel and will not boycott Israel during the term of this Contract;
- that Contractor does not boycott energy companies and will not boycott energy companies during the term of this Contract; and
- that Contractor 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 Contractor shall be deemed to have not made such verification.

RECORDS RETENTION AND PRODUCTION OF INFORMATION

To the extent that this Contract is a contract described by Section 552.371 of the Texas Government Code, Contractor shall (1) preserve all contracting information related to the Contract as provided by the records retention requirements applicable to the City of Midland for the duration of the contract, (2) promptly provide to the City of Midland any contracting information related to the Contract that is in the custody or possession of Contractor on request of the City of Midland, and (3) on completion of the Contract, either (i) provide at no cost to the City of Midland all contracting information related to the Contract that is in the custody or possession of Contractor, or (ii) preserve the contracting information related to the Contract as provided by the records retention requirements applicable to the City of Midland.

PUBLIC INFORMATION

To the extent that this Contract is a contract described by Section 552.371 of the Texas Government Code, Contractor 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 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.

IN WITNESS WHEREOF, the parties to these presents have executed this Agreement in the year and day first above written.

Parties of the First Part (Owner)

By: _____
Patrick Payton, Mayor

ATTEST:

_____
Amy Turner, City Secretary

APPROVED ONLY AS TO FORM:

By: _____
John Ohnemiller, City Attorney

By: _____
Party of the Second Part (CONTRACTOR)

By: _____
Title

THE STATE OF _____ §

COUNTY OF _____ §

BEFORE ME, the undersigned authority, on this _____ day of _____, 20__ personally appeared _____, an officer of _____ Entrench, Inc. _____, known to me to be the person and official whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same as an 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 _____ day of _____, 20_____

_____
Notary Public

Form Revised September 2022

THE AMERICAN INSTITUTE OF ARCHITECTS

AIA Document A310

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we

Entrench, Inc.
3311 N. Grimes
Hobbs, NM 88240

as Principal, hereinafter called the Principal, and **The Cincinnati Insurance Company**
6200 S. Gilmore Road
Fairfield, Ohio 45014-5141

a corporation duly organized under the laws of the State of **Ohio**
as Surety, hereinafter called the Surety, are held and firmly bound unto
City of Midland
300 North Loraine
Midland, Texas 79701

as Obligee, hereinafter called the Obligee, in the sum of
Five Percent (5%) of Amount Bid

Dollars (5%),

for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.
WHEREAS, the Principal has submitted a bid for

Utility Extension Program 05, 300 North Loraine St, Midland, Texas

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding of Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 5th day of **October, 2022.**

(Witness)

Entrench, Inc.
(Principal)
(Seal)

(Title)

(Witness)

The Cincinnati Insurance Company
(Surety)
(Seal)

(Title)
Stacey Boswell, Attorney-In-Fact

AIA DOCUMENT A310 ● BID BOND ● AIA ® ● FEBRUARY 1970 ED. ● THE AMERICAN INSTITUTE OF ARCHITECTS, 1735 N.Y. AVE., N.W., WASHINGTON, D.C. 20006

THE CINCINNATI INSURANCE COMPANY
THE CINCINNATI CASUALTY COMPANY

Fairfield, Ohio

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That THE CINCINNATI INSURANCE COMPANY and THE CINCINNATI CASUALTY COMPANY, corporations organized under the laws of the State of Ohio, and having their principal offices in the City of Fairfield, Ohio (herein collectively called the "Companies"), do hereby constitute and appoint

William W Burke, Jr, Stacey Boswell, Shawn Gustafson, William Burke,

of Las Cruces, NM
their true and legal Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and deliver on behalf of the Companies as Surety, any and all bonds, policies, undertakings or other like instruments, as follows:

Forty Million Dollars and 00/100 ($40,000,000.00)

This appointment is made under and by authority of the following resolutions adopted by the Boards of Directors of The Cincinnati Insurance Company and The Cincinnati Casualty Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the President or any Senior Vice President be hereby authorized, and empowered to appoint Attorneys-in-Fact of the Company to execute any and all bonds, policies, undertakings, or other like instruments on behalf of the Corporation, and may authorize any officer or any such Attorney-in-Fact to affix the corporate seal; and may with or without cause modify or revoke any such appointment or authority. Any such writings so executed by such Attorneys-in-Fact shall be binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company.

RESOLVED, that the signature of the President or any Senior Vice President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Secretary or Assistant Vice-President and the Seal of the Company may be affixed by facsimile to any certificate of any such power and any such power of certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certified by certificate so executed and sealed shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Company.

IN WITNESS WHEREOF, the Companies have caused these presents to be sealed with their corporate seals, duly attested by their President or any Senior Vice President this 16th day of March, 2021.

THE CINCINNATI INSURANCE COMPANY
THE CINCINNATI CASUALTY COMPANY

STATE OF OHIO)SS:
COUNTY OF BUTLER)

On this 16th day of March, 2021 before me came the above-named President or Senior Vice President of The Cincinnati Insurance Company and The Cincinnati Casualty Company, to me personally known to be the officer described herein, and acknowledged that the seals affixed to the preceding instrument are the corporate seals of said Companies and the corporate seals and the signature of the officer were duly affixed and subscribed to said instrument by the authority and direction of said corporations.

Keith Collett, Attorney at Law
Notary Public – State of Ohio
My commission has no expiration date.
Section 147.03 O.R.C.

I, the undersigned Secretary or Assistant Vice-President of The Cincinnati Insurance Company and The Cincinnati Casualty Company, hereby certify that the above is the Original Power of Attorney issued by said Companies, and do hereby further certify that the said Power of Attorney is still in full force and effect.

Given under my hand and seal of said Companies at Fairfield, Ohio, this 5th day of October , 2022 .

PACKET 11.102 October 25, 2022

BN-1457 (3/21)

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 Utility Extension Program 05 , 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

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 Utility Extension Program 05, 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

CERTIFICATE OF PAYMENT

THE STATE OF TEXAS §

COUNTY OF MIDLAND §

Utility Extension Program 05

The undersigned states that all debts, bills, and expenses that were incurred by the undersigned, his agents, or subcontractors employed by him, for labor, wages, materials and other purposes furnished for the above project have been paid and satisfied in full.

The undersigned, as general contractor for the above described project agrees to indemnify, hold harmless and defend the City, its officers, agents, and employees, from and against all claims and suits for damages, expenses, including court costs and attorney fees, arising out of or resulting from the undersigned contractor, his agents or subcontractors employed by him for expenses, warranties for items furnished, or labor performed and for any party that has supplied materials in connection with the repair or construction of the above referenced premises.

The undersigned contractor agrees to waive any and all claims it may have against the City, associated with, resulting from or arising out of the work performed at the above premises.

Further, the undersigned states that all labor performed by the undersigned, his agents, and subcontractors employed by him, has been completed in the usual and customary workmanlike manner and all work performed is accompanied with the usual and appropriate warranties for such work or repair, absent any disclaimer previously approved by the City of Midland.

I, the undersigned, release and relinquish unto the City of Midland, and their assigns the above described lien upon the above referenced property and hereby certify that all debts, bills, and expenses incurred by the undersigned, his agents, or subcontractors employed by him in connection with work done at the above

premises have been fully paid, in exchange for payment in full to be made by the City of Midland for the performance on the above described premises.

WITNESS MY HAND on this _____ day of _____, 20_____.

_____
Signature

_____
Typed or Printed Name

_____
Title

_____
Name of Company

SUBSCRIBED AND SWORN to before me on the _____ day of _____, 20_____.

_____
Notary Public, State of Texas

_____
Typed or printed name

_____
My Commission expires:

Form Revised September 2022

MEMO

TO: All Project Bidders
FR: Joshua C. Ferguson, P.E. / City of Midland
DA: September 13, 2022
RE: Utility Extension Program 04 – Anticipated Equipment List

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To discuss the comments outlined below, or any other engineering issues related to this project, please call 432.685.7286 to speak with Josh Ferguson. Thank you.

Dept of Engineering Services, Engineering Services Division, has put together an Anticipated Equipment List for the City of Midland Utility Extension Program 04. The list includes equipment that the contractor may need but is in no way meant to be a final list of all necessary equipment, nor does it relieve the contractor of their obligation to have or acquire any additional equipment necessary to complete the project work. Below is a summary of the list:

- **Water Improvements**
  - Water Pump
  - Backhoe or Trenching Machine
  - Dump Truck
  - Crimpers
  - Tapping Machine (different sizes)
- **Wastewater Improvements**
  - Clay Cutters
  - Backhoe with Ramhoe and Trenching Machine
  - Dump Truck
  - Water Pump
  - Chop Saw
  - Hole Saw (4” & 6")
  - Clay Shell Cutter
  - Closed Circuit Televising
- **Pavement Patching**
  - Pneumatic Roller
  - Excavator and Jack-Hammer
  - Pavement Saw (Asphalt & Concrete)
- **Safety**
  - Shoring
  - Steel Plates
  - Traffic Control Devices
  - Ladders
  - Personnel Safety Gear

If you have any questions, please feel free to call Josh Ferguson at our office.

— JCF

City of Midland | Engineering Services
300 N. Loraine Street ▪ Suite 510 ▪ Midland, TX 79701 ▪ T 432.685.7286 ♦ F 432.685.1786

Sample
Work Orders
And
Calculations

2022-2025 Term - Water Main Extension - UEP05 Work Order

Address: _____ Start Date: _____

Completion Date: _____

GIS Sketch Complete: _____

Description of work: _____

_____

_____

Sketch/Measurements

(Attach additional sheet if necessary)

See Attached Sketch

Calculations

(Attach additional sheet if necessary)

See Attached Calculations

Pay Quantities	Quantity	Unit Price	Total	Comment/Description
( )" DIP Pressure Class 150				
( )" AWWA C-900 DR 18 PVC				
( )" AWWA C-900 DR 18 PVC				
( )" Pipe Casing ( )				
( )" Tapping Sleeve				
( )" Tapping Sleeve				
( )" Gate Valve & Vault (MJxMJ/FL)				
( )" Gate Valve & Box (MJxMJ/FL)				
( )" Gate Valve & Box (MJxMJ/FL)				
Fire Hydrant (≤ 5' Bury Depth)				
Fire Hydrant Riser (> 5' Water Main Bury Depth)				
Ductile Iron Fittings				
Anchor Coupling / Foster Adapter				
(x)" Tapping Saddle				
(x)" Tapping Saddle				
( )" Water Serive Connection (Long > 20')				
( )" Water Serive Connection (Short ≤ 20')				
Trenching Depth (Deep)				
Trenching Depth (Deep)				
Conctete Utility Cut Repair				
Asphalt Utility Cut Repair				
Base Rock Utility Cut Repair				
Flowable Fill / 2-Sack Backfill				
Erosion/Sediment Control				
Job Site Safety				
( ) Traffic Control				
( ) Traffic Control				
TOTAL =	------	------		

(Attach concrete/asphalt tickets)

Contractor Name (Print): _____

Quantities verified (City): _____ Quantities Agreed (Contractor): _____

initial date initial date

Sketch/Measurements

Calculations

2022-2025 Term - Water Main Extension - UEP05 Work Order

Address: New Jersey Avenue

Start Date: 10/01/2022

Completion Date: 10/30/2022

GIS Sketch Complete: 10/30/2022

Description of work: 6" Water Main replacement along New Jersey Avenue from Colorado Street to Main Street.

--- EXAMPLE ONLY ---

Sketch/Measurements

(Attach additional sheet if necessary)

See Attached Sketch

Calculations

(Attach additional sheet if necessary)

See Attached Calculations

Pay Quantities	Quantity	Unit Price	Total	Comment/Description
( )" DIP Pressure Class 150				
(8")" AWWA C-900 DR 18 PVC	83.5			
(6")" AWWA C-900 DR 18 PVC	1,120.0			
( )" Pipe Casing ( )				
( )" Tapping Sleeve				
( )" Tapping Sleeve				
( )" Gate Valve & Vault (MJxMJ/FL)				
(8")" Gate Valve & Box (MJxMJ/FL)	2			
(6")" Gate Valve & Box (MJxMJ/FL)	8			
Fire Hydrant (≤ 5' Bury Depth)	2			
Fire Hydrant Riser (> 5' Water Main Bury Depth)				
Ductile Iron Fittings	998			
Dresser Coupling	1			
(6" x 1")" Tapping Saddle	1			
(x)" Tapping Saddle				
( )" Water Serive Connection (Long > 20')				
(1")" Water Serive Connection (Short ≤ 20')	1			
Trenching Depth (0' - 5' Deep)	1,203.5			
Trenching Depth (Deep)				
Conctete Utility Cut Repair				
Asphalt Utility Cut Repair	535			
Base Rock Utility Cut Repair				
Flowable Fill / 2-Sack Backfill	535			
Erosion/Sediment Control	5			
Job Site Safety	5			
(Local Street) Traffic Control	5			
( ) Traffic Control				
Removal & Disposal of Existing Utility Mains	126.5			
Flowable Fill For Ex. Pipe Abandoned In Place	21			
TOTAL =	------	------		

(Attach concrete/asphalt tickets)

Contractor Name (Print): Example Construction Company

Quantities verified (City): ## 10/30/2022 (initial / date)

Quantities Agreed (Contractor): ## 10/30/2022 (initial / date)

Sketch/Measurements

Calculations

Total 8" Pipe = 27.46' + 55.81' = 83.27' ~ (round up) ~ 83.5'

Total 6" Pipe = 8.14' + 23.47' + 13.00' + 198.46' + 51.38' + 13.24' + 211.49' + 17.50' + 167.64' + 5.76' + 46.28' + 11.31' + 204.40' + 17.27' + 18.38' + 6.72' + 43.62' + 7.98' + 12.50' + 41.10' = 1,119.64'
~ (round up) ~ 1,120.0'

Total Pipe Removed = 27.46' + 55.81' + 13.00' + 17.50' + 12.50' = 126.27' ~ (round up) ~ 126.5'

Flowable Fill = 443.00' (6" pipe) + 623.00' (4" pipe) = (π * (6" / 12) ^ 2 * 443') / 27 + (π * (4" / 12) ^ 2 * 623') / 27
= 20.94-cy ~ (round up) ~ 21.0-cy

Trench Repair = 83.5' + 1,120.0' = 1,203.50' length >> Width = 4.0' per detail >> 1,203.5' * 4.0' / 9 = 534.9-sf
~ (round up) ~ 535.0-sf

Fittings = 12 * (6", 45° bend) + 1 * (8" x 6" cross) + 1 * (6" x 6" cross) + 1 * (8" x 6" tee) + (4 * 6" x 6" tee)
= 12 * (39-lbs) + 1 * (98-lbs) + 1 * (79-lbs) + 1 * (81-lbs) + 4 * (68-lbs) = 998.0-lbs

UPE05 - New Jersey Avenue Water Main Improvements
September 13, 2022

KEYED NOTES:

01 Project Area

02 443.00' - Abandon Ex. 6" Water Main In Place.

03 623.00' - Abandon Ex. 4" Water Main In Place.

04 Abandon Per Keyed Note 02 Only If Existing Pipe Is Not PVC Pipe.

05 STA: 0+00.00
Connect To Ex. 6" Water Main
1 - 6", 45° Bend (MJxMJ)
8.14' - 6" Water Main, E (C-900, PVC)
1 - 6", 45° Bend, E (MJxMJ)

06 STA: 0+31.61
Remove:
1 - Ex. 8"x6" Cross
1 - Ex. 8" Gate Valve & Box
2 - Ex. 6" Gate Valve & Box
27.46' - Ex. 8" Water Main, N
55.81' - Ex. 8" Water Main, S
1 - Ex. 8" Gate Valve & Box, S

Install:
1 - 8"x6" Cross (MJxMJ)
1 - 8" Gate Valve & Box, N (MJxMJ)
1 - 6" Gate Valve & Box, E (MJxMJ)
1 - 8" Gate Valve & Box, S (MJxMJ)
23.47' - 6" Water Main, W (C-900, PVC)
27.46' - 8" Water Main, N (C-900, PVC)
55.81' - 8" Water Main, S (C-900, PVC)
1 - 8" Dresser Coupling, S (MJxMJ)
Connect to Ex. 8" Water Main, S

07 STA: 0+31.61 (Offset 27.46' N)
Remove:
1 - Ex. Fire Hydrant Assembly
1 - Ex. 8"x6" Tee
1 - Ex. Gate Valve & Box
13.00' - Ex. 6" Fire Lateral

Install:
1 - Fire Hydrant Assembly
1 - 8"x6" Tee (MJxFL)
1 - 6" Gate Valve & Box (MJxFL)
13.00' - 6" Fire Lateral (C-900, PVC)
Connect to Ex. 8" Water Main, N

08 198.46' - 6" Water Main (C-900, PVC)

09 STA: 2+30.07
1 - 6"x6" Tee (MJxFL)
1 - 6" Gate Valve & Box, S (MJxFL)
51.38' - 6" Water Main, S (C-900, PVC)
1 - 6", 45° Bend, S (MJxMJ)
13.24' - 6" Water Main, SE (C-900, PVC)
1 - 6", 45° Bend, S (MJxMJ)

10 211.49' - 6" Water Main (C-900, PVC)

11 STA: 4+41.56
Remove:
17.50' - 6" Ex. Water Main

Install:
1 - 6"x6" Tee (MJxFL)
1 - 6" Gate Valve & Box (MJxFL)
17.50' - 6" Water Lateral (C-900, PVC)

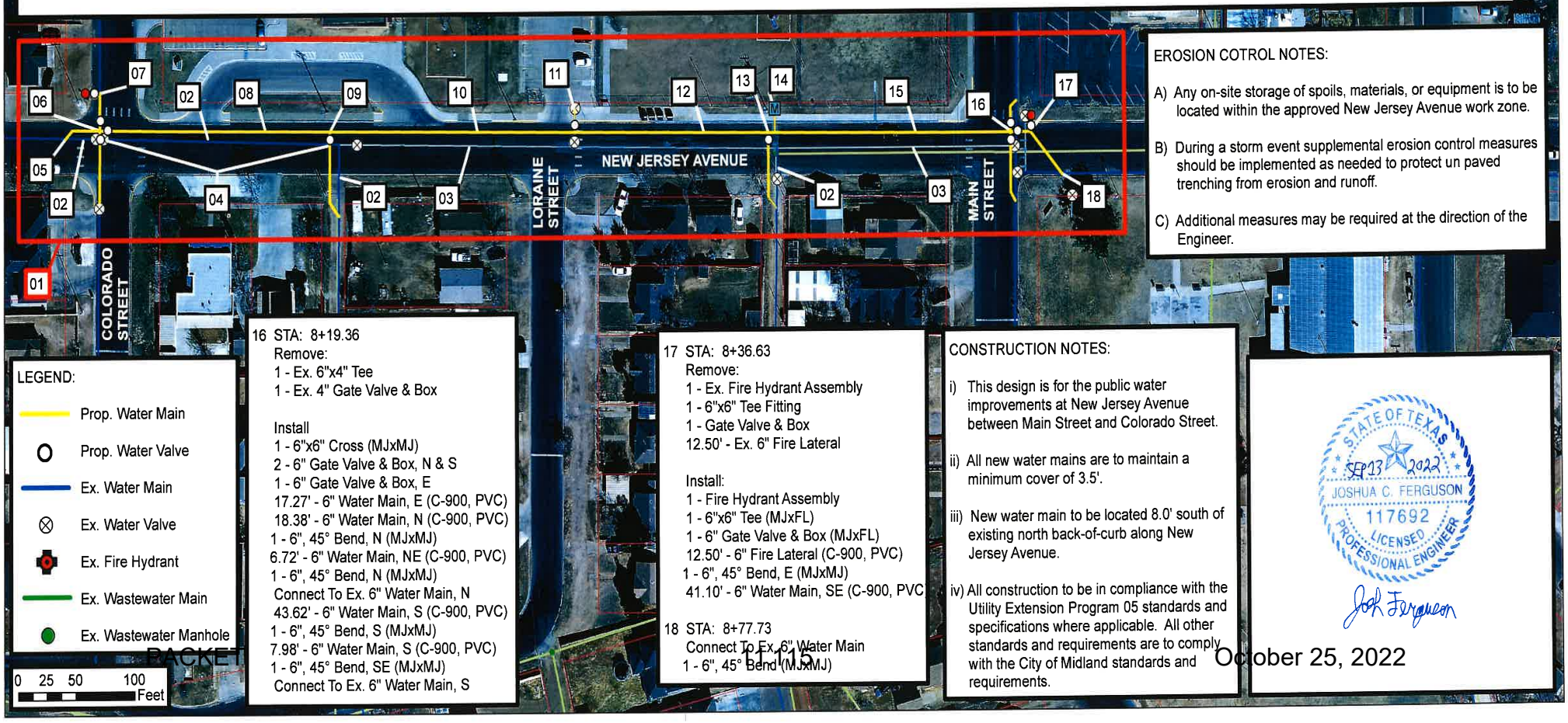
12 167.64' - 6" Water Main (C-900, PVC)

13 STA: 6+09.20
1 - 6"x6" Tee (MJxFL)
1 - 6" Gate Valve & Box (MJxFL)
5.76' - 6" Water Main, E (C-900, PVC)
46.28' - 6" Water Main, S (C-900, PVC)
1 - 6", 45° Bend, S (MJxMJ)
11.31' - 6" Water Main, SE (C-900, PVC)
1 - 6", 45° Bend, S (MJxMJ)

14 STA: 6+14.96
Remove:
17.00' - Ex. 2" Irrigation Lateral

Install:
17.00' - 2" Water Service Lateral
1 - 2" Water Meter

15. 204.40' - 6" Water Main (C-900, PVC)



EROSION COTROL NOTES:

A) Any on-site storage of spoils, materials, or equipment is to be located within the approved New Jersey Avenue work zone.

B) During a storm event supplemental erosion control measures should be implemented as needed to protect un paved trenching from erosion and runoff.

C) Additional measures may be required at the direction of the Engineer.

LEGEND:

- Prop. Water Main
- Prop. Water Valve
- Ex. Water Main
- Ex. Water Valve
- Ex. Fire Hydrant
- Ex. Wastewater Main
- Ex. Wastewater Manhole

0 25 50 100 Feet

16 STA: 8+19.36
Remove:
1 - Ex. 6"x4" Tee
1 - Ex. 4" Gate Valve & Box

Install
1 - 6"x6" Cross (MJxMJ)
2 - 6" Gate Valve & Box, N & S
1 - 6" Gate Valve & Box, E
17.27' - 6" Water Main, E (C-900, PVC)
18.38' - 6" Water Main, N (C-900, PVC)
1 - 6", 45° Bend, N (MJxMJ)
6.72' - 6" Water Main, NE (C-900, PVC)
1 - 6", 45° Bend, N (MJxMJ)
Connect To Ex. 6" Water Main, N
43.62' - 6" Water Main, S (C-900, PVC)
1 - 6", 45° Bend, S (MJxMJ)
7.98' - 6" Water Main, S (C-900, PVC)
1 - 6", 45° Bend, SE (MJxMJ)
Connect To Ex. 6" Water Main, S

17 STA: 8+36.63
Remove:
1 - Ex. Fire Hydrant Assembly
1 - 6"x6" Tee Fitting
1 - Gate Valve & Box
12.50' - Ex. 6" Fire Lateral

Install:
1 - Fire Hydrant Assembly
1 - 6"x6" Tee (MJxFL)
1 - 6" Gate Valve & Box (MJxFL)
12.50' - 6" Fire Lateral (C-900, PVC)
1 - 6", 45° Bend, E (MJxMJ)
41.10' - 6" Water Main, SE (C-900, PVC)

18 STA: 8+77.73
Connect To Ex. 6" Water Main
1 - 6", 45° Bend (MJxMJ)

CONSTRUCTION NOTES:

i) This design is for the public water improvements at New Jersey Avenue between Main Street and Colorado Street.

ii) All new water mains are to maintain a minimum cover of 3.5'.

iii) New water main to be located 8.0' south of existing north back-of-curb along New Jersey Avenue.

iv) All construction to be in compliance with the Utility Extension Program 05 standards and specifications where applicable. All other standards and requirements are to comply with the City of Midland standards and requirements.

STATE OF TEXAS
SEP 13 2022
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER

Josh Ferguson

2022-2025 Term - Fire Main Extension - UEP05 Work Order

Address: _____ Start Date: _____

Completion Date: _____

GIS Sketch Complete: _____

Description of work: _____

_____

_____

Sketch/Measurements

(Attach additional sheet if necessary)

See Attached Sketch

Calculations

(Attach additional sheet if necessary)

See Attached Calculations

Pay Quantities	Quantity	Unit Price	Total	Comment/Description
( )" DIP Pressure Class 150				
( )" AWWA C-900 DR 18 PVC				
( )" AWWA C-900 DR 18 PVC				
( )" Tapping Sleeve				
( )" Tapping Sleeve				
( )" Gate Valve & Box (MJxMJ/FL)				
( )" Gate Valve & Box (MJxMJ/FL)				
Fire Hydrant (≤ 5' Bury Depth)				
Fire Hydrant Riser (> 5' Water Main Bury Depth)				
Ductile Iron Fittings				
Anchor Coupling / Foster Adapter				
Trenching Depth (Deep)				
Trenching Depth (Deep)				
Conctete Utility Cut Repair				
Asphalt Utility Cut Repair				
Base Rock Utility Cut Repair				
Flowable Fill / 2-Sack Backfill				
Erosion/Sediment Control				
Job Site Safety				
( ) Traffic Control				
( ) Traffic Control				
TOTAL =	------	------		

(Attach concrete/asphalt tickets)

Contractor Name (Print): _____

Quantities verified (City): _____ Quantities Agreed (Contractor): _____

initial date initial date

Sketch/Measurements

2022-2025 Term - Wastewater Main Extension - UEP05 Work Order

Address: _____ Start Date: _____

Completion Date: _____

GIS Sketch Complete: _____

Description of work: _____

_____

_____

Sketch/Measurements

(Attach additional sheet if necessary)

See Attached Sketch

Calculations

(Attach additional sheet if necessary)

See Attached Calculations

Pay Quantities	Quantity	Unit Price	Total	Comment/Description
( )" SDR26 ASTM D2241, PVC				
( )" SDR26 ASTM D2241, PVC				
( )" SDR26 ASTM D3034, PS115,PVC				
( )" SDR26 ASTM D3034, PS115,PVC				
( )" SDR 35 ASTM D3034, PS46,PVC				
( )" SDR 35 ASTM D3034, PS46,PVC				
( )" Pipe Casing ( )				
( )" Fiberglass Manhole (0' - 5' Deep)				
( )" Manhole Additional Bury Depth (5'-16' deep)				
( )" Manhole Additional Bury Depth (>16' deep)				
Connect to Existing Manhole				
Manhole Drop Structure ( )				
( )" Wastewater Service Connection (Long > 20')				
( )" Wastewater Serive Connection (Short ≤ 20')				
Trenching Depth (Deep)				
Trenching Depth (Deep)				
Conctete Utility Cut Repair				
Asphalt Utility Cut Repair				
Base Rock Utility Cut Repair				
Flowable Fill / 2-Sack Backfill				
Erosion/Sediment Control				
Job Site Safety				
( ) Traffic Control				
( ) Traffic Control				
TOTAL =	------	------		

(Attach concrete/asphalt tickets)

Contractor Name (Print): _____

Quantities verified (City): _____ Quantities Agreed (Contractor): _____

initial date initial date

Sketch/Measurements

Calculations

2022-2025 Term - Wastewater Main Extension - UEP05 Work Order

Address: RMN Park

Start Date: 10/01/2022

Completion Date: 10/30/2022

GIS Sketch Complete: 10/30/2022

Description of work: 6" Wastewater Main extension along private park road ending southwest of Cuthbert Avenue and San Andres Drive intersection.

--- EXAMPLE ONLY ---

Sketch/Measurements

(Attach additional sheet if necessary)

See Attached Sketch

Calculations

(Attach additional sheet if necessary)

See Attached Calculations

Pay Quantities	Quantity	Unit Price	Total	Comment/Description
( )" SDR26 ASTM D2241, PVC				
( )" SDR26 ASTM D2241, PVC				
( )" SDR26 ASTM D3034, PS115,PVC				
( )" SDR26 ASTM D3034, PS115,PVC				
(6")" SDR 35 ASTM D3034, PS46,PVC	632			
( )" SDR 35 ASTM D3034, PS46,PVC				
( )" Pipe Casing ( )				
(48")" Fiberglass Manhole (0' - 5' Deep)	2			
(48")" Manhole Additional Bury Depth (5'-16' deep)	2.5			
( )" Manhole Additional Bury Depth (>16' deep)				
Connect to Existing Manhole	1			
Manhole Drop Structure ( )				
( )" Wastewater Service Connection (Long > 20')				
( )" Wastewater Serive Connection (Short ≤ 20')				
Trenching Depth (0' - 5' Deep)	245			
Trenching Depth (5' - 8' Deep)	387			
Conctete Utility Cut Repair				
Asphalt Utility Cut Repair	19.5			
Base Rock Utility Cut Repair	376.5			
Flowable Fill / 2-Sack Backfill	19.5			
Erosion/Sediment Control	2			
Job Site Safety	2			
(Local Street) Traffic Control	2			
( ) Traffic Control				
TOTAL =	------	------		

(Attach concrete/asphalt tickets)

Contractor Name (Print): Example Construction Company

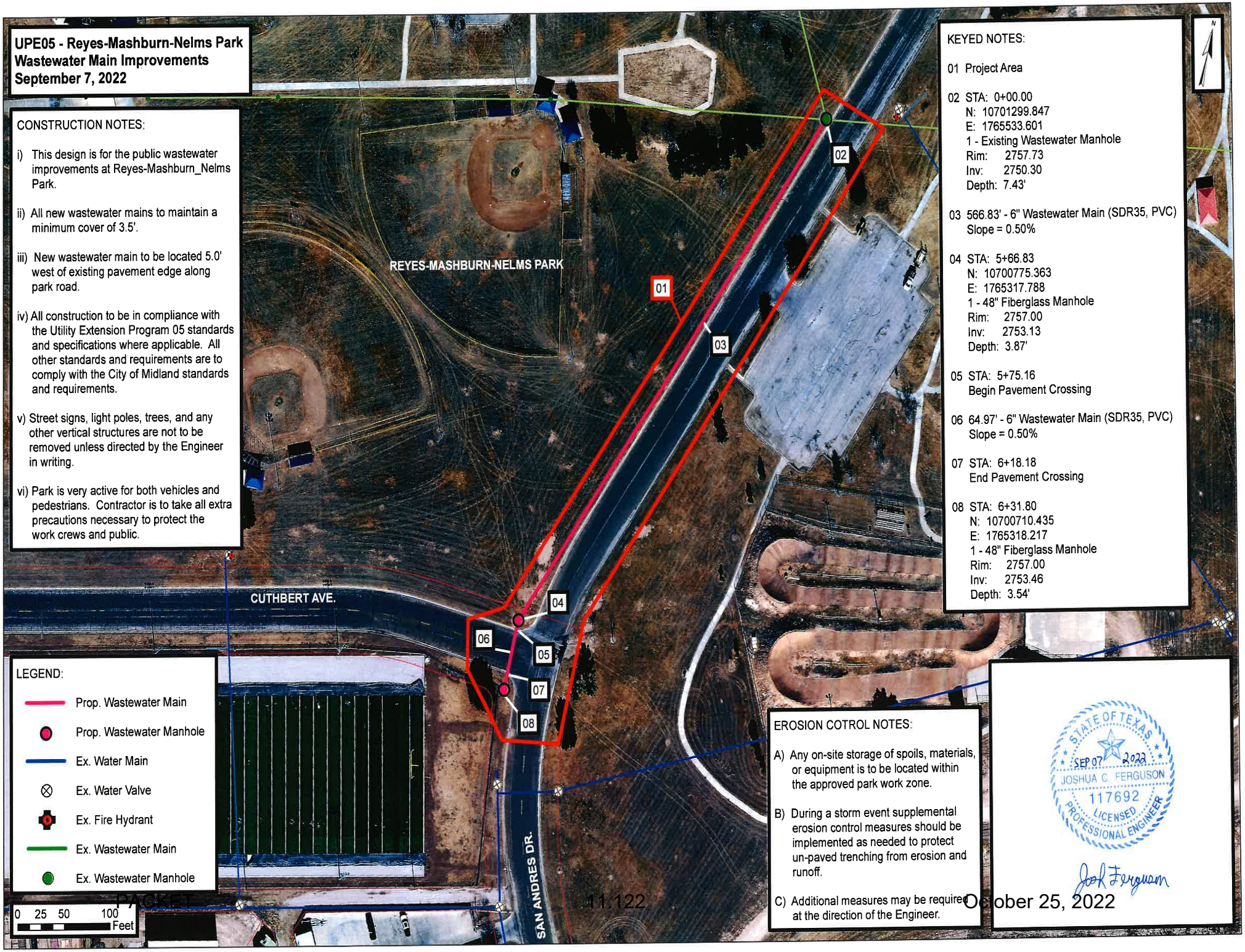
Quantities verified (City): ## 10/30/2022 (initial / date)

Quantities Agreed (Contractor): ## 10/30/2022 (initial / date)

Sketch/Measurements

Calculations

Total 6" Pipe = 631.8' ~ (round up) ~ 632'
Total Manholes = 2
Total Manhole Depth > 5' = 7.43' - 5.00' = 2.43' ~ (round up) ~ 2.5'
Total Trenching (0' - 5' deep) = 631.80' - 386.91' = 244.89' ~ (round up) ~ 245.0'
Total Trenching (5' - 8' deep) = ((7.43' - 5.00') / (7.43' - 3.87')) * 566.83' = 386.91' ~ (round up) ~ 387.0'
Asphalt Trench Repair = ((618.18 - 575.16) * 4.0' {per detail}) / 9 = 19.12-sy ~ (round up) ~ 19.5-sy
Base Trench Repair = (245.0' * 4.0' {per detail} + (387.0' - (618.18' - 575.16')) * 7.0' {per detail}) / 9 = 376.43-sy ~ (round up) ~ 376.5-sy


UPE05 - Reyes-Mashburn-Nelms Park
Wastewater Main Improvements
September 7, 2022
CONSTRUCTION NOTES:
i) This design is for the public wastewater improvements at Reyes-Mashburn_Nelms Park.
ii) All new wastewater mains to maintain a minimum cover of 3.5'.
iii) New wastewater main to be located 5.0' west of existing pavement edge along park road.
iv) All construction to be in compliance with the Utility Extension Program 05 standards and specifications where applicable. All other standards and requirements are to comply with the City of Midland standards and requirements.
v) Street signs, light poles, trees, and any other vertical structures are not to be removed unless directed by the Engineer in writing.
vi) Park is very active for both vehicles and pedestrians. Contractor is to take all extra precautions necessary to protect the work crews and public.
REYES-MASHBURN-NELMS PARK
CUTHBERT AVE.
SAN ANDRES DR.
01
02
03
04
05
06
07
08
KEYED NOTES:
01 Project Area
02 STA: 0+00.00
N: 10701299.847
E: 1765533.601
1 - Existing Wastewater Manhole
Rim: 2757.73
Inv: 2750.30
Depth: 7.43'
03 566.83' - 6" Wastewater Main (SDR35, PVC)
Slope = 0.50%
04 STA: 5+66.83
N: 10700775.363
E: 1765317.788
1 - 48" Fiberglass Manhole
Rim: 2757.00
Inv: 2753.13
Depth: 3.87'
05 STA: 5+75.16
Begin Pavement Crossing
06 64.97' - 6" Wastewater Main (SDR35, PVC)
Slope = 0.50%
07 STA: 6+18.18
End Pavement Crossing
08 STA: 6+31.80
N: 10700710.435
E: 1765318.217
1 - 48" Fiberglass Manhole
Rim: 2757.00
Inv: 2753.46
Depth: 3.54'
LEGEND:
Prop. Wastewater Main
Prop. Wastewater Manhole
Ex. Water Main
Ex. Water Valve
Ex. Fire Hydrant
Ex. Wastewater Main
Ex. Wastewater Manhole
0 25 50 100
Feet
EROSION COTROL NOTES:
A) Any on-site storage of spoils, materials, or equipment is to be located within the approved park work zone.
B) During a storm event supplemental erosion control measures should be implemented as needed to protect un-paved trenching from erosion and runoff.
C) Additional measures may be required at the direction of the Engineer.
STATE OF TEXAS
SEP 07 2022
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER
Josh Ferguson

2022-2025 Term - Utility Main Extension - UEP05 Work Order

Address: _____ Start Date: _____

Completion Date: _____

GIS Sketch Complete: _____

Description of work: _____

_____

_____

Sketch/Measurements

(Attach additional sheet if necessary)

See Attached Sketch

Calculations

(Attach additional sheet if necessary)

See Attached Calculations

Pay Quantities	Quantity	Unit Price	Total	Comment/Description
TOTAL =	------	------		

(Attach concrete/asphalt tickets)

Contractor Name (Print): _____

Quantities verified (City): _____ Quantities Agreed (Contractor): _____

initial date initial date

Sketch/Measurements

Calculations

2022-2025 Term - Utility Main Extension - UEP05 Work Order

Address: _____ Start Date: _____

Completion Date: _____

GIS Sketch Complete: _____

Description of work: _____

_____

_____

Sketch/Measurements

(Attach additional sheet if necessary)

See Attached Sketch

Calculations

(Attach additional sheet if necessary)

See Attached Calculations

Pay Quantities	Quantity	Unit Price	Total	Comment/Description

Sketch/Measurements

Calculations

City of Midland Specifications

PREPARATION OF RIGHT OF WAY

1. GENERAL

Includes the preparation of right-of-way for construction by clearing, grubbing, removing and disposing of all obstructions and objectionable material from the right-of-way and designated easements, which is not specifically provided for on the plans.

Obstructions and objectionable material refer to all objects or material that do not meet the quality of standards for the courses of pavement to be constructed or which protrude into the excavation for slopes.

Measurement and Payment - Measurement and payment will be at the units and prices for the applicable bid item in the proposal.

When no specific bid items are included in the bid proposal for work specified under this section this work shall be considered as incidental to other items of work and the cost shall be included in the bid for these items. No separate payment will be made.

2. CONSTRUCTION METHODS

Removal - Obstructions and objectionable material to be removed by blading, plowing, bulldozing, or other methods approved in writing by the Engineer. The use of explosives will not be permitted. Solid objects must be removed to a depth of at least one (1) foot below the finished slope or subgrade elevation. Hollow objects must be removed entirely.

Disposal - Material to be removed from the right-of-way becomes the property of the Contractor. If disposal areas are available, they will be indicated on the plans.

Preservation of Trees and Shrubs - Trees and shrubs to be preserved in the right of way are shown on the plans and must be protected from injury during construction.

Removal of Concrete - Cut concrete at the right-of-way line straight and vertical by sawing or other approved methods prior to the removal of concrete in the right-of-way.

EXCAVATION, EMBANKMENT AND PREPARATION OF SUBGRADE 1
1. GENERAL 2
2. CONSTRUCTION METHODS 2

EXCAVATION, EMBANKMENT AND PREPARATION OF SUBGRADE

1. GENERAL

Includes the excavation, embankment and preparation of subgrade determined by the lines, grades and sections shown on the plans and in accordance with the provisions of the specifications.

Excavation - Includes excavation to planned grade, disposal of the material, removal of unsuitable subgrade material and borrow material when required in the construction. All excavation to be classified as common.

Embankment - Consists of excavated or borrow materials placed and compacted in horizontal layers in accordance with the specifications.

Subgrade - The upper eight inches (8") of embankment or the upper eight inches (8") below the roadway excavation finished grade. The subgrade shall extend from six inches (6") back of curb to six inches (6") back of curb where curb and gutter is to be constructed.

Measurement and Payment - Measurement and payment to be at the units and prices for the applicable bid items in the proposal.

2. CONSTRUCTION METHODS

Excavation - Made at the location and to the lines and grades shown on the plans in areas previously prepared in accordance with provisions of Section 2A. Dispose of excess material not required in the embankment and material that is unsuitable for subgrade. Excavation tolerance to be plus or minus 1/10 foot from the plan grade.

The area between the curb and property line shall be excavated or filled, whichever is necessary, to curb height at back of curb and finished to a straight even surface to the property line. The minimum elevation at the property line shall be the elevation of the top of the curb. The maximum elevation at the property line shall be equal to a rise of 1/4 inch per foot from the back of the curb to the property line.

During the excavation of this project, it will be required that all parkways be excavated and shaped at the same time the roadway is excavated. Excess excavation will be disposed of at locations approved by the Engineer.

Embankment shall be constructed at the locations and to the lines and grades shown on the plans in areas previously prepared in accordance with Section 2A of these specifications. Top eight inches (8") of natural ground to be compacted

to embankment density requirements. Embankment shall be constructed from suitable material obtained from the excavation or borrow free of roots, rocks in excess of three inches (3"), debris and other objectionable material. Excavation deficiencies shall be supplemented from a borrow source approved by the Engineer. Embankment shall be constructed in uniform horizontal layers not to exceed eight inches (8") of loose depth and compact with suitable equipment to a minimum of ninety percent (90%) AASHTO T180. The materials shall be processed by aeration or watering to bring the material to the approximate optimum moisture. Dry layers will not be permitted. Soft spots that develop in the embankment shall be removed and replaced with suitable material. No payment will be made for removal of soft spots. Tolerance for embankment grading shall be one-half foot (1/2) plus or minus the plan grade.

Preparation of Subgrade - Eight inches (8") of the upper portion of the embankment or excavation shall be shaped and compacted to a minimum density of 95 percent (95%) AASHTO T180 and finished within a tolerance of one-half inch (1/2") in ten feet (10'). The finished subgrade shall be protected and maintained in a satisfactory condition until covered by succeeding construction.

Compaction Tests - Field density tests will be made by the Owner or by a laboratory selected by the Owner. The Contractor shall notify the Engineer when compaction has been achieved. The Contractor shall allow 24 hours for scheduling of test. Prior to the taking of subgrade density test, the entire subgrade will be tested by proof-rolling using a pneumatic roller weighing not less than 50,000 lbs. gross with tire pressure being not less than 110 psi. Any soft spots, pumping, or other evidence of weakness shall be remedied before density tests are made. Proof rolling shall be in the presence of the Engineer or his duly authorized representative.

The City will pay the cost of initial density tests made on the subgrade. If the subgrade fails to meet the density requirements on the first test, the contractor will be required to have subsequent density tests made by the commercial lab selected by owner. The cost of all subsequent density tests will be born by the contractor.

08/07

CONCRETE CURB AND GUTTER, SIDEWALKS AND DRIVEWAYS,

VALLEY GUTTERS, CENTER DRAINS AND RIP RAP

1. GENERAL

Includes the construction of concrete curb and gutter, sidewalks, driveways, valley gutters, center drains and rip rap in accordance with lines, grades and the sections shown on the plans and constructed in full compliance with provisions of the specifications.

A proven performance record by the Texas Highway Department shall be supplied by material producers for all materials supplied by them.

2. MATERIALS

Concrete - All concrete other than rip rap shall be Class "A" concrete in accordance with Texas Highway Department specifications Item No. 421. Concrete for rip rap shall be the class as shown on the plans and detail drawings. When no concrete class is shown the plans concrete for rip rap shall be Class "B" concrete.

Concrete batch designs shall be furnished for each project and shall include all classes of concrete proposed for use on the project.

Reinforcing Steel - Reinforcing steel shall be deformed bars or wire mesh fabric conforming to the requirements of "Texas State Department of Highways and Public Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges" Item No. 440 and shall be of the sizes and grades as shown on the plans.

The contractor, at his option, may use fiber reinforcing in lieu of the wire mesh for all concrete slab on grade. When fiber reinforcing is used, it shall be "Fiber Mesh" or "Caprolan RC" or approved equal. The material and rate of application shall be approved by the Engineer prior to its use.

Expansion Joints - Bituminous pre-molded joint filler shall be composed of top grade fiber, treated by special impregnation system with water repellent bituminous materials. It shall be a non-extruding type, resilient, expanding on release of compression, preventing open joint crevices. The pre-molded joint filler shall be of such character, that it will not be deformed by handling during hot weather, nor shall it become brittle in cold weather. It shall be free from visible external defects such as holes, ragged or untrue edges, breaks, cracks or tears. It may be covered on both sides with paper to facilitate handling.

The joint filler shall be accurately cut to the dimensions and shapes required. It shall be of the thickness required by the plans, or as specified elsewhere.

3. CONSTRUCTION METHODS

GENERAL

No concrete shall be placed when, in the Engineers opinion, weather or other conditions would be detrimental to the structure placed. No concrete shall be placed on grade when the ground temperature is 35^{o} F or lower. Concrete may be placed when the ground temperature is rising from 35^{o} F. Concrete placed in cold weather shall be protected from freezing for 72 hours after being placed.

CURB AND GUTTER

EXCAVATION AND SUBGRADE - Excavation for curb, gutter, and combined curb and gutter shall be done with the subgrade excavation for the street. Street subgrade shall extend from six inches (6") back of curb to (6") back of curb and shall be compacted for a full width to a minimum of 95% AASHTO T180-61. Where subgrade is more than three inches (3") below bottom of curb, fill shall be compacted caliche base constructed from six inches (6") back of curb to six inches (6") back of curb as specified for base course.

Whenever subgrade or base is dry or dusty, it shall be thoroughly moistened, not made muddy, before the concrete is placed.

Forms - Forms shall be of steel, of a type to be approved by the Engineer, except that curves may be formed with wood sections built up or laminated, upon prior approval by the Engineer.

The forms shall be attached securely to stakes, shall be set true to line and grade, and braced sufficiently to remain true during the placing and tamping of the concrete. Forms shall be thoroughly cleaned and oiled before each use.

Curves - All changes in direction of the curbs shall be by means of true circular curves of the radii as shown on the plans.

Expansion Joints - Expansion joints shall be placed between curb and gutter sections at the tangent points of all curves, at each side of the inlet boxes, drives, alleyways, and at intervals of not more than forty feet (40') in straight runs. The expansion material shall be pre-molded three-fourths inch (3/4") in thickness, and shall conform to the requirements of expansion material as specified herein. It shall be cut to the full size and shape or the cross section of the curb and gutter, less one-half inch (1/2") from the finished surface thereof. The edges of sections against the joint shall be finished with an edging tool and the joint raked clean of concrete.

Finishing - There shall be provided on the job a metal screed or mule designed to give proper shape to the curb and gutter. It shall be bent to the exact shape of the finished curb and gutter and the forward edge turned up slightly to prevent disturbing the mortar. It shall be designed to ride on the forms and when properly manipulated shall leave the curb and gutter in its proper shaped condition. An "S" trowel shall be used to finish the surface and minor imperfections shall be corrected with a mason's trowel. Care shall be taken to finish

the gutter flow line to a true, uniform grade. All edges shall be finished with an edging tool, and joints marked with a jointer. Joint marks shall coincide with actual joints and shall be straight and true.

Curing - The completed curb and gutter, shall be cured in accordance with the requirements of the item "Membrane Curing", Texas Highway Department Item 531.

DRIVEWAYS AND ALLEY RETURNS

Driveways and alley returns shall be constructed of Class "A" concrete to the lines and grades as shown on the plans and detail sheets. All driveways and alley returns shall be reinforced as shown on the detail drawings.

Excavation and Subgrade - Excavation shall be accomplished in the same manner as for streets and curbs. The subgrade for all driveways and alley returns shall be compacted to 95% modified proctor density for 8 inches depth.

Driveways for single family residences and property used for two family residential purposes (duplexes) may be placed on the compacted subgrade. All other driveways shall be considered as commercial driveways and shall be constructed on 6 inches compacted flexible base.

Flexible Base - Commercial driveways and alley returns shall be constructed on 6 inches of flexible base conforming to Section 2-C- Flexible Base, Caliche.

Forms - Forms shall be constructed of steel or, when approved by the engineer, wood conforming to the requirements for curb and gutter forms.

Expansion Joints - Expansion joints shall be placed at the ends of abutting curb and gutter at the end of radii for all driveways and alley returns. In addition, expansion joints shall be placed at the ends of abutting sidewalk sections and at any point where the driveway or alley return abuts another concrete structure. Expansion joint material shall be pre-molded three fourths inch (3/4") in thickness, cut to the shape and dimensions required and shall extend the full depth of the concrete.

Finishing - Shaping and finishing of driveways and alley returns shall be accomplished by using a screed to shape the driveway or alley return to the lines and grade required. Finishing shall be accomplished by use of wooden floats and stiff bristled brushes or brooms. The last finish shall be by brushing or brooming in
A direction transverse to the direction of traffic.

During the entire finishing process care shall be taken to maintain the true gutter invert in line with the street curb and gutter.

Curing - Finished driveways and alley returns shall be cured in accordance with the requirements "membrane curing" "Texas Department of Highways and Public Transportation, 1982 Standard Specifications for Highways, Streets and Bridges", Item Number 531.

CONCRETE VALLEY GUTTERS, CENTER DRAINS AND DRAINWAYS

Concrete slab type street drainage structures with or without curbs, shall be constructed of Class "A" concrete to the lines and grades as shown on the plans and detail sheets or as may be established in the field by the engineer.

Subgrade excavation preparation and compaction and flexible base shall be the same as specified for street construction. All drainage structures within the roadway shall be constructed on a flexible caliche base so that the thickness of the concrete slab plus base is equal to the thickness of the hot mix asphaltic concrete surface plus base.

Forms - Forms shall be as specified for curb and gutter.

Reinforcing - All slab type drainage structures shall be reinforced as shown on the plans and detail drawings. Care shall be taken to maintain all reinforcing in good condition and at its proper location within the slab.

Expansion Joints - Expansion joint material shall be as specified for curb and gutter and for driveways and alley returns.

Expansion joints for valley gutter shall be placed at the ends of radii and at the juncture between the fillet and the cross valley as shown on the detail sheet.

For center drains, expansion joints shall be placed at the ends of widened or transition sections and at each end of a section containing a manhole or other structure and at intervals of sixty feet (60') measured along the center line of the drain.

Additional expansion joints shall be placed where drainage slabs abut backs of curbs, sidewalks and at contact points with other concrete structures.

Contraction Joints - Contraction joints shall be spaced at 15' intervals along the center line of center drains. These contraction joints shall be saw cut 3/8" wide minimum and 1/4 the depth of the slab using an approved concrete saw.

Saw cut contraction joints shall be made after the concrete has set sufficiently to prevent excessive raveling during sawing and shall be completed before the concrete is 48 hours old.

Finishing - Finishing shall be the same as for alley returns and driveways with the last finishing operation for structures subject to vehicular traffic being by broom or stiff brush in a direction transverse to the direction of traffic.

Curing - Curing shall be the same as for curb and gutter and driveways and alley returns.

SIDEWALKS

Sidewalks shall be constructed of Class A" concrete to the lines and grades as shown on the plans and detail drawings or as may be established in the field by the engineer. Sidewalks shall be constructed parallel to the back of the curb and on a grade parallel to

the top of curb grade. The minimum thickness for any sidewalk is 4 inches. The minimum width of any sidewalk is 4 feet.

Excavation and Subgrade - Excavation for sidewalk shall be made with street excavation where applicable. Care shall be exercised in excavating for sidewalks. Any over excavation or any fill required for sidewalk must be brought to grade in lifts not to exceed two inches (2") and thoroughly tamped. Subgrade for sidewalks shall be compacted to at least the density of the adjacent soil or to 85% modified proctor whichever is greater.

When a sidewalk is to be constructed on an embankment the fill must extend at least 3 feet beyond the edge of the sidewalk.

If the subgrade is dry or dusty it must be thoroughly moistened but not made muddy before concrete is placed.

Forms - Forms for sidewalks may be either steel or wood. Forms must be in good shape and true to line and grade. If nominal 2" x 4" lumber is used the subgrade must be finished one half inch (1/2") below the bottom of the form to provide the required 4 inch thickness.

Expansion Joints - Expansion joint material shall be pre-molded conforming to these specifications and shall be one half inch (1/2") thick. The expansion joint shall extend the full depth of the sidewalk.

Expansion joints shall be placed at points where the sidewalk contacts the back of curb, at all junctures between sidewalks all directions, and at all points where the sidewalk abuts a driveway, alley return or other concrete structure including fence foundations.

Transverse expansion joints shall be constructed in the sidewalk at intervals not exceeding twenty eight feet (28') as measured along the centerline of the walk except for sidewalks that are constructed wider than four feet (4') in which case expansion joints may be placed at intervals that are multiples of the width but not exceeding thirty feet (30').

Contraction Joints - Contraction joints consisting of trowel cuts one and one half inches (1-1/2") deep shall be spaced at four foot (4') intervals along the sidewalk. Contraction joints shall be edged using an edging tool with a 1/4 inch or 3/8 inch radius.

For sidewalks wider than four feet (4') contraction joints may be placed at intervals equal to the width of the walk up to but not exceeding ten feet (10').

Finishing - Sidewalks shall be "struck off" with a screed to provide an even surface and float finished using a wooden float.

The final finish on the sidewalk shall be accomplished by brooming or brushing using a stiff bristled brush or broom with the final strokes being in the transverse direction.

Curing - Curing shall be as specified for curb and gutter and driveways and alley returns.

CONCRETE RIP RAP

Concrete rip rap shall be constructed of concrete of the class and to the line and grades as shown on the plans.

Excavation and Subgrade - Care shall be taken not to over excavate for rip rap. The subgrade for rip rap shall be compacted to at least the density of the adjacent undisturbed soil or 85% modified proctor whichever is higher.

Forms - Forms, where required, may be either steel or wood. Forms must be in good condition and true to line and grade.

Expansion Joints - Expansion joints, where required, will meet the requirements of expansion joints materials as specified herein and will be placed as shown on the plans or directed by the engineer.

Finishing - Finishing shall be by screed and wooden float to produce true uniform surface.

Curing - Curing shall be as specified for other concrete herein.

Slope Paving - Slope paving may be required behind the curb or behind sidewalks where street paving requires deeper cuts in developed areas. Slope paving shall be constructed of Class "A" concrete and shall be constructed to the lines and grades as shown on the plans or as established in the field. Slope pavement shall be four inches (4") thick and shall be constructed in accord with the specifications for sidewalks.

When no slope grade is given on the plans the slope gradient shall be l:l.

Unless listed separately on the bid proposal, slope pavement shall be measured and paid for as sidewalk.

4. BACKFILL AND CLEANUP

GENERAL

Backfill and clean up are an integral part of the various items covered by this specification and must be completed for each item before that item will be considered for payment.

CONCRETE STRUCTURES WITHIN THE PAVED AREA OF STREETS

Backfill and clean up for concrete structures within the paved areas of streets, alleys, etc. shall receive special attention to assure the integrity of the street pavement.

Structures constructed in previously paved areas shall have sufficient surface removed along with base and subgrade where necessary to set full face forms for the concrete. As soon as the forms are removed all loose material shall be removed from the form trench and the trench filled to the base level with Portland cement stabilized backfill material

consisting of two (2) sacks Portland cement to one (l) cubic yard of caliche base material or one (l) cubic yard "blow sand". When the cement stabilized backfill has cured the pavement edge shall be saw cut to provide true and straight lines and the pavement restored to its original or revised grade using Hot mix asphaltic concrete conforming to the requirements of Section 2-F of these specifications.

For structures constructed on previously prepared subgrade or base course, clean up and backfill shall be considered complete when the subgrade or base course has been made ready to receive the next course.

When a structure is constructed on a finished base course and it is necessary to remove base material to set forms, backfill and cleanup shall be as described for previously paved areas and shall be considered complete when the base course is made ready to receive the surface course or courses.

BACKFILL BEHIND CURBS AND ALONG SIDEWALKS

Backfill behind curbs and along sidewalks that is to be grassed shall be made using good top soil. Top soil shall be free of caliche, rocks, clods, lumps, debris and other objectionable material. This backfill shall be compacted to at least the density of undisturbed adjacent soil but not less than 85% modified proctor.

Backfill behind curbs and along sidewalks that is to receive paving shall be constructed to conform to the base and subgrade of the adjacent paving and shall be compacted to 95% modified proctor. Or the contractor may elect to backfill to the top of the base with two (2) sack cement stabilized backfill.

In undeveloped areas and in areas where no sidewalks exist the contractor shall slope from the back of the curb to a maximum height of 1/4 inch per foot rise from the top of the curb to the property line on a straight line grade. The minimum elevation at the property lines shall be top of curb elevation.

In deeper cut areas slope paving may be required. When slope paving is required it shall be constructed to the lines and grades shown on the plans. Backfill and shaping beyond the slope paving shall be in accord with the applicable portions of this specification.

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CONCRETE CURB AND GUTTER, SIDEWALKS AND DRIVEWAYS **1**

VALLEY GUTTERS, CENTER DRAINS AND RIP RAP **1**

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Updated 3/06

CONCRETE STRUCTURES

1. GENERAL

This specification covers concrete structures including but not limited to junction boxes, culverts, head walls, cast in place manholes, valve vaults, meter vaults and retaining walls.

2. MATERIALS

CONCRETE

Concrete for cast in place manholes, junction boxes, storm sewer inlet boxes, valve vaults and direct traffic culvert and bridge decks shall be a modified class "C" concrete using a minimum of 6 sacks cement per cubic yard with a maximum water content of 5 gallons per sack of cement and producing a concrete with 4000 psi 28 day compressive strength.

Concrete for other structures shall be class "A" as specified in "Texas State Department of Highways and Public Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges" item number 421. Concrete for riprap shall be class "B".

Reinforcing steel shall conform to the requirements of item number 440 or "Texas State Department of Highways and Public Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges" and shall be of the sizes and grades as shown on the plans.

3. CONSTRUCTION

Construction of concrete structures shall be in accordance with the provisions of item 420 "Texas State Department of Highways and Public Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges".

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FLEXIBLE BASE, CALICHE

1. GENERAL

This item consists of the construction of a caliche flexible base course to the lines, grades and thickness shown on the plans and in accordance with the provisions of the specifications.

Qualification of Material Source - There will be no designated material sources, but the source proposed by the Contractor must be approved by the Engineer. The contractor shall furnish evidence of capability to crush and screen the material with suitable equipment.

Measurement and Payment - Measurement and payment to be at the units and price for the applicable bid item in the proposal.

2. MATERIALS

Material from the approved source shall meet the following requirements when tested in accordance with the referenced testing standards:

Gradation - Tested by ASTM C 136-67 to meet the following gradation limits:

Sieve Size	Percent Passing
1-3/4"	100.0
7/8"	65-90
3/8"	50-70
No. 4	30-60
No. 40	15-35

Liquid Limit and Plasticity Index **-** Tested by ASTM D423-66 and D 424-59.

Liquid Limit - 30.0 Maximum
Plasticity Index - 10.0 Maximum
Triaxial Classification - Tested by Texas Highway Department Method TEX 117-E, Part II - minimum class 3.0.

Source Quality Control - The contractor shall exercise caution in the operation of the material source to prevent the inclusion of inferior materials.

3. CONSTRUCTION

A. The subgrade shall be finished true to the lines and grades as shown on the plans or as established by the Engineer and finished within specified tolerances and properly maintained to prevent drying and/or loosening of the surface.

No base material may be dumped on any subgrade until it has been tested and approved by the Engineer.

B. Flexible caliche base material shall be placed in uniform courses and processed to provide a uniformly mixed base course of the proper moisture content for compaction. The processing and compaction procedure used shall provide a uniform base course compacted to ninety-five percent (95%) modified proctor density (YACHT T180) minimum. The minimum thickness of any one compacted course shall be three inches (3"). The maximum thickness of any one compacted course shall be eight inches (8").

Any soft or segregated spots that appear in the base shall be removed, replaced or reprocessed and recompacted prior to final finishing of the base. The finished base shall conform to the lines and grades as shown on the plans or established by the Engineer. Finished tolerances shall not exceed one half inch (1/2") in ten feet (10').

The finished base shall be primed as soon after finishing as practical and shall be protected until the hot mix asphaltic concrete surface is applied. In no case will prime be applied until the finished base has been approved by the Engineer.

4. TESTING

A. All test for approval of the source shall be performed by a commercial lab selected by the owner and shall be paid for by the contractor.

B. Gradation and soil constants tests (ASTM C-136, D423 and D424) and THD Triaxial Test (THD TEX117-E Part II) will be performed for source approval. Should the appearance, workability or other visual checks indicate a possible change in the material being furnished, the Engineer may require the contractor to retest the material for source approval.

C. Field quality control test will consist of the finish tolerance test and density test.

The finish tolerance test will be performed by the contractor at his expense using a 10' rolling straight edge. This test shall be performed at the direction of the Engineer or his representative. When required, the test shall consist of checking one path in each lane with the rolling straight edge.

Density test will be made by the City or a commercial laboratory chosen by the City using Troxler 3411-B nuclear density gauges or approved equal at the minimum rate of one test for each 1000 square yards of base. In no case shall less than three tests be run on any one area processed as a unit. The City will bear the cost of the first test or set of tests only. If the base fails the first test the contractor, at his own expense, will be required to have all subsequent tests performed by the commercial laboratory chosen by the city.

8/07

BITUMINOUS PRIME

1. GENERAL

This item consists of the application of a bituminous prime coat to the finished caliche base in accordance with the provisions of the Specifications.

Qualification of Material Source - Material shall be supplied by a producer with a proven performance record of acceptance by the Texas Highway Department.

Measurement and Payment - Measurement and payment will be at the units and price for the applicable bid item in the proposal.

2. MATERIALS

Cut-back asphalt grade MC-30, Texas Highway Department Item 300.

Source Quality Control - Certificates of compliance to be furnished by the producer to the Engineer.

3. CONSTRUCTION METHODS

Condition of Base - The surface of the base shall be tightly compacted to the line and grade shown on the plans and within the tolerances of the specifications. The surface shall be clean and the base shall contain sufficient moisture to assure the proper penetration of the prime.

The prime shall be applied with an approved distributor to the surface of the base at a rate of between 0.15 and 0.40 gallon per square yard. The application rate shall be varied to meet field conditions and to obtain uniform coverage, and adequate penetration. Properly applied prime coat should penetrate from 3/8" to 1/2" into the base and should cure in approximately 72 hours with ambient temperatures at or near 70 degrees F. The prime shall be applied at a temperature within the range of temperatures recommended in Item 300 of Texas Highway Department Standard Specifications. The temperature shall be varied within this range to provide a viscosity that will assure even spreading and penetration of the base. Air Temperatures at the time of application shall be above 50'F.

BITUMINOUS TACK

1. GENERAL

This item consists of the application of a bituminous tack coat to the primed base or existing asphaltic concrete or Portland cement concrete pavement in accordance with the provisions of the specification.

Qualification of Material Source - Material shall be supplied by producer with a proven performance record of acceptance by the Texas Highway Department.

Measurement and Payment - Measurement and payment will be at the units and price for the applicable bid item in the proposal.

2. MATERIALS

Cut-back asphalt grade RC-250, Texas Highway Department Item 300.

3. CONSTRUCTION METHODS

Conditions of Surface - Prior to application of tack to the base course the prime must be completely penetrated into the base and the surface cleaned of foreign objects.

The tack shall be applied with an approved distributor at a rate of between 0.05 and 0.10 gallons per square yard. The temperature of application shall be within the range recommended by the Texas Highway Department in Item 300. The surface temperature to which tack is being applied shall be above 50 degrees F. at the time of application.

When the asphaltic concrete surface is being placed on primed caliche base, use of the tack coat may be waived by the Engineer if the contractor can show that adequate adhesion of the surface being placed to the base course is achieved without it.

Tack coat shall be placed on all asphaltic concrete or portland cement concrete surfaces on which an additional course of asphaltic concrete surfacing is to be placed. The tack coat shall be rolled with a pneumatic roller to assure even distribution over the entire surface and to achieve proper penetration into and adhesion to the surface being overlayed.

HOT MIX ASPHALTIC CONCRETE

I. GENERAL

Includes the construction of the hot mix asphaltic concrete surface in accordance with lines, grades and the sections shown on the plans and with the provisions of the specifications.

Qualification of Material Sources - Producers of oil asphaltic concrete mixture to have a proven record of acceptance by the Texas Highway Department.

Measurement and Payment - Measurement and payment to be at the units and price for the applicable bid item in the proposal.

2. MATERIALS

Oil Asphalt - Oil asphalt grade AC-l0 or AC-20, Texas Highway Department Item 300. When no asphalt grade is shown on the plans, and unless directed otherwise by the Engineer, asphalt for this project shall be grade AC-10.

Coarse Aggregate - Crushed stone or crushed gravel with a minimum of 75 percent of the aggregates having two or more crushed faces. Additional requirements:

(a) Los Angeles Abrasion: ASTM C l3l, Wear not to exceed 40.

(b) Decantation: Maximum 2.0 percent by weight

Fine Aggregates - Natural sand and screenings crushed from the same or similar material meeting the requirements of the course aggregates. Additional requirements.

(a) Plasticity Index: Maximum of 6.

(b) Sand Equivalents: Minimum of 50 for each individual fine aggregate.

Paving Mixtures - The paving mixture(s) shall be as shown on the plans and details. If no mixtures are shown on the plans surface or wearing courses up to l-3/4 inches thick shall be Type D, base courses up to 2 inches thick shall be Type C and base courses over 2 inches thick shall be Type B or Type A.

(a) Gradation: The master gradations for the paving mixtures are:

TYPE "A" (Coarse Graded Base Course):	Percent Aggregate by weight or volume
Passing 2" sieve	100
Passing l-3/4" sieve	95 to 100
Passing l-3/4" sieve, retained on 7/8" sieve	16 to 42
Passing 7/8" sieve, retained on 3/8" sieve	16 to 42
Passing 3/8" sieve, retained on No. 4 sieve	10 to 26
Passing No. 4 sieve, retained on No. l0 sieve	5 to 21
Total retained on No. l0 sieve	68 to 84
Passing No. l0 sieve, retained on No. 40 sieve	5 to 21
Passing No. 40 sieve, retained on No. 80 sieve	3 to 16
Passing No. 80 sieve, retained on No. 200 sieve	2 to 16
Passing No. 200 sieve	1 to 8

The asphaltic material shall form from 3.5 to 7 percent of the mixture by weight.

TYPE "B" (Fine graded Base or Leveling-up course)	Percent Aggregate by Weight or Volume
Passing l" sieve	100
Passing 78" sieve	95 to 100
Passing 7/8" sieve, retained on 3/8" sieve	21 to 53
Passing 3/8" sieve, retained on No. 4 sieve	11 to 42
Passing No. 4 sieve, retained on No. l0 sieve	5 to 26
Total retained on No. l0 sieve	58 to 74
Passing No. l0 sieve, retained on No. 40 sieve	6 to 32
Passing No. 40 sieve, retained on No. 80 sieve	4 to 21
Passing No. 80 sieve, retained on No. 200 sieve	3 to 21
Passing No. 200 sieve	1 to 8

The asphaltic material shall form from 3.5 to 7 percent of the mixture by weight.

Type "C" (Coarse Graded Surface Course):	Percent Aggregate by Weight or Volume
Passing 7/8" sieve	100
Passing 5/8" sieve	95 to 100
Passing 5/8" sieve, retained on 3/8" sieve	16 to 42
Passing No. 4 sieve, retained on No. l0 sieve	11 to 37
Total retained on No. l0 sieve	54 to 74
Passing No. l0 sieve, retained on No. 40 sieve	6 to 32
Passing No. 40 sieve, retained on No. 80 sieve	4 to 27
Passing No. 80 sieve, retained on No. 200 Sieve	3 to 27
Passing No. 200 sieve	1 to 8

The asphaltic material shall form from 3.5 to 7 percent of the mixture by weight.

TYPE "D" (Fine Graded Surface Course):	Percent Aggregate by Weight or Volume
Passing l/2" sieve	100
Passing 3/8" sieve	85 to 100
Passing 3/8" sieve, retained on 4" sieve	21 to 53
Passing No. 4 sieve, retained on No. l0 sieve	54 to 74
Total retained on No. l0 sieve	54 to 74
Passing No. l0 sieve, retained on No. 40 sieve	6 to 32
Passing No. 40 sieve, retained on No. 80 sieve	4 to 27
Passing No. 80 sieve, retained on No. 200 sieve	3 to 27
Passing No. 200 sieve	1 to 8

The asphaltic material shall form from 4 to 8 percent of the mixture by weight.

TYPE "F" (Fine Graded Surface Course):	Percent Aggregate by Weight or Volume
Passing 3/8" sieve	100
Passing No. 4 sieve	95 to 100
Passing No. 4 sieve, retained on No. l0 sieve	58 to 73
Passing No. l0 sieve, retained on No. 40 sieve	6 to 26
Passing No. 40 sieve, retained on No. 80 sieve	3 to 13
Passing No. 80 sieve, retained on No. 200 sieve	2 to 11
Passing No. 200 sieve	1 to 8

The asphaltic material shall form from 3.5 to 6.5 percent of the mixture by weight.

(b) Tolerances: Deviations from job mix formula limited to:

(l) Sizes larger than the l0 sieve- Plus or Minus 4 percent.

(2) No. l0 sieve and smaller - Plus or Minus 3 percent.

(3) The deviation from the job mix formula shall be further limited in that the total deviation from the job mix formula between any two adjacent aggregate grades shall not exceed the allowable deviation for either one.

(4) Asphalt - Plus or Minus 0.3 percent.

(c) Density - The mixture shall be designed to produce an acceptable mixture within tolerance, at or near optimum density. The mixture molded in the laboratory should have the following percent of maximum theoretical density:

Minimum	Maximum	Optimum
96	98	97

(d) Stability: Minimum of 35 Hveem

Source Quality Control - Paving mixture and plant tests to be performed by laboratory selected and paid by the Owner, except as noted.

Job Mix Formula - The contractor shall submit a job mix formula, prepared by laboratory chosen by the owner, at least l0 days in advance of laying operations to allow time for review by the engineer. Substitution of one or more materials will require a new job mix formula and must be approved by the engineer.

The design of job mix formula whether for original submittal or revisions shall be paid for by the contractor.

Plant Tests - Check of raw material uniformity, quality and flow, hot bin gradations, temperature of mixture, mixture tests for density, stability and percent asphalt and other necessary tests to be performed bythe laboratory selected by the owner for each day's production.

Oil Asphalt - Producer to furnish certificates of compliance to the Engineer.

3. CONSTRUCTION METHODS

A. GENERAL

Condition of Base - The surface of the base shall be tight and free of debris. The prime coat shall be uniformly distributed, well penetrated and completely cured prior to application of the tack coat. If the mixture will adhere to the surface of the base without the application of a tack coat, the tack coat can be eliminated. If the surface of the base is one half (l/2") inch or more lower than the proposed bottom of the asphaltic concrete it shall be corrected by placing and compacting a level up course of the asphaltic concrete before the mat is placed on it.

Stockpiling, Storage, Batching and Mixing - Shall meet the requirements of Item 340, "Texas Highway Department l982 Standard Specifications for Road and Bridge Construction.

Weather Limitations - Shall be the requirements of Item 340,"Texas Highway Department l982 Standard Specifications for Road and Bridge Construction." With the added provision that no asphaltic concrete shall be placed when the surface on which the mat is to be placed is below 50 degrees F.

Thickness - Shall be as shown on plans. Unless shown otherwise on the plans, the maximum compacted thickness of any one course of asphaltic concrete shall be two and one-half (2-l/2) times the maximum aggregate size of the mixture being placed. The minimum shall be one (l) inch or one and one fourth (1-1/4) times the maximum particle size which ever is greater.

B. PLACING

Placing of Asphaltic Concrete shall be accomplished using an approved self propelled spreading and finishing machine with a heated vibrating screed capable of producing a surface that will meet the requirements of the typical cross section and the surface test, and when the mixture is dumped directly into the finishing machine shall have adequate power to propel the delivery vehicles in a satisfactory manner. The finishing machine shall be equipped with a flexible spring and/or hydraulic type hitch sufficient in design and capacity to maintain contact between the rear wheels of the hauling equipment and the pusher rollers of the finishing machine while the mixture is being unloaded.

The use of any vehicle which requires dumping directly into the finishing machine and which the finishing machine cannot push or propel in such a manner as to obtain the desired lines and grades without resorting to hand finishing will not be allowed. Vehicles dumping directly or indirectly into the finishing machine shall be so designed and equipped that unloading into the finishing machine can be mechanically and/or automatically operated in such a manner that overloading the finishing machine being used cannot occur and the required lines and grades shall be obtained without resorting to hand finishing.

Automatic screed controls will be required and shall meet the requirements item, 528 "automatic screed controls for asphaltic concrete spreading and finishing machines "Texas Department of Highways and Public Transportation 1982 Specifications for Construction of Highways, Streets and Bridges".

The screed shall be ski controlled using a ski of not less than l8' in length. Curb shoe control will not be allowed.

The spreading and finishing machine shall be maintained in good working order and operated by competent trained personnel.

The Engineer may require the contractor to place a test strip to prove the capability of the machine and the competency of the operating personnel to produce a satisfactory finished surface.

In dips and on curved surfaces where the ski control cannot be used, the surface will be controlled using a l0' straight edge.

Fillet areas, turn outs and other areas not accessible to the spreading machine may be hand laid provided a satisfactory surface is produced.

C. COMPACTION AND FINISHING

Compaction Requirements - The asphaltic concrete surface shall be compacted so that the compacted mixture will contain not more than seven percent (7%) nor less than three percent (3%) air voids.

The surface of the pavement, after compaction, shall be smooth and true to the established line, grade and cross section, and when tested with a l0 foot rolling straightedge, except as provided herein, the maximum deviation shall not exceed l/8 inch in l0 feet, and any surface not meeting this requirement shall be corrected as directed by the engineer.

Raking and Leveling - Minor leveling may be accomplished using asphalt rakes prior to compacting the surface. The surface shall be leveled by loosening the surface of the asphaltic concrete using an asphalt rake then adding or removing material and smoothing the surface. Any large aggregate worked to the surface in this process shall be removed before compaction. The large aggregate shall not be spread over the new asphaltic concrete surface.

Edges and joints with compacted asphalt or concrete gutters shall be carefully squared and excess material removed before compaction. Care shall be taken to see that NO excess material laps over onto the surface of existing asphaltic concrete paving or concrete gutters. Large aggregate worked to the surface in this process shall be removed. It shall not be spread over the new asphaltic concrete surface.

Rolling - In general rolling shall conform to the requirements of item 340 of the Texas Department of Highways and Transportation 1982 Specifications for Construction of Highways, Streets an Bridges except as modified herein.

It shall be the responsibility of the contractor to have rolling equipment available on the job to properly compact the paving mixture in place as required without delay to the lay down operation. Rollers provided shall meet the qualifications for their type as follows:

PNEUMATIC TIRE ROLLERS: The rollers shall be acceptable medium pneumatic tire rollers conforming to the requirements of the item, "Rolling (pneumatic tire)", Type B, unless otherwise specified on plans.

TWO AXLE TANDEM ROLLER: This roller shall be an acceptable power driven tandem roller weighing not less than 8 tons.

THREE WHEEL ROLLER: This roller shall be an acceptable power driven three wheel roller weighing not less than l0 tons.

THREE AXLE TANDEM ROLLER: This roller shall be an acceptable power driven three axle roller weighing not less than l0 tons.

Vibrating rollers will not be used without prior written approval of the engineer. Written approval will be granted only upon demonstration by the contractor that the roller and operator can produce a satisfactory surface within the tolerances of these specifications. Only the operator or operators thus approved will be allowed to operate the vibrating roller on this project.

Areas not accessible to standard rollers shall be compacted using trench rollers, impact tampers, hand tamps or other approved means that will produce the density and surface required.

JOINTS- Shall be carefully rolled to provide compaction of the asphalt against the existing surface or face of the concrete gutter. Joints between concrete gutters and Hot Mix Asphaltic Concrete shall be placed so that the HMAC will be approximately l/2 inch higher than the concrete when compaction is completed. At transverse joints such as valley gutters and fillet areas where finishing asphalt paving 1/2 inch above the edge of concrete will adversely affect ride quality the asphalt shall be finished 1/4 inch above the edge of the concrete.

Transverse joints shall be rolled in the transverse direction with the first pass extending approximately six (6") inches onto the new asphalt each additional pass shall extend approximately twelve (12") inches further onto the new asphalt until the full width of the roller is on the new asphalt. Longitudinal rolling may begin then.

All transverse joints shall be checked with a l0" straight edge while the material is

still hot enough to roll. Any corrections shall be made by loosening the material using an asphalt rake and adding or removing material and recompacting the surface. The surface shall be rechecked and when the joint is acceptable the asphalt spreading machine may proceed with the pass.

Final or finish rolling shall be accomplished using a two axle tandem roller to remove roller marks. This rolling shall be accomplished after the surface has cooled sufficient to minimize further marking but before it is too cool to respond to rolling.

STRAIGHTEDGES AND TEMPLATES - The contractor shall provide acceptable l0 foot straightedge for surface testing. Satisfactory templates shall be provided as required by the Engineer.

4. FIELD QUALITY CONTROL

Test Lots - Field Quality Control Tests shall be made by lot with a lot being the amount of contiguous surface laid in one day. No lot shall exceed l0,000 S.Y. If a days laying exceeds l0,000 S.Y., that days laying shall be divided into two approximately equal lots. The same lot divisions shall be used for all Quality Control Tests. Each separate block or combination of contingeous (blocks) of paving shall be considered as a separate lot even though they may be placed in a single day and do not comprise l0,000 S.Y. of surface.

Surface Tests - Surface tolerance tests will be performed in both longitudinal and transverse directions. The test for longitudinal surface tolerance will be performed with a ten-foot rolling straightedge furnished by the contractor, and calibrated and used in accordance with the manufacturer's recommendation or other approved method.

The maximum allowable deviation in surface shall be 1/8 inch in 10 feet. Tests for longitudinal surface tolerance will be performed by the contractor, accompanied by the engineer within 24 hours of the completion of a lot. One path in each lane for the length of the entire lot will be tested. The location of the test path (Distance from centerline or pavement edge) will be determined by the engineer through the use of random numbers. Any deviations in the surface finish of a roadway wearing course which exceeds l/4 inch must be corrected. After corrections have been made, the entire lot must meet the l/8 inch surface tolerance.

Thin course "scab on" patching will NOT be permitted. Corrections may be made by planning, milling and patching or by removing and replacing affected surface area.

When milling and patching is used to correct surface defects the minimum depth of removal shall be l".

For milling and patching or surface removal the area removed or milled shall be sufficiently large to avoid the appearance of patching.

When planning is used to correct defects the thickness of the remaining paving shall meet the thickness requirements as shown on the plans.

Surface tolerance test will be performed on the last or wearing course only.

Asphaltic concrete pavement constructed under these specifications that does not meet the surface tolerance requirements and is allowed to remain in place will be paid for at a reduced rate determined by multiplying the price bid for the wearing surface course by a surface tolerance quality factor. This rate shall apply to the entire lot.

Lower courses will not be affected by this quality factor but will be paid for at the price bid or such price as it may be affected by other quality factors.

The surface tolerance quality factor will be determined according to the following schedule:

Linear % of pavement exceeding 1/8 inch surface tolerance	Surface tolerance quality factor
0.0 to 1.0	1.0
1.1 to 1.5	0.9
1.6 to 2.5	0.8
over 2.5	0.5

Roadway surface requirements will not be applied for paved drives, aprons, turnouts, and other irregular sections, however, asphaltic concrete shall be placed in such a manner as to provide a neat and uniform appearance and shall be compacted by methods satisfactory to the engineer.

The contractor may request permission to reconstruct a portion of the pavement when, in his opinion, the surface tolerance quality factor can be improved. Upon approval of the engineer, the contractor shall take sufficient tests to isolate the portion or portions of pavement to be pre- constructed and remove and reconstruct the pavement. All costs in connection with this reconstruction are to be born by the contractor. The minimum width of this reconstruction shall be l/2 the street width unless approved otherwise in writing by the engineer. The portions reconstructed shall be re-tested and the surface tolerance quality factor recomputed using the new information along with the test from the area within the portion of the lot not reconstructed.

When other quality factor reductions are provided for on the plans or in the specifications the effect shall be cumulative ie: QFl x QF2 x QF3 x ....x QFn x unit price.

No payment will be made for pavement with a combined quality factor of less than 0.5.

Thickness Test - Thickness test will be made by the engineer on each course of asphaltic concrete laid. Test specimens shall be made by a commercial laboratory selected by the owner. Test specimens shall be cores having a minimum nominal diameter of 6". These cores shall be made in the presence of the inspector at locations designated by the inspector using an approved power operated coring machine.

For thickness and compaction test, each lot shall be divided into approximately equal sublots corresponding in width to each pass of the lay down machine and containing up to but not exceeding 2,000 square yards each. If a lot contains less than 2,000 square yards the engineer may, at his option, divide the lot into two equal sublots, or, if the contractor has a record of satisfactory workmanship, the engineer may waive tests on said lots.

The engineer will locate one test spot for each l,000 S.Y. and/or fraction thereof in each sub-lot using random numbers. If a spot thus located falls within one foot of a longitudinal joint or lip of gutter or within two feet of an unsupported edge or within l5 feet of the beginning or ending edge of a pass, the engineer will relocate the spot using random numbers. The commercial laboratory chosen by the owner will remove the test specimen from each designated spot, mark the specimen and the adjacent pavement for future reference and perform the required tests. Test specimens shall be removed with special caliper type tongs having circular jaws of the diameter of the specimen being removed. These jaws shall grip at least 1/2 of the circumference of the specimen. Screw drivers or other type of prying instruments shall not be used to remove the specimens.

The thickness of a specimen shall be determined by averaging four (4) measurements made at ninety degree (90) intervals around the specimen. Any thickness less than design thickness shall be considered as deficient.

For hot mix asphaltic concrete pavement less than 2 inches thick the maximum allowable deficiency in any one test specimen is l/8 inch provided that no more than twenty five percent (25%) of the specimens tested show a deficiency. For pavement in excess of 2 inches in thickness the maximum allowable deficiency in any one specimen shall be l/8 inch plus l/l6 inch for each additional inch of thickness provided that no more than twenty five percent (25%) of the test specimens show a deficiency.

When a test specimen has a greater deficiency and less than (25%) of the test specimens show a deficiency the contractor shall, at his own expense, determine the extent of the deficiency and correct it by removing and replacing the surface. The minimum width for such correction will be the full width of the pass or passes of the lay down machine in which the deficiency occurs.

The minimum length of such correction shall be three times the width removed. When more than (25%) of the test specimens show a deficiency the surface may at

the engineers option be declared uniformly deficient and the contractor shall correct the deficiency by removing and reconstructing the surface or by constructing an overlay of not less than l inch thickness over the deficient area. The construction of an overlay will require milling at lip lines and dips.

The corrected surface shall meet all the requirements of these specifications.

Asphaltic concrete pavement constructed under these specifications that is less than design thickness, if allowed to remain in place, will be paid for at a reduced rate determined by multiplying the unit price bid in the bid proposal by a thickness quality factor. This rate shall apply to the entire lot in which the deficiency is found.

The thickness quality factor for hot mix asphaltic concrete pavement less than 2 inches in thickness shall be:

Thickness Deficiency	Quality Factor
Maximum l/8" for any one specimen with no more than 25% of the specimens showing a deficiency.	l.0
Pavement not meeting the 25% limitation with an average specimen deficiency up to l/8 inch.	0.75
Average specimen deficiency of l/8 inch to l/4 inch	.55
Average deficiency of more than l/4 inch	0.0

The thickness quality factor for hot mix asphaltic concrete more than 2 inches thick will be l.0 if the maximum deficiency for any one specimen is l/8 inch plus l/l6 inch for each additional inch of thickness over 2 inches and not more than twenty five percent (25%) of the test specimens in the lot are deficient. For thickness test that fall outside this area either by single specimen thickness deficiency or more than twenty five percent (25%) of the specimens showing deficiency the thickness quality factor shall be computed as follows:

$$\text{Thickness Quality Factor} = \frac{1}{\left(\frac{1}{\text{Thickness Ratio}}\right)^2}$$

The thickness ratio for a lot is the average specimen thickness for that lot, with no allowance for thickness in excess of design, divided by the design thickness. For determining the average specimen thickness, those specimens in excess of design thickness shall be considered at design thickness.

The minimum thickness quality factor for which payment will be allowed is .55. Any pavement with a thickness quality factor below .55 will be considered as having a thickness quality factor of 0. This shall apply only if the contractor requests, in writing, to have this paving remain in place and this request is approved in writing by the engineer.

When the deficient area is in a lower course of a multi-course paving structure the contractor may reduce or correct the deficiency by increasing the thickness of the subsequent course or courses as follows:

When subsequent course is	Maximum increase in course thickness
Type B	1/2"
Type C	3/8"
Type D	1/4"

When corrected in this manner the thickness quality factor shall be determined using the combined thickness of the corrected courses and shall apply to all unit prices applicable to this lot.

The contractor may request permission to reconstruct a portion of the pavement when, in his opinion, the thickness quality factor can be improved. Upon approval of the engineer, the contractor shall take sufficient tests to isolate the portion or portions of pavement to be reconstructed and remove and reconstruct the pavement. All cost in connection with this reconstruction are to be born by the contractor. The minimum width of this reconstruction shall be l/2 the street width unless approved otherwise in writing by the engineer. The portions reconstructed shall be retested and the thickness quality factor recomputed using the new information along with the test from the area within the portion of the lot not reconstructed.

When other quality factor reductions are provided for on the plans or in the specifications the effect shall be cumulative ie: QFl x QF2 x QF3 x....x QFn x unit price.

No payment will be made for pavement with a combined quality factor of less than 0.5.

Compaction Test: Compaction test will be made by the commercial laboratory chosen by the owner on the core samples removed from the paving for thickness testing.

The percent air voids will be calculated using maximum theoretical specific gravity of the mixture.

The contractor may attempt to correct deficiencies in compaction by additional pneumatic rolling upon written permission of the engineer. Requests for permission to conduct additional rolling shall be submitted, in writing, to the engineer no later than three days following notification of the deficiency by the commercial laboratory and the additional rolling shall be completed within ten (l0) days following said notification weather permitting.

In no case shall the additional rolling be delayed beyond thirty (30) days from the date the surface was laid. All cost for additional rolling and additional coring and testing of the re-rolled surface shall be born by the contractor.

Asphaltic concrete pavement not meeting this specification and that is allowed to remain in place shall be paid for at a reduced rate determined by multiplying the price bid in the bid proposal by a compaction quality factor determined according to the following schedule:

Percent air voids (average of all specimens for the lot)	Compaction Quality factor	
less than 3	0	
3.0 to 8.0	1.0	
8.1 to 9.0	0.9	
9.1 to 10.0	0.7	
10.1 to 11.0	0.5	and the engineer may require a chip seal to be applied at the contractor's expense
More than 11		0 and the engineer may require a chip seal to be applied at the contractor's expense.

NOTE: HMAC surfacing with between 11% and 15% air voids may, upon written request by the Contractor, be reviewed by the Engineer to determine if it may be left in place. The Engineer's review will consider the type of street and expected traffic conditions among other factors and a written determination will be issued. If the surface is allowed to remain in place, a chip seal will be required at the Contractor's expense. The quality factor for this paving will remain at 0.

The reduced rate shall apply to the entire lot.

The effect of compaction quality factors shall be cumulative and shall be applied as described for surface quality factors and thickness quality factors.

Cost for Field Quality Control - The surface tolerance test shall be made by the contractor at his expense.

The initial thickness and compaction test will be made at no cost to the contractor except for the cost of materials and labor to repair the holes left when cores are removed.

The cost of all thickness test to isolate a deficient area and the cost of retesting the corrected area shall be born by the contractor.

The cost of all retesting of compaction after additional rolling to correct compaction deficiencies shall be born by the contractor.

Areas reconstructed to remedy deficiencies shall meet all the requirements of these specifications and shall be tested in the same manner as original construction. The cost of all tests on reconstructed areas shall be born by the contractor.

5. ADDITIVES

Anti-stripping: An approved liquid anti-stripping agent shall be added to the asphalt used in the hot mix asphaltic concrete. The rate of application shall be in accordance with the manufacturer's recommendation. The minimum anti-stripping agent added shall be one-half (l/2) of l%.

The anti-stripping agent used shall have a proven record when used with similar aggregate and shall be approved by the engineer in writing prior to the date set for reception of bids.

P.V.C. PIPE CASINGS

1. SCOPE

   This item consists of furnishing and installing PVC pipe for casing for future water and electric lines at locations shown on the plans or as directed by the Engineer.

2. MATERIAL

   Pipe shall be ASTM D 1785 schedule 40 PVC pipe or ASTM D 2241 PVC SDR 32.5 pressure pipe. The ASTM designation and schedule or SDR shall be clearly marked on the outside of the pipe.

3. CONSTRUCTION

   Pipe shall be laid in straight alignment and grade in trenches as narrow as the diameter of the pipe can be laid. Pipe shall be placed after the sub grade is prepared but before base material is placed. Bedding under the pipe shall be a minimum of 2 inches in thickness and shall be carefully graded and leveled before pipe is placed. Joints shall be water tight. They may be solvent cement welded using approved materials, or may be made using a gasketed collars or push on gasketed bell and spigot. When collars are used care shall be exercised to assure that the collar is centered over the joint. All joints shall be made in accord with the manufacturer's recommendations. After pipe has been joined and inspected the pipe shall be encased in bedding/encasement material to a thickness of 3 inches above the pipe. Care shall be exercised to be sure the encasement material is worked in under the haunches of the pipe and compacted along the side of the pipe to assure adequate lateral support. The balance of the trench shall be back filled using cement stabilized backfill consisting of 2 sacks of Portland cement to 1 cubic yard of blow sand or crushed caliche mixed with sufficient water to form a stiff place able mixture that can be consolidated in the trench by rodding or vibrating. The back fill shall be "struck off" at the finished sub grade level using square point shovels or suitable screeds. The ends of the pipe shall be tightly plugged to prevent the entrance of water debris or other foreign material. These plugs shall be PVC or rubber stoppers designed to endure until the water lines and/ or electric lines are places.

4. MEASUREMENT AND PAYMENT

   Casing pipe shall be measured by the linear foot along the center of the pipe and shall be paid for at the unit price in the bid proposal.

WATER LINE SPECIFICATIONS

1. SCOPE OF WORK

The work covered by this section consists of all water pipe lines and piping, including valves, valve boxes, tapping sleeves, fire hydrants and other accessories, required to complete the project. The contractor shall furnish all materials, labor, superintendence, tools, equipment and incidentals necessary for the complete construction of this work in accordance with the drawings and these specifications.

2. PIPE AND MATERIAL

2.1 General

Pipe shall be polyvinyl chloride (PVC) AWWA C900, ductile iron AWWA C-151 or steel cylinder concrete pipe AWWA C-303.

2.2 Polyvinyl Chloride (PVC) Pipe

A. PVC pipe furnished for use on this project shall conform to the requirements of AWWA C900 Polyvinyl Chloride (PVC) Pressure Pipe, 4 in. through 12 in., for water distribution pressure class 150, DR18. and shall be NSF approved for potable water supply.

B. The pipe furnished shall have an integral bell designed for joint assembly using elastomeric seals.

C. Markings for the pipe shall include all the requirements of AWWA C900 and the MSF approval stamp.

D. Elastomeric seals shall be furnished by the pipe manufacturer. Seals shall be manufactured to conform with the requirements of ASTM F4 77 and shall be specifically designed for use with the pipe furnished.

E. Lubricants intended for use with PVC pipe and seals (gaskets) shall be compatible with both PVC and the seal material. Lubricant shall not support growth of bacteria and shall not adversely affect the potable quality of the water that is to be transported.

F. Pipe laying lengths shall be 20'.

G. Service taps on PVC water lines shall be made using hinged type or double strap type saddles. Tapping saddles shall support the full circumference of the pipe and shall have a bearing area of sufficient width along the axis of the pipe to prevent distortion of the pipe when saddle is tightened.

No direct taps into the wall of PVC pipe will be permitted.

Seals for tapping saddles shall be recessed into the body of the saddle and shall be

a rubber - compound conforming to the requirements of ASTM F477.

Tapping saddles shall be SMITH-BLAIR Taper Seal Style 313 or DMD Dresser style 194 or approved equal.

H. Tapped connections for water mains and fire lines made on PVC water mains shall be accomplished using full bodied ductile iron tapping sleeves of a pressure rating equal to or greater than the pressure rating of the pipe specified.

I. Bedding for AWWA C900 PVC water pipe shall extend from a minimum depth of 4 inches below the outside of the water line to a minimum cover of 6 inches over the top outside of the water line.

J. AWWA C900 PVC water pipe shall be installed in accord with the applicable requirements for installing ductile iron pipe.

Care shall be taken to install each joint of PVC water pipe to, but not beyond the factory insertion mark on the pipe.

When a joint of PVC water pipe must be cut, the end of the pipe shall be carefully beveled to match the factory bevel on the uncut pipe. An insertion mark matching the factory insertion mark on the uncut pipe must be made before the pipe is inserted into the bell.

When PVC water pipe is to be inserted into a ductile iron fitting or valve, the factory bevel must be removed to form a square plain end pipe.

2.2 (a) Metallic Marking Tape (For PVC Water Pipe)

2.2(a).1 General

When non-metallic pipelines are to be installed, then the Contractor shall furnish and lay, above the pipeline, a continuous strip of metallic identification tape.

2.2 (a).2 Tape Material

The metallic identification tape shall be at least two inches (2”) in width and shall be of corrosive resistant metal of sufficient thickness to be stable and reflect electronic signals to electronic pipeline detector when buried to a dept of twenty-four (24”) below normal ground level.

The metallic tape shall be painted blue on one side and shall have 1-inch high letters painted continuously on the same side of the tape which read, “CAUTION: BURIED WATER LINE BELOW” or other words to this effect.

The marking tape shall be “Detectable Warning Tape”, as manufactured by the Omega Marking Company, or equal approved by the Engineer.

2.2(a).3 Construction Methods

The Contractor shall backfill over non-metallic pipelines to a depth which is less than twenty-four (24”) and not more than twelve inches (12) from the top of the cut of the ditch section in which the pipeline is laid. Contractor shall stop the backfilling material to a generally uniform level. All machine tamping, jetting and other compaction activities shall be accomplished up to this point of height in the backfilling the marking tape is placed in the trench.

The Contractor shall then lay the marking tape in the pipe trench and shall be held in position by the spot placement of backfill materials over it to keep it from sliding t the sides and/or from being blown about in the ditch by the wind. The tape shall be lid with the painted side, which shall also be the side with the identification lettering on it, in the “up” position. The tape shall be laid in the flat position and kept there until backfill is accomplished.

The Contractor shall then complete the backfilling operation in such a manner that the marking tape is not cut, crimped, ruptured or separated by the backfilling work.

2.2(a).4 Measurement and Payment

No separate pay item will be provided for furnish and placing the marking tape. This item shall be considered subsidiary to the non-metallic pipe being placed.

2.3 Ductile Iron Pipe

A. All ductile iron pipe used in the construction of water works improvements shall be Cement Lined and shall be manufactured in accordance with and shall meet the requirements of AWWA Specification C-l5l.

B. Pipe shall be cast in lengths of not less than l2 feet and shall be designed for a working pressure of l50 pounds per square inch. Thickness of ductile iron pipe shall be as shown on the plans and bid proposal or shall be computed in accordance with AWWA Specification C-l50, based on l50 pounds per square inch working pressure for 10 feet of cover and laying condition 2.

C. All ductile iron pipe shall have an exterior, bituminous coating and an inside cement-mortar lining in accordance with the requirements of AWWA Specification C-l04.

2.4 Polyethylene Plastic Tubing

Service lines shall be constructed with polyethylene plastic tubing as specified in ASTM D 2737 with a rating of l60 psi.

2.5 Ductile Iron Pipe Fittings

All fittings for ductile iron pipe and PVC pipe shall be ductile iron and shall be mechanical joint all connections except tees for fire hydrant leads unless shown otherwise on the plans. Tees for connecting fire hydrant leads shall be MJ- with a flange outlet.

All ductile iron fittings shall conform to AWWA Specification C-110, designed for a working pressure of 250 psi. All ductile iron fittings shall have an external coating and shall be cement lined in accordance with the specifications for coating and lining the pipe.

2.6 Pretensioned Concrete Cylinder Pipe

A. The contractor shall furnish and install all concrete cylinder pipe and fittings, including connections and appurtenances complete as shown on the plans and specified herein.

B. The contractor shall submit six (6) sets of full and complete shop drawings on the concrete cylinder pipe and fittings. All of the drawings and data shall be complete and shall include a complete description of the pipe offered, including cuts, tabulated layout and all pertinent engineering data required for a complete evaluation of the submittal. Submittal data shall be in such form and so presented that the Engineer may readily review the data.

C. Prior to delivery of the pipe to the project site, the manufacturer shall furnish an affidavit certifying that all pipe, fittings, and specials, and other products and materials furnished, comply with the applicable provisions of this specification.

D. The pipe manufacturer shall furnish a factory trained, job experienced field representative who shall visit the project periodically during the course of installation. He shall also be subject to call by the contractor and/or engineer to advise and assist with the solution of field problems.

During visits, the representative shall observe all phases of the project including location and condition of pipe strung ahead of the contractor, trench width, if applicable, bedding and backfill, assembly of pipe joints and protection of steel. If, in the opinion of the representative any phase of the installation is unsatisfactory, he shall so advise the contractor's superintendent and also advise the owner or engineer's representative on the job site.

E. All closure sections shall be the jack on type and "field welding" will not be permitted without the written permission of the engineer.

F. Pipe manufacturer will install all necessary taps for the contractor to disinfect and field hydrostatic test the pipe.

G. Pretensioned concrete cylinder pipe, fittings and specials shall be designed, fabricated and tested in accordance with the latest requirements of AWWA C-303, "Reinforced Concrete Pressure Pipe Steel Cylinder Type, Pretensioned, for Water and Other Liquids" with additional requirements or modifications as described herein.

H. Pretensioned concrete cylinder pressure pipe shall be designed for l50 psi, working pressure and manufactured in 32 foot nominal lengths in accordance with the provisions of AWWA Standard C-303.

I. Inspection and Testing

(1) The owner reserves the option to have an independent testing laboratory, at the owner's expense, inspect pipe and fittings at the pipe manufacturer's plant to ensure compliance with the applicable specifications. The owner's testing laboratory and Engineer shall have free access to those parts of the manufacturer's plant that are necessary to ensure compliance with the governing standard. The pipe manufacturer shall notify the owner, in writing, at least two weeks ahead of pipe fabrication as to start of fabrication and fabricating schedule so that the owner can advise the manufacturer as to owners' decision regarding tests to be performed by an independent testing laboratory. In event the owner elects to retain an independent testing laboratory to make material tests and weld test, it is the intent that the tests be limited to one spot testing of each category unless the tests do not show compliance with the standard. If these tests do not show compliance, the owner reserves the right to have the laboratory make additional tests and observations to ensure compliance of the finished product with the standard.

(2) In any event, the manufacturer shall perform the tests described in AWWA C 303, and furnish the owner with a copy of the test reports, if requested, at the expense of the pipe manufacturer. The pipe manufacturer shall furnish the owner with affidavit of compliance as outlined in the standard.

(3) All welds for water tightness in special pipe and fittings that have not been hydrostatically tested may be examined by use of visible dye penetrant system meeting requirement of ASTM El65; however, collar reinforcement and all other lap welds shall be tested by introducing air under l0 psi pressure between the collar and cylinder and checking for leaks around and through the welds with soap solution.

The area to receive the dye penetrant shall be cleaned free from contaminants that might interfere with the penetrant process. The temperature of the steel in the weld area shall be between 60 and l25 degrees F. when the penetrant is applied. Dwell time of six hours shall be allowed after application of the penetrant and developer before interpreting the results.

Defects that are found shall be repaired and the test repeated until all defects

are eliminated. Colored penetrant shall be removed before fittings are lined.

2.7 Casing Pipe

Casing pipe to be installed in bore or open cut may be limited service pipe, corrugated galvanized steel pipe or new straight seam or spiral welded steel pipe. Casing pipe shall be furnished in thickness or gage as shown on the plans.

Limited service pipe proposed for use on this project must be approved a minimum of four (4) working days prior to the time of opening bids and shall be in good condition and shall meet the same service requirements as the corrugated galvanized steel or welded steel pipe.

Welded steel casing pipe shall be coated inside and out using a coal tar epoxy or shall be bituminous coated in side and out by the hot dip method.

2.8 Bedding Materials

A. All water pipelines placed on this project shall be bedded with crushed stone bedding materials to the minimum as shown on the plans and in the Detail Drawings.

B. Granular material furnished for foundation, bedding, encasement, backfill, or other purposes as may be specified, shall consist of any natural or synthetic mineral aggregate such as, crushed gravel, crushed rock, crushed stone, or slag, and shall conform to the following specifications and/or gradation.

Note, all materials used for these purposes shall be crushed and shall have at least two broken faces. Pea gravel will NOT be allowed.

	Foundation	Bedding	Encasement	Backfill
ASTM c33 Grade #57	X			
ASTM C33 Grade #67	X			
ASTM C33 Grade #8		X	X	
THD 1982 ITEM 302 Type "D" Grade #4		X	X	
THD 1982 Item 302 Type "D" Grade #5			X	
Crusher Fines**			*X	X

* 100 percent of crusher fines that are to be used within 12 inches of the top of pipe must pass the 3/4" sieve.

** Approximate Gradation for Crusher Fines

Sieve Size	% Passing
2 inch	100
#4	35 - 100
#10	20 - 100
#40	5 - 35
#200	4 - 10

Crushed stone material proposed as an alternate for use on this project and not meeting the above specifications must be approved in writing at least 48 hours prior to the time scheduled for opening bids.

C. Granular materials provided for Foundation, Bedding, Encasement, or backfill use as required by the contract, either as part of the pipe item work unit or as a separate contract item, shall be classified as to use in accordance with the following:

MATERIAL USE DESIGNATION	ZONE DESIGNATION
Granular Foundation	Placed below the bottom of pipe grade as replacement for unsuitable or unstable soils, to achieve better foundation support.
Granular Bedding	Placed below the midpoint of the pipe prior to pipe installation, to facilitate proper shaping and achieve uniform pipe support. Also for Class B Bedding where specified.
Granular Encasement	Placed below an elevation one half (6") foot above the top of pipe, after pipe installation, for protection of the pipe and to assure proper filling of voids and thorough consolidation of backfill.
Granular Backfill	Placed below the surface base course, if any, as the second stage of backfill, to minimize trench settlement and provide support for surface improvements.

In each case above, unless otherwise indicated, the lower limits of any particular zone shall be the top surface of the next lower course as constructed. The upper limits of each zone are established to define variable needs for material gradation and compaction or void content, taking into consideration the sequence of construction and other conditions. The material use and zone designations described above shall only serve to fulfill the objectives and shall not be construed to restrict the use of any particular material in other zones where the gradation requirements are met.

3. VALVES AND VALVE BOXES

3.1 General

A. Valves 4" through l2" shall be resilient seated gate valves with non-rising stems and shall open by turning to the left (counter clock wise).

B. Valves l4" and larger shall be resilient seated butterfly valves and have operators suitable for direct burial and shall open by turning to the left (counter clock wise).

All valves except valves for use in fire hydrant leads shall have mechanical joint ends unless shown otherwise on the plans. Valves for use in fire hydrant leads shall be flange by mechanical joint.

C. All valves and fire hydrants shall be spray coated with a two component thermal setting epoxy to cover all interior wetted ferrous surfaces. Finished coating shall have a minimum thickness of 4 mils. The coating shall conform to the coating section of these specifications.

D. All valves for buried service shall be equipped with 2" square AWWA operating nuts.

3.2 Gate Valves

A. Gate valves shall be iron body, resilient **wedge gate** and shall be in compliance with AWWA Standard C-509-80 or latest revision thereof and shall have the following design features:

B. All valves shall have a working pressure of 200 psi and shall be bottle tight tested at this pressure from both directions. The gate body shall also be hydrostatically tested at 400 psi. Zero leakage will be required in all tests. The body, bonnet, and stuffing box shall be flange together with ASTM A-307 Grade B bolts and nuts to insure repairability.

C. Stems shall be machined from modified manganese bronze rod with an integral forged thrust collar machined to size.

D. Stem seals shall be dual "O" ring type.

E. Valve discs shall be rubber encapsulated or have disc seat rings molded of natural rubber, internally steel reinforced retained to the disc by self-locking type 304 stainless steel screws. Valve gates shall seat against a machined epoxy coated mating surface in the body of the valve.

F. All internal ferrous metal surfaces (machined or cast) shall be factory spray coated with a two component thermosetting epoxy to a nominal thickness of 4 mils and the exterior shall be coated with asphalt varnish as specified for coating of the pipe. (See Sec. 3.4 of these specifications for epoxy coating).

G. Valves shall be Mueller A-**2360** or Dresser-M&H **4067** or approved equal. Any alternate (approved equal) to these specifications **shall have completely interchangeable parts with either of the specified valves.**

3.3 Butterfly Valves

A. General - All butterfly valves shall be of the rubber seated tight-closing type. They shall meet or exceed AWWA Standard C-504, Class l50B. Both valve ends shall be mechanical-joint per AWWA Standard C-lll. Accessories (bolts, glands, and gaskets) shall be supplied by the valve manufacturer.

B. All valves must use full AWWA C-504 Class l50 B valve shaft diameter, and full Class l50 B underground service operator torque rating throughout entire travel, to provide capability for operation in emergency service.

C. Valve body shall be high strength cast iron ASTM A 126 Class B with l8-8 type 304 stainless steel body seat. Valve vane shall be high strength cast iron ASTM A 48 Class 40 or ASTM A 536, Grade 65-45-l2 ductile iron having rubber seat mechanically secured with an integral l8-8 stainless steel clamp ring and l8-8 stainless steel self locking screws.

D. Rubber seat shall be a full circle 360^{o} seat not penetrated by the valve shaft. Valve shall have permanently set two way thrust bearing. Packing shall be designed for permanent duty in underground service.

E. Valve operator shall be of the traveling nut type, sealed, gasketed and lubricated for underground service. It shall be capable of withstanding an overload input torque of 450 ft. lbs. at full open or closed position without damage to the valve or valve operator. It shall be designed to resist submergence in water to 25 ft. head pressure. Number of turns to operate valve shall be as listed below in order to closely resemble conventional distribution valve practices and to minimize water hammer:

Pipe and Valve Size	Turns to close	Pipe and Valve Size	Turns to Close
4" - 6"	16-1/2	14" - 16"	48"
8"	24	18" - 20"	72
10" - 12"	36	24"	90

F. Valves shall be capable of easy closure by one man using standard valve key, even under emergency line-break conditions as severe as those that would - cause a valve maximum opening torque requirement of as much as two times AWWA Class l50 B.

G. All valves shall be tested bottle-tight at rated working pressure by the manufacturer as follows:

l4" up. . . . . l50 psi

In addition a hydrostatic test with vane partially open shall be given to the assembled valve as follow:

l4" up. . . . . 300 psi

H. Valve shafts shall be l8-8 type 304 stainless steel. Shaft bearings shall be of the self lubricating sleeve type.

I. Valve discs or vanes for valves 30" and larger shall be the flow through (bridge or truss) type.

J. Butterfly valves shall be Dresser-M&H Model "450", "4500" or "l450" or Mueller line seal III or approved equal. Alternates (approved equal) to these specifications must be approved in writing 48 hours prior to time bids are received.

3.4 Coating

A. The coating shall be a two part thermosetting epoxy protective coating and shall function as a physical, chemical and electrical barrier between the base metal to which it is applied and the surroundings.

B. The coating shall be non-toxic and shall not impart taste to water. The coating must be formulated from materials deemed acceptable per the FOOD AND DRUG ADMINISTRATION DOCUMENT TITLE 2l of the FEDERAL REGULATIONS ON FOOD ADDITIVES SECTION l2l.25l4 entitled, RESINS AND POLYMERIC COATINGS.

C. The coating shall have a satin finish and shall be suitable for field over coating and touchup with same coating material without sanding or special surface preparation, or application of heat in excess of room temperature.

D. The coating shall have a successful record of performance in valves, pipe or other allied equipment for a minimum of two years.

E. The coating adhesion to the substrate shall exceed cohesion of the coating film as demonstrated by the following test:

(1) Prepare test panel and apply coating per manufacturer's recommendation.

(2) After sample has properly cured per manufacturer's recommendation, scribe an "X" using a sharp knife or scalpel through the coating to the metal substrate.

(3) Then with the point of the knife at the juncture of two scribes, attempt to lift off coating. Coating should not lift off substrate or between coats readily, but should break up leaving coating material on the substrate of this damaged area.

(4) No disbandment of the film shall be noted as tested above after immersion in tap water for l500 hours at l00`F.

F. A falling sand abrasion test using ASTM D968 shall produce an abrasion coefficient of 25-30 liters/mil. As an alternative, a Taber Abrader Test should find 3.5 - 3.7 milligrams coating loss per l00 cycles when using a CSF l0 Wheel (l000 gram weight).

3.5 Valve Boxes

All valves to be used in buried service shall be enclosed in cast iron valve boxes. Care shall be taken to place and maintain the 2" square operating nut in the center of the valve box. The valve box shall be two piece cast iron suitable for use with PVC pipe box risers. The 6 inch diameter cover shall be marked " Water". The PVC riser pipe shall be furnished in lengths as required (minimum pipe cover 42") PVC pipe for valve box riser may be ASTM C-900, ASTM D1785 schedule 40, ASTM D2241 pressure class 125 or ASTM D3034 DR 35. Valve boxes shall have a concrete ring 8" thick and having a radius equal to the radius of the valve box plus one foot (1') cast around them. Valve boxes placed in unpaved areas shall be set level with or slightly higher than the finished ground elevation. Valve boxes set in paved areas shall match the finished pavement surface.

3.6 Fire Hydrants

A. Fire hydrants shall conform to the requirements of AWWA C 502 dry barrel type. The fire hydrants shall be designed for a depth of bury of 4.5 feet, however the depth of bury may vary according to field conditions and extensions or shorter bury depth may be required.

B. The hydrants shall have a 5-l/4 inch valve opening, two 2-l/2 inch hose nozzles and one 4-l/2 inch pumper nozzle.

C. Hose threads shall be National Standard threads.

D. The hydrants shall be sized for 6-inch mains and shall have an inlet connection compatible with the type pipe used. All gaskets, nuts, bolts and other jointing materials shall be considered part of the fire hydrant installation.

E. Operating nut shall be standard l-l/2 inch pentagon opening counter-clockwise. The hydrant shall close with the pressure.

F. Hydrants shall be painted Federal Safety Yellow.

G. Fire hydrants shall have all interior wetted ferrous surfaces epoxy coated as required in the general and coating section of this item.

H. The hydrants shall have a minimum of two (2) drain holes located on opposite sides of the hydrant. The entire drainage channel must be made of non-corrosive material and sealed by acceptable resilient material (metal and/or leather seals are not acceptable).

I. The hydrants shall have a breakable safety flange and breakable stem coupling which breaks cleanly upon impact.

J. The hydrants shall be AWWA improved type hydrants and shall have self-oiling reservoirs.

K. Fire hydrants shall be the Mueller Centurion, the Dresser -M & H 929 Reliant, or The American Darling.

4. EXCAVATION, TRENCHING BEDDING AND BACKFILLING

4.l Trenching

A. The trench shall be excavated to the lines and grades as established by the engineer and as shown on the plans. The depth of cover for all main lines on which the grades and elevations are not shown on the plans, shall in general be Forty-two (42) inches. The amount of cover may vary over or under 42 inches as directed by the engineer but in no case will the amount of cover be less than thirty-six (36) inches. Depth of cover for service lines shall be as shown on the detail drawings.

B. Water lines constructed in proposed streets and service drives shall have the depth of cover measured from the finished grade. The contractor is hereby cautioned that proposed street finished grades are sometimes cut below the existing ground elevation.

C. The minimum width of the trench shall be the outside diameter of the pipe plus twelve (l2) inches for pipe diameter through l8", the outside diameter of the pipe plus eighteen (l8) inches for pipe diameters over l8". The trenching equipment shall be maintained on a sufficiently level road bed to provide substantially vertical trench walls. The maximum horizontal offset of the trench wall from bottom of trench to the top of the trench (under-cutting) shall be four (4) inches.

D. The trench shall be over excavated to an even grade to the depth of required bedding so that the bottom of the pipe will rest on a uniform thickness of bedding material on the bottom of trench throughout the entire length of the pipe. In order to obtain a true even grade, the bedding material shall be fine graded by hand. On lines that are to be laid to established grades batter boards shall be set at fifty foot intervals and the trench graded to the established grade.

E. Any part of the trench excavated below grade shall be corrected by filling with bedding material. The bedding material shall be thoroughly compacted.

E. If large rock, rock fragments or other unyielding materials are encountered in the bottom of the trench they shall be removed to a depth of six inches below grade, and the void filled with thoroughly compacted approved bedding material.

G. Bell holes of ample dimensions shall be dug at each joint to permit the jointing of pipe to be made properly and of sufficient depth to prevent the bell of the pipe from resting on undisturbed materials.

H. Wherever necessary to prevent caving, the trench shall be adequately braced and sheeted. Trench safety shall be in accordance with item l4 "Shoring and Sheeting of this specification.

I. Trench digging machinery may be used to make the trench excavations except in places where operation of same would cause damages to trees, buildings or other existing structures either above or below ground. In such instances hand trenching methods shall be employed.

J. All excavated material shall be stockpiled in a manner that will not endanger the work or existing structures and that will cause the least amount of obstructions to walks and driveways.

K. There will be no classification of the excavated materials and the term excavation shall include all materials encountered in excavating the trenches or structural excavations.

L. The contractor shall take all necessary precautions for protecting paved areas from being damaged by the trenching and backfilling equipment. Any damage done to any paved area, outside of the area set forth in the plans, as a result of the construction work shall be repaired by the contractor at his own expense.

M. Where the lines are located behind curbs, the contractor shall take special precautions to protect trees and shrubs. Care shall be exercised to cause as little damage to lawns as possible.

Where lines cross under curbs, gutters or curbs and gutters, tunneling will be required.

N. Blasting for excavation of solid rock will be permitted only after securing the

approval of the Director of Engineering and Transportation and the engineer and only when proper precautions are taken for protection of persons and property. The hours of blasting will be fixed by the engineer. Any damage caused by blasting shall be paid for by the contractor. The method or procedure relative to blasting shall conform to all state laws and local ordinances.

O. The contractor will be required to locate all known utility lines, including consumer service lines, far enough in advance of the trenching to make proper provisions for protecting the lines and to allow for any deviations that may be required from the established lines and grades.

P. The contractor shall not be allowed to disrupt the service on any utility lines except consumers service lines, which may be taken out of service for short periods of time, if the contractor obtains permission from the engineer and from the owner of the premises being served by the utility.

Q. The contractor shall immediately notify the proper utility company of any damage to utility lines, in order that service may be reestablished with the least possible delay. Repair of any damage to existing lines and the repair of consumer lines which are authorized to be cut or temporarily taken out of service shall be made by the contractor at his own expense, and as directed by an official representative of the utility company involved.

R. All utility lines shall be properly supported to prevent settlement or damage to the line both during and after construction.

S. Any permanent relocations of existing utility lines shall be done by the proper utility company without expense to the contractor.

4.2 Backfill General

A. All pipeline excavations shall be backfilled in a manner that will restore pre-existing conditions as the minimum requirement and fulfill all supplementary requirements indicated in the Plans and Specifications. The backfilling operations shall be started as soon as conditions will permit on each section of pipeline to provide continuity in subsequent operations and restore normal public service as soon as practicable on a section-by- section basis. All operations shall be pursued diligently, with proper and adequate equipment, to assure acceptable results.

B. Depositing of the backfill shall be done so the shock of falling material will not injure the structure. Grading over and around all parts of the work shall be done as directed by the Engineer.

C. Whenever soil types which are determined by the Inspector to be undesirable for backfill are excavated from the trench, such material shall be hauled away and deposited where directed by the Inspector at no additional compensation.

D. In the absence of special work item requirements the backfilling shall be accomplished with the use of suitable materials selected from the excavated

materials to the extent available and practical. Should the materials available from the trench section be unsuitable or insufficient, the required additional materials shall be furnished from outside sources at the Owners expense.

E. Suitable material shall be defined as a mineral soil reasonable free of foreign materials (rubbish, debris, etc.) frozen clumps, oversize stone, rock, concrete or bituminous chunks and other unsuitable materials, that may damage the pipe installation, prevent thorough compaction, or increase the risks of after settlement unnecessarily. Material selection shall be such as to make the best and fullest utilization of what is available, taking into consideration particular needs of different backfill zones. Material containing stone, rock, or chunks of any sort shall only be utilized where and to the extent there will be no detrimental effects.

F. Backfill materials shall be carefully placed in relatively uniform depth layers spread over the full width and length of the trench section in a manner and/or sequence that will provide simultaneous support on both sides of the pipeline. Each layer shall be compacted effectively, by approved mechanical of hand methods, until there is no further visual evidence of increased consolidation. Compaction of the in place layer shall be completed acceptably before placing material for a succeeding layer thereon. The manner of placement, layer thickness, compaction equipment, and procedure effectiveness shall be subject to approval of the Engineer. Water jetting or flooding shall NOT be used to compact trench backfill.

G. Within the pipe bedding and encasement zones described as that portion of the trench which is below an elevation one foot above the top of the pipe, the materials placed shall be limited in particular size to 3/4 inch maximum. For larger pipe in access of 18 inches in diameter the Engineer may allow particle sizes up to 2 inches maximum if it can be shown that the backfill can be satisfactorily compacted without leaving voids or damaging pipe or joints. Above these zones, the placement of material containing stones, boulders, chunks, etc. shall be governed by the layer thickness and compaction equipment capabilities.

H. Compaction of materials placed within the pipe bedding and encasement zones shall be accomplished with portable or hand equipment methods to achieve thorough consolidation under and around the pipe and avoid damage to the pipe. Above the pipe zone material, the use of heavy roller type compaction equipment shall be limited to safe pipe loading.

I. The maximum loose thickness of each backfill layer shall be l2 inches, except that l6 inches will be permitted for Granular Materials placed above an elevation one foot above the top of pipe, and with the provision that, by authority of the Engineer in consideration of the demonstrated capability of special type vibratory compactors, these maximums may be increased at his discretion. "Hydro tamps" or "vibra tamp: or other heavy vibrating equipment shall not be used until the backfill has reached a depth of four (4) feet above the top of the pipe.

J. All surplus or waste materials remaining after completion of the backfilling operations shall be disposed of in an acceptable manner within 24 hours after

completing the backfill work on each particular pipeline section. Disposal at any location within the project limits shall be as specified, or as approved by the Engineer; otherwise, disposal shall be accomplished outside the project limits at the Contractor's discretion. The backfilling and surplus or waste disposal operations shall be a part of the work required under the pipeline installation items, not as work that may be delayed until final cleanup.

K. Until final acceptance of the project, the Contractor shall assume full Responsibility and expense for all backfill settlement and shall refill and restore the work as directed to maintain an acceptable surface condition. All additional materials required shall be furnished without additional cost to the Owner.

4.3 Backfill Procedure above Pipe Zone, in Public Rights-of-way and other areas where settlement is important.

A. Backfill above the pipe zone shall be made using Portland cement stabilized backfill or crushed stone screening (crusher fines).

B. Backfill around structures such as manholes, junction boxes, transformer boxes and valve boxes shall be made using portland cement stabilized backfill material or crushed stone screening (crusher fines).

C. The minimum depth of stabilized backfill or crusher fines shall be twelve (12") inches.

When utilities are being constructed under existing paving, the stabilized backfill or crusher fines shall extend from top of the pipe zone to the top of the base course.

When utilities are being constructed under existing unpaved streets that are not scheduled for immediate pavement construction, the stabilized backfill or crusher fines shall extend from the top of the pipe zone to the existing roadway surface.

When utilities are being constructed in new streets that are scheduled for immediate paving or in streets in a new subdivision for which a paving contract with the property developer has been approved the stabilized backfill or crusher fines shall extend from the top of the pipe zone to the bottom edge of the eight (8") inches of subgrade, or, if the paving contractor has constructed a portion of the roadway prior to the construction of the utilities stabilized backfill shall extend to the top of the course the contractor has finished. In no case shall the backfill extend above the top of the base course.

If the final course of asphaltic concrete has been placed, the street or alley surface shall **NOT** be cut for utility installation.

In new streets where stabilized backfill is required only to the bottom of the subgrade course, the minimum depth of stabilized backfill may be reduced to six (6") inches in which case the maximum depth of the "pipe zone" shall be limited to six (6") inches above the top of the utility line or conduit.

D. Backfill Materials

(1) Portland cement stabilized backfill shall consist of caliche base material, blow sand or native soil stabilized by the addition of Portland cement. Crushed stone or concrete aggregate shall **NOT** be used.

The Contractor shall submit a mix design prepared by an approved Commercial Laboratory that will produce a minimum 7 day compressive strength of 150 psi. In no case shall the minimum cement content of the mix be less than 1 sack per cubic yard.

(2) Cement used in Portland cement stabilized backfill shall be Type I or Type II conforming to the requirements of ASTM Designation C150.

(3) Caliche used for Portland cement stabilized backfill shall be crushed material con-forming to Texas State Department of Highways and Transportation 1982Standard Specifications for Construction of Highways, Streets and Bridges Item 248 Type F, Grade 2.

(4) Blow sand used for Portland cement stabilized backfill shall be clean, free from organic matter, clay lumps, rock and other deleterious matter.

(5) Native soil used for Portland cement stabilized backfill shall be clean, free from clods and organic matter, and rock in excess of 2".

(6) Crushed stone screening (crusher fines) used for back fill shall be sharp grained particles of crushed stone conforming to the following gradation

Sieve Size	% Passing
2"	100
#4	35-100
#10	20-100
#40	5-35
#200	4-10

and may be the by product of crushing stone for other purposes or may be stone specifically crushed for use in backfill. Crusher fines not meeting these specifications may be approved for backfill upon demonstration that the desired results will be obtained.

E. Backfill Construction

(1) Portland cement stabilized caliche backfill or Portland cement stabilized native soil backfill may be constructed using either the "dry" method or the "wet" method.

(a) The dry method of stabilized backfill construction consists of dry mixing of the cement and caliche, sand or soil to produce a homogenous mixture then adding and mixing sufficient water for proper compaction and hydration of the cement. The water content of the mixture will be approximately one to two percent above the optimum moisture for soil compaction. The mixing may be accomplished by using batch mixers or on the job site by "blade Mixing" or other suitable method to produce the desired backfill material. The mixed material shall be placed in lifts of up to a maximum of 12 inches and compacted to ninety five (95%) modified proctor density by use of suitable compacting equipment.

(b) In the "wet" method of cement stabilized backfill construction, the materials shall be mixed in an approved concrete batching plant or mixer to the consistency of concrete and placed as concrete would be placed. The slump of the backfill material shall be such that all voids will be filled, approximately four (4") to six (6") inches. The backfill shall be consolidated by rodding or by the use of mechanical vibrators.

(c) The mix design used must be for the method of placement chosen.

(2) Portland cement stabilized blow sand backfill shall be mixed and placed by the "wet" method as described above.

(3) Crushed stone screening (crusher fines) shall be wetted uniformly throughout with sufficient moisture to assure proper compaction before being placed in the trench.

The moistened crushed stone screening (crusher fines) shall be placed in maximum lifts of twelve (12") inches and consolidated using vibratory type compaction equipment except when it has been demonstrated that the compaction equipment employed will adequately compact deeper lifts in which case the maximum depth of a lift shall be limited by the capabilities of the equipment used.

Tests to determine the compacted density of the backfill shall be ordered by the Engineer if in his opinion the compaction is not adequate. Test showing a minimum compacted density of 90% modified proctor will be deemed adequate compaction.

5. INSTALLATION OF DUCTILE IRON PIPE

5.1 Pipe Laying - General

A. All pipe and accessories shall be unloaded, handled, laid, jointed, tested for defects and for leakage and chlorinated in the manner herein specified.

B. The pipe, fittings, valves, and accessories shall be inspected upon delivery and during the progress of the work and any material found to be defective will be rejected by the engineer and the contractor shall remove such defective material from the site of the work.

C. The contractor shall be responsible for all material furnished by him and he shall replace at his own expense all such material that is found to be defective in manufacturer or has become damaged in handling after delivery.

D. All pipe, fittings, valves, and other accessories shall, unless otherwise directed, be unloaded at the point of delivery, hauled to and distributed at the site of the work by the contractor. Loading and unloading, of pipe and fittings shall be by hoisting or by sliding, or rolling on skidways in such a manner as to avoid shock or damage to the material. Under no circumstances shall pipe or fittings be dropped. Pipe handled on skidways must not be skidded or rolled against pipe already on the ground.

The pipe, fittings and accessories shall be placed along the site in such a manner as to be kept as free as possible from dirt, sand, mud, and other foreign matter.

E. All pipe shall be laid and maintained to the lines and grades shown on the plans
or as established on the ground by the engineer.

F. Wherever it is necessary to deflect pipe from a straight line either in a vertical or horizontal plane to avoid obstructions, to plumb valves and hydrants, or where vertical or horizontal curves are shown or permitted, the degree of deflection at each joint shall not exceed the maximum deflection recommended by the manufacturer of the particular kind of pipe being laid and the degree of deflection shall be approved by the engineer.

G. After the trench grade has been completed and all bell holes dug and the grade inspected, the pipes and accessories my be placed in the trench. All pipe, fittings, valves, and hydrants shall be carefully lowered into the trench piece by piece by means of derricks, ropes, or other suitable tools or equipment, in such a manner as to prevent damage to the material in any way. Under no circumstances shall pipe or accessories be dropped or dumped in the trench.

H. Before lowering into trench the pipe shall be again inspected for defects and the pipe while suspended shall be lightly hammered to detect cracks. Any defective, damaged or unsound pipe and materials shall be rejected.

I. All foreign matter or dirt shall be removed from the inside of the pipe and from all bells, spigots or parts of the pipe used in forming the joint, before the pipe is lowered into the trench, and it shall be kept clean by approved means during and after laying.

5.2 Laying and Jointing Ductile Iron Pipe

A. Unless otherwise directed, pipe shall be laid with bells facing in direction of laying; and for lines on appreciable slopes, bells shall, at the discretion of the engineer, face up grade. Cutting of pipe for inserting valves, fittings or closure pieces shall be done in a neat and workmanlike manner without damage to the pipe or the cement lining.

B. The jointing shall be completed for all pipe laid each day. No open joints will be left in the trench overnight. At times when pipe laying is not in progress, the open ends of pipe shall be closed by approved means. No trench water shall be permitted to enter the pipe.

C. No pipe shall be laid in water, or when the trench conditions or weather is unsuitable for such work, except by written permission of the engineer.

D. Rubber Gasket joints for cast iron or ductile iron pressure pipe and fittings shall conform to AWWA Standard C-lll.

E. Before laying the pipes, all lumps, blisters and excess coal tar coating shall be removed from the bell and spigot ends of each pipe; the outside of the spigot and the inside of the bell shall be wire brushed and wiped clean and dry. Pipe ends shall be kept clean until joints are made.

F. The pipe and fittings shall be properly aligned and free to move in any direction while bolting, and the bolts shall be gradually tightened at a uniform rate around the entire flange.

G. Flange joints where used shall be bolted with flange bolts of best quality mild steel and of the size and length required by AWWA C-ll5: Bolts and nuts shall be provided with standard hexagonal heads. Gasket rings shall be used and shall be made of best quality rubber composition sheet packing one-eighth (l/8) inch thick, of a brand and quality approved by the engineer.

H. Standard plugs shall be inserted into the bells of all dead end pipes, tees, or crosses and spigot ends shall be capped. Plugs or caps shall be jointed to the pipe or fittings in the same manner used in joining the pipe.

6. SPECIFICATIONS FOR INSTALLING PRETENSIONED CONCRETE CYLINDER PIPE

6.l General

The applicable portions of the specifications for installing ductile iron pipe shall apply except as amended or supplemented herein.

6.2 Pipe Laying

A. Pipe and fittings shall be handled with care at all times to avoid damage. They shall be lifted by hoists or slide or rolled on skid-ways in such manner as to avoid shock. Under no circumstances shall they be dropped. Pipe must not be skidded or rolled against other pipe or object.

B. Just before making the joint, the bell and spigot rings shall be thoroughly cleaned by wire-brushing until clean and dry. The gasket and the inside surface of the bell shall be lubricated with a light film or soft vegetable soap compound (flax soap) to facilitate telescoping the joint. The rubber gasket shall be stretched uniformly as it is placed in the spigot groove to insure a uniform volume of rubber around the circumference of the groove.

C. The joint shall be telescoped by pulling directly along the centerline of the pipe so that the spigot enters squarely into the bell. After the spigot has been telescoped into the bell, the bell end of the pipe being laid shall be moved in accordance with the plans to secure proper grade and alignment. After the joint is in place, a thin metal feeler gauge shall be used to check the position of the rubber gasket around the circumference of the joint.

D. The inside joint recess shall be filled immediately prior to placing the pipe together by buttering the bell end with mortar. After the joint is engaged, the joint mortar of pipe l8" in diameter and larger shall be finished off smooth by hand. The mortar in pipe smaller than l8" in diameter shall be smoothed and cleaned with a swab.

E. After the spigot has been telescoped into the bell, the joint checked and found satisfactory, a canvas wrapper shall be placed around the pipe, covering the joint. The canvas type wrapper shall be of the quality manufactured by the Mar-Mac Manufacturing Company or approved equal burlap type, and shall be hemmed at each edge to allow threading with a steel strap to securely fasten the wrapper around the pipe by means of a stretcher and sealer.

The wrapper shall have a minimum width of 7" and sufficient length to encircle the pipe leaving enough space between the ends at the top to allow the cement mortar to be poured. The entire joint shall be poured with cement mortar and rodded or agitated to eliminate voids and settlement. Prior to pouring the cement mortar the joint shall be thoroughly cleaned and saturated with clean water. Any joint showing shrinkage or excessive cracking shall be cleaned and remade. In hot weather,

additional measures may be required to obtain the best quality of joint, such as additional wet burlap, curing membrane, or immediate careful and well controlled backfilling of the joint with damp earth.

F. The mortar used at the exterior joint shall consist of one part Portland cement to 2-l/2 parts fine, sharp, clean sand and mixed with water to the consistency of thick cream. Mortar required at the joint shall not be placed in freezing weather unless adequately protected from freezing.

G. The joints for pipe to be installed in casing shall be made as for pipe laid in trench except that the outside portion of the joint shall be wrapped in a special polyurethane wrap impregnated with unhydrated cement manufactured for this purpose, prior to being jacked into the casing pipe. The wrap shall be "Flex-Protex" as manufactured by Mar-Mag Mfg. Corporation or approved equal. The interior of the joints shall be mortared after the pipe to be installed in casing has been jacked into place. The pipe shall not be moved after interior mortaring is completed. After the water line has been installed in the casing the ends of the casing shall be sealed using concrete or cement mortar.

H. Steel cylinder reinforced concrete pipe shall not be pressure tested until it has been in place a minimum of l4 days.

I. The contractor shall fill the steel cylinder reinforced concrete pipe under slight pressure and allow approximately 24 hours for water absorption by concrete lining before performing pressure test.

7. SETTING VALVES, VALVE BOXES, FIRE HYDRANTS AND FITTINGS

7.1 General

Valves and fittings shall be set at the locations shown on the plans or at locations as established by the engineer, and shall be set and jointed to the pipe in the manner heretofore specified for pipe installation. All valves buried in the ground shall have a cast iron valve box set over the valve and set to grade. All valves shall be set vertical, unless otherwise specified, and shall be thoroughly inspected and checked for operation before installation.

7.2 Valve Boxes

Cast Iron valve boxes shall be firmly supported and maintained centered and plumb over the wrench nut of the valve, with box cover flush with the surface of the ground or street paving.

Valve boxes shall be supported by a ring of concrete as shown on the plans and Detail Drawings. This ring shall be Class "A" concrete having a minimum thickness of six (6") inches and shall extend a minimum of twelve (12") inches in all directions from the outside diameter of the valve box and shall be supported on thoroughly compacted backfill.

7.3 Setting Fire Hydrants

A. Fire hydrants shall be located at points shown on the plans, the exact location of the hydrant to be established by the engineer. All hydrants shall be set plumb, to the grade as established by the engineer, and shall have their nozzles parallel with and/or at right angles to the curb, with the pumper nozzle facing the curb. The hydrants shall be supported in such a manner as not to cause a strain on the fire hydrant lead or branch.

The bowl of the hydrant shall be well braced against unexcavated earth at the end of the trench with concrete blocking. The concrete blocking shall be placed so as not to interfere with the hydrant drains and so that the joints or flanges are accessible.

B. Each hydrant shall be connected to the main with a six (6) inch ductile iron branch controlled by an independent six (6) inch gate valve. Each hydrant shall be set upon a stone or concrete slab not less than four (4) inches thick and not less than one square foot of surface area. Where solid rock exists in the bottom of the trench and same is excavated to the proper depth to form a foundation for the hydrant, the slab of stone or concrete may be omitted.

C. There shall be placed around the base of the hydrant not less than seven (7) cubic feet of sound broken stone or clean gravel, or other suitable material to provide reservoir capacity so that the hydrant will completely drain when closed. The gravel or broken stone shall reach from the bottom of the trench to at least six (6) inches above the waste opening in the hydrant. Each hydrant shall be operated by the contractor to prove to the inspector that the drain hole has not been plugged with concrete or other material.

8. **ANCHORAGE OF BENDS, TEES AND PLUGS, ETC.**

Reaction or thrust blocking shall be applied to all pipe lines at all tees, plugs, caps, valves, fire hydrants, and at bends deflecting ll-1/4 degrees or more. Concrete shall be used for blocking the pipe and fittings. Concrete for thrust block shall have a minimum compressive strength of 3,000 psi and shall conform to Texas Highway Department Class "A" concrete. Before thrust blocking is placed the element to be blocked shall be carefully wrapped in polyethylene sheeting having a minimum thickness of 3 mils. The blocking shall be placed between solid ground and the fitting to be anchored; the area of bearing on pipe and on the ground in each instance shall be that required by the engineer. The blocking shall be so placed that the pipe and fitting joints will be accessible for repair.

9. DISINFECTION OF PIPE LINES

The contractor shall furnish all labor, equipment, and materials necessary to the disinfecting of the new pipe lines which shall be disinfected before being placed in service. The lines shall be disinfected by the application of a chlorinating agent. The chlorinating agent may be a liquid chlorine, liquid chlorine gas water mixture, or a calcium hypochlorite solution, which shall be fed into the lines through a suitable solution feed device, or other methods approved by the engineer. The chlorinating agent shall be readily dissolvable and of a type that will rapidly mix with the water as it is loaded into the water line. Tablets or other solid form shall not be used unless they are dissolved before being placed into the line. The chlorinating agent shall be applied at or near the point from which the line is being filled, and through a corporation stop or other approved connection inserted in the horizontal axis of the newly laid pipe. The water being used to fill the line shall be controlled to flow into the section to be disinfected very slowly, and the rate of application of the chlorinating agent shall be in such proportion to the rate of water entering the pipe that the chlorine dose applied to the water entering the line shall be at least 50 parts per million. The treated water shall be retained in the pipe lines for a period of not less than twenty four (24) hours. At the end of the retention period all treated water shall be thoroughly flushed from the lines until the replacement water in the lines shall have a chlorine residual of not more than 0.2 parts per million. Where it is necessary to place the new lines in service in less than 24 hours, the concentration of chlorine may be increased to 300 ppm and the lines flushed and placed in service in 3 hours. Disinfecting procedures shall conform to AWWA C 60l.

l0. HYDROSTATIC TESTS

All pipe lines constructed under this contract before being accepted, shall be tested at l20% design pressure as described in the following paragraphs. This test shall apply to all newly laid pipe or any valved sections thereof.

The required test pressure (l80 pounds per square inch) shall be maintained over a continuous period of not less than eight (8) hours.

Each valved section of pipe shall be slowly filled with water, being certain that all air is expelled from the pipe by using hydrants, blow-offs or taps at points of highest elevation in the line. The specified pressure shall be applied by means of a pump and flow meter (gpm and amount) connected to the pipe in a manner satisfactory to the engineer. The contractor shall furnish all necessary equipment, materials and labor to satisfactorily make the hydrostatic tests.

After the line section to be tested has been brought to pressure, a visual inspection shall be made of all joints, fittings, valves, and appurtenance. Any leaks thus located shall be corrected before continuing with the test.

If the test indicates a leakage in excess of a rate equal to twenty-five (25) gallons per inch of nominal diameter of pipe line per mile per day (maximum 600 gallon per mile per day total leakage) the cause of such leaks shall be determined and corrected and the line retested until satisfactory results are obtained.

11. **REMOVING AND REPLACING PAVEMENT**

A. When it is necessary to cut existing paving to install utilities the paving shall be repaired as soon after the backfill is consolidated or the cement stabilized backfill has reached sufficient strength as practical. The repair shall be made using Texas Highway Department Type "D" Hot Mix Asphaltic Concrete and shall have a minimum thickness equal to the thickness of the existing surface.

B. Edges along the trenches and around pits shall be saw cut to remove damaged edges and/or surface. Saw cuts shall be straight and parallel to or at right angles to the street or alley center line in so far as practical. Meandering, zig-zag or notched saw lines will not be permitted. The saw cuts shall be such that a minimum of 6" of surface is removed beyond the edges of the trench.

C. The edges of the saw cut and surface of the backfill material shall be tack coated prior to the placing of hot mix asphaltic concrete. The tack coat shall be either RC-250 cut back asphalt or RS2h emulsified asphalt or approved equal. When emulsified asphalt is used for tack coat the asphaltic concrete shall not be placed until the break of the emulsion is complete and all free water has evaporated or has been removed.

D. After the tack coat is cured the hot mix asphaltic concrete shall be placed uniformly throughout the repair area. The edges of the repair shall be squared up and the hot mix asphaltic concrete thoroughly compacted. Any large aggregate that is separated from the mix during the leveling process shall be removed from the surface and disposed of off the project. Care shall be taken that none of the mix over laps the old paving. Any mix that has "scabbed" onto the paving shall be removed before the section is reopened to traffic.

Sufficient mix shall be placed so that the finished repair is from one eight (1/8") inch to one quarter (1/4") inch above the old paving surface to allow for further consolidation by traffic.

12. **TUNNELING UNDER UTILITY LINES, ETC**.

Where pipes, conduits or concrete curbs, gutters or other obstructions are encountered in the construction, the cost of tunneling under such obstructions shall be included as a part of the cost of the pipe line, or other pay items, complete in place.

13. **HIGHWAY CROSSING**

A. The City of Midland will obtain any required permits from the State Highway Department for installation of the water line along and across the highway right-of-way. It shall be the contractor's duty and responsibility to coordinate the time of making the crossing and the manner of handling traffic.

B. Installations of the casing pipe shall be accomplished by boring or open cut trench as indicated on the drawings and in accordance with the Texas Department of Transportation permit and requirements. Equipment used shall be of such size and capacity as to allow the placement of the casing to proceed in a safe and expeditions manner. Installation of the casing and the excavation and removal of the materials

within the casing shall proceed simultaneously.

The boring shall proceed from a pit provided for the boring equipment and workmen. Excavation and location of the pit shall be approved by the Engineer. Boring without the concurrent installation of the casing pipe will not be permitted. The use of water or other fluids in connection with the boring operation will be permitted only to the extent of lubricating cuttings. Jetting will not be permitted. Overcutting in excess of one inch shall be remedied by concrete pressure grouting the entire length of the installation. All joints for casing pipe installed in bore shall be welded. Care shall be taken to keep the casing pipe on the proper line and grade.

C. After the casing pipe has been installed and is accepted by the Engineer, the pipe shall be shoved through the casing. The pipe shall be pushed or pulled through the casing by exerting pressure on the barrel of the pipe and not on the bell, and shall be done in such a manner that the joint is always in compression during the shoving operation. Hardwood, or other suitable material skids shall be banded with stainless steel bands to each joint of pipe In accordance with the pipe manufacturers recommendation. The hardwood skids shall be of sufficient dimensions to allow the bell of the pipe to clear the casing pipe by at least one-half inch. The length of the skid shall be in accordance with the pipe manufacturers recommendations. A minimum of three bands shall be used to secure the skids to the pipe. The skids shall be such that the carrier pipe will be centered in the casing pipe. The design of skids and bonding techniques shall be submitted to the Engineer for approval prior to use.

In general waterline installation in the casing pipe shall conform to AWWA C 600-Section 6 requirements.

After completion of pipe installation in casing, the ends of the casing shall be sealed off by use of concrete grout. The minimum compressive strength of the grout shall be 2,000 psi in 28 days.

14. **SHORING & SHEETING**

14.1 Description

This item shall govern for the Trench Safety Systems required for the construction of all trench excavation to be utilized in the project and including all additional excavation and backfill necessitated by the safety system. A trench shall be defined as a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet. The depth is five feet or more.

Trench Safety Systems include but are not limited to sloping, sheeting, trench boxes or trench shields, sheet piling, cribbing, bracing, shoring, dewatering or diversion of water to provide adequate drainage.

l4.2 Construction Methods

Trench safety systems shall be accomplished in accordance with the detailed specifications set out in the provisions of Excavation, Trench, and Shoring, Federal Occupational Safety and Health Administration (OSHA) Standards, 29CFR, Part 1926, Subpart P, as amended, including Proposed Rules published in the Federal Register (Vol. 52, No. 72) on Tuesday, October 31, l989. The sections that are incorporated into these specifications by reference include Sections 1926-650 through 1926-652. Legislation that has been enacted by the Texas Legislature, being Tex. Rev. Civ. Stat. Ann. arts. 1015q, 2368a.6 (Vernon Supp. 1988) with regard to Trench Safety Systems, is hereby incorporated, by reference into these specifications.

A reproduction of the OSHA Publication 2226 is attached for the convenience of the Contractor. The City assumes no responsibility for the accuracy of the reproduction or that it reflects current law. The Contractor is responsible for obtaining a copy of this section of the Federal Register for his use.

If the contractor elects to use a trench protective system that, in the Proposed Rules, requires "Design by a qualified person or a qualified engineer," [For example see 1926.652(b) (3) and 1926.652(c) (4)], "a qualified person or qualified engineer" shall be a Professional Engineer registered in the State of Texas. The Contractor is responsible for obtaining boring and soil analysis as required for the planned design. The trench excavation is to be designed in conformance with OSHA standards and regulations.

14.3 Safety Program

The Contractor shall submit a safety program specifically for the construction of trench excavation. The trench safety program shall be in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.

14.4 Inspection

The Contractor shall make daily inspections of the Trench Safety Systems to ensure that the systems meet OSHA requirements. Daily inspection is to be made by a "competent person" provided by the Contractor. If evidence of possible cave-ins, or slides, is apparent, all work in the trench shall cease until the necessary precautions have been taken by the Contractor to safeguard personnel entering the trench. It is the sole duty, responsibility and prerogative of the Contractor, not the owner or the Engineer, to determine the specific applicability of the designed trench safety systems to each field condition encountered on the project. The Contractor shall maintain a permanent record of daily inspections.

14.5. Safety Restrictions - work near high voltage lines

The following procedures will be followed regarding the subject item on this contract:

A. Warning signs 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."

B. All equipment except back hoes or dippers that may be operated within ten feet of high voltage lines shall have an insulating cage-type of guard about the boom or arm and insulator links on the lift hook connections.

C. When necessary to work within six feet of high voltage electric lines, notification shall be given the power company 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.

D. 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.

l5. MEASUREMENT AND PAYMENT

l5.l General

The unit price or lump sum price bid on each item, as stated in the proposal, shall include furnishing all labor, superintendence, machinery, equipment, and materials necessary to complete the various items of work in accordance with the plans and specifications. Cost of work or materials shown on the plans and called for in the specifications and on which no separate payment is made shall be included in the bid price on the various pay items.

l5.2 Water Lines

A. Measurement

The length of pipe lines for the various sizes, classes and types to be paid for will be determined by measurement along the center lines of the pipe installed, measurement being made from the center of fitting to center of fitting or end of pipe, without any deduction for the length of intermediate fittings or valves including pipe installed in casing.

B. Payment

Furnishing and installing approved type pipe of the various sizes and classes shown on the plans or as required will be paid for at the unit price bid per linear foot for furnishing and installing the various sizes and classes of approved pipe complete in place. The unit price bid shall be complete compensation for furnishing and installing the pipe complete in place including all excavation, backfilling, testing and disinfection of lines and shall include any and all incidental work not otherwise included in the bid items or otherwise provided for in the specifications.

l5.3 Solid Rock Excavation

All excavation for pipe trenches shall be unclassified and no extra compensation will be made for solid rock excavation. The contractor is expected to make boring of his own and satisfy himself to the character of material which will be encountered.

l5.4 Gate Valves or Butterfly Valves

A. Measurement

Gate valves or butterfly valves will be counted in the field after installation by the size and type specified and actually installed.

B. Payment

The unit price bid for each type and size valve shall be complete compensation for furnishing and installing the valves, complete in place, including the furnishing and installation of cast iron valve boxes on all valves to the finished grade of the adjacent surface. All valves in paved areas shall be set to finish pavement grades

l5.5 Fire Hydrants

A. Measurement

Fire hydrants will be counted in the field after installation in accordance with the plans and specifications.

B. Payment

The unit price bid shall be complete compensation for furnishing and installing the fire hydrants, complete in place, each, including lead pipe the gravel drain, concrete blocking, extension or additional bury depth as required for a complete installation.

I5.6 Service Connections

A. Measurement

The number of service connections of the type and size specified to be paid for will be counted in the field after complete installation.

B. Payment

The unit price bid shall be complete compensation for furnishing and installing the service connections, complete in place, including the meter box and lid, service line, corporation stop, meter stop and incidentals required for a complete installation.

I5.7 Ductile Iron Fittings

A. Measurement

The weight of the various ductile iron fittings and specials were estimated by using the standard weights for cast iron fittings as established by the American Water Works Association or American Standard Association. Measurement of ductile iron fittings will be made by counting the actual number of fittings installed and multiplying the number of fittings by the catalog weights for those types of fittings actually installed. Allowance will be made for glands and bolts.

B. Payment

The ductile iron fittings or specials required in the construction of the various size pipe lines as shown on the plans or as required will be paid for at the unit price bid per ton for furnishing and installing the ductile iron fittings complete in place. The unit price shall also include all materials, excavation, backfilling, concrete blocking and other incidental work required for the complete installation.

I5.8 Steel Cylinder Concrete Pipe Fittings

A. Measurement

No separate measurement or count of fittings and specials for steel cylinder concrete pipe will be made.

B. Payment

No separate payment will be made for fittings or specials for steel cylinder concrete pipe used on this project, but the cost of same shall be included in the price bid per linear foot for the various classes and sizes of pipe in the bid proposal.

l5.9 Casing Pipe In Bored Hole Or Open Cut

A. Measurement

Measurement of the casing pipe, of the type and size specified, shall be made by the linear foot of casing installed complete in bored hole or installed complete in open cut.

B. Payment

The unit price bid per linear foot for casing in bored hole or for casing in open cut shall be complete compensation for furnishing and installing the casing, complete in place, including all pits, boring equipment, materials and labor required for a complete installation. Payment for carrier pipe installed in the casing will be made as stated under Waterlines above.

l5.l0 Paving Cut and Repair

A. Measurement

Measurement of paving cut and repair will be made by the square yard for replacing pavement of the type specified. The area of the pavement replaced shall be determined by actual measurements on the ground; however, measurement will be limited to areas within widths of cuts as shown on the plans unless additional widths are authorized by the engineer. Any pavement removed or damaged outside of the aforementioned limits shall be replaced as prescribed with these specifications, but will not be measured for payment.

B. Payment

The unit price bid, per square yard, shall be complete compensation for cutting and removing the pavement, and constructing the concrete base and surfacing of the type specified, all as specified herein and as shown on the plans.

15.ll Trench Safety Systems, Sheeting and Shoring

A. Measurement

Trench Safety Systems shall be measured by the linear foot along the centerline of trench including manholes and other line structures.

B. Payment

Payment for Trench Safety Systems, measured as prescribed above, shall be made at the unit price bid per linear foot of "Trench Safety Systems: Payment of all work prescribed under this item shall be full compensation for the Trench Safety Systems including all Engineering cost and any additional excavation and backfill required, for furnishing, placing, maintaining and removing all shoring, sheeting, or bracing; for dewatering or diversion of water; for all jacking and jack removal; and for all other labor, materials, tools, equipment and incidentals necessary to complete the work.

Revised 08/07

GRAVITY FLOW PIPE SEWERS AND FITTINGS
FOR WASTE WATER AND STORM WATER

PART I – GENERAL

1.01 SCOPE

A. The work covered by this specification shall include the furnishing of all material, labor and equipment to construct, complete in place, all Gravity sewers including jointing, gaskets, fittings, castings, mortar, concrete, the placing of sewer pipe, and the construction of manholes and other appurtenance, all in accordance with the details shown on the plans and these specifications for the drainage of sanitary and/or storm sewage.

B. Sanitary and storm sewer lines constructed under these specifications shall be straight in grade and alignment between manholes. Manholes shall be constructed at any change in grade and at any change in alignment. In general manholes are to be constructed at 300 feet intervals or less with the maximum distance between manholes being 350 feet when approved by the Engineer.

1.02 QUALITY ASSURANCE

A. The Contractor, at the Engineer's request, shall furnish a certificate from the manufacturer of the pipe and fittings that the manufacturer is fully competent and capable of manufacturing sewer pipe, fittings, and accessories of the type, size and grade proposed for use in this project that are of uniform texture and strength that will fully comply with these specifications and have so manufactured this class of pipe in sufficient quantities to be certain that it will meet all normal field conditions of usage. The manufacturer must have adequate equipment and quality control facilities to be sure that each extrusion casting or run of pipe is uniform in texture, dimensions, and strength.

B. All PVC, HDPE, or plastic resin based pipe and fittings shall be covered during storage to protect them from excessive heat and direct sunlight.

C. All pipe and accessories shall be stored above ground and fully supported so that they will not bend or deflect excessively under their own weight.

D. Pipe in any way damaged or deformed during storage shall not be incorporated into this project, but at the direction of the Engineer, shall be permanently removed from the job site and project area.

1.03 TYPE OF PIPE

A. Pipe for sanitary sewers 15 inches in diameter and less shall be PVC. Pipe for storm drains 15 inches in diameter and less may be corrugated steel pipe when called for on the plans and in the bid proposal. Pipe 18 inches in diameter and larger shall be of the type shown on the plans and bid proposal.

B. The contractor may be allowed to bid a choice of two or more of the pipe materials when pipe 18 inches in diameter and larger are proposed for use on a project. When such choice is allowed the permissible choices will be clearly stated on the plans and/or bid proposal and a blank space will be provided for the contractor to write in the type of pipe proposed for use on the project. When such blank spaces are provided, the contractor must choose one of the permitted pipe materials as specified in part 2 “Materials” of these specifications and write in the type of pipe bid. Failure to write in the type of pipe bid may be reason to disqualify the bid. One or more types of pipe 18 inches in diameter and larger may be excluded from consideration on any given project by notes on the plans and/or the bid proposal.

PART 2 – MATERIALS

2.01 POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS FOR SANITARY AND STORM SEWERS

A. GRAVITY SEWERS

(1) Pipe and fittings in nominal diameters from 4-inch through 15-inch shall be manufactured in accordance with ASTM D3034, “Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings” and pipe and fittings in diameter 18” through 36” shall be manufactured in accordance with ASTM F-679 or ASTM F-794, closed profile, subject to the modifications and limitations below.

B. MODIFICATIONS AND LIMITATIONS

(1) The concrete slab manhole tops shall be reinforced with number 4 steel reinforcing bars spaced at 12 inches on center each way. Additional diagonal bars shall be placed on 4 sides around the manway opening. The diagonal bars shall be number 4 rebar with a minimum length equal to the diameter of the manway opening plus 4 inches. The steel reinforcing mat shall be placed in the bottom of the slab with 1-1/2 inches protective covering.

(2) The term Dimension Ratio (DR) or standard dimension ratio (SDR) is the ratio of the average outside pipe diameter to the minimum wall thickness rounded to the nearest 0.5. The maximum DR for PVC sewer pipe shall be 35. PVC pipe sewers that will have less than 4 feet of cover shall be DR26.

(3) PVC pipe manufactured under ASTM F679 or F794 shall have a wall thickness that will meet or exceed the D.R. and stiffness specified herein. The minimum pipe stiffness for pipe having a DR of 26 shall be 115 psi. The minimum pipe stiffness for DR 35 pipe shall be 46 psi.

(4) Where DR 26 pipe is specified, all necessary fittings shall be the same as for SDR 35 PVC pipe.

(5) Minimum wall thickness for ASTM D-3034 PVC pipe shall be as follows:

Nominal Size (in.)	Min. Wall Thickness (in.)	
	DR 26	DR 35
4	0.162	0.120
6	0.241	0.180
8	0.323	0.240
10	0.404	0.300
12	0.481	0.360
15	0.588	0.437

The minimum wall thickness for PVC pipe meeting ASTM F-679 or F-794 requirements shall be the thickness as set forth in said ASTM specification that will meet or exceed the pipe stiffness and DR required.

(5) The identification markings as shown in Section 12 of ASTM 3034 shall note the specified DR of 26 where applicable.

(6) All pipe and fittings shall have the dimensions for inside diameter, outside diameter, etc. as shown in ASTM D3034 and/or ASTM F-679 except that the inside diameter DR 26 may be reduced by the added wall thickness.

(7) The pipe and fittings shall be homogeneous throughout and free from visible cracks, holes, foreign inclusions, or other injurious defects. The pipe shall be as uniform as commercially practical in color, opacity, density, and other physical properties.

(8) The Contractor shall provide wyes, tees, bends, adapters, and any other fittings called for in the specifications and/or shown on the plans or directed by the Engineer.

(9) The standard length of ASTM, D-3034 SDR 35 or SDR 26 PVC pipe under this specification shall be 20 feet with a minimum of 10 feet, except that all pipe used in service lines shall not exceed 10 feet in length unless otherwise approved by the Engineer. The standard laying length for ASTM F-679 PVC pipe shall be 13 feet. The Engineer must approve other laying lengths.

C. SEWER LATERALS AND CONNECTIONS

Pipe and fittings for service lines shall be the same material and thickness class as required for the main sewer. Schedule 40 PVC pipe may be used for 4" service lines when PVC pipe meeting requirements of ASTM 3034, SDR 35 is required.

D. JOINING SYSTEMS

(1) PIPE JOINTS

The pipe shall be joined with an integral bell, bell and spigot type rubber gasket joint. Each integral bell joint shall consist of a formed bell complete with a single rubber o-ring gasket. Gaskets shall be manufactured in accordance with ASTM F477 and shall be installed in accordance with the pipe manufacturer's instructions using all the necessary materials, lubricants and equipment recommended by the manufacturer.

For pipe 18" through 36" gaskets shall be factory installed and chemically bonded to the bell end of the pipe.

Lubricant shall be water soluble, non-toxic and have no deteriorating effects on gasket or pipe materials and shall not support the growth of bacteria. Lubricant shall be suitable for use at temperatures from 5^{o} to 120^{o} F (-15^{o} to 50^{o} C). Containers shall be labeled with the manufacturer's name and identified as PVC pipe joint lubricant. Each lubricant container shall have printed instructions for usage and joint assembly.

Field welded joints will not be allowed.

(2) FITTING JOINTS

All fittings shall utilize rubber gasket joints of the same type design and specifications as pipe joints.

(3) PIPE SPIGOT

The pipe spigot shall have a bevel and an insertion stop mark. The assembled joint shall be designed so the gasket shall be radially compressed to assure a positive water-tight seal for all installation conditions recommended by the manufacturer and under all combinations of production tolerances for the joint components. Each size joint shall be qualified to no leakage under various test conditions in conformance with ASTM Specification D-3212, "Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals."

E. INSPECTION AND TESTING

(1) INSPECTION REQUIREMENTS

Certification: as the basis of the acceptance of the material, the manufacturer will furnish a certificate of conformance to these specifications. The manufacturer will furnish other conformance certification in the form of affidavit of conformances, test results, and copies of test reports.

(2) PHYSICAL TEST REQUIREMENTS

For each 4,000 linear feet of pipe manufactured of each class and size of pipe, the following certified test data shall be required:

1. The basic dimensions shall be measured.
2. The allowable crush load (lbs/ft ^{2}) shall be calculated.
3. Impact resistance, fusion quality and ductility shall be tested.

F. MARKING AND DELIVERY

Each pipe shall be identified with the name of manufacturer, nominal size, cell classification, ASTM designation F794, Uni-Bell Plastic Pipe Association designation Uni-B-9, the pipe stiffness designation “PS-46 psi” and manufacturer’s date code.

1. MANHOLE CONNECTIONS

The Contractor shall provide smooth pieces of pipe for connecting sewer line into manholes. The Contractor shall be required to assist the manhole gasket supplier with the nominal outside diameter of these smooth pieces of pipe, as manufactured. There shall be only one plain end thickness for each diameter of pipe specified for the project.

2. DELIVERY

All pipe couplings and fittings shall be prepared for standard commercial shipment.

The pipe shall be inspected upon delivery to the job site for final acceptance. The contractor shall be responsible for all material furnished by him and he shall replace, at his own expense, all such material that is found to be defective in manufacture or which has become damaged in handling until final acceptance has been made. Pipe, which exhibits excessive ovalty or curvature, shall be rejected.

PVC pipe and fittings shall be covered during storage to protect them from excessive heat and direct sunlight.

All pipe and accessories shall be stored above ground and fully supported so as not to bend or deflect excessively under its own weight.

2.01(a) Metallic Marking Tape (For PVC Sewer Pipe)

2.01 (a).1 General

When non-metallic pipelines are to be installed, then the Contractor shall furnish and lay, above the pipeline, a continuous strip of metallic identification tape.

2.01 (a).2 Tape Material

The metallic identification tape shall be at least two inches (2”) in width and shall be of corrosive resistant metal of sufficient thickness to be stable and reflect electronic signals to electronic pipeline detector when buried to a dept of twenty-four (24”) below normal ground level.

The metallic tape shall be painted green on one side and shall have 1-inch high letters painted continuously on the same side of the tape which read, “CAUTION: BURIED SEWER LINE BELOW” or other words to this effect.

The marking tape shall be “Detectable Marking Tape”, as manufactured by the Omega Marking Company, or equal approved by the Engineer.

2.01(a).3 Construction Methods

The Contractor shall backfill over non-metallic pipelines to a depth which is less than twenty-four (24”) and not more than twelve inches (12) from the top of the cut of the ditch section in which the pipeline is laid. Contractor shall stop the backfilling material to a generally uniform level. All machine tamping, jetting and other compaction activities shall be accomplished up to this point of height in the backfilling the marking tape is placed in the trench.

The Contractor shall then lay the marking tape in the pipe trench and shall be held in position by the spot placement of backfill materials over it to keep it from sliding t the sides and/or from being blown about in the ditch by the wind. The tape shall be lid with the painted side, which shall also be the side with the identification lettering on it, in the “up” position. The tape shall be laid in the flat position and kept there until backfill is accomplished.

The Contractor shall then complete the backfilling operation in such a manner that the marking tape is not cut, crimped, ruptured or separated by the backfilling work.

2.01(a).4 Measurement and Payment

No separate pay item will be provided for furnish and placing the marking tape. This item shall be considered subsidiary to the non-metallic pipe being placed.

2.02 CORRUGATED STEEL PIPE (CSP) FOR STORM SEWERS AND CULVERTS ONLY

1. PIPE

A. STEEL SHEET STOCK

(1) Corrugated steel pipe shall be manufactured using galvanized steel sheet AASHTO M 218 or aluminized steel sheet AASHTO M 274.

(2) The lining for smooth lined corrugated steel pipe shall be polymer coated on both sides. The minimum thickness of the polymer coating shall be 10 mils.

B. PIPE DESIGNATION

(1) Pipe furnished shall be manufactured in accordance with AASHTO Specification M 36.

(2) Corrugated steel pipe shall be one or more of the following type as designated in AASHTO M 36.

Type I - Full circular cross section having helical corrugations.

Type IA - Full circular smooth lined pipe constructed of an outer shell having helical corrugations with a smooth sheet lining attached to the outer shell at helical lock seams.

Type IR - Full circular cross section with helical rib protruding outward.

Type II - Type I pipe formed into a pipe arch.

Type IIA - Type IA pipe formed into a pipe arch.

The type of pipe furnished on this project will be as shown on the plans and in the bid proposal.

When no type of pipe is called for on the plans or in the bid proposal helically corrugated circular single wall pipe (Type I or Type IR) shall be furnished.

C. MANUFACTURERS CERTIFICATION

(1) The pipe manufacturer will be required to certify the adequacy of the pipe furnished for the application and design life of the project.

(2) The design life for storm sewers constructed under this specification is 50 years.

(3) The pipe manufacturer will be required to run soil pH, soil resistivity and such other test as they deem necessary to design pipe thickness and protective coatings required to assure the adequacy of the pipe supplied.

D. CORRUGATION AND MINIMUM THICKNESS

(1) Thickness used in this specification refers to the bare steel thickness before coating is applied. The minimum thickness for any single wall corrugated steel pipe furnished under this specification is 16 gage.

(2) All corrugated steel pipe furnished under these specifications shall have helical corrugations.

(3) Circular corrugated steel pipe 48” in diameter and smaller shall have 2-2/3” x ½” corrugation and shall be a minimum of 16 gage in thickness.

Circular corrugated steel pipe larger than 48” in diameter may have either 2-2/3 x ½” or 3” x 1” corrugations. The minimum thickness for corrugated steel pipe larger than 48” in diameter and having 2-2/3 x ½” corrugation shall be as follows:

54” Diameter - 12 gage
60” Diameter - 10 gage
66” through 90” Diameter - 8 gage

The minimum thickness for circular corrugated steel pipe having 3” x 1” corrugation and diameters of 54” through 90” shall be 14 gage.

(4) For smooth lined corrugated steel pipe the minimum thickness for the lining shall be 20 gage and the minimum thickness for the outer shell shall be 18 gage.

The corrugations for the outer shell shall be 2-2/3” x ½” for pipe 48” diameter and smaller. Larger diameter pipe may use 3” x 1” corrugations in the outer shell. The sum of the thickness for the outer shell and the liner shall be a minimum of one thickness unit greater than the thickness that would be required for single wall pipe of the same diameter or span.

(5) Spiral rib steel pipe (Type IR) shall have outward projecting spiral corrugations of ¾” x 1” at 11-1/2” on center in accord with AASHTO specification M 36 or ¾” x ¾” at 7-1/2” on center as described in AASHTO specification M 196.

The minimum thickness for spiral rib pipe 48” in diameter and smaller shall be 16 gage.

The minimum thickness for spiral rib pipe 54” and 60” in diameter shall be 14 gage.

The minimum thickness for spiral rib pipe 66” and 72” in diameter shall be 12 gage.

The minimum thickness for spiral rib pipe larger than 72” in diameter shall be as shown on the plans.

(6) The corrugations and minimum thickness of corrugated steel pipe arch shall be in accord with the following table:

EQUIV. Dia. (in.)	2-2/3" x ½" Corrugations Span (in.)	Rise (in.)	Gage	3" x 1" Nominal Size Span (in.)	Rise (in.)	Gage
15"	17	13	14			
18"	21	15	14			
24"	28	20	14			
30"	35	24	14			
36"	42	29	14	40	31	16
42"	49	33	12	40	36	14
48"	57	38	10	53	41	12
54"	64	43	10	60	46	12
60"	71	47	8	66	51	12
66"	77	52	8	73	55	12
72"	83	57	8	81	59	12
78"				87	63	12
84"				95	67	12
90"				103	71	12

When 2-2/3" x ½" corrugations are called for on the plans and/or on the bid schedule the substitution of 3" x 1" corrugations will be allowed only upon the demonstration by the contractor that there is sufficient head room to accommodate the higher rise for arch pipe of this cross section.

E. END TREATMENT AND JOINING

(1) The ends of all corrugated steel pipe furnished for this project shall be rolled to provide circumferential corrugations for coupling. The end corrugations for all pipe 48" in diameter and less shall be 2-2/3 x ½". The end corrugations for single wall helically corrugated steel pipe or for smooth lined corrugated steel pipe 54" in diameter and larger shall be the same pitch as the pipe furnished and may be either 2-2/3" x ½" or 3" x 1". The end corrugations for spiral rib (Type IR) corrugated steel pipe shall be 2-2/3" x ½" or 3" x 1" for pipe 54" and larger in diameter.

(2) Coupling bands shall be made of the same material as the pipe and shall be not more than 3 nominal sheet thicknesses lighter than the pipe joined and in no case less than .052 inch.

Jointing devices for joining corrugated steel pipe shall have a gasket and shall produce a joint meeting the infiltration/exfiltration requirements of these specifications.

If it should be necessary to cut a joint of Helically corrugated pipe and join the unreformed end to another section of pipe or fitting extra width bands will be required and special care must be taken to insure a water tight connection.

Locking bands shall be corrugated and shall securely fit into at least one full annular corrugation. The corrugations on the locking band must match the corrugations on the pipe being joined.
The minimum width for locking bands is as follows:

for 2-2/3 x ½ inch corrugations	10-1/2 inches
3 x 1 inch corrugation	12 inches

For helical corrugations that have not been reformed the coupling bands must be at least 2 inches wider than the widths listed above.

Unless shown otherwise on the plans all bolts for coupling or locking bands shall be ½ inch in diameter. Bands 12 inches wide or less shall have a minimum of 2 bolts. Bands wider than 12 inches shall have a minimum of 3 bolts.

Bolts must be galvanized in accordance with AASHTO Designation M232 or ASTM A164 Type RS.

(3) Gaskets for corrugated steel pipe shall be closed cell expanded rubber and shall be formed into a continuous band. Gaskets may be either “O” ring or flat band as recommended by the pipe manufacturer. Flat band gaskets shall be a minimum of 7” wide and 3/8” thick. “O” ring gaskets shall be 13/16” diameter minimum for pipe 36” in diameter or less and 7/8” for pipe larger than 36” diameter and having ½” deep corrugations. “O” ring gaskets shall be a minimum of 1-3/8” diameter for pipe having 1” deep corrugations. When “O” ring gaskets are furnished, an additional flat gasket shall be furnished and placed between the overlapping ends of the coupling band. This flat gasket shall completely fill the gap between the “O” rings. All gasket materials shall be capable of producing a water tight joint that will meet the leakage requirements of these specifications.

2. CORRUGATED STEEL MANHOLE FITTINGS, AND CLEAN OUTS

A. FABRICATION

(1) Corrugated steel manholes and fittings shall be constructed of the same material and type of pipe furnished for the storm sewer line with the exception that manhole risers shall be helical corrugated single wall circular pipe when used with pipe arch sewers or smooth lined corrugated steel pipe. The thickness of the manhole riser shall be the same as would be required for the same type and diameter pipe if it were used for the storm sewer.

(2) Cleanouts for use on shallow storm sewer and inlet leads shall be manufactured from pipe meeting the requirements of these specifications. Cleanouts shall be constructed to the dimensions and in accord with the details shown on the plans.

B. CONNECTION TO MANHOLES AND CLEANOUTS

(1) Stub outs from manholes and cleanouts for connection to storm sewers and inlet leads shall have annular corrugations and shall be compatible with the type and size of pipe being connected. Stub outs provided for connection to PVC pipe storm sewers and inlet leads shall be sized so that the PVC pipe can be inserted into the stub leaving the least amount of annular space between the PVC pipe and the CSP practical. The PVC pipe shall be connected using an approved molded rubber or PVC sleeve connector clamped to both pipes with stainless steel straps.

The connector shall be a flexible coupling as manufactured by Fernco, 300 S. Dayton St., Davison, MI., or approved equal.

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C. LEAKAGE

Manholes, fittings and cleanouts shall meet the leakage requirements of these specifications.

D. SHOP DRAWINGS

The contractor shall submit shop drawings of all manholes, fittings and cleanouts for approval prior to their fabrication. A minimum of 5 sets of drawings for each manhole, each fitting and each cleanout shall be submitted.

E. CONCRETE SLAB TOPS

A reinforced concrete slab top shall be constructed for each manhole and cleanout. The slab shall extend to one foot (1') outside the riser section on all sides and shall have an eccentric 2' diameter opening for the manway located at the outside edge of the riser section. For manholes and cleanouts designated for standard manhole rings and covers the concrete top shall be 8 inches thick and shall be finished smooth to receive the manhole ring.

For manholes designated to receive pressure type manhole rings and covers the concrete slab top shall be a minimum of 12 inches thick and shall have L bolts imbedded in the concrete to fit the requirements of the manhole ring furnished. The slab shall be finished smooth to receive the manhole ring. The manhole ring shall be securely bolted to the slab and sealed using "Ram Nek" or an approved equal bitumastic sealer between the manhole ring and the concrete slab.

The concrete slab manhole tops shall be reinforced with number 4 steel reinforcing bars spaced at 12 inches on center each way. Additional diagonal bars shall be placed on 4 sides around the manway opening. The diagonal bars shall be number 4 rebar with a minimum length equal to the diameter of the manway opening plus 4 inches. The steel reinforcing mat shall be placed in the bottom of the slab with 1-1/2 inches protective covering.

F. PRESSURE MANHOLE RING AND COVER

(1) Pressure type manhole rings and covers shall be Western Iron Works No. 380-24P or approved equal. The manhole cover shall be sealed with an "O" ring gasket in a ring groove and shall be secured to the ring by six (6) 5/8-inch stainless steel bolts.

(2) The ring shall have six (6) 1-1/4 inch bolt holes in the flange for securing the ring to the concrete slab top on the manhole.

3. CORRUGATED STEEL PIPE SLOTTED DRAIN

(1) Corrugated steel pipe slotted drains shall be fabricated from full circle corrugated steel pipe conforming to these specifications.

(2) C.S.P. Slotted drains shall be of a type as manufactured by "Contech Construction Products, Inc.", "Texas Corrugators", "Caldwell Culvert Company" or approved equal.

(3) The upstream end of CSP slotted drains shall be equipped with a bend and a ring and cover of the some size as the pipe from which the slotted drain was fabricated to allow cleaning equipment to be inserted into the slotted drain. The ring and cover shall be Nenah Foundry Co. R-5901 open grate or R-5900 solid lid or approved equal. Unless shown otherwise on the plans the open grate shall be furnished.

(4) When slotted drain is to be connected to PVC leads, molded rubber or PVC flexible connector as specified for connections to manholes and cleanouts shall be furnished.

4. DAMAGED COATING

A. PROTECTION OF PIPE

(1) Pipe fittings and specials shall be handled and stored in a manner that will minimize damage to the coating.

(2) The fabrication process shall be designed to minimize the burning of coatings during welding.

(3) Pipe and/or fittings showing excessive abuse or damage will be rejected.

B. REPAIRING DAMAGE

(1) Pipe on which the metallic coating has been burned by welding or has been otherwise damaged in fabricating or handling, shall be repaired. The repair shall be done so that the completed pipe shall show careful finished workmanship in all particulars.

(2) The damaged area shall be cleaned to bright metal by blast cleaning, power disk sanding, or wire brushing. The cleaned area shall extend at least ½ inch into the undamaged section of the coating. The cleaned area shall be coated within 24 hours and before any rusting or soiling.

(3) Zinc-rich paint shall be applied to a dry film thickness of at least 0.005 inches over the damaged section and surrounding cleaned area. Zinc-rich paint shall be used for repair of damage to all types of metallic coating -zinc, aluminum, and aluminum-zinc alloy.

2.03 CAST-IN-PLACE CONCRETE SEWER PIPE (NON-REINFORCED) FOR STORM SEWERS ONLY

1. DESCRIPTION

This item shall cover machine cast-in-place monolithic non-reinforced concrete pipe, which shall consist of Portland cement concrete placed in a prepared trench at such locations and grades shown on the plans and intended to be used for the conveyance of storm water. Items and item numbers referred to in this specification are the items as given in the "Texas State Department of Highways and Public Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges."

2. MATERIALS

The cast-in-place pipe shall be constructed of Class "C" concrete. The concrete shall meet the requirements of Item 421, "Concrete for Structures," and Special Provision thereto, except as otherwise noted herein or on the plans. Type III Portland Cement shall be used.

The minimum compressive strength for concrete used in this item is 4000 psi. Backfilling operations may proceed when the concrete has reached 2000 psi compressive strength.

The coarse aggregate grading for pipe diameters 48 inches or less shall conform to that of Aggregate Grade No. 3, one inch (1") maximum size aggregate under Item 421. For pipe diameters over 48 inches, Coarse Aggregate No. 2, one and one third inch (1-1/3") maximum size aggregate shall be used.

No concrete having a slump in excess of 2" will be permitted for use in pipes with diameters of 48 inches and over. For pipes with diameters less than 48 inches, no concrete having a slump in excess of 3" will be permitted for use. At the option of the Contractor, sections of precast reinforced concrete pipe (D-load) may be substituted for cast-in-place concrete pipe. Pipe and installation shall conform to the requirements of Item 465, "Pipe Sewers." Backfill shall be in accordance with the requirements for other storm sewers in these specifications using crusher fines (chat).

3. PIPE MAKING EQUIPMENT

The pipe shall be constructed with equipment specially designed for constructing cast-in-place monolithic concrete pipe. The equipment shall be acceptable to the Engineer and the Contractor may be required to furnish evidence of successful operation in other work of the equipment he proposes to use. Equipment not suitable to produce the quality of work required for the pipeline will not be permitted to operate on the project.

4. DIMENSIONS AND TOLERANCES

The design shell thickness shall be as specified in Table 1.

TABLE I

Internal Diameter inches	Min. Shell Thickness inches
18	2
24	2-1/2
30	3
36	3-1/2
42	4
48	5
54	5-1/2
60	6
66	6-1/2
72	7
84	8
96	9
108	10
120	11

Variation in the internal diameter shall not exceed plus or minus 3 percent. The maximum allowable deviation form the true grade of the design invert of the pipe shall not exceed ½ inch either side of true grade. Where deviation from true grade occurs, true grade shall be re-established at a maximum departure of one-eighth inch per foot.

5. EXCAVATION AND BACKFILL

Excavation shall be in accordance with the requirement for other types of storm drains, except as modified herein. The trench shall be excavated in the lines and grades shown on the plans or as directed by the Engineer. The width of the trench shall be sufficient to accommodate travel of the pipe machine only. The bottom of the trench shall be shaped to the nominal outside circumference of the pipe. Excavation shall be performed from the outlet to the inlet. If the trench is over-excavated for the bottom 210 degrees of the pipe the excess area shall be filled with concrete. If rock is encountered, it will be removed at least 6 inches below the bottom of the pipe and the trench refilled with material sufficiently compacted to

allow operation of the machine and provide a smooth firm surface. The sidewall of the pipe shall be placed against undisturbed material.

Backfill material will be a crusher fine (chat) as described elsewhere in these Specifications. No backfill other than permitted for curing purposes shall be placed until the line has been inspected and approved by the Engineer. The trench may be completely backfilled after the pipe has been in place at least 24 hours and concrete strength requirements have been reached. Light traffic, axle load less than 6,000 pounds, may be routed over the pipe after backfill has been completed for twenty-four (24) hours. Unrestricted traffic may be permitted over the pipe after the backfill has been in place for forty-eight (48) hours.

All backfill material shall be mechanically compacted to 95% modified proctor or as directed by the Engineer.

6. CONSTRUCTION

All surfaces against which concrete are to be placed shall be free from standing water, mud, and debris. Absorptive surfaces against which concrete are to be placed shall be moistened thoroughly so that moisture will not be drawn from the freshly placed concrete.

The concrete shall be placed in one operation around the full circumference of the pipe by means of a traveling form. The forms shall be of sufficient strength to withstand vibrating or tamping the concrete and to permit workmen to walk on the forms without causing springing or bulging at any point.

As the traveling form moves forward, forms shall be placed inside the newly formed pipe to support a minimum of 230 degrees of the upper portion of the pipe.

The concrete shall be vibrated, rammed, tamped or worked with suitable appliances until the concrete has been consolidated to the maximum practicable density, free of rock pockets, and closes snugly against all surfaces or forms and provides a bond between the pipe shell and supporting earth.

When placing operations cease for any reason, the end of the pipe shall be left rough with a slope of approximately 45 degrees. The ends of the pipeline shall be covered with canvas or other suitable cover material to prevent excessive loss of moisture from the interior of the pipe already placed.

When starting pipe laying operation from a previously laid cast-in-place pipe or section of pre-cast pipe, a construction joint shall be made by excavating a “bell” completely around the end of the existing pipe and constructing a concrete collar to extend at least one foot either side of the joint with a minimum thickness equal to that of the wall of the pipe. The end of the existing pipe shall be clean and damp before continuing pipe making operations. Cleaning of the construction joint shall consist of removing all latency, loose or defective concrete, coatings, and any other deleterious materials.

All forms shall be clean and shall be placed at the trench side at the location of their proposed use for inspection by the Engineer. Forms, which are defective in any way, will not be used, and upon condemnation they shall be removed from the site of the work. The forms shall not vary more than ½ inch from the lower edge of a straightedge laid parallel to the centerline of the form, and shall be free of any holes larger than 5/8 inch in greatest dimension. The pipe machine shall be thoroughly clean and serviced prior to the placing of the concrete. Particular attention will be given to all parts of the machine with which concrete comes into contact.

Concrete chutes or trunks shall be provided to reach within 1 foot of the pipe machine hopper. The end of the chute or trunk shall discharge the concrete at the center of the hopper. Provisions shall be maintained to minimize segregation of the concrete mix in all phases of the operation.

Delays in placing shall be handled as follows or as otherwise directed. The concrete hopper on the pipe laying machine shall be kept ½ full at all times, provided, however, that when placing operations cease or are delayed for any reason for more than 20 minutes, the pipe machine shall be pulled forward until all the concrete is exhausted and until the top troweling skirt is clear of the concrete. If the pipe laying operation proceeds within one hour of the time of the last placement, no further steps need to be taken. However, if longer than one hour has elapsed, then a construction joint must be made as previously described. The end of the pipe shall be left rough and at the natural slope when the machine is moved forward.

All junctions of pipe shall be provided for at the time the cast-in-place pipe is placed.

Inside forms shall be removed from the pipe not sooner than 4 hours nor longer than 24 hours after placement of the concrete. Care shall be taken when removing forms to prevent damage to the pipe. The inside of the pipe shall be carefully inspected for imperfections in placement, and any required repairs or smoothing shall be made immediately to provide a uniform interior surface. No wash, mortar or concrete shall be applied to a surface not properly moistened or cleaned. Visible cracks shall be brushed with cement paste or chipped out and pointed up with cement mortar. Any cracks that appear to go through the shell shall be grooved and filled with mortar. All construction operations and methods for providing a watertight pipeline shall be the responsibility of the Contractor. Mortar shall consist of one part cement; two parts well graded sand passing 1/8-inch sieve. Wash shall consist of four parts cement, one part fire clay. The finished surface of the concrete pipe shall be substantially free of fractures, cracks and surface roughness.

7. CURING CONCRETE

Immediately after the concrete is placed the exposed surface of the concrete shall be cured by covering the top with a sheet of polyethylene film sealed with dirt along the edges. During the curing period following the placement of the concrete, the ends of the pipeline and all other openings into the pipeline shall be covered with canvas or other suitable material, except at locations where work is actually in progress. The inside surface of the pipeline shall not be cured.

8. MANHOLES AND BENDS

Manhole bases shall be hand formed on top of the pipe as soon as the pipe-placing machine has passed. Where required, the extra width for manholes shall be excavated ahead of the pipe placing operation. The base for the manhole shall be formed to receive a standard precast concrete barrel section and shall be shaped and smoothed so that the joint can be sealed water tight by use of “Ram Nek” or other approved joint sealing material.

Bends may be formed and cast in place or fabricated using precast reinforced concrete pipe (load D). Design and shop drawings shall be submitted to and approved by the Engineer before the bends are fabricated or cast.

9. MEASUREMENT

Measurement of manholes shall be as specified elsewhere in these specifications. Measurement of bends shall be as for other storm sewer pipe. The method of pipe measurement shall conform to that for other types of storm drainpipe in the section or storm drains in these specifications.

10. PAYMENT

Payment for cast-in-place non-reinforced pipe sewers, measured as prescribed above, will be made at the unit price bid per linear foot for the various sizes of “Pipe Sewers (Cast-in-Place)” complete in place. Payment for manholes shall be as specified elsewhere in these specifications.

Such payment shall be full compensation for furnishing all concrete materials, precast reinforced concrete pipe used in place of cast-in-place pipe, and for all other materials, tools, labor, equipment, and incidentals required to perform the applicable work prescribed herein.

When precast reinforced concrete pipe at the Contractor’s option is used in a line of cast-in-place pipe the additional excavation for the pipe will be subsidiary.

2.04 CENTRIFUGALLY CAST FIBERGLASS REINFORCED RESIN PIPE SEWERS

A. DIRECT BURY PIPES

1. GENERAL

All pipes, joints and fittings shall be manufactured in accordance with the requirements of the applicable standard given below except as noted herein:

Service	Standard
Non pressure Sanitary Sewer	ASTM D3262
Sewer Force Main and Effluent Lines	ASTM D3754

Pipes shall be centrifugally cast, fiberglass-reinforced polyester resin as manufactured by Hobas USA, Inc. or approved equal.

Minimum pipe stiffness when tested in accordance with ASTM D2412 shall be 46 psi.

2. MATERIALS

The manufacturer shall use only approved polyester resin systems for which he can provide a proven history of performance in these particular applications. The historical data shall have been acquired from a composite material of similar construction and composition as the proposed product.

The reinforcing glass fibers used to manufacture the components shall be of highest quality commercial grade of E-glass filaments with binder and sizing compatible with impregnating resins. Sand shall be minimum 98% silica with a maximum moisture content of 0.2%

3. DIMENSIONS

Pipe outside diameters shall be in accordance with AWWA Standard C151 and C950. For diameters larger than covered in those documents, OD's shall be as shown in Table 1.

TABLE I

*WP/s		0/46		50/46		100/46		150/46		200/46	
Nomin Pipe Sz. (in.)	Pipe OD (in.)	Min. wall (in.)	Wgt. (lb/ ft)	Min. Wall (in.)	Wgt. (lb/ ft)	Min. Wall (in.)	Wgt. (lb/ ft)	Min. Wall (in.)	Wgt. (lb/ ft)	Min. Wall (in.)	Wgt (lb/ ft.)
18	19.50	.42	20	.41	20	.40	19	.38	18	.37	18
20	21.60	.46	25	.45	24	.43	23	.42	22	.40	21
24	25.80	.54	35	.53	34	.51	33	.49	31	.47	30
30	32.00	.66	54	.65	53	.62	51	.60	49	.57	47
36	38.30	.78	77	.77	76	.74	73	.71	70	.68	67
42	44.50	.90	104	.88	101	.85	98	.82	94	.78	89
48	50.80	1.02	134	1.00	131	.96	126	.93	122	.88	115
54	57.10	1.14	169	1.12	166	1.08	160	1.04	155	.99	147
60	62.90	1.26	209	1.23	204	1.19	197	1.14	188	1.09	180
66	69.20	1.38	249	1.35	243	1.30	234	1.25	228		
72	75.40	1.50	298	1.47	292	1.41	280	1.36	270		
78	81.60	1.62	352	1.58	343	1.52	331	1.47	320		
84	88.00	1.74	409	1.70	399	1.64	385				
90	94.30	1.86	468	1.82	458	1.75	440				
96	100.6	1.98	531	1.94	520	1.87	501				

- **Maximum nominal working pressure in psi/pipe stiffness in psi**

Pipe shall be supplied in nominal lengths of 20 feet. Actual laying length shall be the nominal plus or minus 2 inches. At least 90% of the total footage of each size and class of pipe, excluding special order lengths, shall be furnished in nominal length sections.

4. **PRESSURE CLASS & TESTING FOR SEWER FORCE MAINS AND EFFLUENT LINES**

The pipe nominal pressure class (PN) shall be equal to or greater than the maximum sustained operating pressure of the line. The minimum pressure rating for non-pressure pipe shall be 15 psi.

The maximum transient (operating plus surge) pressure of the line shall not exceed the pipe nominal pressure class by more than 40%.

Pipe hoop tensile strength for pressure pipe shall be verified as specified in the applicable standard (D3754 or C950) or by random burst testing at the same sampling frequency. All pipes shall be capable of withstanding a test pressure of 2 times the maximum sustained operating pressure of the line without leaking or cracking. This performance shall be periodically verified at the factory for pressure pipe at least once per lot as defined in D3754, section 7.1.

A. JOINTS

Unless otherwise specified, the pipe shall be field connected with fiberglass sleeve couplings that utilize elastomeric sealing gaskets made of EPDM rubber compound as the sole means to maintain joint water tightness. The joints must meet the performance requirements of ASTM D4161.

B. FITTINGS

Flanges, elbows, reducers, tees, wyes, laterals and other fittings shall, when installed, be capable of withstanding all operating conditions. Acceptable configurations include contact molded or metered fiberglass or properly protected standard ductile iron.

Unbalanced thrust forces shall be restrained with thrust blocks or other approved suitable methods. Fiberglass tees, wyes, laterals, or other similar fittings shall be fully encased in reinforced concrete designed to withstand the pressure forces.

2.05 POLYETHYLENE SEWER PIPE

A. SCOPE

(1) This specification covers Polyethylene (PE) pipe with a corrugated outer wall and a smooth interior wall, for use with non-pressure sanitary sewer systems. The PVC fittings and joints are included in the specification.

B. MATERIAL AND MANUFACTURING

1. PIPE MATERIALS

The pipe shall be made from clean virgin Polyethylene compounds having a cell classification of 324420C as defined by ASTM D-3350.

2. FITTING MATERIALS

The fittings shall be made from clean virgin polyvinyl chloride (PVC) compounds having a cell classification of 12454B, 1245C or 13343C as defined by ASTM D-1784.

Pipe shall be manufactured by simultaneous extrusion of the corrugated and smooth walls with the smooth inner wall fused to the outer corrugated wall.

Fittings shall be molded or fabricated.

3. JOINING MATERIALS

a. Gaskets
b. Elastomeric gaskets shall meet the requirements of ASTM F-477.
c. Lubricants

The lubricants used for assembly shall have no detrimental effect on the gasket or the pipe, and shall be per published recommendations of the pipe manufacture.

4. MATERIAL CERTIFICATION

A manufacture's or an independent laboratory certification shall be furnished to the purchaser/engineer that the products were manufactured, sampled, tested, and inspected at the time of manufacture in accordance with this specification.

C. PIPE DIMENSIONS

Pipe dimensions shall meet the following requirements when tested in accordance with ASTM D-2122.

Nominal Size	Avg. O.D.	Avg. I.D.
4	4.790 (121.7)	4.00 (101.6)
6	6.930 (176.0)	6.00 (152.4)
8	9.145 (232.2)	8.00 (203.2)
10	11.405 (289.7)	10.00 (254.0)
12	14.450 (367.0)	12.00 (304.8)
15	17.530 (445.3)	15.00 (381.0)
18	21/150 (537.2)	18.00 (457.2)

D. INSTALLATION

1. Joint Tightness

Minimum joint performance shall show no leakage when tested in accordance with ASTM D-3212.

2. Supplier Assistance

A manufacturers representative of the above referenced pipe material shall be present at the beginning of the installation as required by the Design Engineer or Contractor and shall remain on site until released by the Design Engineer or Field Inspector/Engineer.

2.06 INLETS FOR STORM SEWERS

A. CURB TYPE INLETS

(1) Curb inlets shall be constructed at the locations and to the lines and grades or shown on the plans or as directed by the Engineer.

(2) Curb inlets shall be constructed of reinforced class “C” concrete in accordance with Section 1-B “Concrete Structures” and the plans and detail drawings.

(3) The curb section and the curb inlet shall conform to the curb and gutter section in which it is placed in so far as it is possible.

B. GRATE TYPE INLETS

(1) Grate inlets shall be constructed at the locations and the lines and grades as shown on the plans or as directed by the Engineer.

(2) Concrete boxes for grate inlets shall be constructed of reinforced Class “C” concrete in accordance with Section 1-B “concrete Structures” and the plans and detail drawings.

(3) Grates shall be constructed of ASTM A-48 gray iron having minimum tensile strength of 35,000 psi or ductile iron having a minimum tensile strength of 60,000 psi and a yield strength of 40,000 psi.

The size, style, shape, type, weight and class shall be as shown on the plans.

Grate frames shall be as manufactured for the grate by the grate fabricator. If more than one type or style or frame is available, the type and/or style shall be as indicated on the plans.

C. COMBINATION INLETS

(1) Combination curb and grate inlets shall be constructed at the locations and to the lines and grades as shown on the plans or as directed by the Engineer.

(2) Combination inlets shall be constructed in accordance with the applicable requirements for “Curb type inlets” and “Grate type inlets” above.

D. INLET LEADS

(1) Inlet leads may be PVC pipe or CSP as shown on the plans and called for in the bid proposal.

(2) Inlet leads shall be constructed in accordance with the specifications for type of material used and the plans and detail drawings.

(3) Where two or more leads are joined together to form a single lead to the storm sewer they shall be joined at a cleanout unless shown otherwise on the plans.

(4) Inlet leads shall be connected to the storm sewer at a manhole. The leads shall enter the manhole at a point that will match the .8 points of the two pipes as near as practical.

E. CLEANOUT FOR STORM SEWER INLET LEADS

Cleanouts at the juncture of inlet leads shall be constructed in accordance with the dimensions and requirements shown on the plans and detail drawings.

F. CORRUGATED STEEL SLOTTED DRAINS

(1) Corrugated steel slotted drains shall be as specified in section 2.02-3 of these specifications and shall be furnished in the lengths and diameters as shown on the drawings and in the bid proposal.

(2) Corrugated steel slotted drains are approved for nuisance water inlets only and are sized to allow for considerable clogging before they will cease to function in this capacity.

2.07 MANHOLES

1. GENERAL

A. **CONCRETE MANHOLES ARE NOT TO BE USED FOR SANITARY SEWERS AFTER DECEMBER 31, 2002. FIBERGLASS MANHOLES ARE TO BE USED FOR ALL SANITARY SEWERS**. Concrete manholes can be used for storm water sewers.

All manholes furnished for this project shall be precast unless noted otherwise on the plans and or bid proposal.

Precast manholes shall conform to the requirements of ASTM Specification C-478 with the modifications given in this article.

Concrete used for precast manholes shall have a minimum 28-day compressive strength of 4,000 psi and shall have a minimum cement content of 7 sacks per cubic yards.

All manhole sections shall be furnished with tongue and groove type joints suitable for sealing water tight with rubber or bituminous joint sealer or gaskets.

B. When cast in place components for manholes are called for on the plans the concrete used shall have a minimum 28 day compressive strength of 4,000 psi and a minimum cement content of 7 sacks per cubic yard and shall conform to the requirements of ASTM Specification C-478 with wall thickness as shown on the plans and detail drawings.

Aggregate for the concrete shall meet the sodium sulfate and magnesium sulfate test as required in ASTM Specification C-33.

C. Mortar for filling and shaping the inverts in precast manhole bases and for mortaring precast grade rings and cast iron rings and covers shall consist of one part Portland cement ASTM C150 Type 1 to 3 parts washed sand mixed with just enough water to make a workable mix.

D. Manholes for corrugated steel pipe may be precast concrete or corrugated steel as described in Article 2.02. The type and material shall be as shown on the plans and called for on the bid proposal.

2. PRECAST MANHOLES

A. Manhole base sections shall be cast with an integral floor and shall be constructed in accordance with the details shown on the plans.

B. Manhole riser sections shall be constructed in accordance with the plans and details and these specifications. When pipe openings are required in manhole riser sections they shall be of the same type and meet the same requirements as the pipe openings in the precast bases.

Manhole riser sections for each manhole shall be furnished in the proper combination of lengths to construct the manhole in conjunction with the other components to the finished grade shown on the plans.

C Eccentric cone sections shall be constructed in the same manner as other components except the top of the cone will have a flat surface to accommodate the manhole ring and cover or grade adjusting rings instead of a tongue or groove.

Generally openings will not be required in the wall of the cone section of the manhole.

D. Manhole grade rings shall comply with all the requirements for manhole riser sections except they shall be cast smooth both sides without tongues and/or grooves.

Manhole grade rings shall be sized to fit the smooth small end of the cone section and shall be cast in heights of 2", 4" or 6".

E. Joint seals for precast concrete manholes shall be a bitumastic sealer such as Ram-Nek or approved equal, a soft rubber sealer such as Butyl-Lok or approved equal or an approved "O" ring gasket or a combination of the above if required to achieve a water tight joint.

F. All water tight Storm Sewer Manholes constructed on this project shall have Neenah R-1755-C watertight manhole rings and covers or approved equal.

No separate payment will be made for the protective plastic manhole linings or for the water tight manhole rings and covers but the cost of these items shall be included in the price bid for water tight Storm Sewer Manholes.

In addition to the markings required by ASTM Specification C-478, all components of each manhole shall be, marked with location identifying information such as manhole number or line number and station value where manhole is to be installed. If the manhole has openings for installation of branch lines above the base section, each manhole section shall be clearly marked with the sequence of installation to assure the branch opening will be at the correct elevation.

3. FIBERGLASS MANHOLES

A. SCOPE

Fiberglass reinforced polyester manholes shall be manufactured from commercial grade polyester resin or other suitable polyester or vinyl resins, with fiberglass reinforcements and in accordance with the latest edition of ASTM D 3 753 (Standard Specification for Glass-Fiber Reinforced Polyester Manholes). Fiberglass manholes shall be used with fiberglass or plastic sewer pipe.

B. MATERIALS

1. **Resin:** The resins used shall be a commercial grade unsaturated polyester resin.

2. **Reinforcing Materials**: The reinforcing materials shall be commercial Grade "E" type glass in the form of mat, continuous roving, chopped roving, roving fabric, or a combination of the above, having a coupling agent that will provide a suitable bond with the resin and leave a resin rich surface.

3. **Surfacing Materials**: If reinforcing materials are used on the surface exposed to the contained substance, they shall be a commercial grade chemical-resistant glass organic surfacing mat having a coupling agent that will provide a suitable bond with the resin and leave a resin rich surface.

4. **Fillers and Additives**: Fillers, when used, shall be inert to the environment and wet well construction. Additives, such as thixotropic agents, catalysts, promoters, etc., may be added as required by the specific manufacturing process to be used. The resulting reinforced plastic material must meet the requirement of this specification.

C. FABRICATION

1. **Exterior Surface**: The exterior surface shall be relatively smooth with no sharp projections. Handwork finish is acceptable if enough resin is present to eliminate fiber show. The exterior surface shall be free of blisters larger than ½ inch in diameter, de-lamination and fiber show.

2. **Interior Surface**: The interior surface shall be resin rich with no exposed fibers. The surface shall be free of crazing, de-lamination, blisters larger than ½ inch in diameter, and wrinkles of 1/8 inch or greater in depth. Surface pits shall be permitted up to 6 per square foot if they are less than ¾ inch in diameter and less than 1/16 inch deep.

3. **Defects not permitted**:

Exposed fibers: glass fibers not wet out with resin.
Resin runs: runs of resin and sand on the surface
Dry areas: areas with glass not wet out with resin.
De-lamination: separation in the laminate.
Blisters: light colored areas larger than ½ inch in diameter.
Crazing: cracks caused by sharp objects
Pits or Voids: air pockets.
Wrinkles: smooth irregularities in the surface.
Sharp projection: fiber or resin projection necessitation gloves for handling.

D. PHYSICAL REQUIREMENTS

1. **Load Rating**: The complete manholes shall have a minimum dynamic-load rating of 16,000 ft-lbs. when tested in accordance with this standard. In order to establish this rating, the complete manhole shall not leak, crack, or suffer other damage when load

tested to 40,000 ft-lbs. and shall not deflect vertically downward more than ¼ inch at the point of load application when loaded to 24,000 lbs.

2. **Stiffness**: The manhole cylinder shall have a minimum pipe stiffness value as shown below when tested in accordance with A.S.T.M. 3753 8.5 (note 1)

Depth Ft.	F/dy.psi
3 – 6.5	0.75
7 – 12.5	1.26
13 – 20.5	2.01
21 – 25.5	3.02
26 – 35	5.24

3. **Soundness:** In order to determine soundness, apply an air or water pressure test to the manhole test sample. Test pressure shall not be less than 3 psig or greater than 5 psig. While holding at the established pressure, inspect the entire manhole for leaks. Any leakage through the laminate is cause for failure of the test. Refer to A.S.T.M. 3753 8.6.

4. **Chemical Resistance**: The fiberglass manhole and all related components shall be fabricated from corrosion proof material suitable for atmospheres containing hydrogen sulfide and dilute sulfuric acid as well as other gases associated with the wastewater collection.

5. **Physical Properties**:

	Hoop Direction	Axial Direction
a. Tensile Strength (pi)	18,000	5,000
b. Tensile Modulus (pi)	0.6×10^6	0.7×10^6
c. Flexural Strength (psi)	26,000	4,500
d. Flexural Modulus (psi)	1.4×10^6	0.7×10^6
e. Compressive (psi)	18,000	10,000

6. **Minimum Wall Thickness**: Shall be 0.48” nominal at all depths of the manholes.

E. TEST METHODS: All tests shall be performed as specified in A.S.T.M 3753 latest edition, section 8. Test method D-790 (see note 5) and test method D-695.

F. QUALITY CONTROL: Each completed manhole shall be examined for dimensional requirements, hardness, and workmanship. All required A.S.T.M 3753 testing shall be completed and records of all testing shall be kept and copies of test records shall be presented to customer upon formal written request within a reasonable time period.

G. CERTIFICATIONS: As a basis of acceptance the manufacturer shall provide a independent certification which consist of a copy of the manufacturer’s test report and accompanied by a copy of the test results that the manhole has been sampled, tested,

and inspected in accordance with the provisions of this specification and meets all requirements.

H. SHIPPING AND HANDLING: Do not drop or impact the fiberglass manhole. Fiberglass manhole may be lifted by inserting a 4" x 4" x 30" timber into the top of manhole with cable attached or by a sling or "choker" connection around center of manhole, lift as required. Use of chains or cables in contact with the manhole surface is prohibited.

I. CONCRETE:

1. **Fiberglass Bottom**: Manholes may have fiberglass bottoms that are a minimum of 6" below the OD of the pipe invert when concrete is used to form the invert. Manufactured fiberglass inverts and bench areas are allowed, or concrete may be used to form bench area and invert. Concrete is to be used on top of anti-flotation ring and around the reducer section as required for buoyancy.

2. **Concrete Bottom**: Lower manhole into wet concrete until it rests at the proper elevation, with a minimum of 4 inches of fiberglass manhole inserted into the wet concrete below flow line, then move manhole to plumb. The concrete shall extend a minimum of one foot from the outside wall of the manhole and a minimum of 6 inches above incoming lines. On the inside concrete shall form the bench and invert area and rise a minimum of 4 inches above incoming lines. If required by Engineer concrete may be used around reducer section for buoyancy control.

BACKFILL:

1. **Backfill Material**: Unless shown otherwise on drawings and approved by the Engineer, sand, crushed stone, or crushed gravel shall be used for backfill around the manhole for a minimum distance of one foot from the outside surface and extending from the bottom of the excavation to the top of the reducer section. Suitable material chosen from the excavation may be used for the remainder of the backfill. The material chosen shall be free of large lumps or clods, which will not readily break down under compaction. This material will be subject to approval by Engineer.

2. **Backfill Procedure**: Backfill shall be placed in layers of not more than 12 loose measure inches and mechanically tamped to 95% Modified Proctor Density, unless otherwise approved by Engineer. Backfill shall be placed in such a manner as to prevent any wedging action against the fiberglass manhole structure.

K. MARKING and IDENTIFICATION: Each manhole shall be marked on the inside and outside with the following information:

Manufacturer's name or trademark
Manufacturer's factory location
Manufacturer's serial number
Total length

4. MANHOLE RINGS AND COVERS

A. Manhole rings and covers furnished for this project shall be pattern No. 300-24 as produced by Western Iron Works, Inc., 21 E. 6th St., San Angelo, Texas 76903-5493 or Bass and Hays Foundry, Inc., 238 South Bagdad Rd., Grand Prairie, Texas 75050, or approved equal.

B. WATER TIGHT MANHOLE COVERS

(1) Water tight manhole rings and covers furnished for this project shall be number R-1755-C as manufactured by Neenah Foundry Company, P.O. Box 729, Neenah, Wisconsin 54957, or approved equal.

(2) When watertight replacement sanitary sewer manhole rings and covers are called for on the plans and in the bid proposal they shall be Neenah Foundry Co. No. R-1755-C or approved equal.

No separate payment will be made for adjusting to grade of the replacement watertight manhole rings and covers. The contractor shall schedule this work to coincide with other manhole and water valve adjustments and any costs that might be involved shall be included in the price bid for replacement water tight manhole rings and covers.

(3) Manhole vents shall be used in conjunction with watertight rings and covers spaced every third manhole or as indicated on the plans. Vents shall be constructed as indicated on City design and construction standards.

C. Pressure type manhole rings and covers may be required for certain storm sewer applications. When pressure type manhole rings and covers are called for on the plans and/or bid schedule they shall be Western Iron Works Pattern #380-24P or approved equal. The manhole cover shall be sealed with an “O” ring gasket in a ring groove and shall be secured to the ring by six (6) five-eighths inch (5/8”) stainless steel bolts. The ring shall have six (6) one and one quarter inch (1-1/4”) bolt holes in the flanges for securing the ring to the concrete slab top on the manhole.

D. All manhole covers except grate type shall have two blind pick holes or pick bar cast into them. The blind pick holes or pick bars shall be placed on opposite sides of the cover.

E. All manhole covers except grate type shall have cast into their tops in letters 2 inches high minimum one of the following:

CITY OF MIDLAND
SANITARY SEWER
OR
CITY OF MIDLAND
STORM DRAIN

which ever is applicable.

2.08 GRANULAR MATERIALS

A. GRANULAR MATERIAL GRADATION CLASSIFICATIONS:

Granular materials furnished for foundation, bedding, encasement, backfill, or other purposes as may be specified, shall consist of any natural or synthetic mineral aggregate such as sharp grained sand, crushed gravel, crushed rock, crushed stone, or slag, and shall conform to the following specifications and/or gradation.

Note all materials used for these purposes shall be crushed and shall have at least two broken faces. Pea gravel will NOT be allowed.

	Foundation	Bedding	Encasement	Backfill
ASTM C33 Grade #57	x			
ASTM C33 Grade #67	x			
ASTM C33 Grade #8		x	x	
THD 1982 Item 302 Type D Grade 4		x	x	
THD 1982 Item 302 Type D Grade 5			x	
Crusher fines**			*x	x

*100 percent of crusher fines that are to be used within 12 inches of the top of pipe must pass the ¾" sieve.

** Approximate Gradation for Crusher Fines.

Sieve Size	% Passing
2 inch	100
# 4	35 - 100
# 10	20 - 100
# 40	5 - 35
#200	4 - 10

Crushed stone material proposed as an alternate for use on this project and not meeting the above specifications must be approved in writing at least 48 hours prior to the time scheduled for opening bids.

B. GRANULAR MATERIAL USE DESIGNATIONS:

Granular materials provided for Foundation, Bedding, Encasement, or Backfill use as required by the contract, either as part of the pipe item work unit or as a separate contract item, shall be classified as to use in accordance with the following:

MATERIAL USE DESIGNATION	ZONE DESIGNATION
Granular Foundation	Placed below the bottom of pipe grade as replacement for unsuitable or unstable soils, to achieve better foundation support.
Granular Bedding	Placed below the midpoint of the pipe prior to pipe installation, to facilitate proper shaping and achieve uniform pipe support. Also for Class B bedding where specified.
Granular Encasement	Placed below an elevation one half foot (6") above the top of pipe, after pipe installation, for protection of the pipe and to assure proper filling of voids and thorough consolidation of backfill.

In each case above, unless otherwise indicated, the lower limits of any particular zone shall be the top surface of the next lower course as constructed. The upper limits of each zone are established to define variable needs for material gradation and compaction or void content, taking into consideration the sequence of construction and other conditions. The material use and zone designations described above shall only serve to fulfill the objectives and shall not be construed to restrict the use of any particular material in other zones where the gradation requirements are met.

PART 3 – EXECUTION

3.01 LOCATION OF WORK

A. The work will be located as shown on the plans.

B. It may be necessary for the Engineer to shift lines as reasonable amount to avoid an obstruction to the construction or to reduce right of way difficulties. The Contractor will not be allowed any additional compensation due to shift of lines. Additional compensation will be allowed only for lengthening of lines.

3.02 PROTECTION OF SURFACE STRUCTURES

A. All surface structures and features located outside the permissible excavation limits for underground installations, together with those within the construction areas which are indicated in the Plans as being saved, shall be properly protected against damage and shall not be disturbed or removed without approval by the Engineer.

B. Obstructions such as street signs, guard posts, mail boxes and other items of prefabricated construction may be temporarily removed during construction provided that essential service is maintained in a relocated setting as

approved by the Engineer and that non-essential items are properly stored for the duration of construction. Upon completion of the underground work, all such items shall be replaced in their proper setting. This removal, relocation and replacement shall be at the sole expense of the Contractor.

In the event of damage to any surface structures or improvements, either privately or publicly owned, in the absence of construction necessity, the Contractor will be required to replace or repair the damaged property to the satisfaction of the Engineer and without cost to the Owner.

3.03 INTERFERENCE OF UNDERGROUND STRUCTURES

A. When any underground structure interferes with the planned placement of the pipeline or appurtenances to such an extent that alterations in the work are necessary to eliminate the conflict or avoid endangering effects on either the existing or proposed facilities, the Contractor shall immediately notify the Engineer and the Owner of the affected structure. When any existing facilities are endangered by the Contractor's operations, he shall cease his operations at the site and take such precautions as may be necessary to protect the in place structures until a decision is made as to how the conflict will be resolved.

B. Without specific authorization from the Engineer, no essential utility service shall be disrupted, nor shall any change be made in either the existing structures or the planned installations to overcome the interference. Alterations in existing facilities will be allowed only to the extent that service will not be curtailed unavoidably and then only when the encroachment or relocation will satisfy all applicable regulations and conditions.

C. Wherever alterations are required as a result of unforeseen underground interference not due to any fault or negligence of the Contractor, the Engineer will issue a written order covering any additional or extra work involved and specifying the revised basis of payment, if any. Any alterations made strictly for the convenience of the Contractor shall be subject to prior approval and shall be at the Contractor's expense.

D. No extra compensation will be allowed for delays caused by the interference of underground structures.

3.04 SEPARATION BETWEEN SANITARY SEWERS AND WATER MAINS

A. Sanitary sewers and service lines shall be installed so that the separation between the sewer and water mains is not less than 9 feet in all directions. The 9 feet shall be measured between the nearest outside edges of the pipe.

B. When the required 9 foot minimum separation cannot be maintained and a sanitary sewer must be constructed parallel to a water main, the sanitary sewer shall be constructed of ductile iron or PVC pipe meeting AWWA specification or having NSF approval for potable water pipe, with a pressure rating of 100 psi for both the pipe and the joint. The sanitary sewer line shall

be installed in a separate trench and may be placed no closer than 2 feet vertically and 4 feet horizontally from the water main, with the separation being measured from the nearest outside walls of the pipes. The sanitary sewer shall be constructed lower than the water main.

C. When a sanitary sewer must cross a water main and the 9 feet required separation cannot be maintained, the sanitary sewer may be constructed with a minimum clear separation between the outside diameters of the two pipes of 6 inches if that part of the sanitary sewer within 9 feet of the water main is constructed of ductile iron pipe or PVC pipe meeting AWWA specifications, having a 150 psi pressure rating and equipped with pressure type joints. One length of the sewer pipe must be centered on the water main and where possible, the sanitary sewer should pass under the water line.

D. When the 9 foot required separation cannot be maintained and a sanitary sewer force main must be constructed parallel to a water main, the sanitary sewer force main shall be constructed of ductile iron or PVC pipe meeting AWWA specifications and having a pressure rating of 150 psi and equipped with pressure type joints. The force main must be constructed with a minimum vertical separation of 2 feet and a minimum horizontal separation of 4 feet measured between the outside diameters of the pipes. The force main must be constructed lower than water main.

Table I showing separation of water and sewer lines and construction materials allowed:

TABLE 1
SEPARATION OF WATER AND SEWER LINES

Condition	Location	Material		Separation (Min.)		Comments
		Water	Sewer	Vert.	Horiz.	
NEW WATER AND NEW SEWER SYSTEM						
New Water & New Sewer Gravity Sanitary Sewer Parallel to Water Main	Water above Sewer	Std.	CI DI PVC 150 PSI	2’	4’	Separate Trenches
Gravity Sanitary Sewer Crossing Water Main	Water above Sewer or Sewer above Water	Std	CI DI PVC. 150 PSI	6”	NA	Center one joint of sewer pipe on water main
Gravity Sewer Crossing Water Main	Water above Sewer	Std	ABS, Clay Conc. composite	2’	NA	Cement stabilize sand initial backfill zone each side of crossing. Center of sewer for 9 ft one joint of sewer pipe on water Main
NEW WATER AND EXISTING SANITARY SEWER						
New Water Parallel Existing Sewer	Water above Sewer	Std.	Clay, Conc. ABS CI DI PVC	2’	4’	If sewer shows no sign of leakage, then leave sewer alone. If Sewer shows signs of leakage, then repair or replace.
New Water Crossing Existing Sewer	Water above Sewer	Std	Clay, ABS Conc. composite	2”	NA	If sewer shows no sign of leakage, then leave sewer alone if sewer shows signs of leakage then repair or replace.
New Water Crossing Existing Sewer	Sewer above Water	Std	Clay, ABS Conc. composite	2’	NA	Replace existing sewer with one joint CI,DI,PVC-150 Centering over waterline
New Water Parallel to Existing Sewer	Sewer above Water	Std	Clay, ABS Conc. composite	2’	4’	Replace existing sewer with CI, DI, PVC – 150 PSI or Cement Stabilized sand back- fill initial Backfill none of sewer where parallel closer than 9 ft., or Encase the water in 150 PSI Pipe two nominal sizes larger.

EXISTING WATER AND NEW SANITARY SEWER						
New Sewer parallel Existing Water	Water above Sewer Or Sewer above Water	Std	CI DI PVC 150 PSI	2'	4'	Separate trenches
New Sewer crossing Existing Water	Water above Sewer or Sewer above water	Std	CI DI PVC 150 PSI	6"	NA	Center one joint of sewer pipe on water main.
New Sewer crossing Existing Water	Water Above Sewer	Std	Clay, ABS Conc. composite	2'	NA	Cement Stabilize sand initial backfill zone of sewer for 9 ft each side of crossing. Center one joint of sewer pipe on water main.

3.05 EXCAVATION

A. Excavation of every description and of whatever materials encountered shall be made to the alignment and depth shown on the plans or as directed by the Engineer. Excavation shall be made by open cut. Sides of trenches shall be kept as nearly vertical as possible and the trench shall be so braced, sheeted and drained that workmen may work safely and efficiently therein. The trenches shall be sufficiently straight between designated angle points to permit the pipe to be laid true to line in the approximate center of the trench.

B. The trench width may vary with and depend upon the depth of trench, the diameter of pipe to be laid and the nature of the material to be excavated; but in any case shall be of ample width to permit the pipe to be laid and jointed properly and the backfill to be placed and compacted properly. The minimum width of unsheeted trench shall be 18 inches. The maximum clear width of trench at the top of the pipe shall be not more than two (2) feet greater than the outside diameter of the pipe for pipes up to 33" diameter except by consent of the Engineer. Whenever, for any reason, the maximum trench width is exceeded, the Contractor shall provide, at his own expense, pipe of higher class and/or bedding adequate to sustain the increased soil load as calculated by the Engineer.

C. Trenches shall be undercut to provide for the class bedding specified and/or shown on the plans. Bell holes shall be excavated to insure the pipe resting for its entire length upon the bedding material. Where trenches are under-cut beyond the depth required for bedding the trench shall be brought to grade by using crushed aggregate as specified for foundation herein. The use of loose native soil will NOT be permitted for this purpose.

D. No pipe shall be laid in water. Where the ground water table is at or above trench bottom, the Contractor shall de-water the trench to permit the pipe to be laid on a solid foundation.

   Costs for de-watering by whatever method selected shall be considered incidental to the price bid per foot of pipe.

   The Contractor shall discharge pumps to the natural drainage channels, or if permitted, to other sewer or drains.

Where sewer pipelines are located in or across streambeds or drainage ditches, the Contractor shall divert the stream flow and de-water each section as the work progresses.

E. Temporary support, adequate protection and maintenance of all underground and surface utility structures, drains, sewers, and other obstructions encountered in the progress of the work shall be furnished by the Contractor at his own expense under the direction of the Engineer.

F. Whenever wet, soft or unstable soil, incapable of properly supporting the pipe, manholes or other structure is encountered in the trench, a further depth and/or width shall be excavated and refilled to trench bottom grade with gravel or other approved suitable material thoroughly compacted to assure a firm foundation for the pipe.

G. Rock, boulders and large stones shall be removed to provide a clearance of at least six (6) inches below the outside barrel of the pipes, valves, or fittings and to a clear width of six (6) inches on each side of all pipe and appurtenances for pipe 15 inches in diameter or less, and a clear width of nine (9) inches on each side of all pipe and appurtenances for pipe larger than 15 inches in diameter. Adequate clearance for properly joining pipe laid in rock trenches shall be provided at bell holes. The space between the rock at the bottom of the trench and the bottom of the pipe barrel shall be filled with compacted bedding material.

H. The Engineer shall be notified of any need for blasting to remove materials which cannot be broken up mechanically, and there shall be no blasting operations conducted until the Engineer's approval has been secured. Blasting operations will be allowed only when proper precautions are taken to protect life and property, and then shall be restricted as the Engineer directs. The Contractor shall assume full responsibility for any damage caused by blasting, regardless of the requirements for notification and approval. The Contractor shall secure any required permits for blasting and shall conduct blasting operations in conformance with all applicable State and local laws, regulations and ordinances.

I. In the event the Contractor desires to employ tunneling in locations other than as shown on the Plans in order to avoid replacement of sidewalks, etc., he shall do so only upon receipt of specific permission from the Engineer. Tunneling of this nature shall be considered incidental.

J. Excavated materials will be classified for reuse as being either suitable or unsuitable for backfill or other specified use.

3.06 SPECIAL SAFETY PROVISIONS

1. TRENCH SAFETY SYSTEMS

A. DESCRIPTION

This item shall govern for the Trench Safety Systems required for the construction of all trench excavation to be utilized in the project and including all additional excavation and backfill necessitated by the safety system. A trench shall be defined as a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet. The depth is five feet or more. Trench Safety Systems include but are not limited to sloping, sheeting, trench boxes or trench shields, sheet piling, cribbing, bracing, shoring, de-watering or diversion of water to provide adequate drainage.

B. CONSTRUCTION METHODS

Trench safety systems shall be accomplished in accordance with the detailed specifications set out in the provisions of Excavation, Trench, and Shoring, Federal Occupational Safety and Health Administration (OSHA) Standards, 29CFR, Part 1926, Subpart P, as amended, including Proposed Rules published in the Federal Register (Vol. 52, No. 72) on Tuesday, October 31, 1989. The sections that are incorporated into these specifications by reference include Sections 1926-650 through 1926-652. Legislation that has been enacted by the Texas Legislature, being Tex. Rev. Civ. Stat. Ann. Arts. 1015q, 2368a.6 (Vernon Supp. 1988) with regard to Trench Safety Systems, is hereby incorporated, by reference into these specifications.

A reproduction of the OSHA Publication 2226 is attached for the convenience of the Contractor. The City assumes no responsibility for the accuracy of the reproduction or that it reflects current law. The Contractor is responsible for obtaining a copy of this section of the Federal Register for his use.

If the contractor elects to use a trench protective system that, in the Proposed Rules, requires “Design by a qualified person or a qualified engineer,” [For example see 1926.652 (b) (3) and 1926.652 (c) (4)], a “qualified person or qualified engineer” shall be a Professional Engineer registered in the State of Texas. The Contractor is responsible for obtaining boring and soil analysis as required for the planned design. The trench excavation is to be designed in conformance with OSHA standards and regulations.

C. TRENCH SAFETY PROGRAM

The Contractor shall submit a safety program specifically for the construction of trench excavation. The trench safety program shall be in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.

D. INSPECTION

The Contractor shall make daily inspections of the Trench Safety Systems to ensure that the systems meet OSHA requirements. Daily inspection is to be made by a "competent person" provided by the Contractor. If evidence of possible cave-ins, or slides, is apparent, all work in the trench shall cease until the necessary precautions have been taken by the Contractor to safeguard personnel entering the trench. It is the sole duty, responsibility and prerogative of the Contractor, not the owner or the Engineer, to determine the specific applicability of the designed trench safety systems to each field condition encountered on the project. The Contractor shall maintain a permanent record of daily inspections.

2. SAFETY RESTRICTIONS - work near high voltage lines

The following procedures will be followed regarding the subject item on this contract:

A. Warning signs 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."

B. All equipment except back hoes or dippers that may be operated within ten feet of high voltage lines shall have an insulating cage-type of guard about the boom or arm and insulator links on the lift hook connections.

C. When necessary to work within six feet of high voltage electric lines, notification shall be given the power company 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.

D. 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.

3.07 PIPE LAYING

A. All gravity pipe shall be laid using approved grade boards, furnished and set by the Contractor at no additional cost to the Owner, according to the grade stakes established by the Engineer. The maximum spacing of grade boards shall be fifty (50) feet. No sewer shall be laid unless there is a minimum of three grade boards set to check the proper grade and alignment ahead. The Contractor shall provide and use a suitable grade rod to insure the proper grade of the pipe.

B. The Contractor may use the laser beam method of setting a line and grade for the sewer by using the laser beam coaxially through the center of the sewer being laid. The laser beam projector is to be rigidly mounted to its support platforms, with a two-point suspension, or equivalent, assuring that all ground and equipment vibrations are kept to an absolute minimum. The Contractor shall furnish all equipment including equipment necessary to control atmospheric conditions in the pipe to keep line and grade to acceptable standards of accuracy. Competent experienced people who have been properly trained to operate the equipment used must operate the laser beam system.

C. The Contractor shall stake check pegs at all manholes throughout the job. Check pegs midway between manholes and any other checkpoints deemed necessary to assure accuracy of the equipment shall be provided by the contractor.

D. Each piece of pipe and special fitting shall be carefully inspected before it is placed and no defective pipe shall be laid in the trench. Pipe laying shall proceed upgrade, starting at the lower end of the grade and with the bells uphill. No pipe shall be laid except in the presence of an inspector representing the Engineer. Any pipe laid except in the presence of an inspector representing the Engineer shall be subject, at the contractor's expense, to a television camera inspection and survey by the city. Trench bottoms found to be unsuitable for foundations after pipe laying operations have started shall be corrected and brought to exact line and grade with approved compacted granular material as specified for foundation in Item 2.07 A. of these specifications.

E. Pipe laying shall proceed up-grade with spigot or tongue ends pointing in the direction of flow. The spigot shall be centered in the bell, and pipe shoved into position, and brought into true alignment. It shall be secured there with bedding material carefully tamped under and on each side of it, excepting at bell holes. Care shall be taken to prevent dirt from entering the joint space.

F. Any defective or damaged pipe discovered after the line is laid or any gravity pipe, which has had its grade or joint, disturbed after laying shall be removed and replaced or relayed. The section of line in which such damaged or displaced section is discovered shall be retested after corrections are made.

G. Where excavation for buildings or other portions of the work have been carried below the line and grades of the pipe, thorough tamping of approved crushed stone backfill and the use of adequate bracing and blocking under the pipe will be required to insure against settling and shearing of the pipe. In areas where noted on plans, Portland cement stabilized material or concrete shall be used for backfill to provide adequate bracing for pipe and protection of structures.

H. All manhole connections for PVC or other Polymer based pipe shall be made using "A Lok Gaskets" or "Kor-N-Seal" boots or other approved water stop devices. Only Portland cement grout that expands upon curing or approved non-shrink grout will be incorporated into any manhole connection.

I. Connections to manholes for other types of pipe shall be in accord with the pipe manufacturers specifications and other applicable requirements of these specifications. The resulting joint shall meet the leakage test requirements of these specifications.

J. The exposed end of all pipes shall be fully protected with a stopper or bulkhead at the end of each day's work to prevent earth, debris, small animals, or other substances from entering the pipe. The interior of the sewer shall be carefully freed from all dirt, jointing compound, or superfluous material of every description as the work progresses.

3.08 CONNECTION AND ASSEMBLY OF JOINTS

1. JOINING PVC OR OTHER POLYMER BASED PIPE

A. The type of joint and the material to be used shall be as shown on the plans or specified herein. Factory cast compression joints shall be free of dirt and lubricated before inserting the barrel into the bell. After the spigot is centered in the bell, the pipe shall be shoved home solidly by using a wood block and bar. The Contractor shall keep the ends of the pipe closed to prevent dirt and other material from entering the pipe during placement. All joints must be water tight, and any leaks or defects discovered must be repaired immediately. Any pipe, which has been disturbed after being laid, must be taken up, the joint cleaned and properly relayed as directed by the Engineer.

Lubricant used shall be as recommended by the pipe manufacturer.

B. Field-cut pipe must be beveled for insertion into the gasketed bell or coupling. Bevels can be made with a hand or power tool. Bevels shall be made to pipe manufacturer's specifications. If pipe manufacturers specifications are not available the bevel may be made at 15 degrees to the longitudinal axis of the pipe through one half (l/2) the wall thickness.

C. After pipe has been cut and beveled, a new full insertion mark located as recommended by the pipe manufacture shall be made using a felt tip pen. The contractor may determine the location of the insertion mark by measuring the mark location on a factory marked joint of pipe if manufacturer's specifications are not available.

2. JOINTING CORRUGATED STEEL PIPE

A. Gaskets for corrugated steel pipe shall be "O" Ring or sleeve types. Sleeve gasket shall be carefully placed on one joint of pipe. When the pipe is aligned and brought end to end the gasket shall be carefully centered over the joint between the ends of the pipe. "O" ring gasket shall be installed in accordance with the manufacturer's recommendation.

B. When "O" ring gaskets are furnished a flat gasket shall be furnished and placed between the overlapping portions of the band. The gasket shall extend the full width of the band and shall be of sufficient depth to assure a watertight joint.

C. The coupling band shall be carefully centered over the joints and tightened to the pipe manufacturer specifications. Care shall be taken during the tightening process to assure a snug uniform fit for the entire circumference of the pipe.

3. PROTECTING AND COVERING JOINTS

A. The contractor shall keep the ends of the pipe closed during the time of construction to prevent the entry of dirt, debris, small animals and other foreign objects.

B. Joints shall not be covered until approved by Engineer or his representative. Connections, which are for future use, shall be properly capped.

3.09 CONNECTIONS TO EXISTING STRUCTURES

A. Where shown on the plans, the contractor shall connect the new sewer to existing manholes. If no stub out is present in the existing manhole for such connection, the contractor shall construct such connection by making a hole in the side of the existing manhole using a coring machine or other approved method and installing a “KOR N Seal” boot as manufactured by N.P.C. Systems, Inc. or other approved water tight manhole connector.

The contractor shall use caution in constructing the connection to the existing manhole. Damage to the manhole that, in the opinion of the Engineer, would impair the use and/or function of the manhole shall be just cause to require the contractor to reconstruct the manhole at contractor’s expense. Such damage shall include but not be limited to cracking of the manhole riser section, spalling around the connection significantly reducing manhole wall thickness or excessive oversize in the opening for the new connection requiring any filler other than the manhole connector and/or non-shrink grout specified.

The contractor shall make such changes in the invert of the manhole as may be necessary to provide a smooth flow of the water through the manhole. Any connection to existing structures required in the Plans shall be accomplished by the Contractor and shall be incidental item with no direct compensation being made unless listed as a pay item in the bid proposal.

B. If the work consists of the construction of a sewer that is to replace an existing sewer, all of the existing service lines shall be kept in operation and connected to the new line.

C. Connections shall be made to all existing sewer lines in the vicinity of the work by removing a section of the sewer for the existing line and inserting in the space a tee branch of proper size, or by the construction of a manhole, regulator chamber of other structure as shown on the Drawings.

D. Connections to building services shall be made in a neat and workman like manner. Clean out plugs shall be installed wherever feasible, by making the connections with a standard wye or tee-wye. When clean out plugs are installed they should be located as near the right of way line as practical.

3.10 BACKFILL OPERATIONS

1. GENERAL

A. All pipeline excavations shall be backfilled in a manner that will restore pre-existing conditions as the minimum requirement and fulfill all supplementary requirements indicated in the Plans and Specifications. The backfilling operations shall be started as soon as conditions will permit on each section of pipeline, so as to provide continuity in subsequent operations and restore normal public service as soon as practicable on a section-by-section basis. All operations shall be pursued diligently, with proper and adequate equipment, to assure acceptable results.

B. For this specification backfill is defined as any material placed in the trench above the bedding zone other than the pipe or conduit and appurtenance.

For flexible pipe the backfill between the bedding material and the crown of the pipe shall be crushed stone suitable for encasement as specified in article 2.07 of the specifications. When Portland cement stabilized backfill is used above the pipe zone; the crushed stone encasement shall extend to 1' above the crown of the pipe.

C. Depositing of the backfill shall be done so the shock of falling material will not injure the structure. Grading over and around all parts of the work shall be done as directed by the Engineer.

D. Whenever soil types which are determined by the Inspector to be undesirable for backfill are excavated from the trench, such material shall be hauled away and deposited at locations shown on the plans or as directed by the Engineer at no additional compensation.

E. Backfill materials placed in the pipe zone shall be carefully placed in relatively uniform depth layers spread over the full width and length of the trench section in a manner and/or sequence that will provide simultaneous support on both sides of the pipeline. Each layer shall be compacted effectively, by approved mechanical of hand methods, until there is no further visual evidence of increased consolidation. Above the pipe zone the backfill material shall be placed uniformly across and along the trench in depth suitable for the compaction method used and compacted to a minimum of the density specified for the material used and the trench location. Compaction of the in place layer shall be completed acceptably before placing material for a succeeding layer thereon.

The manner of placement, layer thickness, compaction equipment, and procedure effectiveness shall be subject to approval of the Engineer. Water jetting or flooding shall NOT be used to compact trench backfill.

F. Compaction of materials placed within the pipe bedding and encasement zones shall be accomplished with portable or hand equipment methods, so as to achieve thorough consolidation under and around the pipe and avoid damage to the pipe. Above the pipe zone, the use of heavy roller type compaction equipment shall be limited to safe pipe loading.

G. The maximum loose thickness of each backfill layer placed above the pipe zone shall be 12 inches, except that 16 inches will be permitted for Granular Materials placed above an elevation one foot above the top of pipe, and with the provision that, by authority of the Engineer and in consideration of the demonstrated capability of special type vibratory compactors, these maximums may be increased at his discretion. “Hydro tamps”, “vibra tamps” or other heavy compacting equipment shall not be used until the backfill has reached a depth of four (4) feet above the top of the pipe.

H. All surplus or waste materials remaining after completion of the backfilling operations shall be disposed of in an acceptable manner within 24 hours after completing the backfill work on each particular pipeline section. Disposal at any location within the project limits shall be as specified, or as approved by the Engineer; otherwise, disposal shall be accomplished outside the project limits at the Contractor’s discretion. The backfilling and surplus or waste disposal operations shall be a part of the work required under the pipeline installation items, not as work that may be delayed until final cleanup.

I. For the duration of the warranty period of the project, the Contractor shall assume full responsibility and expense for all backfill settlement and shall refill and restore the work as directed to maintain an acceptable surface condition. All additional materials required shall be furnished without additional cost to the Owner.

2. BACKFILL IN PUBLIC RIGHTS-OF-WAY AND OTHER AREAS WHERE SETTLEMENT IS CRITICAL

A. GENERAL REQUIREMENTS

(1). Backfill above the pipe zone in public rights-of-way and under paved parking lots, near structures or other utilities where settlement can cause damage shall be made using Portland cement stabilized backfill or crushed stone screenings (crusher fines).

The pipe zone is defined as that portion of the trench extending from the bottom of the trench to 12” above the crown of the pipe or conduit.

(2) Backfill around structures such as manholes, junction boxes, transformer boxes and valve boxes shall be made using Portland cement stabilized backfill material or crushed stone screening (crusher fines).

(3) The minimum depth of stabilized backfill or crusher fines shall be twelve (12”) inches.

When utilities are being constructed under existing paving, the stabilized backfill or crusher fines shall extend from top of the pipe zone to the top of the base course.
When utilities are being constructed under existing unpaved streets that are not scheduled for immediate pavement construction, the stabilized backfill or crusher fines shall extend from the top of the pipe zone to the existing roadway surface.

When utilities are being constructed in streets that are scheduled for immediate paving, the stabilized backfill or crusher fines shall extend from the top of the pipe zone to the bottom edge of the eight (8”) inches of subgrade, or, if the paving contractor has constructed a portion of the roadway prior to the construction of the utilities the backfill shall extend to the top of the course the contractor has finished, or the top of the base course, which ever is lower.

If the final course of asphaltic concrete has been placed, the street or alley surface shall not be cut for utility installation.

In streets where stabilized backfill is required only to the bottom of the subgrade course, the minimum depth of stabilized backfill may be reduced to six (6”) inches in which case the maximum depth of the “pipe zone” shall be limited to six (6”) inches above the top of the utility line or conduit.

B. BACKFILL MATERIALS

(1) Portland cement stabilized backfill shall consist of caliche base material, blow sand or native soil stabilized by the addition of Portland cement. Crushed stone or concrete aggregate shall NOT be used.

When Portland cement stabilized backfill is to be used, the contractor shall submit a mix design prepared by an approved commercial laboratory for approval before the trenching operation is begun. When native soil is to be used samples may be taken along the proposed route by boring or other approved means. Samples must be representative of the full trench depth.

The mix design shall be such that the minimum 7-day compressive strength is 150 psi when tested according to test method Tex 418-A.

The minimum cement content for Portland cement stabilized backfill shall be 1 sack per cubic yard.

Cement used in Portland cement stabilized backfill shall be Type I or Type II conforming to the requirements of ASTM Designation C150.

Caliche used for Portland cement stabilized backfill shall be crushed material conforming to Texas State Department of Highways and Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges Item 248 Type F, Grade 2.

Blow sand used for Portland cement stabilized backfill shall be clean, free from organic matter, clay lumps, rock and other deleterious matter.

Native soil used for Portland cement stabilized backfill shall be clean, free of clods and organic matter, and free of rock in excess of 2”.

(2) Crushed stone screening (crusher fines) used for back fill shall be sharp grained particles of crushed stone conforming to the requirements of Article 2.07 of these specifications.

(3) Trencher excavated rock material shall be screened so that the largest diameter material is less than 2". The screened rock material used for backfill shall have sufficient moisture added so that the backfill will bind with the fines. The rock material backfill shall be tamped or compacted in two (2) foot lifts. A sheeps foot roller shall not be used unless there is two (2) feet or more compacted backfill above the pipe bedding.

C. BACKFILL CONSTRUCTION

(1) Portland cement stabilized caliche backfill or Portland cement stabilized native soil backfill may be constructed using either the "dry" method or the "wet" method.

(a) The dry method of stabilized backfill construction consists of dry mixing of the cement and caliche or soil to produce a homogenous mixture then adding and mixing sufficient water for proper compaction and hydration of the cement. The water content of the mixture will be approximately one to two percent above the optimum moisture for soil compaction. The mixing may be accomplished by using batch mixers or on the job site by "blade mixing" or other suitable method to produce the desired backfill material. The mixed material shall be placed in lifts of up to a maximum of 12 inches and compacted to ninety-five (95%) modified proctor densities by use of suitable compacting equipment.

(b) In the "wet" method of cement stabilized backfill construction, the materials shall be mixed in an approved concrete batching plant or mixer to the consistency of concrete and placed as concrete would be placed. The slump of the backfill material shall be such that all voids will be filled, approximately four (4") to six (6") inches. The backfill shall be consolidated by rodding or by the use of mechanical vibrators.

Portland cement stabilized blow sand backfill shall be mixed and placed by the "wet" method as described above.

Crushed stone screening (crusher fines) shall be wetted uniformly throughout with sufficient moisture to assure proper compaction before being placed in the trench. The moistened crushed stone screening (crusher fines) shall be placed in maximum lifts of twelve inches and consolidated using vibratory type compaction equipment except when it has been demonstrated that the compaction equipment employed will adequately compact deeper lifts in which case the maximum depth of a lift shall be limited by the capabilities of the equipment used.

Tests to determine the compacted density of the backfill shall be ordered by the Engineer if in his opinion the compaction is not adequate. Test showing a minimum compacted density of 90%-modified proctor will be deemed adequate.

3. BACKFILL OUTSIDE OF PUBLIC RIGHTS-OF-WAY WHERE SETTLEMENT IS NOT CRITICAL

A. In areas outside of public rights-of-way and in the absence of special work item requirements the backfilling shall be accomplished with the use of suitable materials selected from the excavated materials to the extent available and practical. Should the materials available from the trench section be unsuitable or insufficient, the required additional materials shall be furnished from outside sources at the Owners expense.

B. Suitable material shall be defined as a mineral soil reasonably free of foreign materials (rubbish, debris, etc.) frozen clumps, oversize stone, rock, concrete or bituminous chunks and other unsuitable materials, that may damage the pipe installation, prevent thorough compaction, or increase the risks of after settlement unnecessarily. Material selection shall be such as to make the best and fullest utilization of what is available, taking into consideration particular needs of different backfill zones. Material containing stone, rock, or chunks of any sort shall only be utilized where and to the extent there will be no detrimental effects.

C. The backfill material placed in this area shall be compacted by suitable means to a minimum density equal to the density of the undisturbed surrounding soil. City Engineer MUST approve water flooding as a means of compaction.

4. TRENCH BACKFILL BEHIND CURB AND GUTTER

A. When utilities are placed behind the curb in paved streets and other landscaped areas the backfill shall be the same as elsewhere in the right-of-way or other applicable location except that in grassed areas and in flower beds the top six (6") inches of backfill shall be good quality top soil. When utilities are placed behind the curb in grassed or landscaped areas where no sidewalk is to be constructed and the edge of the trench is a minimum of 2 feet from the back of curb or where sidewalk is to be constructed and the minimum distance from both the back of curb and the edge of the sidewalk to the edge of the trench is 2 feet the contractor may elect to use suitable native soil for backfill. The native soil backfill shall be compacted to 95% modified proctor density to within 6" of the top of curb height. The top 6" of backfill shall be good topsoil and shall be compacted to the density of the adjacent soil.

B. Sidewalks shall be repaired by removing and replacing the complete section or sections that have been damaged. Strip patching through sidewalks will not be permitted.

The replacement sidewalk shall be of the same design and section as the walk removed and shall be of equal or better workmanship.

C. When utilities are placed in paved areas behind curbs the pavement shall be repaired as specified for street pavement.

D. Grassed areas and flowerbeds shall be restored as nearly as possible to the original condition. Care shall be taken to avoid damage to sprinkler systems.

Mail boxes and other appurtenance in the construction area. Any damage to said items shall be repaired immediately.

E. All repairs made behind the curb shall be to the satisfaction of the property owner responsible for their maintenance and/or to the satisfaction to the City Engineer.

3.11 INLET STRUCTURES AND LEADS AND CLEANOUTS FOR STORM SEWERS

A. Corrugated Galvanized Steel Slotted Drains for Nuisance water inlets only.

(1) Slotted drains shall be the sizes and lengths as shown on the plans and constructed at the locations as shown on the plans or at locations to be established on the job site.

(2) Slotted drains shall not be installed under asphalt pavement but shall have a section of concrete gutter constructed around it as shown on the detail drawings.

Slotted drains shall be protected from the entrance of debris, concrete or HMAC by closing the slot with one or two layers of heavy duct tape or similar material. In addition, the slot for slotted drain shall have a 2-½ inch or ¾ inch board attached to use as a guide for placing and edging the concrete.

Unless otherwise approved or directed by the Engineer the removal of tape and planking from the slotted drain should be accomplished as part of the final clean up.

B. Curb inlets, grate inlets and combination inlets

(1) General

Curb inlets, grate inlets and combination inlets may be pre-cast or cast-in-place at the contractor's option unless specifically shown otherwise on the plans and bid proposal.

(2) Pre-cast inlet boxes

(a) Construction and finish for pre-cast inlet boxes shall conform to details shown on the plans and all applicable requirements for pre-cast manholes.

(b) Tops for curb inlets and combination inlets may be cast in place or pre-cast. Extra care will be required in setting pre-cast tops to assure curb and gutter match.

(c) Pipe connections, bedding, setting and backfill for pre-cast inlets shall be in accord with the applicable requirements for pre-cast manholes article 3.12 of these specifications.

(3) Cast in place inlets

(a) Cast in place inlets shall be constructed of class "C" reinforced concrete as specified in item 1-B "Concrete for Structure" in these specifications.

(b) Forms for cast in place inlets shall be straight, clean and in good condition. Forms shall be properly cleaned and oiled before concrete is placed.

(c) Construction joints may be placed in cast in place inlets at locations shown on the plans. When construction joints are used, extra care will be required to assure that the joints are watertight.

(d) Cast in place inlets may be cast without outside forms if the soil conditions are such that true vertical walls can be cut and will stand during construction without sloughing or otherwise incorporation foreign materials into the concrete.

(e) When inlets are cast without outside forms, a plastic sheet lining may be required to prevent excessive loss of moisture from the concrete and/or to prevent incorporation of foreign material into the concrete.

A. Inlet Leads

(1) Inlet leads shall be constructed of corrugated steel pipe, PVC pipe or other material as called for on the plans and in the bid proposal.

(2) Construction of inlet leads shall be in accord with the applicable requirements for the type of pipe used.

(3) Junctions where two or more inlet leads are joined shall be made at clean outs or manholes.

B. Cleanouts

(1) Clean outs shall be constructed in accord with the plans and detail drawings.

(2) Construction and connections shall be in accord with the applicable specifications for construction of corrugated steel pipe manholes.

3.12 SANITARY SEWER SERVICES AND PLUGGED STUBS

A. Sanitary Sewer Services:

(1) On new sewer main construction all sewer laterals shall be constructed as part of the initial installation. Sewer wye fittings for sewer laterals in new construction shall be molded or fabricated with all gasketed connections. Four (4”) inch laterals shall be installed at all single-family residences and duplex. Laterals installed for apartment complexes, commercial and industrial areas shall be a minimum of six (6”) inches. Depth of laterals will be determined by depth of sewer main and applicable building codes. Laterals shall be installed using tee wyes or wyes and bends so that they will be at 90 degrees to the sewer main. Laterals shall extend to 3’ minimum beyond the property line of the served lot or tract. The contractor shall install sewer laterals according to the typical sewer lateral detail and the most current revisions of the Plumbing Code.

(2) Taps into existing lines shall use a gasketed fitting in conjunction with a full circle repair sleeve coupling, except that taps into existing ductile iron sewer may be made using the Genco Model DF sewer pipe saddle (The General Engineering Co., Frederic, MD Drawing No. R-3220-D dated 12/29/82) or approved equal.

(3) Cemented mitered connections without socket reinforcement shall not be permitted. The contractor will be permitted to use fittings, which are prefabricated, using pipe sections, molded saddles and PVC solvent cement, provided the solvent cement used in fabrication has cured for at least 24 hours prior to the installation. All solvent cement fittings shall e manufactured in the shop under controlled conditions.

(4) All caps and plugs shall be braced, staked, anchored, wired on or otherwise secured to the pipe to prevent leakage under maximum anticipated thrust from internal abnormal operating conditions or test pressures from water or air.

(5) It shall be the duty of the Contractor to keep a record of sewer service wye locations with respect to the nearest downstream manhole, but the Engineer will record ties on the end of all sewer services at the property line. When installing sewer services the Contractor shall, before backfilling, contact the Engineer or his representatives, and assist him in making ties to the end of the service in the open trench. At least two ties shall be made for each service, and if backfilling proceeds before such ties are made, the Contractor shall dig up the end of all such services, with no additional compensation, for the purpose of making ties. During backfilling the Contractor shall furnish and place a vertical steel post or 2 inch by 2 inch wooden stake set flush with finished ground surface, and extending down to the end of the sewer service, a nail shall be placed in the top of the stake to allow location of the service by metal finder.

(6) The main sewer service connection shall consist of installing an in-line wye section in the main sewer line at designated locations. Saddle wye installations will be permitted only when specifically called for. Orientation of service connection fittings shall be as shown in the standard drawings unless otherwise directed by the Engineer.

(7) Where the depth of cover over the main sewer invert is greater than 8 feet (or such other maximum as may be indicated), the service connection shall be extended outward then upward by use of bends to prevent excess loading on the sewer main in accordance with the details shown in the drawings.

(8) The Contractor shall provide the necessary wyes, tees and bends to bring the service to the proper place at the property line.

(9) Wherever service line connections to the main sewer are permitted or required to be made by the open cutout method in the absence of a built-in tee or wye fitting, the connection shall be made by using an approved type coring machine or by other approved methods producing a uniform, smooth circular cut-out as required for proper fit. The cutout discs shall be retrieved and shall not be allowed to remain within the main sewer pipe. The saddle tee shall be securely fastened to the main sewer pipe by means of epoxy resin or other approved adhesive. The entire connection fitting shall be encased in concrete to a minimum thickness of six inches and as may be shown in the standard drawings.

(10)Wherever service line connections to the main sewer are required to be made by means of built-in branch tee or wye fittings, the Contractor shall, in the absence of such fitting, remove a section of the main sewer pipe and replace it with the required branch tee wye or wye section connected by means of an approved sleeve coupling.

(11)Connections of service lines to the main sewer are required to be made by means of built-in branch tee or wye fittings, the Contractor shall, in the absence of such fitting, remove a section of the main sewer pipe and replace it with the required branch tee wye or wye section connected by means of an approved sleeve coupling.

(12)The end of all service connections shall be plugged with PVC plug and sealed with plastic joint material.

(13)Crushed stone bedding and backfill material, concrete encasement and protection, etc., for service line installation shall be the same as for the sewer lines.

(14)No service connections or laterals shall be covered until they have been inspected and located by the Engineer.

B. INSTALLATION OF PLUGGED STUBS ON SANITARY SEWERS

Plugged pipe stubs for future connections to manholes and sewerage structures shall be installed where shown on the Drawings or directed by the Engineer. The pipe stubs shall be installed in accordance with the specifications and details shown on the Drawings for connecting the type of pipe used to manholes.

3.13 MANHOLES

1. General

The manholes shall be constructed at the locations shown on the plans or as directed by the Engineer and in accordance with the details shown on the plans and as specified herein. After the excavation has been completed, the subgrade for the manhole base shall be graded and leveled. A crushed stone foundation having a minimum thickness of 6 inches shall then be placed on the subgrade. The crushed stone foundation shall be leveled and consolidated before the section of the manhole is placed. Pre-cast base sections shall sit in place level and plumb and to the lines and grade as shown on the plans. Cast in place bases shall be placed around the existing sewer line in accord with the plans and detail sheet. When pre-cast manhole bases are used, riser construction may proceed when the base is set on line and grade. When cast in place manhole bases are used, riser construction may proceed when the base has set sufficiently to support the weight of the riser.

Manholes shall be of the type and material shown on the plans and called for in the bid proposal and shall conform to these specifications.

All lift holes shall be filled with approved non shrink grout and bituminous material before final acceptance. Use of bituminous material or other flowable material alone to plug lift holes will not be permitted. Voids in the invert around the sewer pipe on the

inside wall of the manhole shall be grouted with cement rich grout, to conform to the rest of the wash, in accordance with the standard manhole details.

The backfill around the manhole shall be done in accordance with the details shown on the plans and trench backfill specifications.

The Contractor shall take whatever precautions necessary to protect the manholes that are under construction. At the end of the day or at such time as the Contractor deems necessary, all manholes not completed shall be covered, sealed, plugged, etc. to prevent the inflow of storm water or other objectionable material, and to prevent animals and humans from getting into the manhole.

2. PRE-CAST CONCRETE

A. Pre-cast tub bottom sections of manholes shall be set on a crushed stone foundation or bedding according to the details shown on the plans. Care shall be exercised to assure true alignment and grade for the pipe openings.

The invert of the manhole shall be constructed of cement rich grout and shall be formed to true lines; grades and curvature to assure smooth flow through the manhole. The invert shall have a steel trowel finish.

Joints for pre-cast concrete manhole riser sections shall be made Watertight by use of bitumastic or rubber sealers or “O” ring gaskets. Both sides of the tongue and groove joint shall be painted with a bitumastic primer before assembly.

The bitumastic or rubber sealer shall be clean and pliable and shall deform under the pressure of joint closure to assure a complete water tight seal. Care shall be exercised to assure proper alignment of the joint. The walls of the completed manhole shall be straight and vertical.

B. Pre-cast eccentric cone sections and precast slab manhole tops with eccentrically located manway shall be set with the manway adjacent to the up stream side of the manhole. The joints between the cone or slab top and the manhole riser shall be sealed in the same manner as the joints between the riser section. Care shall be taken in placing the cone and or slab tops to assure the manhole ring and cover can be set to match the finished paving.

C. Pre-cast grade rings will be used, when required, to bring the manhole ring and cover up to the finished grade. Grade rings may be set using cement rich grout or bitumastic seal and such as Ram-Nek or approved equal. When cement rich grout is used, care shall be taken that the space between the cone or slab top and the first grade ring and between the grade rings are completely filled without voids.

When bitumastic sealer is used the joints shall be constructed in the same manner as the joints between the riser sections.

When pre-cast manholes with PVC or other approved polymer lining are called for on the plans and bid proposal and are furnished under this contract they shall be constructed as other pre-cast concrete manholes.

In addition the joints in the lining shall be sealed by hot air welding, use of epoxy coating, or other approved means.

3. CAST IN PLACE MANHOLE BASES

A. Cast in place manhole bases shall be used only where shown on the plans or as directed by the Engineer and shall be constructed in accord with the details shown on the plans.

B. Special care shall be taken in casting the surfaces that will mate with the first risersection to assure a smooth even fit and a watertight joint.

C. The first riser section to be used with cast in place manhole bases shall be castwithout tongue or groove. The joint between the riser section and the cast in place base shall be sealed with a bitumastic or rubber sealant in the same manner as the joints in the pre-cast riser sections.

D. Care shall be taken in forming the invert of the manhole around existing sewers to assure adequate opening for the insertion of a “go – no go” mandrel or other testing equipment and cleaning tools.

4. MANHOLE RING AND COVER

A. The tops of the manhole frame and cover (ring) shall be built to the grade shown on the plans. The cast iron frame shall be firmly embedded in mortar.

B. When pressure type manhole rings and cover are specified on storm sewer manholes they shall be bolted to the concrete slab top using the “L” bolts cast into the slab for this purpose. The joint between the ring and the concrete slab top shall be made watertight using a bitumastic or rubber seal and conforming to the requirements of these specifications.

5. CORRUGATED STEEL MANHOLES

A. Corrugated steel manholes shall be constructed in accord with the details shown on the plans and in accord with the applicable requirements for the construction of corrugated steel pipe sewers.

B. Care shall be taken during the placing of backfill around corrugated steel pipe manholes to maintain the horizontal and vertical alignment of the manhole.

C. Since full contact of the flat top slab with the cement stabilized backfill is critical the backfill shall be finished smooth and to the proper grade. A thin layer of cement rich grout shall be placed on the cement stabilized backfill immediately prior to placing the concrete slab top. The grout shall be sufficient t fill all voids between the backfill and the slab and of a consistency to be forced into the voids under the weight of the slab.

3.14 TESTING GRAVITY SEWER MAINS AND MANHOLES

A. Upon completion of the sewer construction including all wyes and service laterals and before any house drains or services are connected, all sewers shall be cleaned and lamped. All runs of sewer between manholes shall be straight and true. Leakage tests shall be made to determine the amount of ground water infiltration into the sewers. Infiltration tests shall be made when groundwater level is 18 inches or more above the top of the outside of the pipe. Measurement will be taken by means of a weir placed in the lines. The maximum allowable rate of leakage shall be 25 gallons per inch diameter per mile of pipe per 24 hours, for any section of pipe with a maximum total leakage of 200 gallons per mile per 24 hours for sanitary sewers with the exception that the maximum leakage for storm drains shall be 200 gallons per inch of diameter per mile per 24 hours with a total maximum leakage of 6,000 gallons per mile per 24 hours.

When the groundwater is not at sufficient height for infiltration testing the Contractor shall use exfiltration to test the sewer lines.

B. In lieu of the infiltration or exfiltration tests the Contractor may perform air tests on the sewers.

C. If the infiltration, exfiltration, or air tests fail to meet requirements specified herein, the Engineer reserves the right to request television work to be done to locate leaks. The Contractor shall furnish all materials and equipment necessary to accomplish all infiltration, exfiltration, air or television testing.

The Contractor shall receive no additional compensation for this testing or inspection work or for repairs of corrective work required to be done to the sewers. The exfiltration tests shall be used in areas where no ground water is present.

D. Test Procedure Hydrostatic (Exfiltration)

(1) The test section shall be bulk headed and the pipe subject to a hydrostatic pressure produced by a head of water at a depth of three (3) feet above the invert of the sewer at the upper manhole under test. In areas where ground water exists, this head of water shall be three feet above the existing water table.

(2) This head of water shall be maintained for a period of one hour during which it is presumed that full absorption of the concrete manhole body has taken place and thereafter for a further period of one (1) hour for the actual test of leakage. Fiber glass manholes are exempt from the one hour absorption requirement. During this one (1) hour test period, the measured maximum allowable rate of exfiltration for any section of sewer shall be the same as allowed for the infiltration test.

E. TEST PROCEDURE AIR

(1) Where the Contractor elects to air test, he shall perform these tests with equipment similar to Air-Loc equipment manufactured by Cherne Industrial, Inc. Hopkins, Minnesota.

(2) The air test shall be made when the sewer is clean. The line shall be plugged at each manhole with pneumatic balls. Low pressure air shall be introduced into the plugged line until the internal air pressure reaches 4.0 psig greater than the average

back pressure of any ground water pressure that may submerge the pipe. At least two (2) minutes shall be allowed for the air temperature to stabilize before readings are taken and the timing started.

(3) When testing pipes 14 inches and less in diameter between consecutive manholes, the portion being tested shall pass if it does not lose air at a rate to cause the pressure to drop from 4.0 to 3.0 psig (greater than the average back pressure of any groundwater that may submerge the pipe) in less time than listed as calculated from Table 1.

When testing pipes greater than 15 inches in diameter between consecutive manholes the portion being tested shall pass if it does not lose air at a rate to cause the pressure to drop from 3.5 psig 3.0 psig (greater than the average back pressure of any groundwater that may submerge the pipe) in less time than that shown in or calculated from Table II.

TABLE I
Specification Time Required for a 1.0 PSIG Pressure Drop for Size and Length of Pipe indicated for Q = 0.0015

Specification Time for Length (L) Shown (min: sec)											
1	2	3	4 (xL)	100 ft.	150 ft.	200 ft.	250 ft.	300 ft.	350 ft.	400 ft.	450 ft.
4	3:46	597	.380	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	5:40	398	.854	5:40	5:40	5:40	5:40	5:40	5:40	5:42	5:42
8	7:34	298	1.520	7:34	7:34	7:34	7:34:	7:36	8:52	10:08	11:24
10	9:26	239	2.374	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	199	3.418	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	159	5.342	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04
18	17:00	133	7.692	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41
21	19:50	114	10.470	19:50	26:10	34:54	43:37	52:21	61:00	69:48	78:31
24	22:40	99	13.674	22:47	34:11	45:34	56:58	68:22	79:46	91:10	102:33
27	25:30	88	17.306	28:51	43:16	57:41	72:07	86:32	100:57	115:22	129:48
30	28:20	80	21.366	35:37	53:25	71:13	89:02	106:50	124:38	142:26	160:15
33	31:10	72	25.852	43:05	64:38	86:10	107:43	129:16	150:43	172:21	193:53
36	34:00	66	30.768	51:17	75:55	102.34	128:12	153:50	179:29	205:07	230:46

1. Pipe Diameter (in.)
Minimum Time (min:sec)
Length for Minimum Time (ft.)
Time for Longer Length (sec)

NOTE: When using column 4 multiply the number in column 4 opposite the pipe diameter by the length of pipe of that diameter and sum the times for the various pipe size in the run being tested. Computations shall include lengths for service connection laterals.

Table II
Specification Time Required for 0.5 PSIG Pressure Drop for Size and Length of Pipe Indicated for Q + 0.0015

Specification Time for Length (L) Shown (min: sec)											
1	2	3	4 (xL)	100 ft.	150 ft.	200 ft.	250 ft.	300 ft.	350 ft.	400 ft.	450 ft.
4	1:53	597	.190	1:53	1:53	1:53	1:53	1:53	1:53	1:53	1:53
6	2:50	398	.427	2:50	2:50	2:50	2:50	2:50	2:50	2:51	3:12
8	3:47	298	.760	3:47	3:47	3:47	3:47	3:48	4:26	5:04	5:42
10	4:43	239	1.187	4:43	4:43	4:43	4:57	5:56	6:55	7;54	8:54
12	5:40	199	1.709	5:40	5:40	5:40	7:08	8:33	9:58	11:24	12:50
15	7:05	159	2.671	7:05	7:05	8:54	11:08	13:21	15:35	17:48	20:02
18	8:30	133	3.846	8:30	9:37	12:49	16:01	19:14	22:26	25:38	28:51
21	9:55	114	5.235	9:55	13:05	17:27	21:49	26:11	30:32	34:54	39:16
24	11:20	99	6.837	11:24	17:57	22:48	28:30	34:11	39:53	45:35	51:17
27	12:45	88	8.653	14:25	21:38	28:51	36:04	43:16	50:30	57:42	46:54

30 33 36	14:10 15:35 17:00	80 72 66	10.683 12.926 15:384	17:48 21:33 25:39	26:43 32:19 38:28	35:37 43:56 51:17	44:31 53:52 64:06	53:25 64:38 75:55	62:19 75:24 89:44	71:13 86:10 102:34	80:07 96:57 115:23

1 Pipe Diameter (in.)
2 Minimum Time (min:sec)
3 Length for Minimum Time (ft.)
4 Time for Longer Length (sec)

NOTE: When using column 4 multiply the number in column 4 opposite the pipe diameter by the length of pipe of that diameter and sum the times for the various pipe size in the run being tested. Computations shall include lengths for service connection laterals. All service plugs shall be secured in place to prevent displacement during testing operation.

F: DEFLECTION TEST

Deflection tests shall be performed on all flexible pipe, the tests shall be conducted after the backfill has been in place at least 30 days. No pipe shall exceed a deflection of 5 percent. The deflection tests shall be run using a Go-No-Go mandrel having a diameter equal to 95 percent of the inside diameter of the pipe. The tests shall be performed without mechanical pulling device, any pipe not meeting the deflection test shall be excavated and re-bedded at no cost to the owner.

The Contractor at no additional cost to the owner shall furnish the Go-No-GO Mandrel.

Upon completion of all tests, the Contractor shall provide personnel to remove each manhole cover in the presence of the Engineer's representative for inspection and depth measurement.

G. TESTING SANITARY SEWER MANHOLES

All sanitary sewer manholes shall be tested for water tightness by one of the following methods.

Manholes, except those in streets scheduled for immediate paving, shall be complete, having all adjusting rings and cover rings in place and shall be backfilled prior to testing.

Manholes in streets scheduled for immediate paving shall be complete as described above except those acceptance tests shall be made at the top of the cone section.

(1.) Vacuum Test

a. General

This item will govern the testing of all sanitary sewer manholes. All connections to manholes including drop connections shall be in place before testing.

b. Equipment

Equipment for vacuum testing manholes shall be:
MANHOLE VACUUM TESTER as manufactured by:

P.A. Glazier, Inc.
P.O. Box 1002
Worcester, MA. 01613

Or

THE CHERNE AIR-LOC MANHOLE TESTER as manufactured by:

Cherne Industries, Inc.
5700 Lincoln Dr.
Minneapolis, MN 55436-1695

Or approved equal.

c. Preparation for Testing

All connections to the manhole; except plugged stubs for future line extensions, shall be plugged using suitable pneumatic plugs. Line plugs shall be placed at a point outside of the manhole wall (approximately 8" to 10" into the sewer pipe). Drop connections shall be plugged at a point up stream from the drop.
All plugs, pipe connections and plugged stub outs shall be adequately braced to prevent them being drawn into the manhole when vacuum is applied.

d. Testing

The contractor shall set the test equipment in place and operate it in accord with the manufacturer instructions. A copy of these instructions shall be kept on the job site and shall be available to the inspector when tests are performed. When equipment is properly set up a vacuum of 10" of mercury (Hg) shall be drawn and the vacuum line valve closed. After the vacuum pump is shut off the hose shall be disconnected before the test is started.

Note: Vacuum must be at 10" Hg when test is started. The contractor may wish to draw up to 10.5" Hg vacuum and then bleed back to 10" Hg before starting the test. The test shall pass when the minimum time for the vacuum to drop from 10" Hg to 9" Hg is greater than the time shown in the following table:

TABLE 1: Minimum test times for various manhole diameters.

	DIAMETER		
Depth Feet	48"	60"	72"
8'	0:20	0:26	0:33
10'	0:25	0:33	0:41
12'	0:30	0:39	0:49
14'	0:35	0:46	0:57
16'	0:40	0:52	1:05
18'	0:45	0:59	1:13
20'	0:50	1:05	1:21
* ADD	0:05	0:06.5	0:08

Any manhole that fails the test shall be repaired and retested until it passes the test.

e. Contractors Optional Test

The contractor, at his option may wish to test manholes before they are backfilled to assure himself that the manhole is sound.
Manholes that fail the test prior to being backfilled may be repaired under vacuum by coating the area of the leak with a liquid quick setting grout allowing the grout to be drawn into the opening until the leak is stopped.

Manholes will not be accepted on the bases of this test.

f. Fiberglass Manholes

Fiberglass manholes may be tested in the same manner as concrete manholes except that all repairs to the fiberglass body of the manhole shall be made using materials furnished by the manufacturer. Repairs shall be made in accord with the manufacturer instructions.

g. No separate payment will be made for vacuum testing of manholes, but the cost shall be considered incidental to furnishing and construction of manholes as bid in the bid proposal.

2. HYDROSTATIC TESTING

a. General

This item shall govern the hydrostatic testing of manholes and may be used as an alternative to vacuum testing by the contractor.

All connections to manholes including drop connections shall be in place prior to testing manholes.

b. Testing

All connections to the manhole, except plugged stubs installed for future line extensions, shall be plugged upstream from the drop.

Plugs in pipe connections must be placed outside the manhole wall (approximately 8” to 10” into the pipe).

The manhole shall then be filled to the top of the cast iron ring (or top of the cone section for manholes in streets scheduled for immediate paving) and allowed to stand for a minimum of one hour to allow for absorption by the components of the manhole. The inspector may extend the absorption period if it appears that the manhole has not reached a stable state.

The manhole shall then be refilled to the top of the ring (or cone) and allowed to stand for up to 24 hours.

The manhole shall be checked at the end of 4 hours and will be deemed to have passed if no perceptible loss has occurred – if loss has occurred the manhole will be checked after the 24 hour period and will be considered to have passed if loss does not exceed the following schedule

Depth Ft.	Loss Inches
0 - 10’	.2
10 – 20’	.4
20 - 30’	.6

c. No separate payment will be made for Hydrostatic Testing of manholes but the cost shall be considered as incidental to furnishing and constructing manholes as bid in the bid proposal.

H. TELEVISING NEW SEWER LINES

It is the city’s intention to televise all new sanitary sewer lines for record purposes.

Immediately after the contractor completes all testing of sanitary sewer lines and manholes he shall leave all manholes accessible for televising and make allowances for the city’s camera crews working on the project site.

The contractor at his own expense before final acceptance must correct any defects discovered during the televising of sanitary sewers.

3.15 RESTORATION

A. Whenever any surface improvements such as pavement, curbing, pedestrian walks, fencing, or turf have been removed, damaged or otherwise disturbed by the Contractor’s operations, they shall be repaired or replaced to the Engineers satisfaction, to restore the improvement in kind and structure to the pre-existing condition. Each item of restoration work shall be done as soon as practicable after completion of installation and backfilling operations on each section of pipeline.

B. In absence of specific payment provisions, as separate Contract Items, the restoration work shall be compensated for as part of the work required under those Contract Items, which necessitated the destruction and replacement or repair, and there will be no separate payment therefor. If separate pay items are provided for restoration work, only that portion of the repair or reconstruction, which was necessitated by the contract, will be measured for payment. Any improvements removed or damaged unnecessarily shall be replaced or repaired at the Contractor’s expense.

C. Turf restoration shall be accomplished by sod replacement except where seeding is specifically allowed or required.

Caliche or gravel surfaced streets and driveway shall be restored to their original condition by salvaging and replacing the pre-existing caliche or gravel. If the Contractor does not salvage sufficient material during excavation operation, he will be required to furnish material to restore the surface to the depth of the original section. This caliche or gravel restoration shall be considered a part of excavation and backfill and no extra compensation will be made.

E. Bituminous and concrete surfaced streets and driveways will be restored to equal or better condition than existed prior to sewer construction. Measurement will be made of the actual quantities required to be replaced by the sewer construction and paid for at the price bid in the appropriate bid items in the proposal.

No measurement or payment will be made for work done outside the lines considered necessary for sewer construction. The Contractor will be required to replace damage outside these lines at his own expense.

F. Reconstruction of caliche base courses and concrete or bituminous surface courses shall be in substantial compliance with all applicable City of Midland Specifications pertaining to the item being restored.

3.16 CLEANUP

After completing each section of the sewer line, the Contractor shall remove all debris, construction materials, and equipment from the site of the work, grade and smooth over the surface on both sides of the line and leave the entire right-of-way in a clean, neat, and serviceable condition. No separate compensation shall be made for clean up.

3.17 PAYMENT

A. General

Payment in accordance with the following items, at the unit price bid for the work, shall constitute full and complete payment for the entire project including all incidental terms necessary for the complete and successful prosecution of the work in accordance with the intent of the plans and specifications.

Materials and work required to complete the project for which there is no bid item in the bid proposal shall be considered as incidental and the cost shall be included in the prices bid for the various items in the bid proposal.

Where payment is to be made on a unit price basis, it shall be made on the actual measured quantities as constructed in the work.

B. Sewer Pipe in Place

Unit prices bid shall cover furnishing and installation of pipe and jointing materials, including tests and all other necessary work and material to install the pipe complete in place at the depth specified. The unit of work shall be the lineal foot of the various types and sizes as shown in the proposal form. The pipe installation shall be measured

along the centerline of the sewer from center to center of manholes with no deduction in footage for manholes, wye branches, riser bases or other structure.

C. Foundation Corrections Materials

Payment for foundation correction materials shall be made at the unit price bid per cubic yard for material furnished and placed to pro vide adequate pipe base in unstable soil. The unit price shall include extra excavation below pipe grade, the material, placing and tamping.

Additional material required to backfill excess depth of excavation caused by neglect or error on the part of the Contractor or wet conditions, shall be furnished and placed at his own expense.

Removal of Street Surfacing

The Contractor shall receive no extra compensation for the removal of street surfacing including cutting of a straight edge.

E. Trench Safety Systems, Sheeting and Shoring

Measurement: Trench Safety Systems shall be measured by the linear foot of "Trench Safety Systems": Payment for work prescribed under this item shall be full compensation for the Trench Safety Systems including any Engineering and/or consulting fees and any additional excavation and backfill required, for furnishing, placing, maintaining and removing all shoring, sheeting, or bracing; for de-watering or diversion of water; for all jacking and jack removal; and for all other labor, materials, tools, equipment and incidentals necessary to complete the work.

F. Manholes

Payment will be made for the various types of manholes at the unit prices bid for the various types of manholes 0 to 6' deep which price shall include excavation, furnishing and installing all materials pumping where necessary, and backfilling and all incidentals for the complete manhole in place. Measurement for manholes over 6 feet in depth shall be made of the depth of manhole in excess of six (6) feet. Manholes will be measured from the invert to the top of the casting as set.

Payment will be made for the manhole depth in excess of 6 feet at the vertical foot price bid in the bid proposal for extra depth of manhole over 6 feet for each type of manhole furnished.

G. Drop Connections to Manholes

Payment shall be made for drop connections to manhole for each drop connection made as counted in the field at the price bid in the proposal.

Said payment shall be complete compensation for furnishing all materials and fittings and making all connections to the manhole including 2' of vertical depth as measured from the invert of the incoming line to the invert of the manhole.

H. Drop Section for Manholes

Drop sections shall be paid for on a vertical footage basis as measured from the invert of the incoming line to the invert of the manhole less 2 feet and shall be paid for at the price bid per vertical foot for the various size drop connections in the bid proposal.

The price bid per vertical foot includes all fittings, granular material, if used and concrete and shall be full compensation for the complete in service drop connection.

I. Service Lines

Service lines will be measured from centerline of the sewer main to the plug end and paid for at the unit price bid per linear foot of each type of pipe as specified and as shown on the typical details.

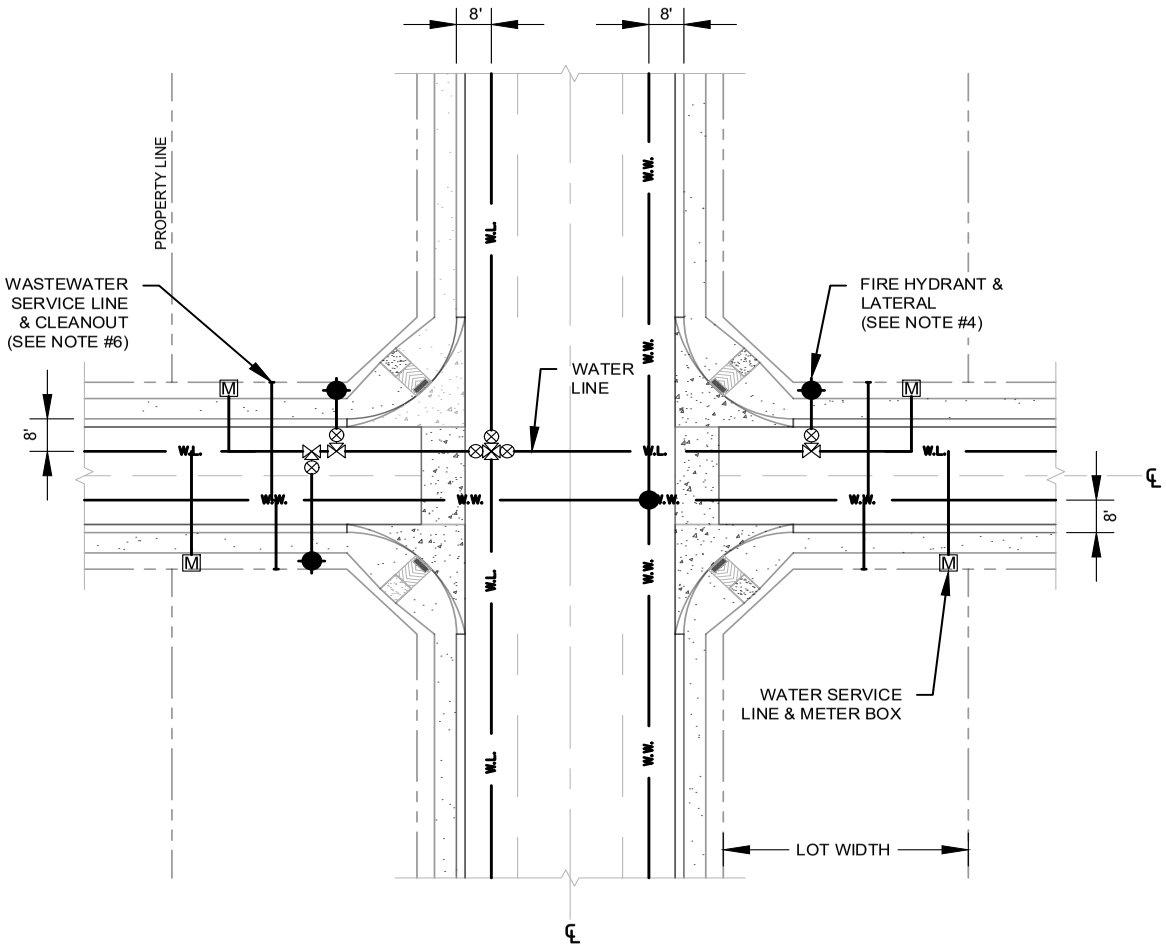
J. Barricading and Traffic Control

The lump sum price bid in the bid proposal shall be full compensation for furnishing flag persons when required and all barricades, signs and other barricading and traffic control devices and for furnishing barricading plans and erecting and maintaining all such devices and signs as required for the duration of the period.

Updated
08/07

City of Midland

Utility Extension Program 05 Details



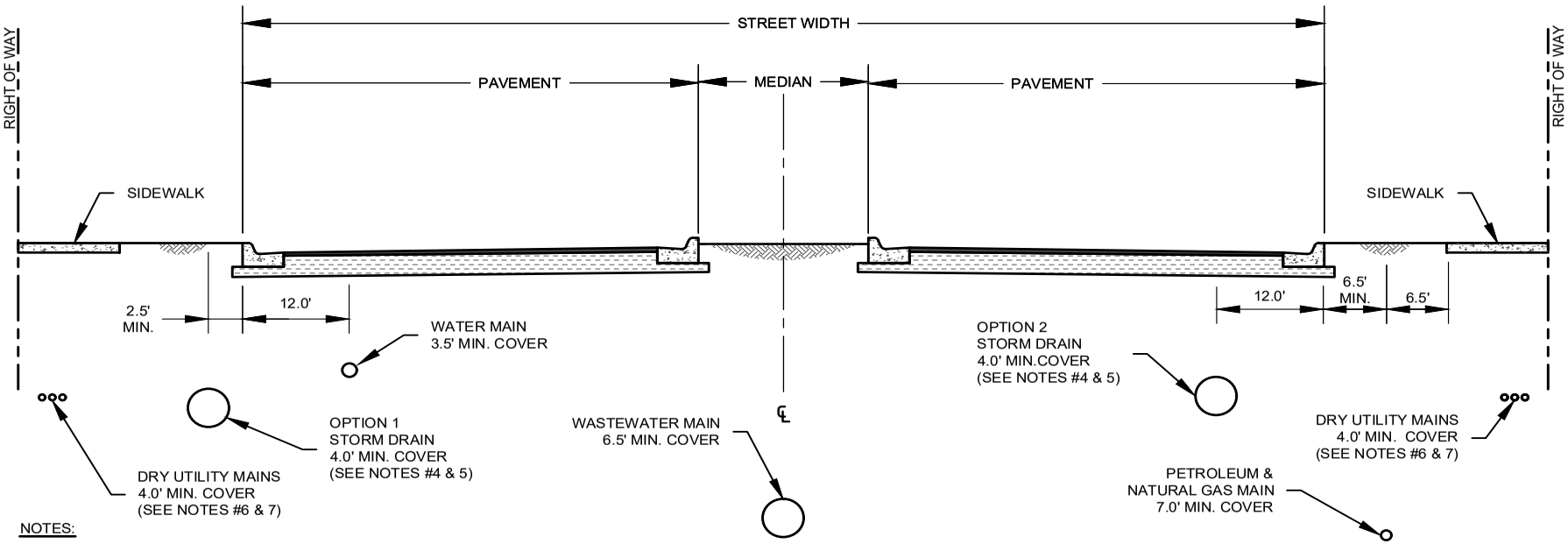
LEGEND

- W.L. — WATER MAIN
- W.W. — WASTE WATER MAIN
- GATE VALVE
- CROSS FITTING
- TEE FITTING
- FIRE HYDRANT
- M — 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.

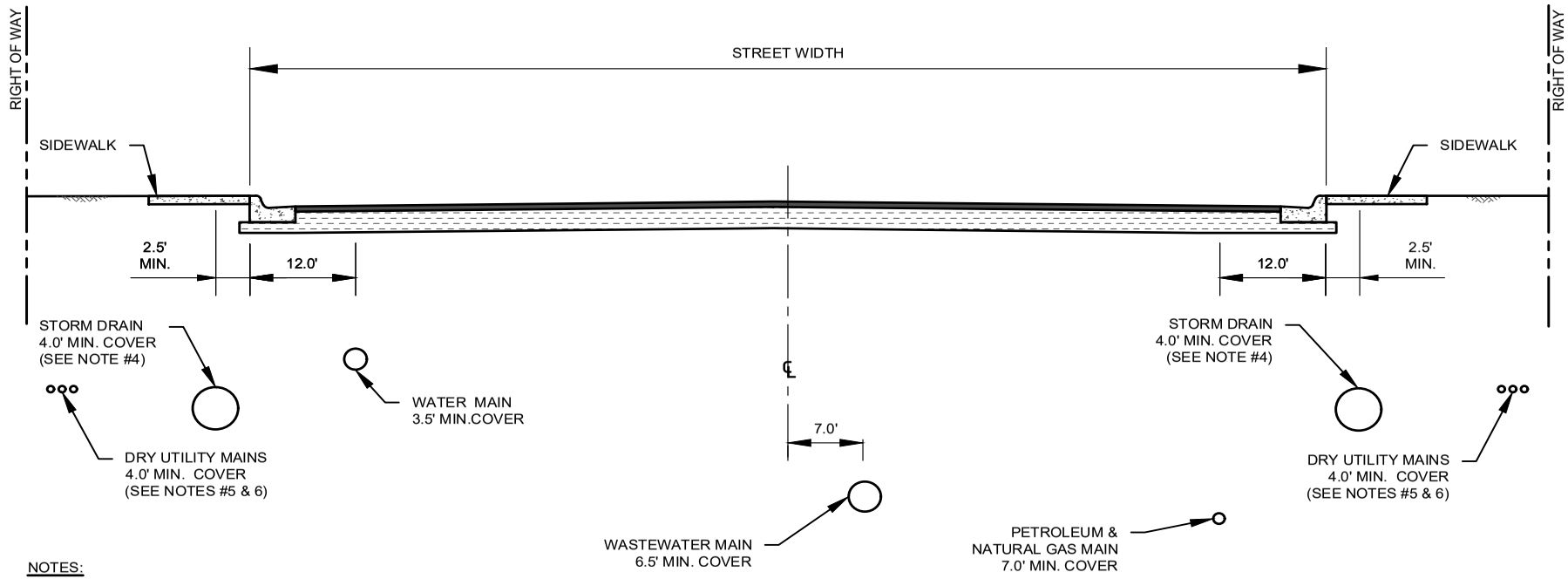
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		TYPICAL UTILITY LAYOUT		301



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.

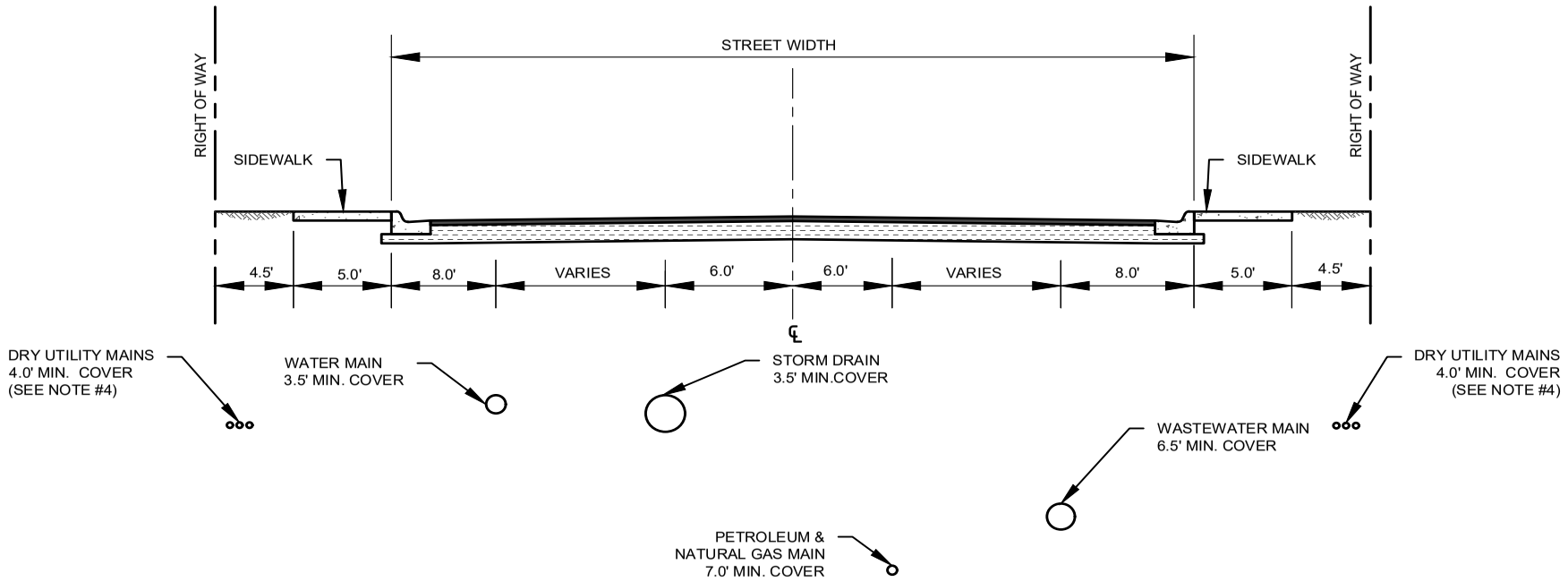
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		ARTERIAL STREET UTILITY MAIN SPACING		302



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.

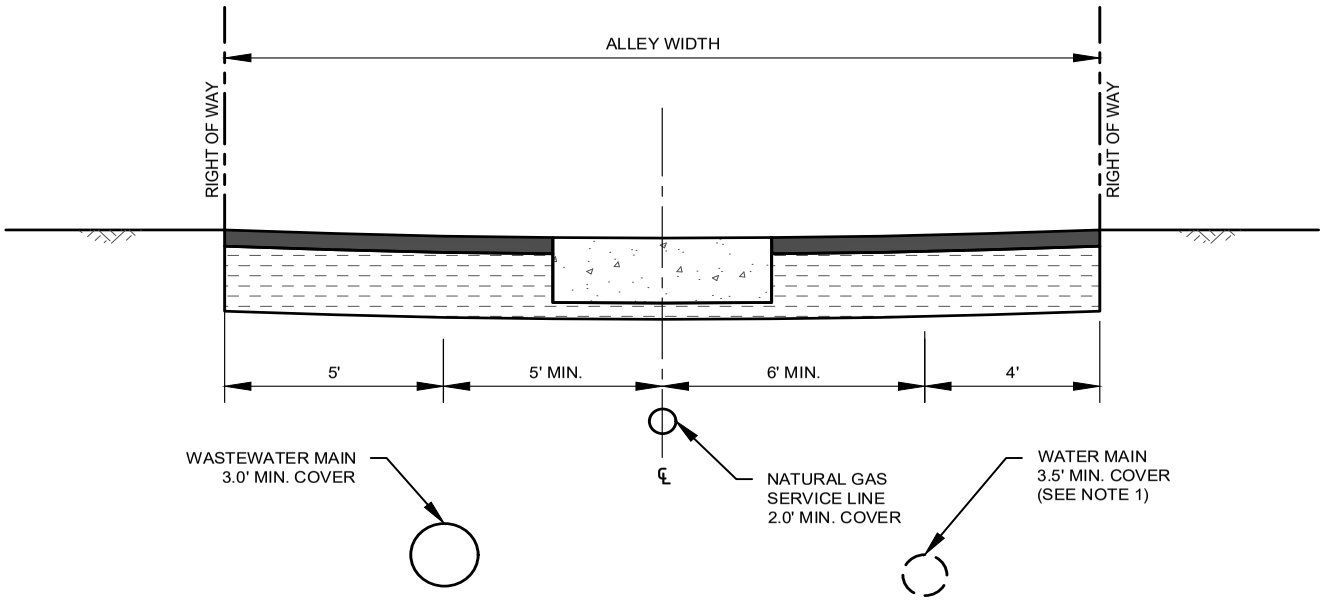
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		COLLECTOR STREET UTILITY MAIN SPACING		303



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.

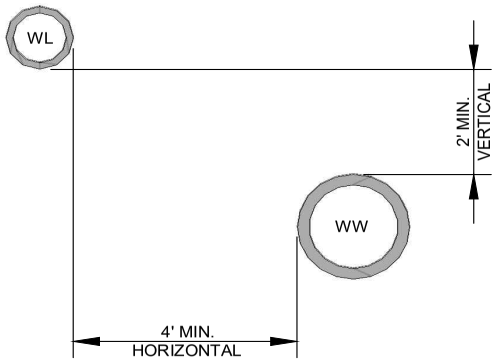
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		LOCAL STREET UTILITY MAIN SPACING		304



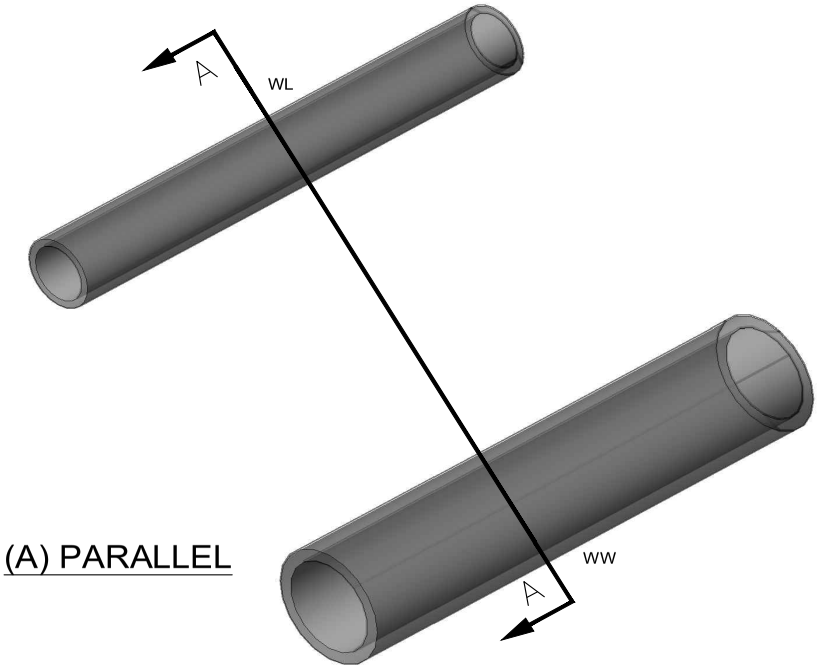
NOTES:

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'



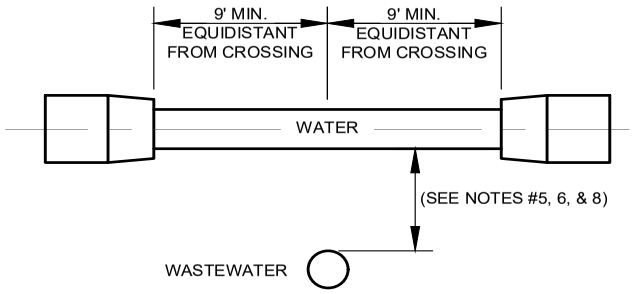
(A) PARALLEL

NOTES:

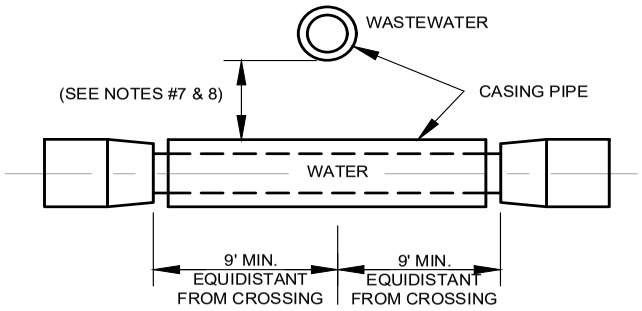
1. SEE CITY DETAIL 807 FOR NEW PETROLEUM OR NATURAL GAS LINE REQUIREMENTS WHEN IN PARALLEL WITH A WATER MAIN. REQUIREMENTS FOR WATER MAINS IN PARALLEL WITH PETROLEUM OR NATURAL GAS LINES ARE THE SAME AS WHEN THEY ARE PARALLEL WITH WASTEWATER MAINS UNLESS STATED OTHERWISE IN CITY DETAIL 807.
2. IF AN 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

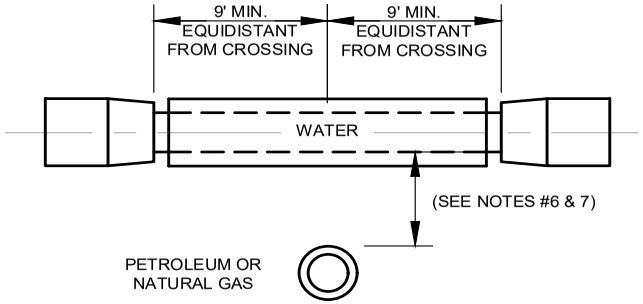


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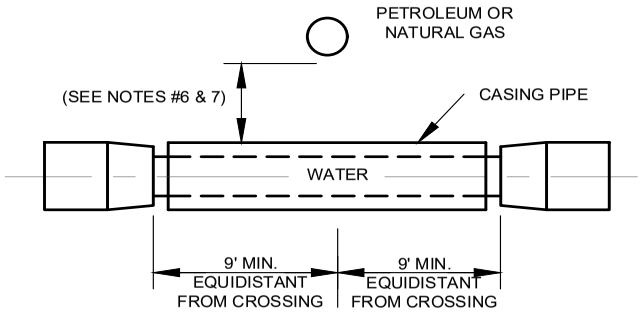
1. SEE CITY DETAIL 309 FOR NEW WASTEWATER MAIN REQUIREMENTS AT WATER MAIN CROSSINGS.
2. WASTEWATER MAINS AND MANHOLES MUST BE LOCATED AT LEAST 9.0' FROM ALL WATER MAINS IN ALL DIRECTIONS. IF THIS IS NOT POSSIBLE THEN AN ENGINEERING REPORT IS REQUIRED PER TAC TO JUSTIFY WHY, AND THE REQUIREMENTS OF THIS 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

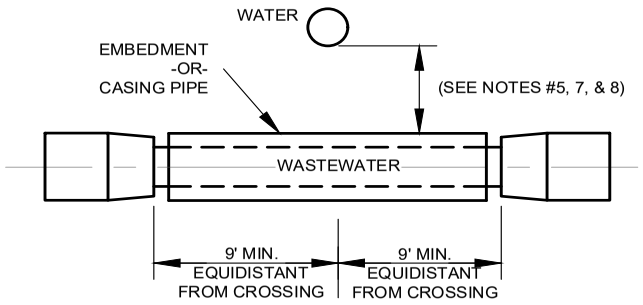


NOTES:

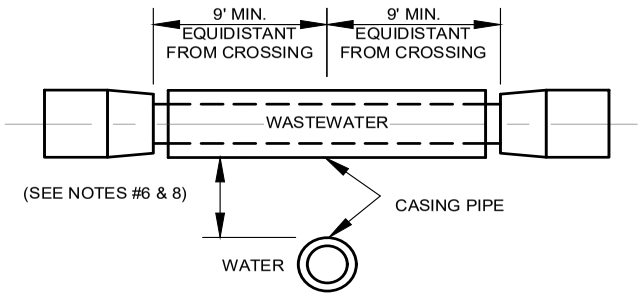
1. SEE CITY DETAIL 808 FOR NEW PETROLEUM OR NATURAL GAS LINE REQUIREMENTS AT WATER MAIN CROSSINGS. REQUIREMENTS FOR WATER MAINS CROSSING WITH PETROLEUM OR NATURAL GAS LINES ARE THE SAME AS WHEN THEY ARE CROSSING WASTEWATER MAINS UNLESS STATED OTHERWISE IN CITY DETAIL 808.
2. IF AN EXISTING PETROLEUM 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: JCF 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

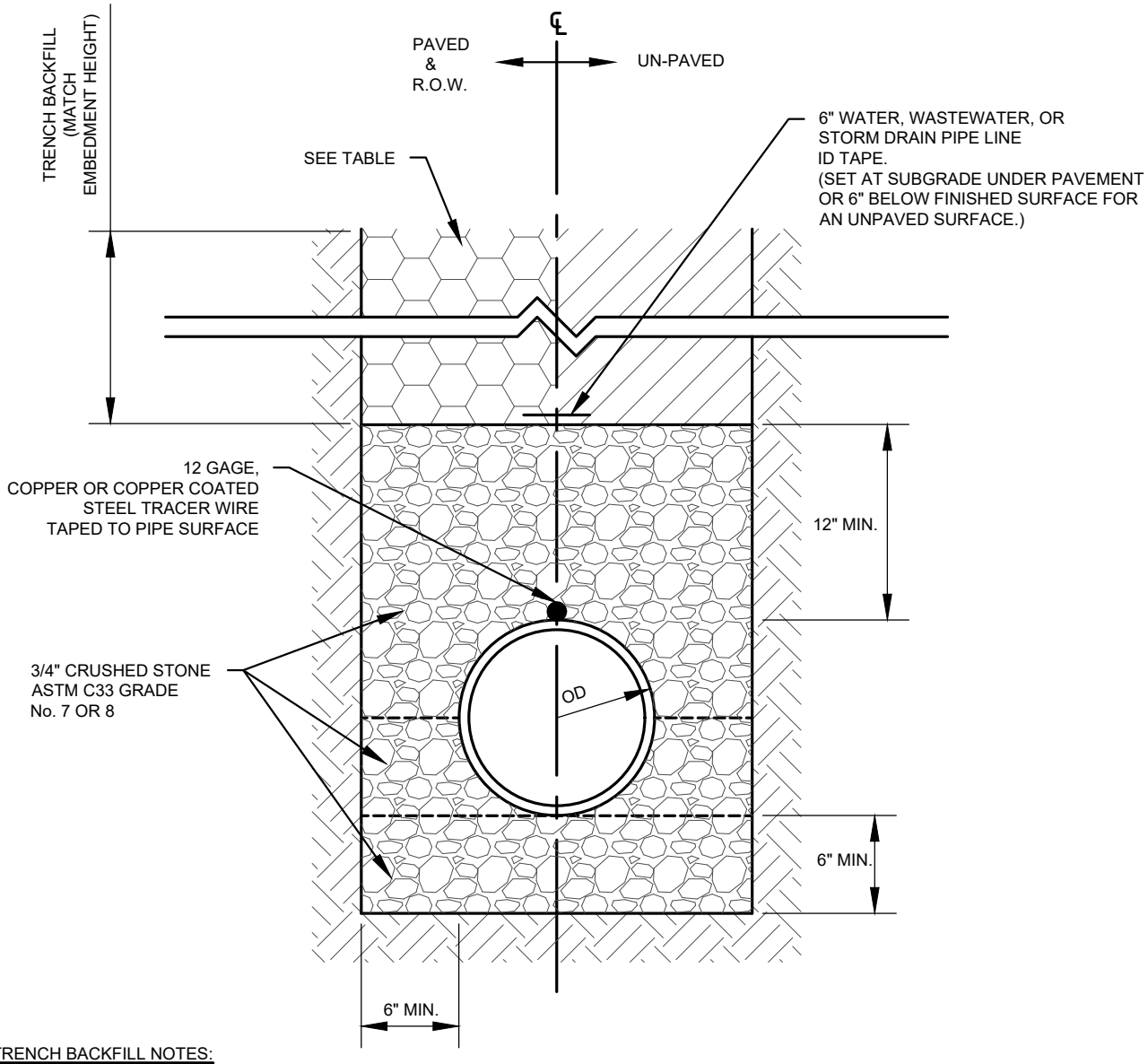


NOTES:

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

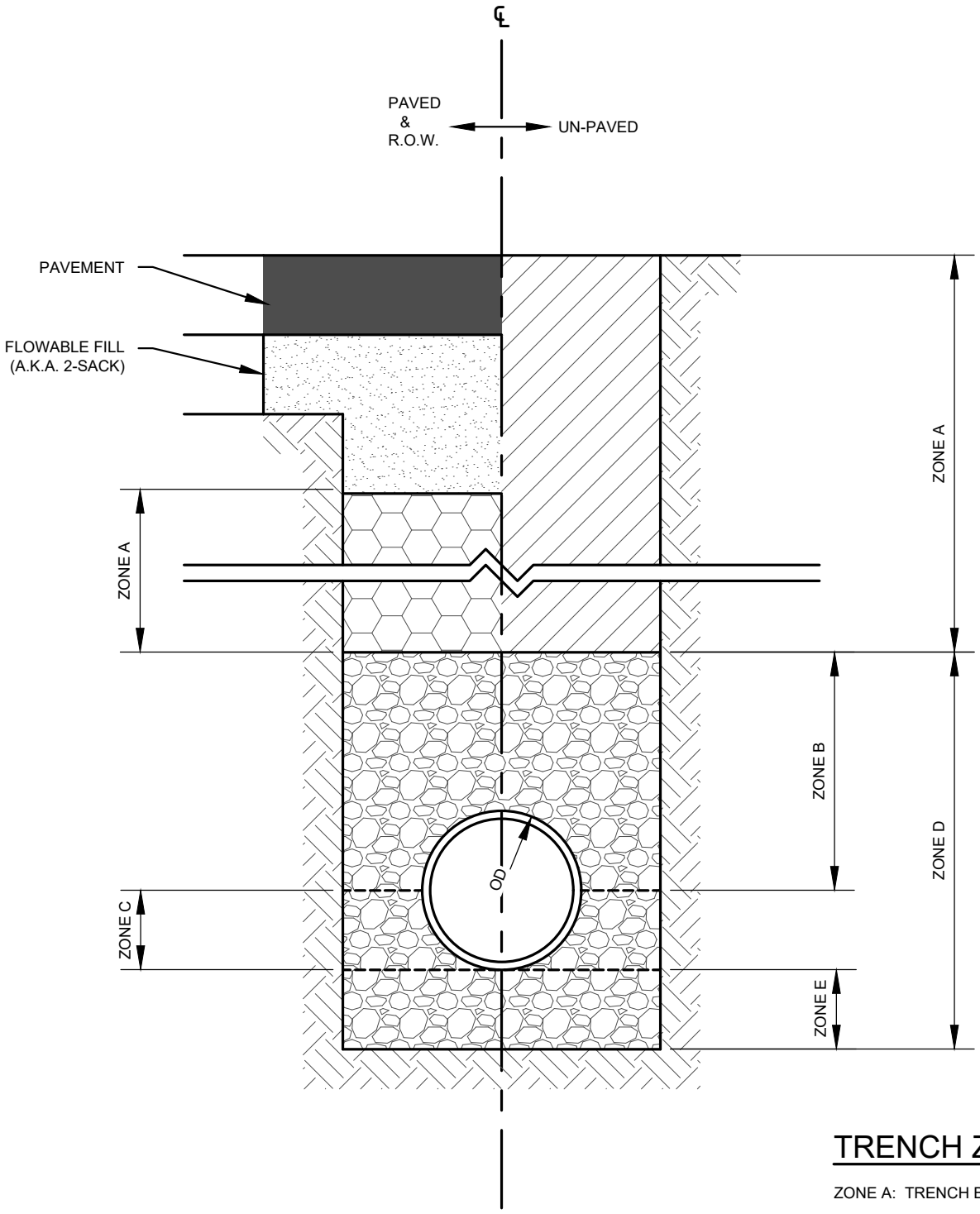
PACKET
11.263
October 25, 2022



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

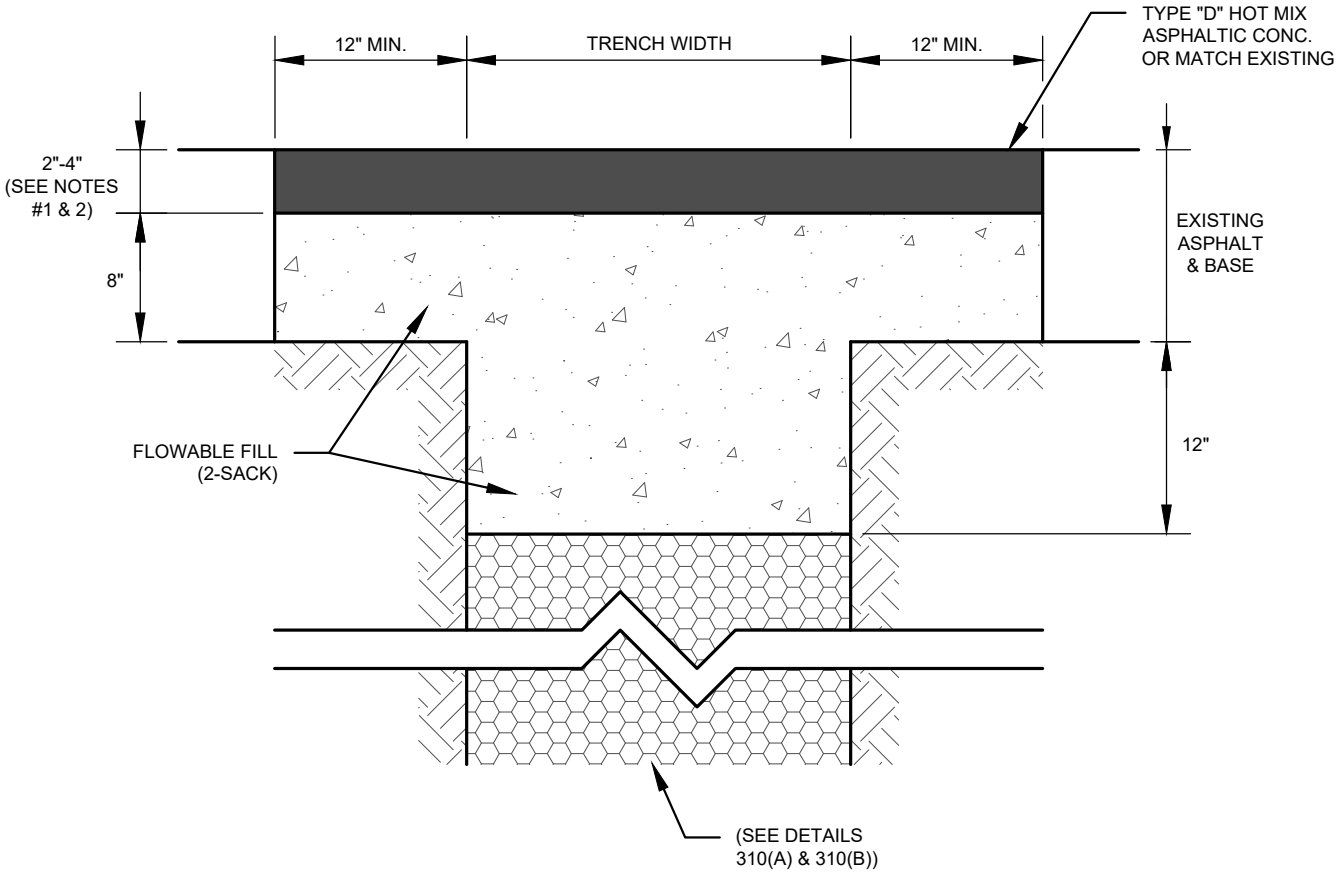
ZONE B: PIPE BACKFILL

ZONE C: HAUNCHING

ZONE D: PIPE EMBEDMENT

ZONE E: BEDDING

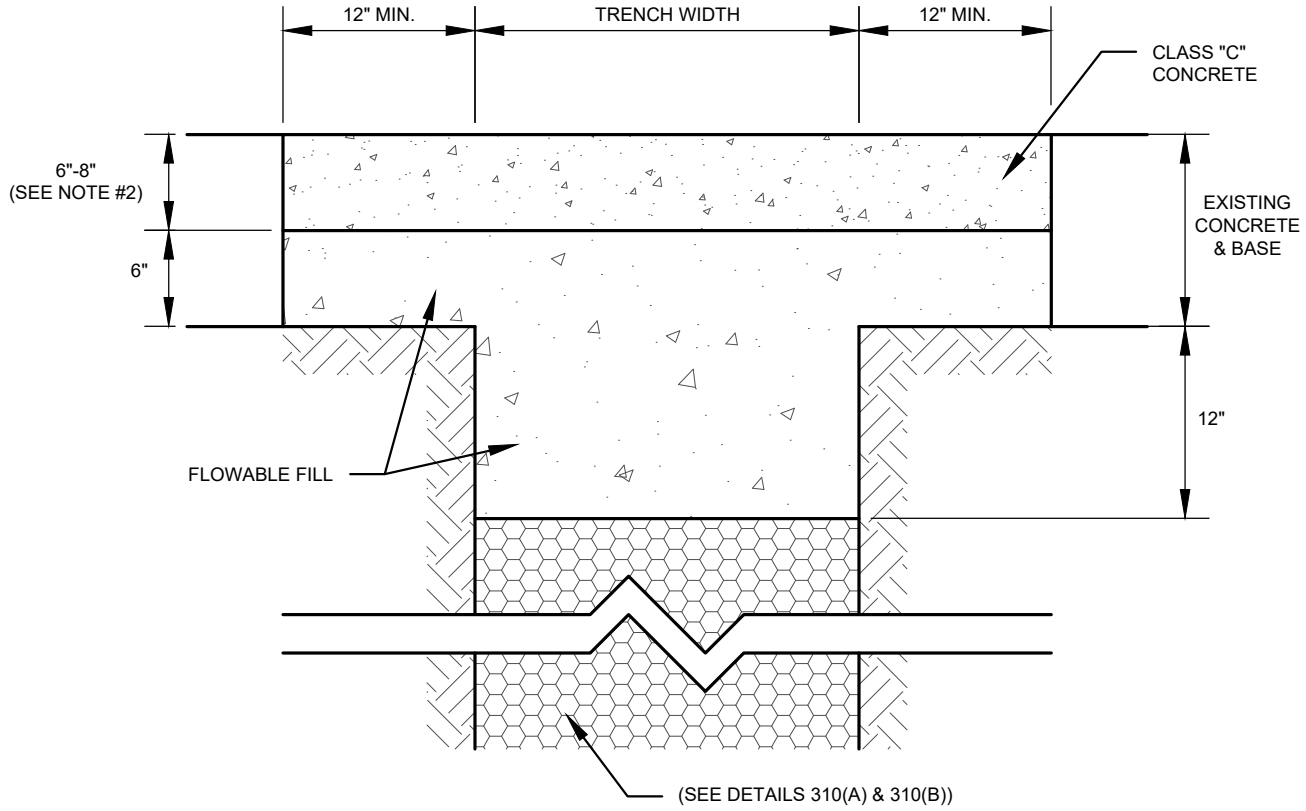
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	TRENCHING AND BEDDING		310(B)



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.

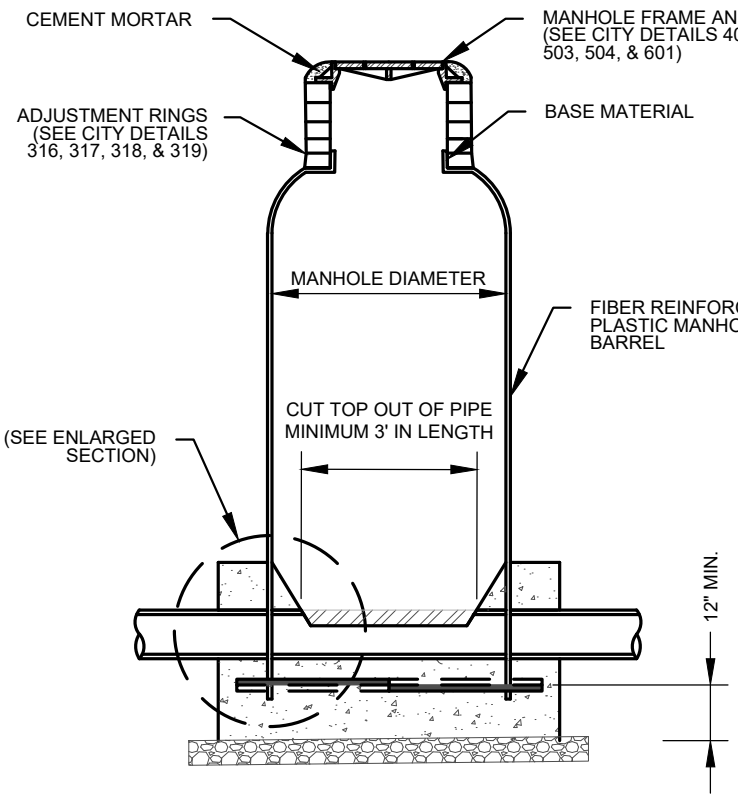
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	ASPHALT TRENCH PAVEMENT REPLACEMENT		311



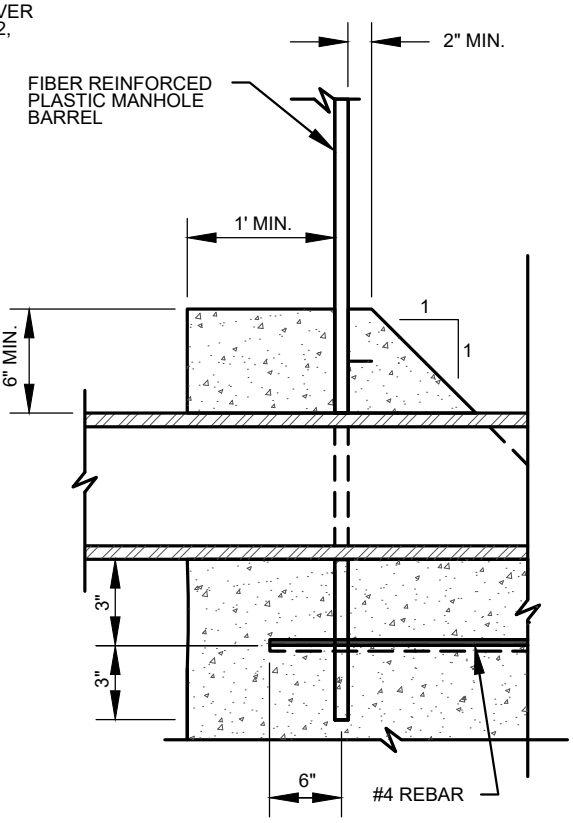
NOTES:

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.

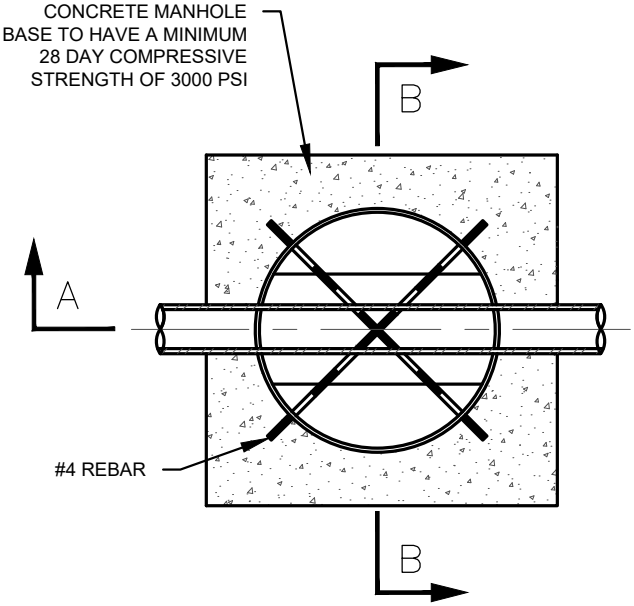
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	CONCRETE TRENCH PAVEMENT REPLACEMENT		312

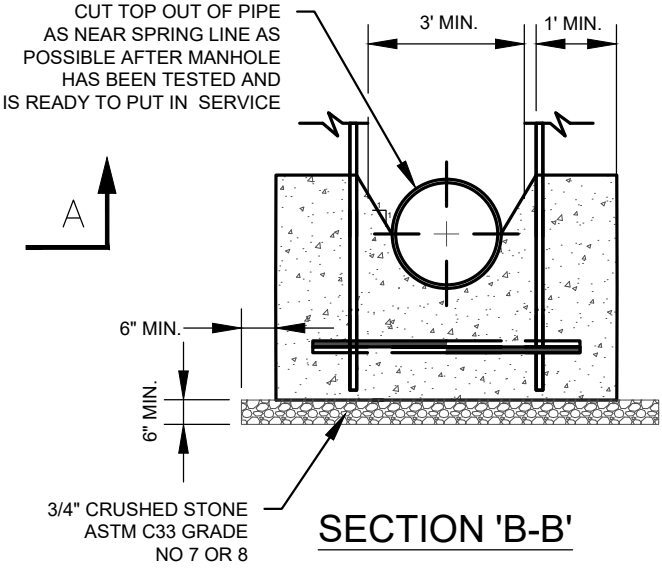


SECTION 'A-A"



ENLARGED SECTION





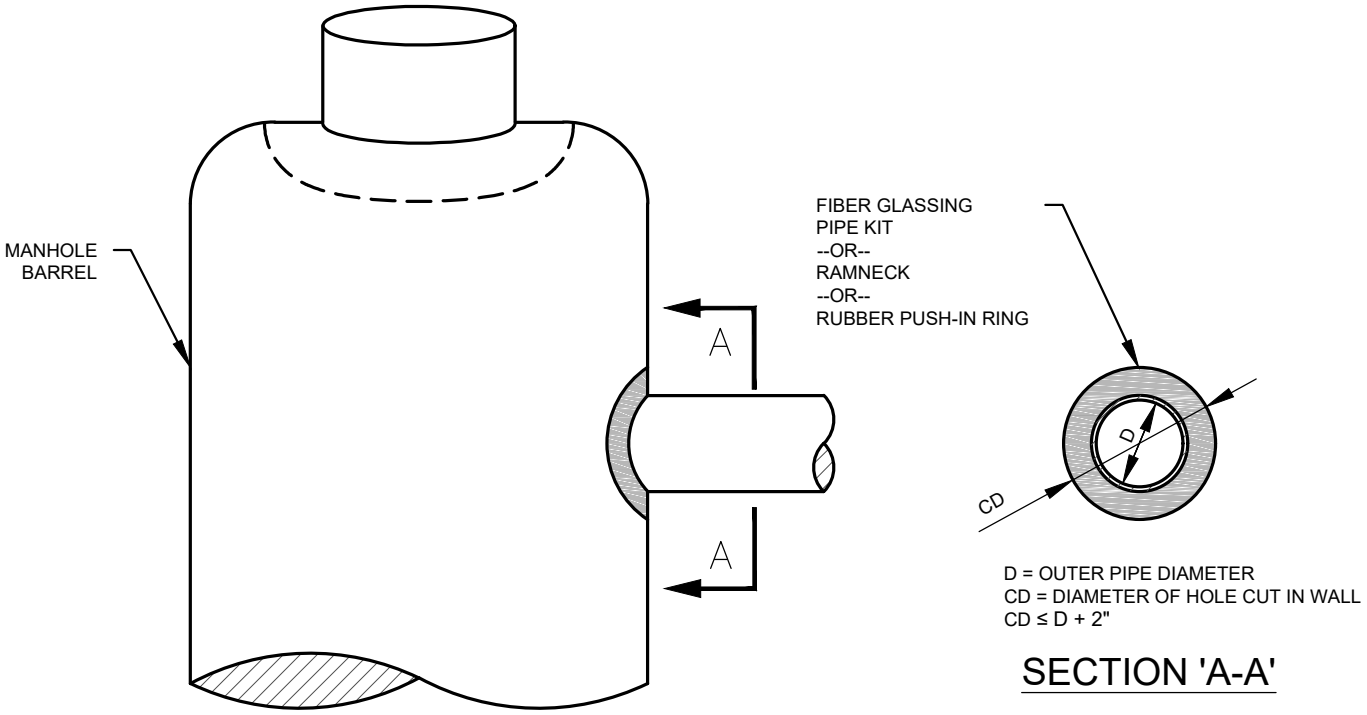
SECTION 'B-B'

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	TYPICAL FIBERGLASS MANHOLE		313(A)
		October 25, 2022	

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)

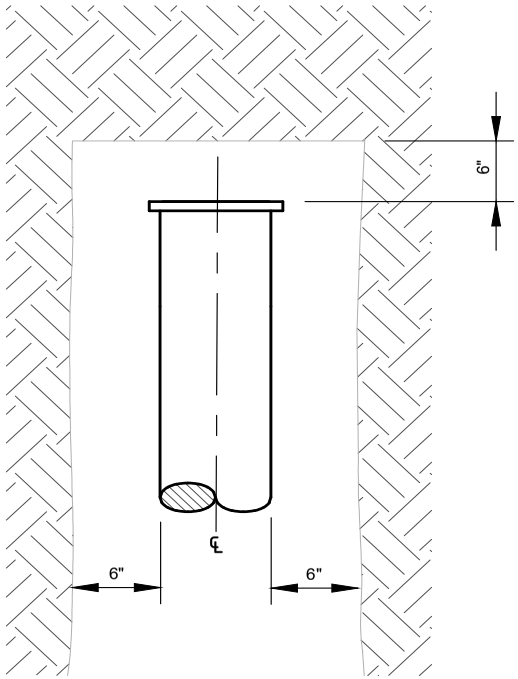


SECTION 'A-A'

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

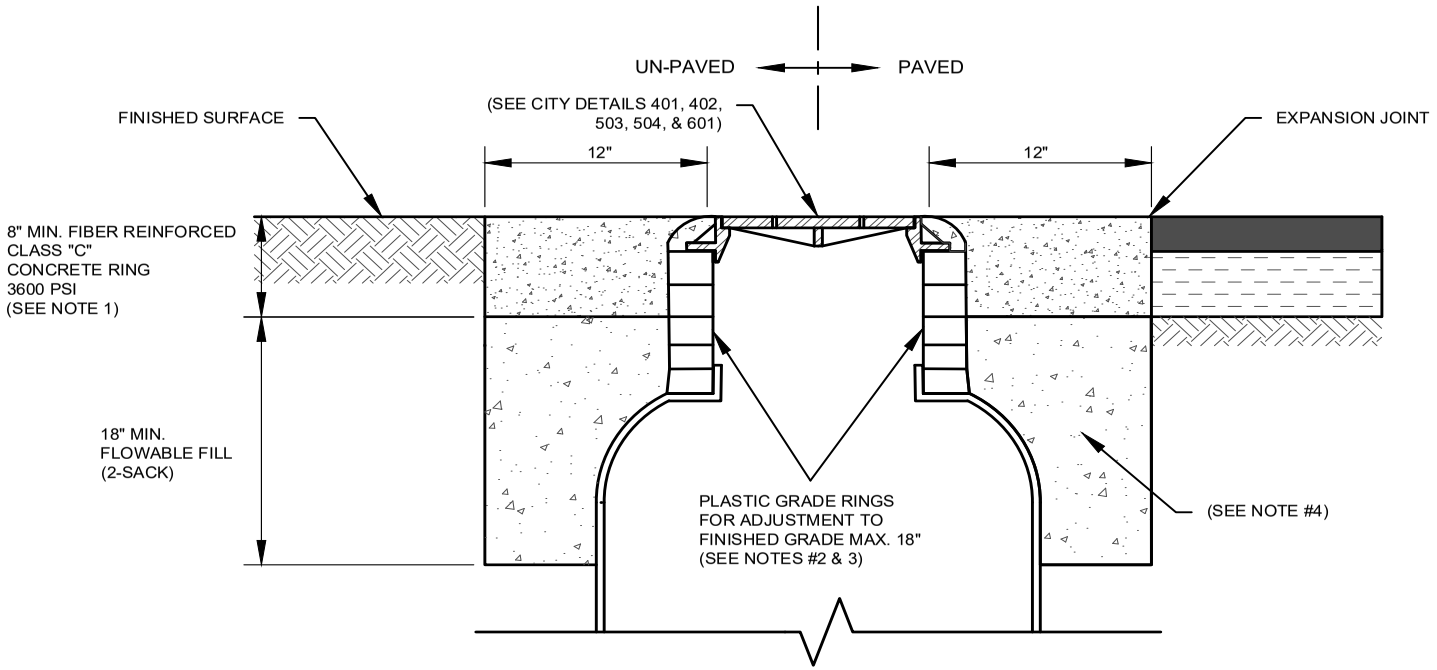


PLUG BLOCKING

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

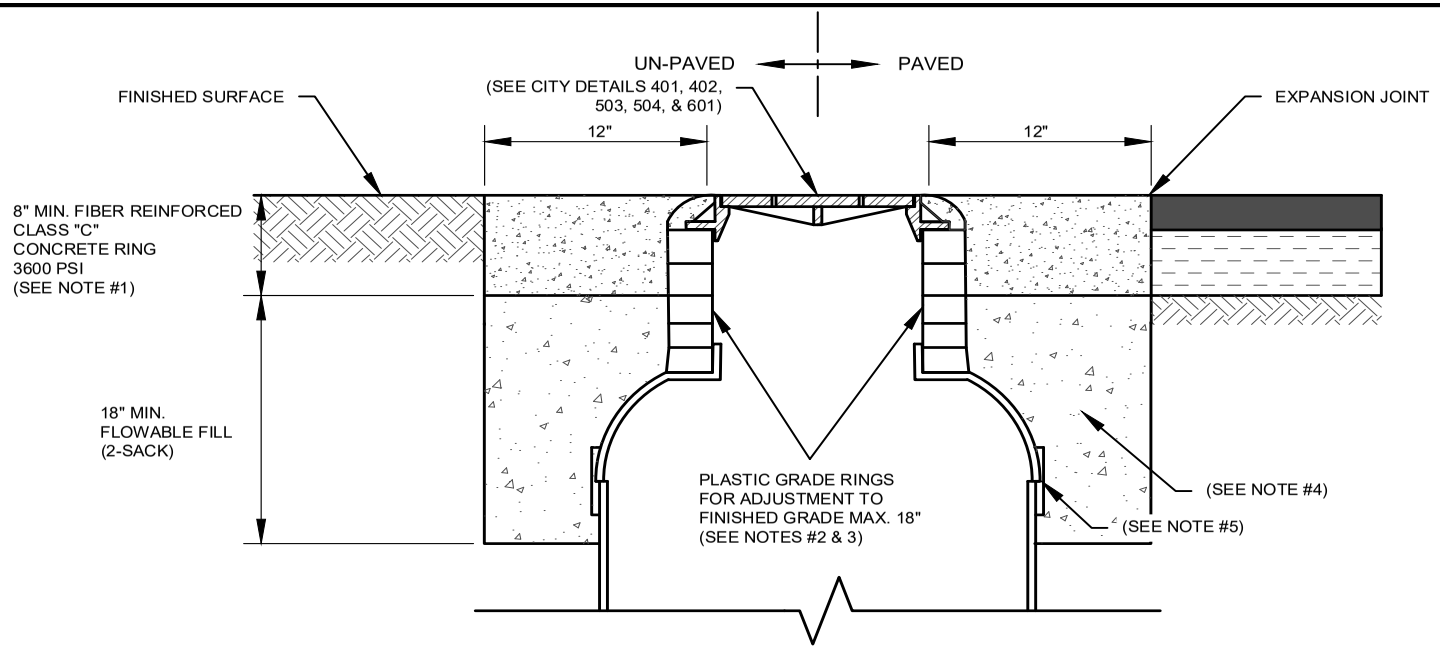


NEW MANHOLE ADJUSTMENT

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

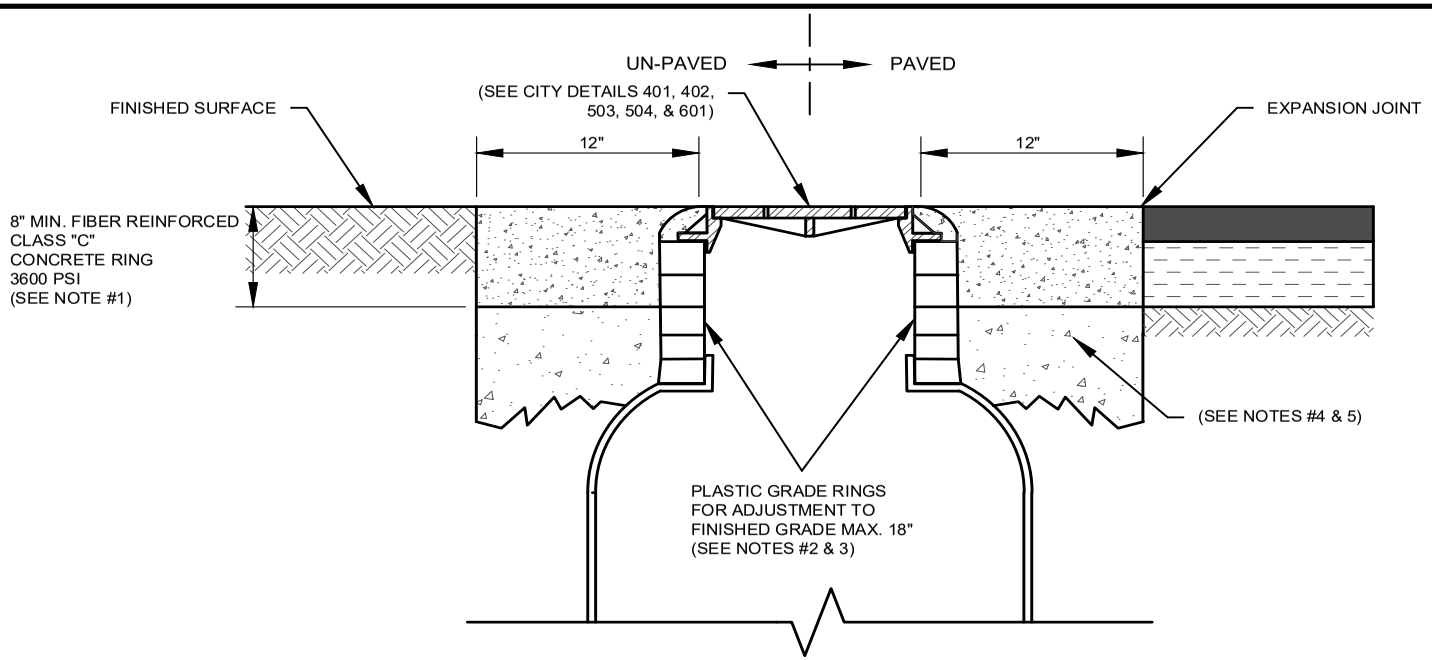


EXISTING MANHOLE BARREL ADJUSTMENT

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 CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL: 317
		EXISTING MANHOLE BARREL ADJUSTMENT		

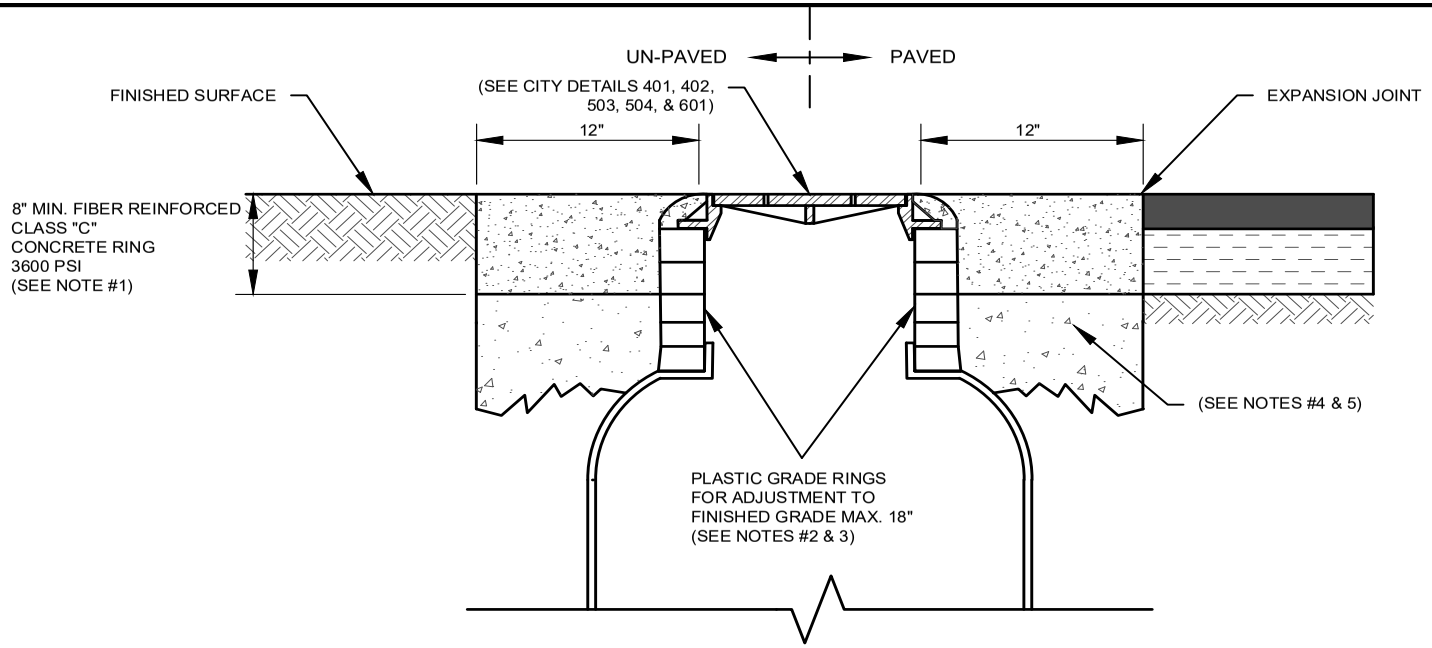


NEW MANHOLE RING & COVER ADJUSTMENT

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

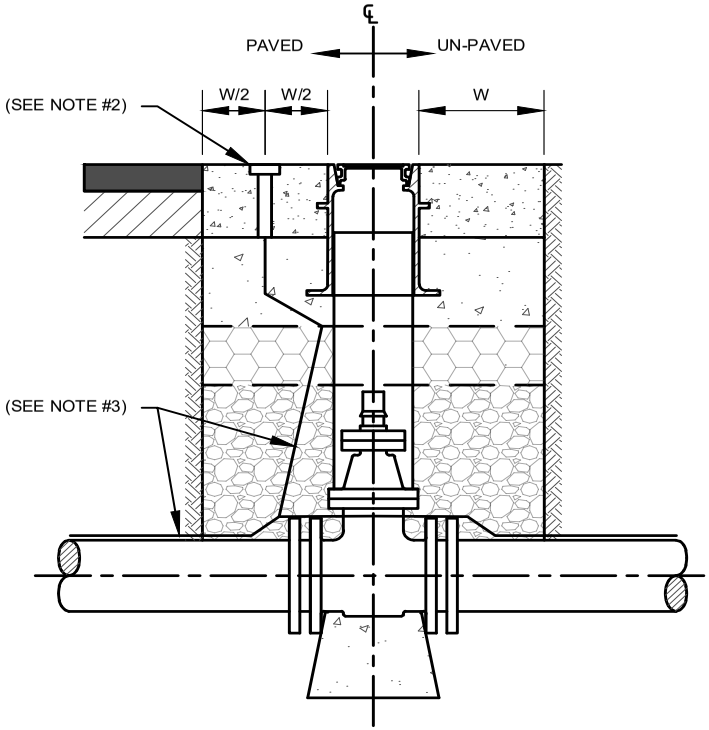


EXISTING MANHOLE RING & COVER ADJUSTMENT

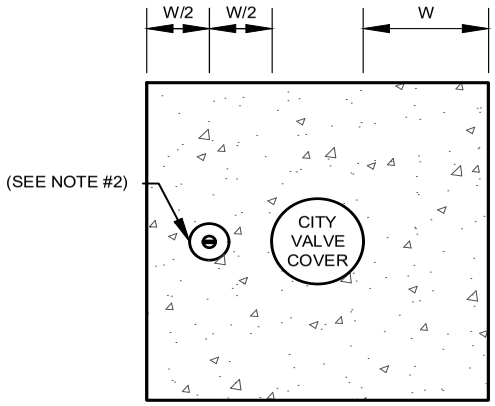
NOTES:

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

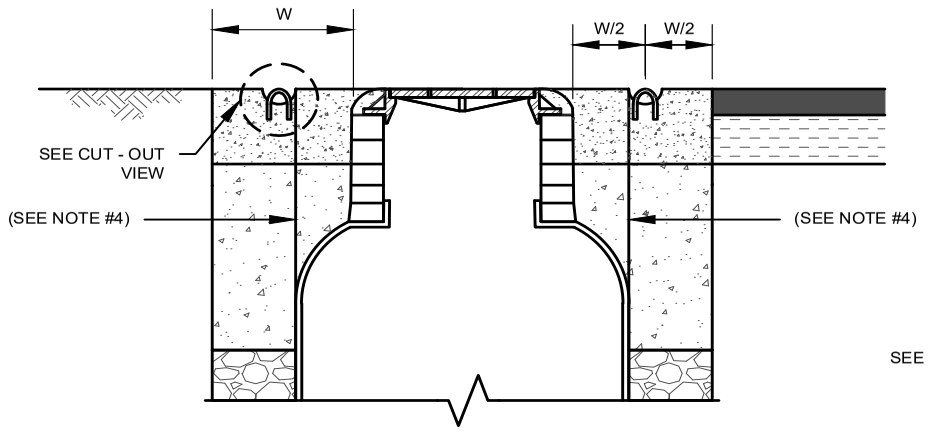


PLAN VIEW

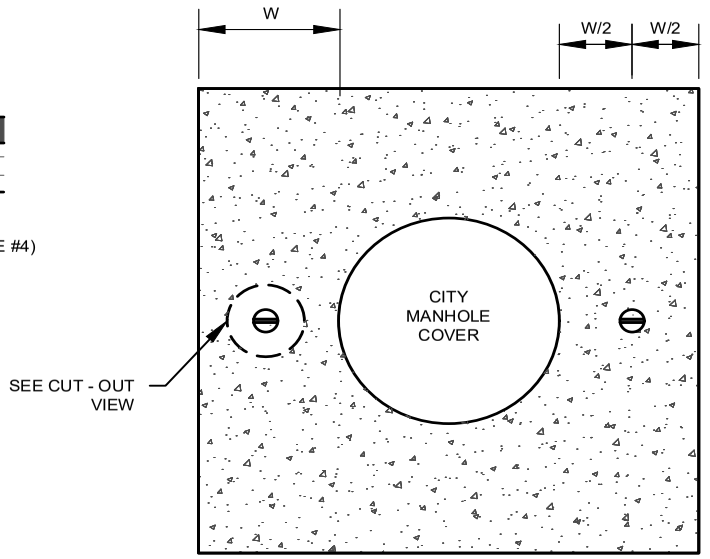
NOTES:

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.

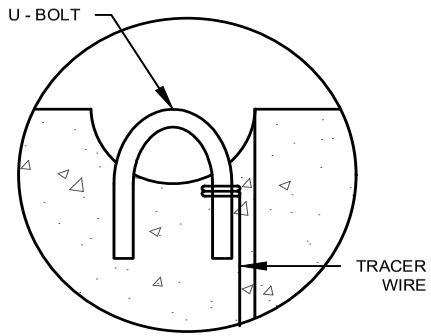
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		VALVE DETECTOR WIRE END		320



CROSS SECTION VIEW



PLAN VIEW

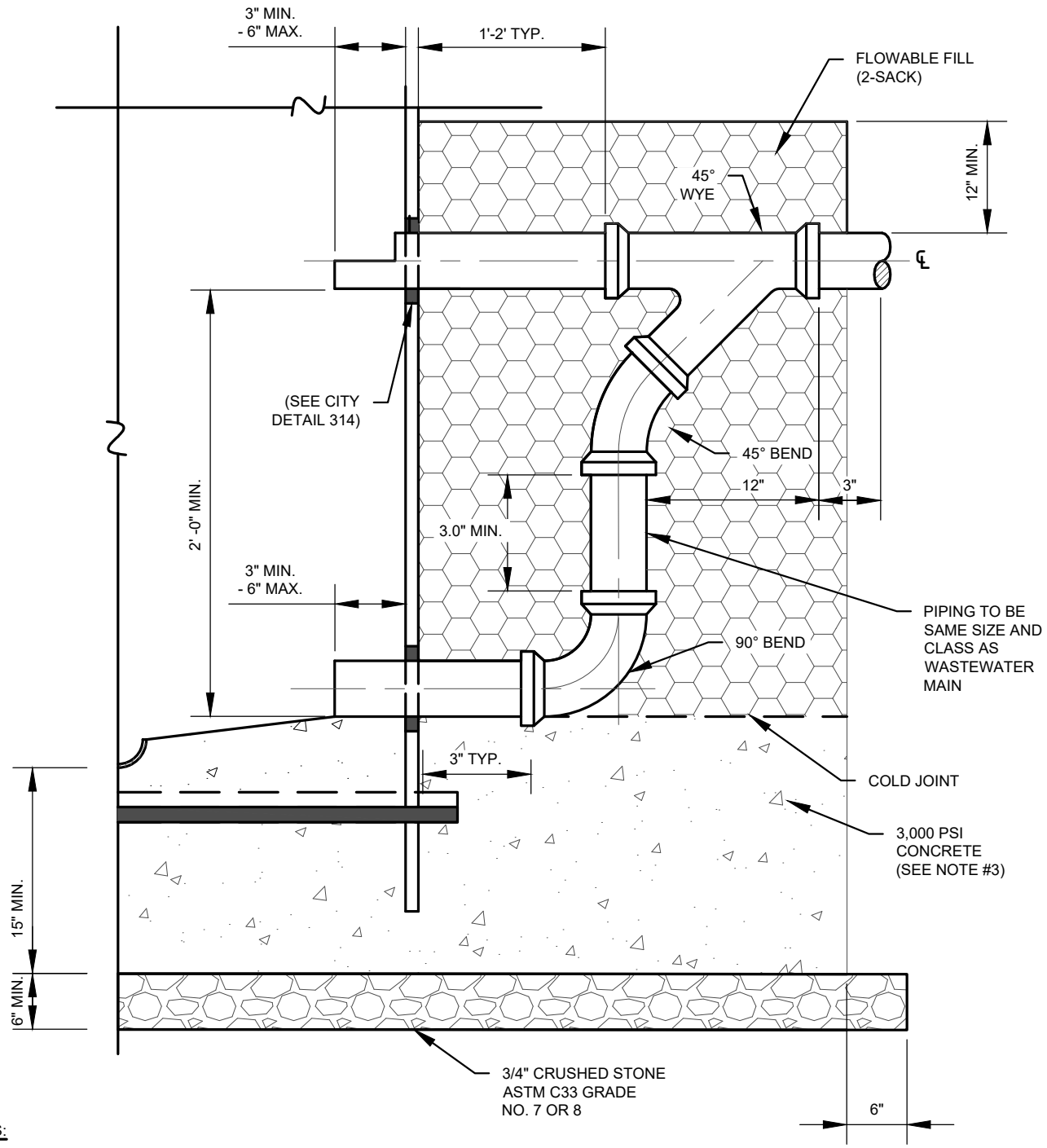


CUT - OUT VIEW

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.

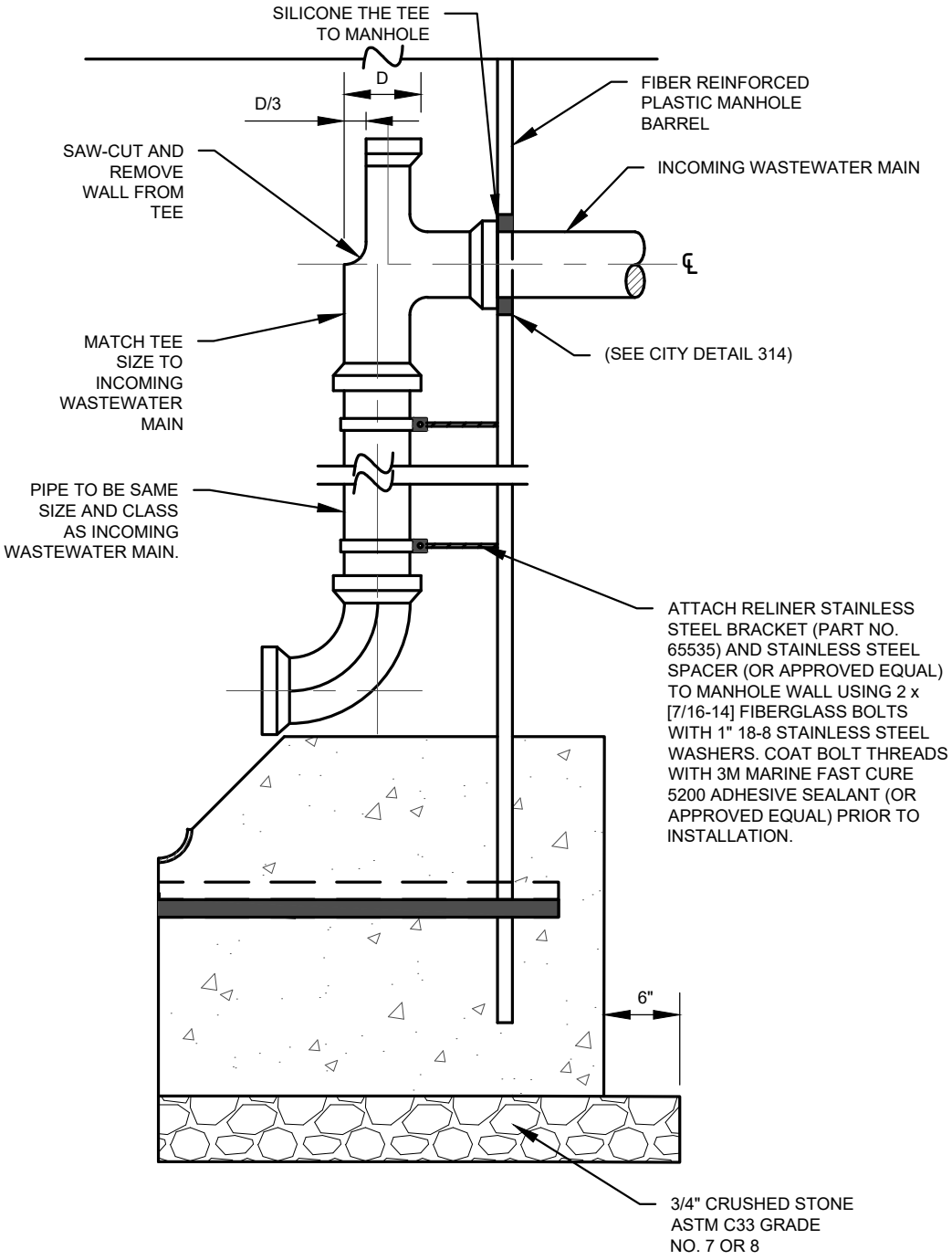
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		MANHOLE DETECTOR WIRE END		321



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.

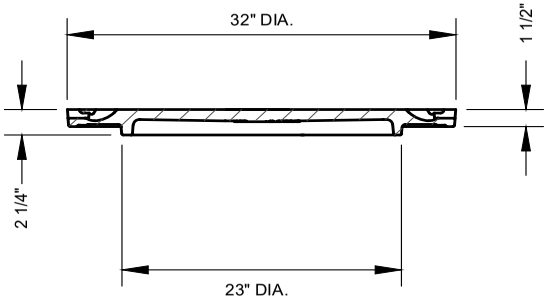
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	EXTERNAL DROP STRUCTURE		501



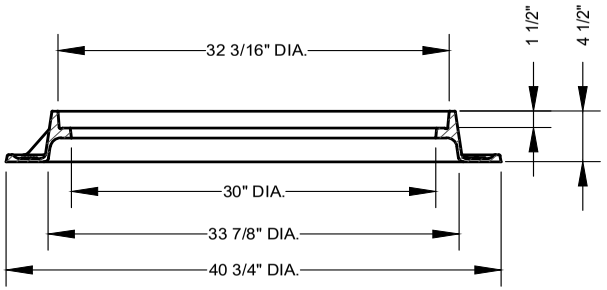
NOTES:

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.

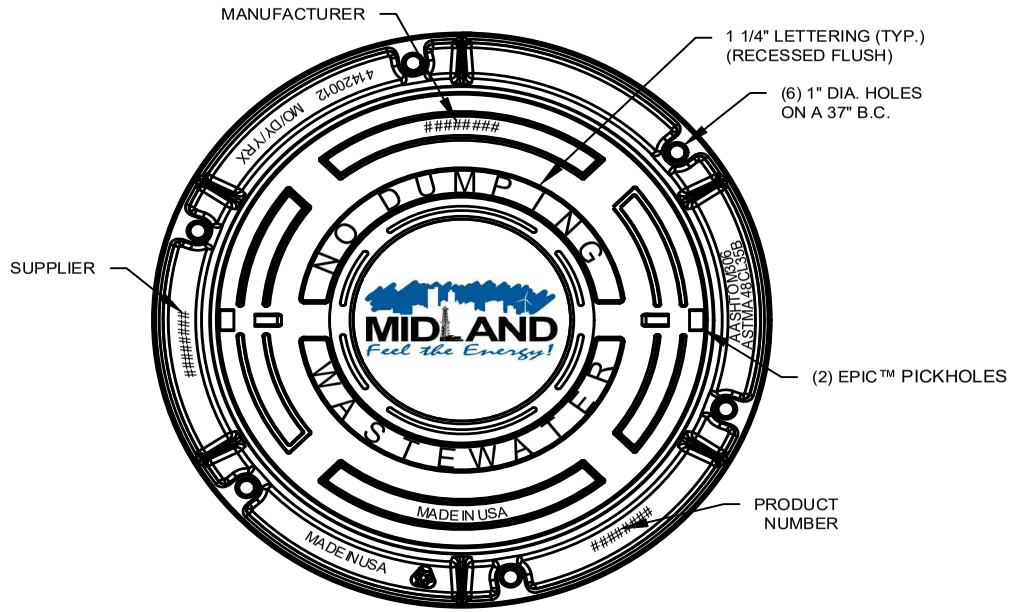
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE:	DETAIL:
	INTERNAL DROP STRUCTURE		502

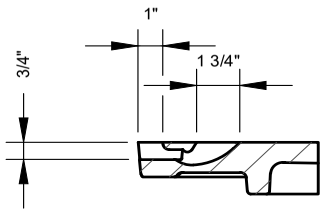


COVER SECTION



FRAME SECTION





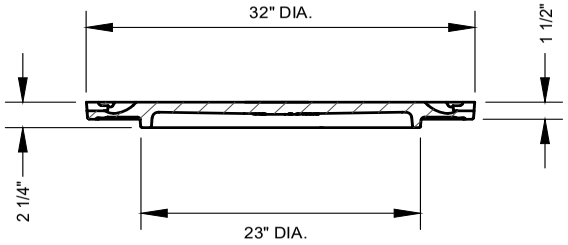
PICKHOLE DETAIL

NOTES:

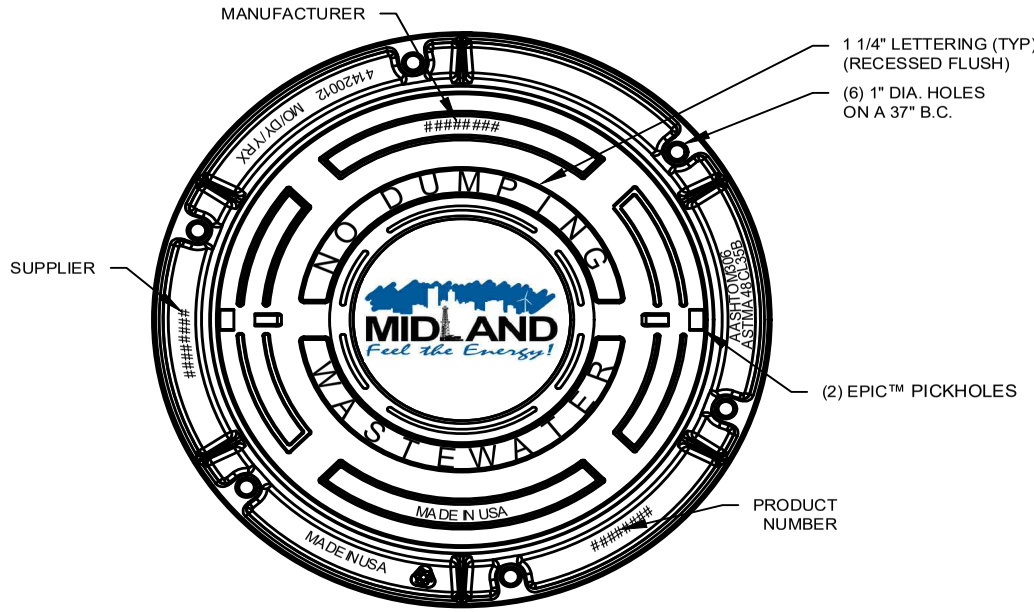
1. MANHOLE COVERS TO BE CAST WITH THE FOLLOWING:
   "NO DUMPING"
   CITY OF MIDLAND LOGO
   "WASTEWATER"

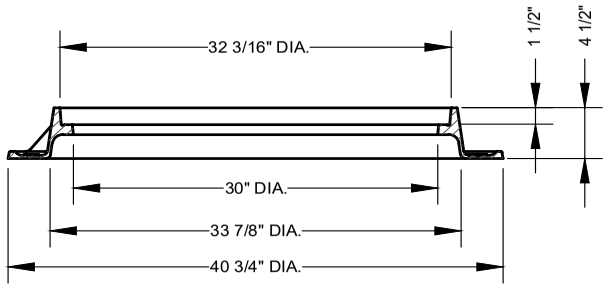
   EAST JORDAN V1420Z1/V1430A ASSEMBLY
   OR APPROVED EQUAL
2. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
3. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
TYPICAL WASTEWATER MANHOLE COVER			DETAIL: 503

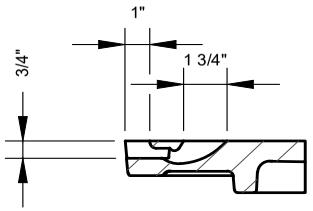


COVER SECTION





FRAME SECTION



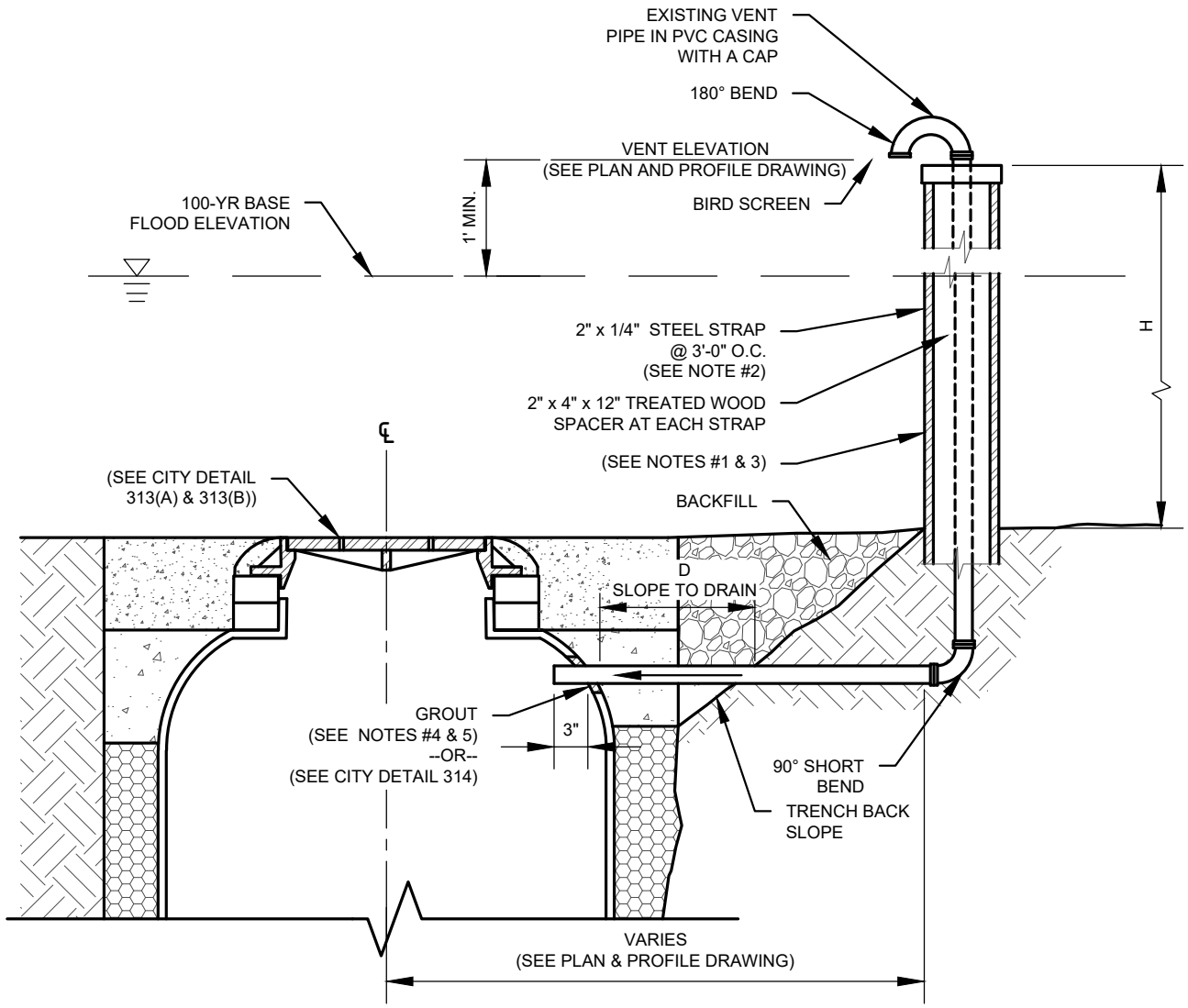
PICKHOLE DETAIL

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

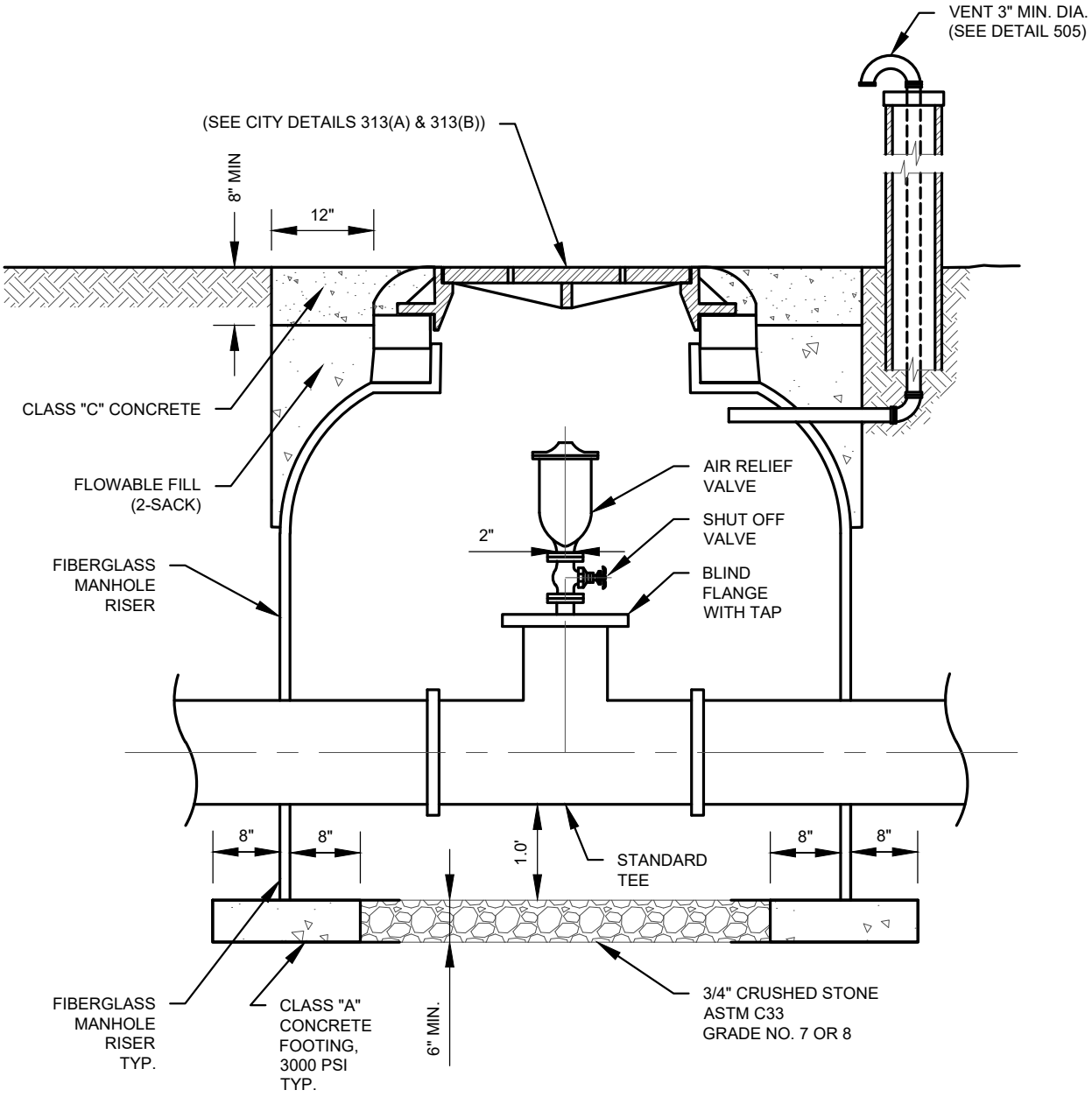


REMOTE VENT PIPE

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.

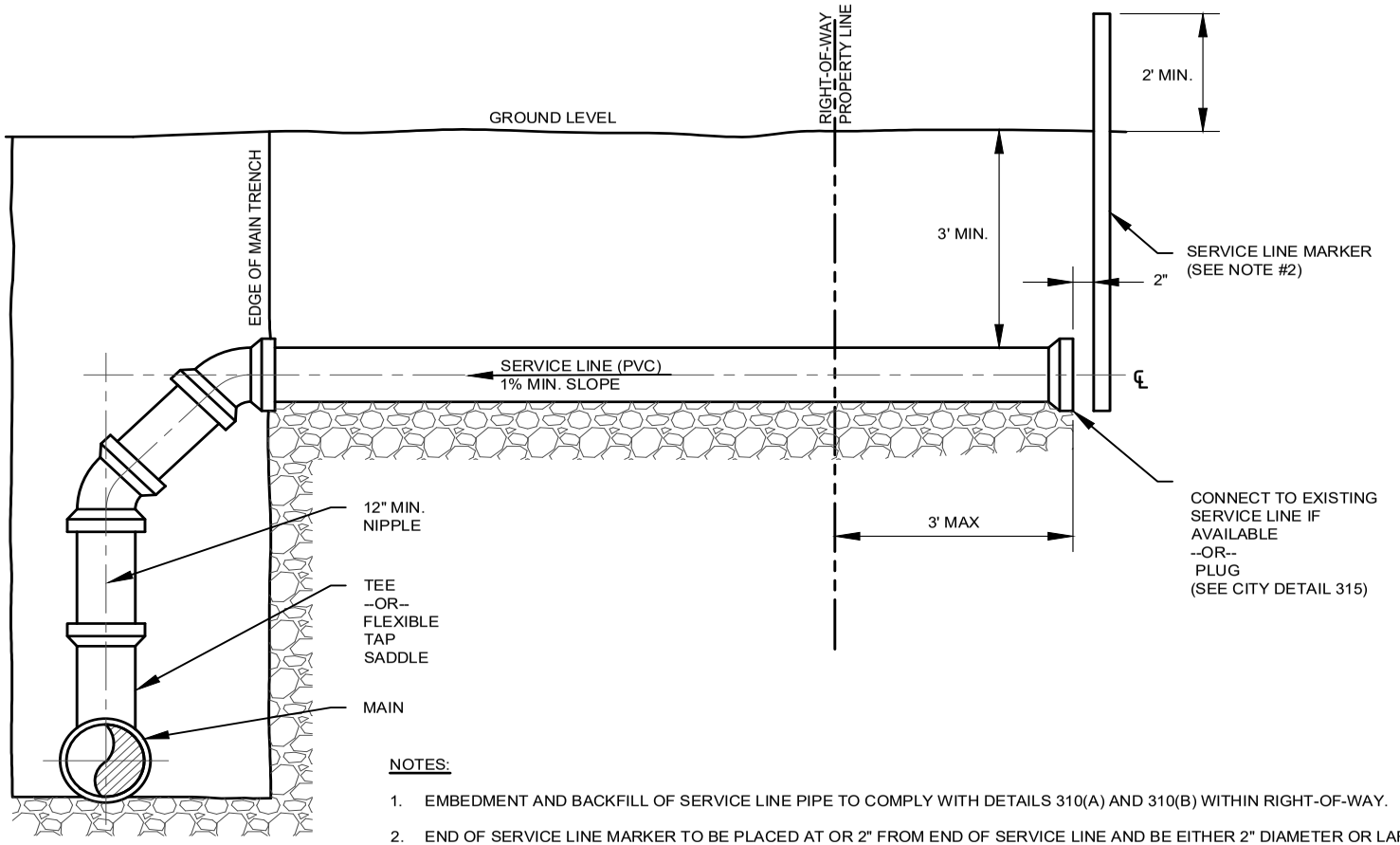
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	REMOTE VENT PIPE		505



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.

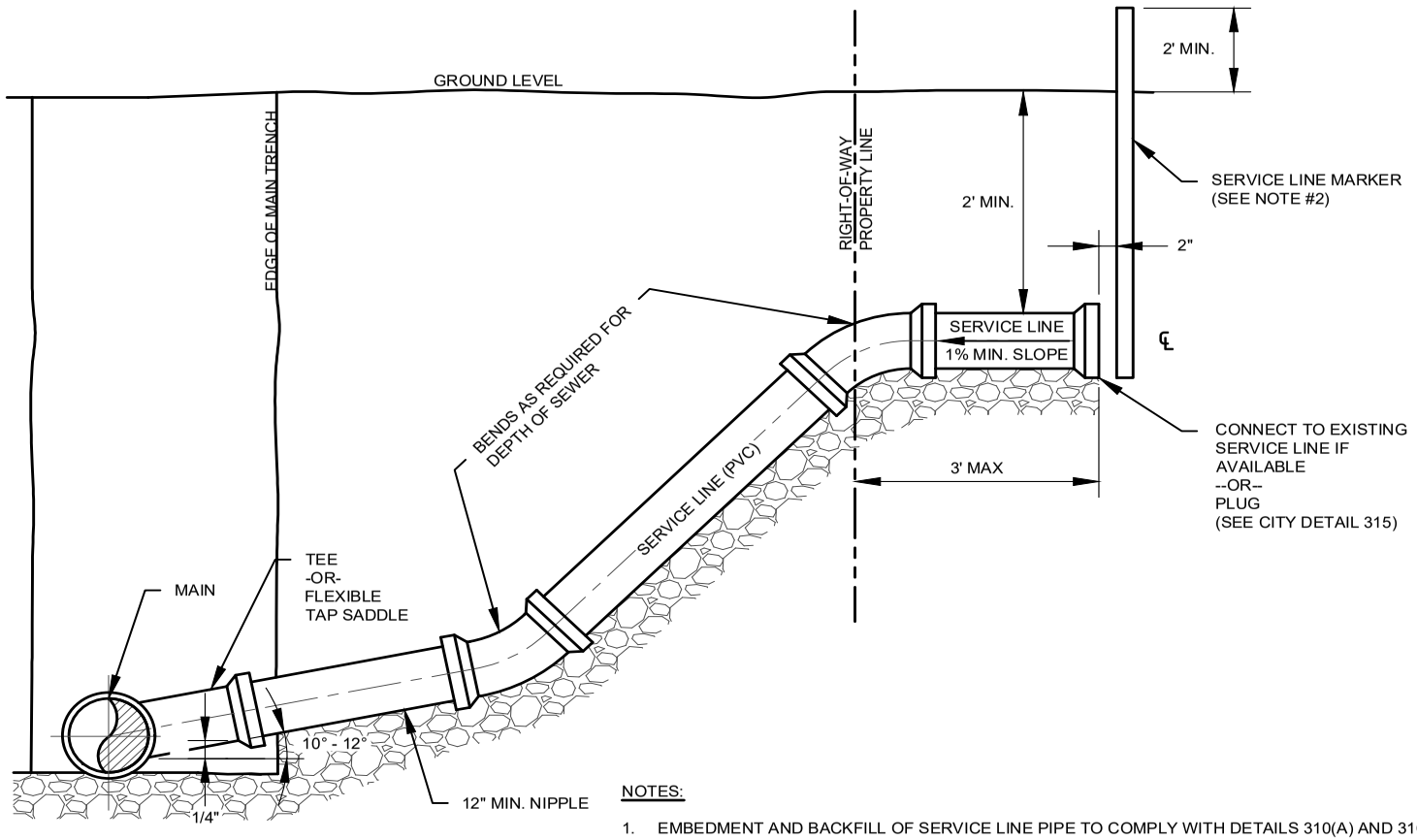
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	FORCE MAIN RELIEF VALVE		506



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.

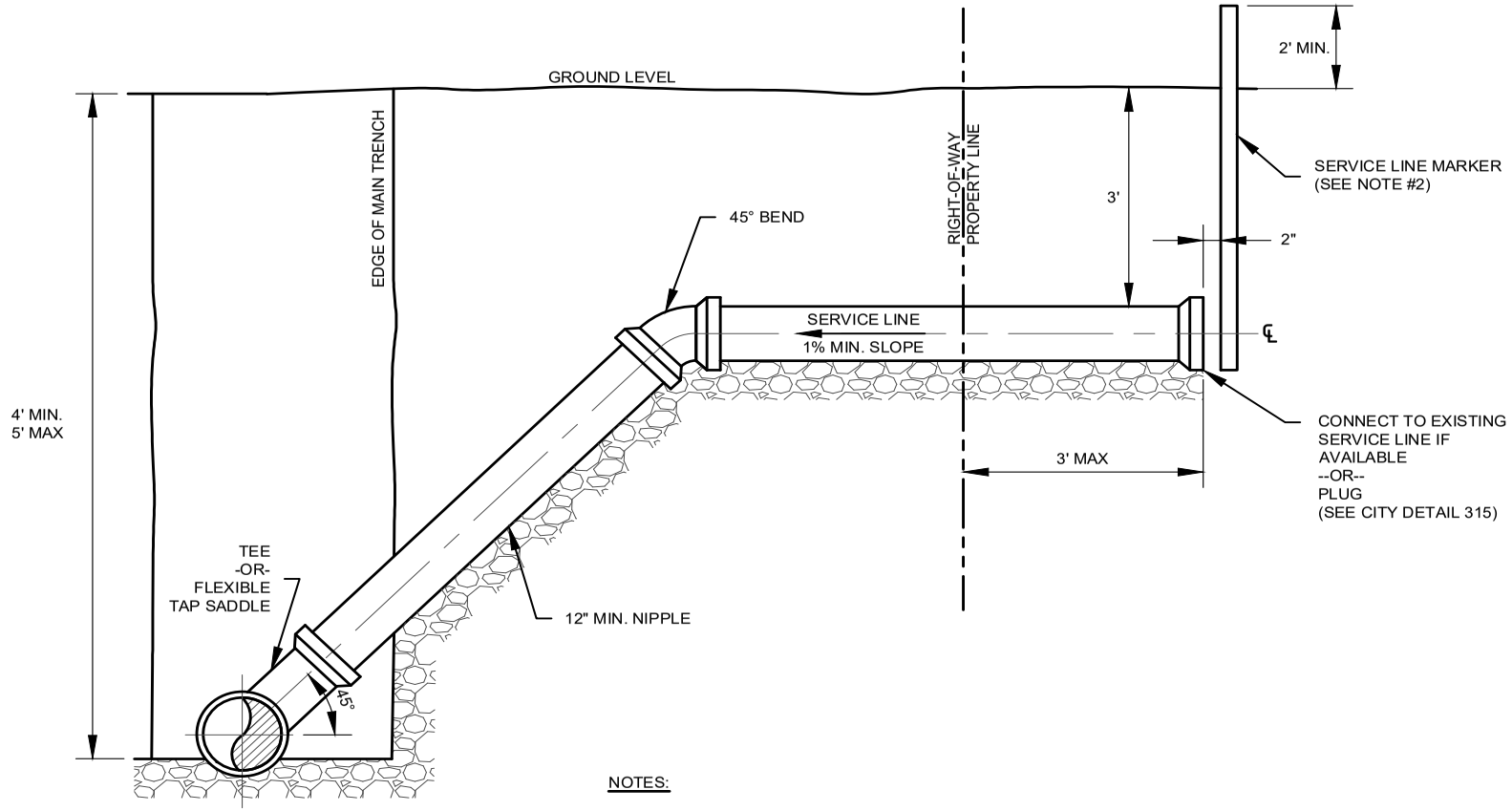
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE:	DETAIL:
		4" AND 6" WASTEWATER SERVICE LATERAL TAP OPTION 1		507



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 CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
		4" AND 6" WASTEWATER SERVICE LATERAL TAP OPTION 2	DETAIL: 508



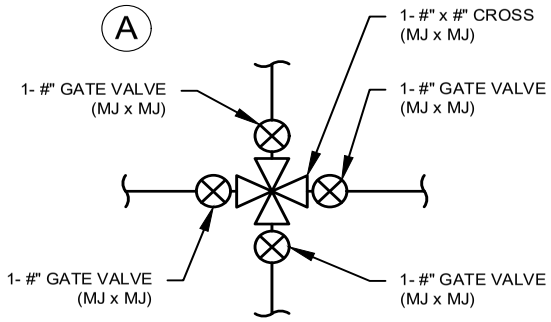
NOTES:

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.

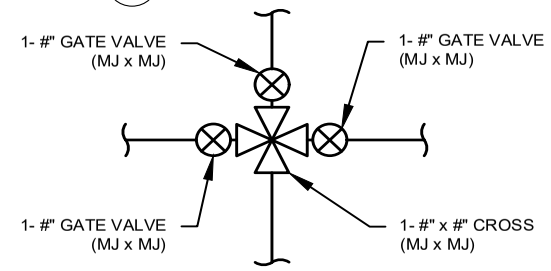
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		4" AND 6" WASTEWATER SERVICE LATERAL TAP OPTION 3		509

CROSS FITTING RESTRAINTS

A

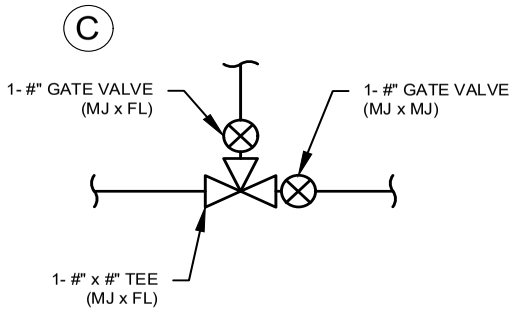


B

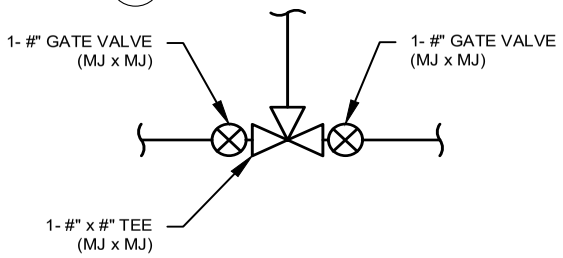


TEE FITTING RESTRAINTS

C

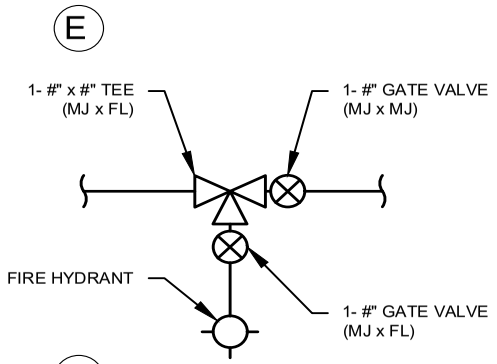


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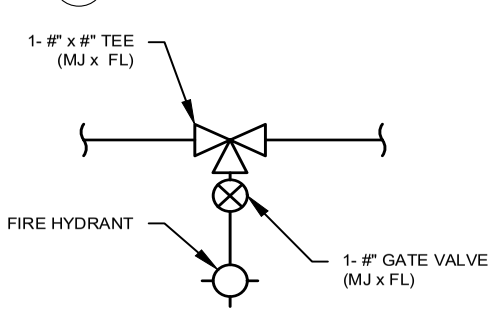


FIRE HYDRANT RESTRAINTS

E



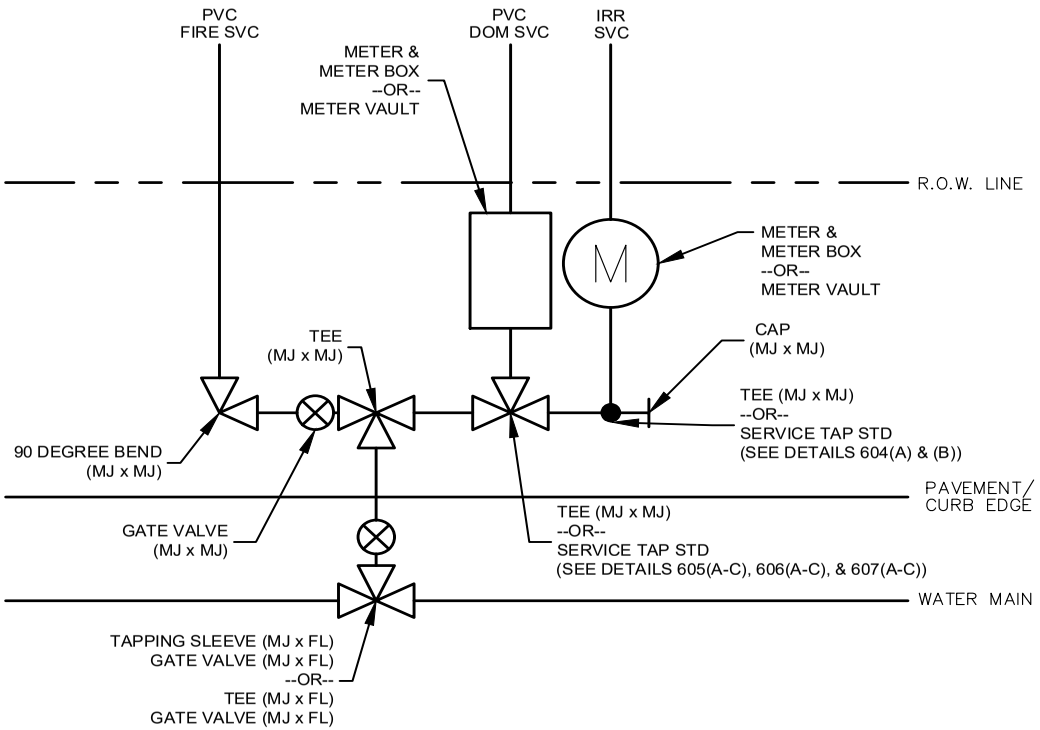
F



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



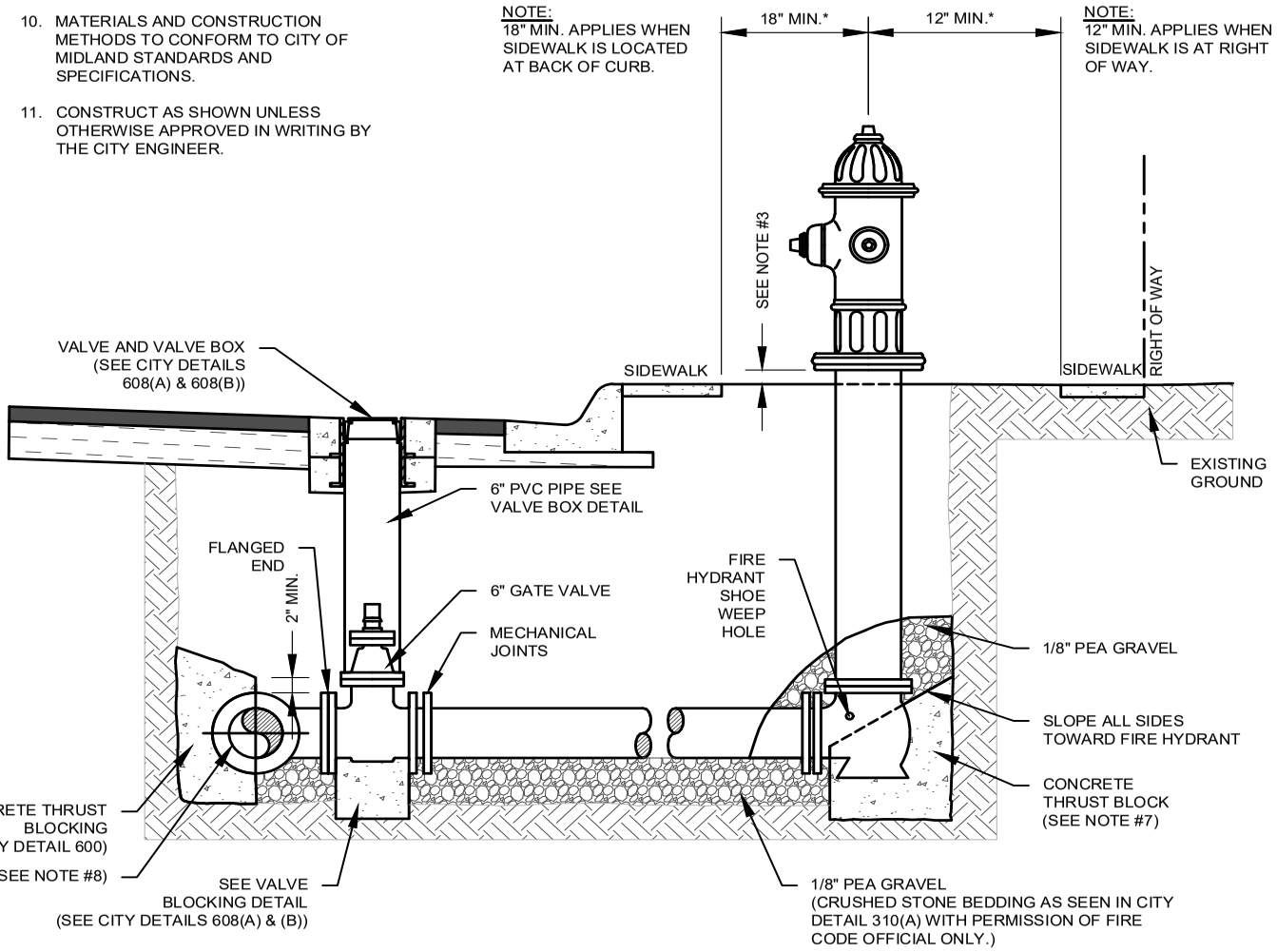
NOTES:

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

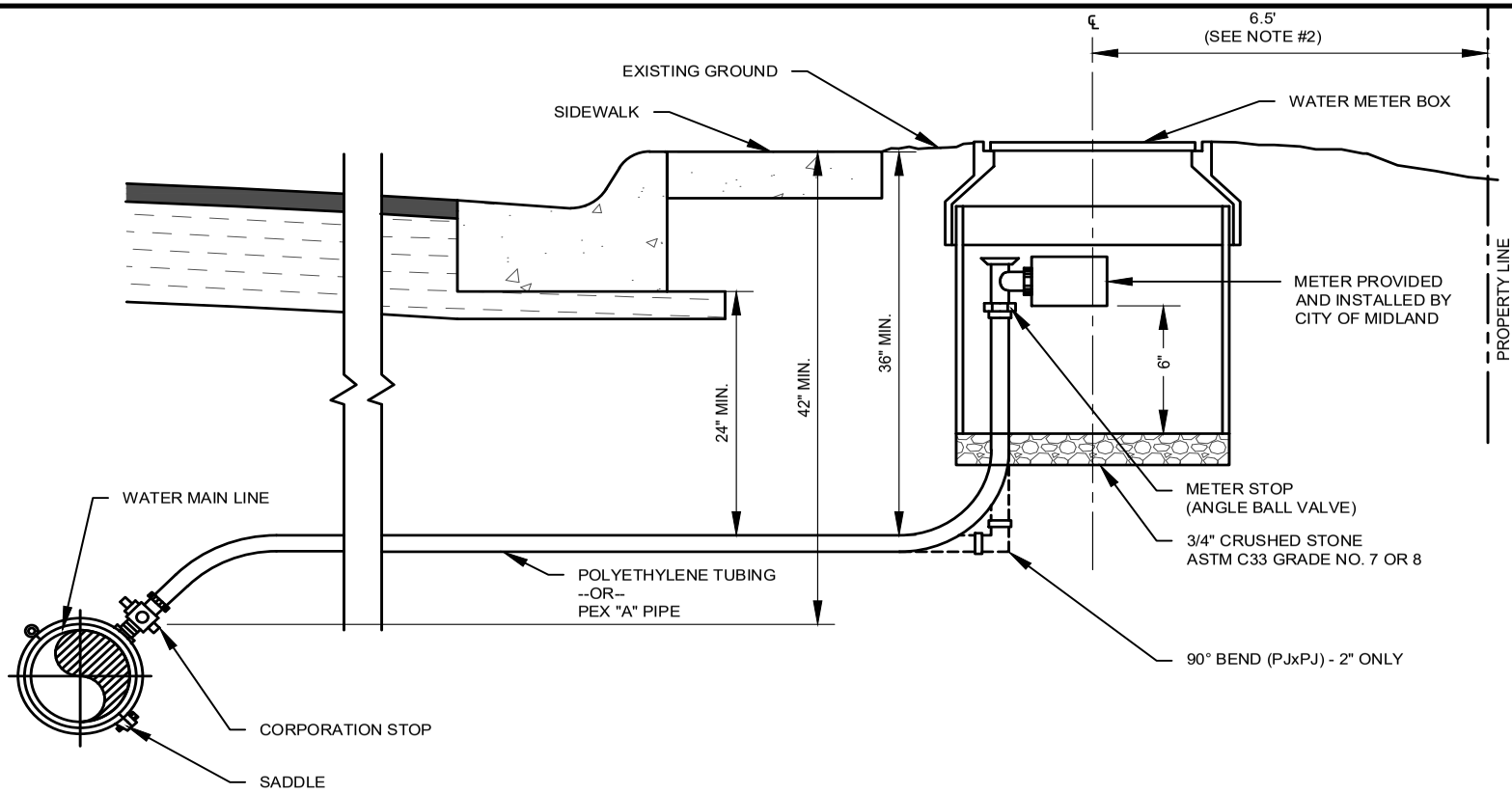
NOTES:

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 CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		FIRE HYDRANT NEW WATER MAIN		603

PACKET
11.289
October 25, 2022



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)

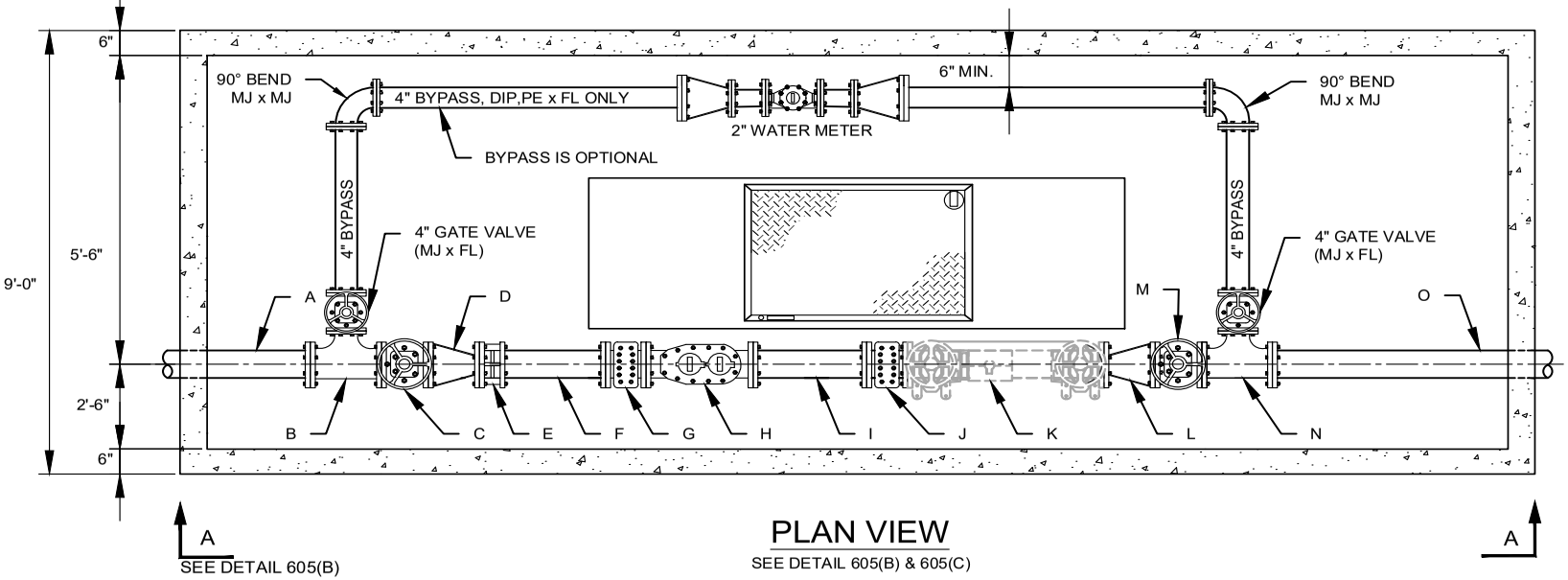
APPROVED COMPONENT LIST

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)

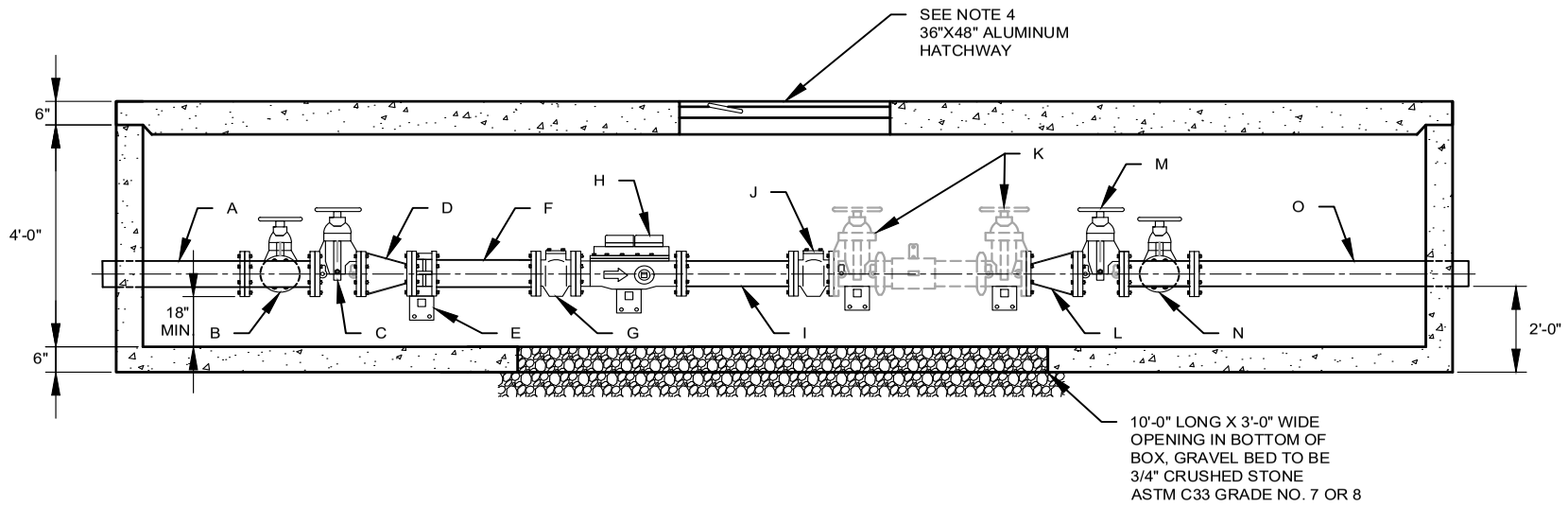


NOTES:

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)

PACKET
11.292
October 25, 2022



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

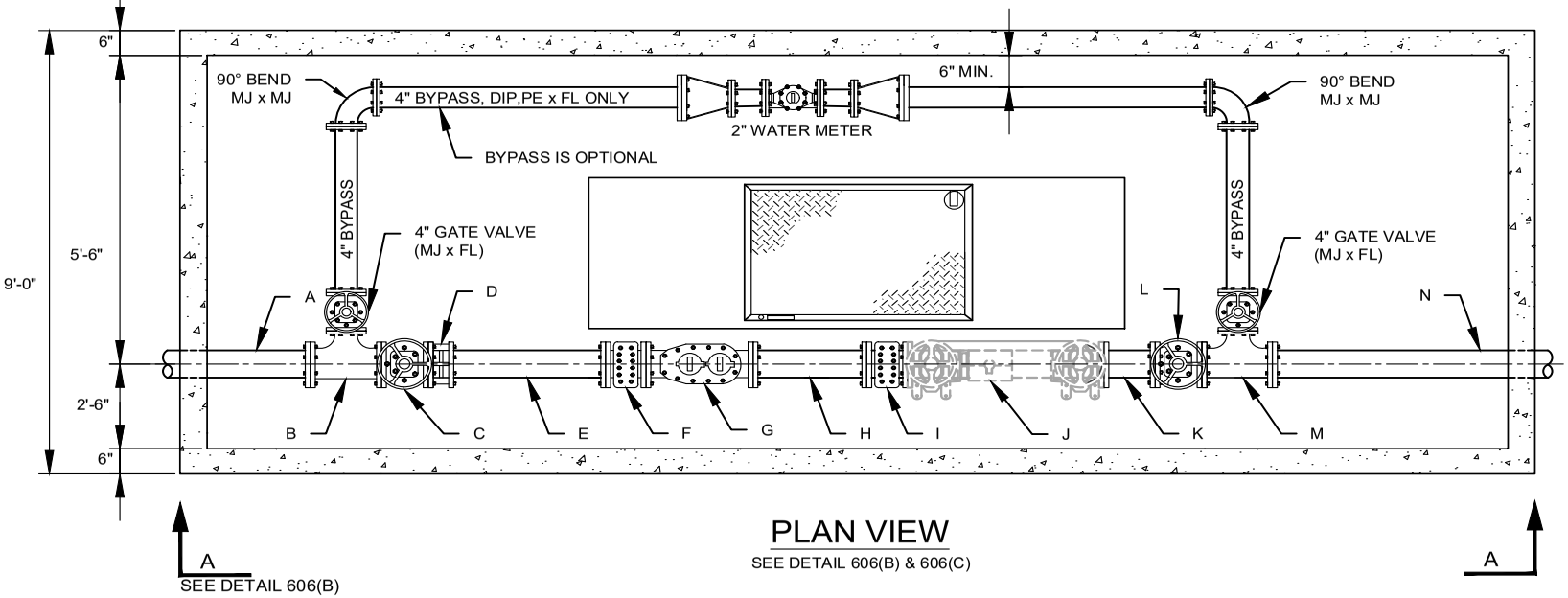
*** TOTAL INSIDE VAULT LENGTH WITH BACKFLOW PREVENTER = 171.0" - OR - 14.25'

**** 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:
PACKET 11.294	3 - INCH COMPOUND METER & VAULT	October 25, 2022	605(C)

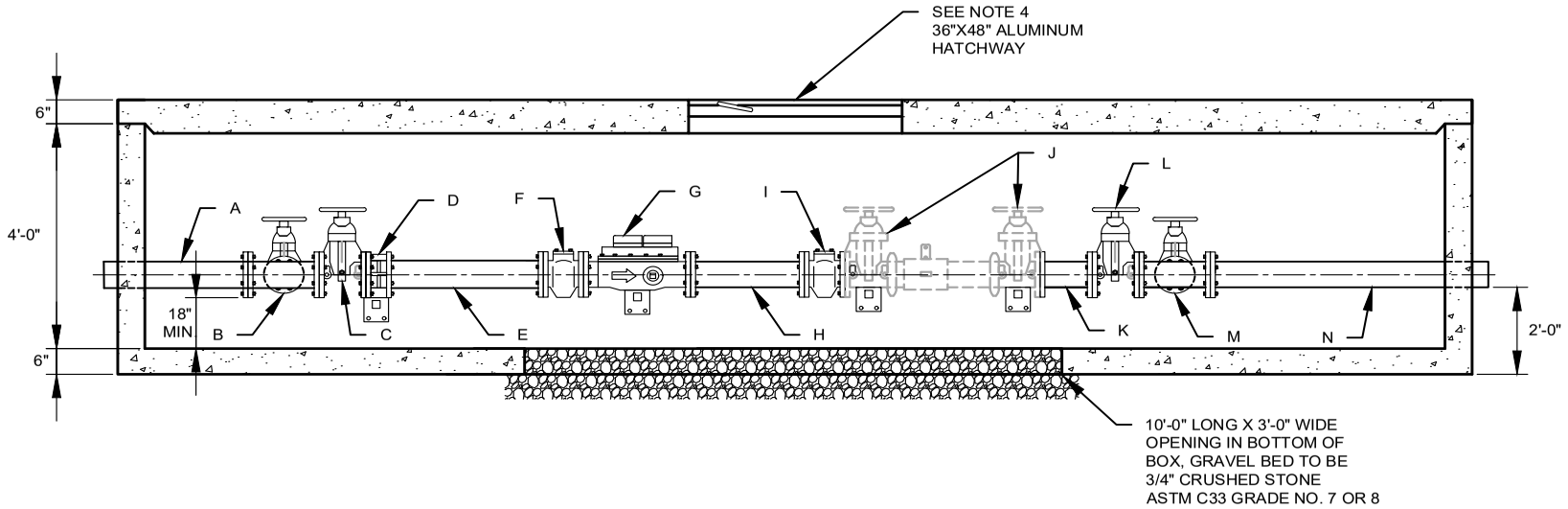


NOTES:

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:
		4 INCH DOMESTIC COMPOUND WATER METER ASSEMBLIES		606(A)

PACKET
11.295
October 25, 2022



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

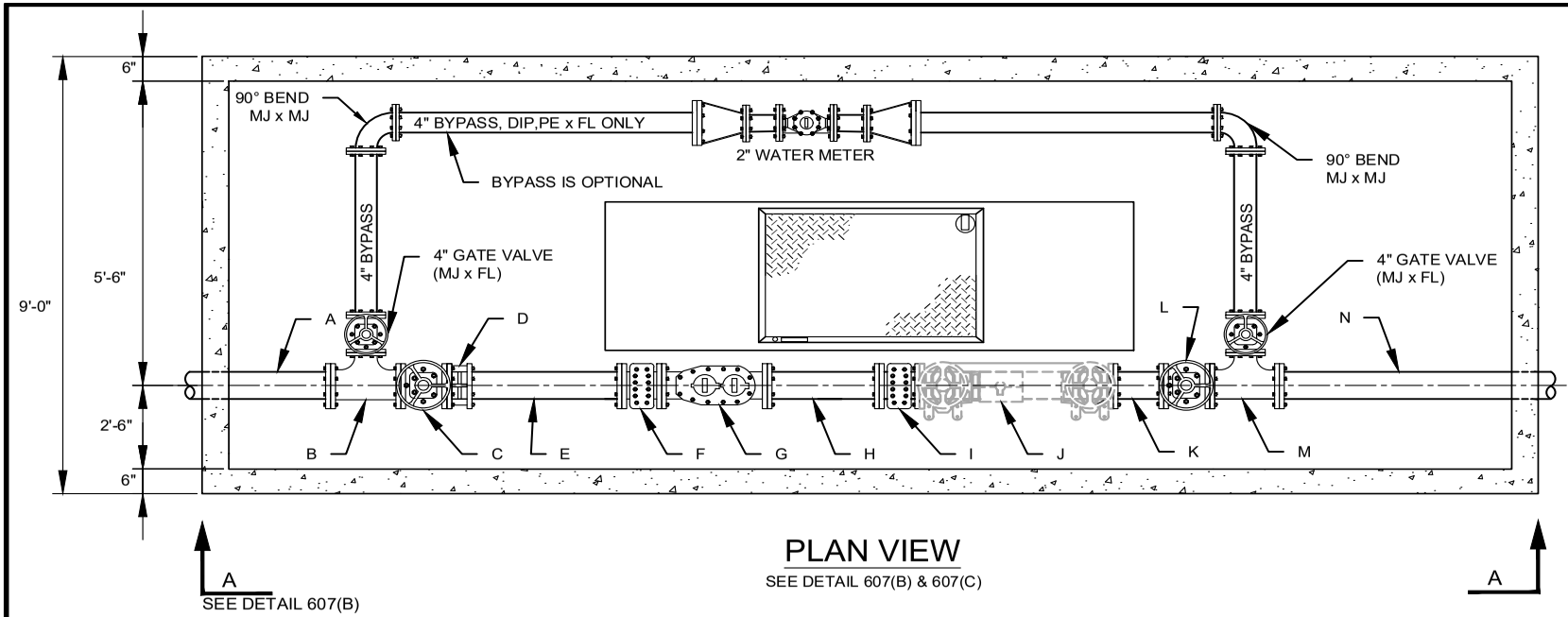
*** TOTAL INSIDE VAULT LENGTH WITH BACKFLOW PREVENTER = 188.0" - OR - 15.67'

**** 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:
PACKET 11.29	4 - INCH COMPOUND METER & VAULT	October 25, 2022	606(C)



PLAN VIEW

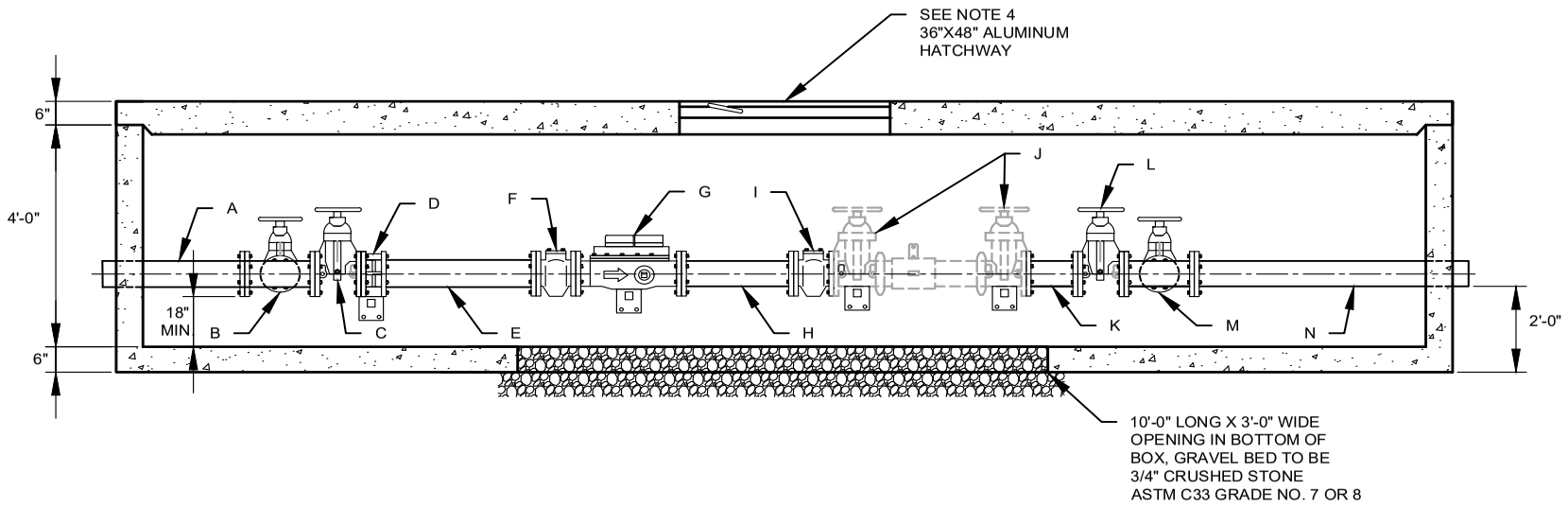
SEE DETAIL 607(B) & 607(C)

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)

PACKET
11.298
October 25, 2022



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	18.5"
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

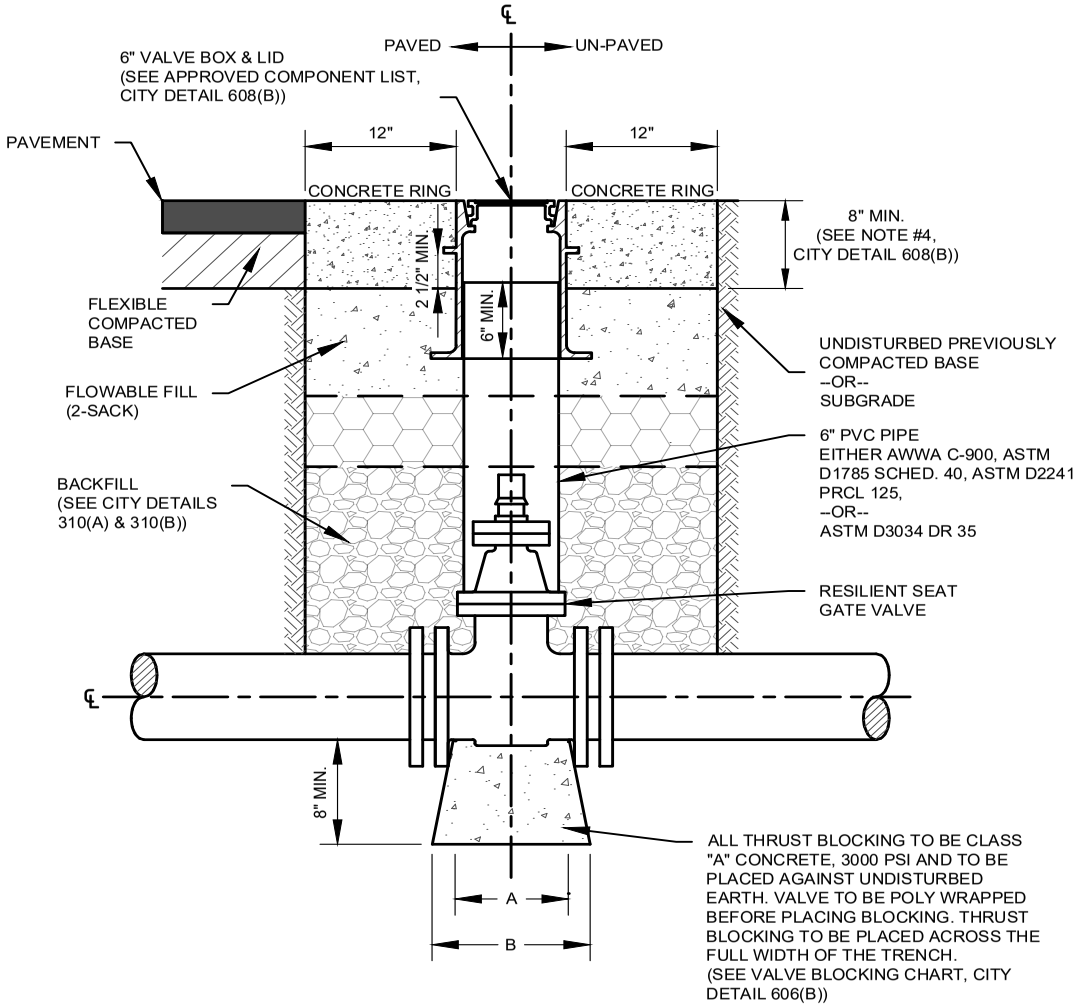
*** TOTAL INSIDE VAULT LENGTH WITH BACKFLOW PREVENTER = 232.5" - OR - 19.38'

**** 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:
PACKET	6 - INCH COMPOUND METER & VAULT	October 25, 2022	607(C)
11.300			



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	CL0W 2838 M/J	CL0W 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

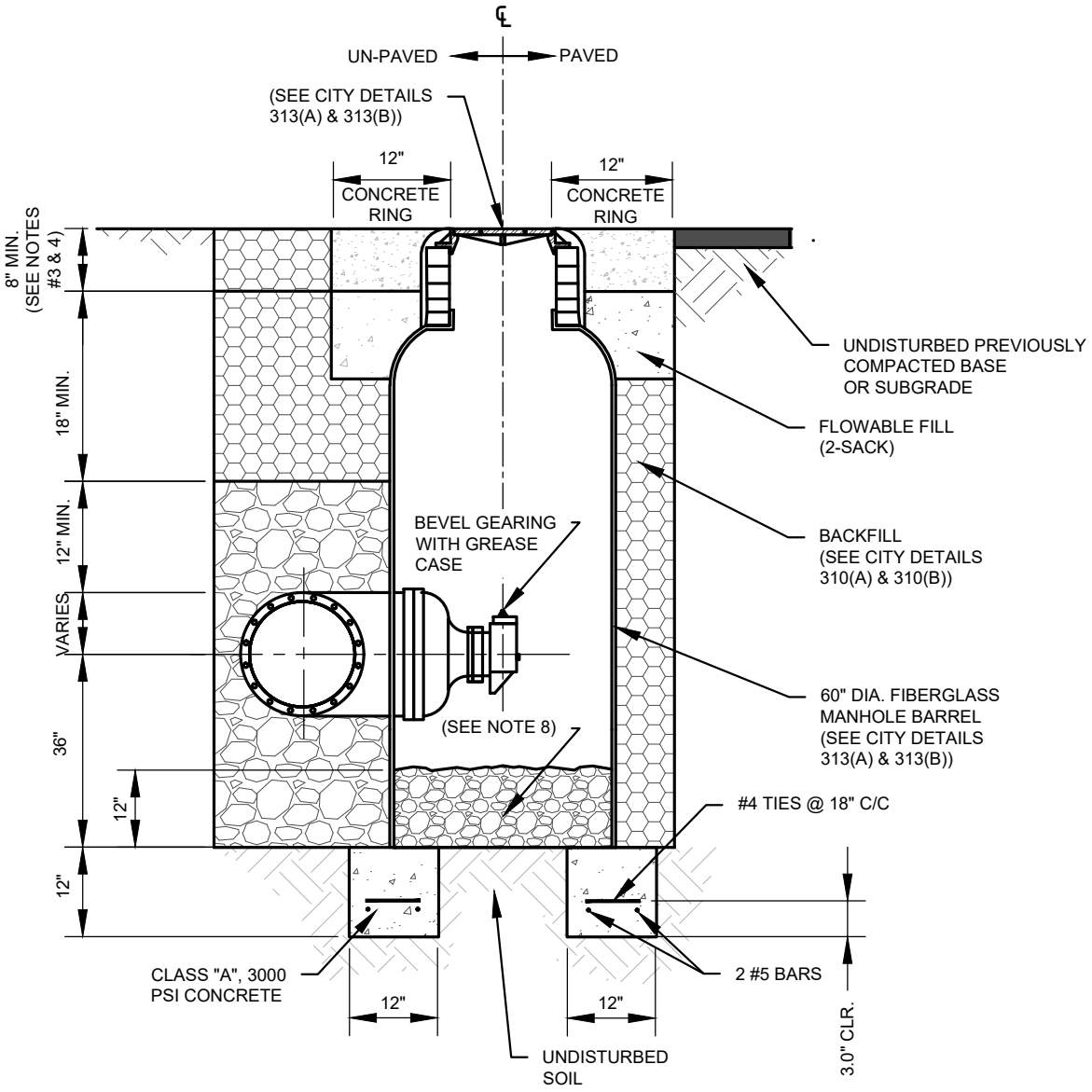
DRAWN: DPM
CHECKED: JCF
APPROVED: MCC

EFFECTIVE DATE: 10/01/2018

SCALE: NTS

DETAIL: 608(B)

TYPICAL VALVE AND VALVE BOX DETAILS

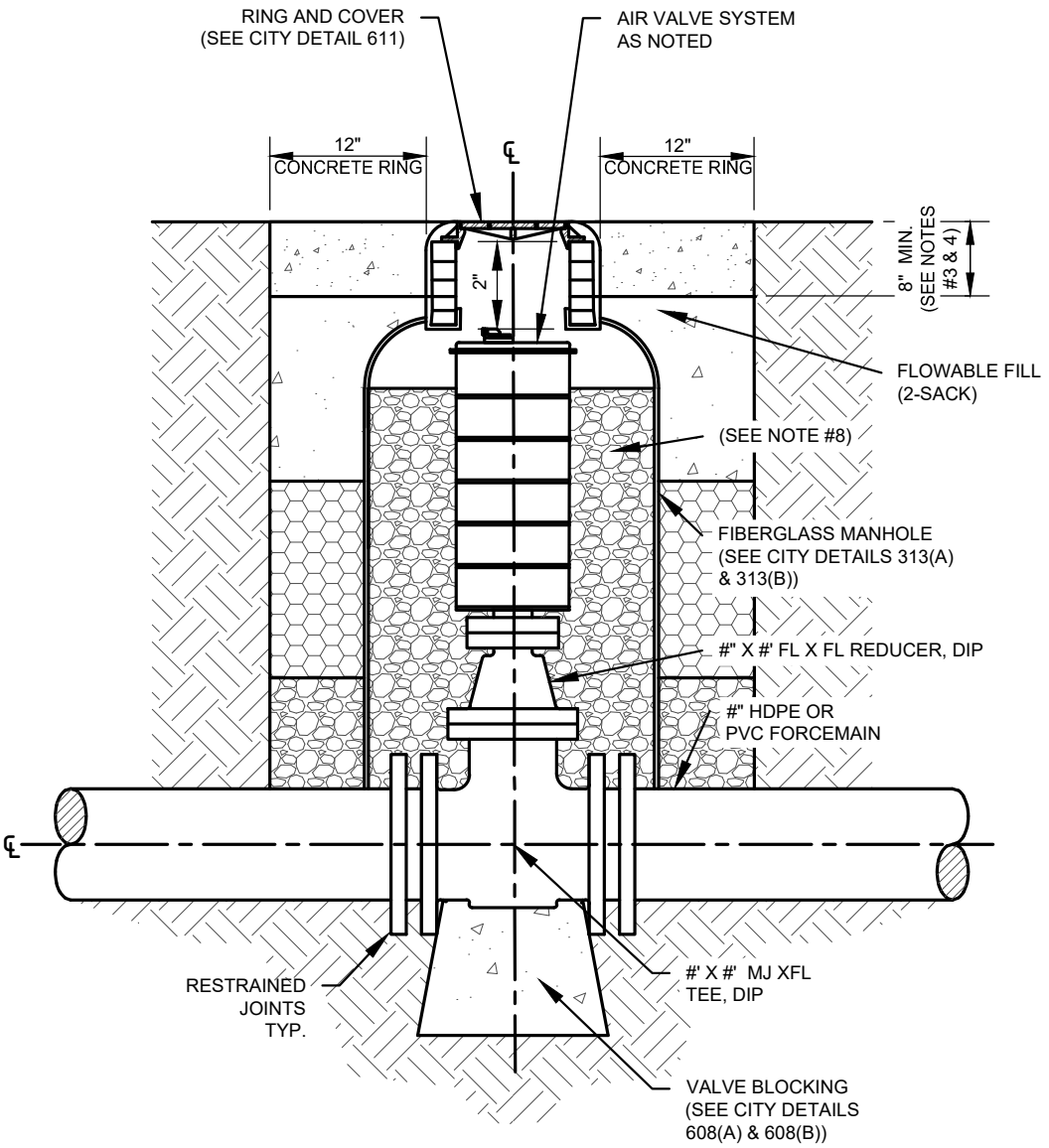


NOTES:

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:
	HORIZONTAL GATE VALVE AND VAULT	October 25, 2022	609

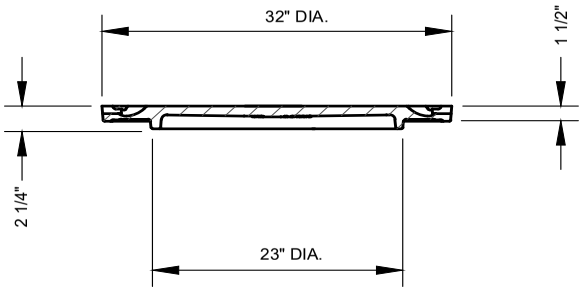
PACKET 14.303



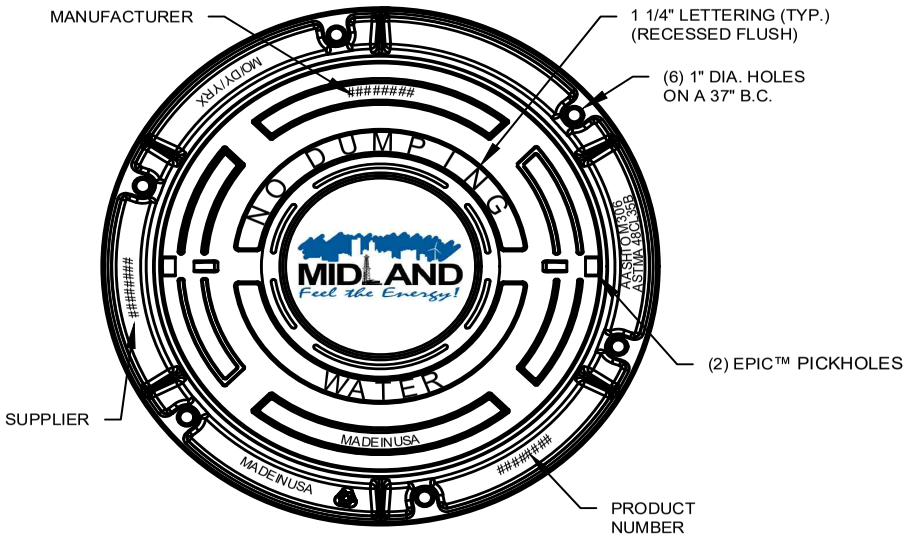
NOTES:

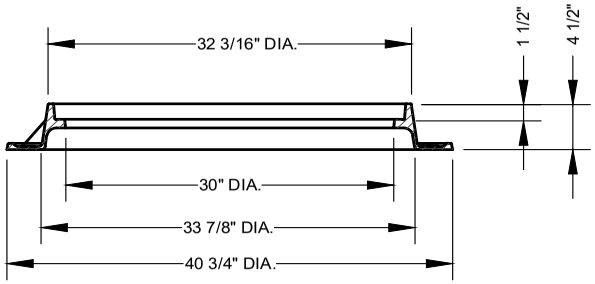
1. USE AN A.R.I. D060CHF03SB-32-SSF 3" CONBINATION AIR VALVE, SUB-SURFACE, FLANGED INLET, SHORT, STAINLESS STEEL KNIFE GATE HOUSING OR APPROVED EQUAL FOR ALL AIR VALVE INSTALLATIONS.
2. EQUIP EACH AIR VALVE SYSTEM WITH A NON-SLAM, DISCHARGE THROTTLING ATTACHMENT (SLOW RELEASE ONE WAY ATTACHMENT).
3. 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: UEP 04	SCALE: NTS	DETAIL:
	WATER AIR RELIEF VALVE		610

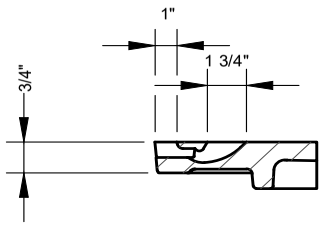


COVER SECTION





FRAME SECTION



PICKHOLE DETAIL

NOTES:

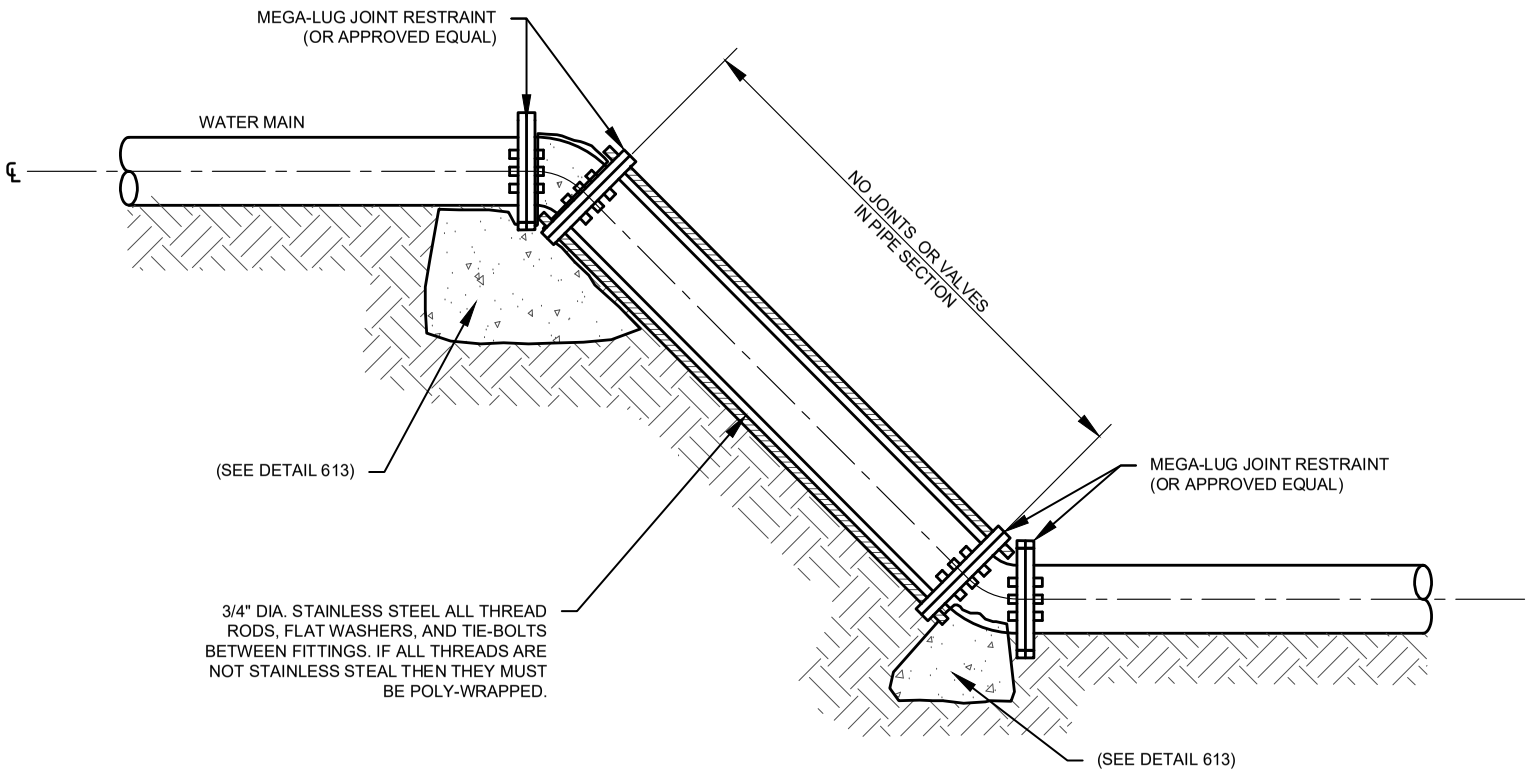
1. MANHOLE COVERS TO BE CAST WITH THE FOLLOWING:
   "NO DUMPING"
   CITY OF MIDLAND LOGO
   "WATER"

   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:

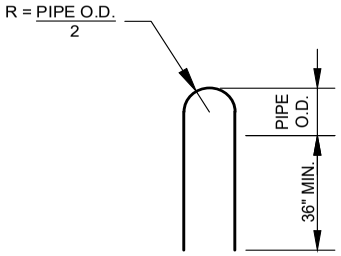
1. FORM ALL CONCRETE THRUST BLOCKING. DO NOT PLACE UN-FORMED THRUST BLOCKING.
2. ALL THRUST BLOCKING TO BE CLASS "A" CONCRETE, 3000 PSI, AND TO BE PLACED AGAINST UNDISTURBED EARTH. USE FIBER REINFORCEMENT THROUGHOUT.
3. FITTINGS TO BE POLY WRAPPED BEFORE BLOCKING IS PLACED.
4. MATERIALS AND CONSTRUCTION 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

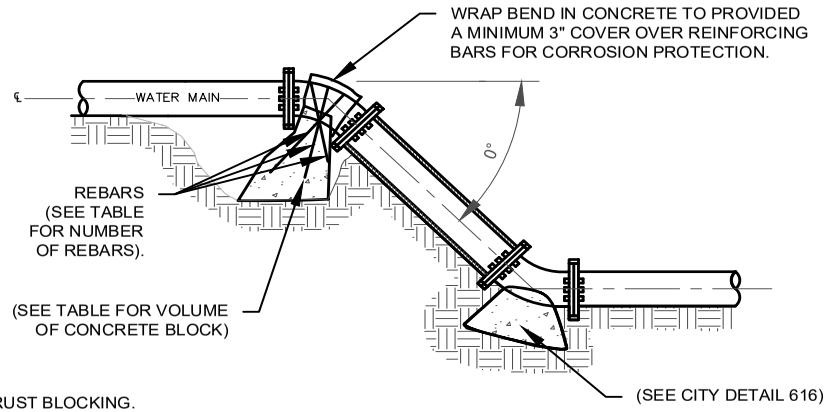
DIA. OF PIPE	DEGREE OF BEND θ							
	11 1/4°		22 1/2°		45°		90°	
	VOLUME BLOCK	REBAR NO. SIZE	VOLUME BLOCK	REBAR NO. SIZE	VOLUME BLOCK	REBAR NO. SIZE	VOLUME BLOCK	REBAR NO. SIZE
4"	3 C.F.	2-#3	6 C.F.	2-#3	12 C.F.	2-#3	22 C.F.	2-#3
6"	7 C.F.	2-#3	13 C.F.	2-#3	26 C.F.	2-#3	1.0 C.Y.	2-#3
8"	12 C.F.	2-#3	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.



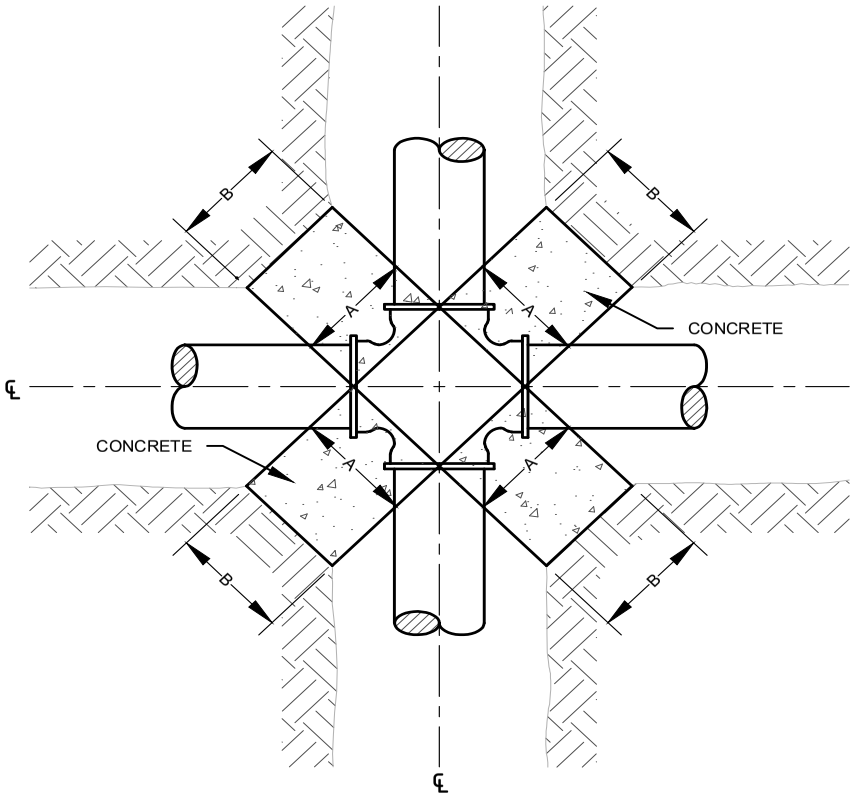
BAR BEND DETAIL



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 CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		BLOCKING FOR VERTICAL BEND		613



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'-8"	2'-8"
12"x 12"	1'-10"	3'-2"	3'-2"
14"x 14"	2'-2"	3'-8"	3'-8"
16"x 16"	2'-4"	4'-3"	4'-3"

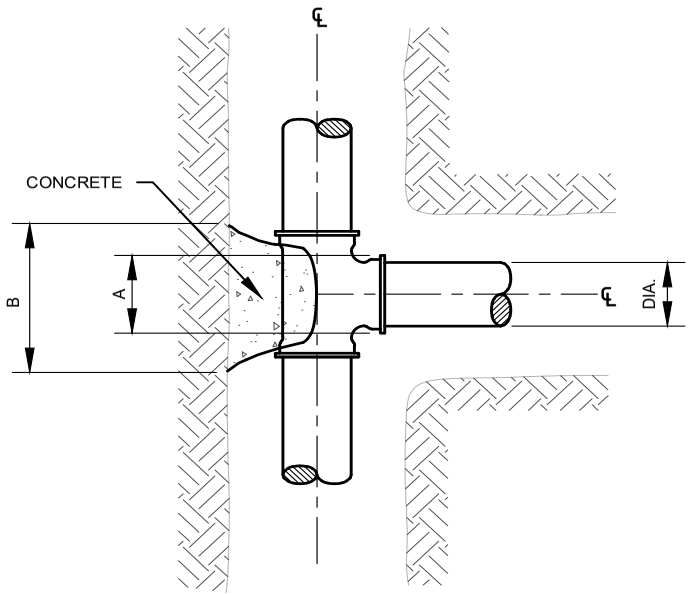
*C - VERTICAL DEPTH OF CONCRETE
BEARING ON UNDISTURBED EARTH

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:

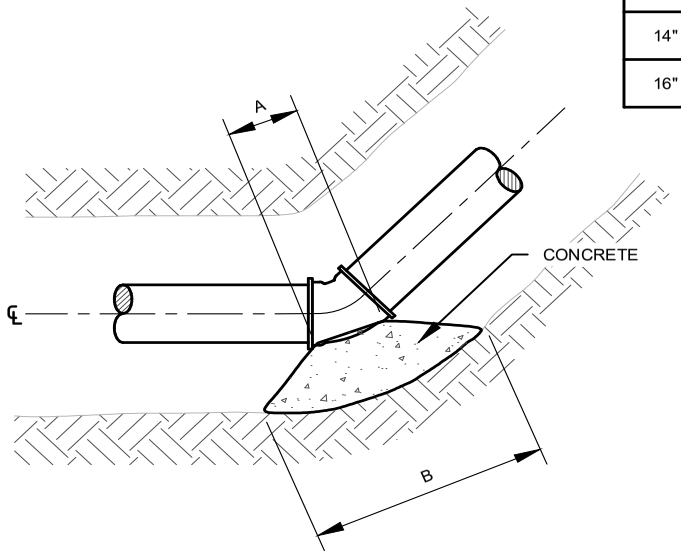
1. FORM ALL CONCRETE THRUST BLOCKING. DO NO PLACE UN-FORMED THRUST BLOCKING.
2. BLOCKING FOR TEES LARGER THAN 16" RUN TO BE SHOWN ON THE PLANS.
3. ALL THRUST BLOCKING TO BE CLASS "A" CONCRETE, 3000 PSI, AND TO BE PLACED AGAINST UNDISTURBED EARTH. USE FIBER REINFORCEMENT THROUGHOUT.
4. FITTING TO BE POLY 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 CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		BLOCKING FOR TEE		615

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"			

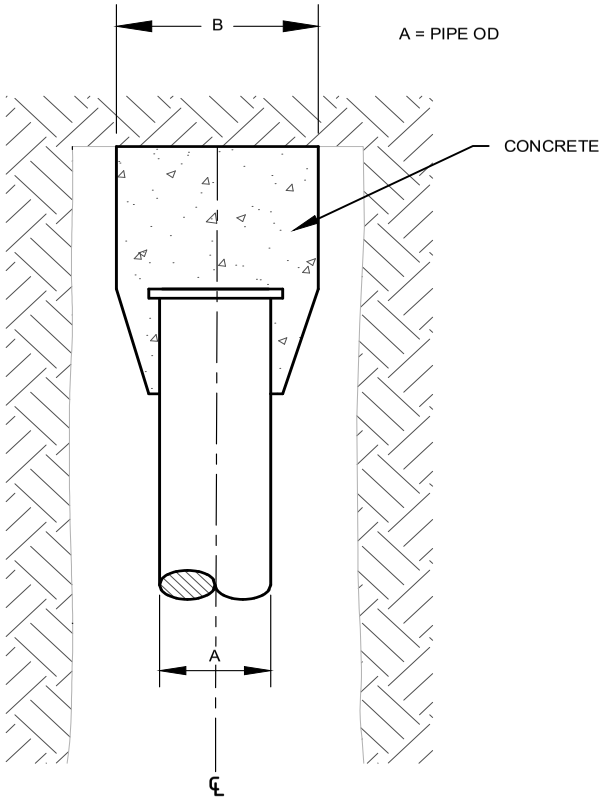
*C - VERTICAL DEPTH OF CONCRETE
BEARING ON UNDISTURBED EARTH



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

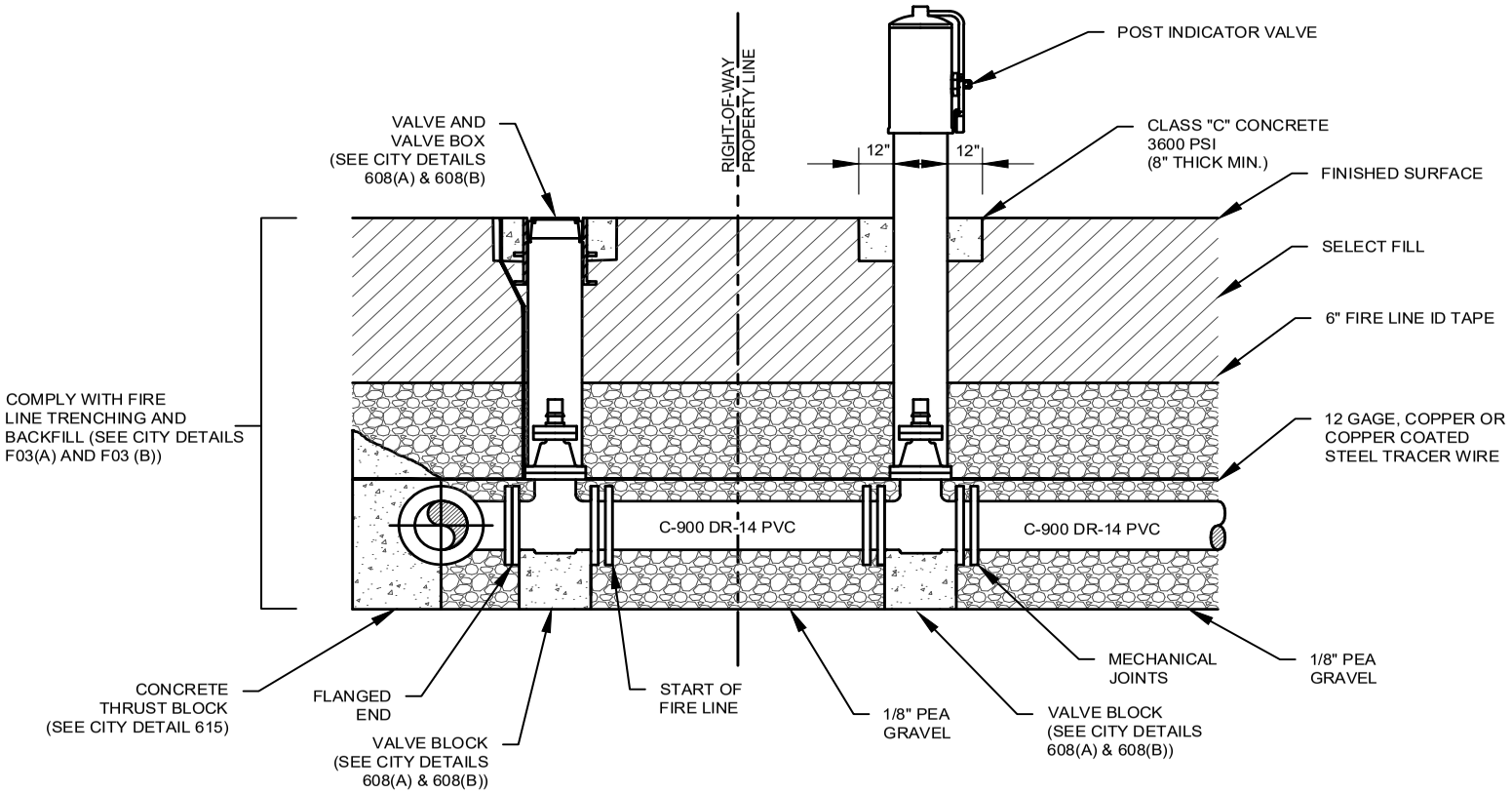
PIPE OD A	BLOCKING DIMENSIONS	
	B	*C
4"	1'-0"	1'-0"
6"	1'-7"	1'-0"
8"	2'-2"	2'-2"
10"	2'-8"	2'-8"
12"	3'-2"	3'-2"
14"	3'-8"	3'-8"
16"	4'-3"	4'-3"

*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.

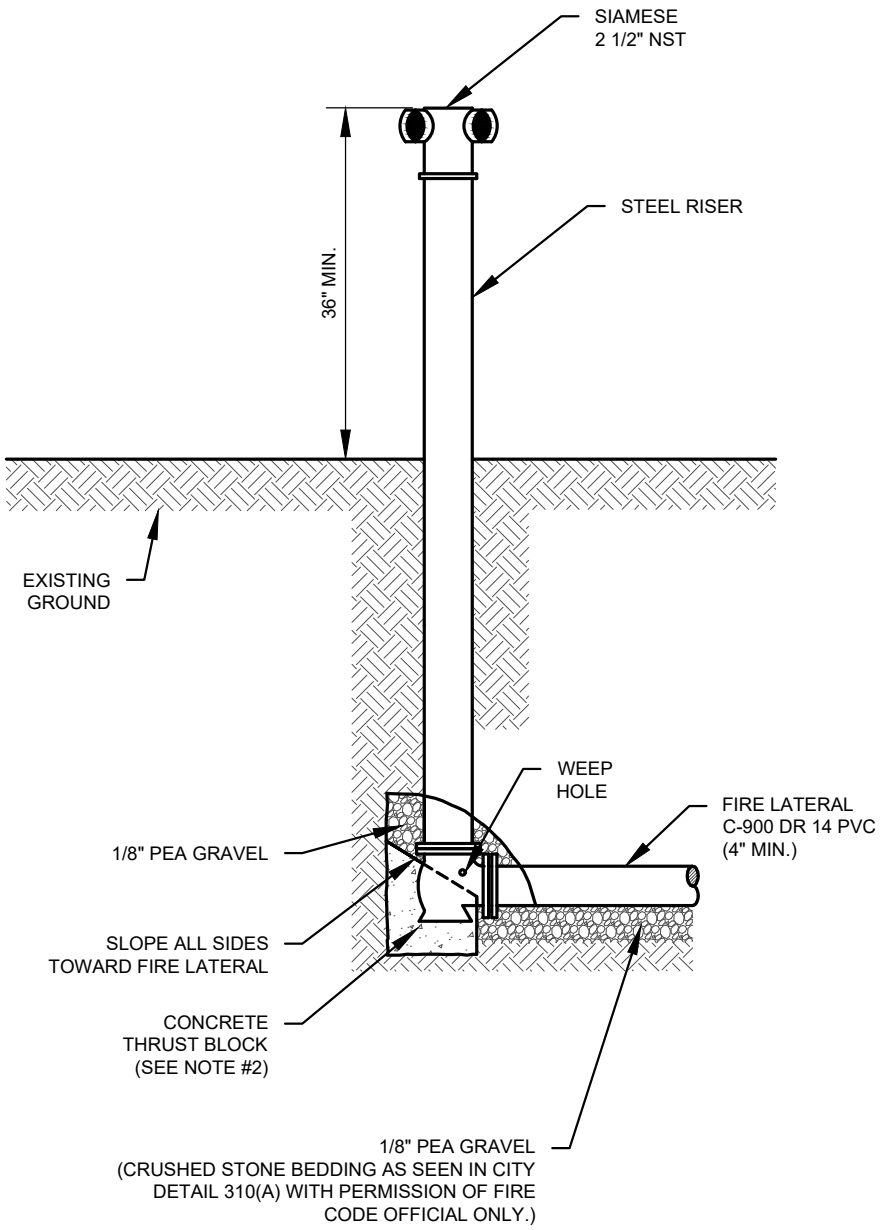
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		BLOCKING FOR CAP		617



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.

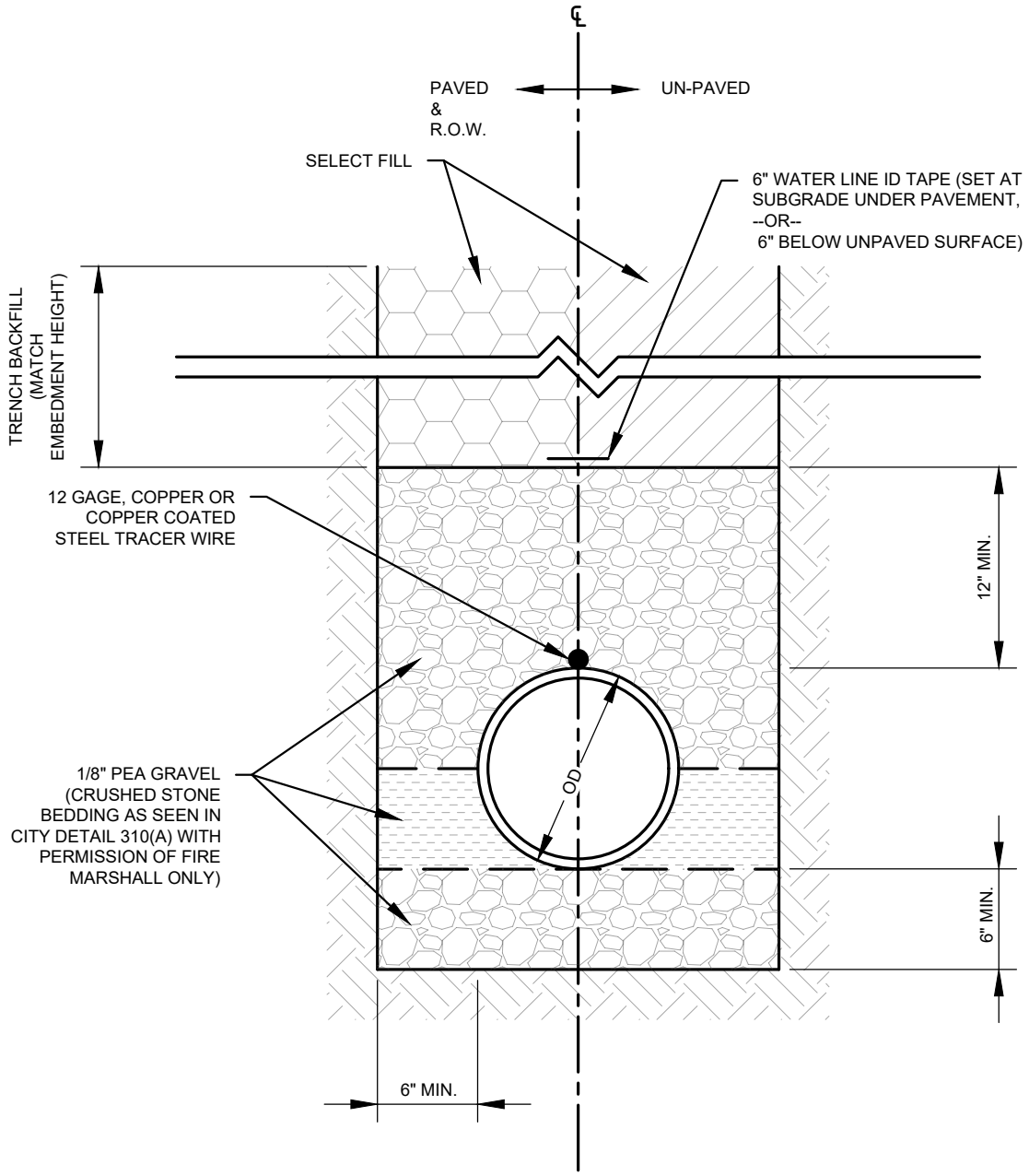
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		FIRE SERVICE LINE		F01



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.

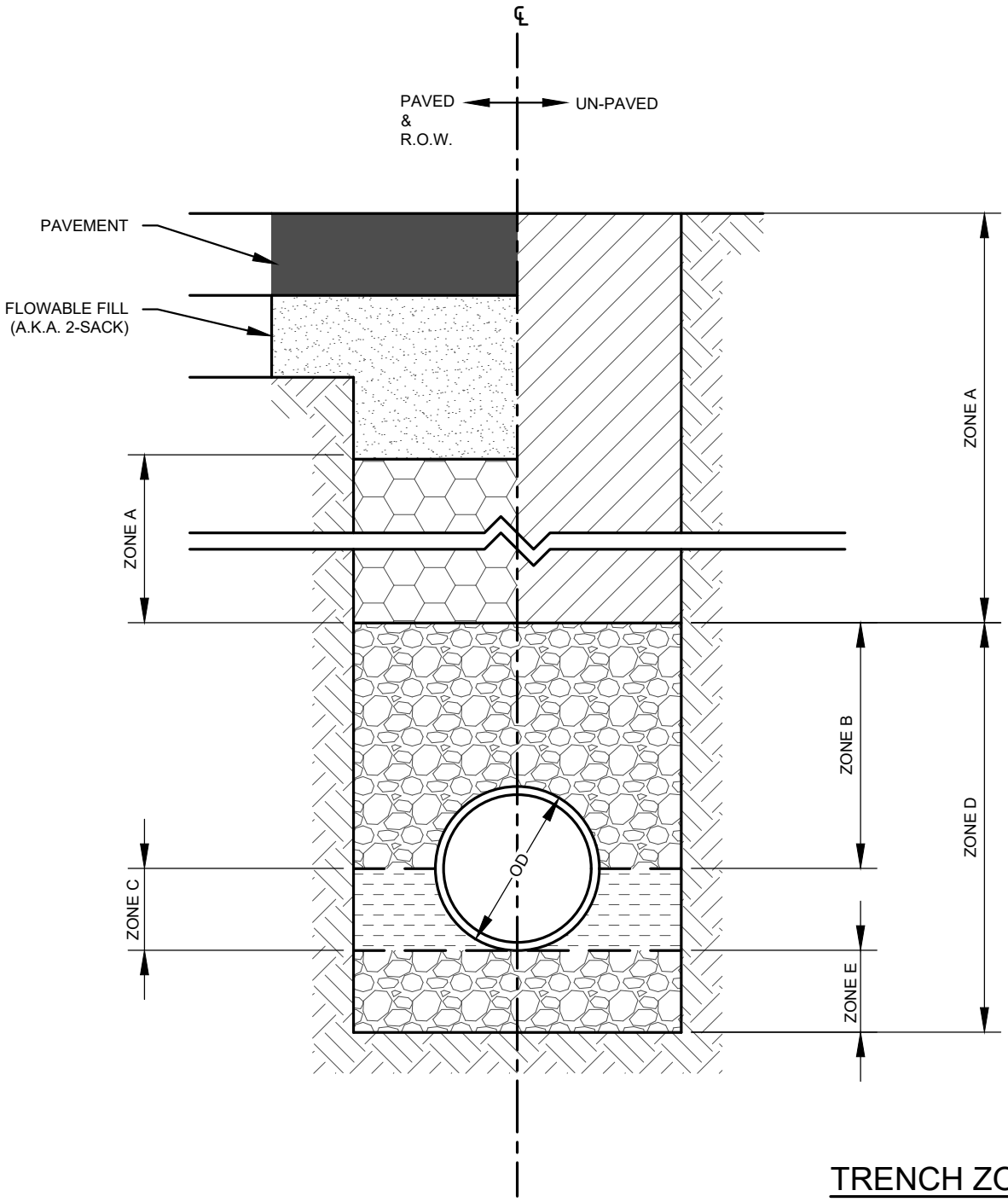
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	REMOTE FDC		F02



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

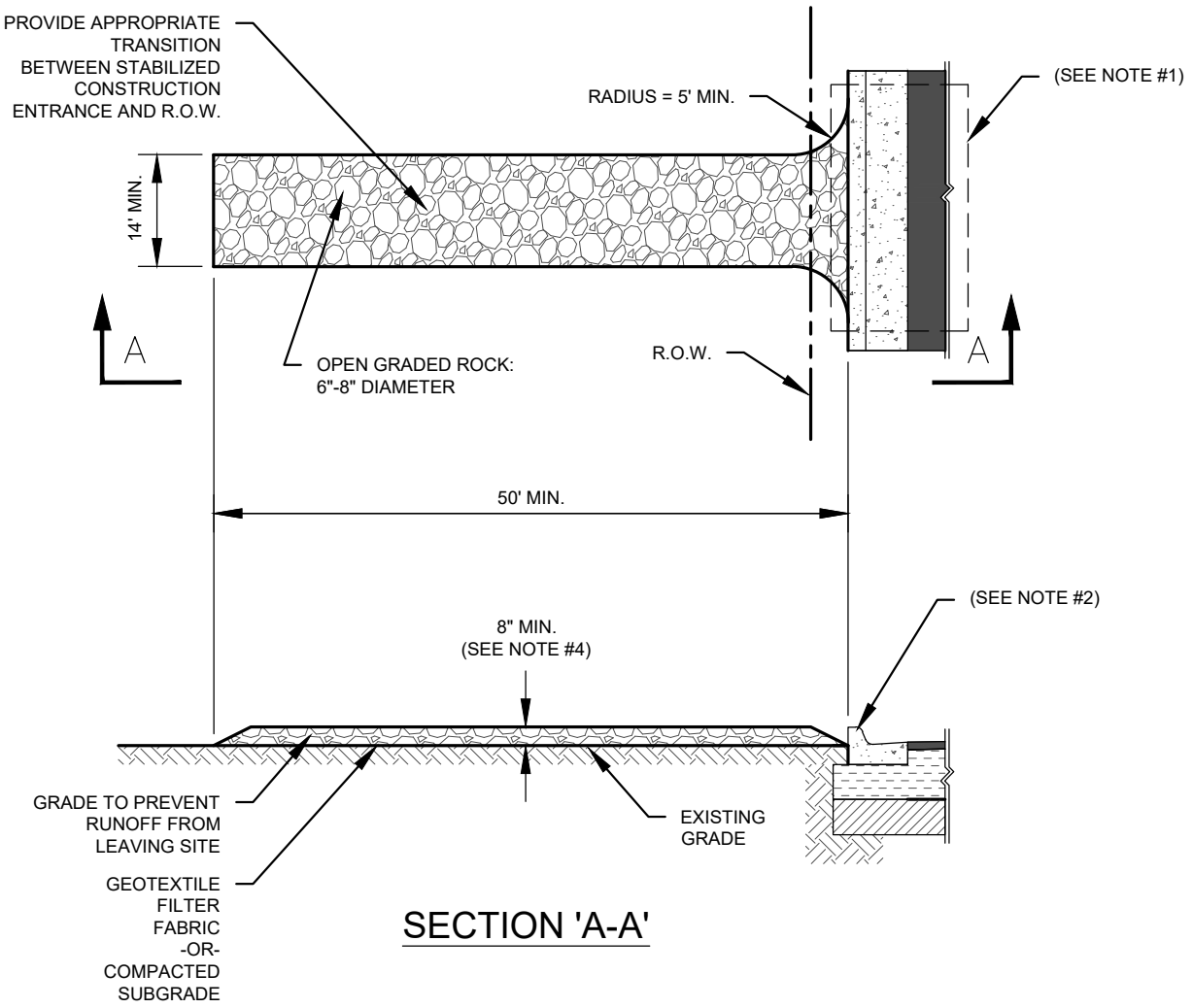
ZONE B: PIPE BACKFILL

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)



SECTION 'A-A'

NOTES:

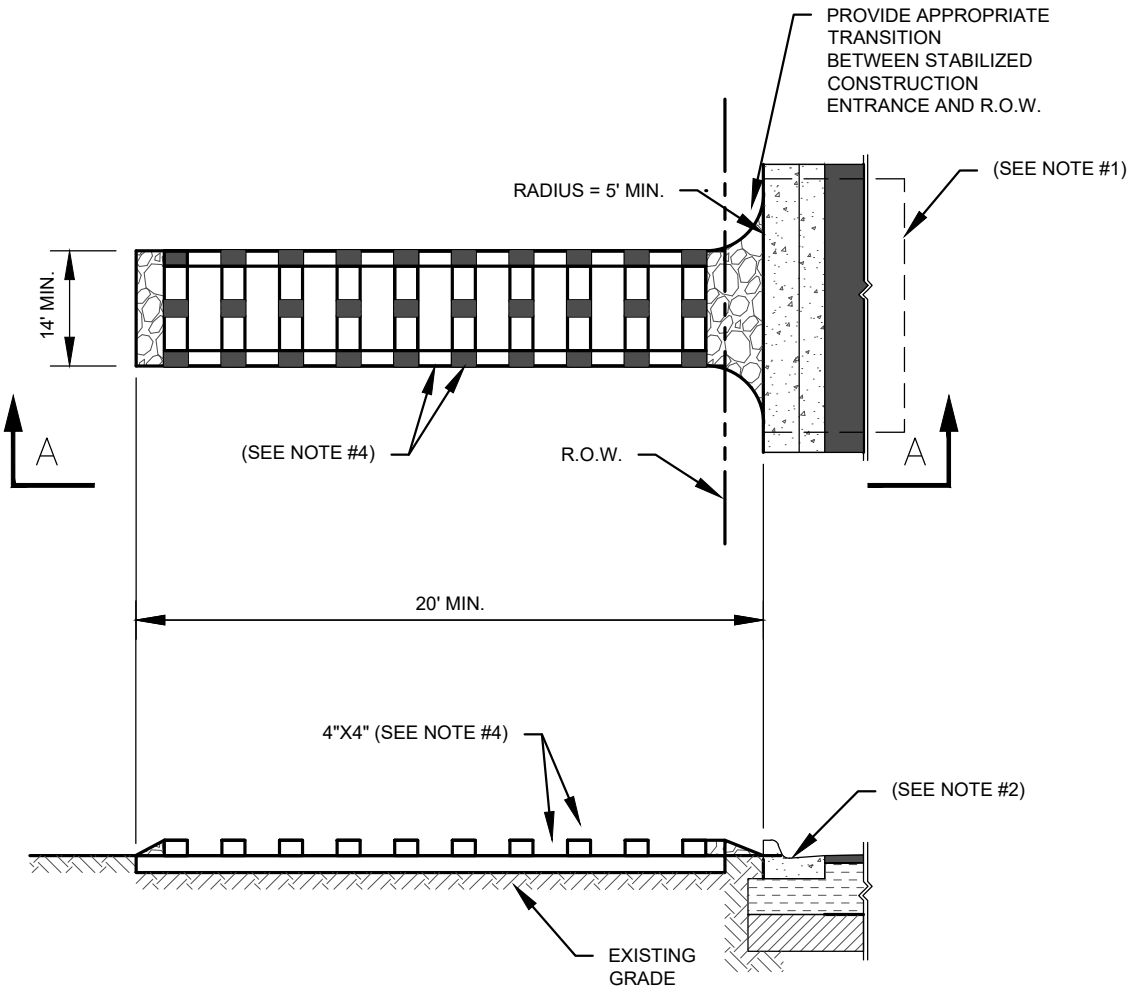
1. IF CURB DOES NOT EXIST OR IF EXISTING CURB IS REMOVED DURING CONSTRUCTION THEN STABILIZED CONSTRUCTION ENTRANCE IS TO EXTEND TO THE EDGE OF PAVEMENT.
2. IF CURB IS LEFT IN PLACE DURING CONSTRUCTION THEN INSTALL TEMPORARY CURB PROTECTION AS PER CITY DETAIL 713.
3. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION 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	
	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:

MIDLAND Engineering Services

STABILIZED CONSTRUCTION ENTRANCE OPTION 1

701



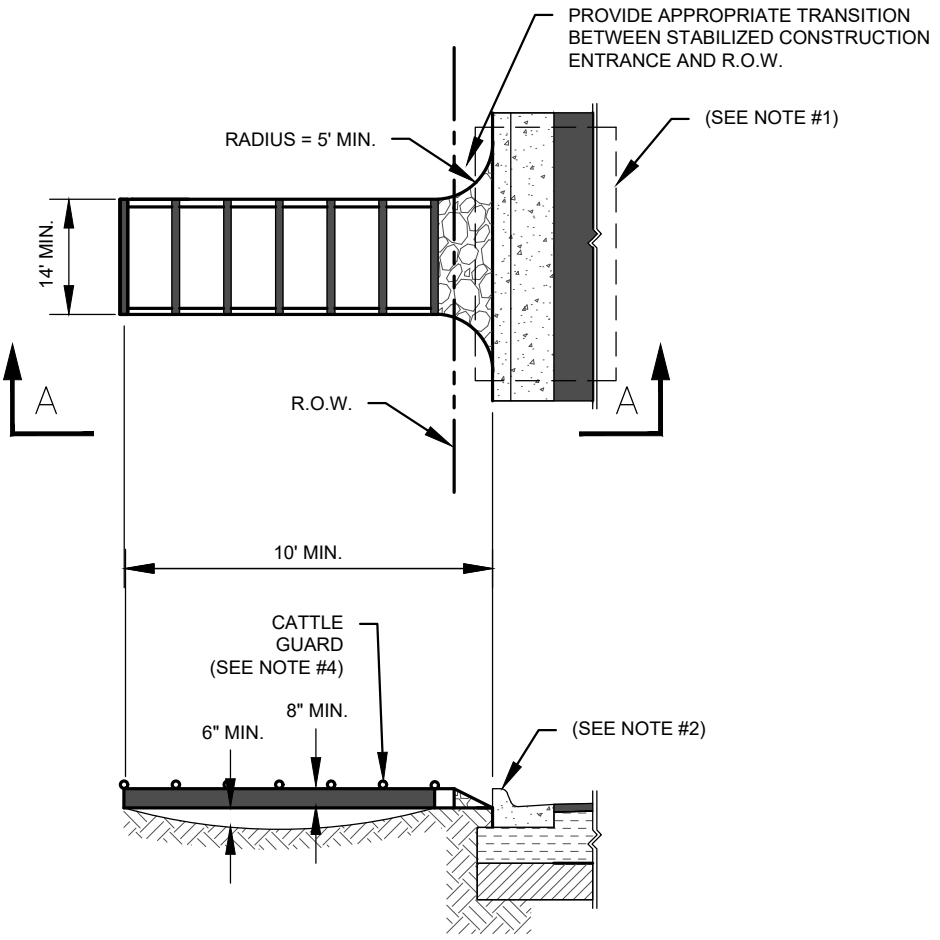
SECTION 'A-A'

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

PACKET Page 117 October 25, 2022

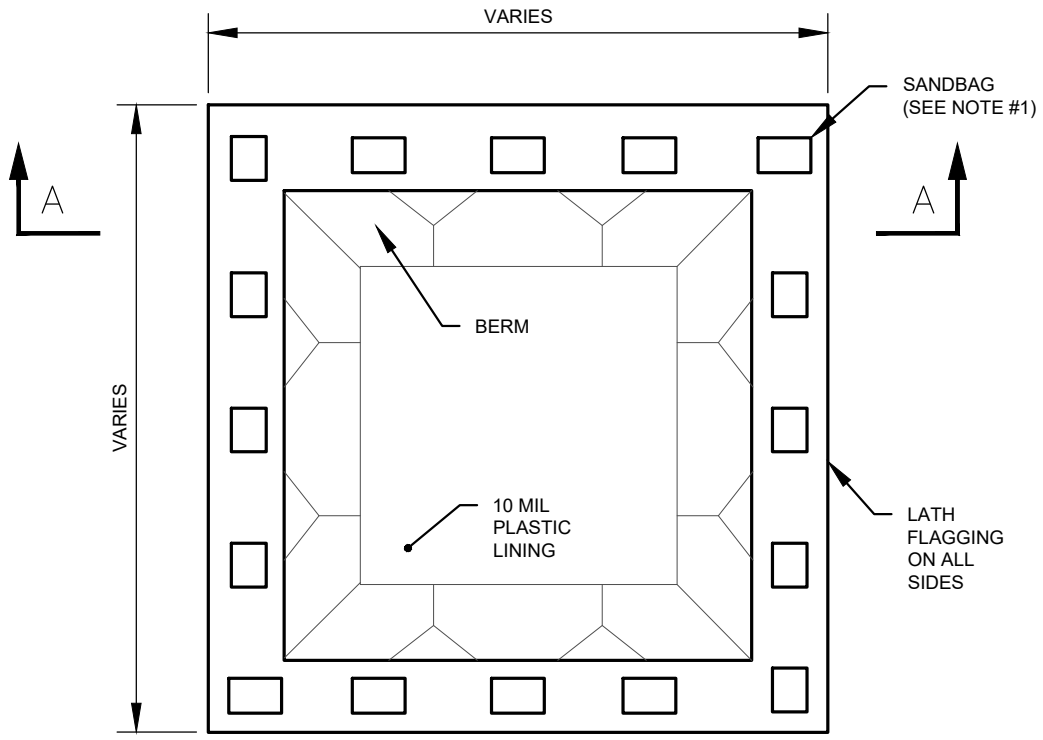


SECTION 'A-A'

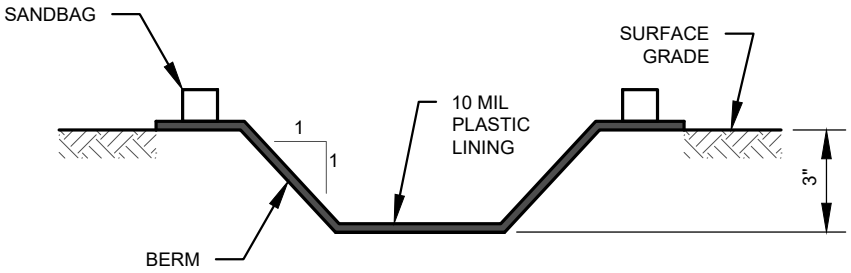
NOTES:

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:

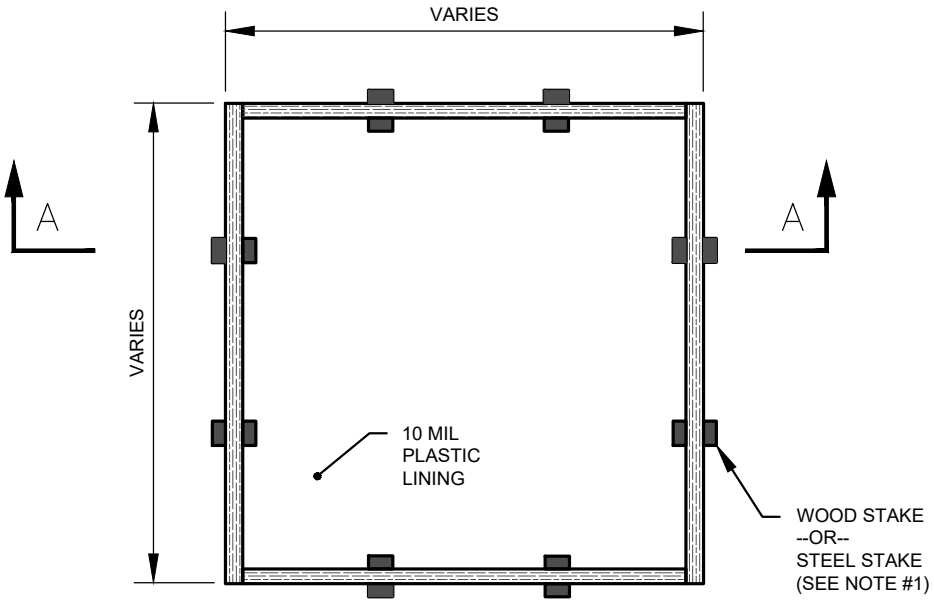
1. SECURE WASHOUT STRUCTURES AND LININGS WITH SANDBAGS OR TWO SECURELY FASTENED STAKES AROUND ENTIRE WASHOUT PERIMETER.
2. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
3. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:

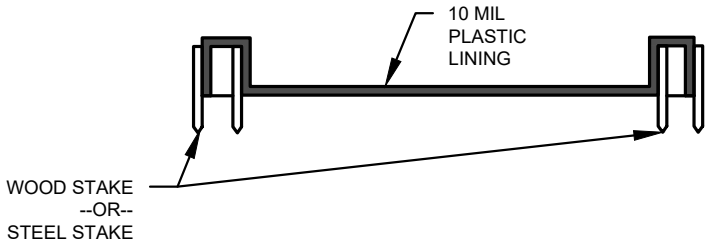
MIDLAND Engineering Services

CONCRETE WASHOUT OPTION 1

704



ELEVATED WASHOUT

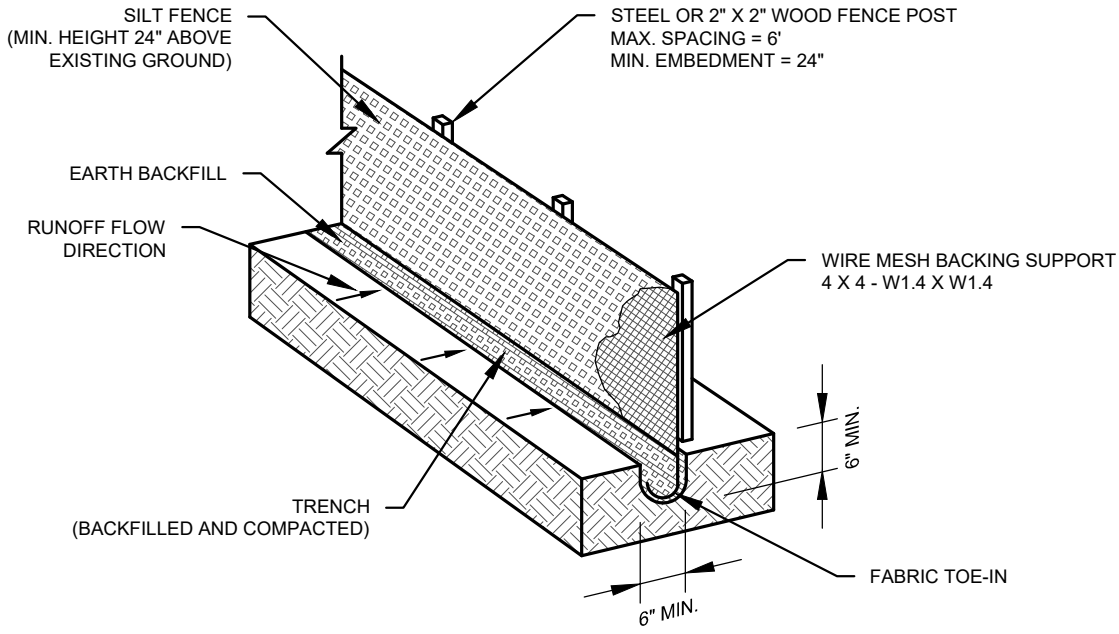


SECTION 'A-A'

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

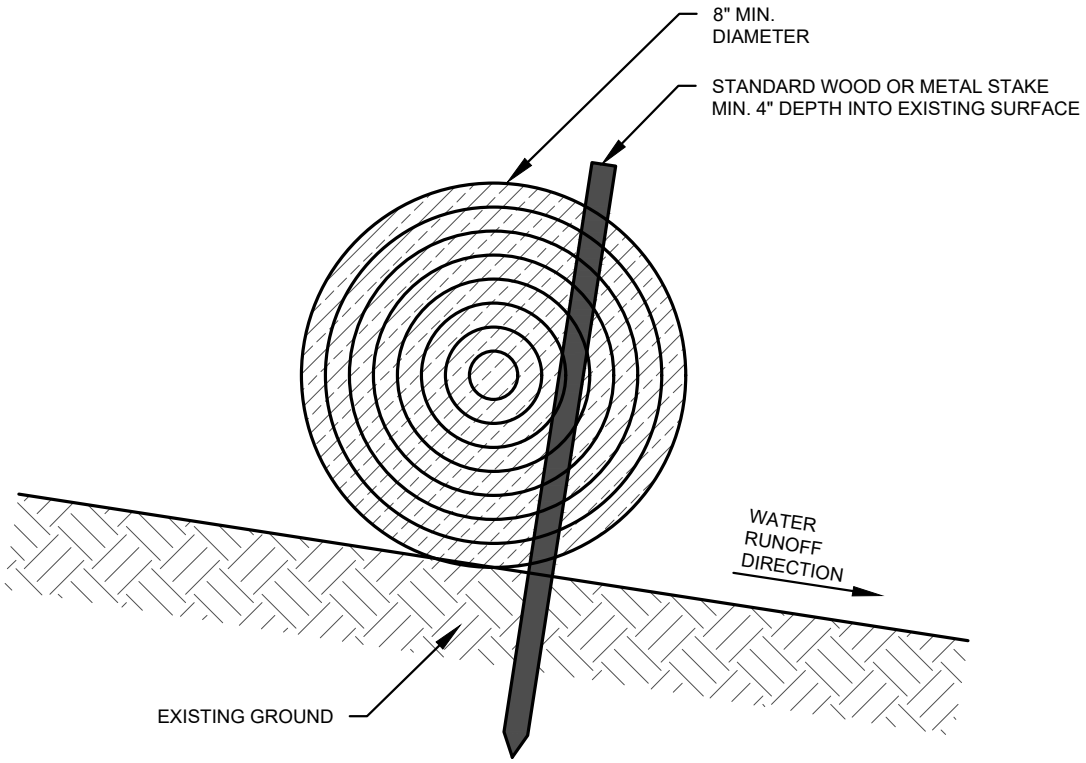


NOTES:

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	October 25, 2022	706

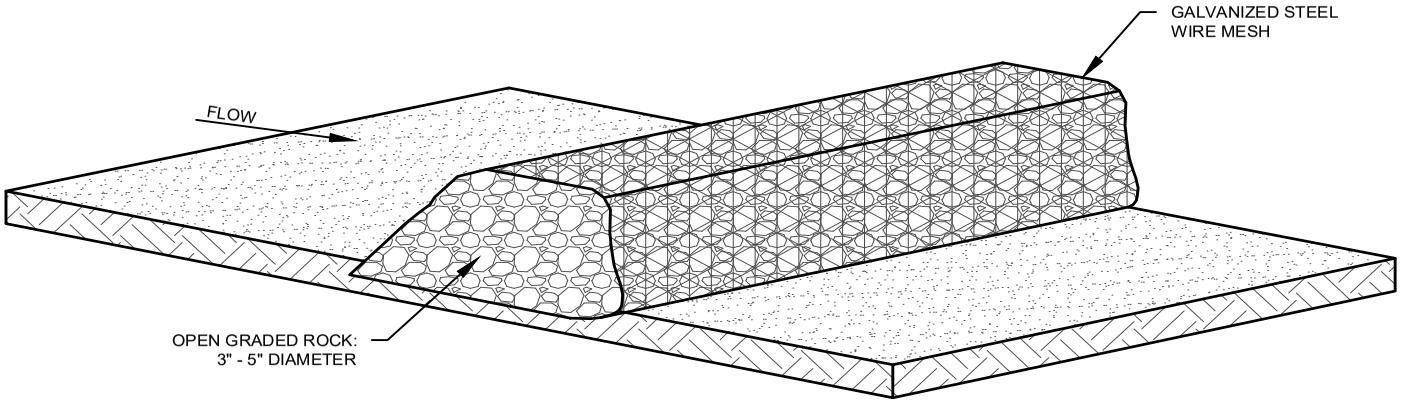
PACKET 11.321



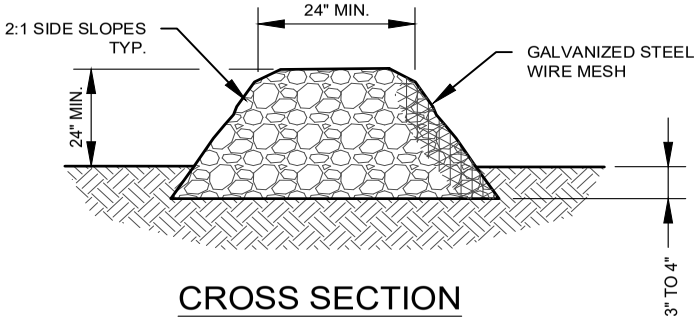
NOTES:

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:
PACKET 11.322	FILTER SOCK	October 25, 2022	707



ISOMETRIC VIEW

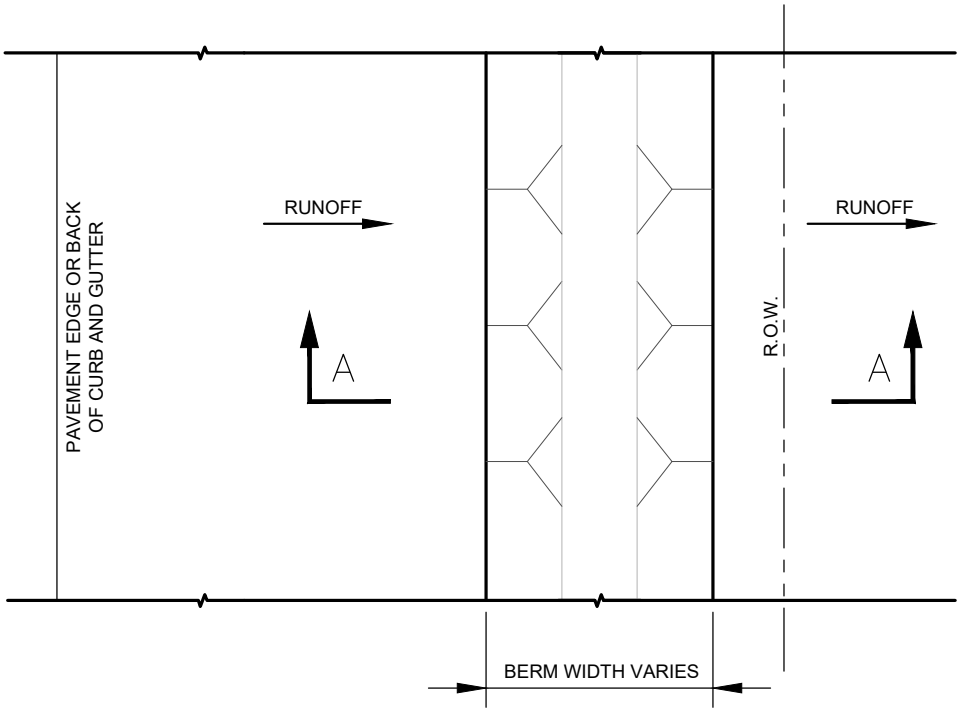


CROSS SECTION

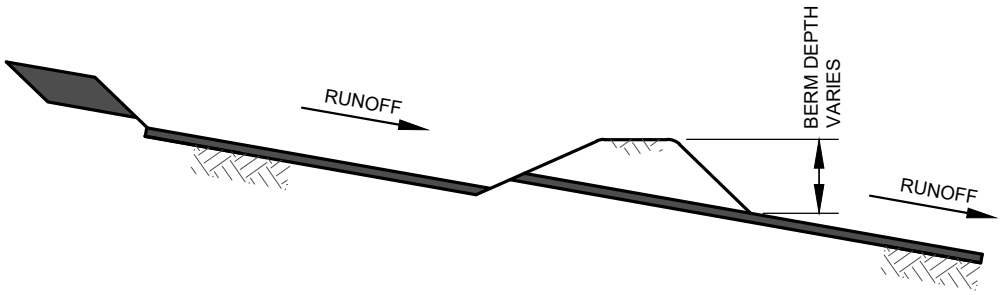
NOTES:

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

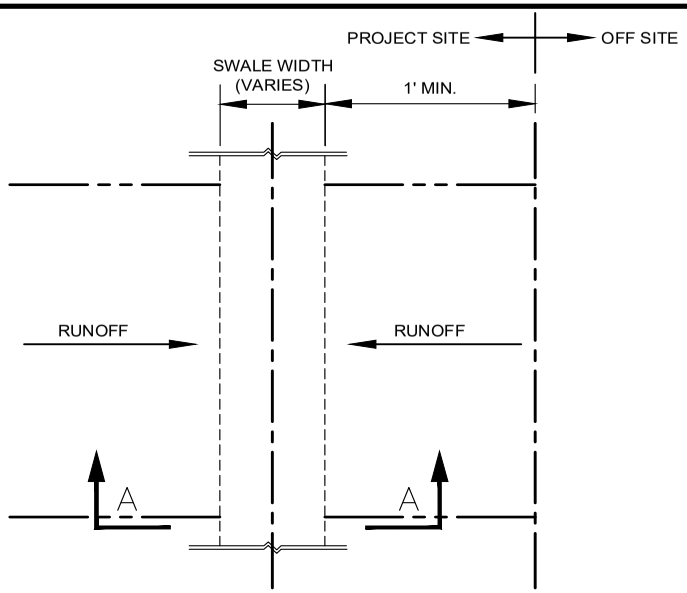


SECTION 'A-A'

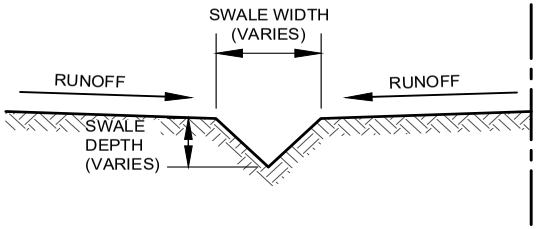
NOTES:

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

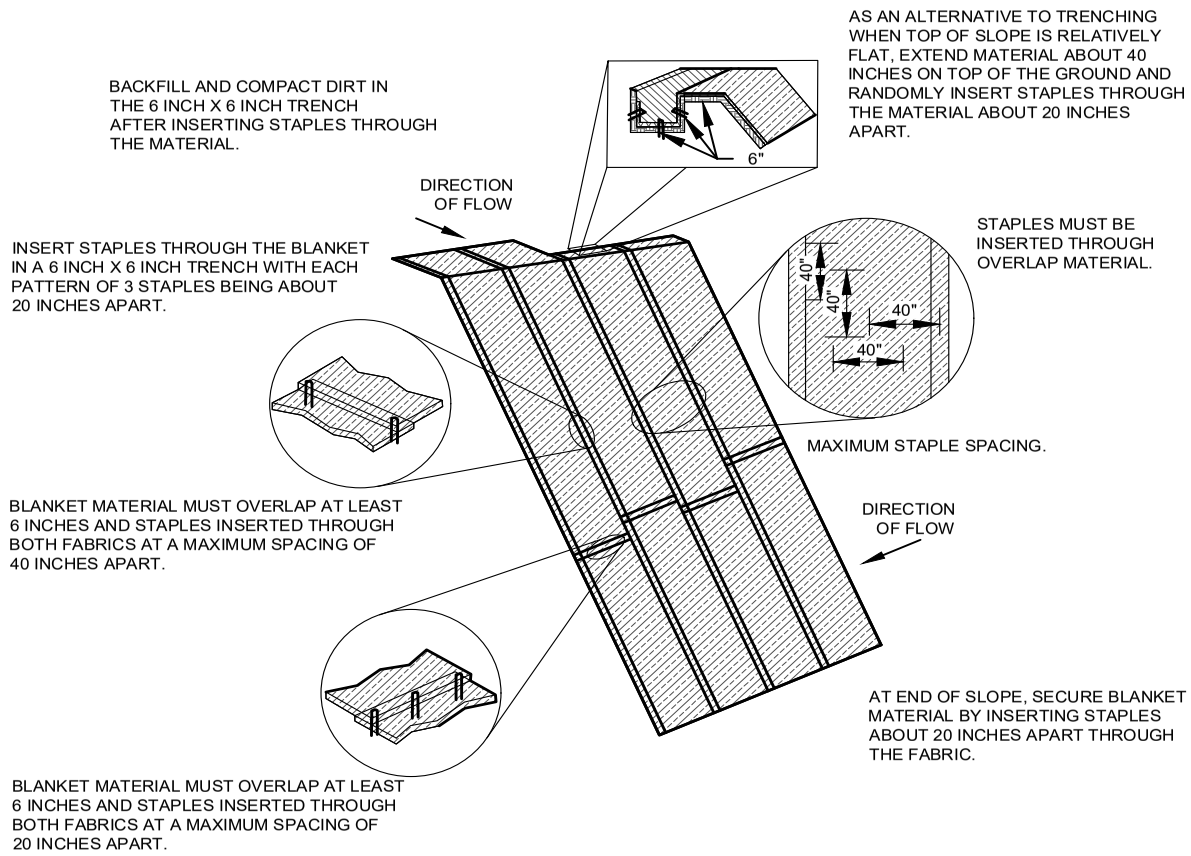


SECTION 'A-A'

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.

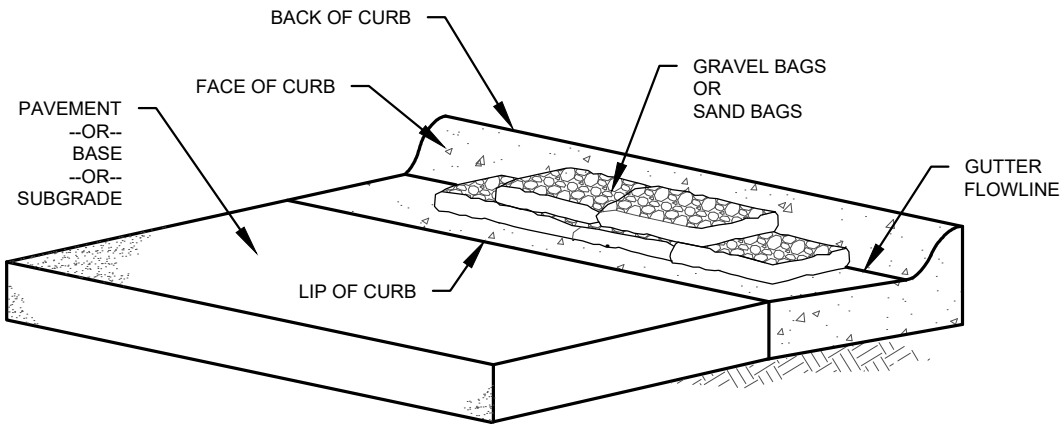
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		DRAINAGE SWALE BUFFER		710



NOTES:

1. THE FOLLOWING PRODUCTS, OR AN EQUAL APPROVED BY THE ENGINEERING SERVICES REPRESENTATIVE MAY BE USED;
   ECS S-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.

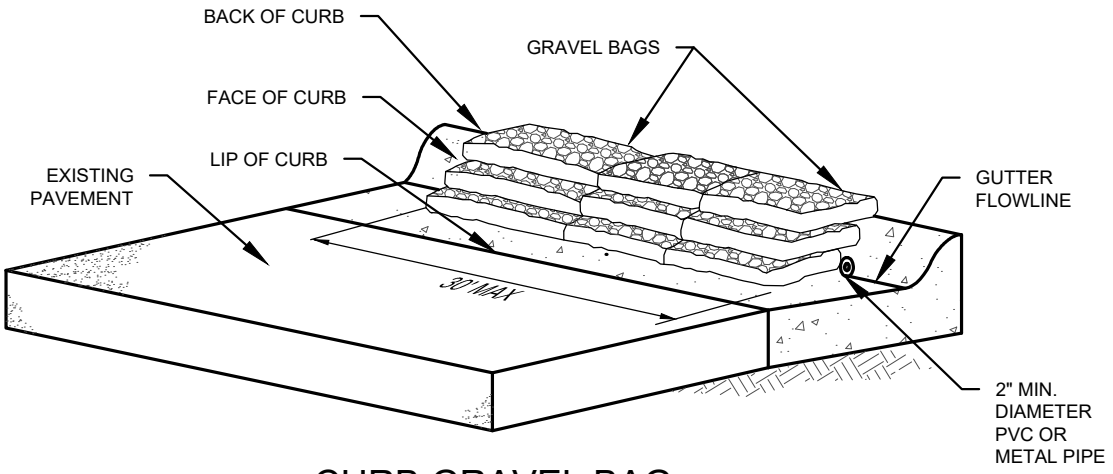
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		EROSION CONTROL BLANKET AND VEGETATION		711



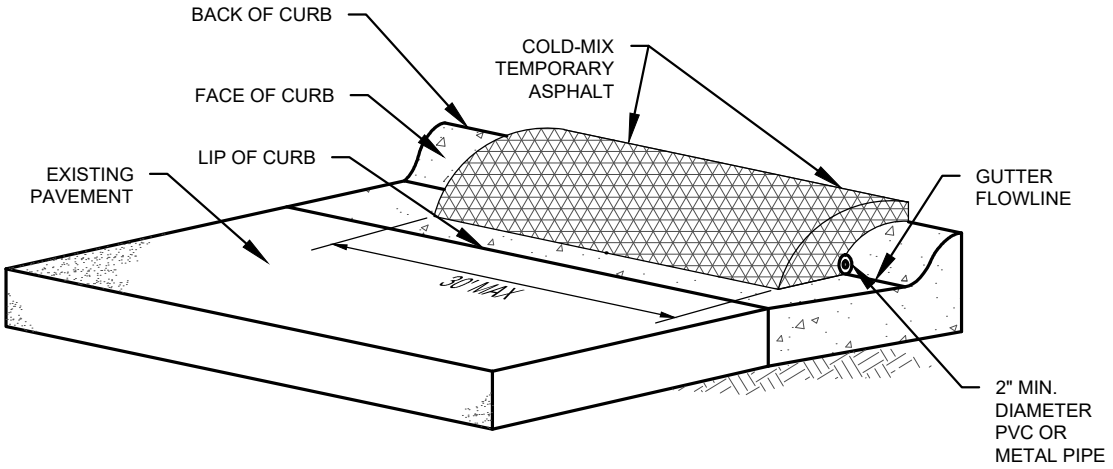
NOTES:

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

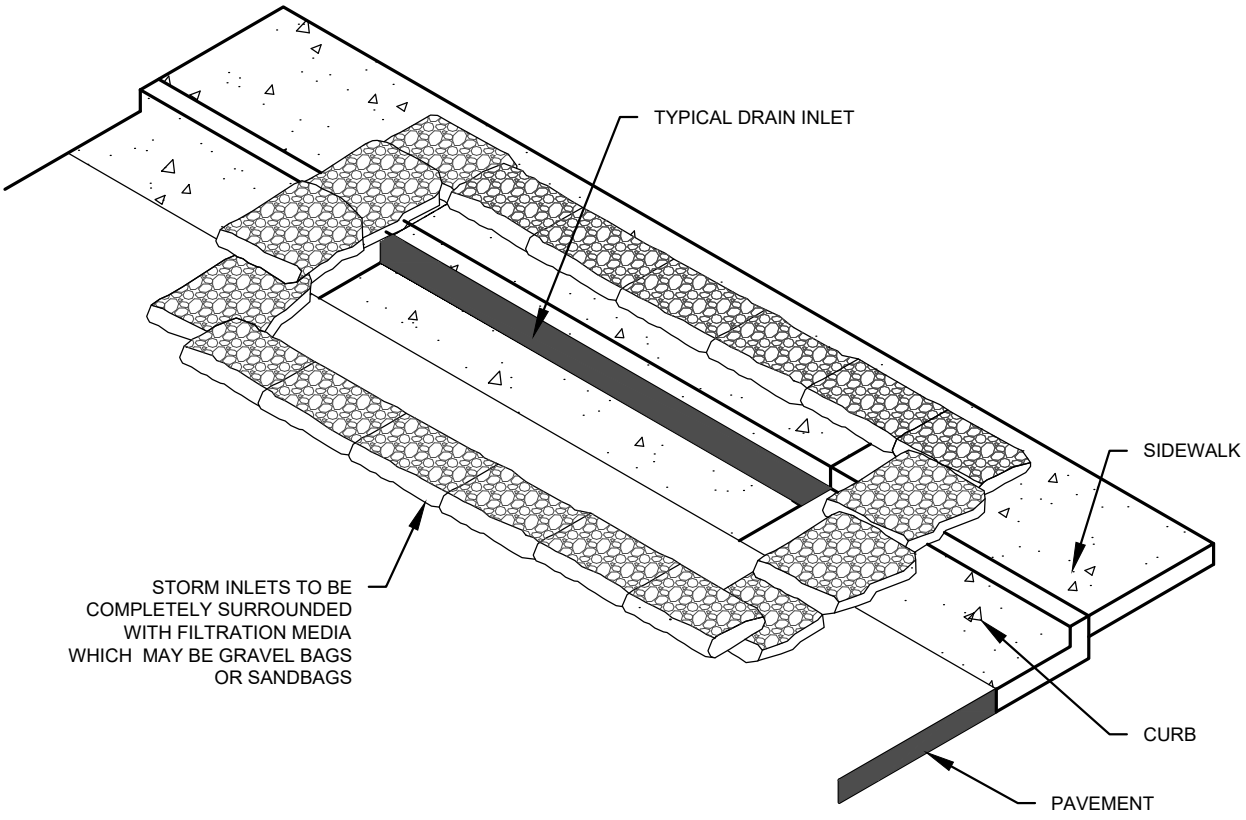


CURB COLD-MIX TEMPORARY ASPHALT

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

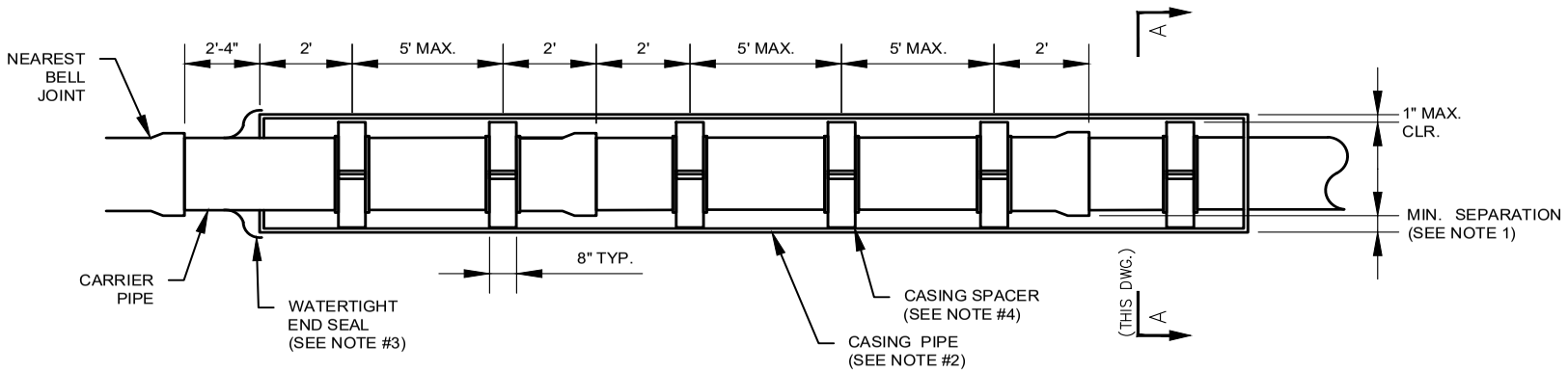


GRAVEL BAGS OR SANDBAGS

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.

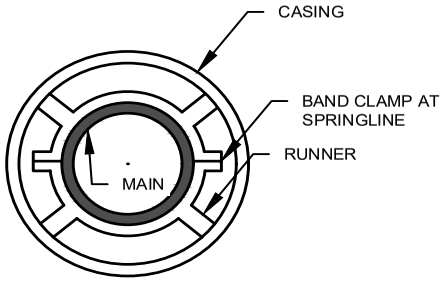
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	CURB INLET PROTECTION		714



CROSS SECTION VIEW

NOTES:

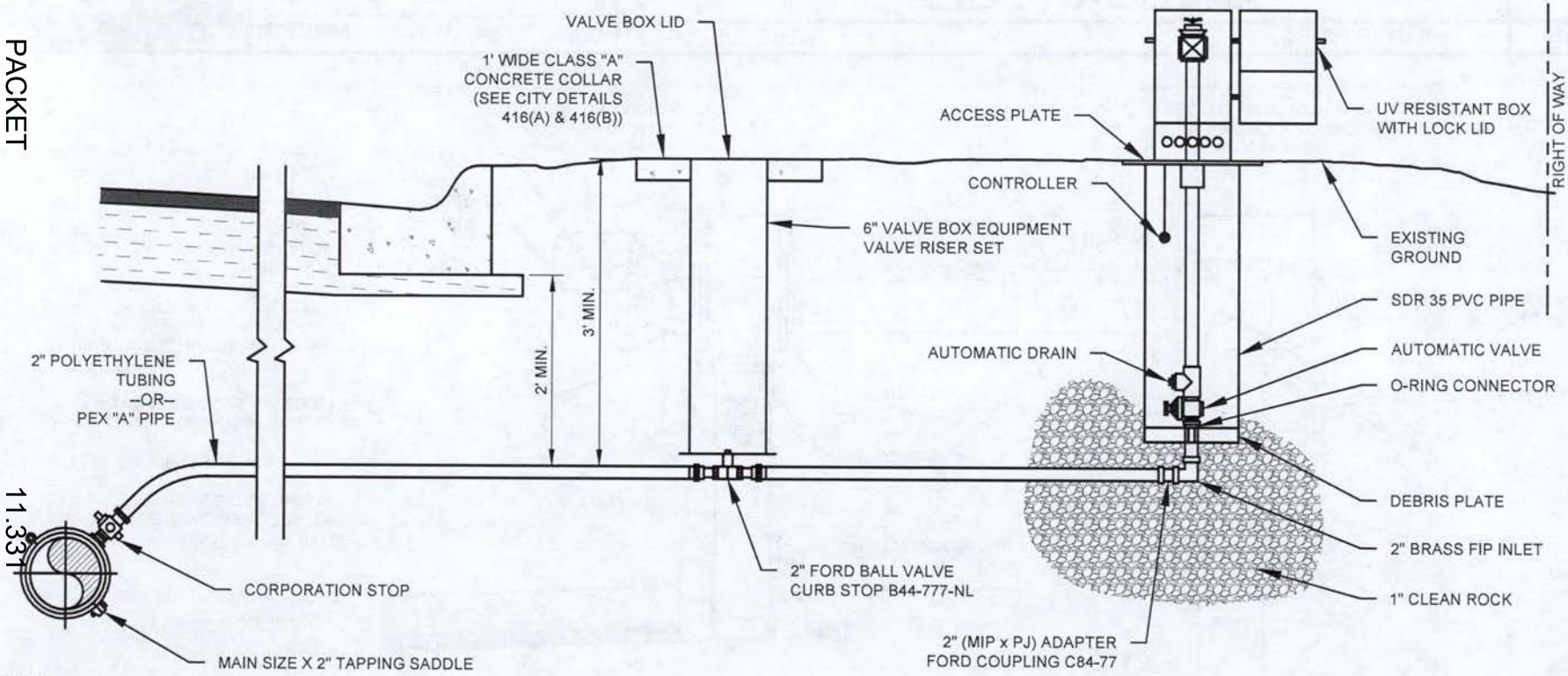
1. CASING PIPE TO BE MINIMUM TWO (2) NOMINAL SIZES LARGER IN DIAMETER THAN CARRIER PIPE.
2. CASING PIPE TO BE NO LESS THAN 12" DIAMETER PIPE. 12"-16" DIAMETER CASING PIPE MAY BE STEEL OR PVC PIPE. CASING PIPE LARGER THAN 16" DIAMETER MUST BE STEEL PIPE. STEEL CASING PIPE TO BE MINIMUM 1/4" WALL THICKNESS. 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

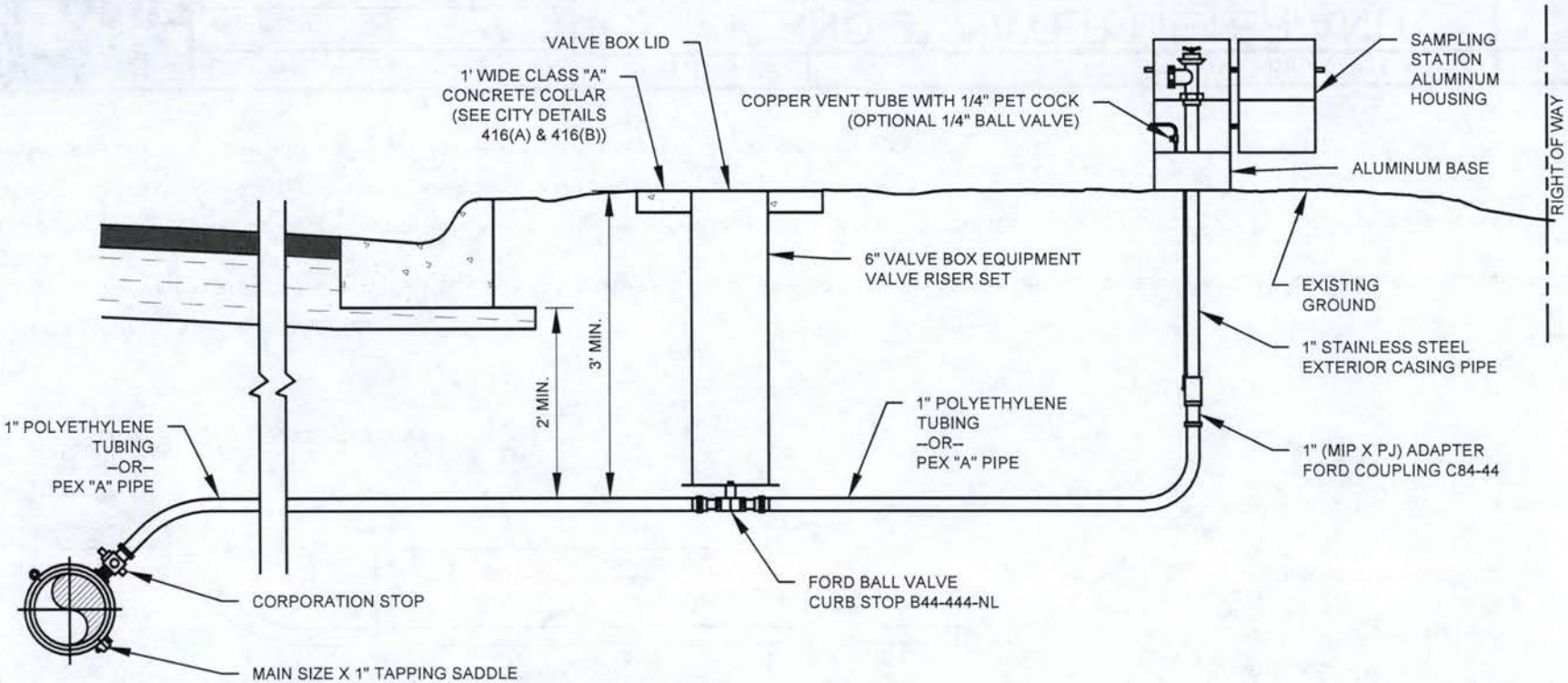
PACKET 11.331 October 25, 2022



NOTES

1. AUTOMATIC FLUSHING DEVICE TO HAVE A 2" BRASS FIP INLET, LEADING VERTICALLY INTO A 2" AUTOMATIC SOLENOID VALVE. AUTOMATIC SOLENOID VALVE SHALL HAVE A 150 PSI RATING. EACH UNIT SHALL BE FURNISHED WITH A STAND-ALONE VALVE CONTROLLER. VALVE CONTROLLER WILL NOT REQUIRE A SECOND HAND-HELD DEVICE FOR PROGRAMMING, MUST HAVE A MINIMUM OF 12 POSSIBLE FLUSHING CYCLES PER DAY AT UP TO 6 HOURS OF FLUSH TIME PER CYCLE, SHALL BE SUBMERSIBLE TO 12', OPERATE WITH A 9 VOLT BATTERY (COMPARTMENT HOLDS TWO BATTERIES) AND HAVE A DOUBLE VALVE, ALL BRASS SAMPLING POINT. REMOVAL OF THE 2" SOLENOID VALVE SHALL BE POSSIBLE VIA AN O-RING CONNECTOR LOCATED UNDER THE VALVE AFTER REMOVAL OF THE STAINLESS STEEL ACCESS PLATE, UNDERGROUND PARTS SHALL BE HOUSED IN A PVC ENCLOSURE AND EACH UNIT SHALL BE SELF-DRAINING, NON-FREEZING. ALL ABOVE-GROUND COMPONENTS SHALL BE CONTAINED WITHIN A UV-RESISTANT LOCKING DOMED COVER.
2. ALL CONNECTION COMPONENTS (NOT INCLUDING THE STATION) MUST BE THE COMPONENTS LISTED OR APPROVED EQUALS. ALL COMPONENTS USED MUST BE FROM THE SAME MANUFACTURER.
3. ONLY TO BE INSTALLED IF APPROVED BY CITY ENGINEER/UTILITIES DIRECTOR.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY BOTH THE ENGINEERING SERVICES REPRESENTATIVE AND THE UTILITY DEPARTMENT REPRESENTATIVE.

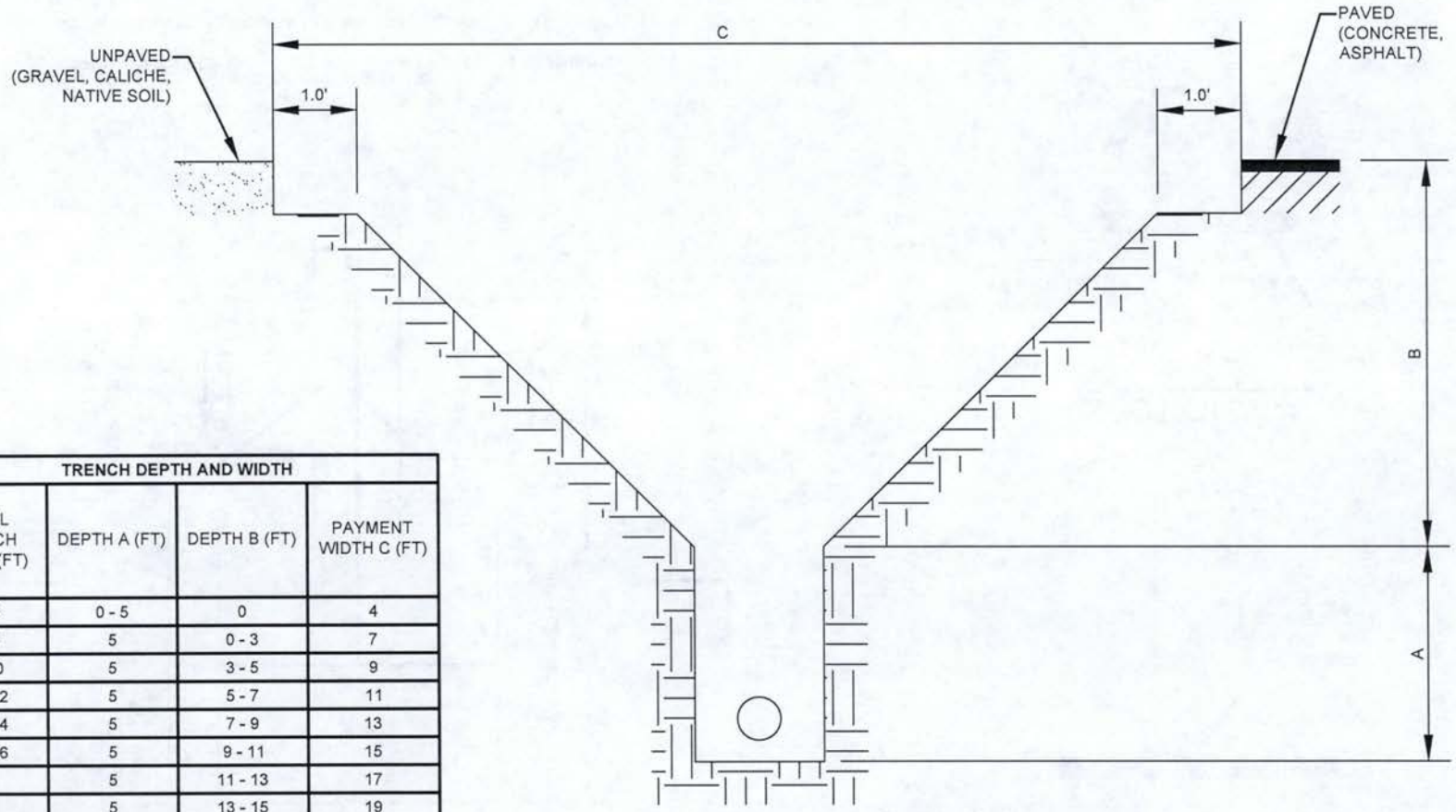
MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE:	SCALE: NTS
		WATER FLUSHING STATION	DETAIL: 4##



NOTES

1. SAMPLING STATION TO BE BURIED, WITH A 3/4" FIP INLET, AND A (3/4" HOSE OR UNTHREADED) NOZZLE.
2. ALL STATIONS TO BE ENCLOSED IN A LOCKABLE, NONREMOVABLE, ALUMINUM-CAST HOUSING.
3. WHEN OPENED, THE STATION WILL REQUIRE NO KEY FOR OPERATION, AND THE WATER WILL FLOW IN AN ALL BRASS WATERWAY.
4. ALL WORKING PARTS WILL ALSO BE OF BRASS AND BE REMOVABLE FROM ABOVE GROUND WITH NO DIGGING. EXTERIOR PIPING TO BE BRASS OR GALVANIZED.
5. A COPPER VENT TUBE WILL ENABLE EACH STATION TO BE PUMPED FREE OF STANDING WATER TO PREVENT FREEZING AND TO MINIMIZE BACTERIA GROWTH.
6. ALL CONNECTION COMPONENTS (NOT INCLUDING THE STATION) MUST BE THE COMPONENTS LISTED OR APPROVED EQUALS. ALL COMPONENTS USED MUST BE FROM THE SAME MANUFACTURER.
7. ONLY TO BE INSTALLED IF APPROVED BY CITY ENGINEER/ UTILITIES DIRECTOR.
8. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
9. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY BOTH THE ENGINEERING SERVICES REPRESENTATIVE AND THE UTILITY DEPARTMENT REPRESENTATIVE.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE:	SCALE: NTS
		WATER SAMPLING STATION	DETAIL: 4##



TRENCH DEPTH AND WIDTH			
TOTAL TRENCH DEPTH (FT)	DEPTH A (FT)	DEPTH B (FT)	PAYMENT WIDTH C (FT)
0 - 5	0 - 5	0	4
5 - 8	5	0 - 3	7
8 - 10	5	3 - 5	9
10 - 12	5	5 - 7	11
12 - 14	5	7 - 9	13
14 - 16	5	9 - 11	15
16	5	11 - 13	17
18	5	13 - 15	19
20	5	15 - 17	21
22	5	17 - 19	23

MIDLAND Engineering Services

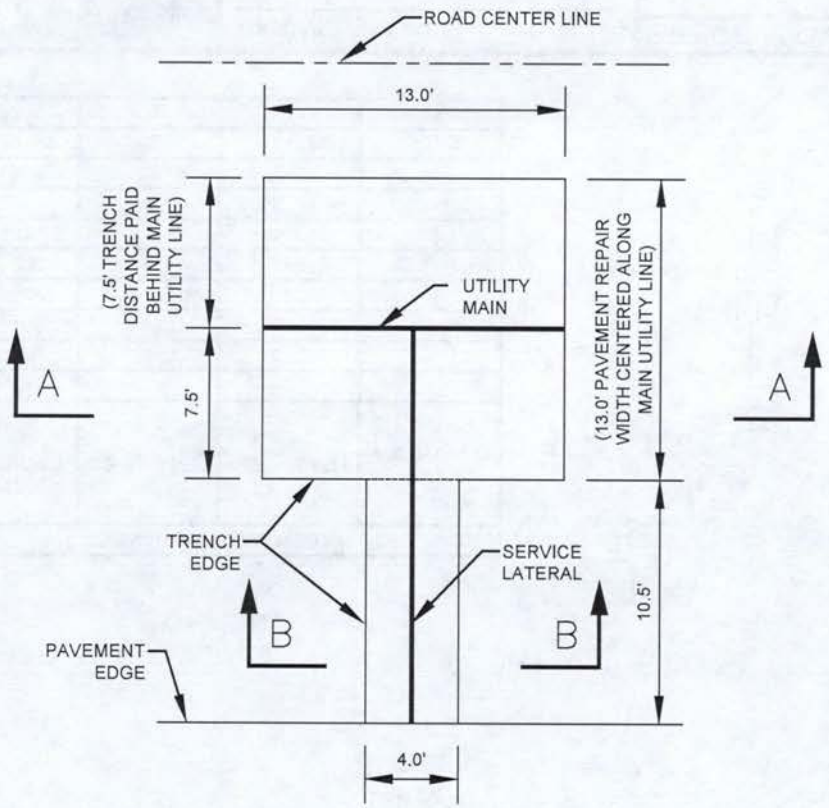
DRAWN: DPM
CHECKED: JCF
APPROVED: MCC

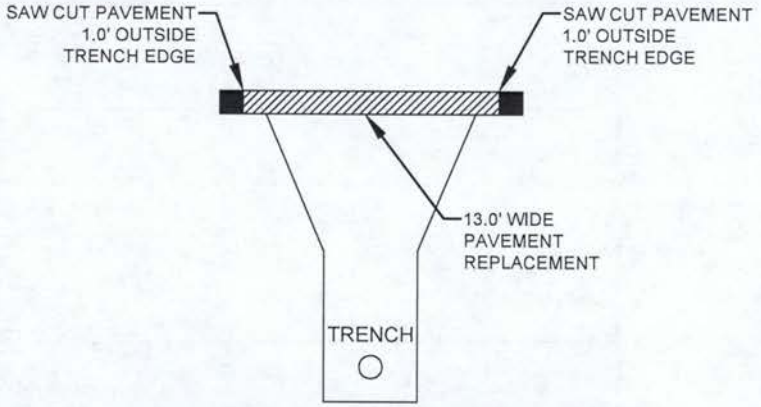
EFFECTIVE DATE:

TRENCH DEPTH, WIDTH, & EXAMPLE CALCULATIONS

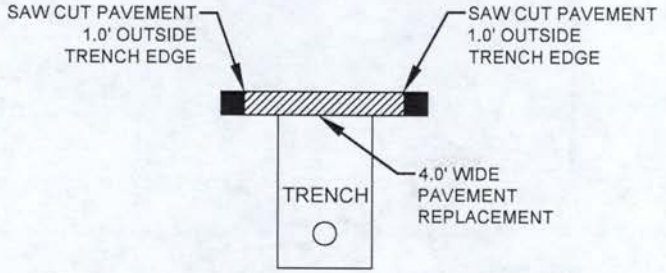
DETAIL:

PART(A)





SECTION 'A-A'



SECTION 'B-B'

EXAMPLE CALCULATION: 14.0' DEEP TAP, 18.0' LONG, UNDER ASPHALT PAVED ROAD.

PAYMENT WIDTH FOR 14.0' DEEP TAP IS 13.0' AND PAVEMENT WIDTH FOR 5.0' DEEP TRENCH IS 4.0'.

PAVEMENT REPLACEMENT QUANTITY IS:

(10.5' X 4.0') + (13.0' X 13.0') = 211.0 SF = 23.4 SY

CONTRACTOR WILL BE PAID FOR 23.5 SY OF PAVEMENT REPLACEMENT ON THIS TAP.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE:	DETAIL:
		TRENCH DEPTH, WIDTH, & EXAMPLE CALCULATIONS	PART(B)

MIDLAND
Engineering Services

ADDENDUM #01

Project Number U22-01

TO ALL BIDDERS ON THE SUBJECT BID: Utility Extension Program 05

ADDENDUM #01

DATE: September 30, 2022

1. Q/A and Clarification
2. Revised Pay Notes
3. UEP05 – Bryant Street North Water Main Improvements
4. Non-Mandatory Pre-Bid Meeting Agenda
5. Non-Mandatory Pre-Bid Meeting Attendance

PLEASE RETURN THIS ADDENDUM WITH YOUR BID BY THE CLOSING DATE.

All other terms and conditions shall remain the same.

Entrench, Inc
Company Name

Bidder Authorized Signature

10/04/2022
Date

Alberto Caballero
Please Print Above Name

575-492-1914
Phone

Utility Extension Program 05
Project Number U22-01

Q/A and Clarification

During the Pre-Bid Meeting, the following questions were raised by one or more bidders. Below is a list of the questions along with the answers and clarifications.

Clarification: All addendum acknowledgement forms must be included with the bid for the bid to be considered complete. Bidders have sole responsibility for making sure they have and acknowledge all addendums provided for this project bid.

Clarification: The Pay Notes section of the Bid Packet has been revised.

The original Pay Notes W11, W12, W13, W17, W18, W19, WW10, and WW11 were revised to clarify that they include backfill except for flowable fill backfill.

Remove the original Pay Notes section in its entirety and replace it with the revised Pay Notes section attached to this Addendum 01.

Clarification: The design drawings for UEP05 – Bryant Street North Water Main Improvements are being added to the Bid Packet and are attached to this Addendum 01. This project, along with the New Jersey Avenue water improvement and Reyes-Mashburn-Nelms Park wastewater improvement projects that were already included in the Bid Packet, all represent actual projects that the Contractor will be expected to perform as part of this Utility Extension Program 05.

Clarification: Note that projects assigned to the Utility Extension Program 05 are not chosen at random, but rather are a direct response to issues that the City needs to resolve in its utility systems and services. Issues of this type may include, but are not limited to, replacing old infrastructure that is past its life expectancy, replacing infrastructure that has a history of repeating failures or breaks, looping parts of the existing water system that previously ended in dead-ends to improve water pressure and circulation, small project improvements that lay the groundwork for much larger follow-up projects, etc.

Clarification: If an emergency occurs that the City feels it needs help with, it will likely first request help from Contractors who are already under contract with the City as that is the easiest option for City Staff to justify. However, if the Contractor who is awarded this program cannot perform or is not willing to perform the emergency work requested by the City there is no obligation for them to do so, nor will this decision have any bearing on the operation or execution of this program. Emergency projects of this nature will not be paid for from the Utility Extension Program 05 funds, so the original program funds will still be used only for Utility Extension Program 05 projects regardless of whether or not the Contractor also chooses to assist with any emergency projects.

Clarification: Contractor must be willing to sign contract as is.

Clarification: Check that all insurance forms are in order when submitting bids.

Clarification: Check that all conflict of interest forms are completed if applicable.

Clarification: Contractor must fill out all bid items in the Proposal for the bid to be considered complete.

The quantities listed in the Proposal are representative of the type of work that has occurred in past versions of this program in order to establish the bid item unit prices, but the quantities are not based on known future projects for this program as the nature of this program does not make that possible. This program is intended to be flexible enough to be used for whatever the City of Midland's highest priority task is at the time that falls within the program's scope. In the past some years of the program were dedicated more heavily to water improvements, while other years have seen more wastewater improvements.

Clarification: Bidders are required to have a performance bond for the full contract amount.

Clarification: Contractor must include 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 an active 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 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 immediately and the City of Midland will have sole discretion to either allow the Contractor to renew their active licenses before resuming work or to end the project immediately. If the Contractor is allowed to renew the required licenses then the City of Midland will have sole discretion on whether or not to grant a stay of contract time while the required licenses are renewed or to hold the Contractor to the original contract time. There will be no additional payments for traffic controls, erosion controls, site safety measures, material storage, equipment storage, mobilization or remobilization, or similar items during any pause in construction if it is a result of the Contractor's failure to maintain the required licenses for this project.

Clarification: Contractor is responsible for all construction staking.

Clarification: Traffic control in arterials will be the responsibility of the City of Midland, and the Contractor will be required to coordinate with the barricade company under contract with the City of Midland in such cases. Contractor is responsible for all other traffic control during this program. For all traffic control, arterial or otherwise, the Contractor is required to coordinate with the City's Construction Manager.

Clarification: Contractor is responsible for notifying all adjacent properties of any planned service interruptions no less than two (2) business days in advance of any such interruptions.

Service interruptions are to be kept as short as is reasonably possible. This requirement does not apply in emergency situations.

Clarification: Contractor is responsible for maintaining access to all adjacent properties at all times, barring those times when actual construction activity necessary to complete the work is taking place in front of driveway approaches or similar points of access. Contractor is responsible for notifying all adjacent properties of any planned access interruptions no less than two (2) business days in advance of any such interruptions. When such work is not occurring then access must be restored by means of traffic rated steel plates or other equivalent means until such time as the work is completed.

Clarification: Utility covers matching City Details are now available. All utility covers and cover patterns are to match the City standard details.

Clarification: Contractor is to return all existing fire hydrants removed during this project to the City of Midland Utilities. Fire hydrant removal is considered subsidiary to the bid items listed in the Proposal.

Clarification: Contractor is to return all existing water meters removed during this project to the City of Midland Utilities. Water meter removal is considered subsidiary to the bid items listed in the Proposal.

Clarification: Contractor is responsible for all material protection and storage, and any material delivered that becomes weathered or damaged prior to installation must be replaced with new material prior to installation at the Contractor's sole expense as per the Bid Packet's Special Provisions, 4. Payment.

Clarification: Saw-cutting is considered subsidiary to the bid items listed in the Proposal.

Clarification: Contractor is required to provide Closed Circuit Televising of all wastewater mains installed, but this requirement does not apply to wastewater laterals.

Clarification: Contractor is required to have at least one construction crew dedicated to this program at all times. Contractor may also assign more than one crew to this program if they wish to do so.

Clarification: All invoice submittals are to be itemized and are to match the approved Work Orders and Proposal line items listed.

Clarification: Additional Labor, Downtown Area, Water Improvements and Additional Labor, Downtown Area, Wastewater Improvements are covered by Miscellaneous Bid Items 11 and 12 in the Proposal and by Pay Notes M7 and M8.

Clarification: Material Mark-up, Labor Mark-up, and Equipment Rental Mark-up are covered by Miscellaneous Bid Items 13, 14, and 15 in the Proposal and by Pay Notes M9, M10, and M11.

Clarification: The detail drawings attached to the Bid Packet will be the details used throughout the entire duration of the Utility Extension Program 05. If the City's standard detail drawings change between the date this program is awarded and the date this program ends, the program will still only be held to the standards of the attached detail drawings and will not be held to the new City detail drawing standards.

Clarification: For the purpose of this bid all Bidders are to assume hydrovac operations will be performed by the Contractor and will be considered subsidiary to the program scope and not paid for as an additional bid item.

Clarification: The scope of this program is as described in the Bid Packet and the Pre-Bid Meeting Agenda, and includes both utility projects than may extend for several blocks or smaller utility projects that may only replace a single valve or manhole. It is the expectation of the City that the larger utility projects extending for one or more blocks will make up the bulk of the work assigned under this program, but Bidders are reminded that smaller utility project tasks also fall within the scope of this program.

Clarification: It is recommended that Bidders use the USPS mailing address rather than the physical City Hall address for bid submittals that are mailed in as the physical address has experienced issues on occasion in the past. The USPS mailing address is unchanged from what is listed in the original bid packet and the pre-bid teleconference meeting agenda.

Clarification: Bidders have sole responsibility for making sure that their bid submittals are received by the City of Midland before the deadline stated in the Bid Packet. Bidders should be aware that just because a mail carrier says a submittal was delivered does not mean that the City actually received it. Bidders choosing to mail their submittals should do so early enough to ensure that the City will receive the submittal before the deadline stated in the Bid Packet. It is recommended that bidders who mail their submittals in do so by certified mail.

Question: Can we get a clarification on what is meant by a 100% complete Work Order and how that will be paid out? Does 100% mean the entire project? Will there be periodic bills, such as monthly or weekly?

Answer: For the purposes of this bid all Bidders are to assume that there are two ways that Work Orders can be completed and invoiced. The City has no preferences one way or the other for either option, but it is assumed that the first option listed below will probably be the preferred option for the Contractor in most cases.

The first way that Work Orders may be completed and invoiced under this program would be to split them into two work orders for each project assigned under this program. The first Work Order would cover items listed in Special Provisions, 4. Payment that are to be paid upon material delivery. Once delivery of these materials for a specific project was completed, the first Work Order for those materials would be completed as per the Bid Packet's Special Provisions, 8. Completion Of Work, and then the invoice matching that work order could be approved. The second Work Order would then cover everything else related to the project in question. This

second Work Order would only completed and approved for invoicing after the project's work was 100% complete, including all pavement patching, site cleanup, etc.

The second way that Work Orders may be completed and invoiced under this program would be to wait until all work for the entire project in question was 100% complete, and then create and approve a single Work Order for everything after that which would then be handled with a single invoice.

Historically the City has looked for opportunities to work with Contractors on past programs of this nature when dealing with payments for larger utility projects like the UEP05 – Bryant Street North Water Main Improvements project that is attached to this Addendum 01. In such cases there have been times when it made sense to break the projects up into phases, both for construction and payment. However, the City cannot guarantee that this will be the case for the Utility Extension Program 05, and thus Bidders should not count on this occurring when bidding on this program.

Unless otherwise stated in this answer, all aspects of Work Order completion and payments will be as described in the Bid Packet's Special Provisions, 4. Payment and 8. Completion of Work.

Question: With all the difficulties in getting supplies right now, we wouldn't be able to start a job until all material for that job has been delivered. Suppliers won't honor prices for any length of time, which makes it problematic if a part won't arrive for 4-6 weeks.

Answer: The City of Midland understands this, and the difficulties the current material supply and market costs are putting on everyone. The City would not expect work to start on any projects issued under this program until the Contractor had secured all the material necessary to complete the project in question, and the City definitely doesn't want a Contractor to start a project and then be unable to finish halfway through because they couldn't get the rest of the material necessary to finish the work. This is one of the reasons the City of Midland has agreed to pay for material upon delivery for those bid items listed under the Special Provisions, 4. Payment section of the Bid Packet, and the City fully expects that bids on this program will take into account the current circumstances with material supply and costs.

Question: Who will the City's inspector bid for this program?

Answer: Clint Harmon will be the City of Midland's primary inspector for this program.

Question: Is the bond which we currently hold to do small city work like water & sewer taps & emergency repairs enough for the UEP? Will this be something that is discussed with the contractor after it is awarded?

Answer: Bidders are required to have a performance bond for the full contract amount. This is required as part of the bid submittal, and thus must be in place before the bid submittal is made.

Question: Also when it comes to proper backfilling where spoils have to be carried out and fine red dirt has to be hauled in for backfill, will this be an acceptable material to charge on the invoice after work is performed and completed for that project?

Answer: Except when flowable fill backfill is called for, any backfill material used for this program must be select fill material as indicated in the Bid Packet's detail drawings and as described in the Bid packet's Specifications. The City no longer allows the reuse of on-site native or existing material for backfill material on new projects, so a Contractor will always be expected to remove and dispose of any such material and replace it with new backfill material. Bidders should note that pipe embedment material is not the same as backfill material, and utilizes a different material that is indicated in the Bid Packet's detail drawings. New backfill material is already covered in the Bid Packet's Proposal bid items and is described in its Pay Notes W11, W12, W13, W17, W18, W19, W20, WW10, WW11, and WW12. Existing and native material removal and disposal is considered subsidiary to the bid items listed in the Proposal.

PAY NOTES

Utility Extension Program 05

Bid Item		Pay Quantity Note
Miscellaneous Items		
1	20" Steel Pipe Casing (1/4" Wall Thickness)	M1
2	16" Steel Pipe Casing (1/4" Wall Thickness)	M1
3	12" Steel Pipe Casing (1/4" Wall Thickness)	M1
4	16" PVC Pipe Casing, SDR 26 ASTM D2241	M1
5	12" PVC Pipe Casing, SDR 26 ASTM D2241	M1
6	Cement Stabilized Bedding (2.5-Sack)	M2
7	Erosion/Sediment Control	M3
8	Traffic Control for Collector/Local Road Conditions	M4
9	Traffic Control for Alley/Easement Conditions	M5
10	Job Site Safety	M6
11	Additional Labor, Downtown Area, Water Improvements	M7
12	Additional Labor, Downtown Area, Wastewater Improvements	M8
13	Material Mark-up	M9
14	Labor Mark-up (Regular Work Hours)	M10
15	Equipment Rental Mark-up (Non-Standard Equipment Only)	M11
Demolition Items		
1	Removal & Disposal of Existing Utility Mains	D1
2	Flowable Fill for Existing Pipes Abandoned In Place	D2
3	Removal & Disposal of Existing 60" Manhole (0'-5' Deep)	D3
4	Removal & Disposal of Existing 48" Manhole (0'-5' Deep)	D3
5	Removal & Disposal of Existing 60" Manhole Additional Depth (> 5' Deep)	D4
6	Removal & Disposal of Existing 40" Manhole Additional Depth (> 5' Deep)	D4

Water Items

1	16" Ductile Iron Pipe Pressure Class 150, Water Main	W1
2	12" Ductile Iron Pipe Pressure Class 150, Water Main	W1
3	10" Ductile Iron Pipe Pressure Class 150, Water Main	W1
4	8" Ductile Iron Pipe Pressure Class 150, Water Main	W1
5	6" Ductile Iron Pipe Pressure Class 150, Water Main	W1
6	16" AWWA C-900 DR18, PVC, Water Main	W1
7	12" AWWA C-900 DR18, PVC, Water Main	W1
8	10" AWWA C-900 DR18, PVC, Water Main	W1
9	8" AWWA C-900 DR18, PVC, Water Main	W1
10	6" AWWA C-900 DR18, PVC, Water Main	W1
11	16" Tapping Sleeve	W2
12	12" Tapping Sleeve	W2
13	10" Tapping Sleeve	W2
14	8" Tapping Sleeve	W2
15	6" Tapping Sleeve	W2
16	16" Gate Valve & Vault (MJxMJ/FL)	W3
17	12" Gate Valve & Box (MJxMJ/FL)	W4
18	10" Gate Valve & Box (MJxMJ/FL)	W4
19	8" Gate Valve & Box (MJxMJ/FL)	W4
20	6" Gate Valve & Box (MJxMJ/FL)	W4
21	Air Relief Valve & Vault (Water Main)	W5
22	Fire Hydrant Assembly (≤ 5' Water Main Bury Depth)	W6
23	Fire Hydrant Riser (> 5' Water Main Bury Depth)	W7
24	Ductile Iron Fittings	W8
25	Dresser Coupling	W9
26	16" Tapping Saddle (2" or 1")	W10
27	12" Tapping Saddle (2" or 1")	W10
28	10" Tapping Saddle (2" or 1")	W10
29	8" Tapping Saddle (2" or 1")	W10
30	6" Tapping Saddle (2" or 1")	W10
31	2" Water Service Connection, Long (> 20')	W11
32	2" Water Service Connection, Short (≤ 20')	W11
33	1" Water Service Connection, Long (> 20')	W11
34	1" Water Service Connection, Short (≤ 20')	W11
35	Flushing Station Installation, Long (> 20')	W12
36	Flushing Station Installation, Short (≤ 20')	W12
37	Sampling Station Installation, Long (> 20')	W13
38	Sampling Station Installation, Short (≤ 20')	W13
39	Water Meter Installation (New Service Lateral)	W14
40	Water Meter & Meter Box Installation (Existing Service Lateral)	W15
41	Replace Water Meter In Existing Vault	W16
42	Stand-Alone Add-On For Gate Valve & Vault Replacement / Installation	W17
43	Stand-Alone Add-On For Gate Valve & Box Replacement / Installation	W18
44	Stand-Alone Add-On For Water Service Connection	W19
45	Open Trenching of Water Main (0' - 5' Deep)	W20
46	Open Trenching of Water Main (5' - 8' Deep)	W20
47	Open Trenching of Water Main (8' - 10' Deep)	W20
48	Open Trenching of Water Main (10' - 12' Deep)	W20

Wastewater Items

1	16" SDR 26 ASTM D2241, PVC, Wastewater Main	WW1
2	12" SDR 26 ASTM D2241, PVC, Wastewater Main	WW1
3	10" SDR 26 ASTM D2241, PVC, Wastewater Main	WW1
4	8" SDR 26 ASTM D2241, PVC, Wastewater Main	WW1
5	6" SDR 26 ASTM D2241, PVC, Wastewater Main	WW1
6	15" SDR 26 ASTM D3034, PVC, Wastewater Main	WW1
7	12" SDR 26 ASTM D3034, PVC, Wastewater Main	WW1
8	10" SDR 26 ASTM D3034, PVC, Wastewater Main	WW1
9	8" SDR 26 ASTM D3034, PVC, Wastewater Main	WW1
10	6" SDR 26 ASTM D3034, PVC, Wastewater Main	WW1
11	15" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	WW1
12	12" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	WW1
13	10" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	WW1
14	8" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	WW1
15	6" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	WW1
16	4" SDR 35 ASTM D3034, PS46, PVC, Wastewater Main	WW1
17	60" Fiberglass Manhole & Cover (0'-5' Deep)	WW2
18	48" Fiberglass Manhole & Cover (0'-5' Deep)	WW2
19	60" Fiberglass Manhole & Watertight Cover (0'-5' Deep)	WW3
20	48" Fiberglass Manhole & Watertight Cover (0'-5' Deep)	WW3
21	60" Fiberglass Manhole Additional Bury Depth (> 5' Deep)	WW4
22	48" Fiberglass Manhole Additional Bury Depth (> 5' Deep)	WW4
23	Connect To Existing Manhole	WW5
24	Manhole Drop Structure (0'-5' Deep, External)	WW6
25	Manhole Drop Structure Additional Bury Depth (> 5' Deep, External)	WW7
26	Manhole Drop Structure (0'-5' Deep, Internal)	WW8
27	Manhole Drop Structure Additional Bury Depth (> 5' Deep, Internal)	WW9
28	6" Wastewater Service Connection, Long (> 20')	WW10
29	6" Wastewater Service Connection, Short (≤ 20')	WW10
30	4" Wastewater Service Connection, Long (> 20')	WW10
31	4" Wastewater Service Connection, Short (≤ 20')	WW10
32	Stand-Alone Add-On For Wastewater Service Connection	WW11
33	Open Trenching of Wastewater Main (0'-5' Deep)	WW12
34	Open Trenching of Wastewater Main (5'-8' Deep)	WW12
35	Open Trenching of Wastewater Main (8'-10' Deep)	WW12
36	Open Trenching of Wastewater Main (10'-12' Deep)	WW12
37	Open Trenching of Wastewater Main (12'-14' Deep)	WW12
38	Open Trenching of Wastewater Main (14'-16' Deep)	WW12
39	Open Trenching of Wastewater Main (16'-18' Deep)	WW12
40	Open Trenching of Wastewater Main (18'-20' Deep)	WW12

Paving Items

1	6" Concrete Pavement Repair	P1
2	4" Concrete Sidewalk Repair	P2
3	2" Asphalt Pavement Repair	P3
4	6" Base Rock Pavement Repair	P4
5	20" Flowable Fill / 2-Sack Backfill	P5

PAY QUANTITY NOTES

M1 Includes the necessary equipment, labor, materials, and incidentals for the installation of Pipe Casing per the construction drawings and City of Midland standards and specifications, including all spacers, grout, embedment, detector wire, tracer tape, and appurtenances. Measurement and payment to be per linear foot measured along the ground surface following the pipe centerline through all valves, fittings, structures, and appurtenances.

M2 Includes the necessary equipment, labor, materials, and incidentals for the installation of Cement Stabilized Bedding Encasement (Portland Cement 2.5 Sack Cement = 235 LBS/CY) per the construction drawings, City of Midland standards and specifications, and Texas Administrative Code Title 30, Ch. 290, Sub-Ch. D Rule§290.44(e)(4)(B)(v), including all embedment, detector wire, tracer tape, and appurtenances. Measurement and payment to be per linear foot measured along the ground surface following the pipe centerline through all valves, fittings, structures, and appurtenances.

M3 Includes the necessary equipment, labor, materials, and incidentals to implement the Erosion Control Plan per the construction drawings and City of Midland standards and specifications. Measurement and payment to be made per each block measured from street intersection to street intersection, or per each street crossing between blocks.

M4 Includes the necessary equipment, labor, materials, and incidentals to implement the Traffic Control for Collector/Local Road Conditions per the approved Traffic Control Plan. Any required traffic control devices are to meet the City of Midland Traffic Division Standards. Measurement and payment to be made per each block measured from street intersection to street intersection, or per each collector/local road crossed.

M5 Includes the necessary equipment, labor, materials, and incidentals to implement the Traffic Control for Alley/Easement Conditions per the approved Traffic Control Plan. Any required traffic control devices are to meet the City of Midland Traffic Division Standards. Measurement and payment to be made per each block measured from street intersection to street intersection, or per each alley/easement crossed.

M6 Includes the necessary equipment, labor, materials, and incidentals to implement Job Site Safety and to provide a safe work environment for the project work area (including all personal protection equipment, trench safety, etc.) per the construction drawings and in compliance with all applicable Federal, State, and Local requirements or regulations including those of OSHA and the City of Midland. JOB SITE SAFETY IS THE RESPONSABILITY OF THE CONTRACTOR. Measurement and payment to be made per each block measured from street intersection to street intersection, or per each street crossing between intersections.

M7 Includes the necessary equipment, labor, materials, and incidentals to complete work for water improvements in the downtown Midland area per the construction drawings and City of Midland standards and specifications. The downtown Midland area is considered to be the area bordered by Kansas Avenue to the north, Lamesa Road to the east, Front Street to the south, and 'A' Street to the west. Measurement and payment to be per linear foot measured along the ground surface following the water pipe centerline through all valves, fittings, structures, and appurtenances. This will be applied solely at the discretion of the Engineer or Records or the City of MIdland designee.

M8 Includes the necessary equipment, labor, materials, and incidentals to complete work for wastewater improvements in the downtown Midland area per the construction drawings and City of Midland standards and specifications. The downtown Midland area is considered to be the area bordered by Kansas Avenue to the north, Lamesa Road to the east, Front Street to the south, and 'A' Street to the west. Measurement and payment to be per linear foot measured along the ground surface following the wastewater pipe centerline through all structures and appurtenances. This will be applied solely at the discretion of the Engineer or Records or the City of MIdland designee.

M9 Includes the Material Mark-up for materials and material sizes (pipe, valve, manhole, etc.) required to complete work for improvements not covered by the bid items listed in the Proposal for this project per the construction drawings and the City of Midland standards and specifications. Measurement and payment to be made per the cost of the material in question plus the set percent increase established by this bid item. The Contractor must provide a copy of the invoice for the material cost from the supplier to the Engineer of Record or the City of Midland designee before this bid item may be claimed for any material. This will be applied solely at the discretion of the Engineer of Record or the City of Midland designee.

M10 Includes the Labor Mark-up (Regular Work Hours) for labor required to complete work for improvements not covered by the bid items listed in the Proposal for this project per the construction drawings and the City of Midland standards and specifications. Measurement and payment to be made per the cost of labor in question plus the set percent increase established by this bid item. The Contractor must provide a typical hourly pay rate for work crews prior to the percent increase along with the number of workers on the crew and the number of hours worked by the crew for the project in question to the Engineer of Record or the City of Midland designee before this bid item may be claimed for any labor. This will be applied solely at the discretion of the Engineer of Record or the City of Midland designee.

M11 Includes the Equipment Rental Mark-up (non-standard equipment only) required to complete work for improvements not covered by the bid items listed in the Proposal for this project per the construction drawings and the City of Midland standards and specifications. Measurement and payment to be made per the cost of the equipment rental in question plus the set percent increase established by this bid item. The Contractor must provide a copy of the invoice for the rented equipment from the equipment supplier to the Engineer of Record or the City of Midland designee before this bid item may be claimed for any rented equipment. This will be applied solely at the discretion of the Engineer of Record or the City of Midland designee.

D1 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Utility Mains per the construction drawings and City of Midland standards and specifications, including the removal and disposal of all pipes, fittings, structures, and appurtenances. All existing fire hydrants and meters removed are to be returned to the City of Midland. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all valves, manholes, fittings, junctions, structures, and appurtenances.

D2 Includes the necessary equipment, labor, materials, and incidentals for the placement of Flowable Fill for Existing Pipes Abandoned In Place (Portland Cement 2-Sack = 188 LBS / CY) per the construction drawings and City of Midland standards and specifications, including all plugging (wastewater) or capping (water) of the pipe to be abandoned, and appurtenances. Measurement and payment to be made per cubic yard volume of flowable fill placed in pipe abandoned in place.

D3 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Manholes to a depth of 5' per the construction drawings and City of Midland standards and specifications, including the removal and disposal of all drop structures, other structures, base, and appurtenances. Measurement and payment to be made per each manhole removed.

D4 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Manholes at depths exceeding 5' per the construction drawings and City of Midland standards and specifications, including the removal and disposal of all drop structures, other structures, and appurtenances. Measurement and payment to be made per vertical foot of existing manhole removed below a depth of 5' measured from the lowest invert at the manhole flowline and rounded up to the nearest 0.5'.

W1 Includes the necessary equipment, labor, materials, and incidentals for the installation of Water Mains per the construction drawings and City of Midland standards and specifications, including all embedment, detector wire, tracer tape, necessary testing, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all valves, fittings, structures, and appurtenances.

W2 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Tapping Sleeve per the construction drawings and City of Midland standards and specifications, including all joint restraints, embedment, thrust blocking, and appurtenances. Valves are addressed in a separate pay note. Measurement and payment to be made per each tapping sleeve installed.

W3 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Gate Valve & Vault per the construction drawings and City of Midland standards and specifications, including all embedment, vault, joint restraint, thrust blocking, concrete collar, and appurtenances. Measurement and payment to be made per each valve and vault installed. Includes valves associated with tapping sleeves. Stand alone valve replacements are addressed in a separate pay note.

W4 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Gate Valve & Box per the construction drawings and City of Midland standards and specifications, including all embedment, valve box, joint restraint, thrust blocking, concrete collar, and appurtenances. Measurement and payment to be made per each valve and box installed. Includes valves associated with tapping sleeves. Stand alone valve replacements are addressed in a separate pay note.

W5 Includes the necessary equipment, labor, materials, and incidentals for the installation of an Air Relief Valve & Vault (Water Force Main) per the construction drawings and City of Midland standards and specifications, including all embedment, wrapping, joint restraint, thrust blocking, backfill, concrete collar, and appurtenances. Measurement and payment to be made per each valve and vault installed.

W6 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Fire Hydrant Assembly to a depth of 5' per the construction drawings and City of Midland standards and specifications, including all risers, embedment, gravel sump, thrust blocking, necessary testing, and appurtenances. Measurement and payment to be made per each fire hydrant assembly installed.

W7 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Fire Hydrant Riser (> 5' Water Main Bury Depth) per the construction drawings and City of Midland standards and specifications, including all embedment and appurtenances. Measurement and payment to be made per vertical foot of riser below a water main bury depth of 5' measured from the water main invert and rounded up to the nearest 0.5'.

W8 Includes the necessary equipment, labor, materials, and incidentals for the installation of Ductile Iron Fittings per the construction drawings and City of Midland standards and specifications, including all embedment, wrapping, thrust blocking, joint restraints, and appurtenances. All fittings are to be C153 ductile iron compact fittings. Fitting weights are established from Tyler Union Quality Waterworks Products Catalog PC-U2014, December, 2014 and payment will be made at the standard compact weight. Nuts, bolds, glands, and other associated accessories are not included as part of the fitting weight and are considered subsidiary to the weight of the fitting. Any additional required fittings not shown on the drawings will be paid for at weights established in the Tyler Union Waterworks Catalog.

W9 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Dresser Coupling per the construction drawings and City of Midland standards and specifications, including all embedment, wrapping, thrust blocking, and appurtenances. Measurement and payment to be made per each dresser coupling / adaptor installed.

W10 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Tapping Saddle for a water service connection per the construction drawings and City of Midland standards and specifications, including all embedment, thrust blocking, and appurtenances. Measurement and payment to be made per each tapping saddle installed.

W11 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Water Service Connection per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, backfill not including flowable fill backfill, polyethylene service line or other pipe, brass goods from the corporation stop to the brass angle valve (inclusive), meter box, and all appurtenances. Measurement to be per linear foot measured along the ground surface following the pipe centerline through all valves, fittings, structures, and appurtenances, and payment to be made per each water service connection installed.

W12 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Flushing Station per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, backfill not including flowable fill backfill, polyethylene service line or other pipe, brass goods between the tapping saddle and flushing station, and all appurtenances. The flushing station will be provided by the City of Midland. Measurement to be per linear foot measured along the ground surface following the pipe centerline through all valves, fittings, structures, and appurtenances, and payment to be made per each flushing station installed.

W13 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Sampling Station per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, backfill not including flowable fill backfill, polyethylene service line or other pipe, brass goods between the tapping saddle and sampling station, and all appurtenances. The sampling station will be provided by the City of Midland. Measurement to be per linear foot measured along the ground surface following the pipe centerline through all valves, fittings, structures, and appurtenances, and payment to be made per each sampling station installed.

W14 Includes the necessary equipment, labor, materials, and incidentals for a new Water Meter Installation as part of a new water service lateral installation per the construction drawings and City of MIdland standards and specifications, including all appurtenances. The new water meter will be provided by the City of Midland. Measurement and payment to be per each water meter set.

W15 Includes the necessary equipment, labor, materials, and incidentals to set a new Water Meter and Meter Box for an existing water service lateral, or to replace an existing water meter and water meter box, per the construction drawings and City of MIdland standards and specifications, including all appurtenances. Return the existing water meter to the City of Midland. The new water meter will be provided by the City of Midland. Measurement and payment to be per each water meter and meter box set.

W16 Includes the necessary equipment, labor, materials, and incidentals to Replace Water Meter in Existing Vault per the construction drawings and City of MIdland standards and specifications, including all appurtenances. Return the existing water meter to the City of Midland. The new water meter will be provided by the City of Midland. Measurement and payment to be per each water meter replaced.

W17 Includes the additional necessary equipment, labor, materials, and incidentals for a Stand-Alone Gate Valve & Vault Replacement / Installation Add-On per the construction drawings and City of Midland standards and specifications, including all saw-cutting, pavement removal, unclassified excavation, removal of fittings, removal of structures, embedment, vault, joint restraint, thrust blocking, backfill not including flowable fill backfill, concrete collar, and appurtenances. Measurement and payment to be made per each valve and vault replaced or installed that is stand-alone and not connected to a larger water improvement project. Includes valves associated with tapping sleeves.

W18 Includes the additional necessary equipment, labor, materials, and incidentals for a Stand-Alone Gate Valve & Box Replacement / Installation Add-On per the construction drawings and City of Midland standards and specifications, including all saw-cutting, pavement removal, unclassified excavation, removal of fittings, removal of structures, embedment, box, joint restraint, thrust blocking, backfill not including flowable fill backfill, concrete collar, and appurtenances. Measurement and payment to be made per each valve and box replaced or installed that is stand-alone and not connected to a larger water improvement project. Includes valves associated with tapping sleeves.

W19 Includes the additional necessary equipment, labor, materials, and incidentals for a Stand-Alone Water Service Connection Add-On per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, backfill not including flowable fill backfill, polyethylene service line or other pipe, brass goods from the corporation stop to the brass angle valve (inclusive), meter box, and all appurtenances. Measurement and payment to be per each water service connection made that is stand-alone and not connected to a larger water improvement project.

W20 Includes the necessary equipment, labor, materials, and incidentals for Open Trenching of Water Main per the construction drawings and City of Midland standards and specifications, including all saw cutting, pavement removal, curb removal, sidewalk or ramp removal, unclassified excavation, backfill not including flowable fill backfill, providing trench safety and protection for workers to install pipe and other infrastructure, structures, and appurtenances. Depth measurement to be measured to the nearest 0.5' from the flowline of the pipe to the existing surface. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all valves, fittings, structures, and appurtenances.

WW1 Includes the necessary equipment, labor, materials, and incidentals for the installation of Wastewater Mains per the construction drawings and City of Midland standards and specifications, including all embedment, detector wire, tracer tape, necessary testing, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all structures and appurtenances.

WW2 Includes the necessary equipment, labor, materials, and incidentals for the installation of Fiberglass Manhole & Cover to a depth of 5' per the construction drawings and City of Midland standards and specifications, to the depth shown on the construction drawings and including all embedment, base, necessary testing, concrete collars, and appurtenances. Measurement and payment to be made per each manhole installed.

WW3 Includes the necessary equipment, labor, materials, and incidentals for the installation of Fiberglass Manhole & Watertight Cover to a depth of 5' per the construction drawings and City of Midland standards and specifications, to the depth shown on the construction drawings and including all embedment, base, necessary testing, concrete collars, and appurtenances. Measurement and payment to be made per each manhole installed.

WW4 Includes the necessary equipment, labor, materials, and incidentals for the installation of Fiberglass Manhole Additional Bury Depth (> 5' pipe invert bury depth) per the construction drawings and City of Midland standards and specifications, including all embedment and appurtenances. Measurement and payment to be made per vertical foot measured from the lowest flowlline invert at the manhole to 5' below the rim elevation.

WW5 Includes the necessary equipment, labor, materials, and incidentals to Connect to Existing Manhole per the construction drawings and City of Midland standards and specifications, including all coring, grouting, sealing, repairs, and appurtenances. Measurement and payment to be made per each connection made.

WW6 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Manhole Drop Structure (External) per the construction drawings and City of Midland standards and specifications, including all coring, repairs, and appurtenances for a vertical adjustment of up to 5'. Additional pipe required for a vertical adjustment of more than 5' will be addressed in a separate pay note. Measurement and payment of drop structures to be made per each drop structure installed.

WW7 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Manhole Drop Structure Additional Bury Depth (> 5' Deep, External) per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment of drop structures to be made per each vertical foot installed below a depth of 5' below the manhole rim elevation.

WW8 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Manhole Drop Structure (Internal) per the construction drawings and City of Midland standards and specifications, including all coring, repairs, and appurtenances for a vertical adjustment of up to 5'. Additional pipe required for a vertical adjustment of more than 5' will be addressed in a separate pay note. Measurement and payment of drop structures to be made per each drop structure installed.

WW9 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Manhole Drop Structure Additional Bury Depth (> 5' Deep, Internal) per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment of drop structures to be made per each vertical foot installed below a depth of 5' below the manhole rim elevation.

WW10 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Wastewater Service Connection to a wastewater main or manhole per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, backfill not including flowable fill backfill, pipe, coring, repairs, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all structures and appurtenances, and payment to be made per each wastewater service connection installed.

WW11 Includes the additional necessary equipment, labor, materials, and incidentals for the installation for a Stand-Alone Wastewater Service Connection Add-On to a wastewater main or manhole per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, backfill not including flowable fill backfill, pipe, coring, repairs, and appurtenances. Measurement and payment to be made per each wastewater service connection made that is stand-alone and not connected to a larger wastewater improvement project.

WW12 Includes the necessary equipment, labor, materials, and incidentals for Open Trenching of Wastewater Main per the construction drawings and City of Midland standards and specifications, including all pavement saw-cutting, pavement removal, curb removal, sidewalk or ramp removal, unclassified excavation, backfill not including flowable fill backfill, providing trench safety and protection for workers to install pipe and other infrastructure, structures, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all structures and appurtenances.

P1 Includes the necessary equipment, labor, materials, and incidentals for Concrete Pavement Repair per the construction drawings and City of Midland standards and specifications, including all forming, placement, jointing, fiber or rebar reinforcement, sealing, finishing, and appurtenances. Curb repair is included with this bid item and pay note. Concrete pavement joints are to typically be 10'x10' joints, and are to be no larger than 15'x15' joints. Concrete pavement joints are to typically be saw-cut or expansion joints, and must all be sealed with TxDOT DMS-6310 SL-2 sealant. Curb joint spacing is to match adjacent concrete pavement joints or be no more than 10'. Curb joints are to be expansion joints between new and existing curb, saw-cut joints everywhere else, and do not have to be sealed. Measurement and payment to be made per square yard measured along the ground surface.

P2 Includes the necessary equipment, labor, materials, and incidentals for Concrete Sidewalk Repair per the construction drawings and City of Midland standards and specifications, including all forming, placement, jointing, fiber reinforcement, finishing, and appurtenances. Concrete pedestrian access ramp repairs are included with this bid item and pay note. Measurement and payment to be made per square yard.

P3 Includes the necessary equipment, labor, materials, and incidentals for Asphalt Pavement Repair per the construction drawings and City of Midland standards and specifications, including all pavement, compaction, prime coat, tack coat, and appurtenances. Asphalt may be Type "D" HMAC Asphalt with PG 70-22, or either Type "B" or "C" HMAC Asphalt with PG 64-22. All asphalt is assumed to be 110 LBS / SY at 1" thick. Prime and tack coats are to be Bituminois Prime Coat (MC-30, 0.20 GAL / SY), and Tack Coat (MC-30, 0.10 GAL / SY). Measurement and payment to be made per square yard measured along the ground surface.

P4 Includes the necessary equipment, labor, materials, and incidentals for Base Rock Pavement Repair including the installation of base rock backfill (City base) per the construction drawings and City of Midland standards and specifications including all pavement, compaction, and appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P5 Includes the necessary equipment, labor, materials, and incidentals for installation of Flowable Fill / 2-Sack Backfill (Portland Cement 2 Sack = 188 LBS/CY) per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

UEP05 - Bryant Street North Water Main Improvements
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CONSTRUCTION NOTES:

i) This design is for the public water improvements at Bryant Street, Humble Avenue,George Avenue, and Eugene Avenue.

ii) All new water mains to maintain a minimum cover of 3.5', and a minimum vertical separation of 2.0' above exisitng wastewater mains.

iii) New water main to be located 8.0' east of existing west back-of-curb for Bryant Street and 8.0' south of existing north back-of-curb for Humble Avenue, George Avenue and Eugene Avenue.

iv) All construction to be in compliance with the Utility Extension Program 05 standards and specifications where applicable. All other standards and requirements to comply with the City of Midland standards and requirements.

v) All water service lateral connections are approxiate in location. Set new meters at same location as existing meters.

vi) All existing water main sections abandoned in place are to be filled with flowable fill and capped at the ends of the abandoned seciton.

vii) If necessary due to the number of existing service connections, existing water mains identified for removal can instead be abandoned in place and the proposed water main shifted 2'-3' as needed per the direction of the City Inspector.

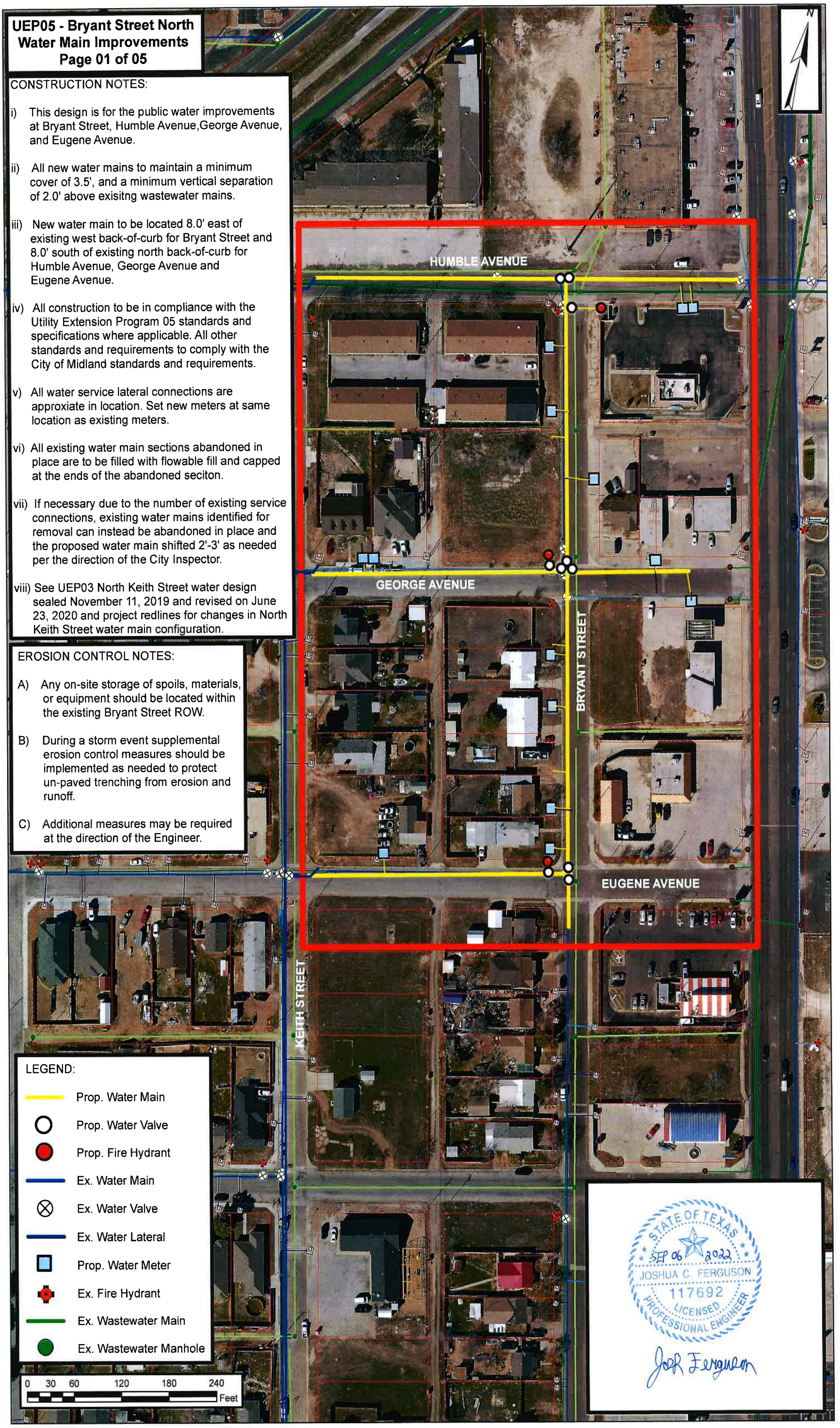
viii) See UEP03 North Keith Street water design sealed November 11, 2019 and revised on June 23, 2020 and project redlines for changes in North Keith Street water main configuration.

EROSION CONTROL NOTES:

A) Any on-site storage of spoils, materials, or equipment should be located within the existing Bryant Street ROW.

B) During a storm event supplemental erosion control measures should be implemented as needed to protect un-paved trenching from erosion and runoff.

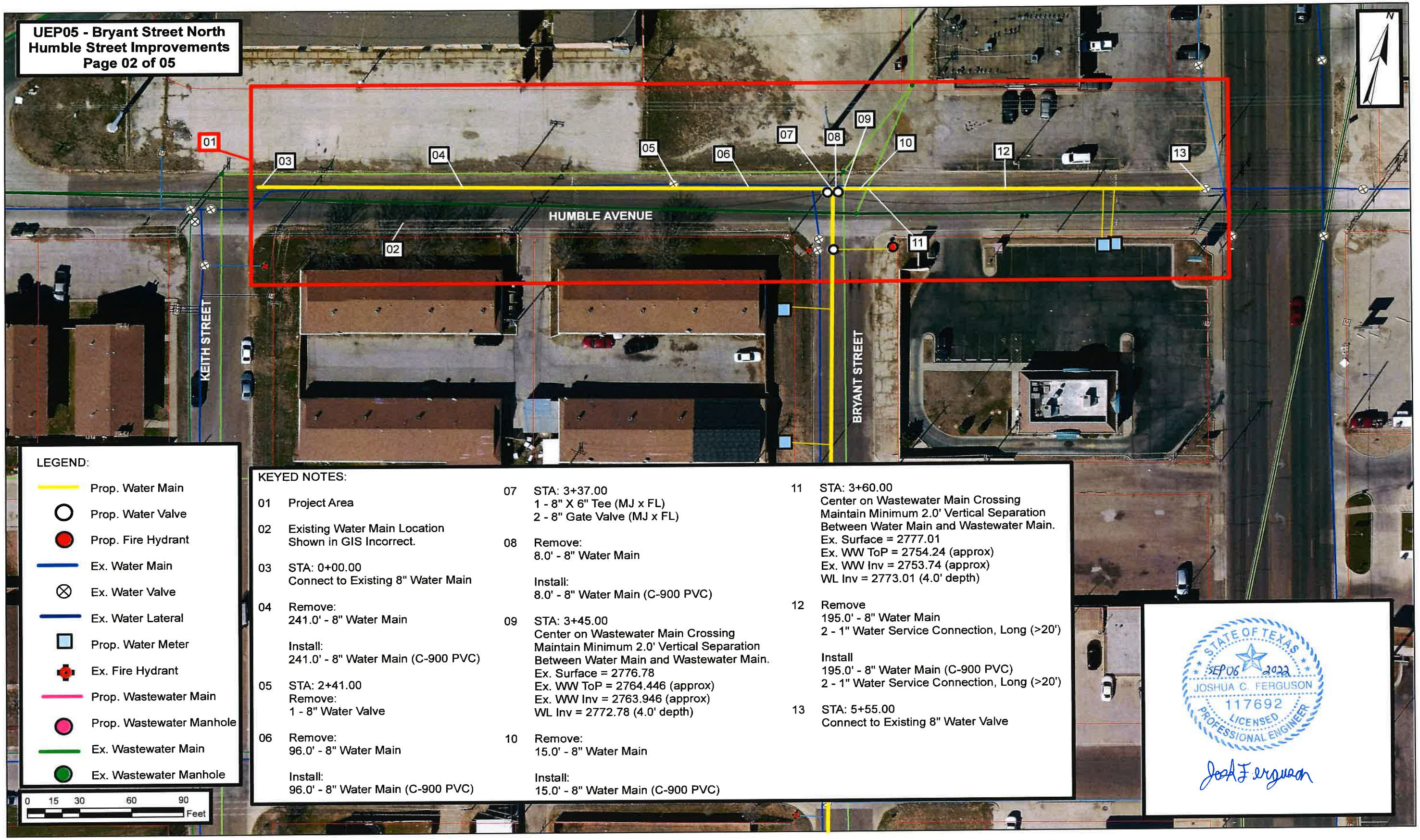
C) Additional measures may be required at the direction of the Engineer.



STATE OF TEXAS
SEP 06 2022
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER

Josh Ferguson

UEP05 - Bryant Street North
Humble Street Improvements
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LEGEND:

- Prop. Water Main
- Prop. Water Valve
- Prop. Fire Hydrant
- Ex. Water Main
- Ex. Water Valve
- Ex. Water Lateral
- Prop. Water Meter
- Ex. Fire Hydrant
- Prop. Wastewater Main
- Prop. Wastewater Manhole
- Ex. Wastewater Main
- Ex. Wastewater Manhole

0 15 30 60 90 Feet

KEYED NOTES:

01 Project Area

02 Existing Water Main Location
Shown in GIS Incorrect.

03 STA: 0+00.00
Connect to Existing 8" Water Main

04 Remove:
241.0' - 8" Water Main

Install:
241.0' - 8" Water Main (C-900 PVC)

05 STA: 2+41.00
Remove:
1 - 8" Water Valve

06 Remove:
96.0' - 8" Water Main

Install:
96.0' - 8" Water Main (C-900 PVC)

07 STA: 3+37.00
1 - 8" X 6" Tee (MJ x FL)
2 - 8" Gate Valve (MJ x FL)

08 Remove:
8.0' - 8" Water Main

Install:
8.0' - 8" Water Main (C-900 PVC)

09 STA: 3+45.00
Center on Wastewater Main Crossing
Maintain Minimum 2.0' Vertical Separation
Between Water Main and Wastewater Main.
Ex. Surface = 2776.78
Ex. WW ToP = 2764.446 (approx)
Ex. WW Inv = 2763.946 (approx)
WL Inv = 2772.78 (4.0' depth)

10 Remove:
15.0' - 8" Water Main

Install:
15.0' - 8" Water Main (C-900 PVC)

11 STA: 3+60.00
Center on Wastewater Main Crossing
Maintain Minimum 2.0' Vertical Separation
Between Water Main and Wastewater Main.
Ex. Surface = 2777.01
Ex. WW ToP = 2754.24 (approx)
Ex. WW Inv = 2753.74 (approx)
WL Inv = 2773.01 (4.0' depth)

12 Remove
195.0' - 8" Water Main
2 - 1" Water Service Connection, Long (>20')

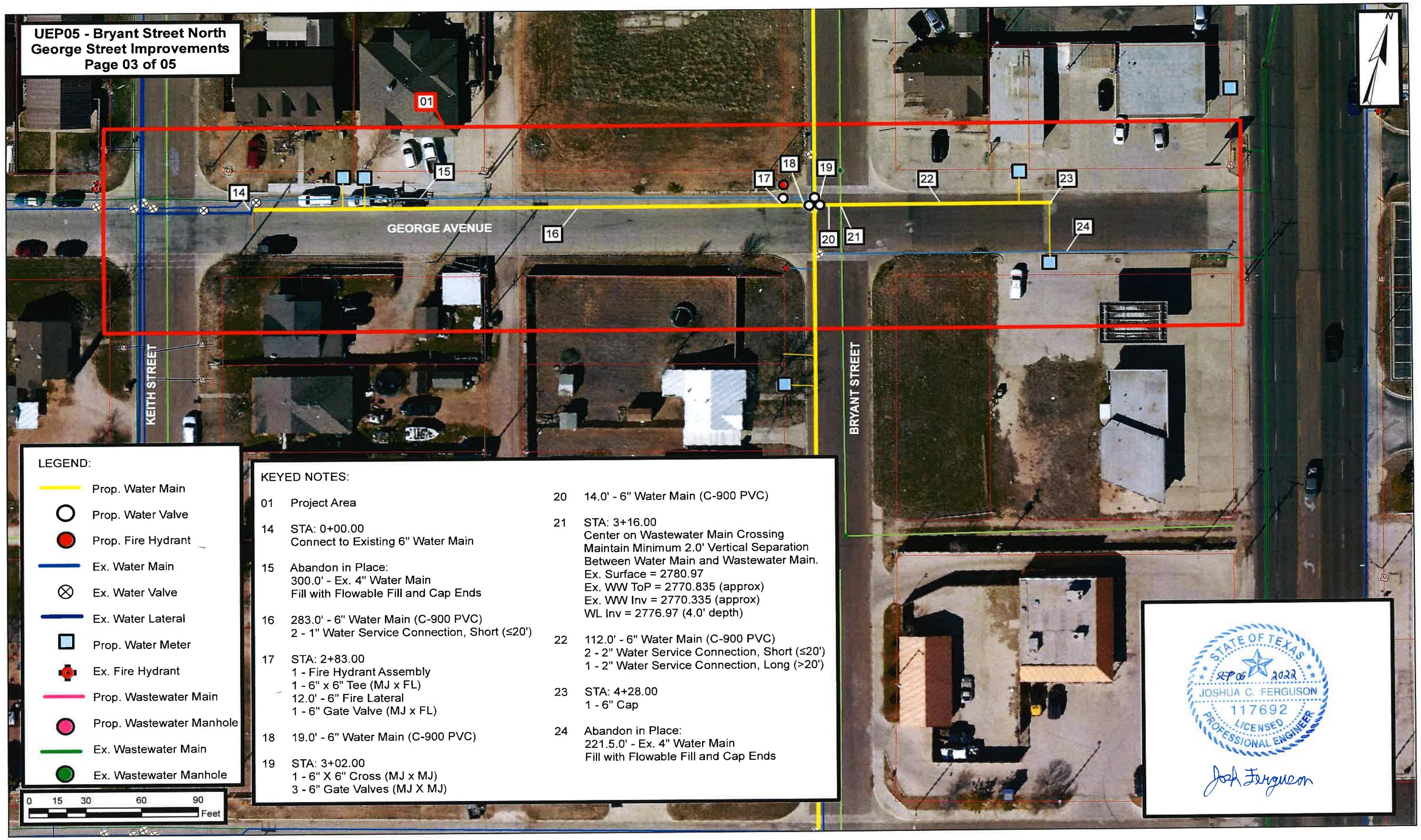
Install
195.0' - 8" Water Main (C-900 PVC)
2 - 1" Water Service Connection, Long (>20')

13 STA: 5+55.00
Connect to Existing 8" Water Valve

STATE OF TEXAS
SEP 06 2022
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER

Josh Ferguson

UEP05 - Bryant Street North George Street Improvements Page 03 of 05



LEGEND:

- Prop. Water Main
- Prop. Water Valve
- Prop. Fire Hydrant
- Ex. Water Main
- Ex. Water Valve
- Ex. Water Lateral
- Prop. Water Meter
- Ex. Fire Hydrant
- Prop. Wastewater Main
- Prop. Wastewater Manhole
- Ex. Wastewater Main
- Ex. Wastewater Manhole

0 15 30 60 90 Feet

KEYED NOTES:

01 Project Area

14 STA: 0+00.00
Connect to Existing 6" Water Main

15 Abandon in Place:
300.0' - Ex. 4" Water Main
Fill with Flowable Fill and Cap Ends

16 283.0' - 6" Water Main (C-900 PVC)
2 - 1" Water Service Connection, Short (≤20')

17 STA: 2+83.00
1 - Fire Hydrant Assembly
1 - 6" x 6" Tee (MJ x FL)
12.0' - 6" Fire Lateral
1 - 6" Gate Valve (MJ x FL)

18 19.0' - 6" Water Main (C-900 PVC)

19 STA: 3+02.00
1 - 6" X 6" Cross (MJ x MJ)
3 - 6" Gate Valves (MJ X MJ)

20 14.0' - 6" Water Main (C-900 PVC)

21 STA: 3+16.00
Center on Wastewater Main Crossing
Maintain Minimum 2.0' Vertical Separation
Between Water Main and Wastewater Main.
Ex. Surface = 2780.97
Ex. WW ToP = 2770.835 (approx)
Ex. WW Inv = 2770.335 (approx)
WL Inv = 2776.97 (4.0' depth)

22 112.0' - 6" Water Main (C-900 PVC)
2 - 2" Water Service Connection, Short (≤20')
1 - 2" Water Service Connection, Long (>20')

23 STA: 4+28.00
1 - 6" Cap

24 Abandon in Place:
221.5.0' - Ex. 4" Water Main
Fill with Flowable Fill and Cap Ends

STATE OF TEXAS
SEP 06 2022
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER

UEP05 - Bryant Street North
Eugene Street Improvements
Page 04 of 05

KEITH STREET

EUGENE AVENUE

BRYANT STREET

01 25 26 27 28 29 30

LEGEND:

- Prop. Water Main
- Prop. Water Valve
- Prop. Fire Hydrant
- Ex. Water Main
- Ex. Water Valve
- Ex. Water Lateral
- Prop. Water Meter
- Ex. Fire Hydrant
- Prop. Wastewater Main
- Prop. Wastewater Manhole
- Ex. Wastewater Main
- Ex. Wastewater Manhole

0 15 30 60 90 Feet

KEYED NOTES:

01 Project Area

25 STA: 0+00.00
Connect to Existing 6" Water Main

26 Abandon in Place:
300.0' - Ex. 6" Water Main
Fill with Flowable Fill and Cap Ends

27 280.5' - 6" Water Main (C-900 PVC)
1 - 1" Water Service Connection, Short (≤20')

28 STA: 2+80.50
1 - Fire Hydrant Assembly
1 - 6" x 6" Tee (MJ x FL)
14.0' - 6" Fire Lateral
1 - 6" Gate Valve (MJ x FL)

29 21.5' - 6" Water Main (C-900 PVC)

30 STA: 3+02.00
1 - 6" X 6" Cross (MJ x MJ)
2 - 6" Gate Valves (MJ X MJ)

STATE OF TEXAS
SEP 06 2022
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER
Josh Ferguson

UEP05 - Bryant Street North
Bryant Street Improvements
Page 05 of 05

KEYED NOTES:

01 Project Area

31 Abandoned in Place:
333.5' - Ex. 4" Water Main
Fill with Flowable Fill and Cap Ends

32 STA: 0+00.00
See Keyed Note 07, Page 02

33 15.0' - 6" Water Main (C-900 PVC)

34 STA: 0+15.00
Center on Wastewater Main Crossing
Maintain Minimum 2.0' Vertical Separation
Between Water Main and Wastewater Main.
Ex. Surface = 2776.78
Ex. WW ToP = 2764.446 (approx)
Ex. WW Inv = 2763.946 (approx)
WL Inv = 2772.78 (4.0' depth)

35 26.0' - 6" Water Main (C-900 PVC)

36 STA: 0+41.00
1 - Fire Hydrant Assembly
1 - 6" x 6" Tee (MJ x FL)
44.0' - 6" Fire Lateral
1 - 6" Gate Valve (MJ x FL)

37 311.0' - 6" Water Main (C-900 PVC)
3 - 1" Water Service Connection, Long (>20)
1 - 1" Water Service Connection, Short (≤20)

38 STA: 3+52.00
See Keyed Note 19, Page 03.

39 STA: 3+77.00
Remove:
1 - 4" Gate Valve
1 - 6" x 4" Tee

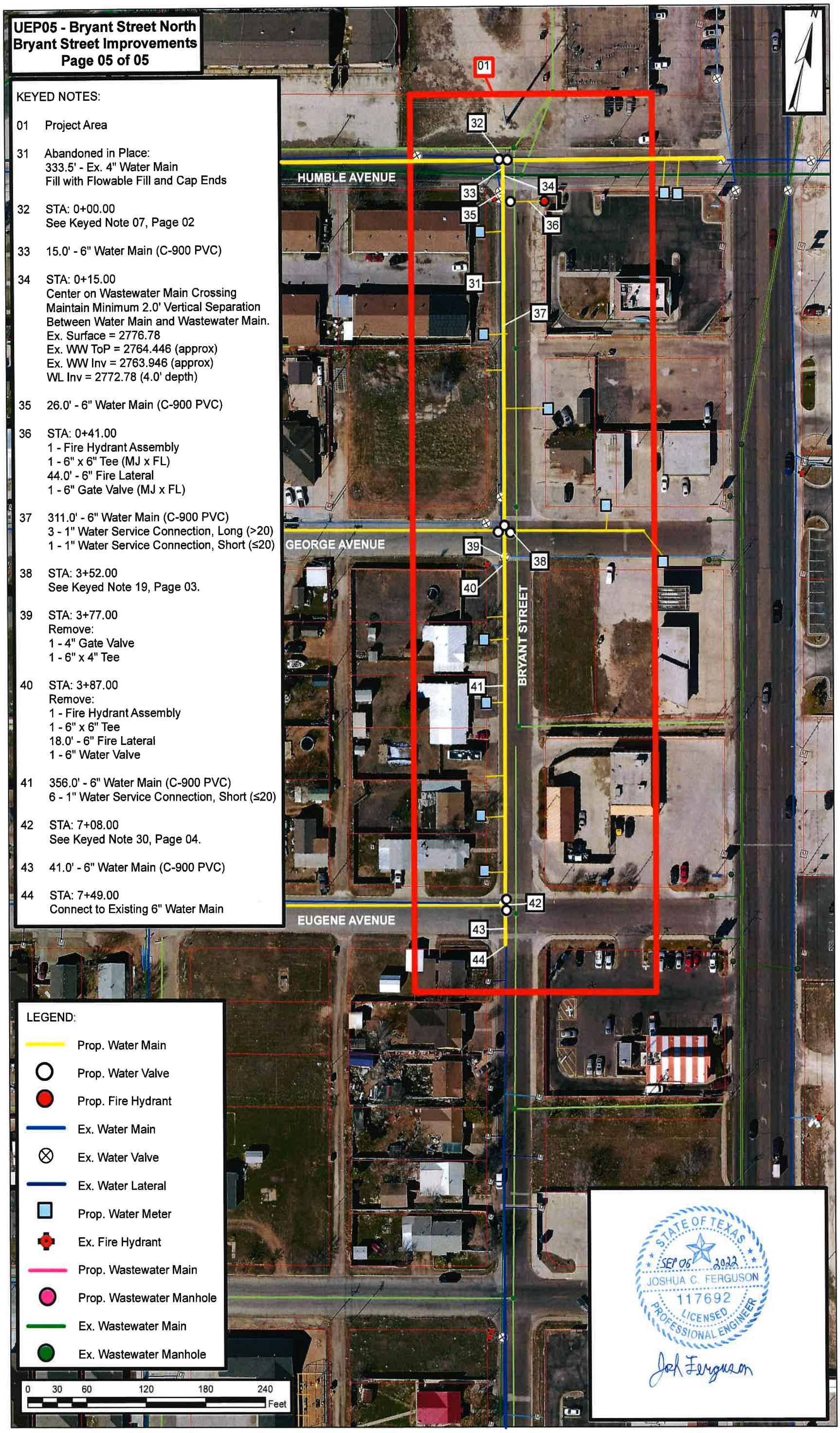
40 STA: 3+87.00
Remove:
1 - Fire Hydrant Assembly
1 - 6" x 6" Tee
18.0' - 6" Fire Lateral
1 - 6" Water Valve

41 356.0' - 6" Water Main (C-900 PVC)
6 - 1" Water Service Connection, Short (≤20)

42 STA: 7+08.00
See Keyed Note 30, Page 04.

43 41.0' - 6" Water Main (C-900 PVC)

44 STA: 7+49.00
Connect to Existing 6" Water Main



Utility Extension Program 05
Non-Mandatory Pre-Bid Meeting Agenda
Project No. U22-01
September 28, 2022

Discussion Items

1. Sign-In Sheet

2. Personnel Overview
   - Jose Ortiz – Director Engineering Services
   - Gabe McClelland – Senior Engineering Manager
   - Josh Ferguson – Assistant City Engineer – project engineer
   - Bobby Wojciechowski – Capital Improvement Project manager
   - Carl Craigo – Utilities Director
   - Rex Swearinger – Water & Wastewater Operations Superintendent, utility coordination
   - Taha Sakrani – Associate Traffic Engineer
   - Troy Clabaugh – Traffic Operations Superintendent
   - Jesse Trejo – Construction Manager, construction management & inspections
   - Madison Brasuell – Project Manager
   - Andy Navarro – Franchise Utility Coordinator
   - Michael Williams – Stormwater Manager
   - Natalie Burgard – Administrative Assistant, document processing & payments
   - Erika Martinez – Purchasing Manager, conduct bid process & bid opening

3. Program Overview and Scope
   - This program will include the installation, replacement, repair, relocation, and removal of water improvements, wastewater improvements, and other assorted utility structures and appurtenances as well as all equipment, labor, materials, etc. necessary to complete the work outlined in the Bid Packet, Construction Drawings, and Specifications, and to satisfactorily complete the work.
   - In general, this program is intended to replace or extend water and wastewater improvements throughout Midland, Texas.

4. Bid Process
   - Pre-Bid meeting attendance is non-mandatory to bid on this project.
   - ATTENTION: All questions submitted before or after the Non-Mandatory Pre-Bid Meeting must be submitted via email to the following email address:

     jferguson@midlandtexas.gov

   - Purpose of bids is to establish unit prices.
   - The amount to be awarded for the Utility Extension Program 04 is set at an amount not to exceed &2.5-million.
   - Quantities listed in the Proposal are not indicative of or guarantees of the actual project work quantities that may be assigned under this program.
   - Addendum distributed by email the Friday afternoon following the Pre-Bid Meeting.
     - The deadline to ask or send questions for the addendum is this Friday, September 30, 2022 at Noon.

- Questions asked after the Noon deadline will be directed to the information already provided in the bid documents or included in the Addendum.

- ATTENTION: Bidders are to submit bids either by mail or in person. If bidders choose to mail their bid packets in, then they are to mail the bid packet to one of the addresses listed below:

  USPS Mailing Address:
  City of Midland, Texas
  Attn: City Secretary's Office
  P.O. Box 1152
  Midland, TX 79702

  – OR –

  Physical Address for mail carriers other than USPS:
  City of Midland, Texas
  Attn: City Secretary's Office
  300 North Loraine St., Suite 330
  Midland, TX 79701

  If bid packets are delivered in person then bidders must drop the bid packets off at the first-floor front desk of City Hall before the bid opening deadline.

- **Bid Opening is Wednesday, October 5, 2022 at 2:00 PM** in the City Hall Council Chamber located on the 1st Floor of Midland's City Hall.
  - The Bid Opening will be open to the public, and bidders are free to attend in person.
  - No late bids will be accepted.
  - Bidders must be willing to sign the contract as is.
  - Bidders must complete the conflict of interest forms if applicable.
  - Bidders must fill out all bid items in the Proposal. If bid items are left blank then the bid will be considered non-responsive.
  - Bidders have sole responsibility for making sure they have and acknowledge all addendums provided. If all acknowledgement forms are not included with the bid packet submittal then the bid will be considered non-responsive.
  - Bidders must provide proof that they possess active licenses equal to or a higher class than a Water Operator D license and either a Wastewater D license or a Class 1 Collections license as outlined in the last paragraph of the Special Provisions section of the bid packet.

5. Notice to Proceed
   - Date of Notice to Proceed to be determined at the Pre-Construction Meeting.
   - Pre-Construction Meeting date will be set after the program bid is awarded.

6. Payment
   - Payment will be as described in the Bid Packet's Special Provisions, 4. Payment.
   - Payment to be made for material delivered only for bid items specifically indicated in Special Provisions, 4. Payment. All other payments to be made after 100% work completion, with no other material delivery payments, partial payments, or payments for mobilization.
   - Work is considered 100% complete when the project Work Order is completed and signed by both the City Inspector and the Contractor.
     - When a project has items paid upon material delivery, there are to be two Work Orders. The first Work Order will include all items to be paid upon material delivery, and the second will include all other items applicable to the project in question.
   - Work Orders and invoices are to be itemized and match the bid items listed in the bid packet Proposal.
   - Recommended that invoices state "Invoice Due Upon Receipt", or have a due date that is two (2) weeks after the date the invoice is submitted.

7. Program Schedule
    - City Inspector must be notified of all work occurring and be able to perform inspections on any construction or installation that occurs.
    - Typically work times are Monday – Friday from 8:00 AM – 5:00 PM. No work earlier than 7:00 AM or later than 8:00 PM without City permission unless for emergency conditions.
    - Work is not to occur on Sundays or legal holidays unless required for emergency situations.
    - Work is not to occur on Saturdays unless requested by Contractor in writing at least 48-hours in advance and approved by the City Engineer.

8. Program Specifics
    - Comply with all OSHA and other applicable safety requirements and regulations at all times. The City reserves the right to require additional safety measures if it deems them necessary to ensure the safety of the work crews and/or public.
    - Open Trench Depth bid items.
    - Additional Labor, Downtown Area line items.
    - Material/Labor/Equipment Rental Mark-up line items.
    - Design and Detail drawings.
    - Erosion Control – Will be emphasized. Contractor is responsible for all Erosion Control for this program.
        - Contractor is required to place erosion control BMPs as needed and to regularly maintain any BMPs placed. Project site is to be kept reasonably clean, and any piles or spoils, backfill material, etc. are to include sand bag BMPs or similar temporary erosion protection emplacements at all times.
    - Traffic Control – Traffic control for work performed in arterial streets under this program will be City of Midland's responsibility. Contractor is responsible for all other Traffic Control for this program. If at any time traffic control in arterial Right-of-Way is to be handled by the Contractor rather than by the City, then the Contractor is to adhere to all requirements outlined in Special Provisions, 7. Traffic Control of the program's bid packet.
        - Contractor is responsible for coordinating with the City on all projects, as well as with the City's barricade company on arterial roadway projects.
        - Contractor is responsible for coordinating with TxDOT if needed.
        - Contractor is responsible for maintaining access to all adjacent properties during this program.
            - Contractor is responsible for notifying affected property owners at least two (2) business days in advance of any planned access interruptions.
            - Contractor is directed to use steel plates or other means to enable access to adjacent properties when work is not actively occurring at an otherwise blocked point of access so long as this does not conflict with the approved traffic control plan.
        - Contractor is responsible for coordinating with City Transportation to have any traffic control signs removed or relocated as needed by the City.
    - Contractor is responsible for maintaining service to adjacent lots during this program.
        - Contractor must notify affected properties at least two (2) business days prior to any planned service interruption.
    - Material stored on the project site must be properly stored and protected from damage and weathering.
    - Construction staking is solely the responsibility of the Contractor.
    - Construction testing is solely the responsibility of the Contractor.
    - Personnel
    - Weekly Progress Meetings – Mandatory attendance.
    - Program Duration & Renewals
    - There is no warranty period on this program as all work is to be subject to City inspection prior to acceptance. All underground installations must be inspected by the City Inspector before backfilling occurs.
    - Example Projects & Work Orders

9. Additional Information, Clarifications, and Corrections
    - Bidders must provide documentation as part of the bid packet submittal proving that they possess both an active license equal to or a higher class than a Water Operator D license and an active license equal to or a higher class than either a Wastewater D license or Class 1 Collections license and the Contractor must maintain both of these

active licenses for the entirety of the program. Bids without this proof of active licensure will be deemed non-responsive and will not be accepted.

- Bidders are directed to bid the item quantities listed in the Bid Packet's Proposal.
- Contractor is remined that this project is located in an urban environment. Structures, trees, and overhead lines are common, and contractor is to provide proper equipment to complete all work required for this project in an urban environment.

10. Any Additional Questions

Please direct all questions or comments following the Pre-Bid Meeting to Josh Ferguson with the City of Midland.

Engineering Services

Josh Ferguson
Phone: (432) 685-7290
Email: jferguson@midlandtexas.gov

Madison Brasuell
Phone: (432) 685-7289
Email: mbrasuell@midlandtexas.gov

Non-Mandatory Pre-Bid Meeting Attendance

U22-01

Utility Extension Program 05

Date: 09-28-2022 - 3:00 PM

PACKET ☑	Name *(Please Print)*	Company Name *(Please Print)*	Phone Number	Fax Number	Email
✓	Josh Ferguson	City of Midland	(432) 685-7290		jferguson@midlandtexas.gov
	Chris Adams	Boler			
	Kylee McClendon	Boler	[illegible]		Kylee@boler.net
	Greg Boler	Boler			
	David Chandler	Red Deer	432-466-9122		david@reddeerconstructiontx.com
	Trey Chandler	Red Deer	432-556-9768		trey@reddeerconstructiontx.com
	Saul Natera	Natera excavation	432 634-2582		NaTera excavation@gmail.com
	Everardo Rodriguez	ENTRENCH INC.	9154729715		ever@entrenchinc.com
	Michael Workman	Scott Thane Ditching	830-491-8902		
	David Walcrot	Scott Thane Ditching	(432)352-5159		David@Sthaneinc.com
	Saul Natera Jr	Natera Excavation LLC	(432)634-2582		Natera excavation@gmail.com
	JESSE TREJO	COM	432-685-7905		JTREJO@MIDLANDTEXAS.GOV ✓
	Madison Braswell	COM	432-685-7289		mbraswell@midlantexas.gov
	Nora Lopez	COM	432-685-7901		nlopez@midlandtexas.gov
	Taha Sakrani	COM	432-685-7511		tsakrani@midlandtexas.gov

11.359

October 25, 2022

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Be it known that

ADALBERTO CABALLERO

has fulfilled the requirements in accordance with the laws of the State of Texas for

CLASS D WATER OPERATOR

License Number: **WO0047069**
Issue Date: **04/26/2021**
Expiration Date: **04/26/2024**

Executive Director
Texas Commission on Environmental Quality

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Be it known that

ADALBERTO CABALLERO

has fulfilled the requirements in accordance with the laws of the State of Texas for

CLASS D WASTEWATER TREATMENT OPERATOR

License Number: **WW0066372**
Issue Date: **01/19/2021**
Expiration Date: **01/19/2024**

Executive Director
Texas Commission on Environmental Quality

City Council Meeting

Item Number: 12

Meeting Date: October 25, 2022

To: City Council / City Manager

From: Marcia Bentley-German, Chief Deputy City Secretary

Subject: RESOLUTION ESTABLISHING THE DATES OF THE REGULAR CITY COUNCIL MEETINGS TO BE HELD DURING THE CALENDAR YEAR 2023 (DISTRICT: NONE) (CITY SECRETARY'S OFFICE)

Purpose:

The attached resolution will set the 2023 City Council Meeting Dates.

Recommended City Council Action:

Approve

Fiscal Impact:

None

Discussion:

None

Morris William Jr.

City Manager's Office

RESOLUTION NO. _____

RESOLUTION ESTABLISHING THE DATES OF THE REGULAR CITY COUNCIL MEETINGS TO BE HELD DURING THE CALENDAR YEAR 2023

WHEREAS, the City Council finds it to be in the public interest to establish the dates on which the City Council will meet in regular session during the calendar year 2023;

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

THAT the dates of the regular City Council meetings to be held during the 2023 calendar year as shown on Exhibit A, which is attached hereto and made a part hereof for all purposes, are hereby adopted. The City Council expressly reserves the right to approve and adopt one or more regular City Council meeting dates for said calendar year.

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., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

2023 Council Meeting Dates

January 9 - **(Swearing-in Ceremony)**

January 10

January 24

February 14

February 28

March 28

April 11

April 25

May 9

May 23

June 13

June 27

July 11

July 25

August 2 - **(Budget Wkshop/Set Tax Rate Ceiling)**

August 8

August 22

August 29 - **(Adopt Budget & Tax Rate)**

September 12

September 26

October 10

October 24

November 14

December 12

300 N. Loraine, Midland Tx 79701 • 432-685-7913 • Fax 432-686-1600

City Council Meeting

Item Number: 13

Meeting Date: October 25, 2022

To: City Council / City Manager

From: Ron Jenkins, Oil and Gas Coordinator

Subject: **RESOLUTION APPROVING THE ISSUANCE OF PERMITS TO PIONEER NATURAL RESOURCES, USA, INC. ("OPERATOR") TO DRILL NINE OIL AND GAS WELLS LOCATED IN SECTION 17, BLOCK 38, T-1-S, T&P RR CO. SURVEY, CITY OF MIDLAND, MIDLAND COUNTY, TEXAS (GENERALLY LOCATED BETWEEN 405 FEET AND 406 FEET SOUTH OF ARAPAHOE ROAD AND BETWEEN 1,182 FEET AND 1,342 FEET WEST OF ELKINS ROAD); AND PROVIDING THAT SAID PERMITS DO NOT REQUIRE A NEW ROAD REPAIR AGREEMENT BUT SHALL BE CONSOLIDATED UNDER AN EXISTING ROAD REPAIR AGREEMENT (DISTRICT 1) (DEVELOPMENT SERVICES)**

Purpose:

Resolution approving the issuance of permits to Pioneer Natural Resources, USA, Inc. ("Operator") for the drilling of the following oil and gas wells: Stimson E17B 102H; Stimson E17C 103H; Stimson E17D 104H; Stimson E17E 105H; Stimson E17F 106H; Stimson E17G 107H; Stimson E17H 108H; Stimson E17I 109H; and Stimson E17J 110H; said well being generally located between 405 feet and 406 south of Arapahoe Road and between 1,182 feet and 1,342 west of Elkins Road. The required 30-day public comment has passed, and the Council may consider this request. No notices of objection received.

Recommended City Council Action:

Approve

Fiscal Impact:

There is no cost to the City to process this application.

Discussion:

The Oil and Gas Advisory Committee has reviewed the well site in detail and recommends approval with updated exhibits. A 24 ft. sound wall will be used during drilling and fracturing operations being located on the north, west and south side of location. Closest homes approximately 880 feet to the north east of the drill pad site. Pad site is planned to be a 20 well pad site. No quiet frac system being used. Tank Battery will be in the County to the east of Elkins Road. The operator has a surface agreement. Receiving support of the Oil & Gas Advisory Committee, Pioneer Natural Resources is requesting the following variances:

(1) Pioneer Natural Resources requests to allow for twenty-four-hour fracing operations.
(2) Pioneer Natural Resources requests variance to close reserve pit 3 months (90 days) after operations are completed on all wells on the pad.
(3) Pioneer Natural Resources requests a variance to remove drill cuttings from surface location to be taken off site.
(4) Pioneer Natural Resources requests variance for irrigation and landscaping of the pad. Proposed fencing provides adequate screening around the pad.

Attachments: Applications; Location maps; Exhibit - Drill site maps, Exhibit – Flow Line Location.

Morris William Jr.

City Manager's Office

RESOLUTION NO. _____

RESOLUTION APPROVING THE ISSUANCE OF PERMITS TO PIONEER NATURAL RESOURCES, USA, INC. ("OPERATOR") TO DRILL NINE OIL AND GAS WELLS LOCATED IN SECTION 17, BLOCK 38, T-1-S, T&P RR CO. SURVEY, CITY OF MIDLAND, MIDLAND COUNTY, TEXAS (GENERALLY LOCATED BETWEEN 405 FEET AND 406 FEET SOUTH OF ARAPAHOE ROAD AND BETWEEN 1,182 FEET AND 1,342 FEET WEST OF ELKINS ROAD); AND PROVIDING THAT SAID PERMITS DO NOT REQUIRE A NEW ROAD REPAIR AGREEMENT BUT SHALL BE CONSOLIDATED UNDER AN EXISTING ROAD REPAIR AGREEMENT

WHEREAS, on December 8, 2009, the City Council of the City of Midland duly approved Ordinance No. 8769 which amended Title VI, "Police Regulations," Chapter 1, "General Offenses," of the City Code of Midland, Texas, so as to establish Section 23, "Oil and Gas Well Permits issued on or after January 1, 2010," which governs the granting or rejecting of Oil and Gas Well Permits; and

WHEREAS, the purpose of said section is to establish reasonable and uniform limitations, safeguards, and regulations for present and future operations related to the exploring, drilling, developing, producing, transporting and storing of oil or gas or other substances produced in association with oil and gas within the City of Midland to protect the health, safety, and general welfare of the public and the orderly development of the City of Midland; abate or prevent potential public nuisances; minimize the potential adverse impact to surface and mineral owners, protect the quality of the environment and encourage the orderly production of available mineral resources; and

WHEREAS, Section 6-1-23(C) of the City Code of Midland, Texas, makes it an offense to knowingly drill or participate in the drilling of any well or to re-enter any well within the corporate limits of the City of Midland without a permit having first been issued by the authority of the City Council; and

WHEREAS, Operator has submitted applications to the City of Midland to drill oil and gas wells on the property described in Section Two hereof; and

WHEREAS, notice of the public hearing on this matter was provided in accordance with Section 6-1-23(H)(1) and a public hearing was held on September 13, 2022; and

WHEREAS, subsequent to said public hearing, and in accordance with Section 6-1-23(H)(1), the City Council allowed the public and Operator thirty (30) days to submit written input to the City Manager regarding Operator's applications to drill oil and gas wells on the property described in Section Two hereof; and

WHEREAS, the City Council has considered those issues set forth in Section 6-1-23(I) in determining whether to grant or deny permits to Operator to drill oil and gas wells on the property described in Section Two hereof; and

WHEREAS, the City Council finds it to be in the public interest to approve the issuance of permits to Operator to drill oil and gas wells on the property described in Section Two hereof;

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

SECTION ONE. That the above recitals are hereby adopted and approved by the City Council of the City of Midland.

SECTION TWO. That the Mayor is hereby authorized and directed to execute permits, on behalf of the City of Midland, that will allow Operator to drill the following oil and gas wells:

> Stimson E17B 102H; Stimson E17C 103H; Stimson E17D 104H; Stimson E17E 105H; Stimson E17F 106H; Stimson E17G 107H; Stimson E17H 108H; Stimson E17I 109H; and Stimson E17J 110H;

located in Section 17, Block 38, T-1-S, T&P RR Co. Survey, City of Midland, Midland County, Texas. Said permits shall be in forms substantially similar to those attached hereto as Exhibits "A" through "I" and incorporated herein for all legal purposes.

SECTION THREE. That said permits do not require a new road repair agreement but shall be consolidated under the existing road repair agreement between Operator and the

City of Midland for Operator's wells located on the property described in Section Two hereof.

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., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

EXHIBIT "A"

OIL AND GAS WELL PERMIT

The City Council of the City of Midland, Texas, at its regular meeting on October 25, 2022, considered the application of Pioneer Natural Resources, USA, Inc. ("Operator") dated April 27, 2022, to drill an oil and gas well inside the territorial limits of the City of Midland, Texas. The City Council of the City of Midland, Texas, by appropriate action approved the application and authorized the issuance of this permit.

This documentation hereby constitutes a permit, issued in accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), to drill an oil and gas well as requested in Operator's application that has been filed with the Oil & Gas Compliance Coordinator and is incorporated herein for all legal purposes.

The location of Operator's Stimson E17B 102H oil and gas well shall be 405 feet from the north line and 1,342 feet from the east line, Section 17, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

This permit shall be effective from October 25, 2022 through October 25, 2023, and so long thereafter as oil or gas is produced, or until such time as Operator has permanently abandoned the operations of the well or facility for which this permit is issued.

The issuance of this permit by the City of Midland does not in any way alter or modify the rights as between the surface estate owner(s) and mineral estate owner(s) if there exists a severance of the surface estate and mineral estate. This permit in no way exempts Operator from its responsibilities or obligations as to third parties. The issuance of this permit only means that Operator has, at this time, complied with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance No. 8769) and that the Midland City Council, as a regulatory body, will allow Operator to proceed under the conditions of this permit. The issuance of this permit is intended to be only a negative pronouncement that grants no affirmative rights to the permittee to occupy the property. It is expressly provided that this permit does not authorize a trespass by the permittee as to any third party. This

permit does not in any way restrict the use of the surface estate. Securing a permit does not authorize Operator to act with impunity as to third parties, nor does it insulate Operator from the consequences of its actions with regard to those third parties. The receipt of a permit does not undertake to adjudicate property rights.

This permit granted by the City of Midland does not act to immunize Operator from civil tort liability from private parties for actions arising out of the use of the permit. This is because the permit is a "negative pronouncement" that grants no affirmative rights to the permittee. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of State or local law or regulations. Operator has obtained a permit from the City of Midland but the consequences of acting under the permit have not been immunized. The fact that the City of Midland has issued a permit to drill an oil and gas well does not shield Operator from third party tort liability stemming from the consequences of the permitted activity.

NOTWITHSTANDING ANY OTHER PROVISION, OPERATOR HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY OF MIDLAND, CITY OF MIDLAND'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH OPERATOR HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKING CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS OR CITY OF MIDLAND'S NEGLIGENCE.

OPERATOR AGREES TO INDEMNIFY AND HOLD HARMLESS AND DEFEND THE CITY OF MIDLAND, THE CITY'S OFFICERS, AGENTS, AND EMPLOYEES FROM ANY AND ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITY OF ANY KIND, INCLUDING ALL EXPENSES OF LITIGATION, COURT COSTS, AND ATTORNEY'S FEES, FOR INJURY TO OR DEATH OF ANY PERSON, OR FOR DAMAGE TO ANY PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE WORK DONE BY OPERATOR UNDER AN OIL AND GAS WELL PERMIT WHERE SUCH INJURIES, DEATH, OR DAMAGES ARE CAUSED BY OPERATOR'S SOLE NEGLIGENCE OR THE JOINT NEGLIGENCE OF THE OPERATOR AND ANY OTHER PERSON OR ENTITY.

A right-of-way license agreement approved by a resolution of the Midland City Council is required for any oil and/or gas flowline or pipeline or any other device associated with a proposed well site that extends into, on, above, in, under, across or through any City rights-of-way, including but not limited to streets, alleys, and utility and drainage rights-of-way.

If the well that is the subject of this permit is not located within the County of Midland, Texas, Operator shall notify the Midland Central Appraisal District of the following: (1) the well's location within the territorial limits of the City of Midland; and (2) that the City of

Midland is to be included as a taxing entity. Operator shall make said notification no later than 60 days after completion of the well.

The Midland City Council, in granting this permit, also grants the following variance(s):

1. Twenty-four hour hydraulic fracturing operations are permitted.
2. Close reserve pit 3 months (90 days) after operations are completed on all wells on the pad.
3. Drill cuttings shall be removed from the surface location.
4. No landscaping or irrigation are required.

This permit shall constitute a written contract for purposes of insurance requirements.

In addition to the requirements of this permit and the Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), including, but not limited to Subsections (K) through (Z), Operator shall develop, maintain and operate the well described herein in accordance with the conditions, limitations and safeguards contained in Operator's application for said well.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of October 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Pioneer Natural Resources, USA, Inc.

By: _____

Laura Wallace

Regulatory Specialist

EXHIBIT"B"

OIL AND GAS WELL PERMIT

The City Council of the City of Midland, Texas, at its regular meeting on October 25, 2022, considered the application of Pioneer Natural Resources, USA, Inc. ("Operator") dated April 27, 2022, to drill an oil and gas well inside the territorial limits of the City of Midland, Texas. The City Council of the City of Midland, Texas, by appropriate action approved the application and authorized the issuance of this permit.

This documentation hereby constitutes a permit, issued in accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), to drill an oil and gas well as requested in Operator's application that has been filed with the Oil & Gas Compliance Coordinator and is incorporated herein for all legal purposes.

The location of Operator's Stimson E17C 103H oil and gas well shall be 405 feet from the north line and 1,322 feet from the east line, Section 17, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

This permit shall be effective from October 25, 2022 through October 25, 2023, and so long thereafter as oil or gas is produced, or until such time as Operator has permanently abandoned the operations of the well or facility for which this permit is issued.

The issuance of this permit by the City of Midland does not in any way alter or modify the rights as between the surface estate owner(s) and mineral estate owner(s) if there exists a severance of the surface estate and mineral estate. This permit in no way exempts Operator from its responsibilities or obligations as to third parties. The issuance of this permit only means that Operator has, at this time, complied with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance No. 8769) and that the Midland City Council, as a regulatory body, will allow Operator to proceed under the conditions of this permit. The issuance of this permit is intended to be only a negative pronouncement that grants no affirmative rights to the permittee to occupy the property. It is expressly provided that this permit does not authorize a trespass by the permittee as to any third party. This

permit does not in any way restrict the use of the surface estate. Securing a permit does not authorize Operator to act with impunity as to third parties, nor does it insulate Operator from the consequences of its actions with regard to those third parties. The receipt of a permit does not undertake to adjudicate property rights.

This permit granted by the City of Midland does not act to immunize Operator from civil tort liability from private parties for actions arising out of the use of the permit. This is because the permit is a "negative pronouncement" that grants no affirmative rights to the permittee. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of State or local law or regulations. Operator has obtained a permit from the City of Midland but the consequences of acting under the permit have not been immunized. The fact that the City of Midland has issued a permit to drill an oil and gas well does not shield Operator from third party tort liability stemming from the consequences of the permitted activity.

NOTWITHSTANDING ANY OTHER PROVISION, OPERATOR HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY OF MIDLAND, CITY OF MIDLAND'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH OPERATOR HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKING CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS OR CITY OF MIDLAND'S NEGLIGENCE.

OPERATOR AGREES TO INDEMNIFY AND HOLD HARMLESS AND DEFEND THE CITY OF MIDLAND, THE CITY'S OFFICERS, AGENTS, AND EMPLOYEES FROM ANY AND ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITY OF ANY KIND, INCLUDING ALL EXPENSES OF LITIGATION, COURT COSTS, AND ATTORNEY'S FEES, FOR INJURY TO OR DEATH OF ANY PERSON, OR FOR DAMAGE TO ANY PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE WORK DONE BY OPERATOR UNDER AN OIL AND GAS WELL PERMIT WHERE SUCH INJURIES, DEATH, OR DAMAGES ARE CAUSED BY OPERATOR'S SOLE NEGLIGENCE OR THE JOINT NEGLIGENCE OF THE OPERATOR AND ANY OTHER PERSON OR ENTITY.

A right-of-way license agreement approved by a resolution of the Midland City Council is required for any oil and/or gas flowline or pipeline or any other device associated with a proposed well site that extends into, on, above, in, under, across or through any City rights-of-way, including but not limited to streets, alleys, and utility and drainage rights-of-way.

If the well that is the subject of this permit is not located within the County of Midland, Texas, Operator shall notify the Midland Central Appraisal District of the following: (1) the well's location within the territorial limits of the City of Midland; and (2) that the City of

Midland is to be included as a taxing entity. Operator shall make said notification no later than 60 days after completion of the well.

The Midland City Council, in granting this permit, also grants the following variance(s):

1. Twenty-four hour hydraulic fracturing operations are permitted.
2. Close reserve pit 3 months (90 days) after operations are completed on all wells on the pad.
3. Drill cuttings shall be removed from the surface location.
4. No landscaping or irrigation are required.

This permit shall constitute a written contract for purposes of insurance requirements.

In addition to the requirements of this permit and the Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), including, but not limited to Subsections (K) through (Z), Operator shall develop, maintain and operate the well described herein in accordance with the conditions, limitations and safeguards contained in Operator's application for said well.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of October 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Pioneer Natural Resources, USA, Inc.

By: _____

Laura Wallace

Regulatory Specialist

EXHIBIT "C"

OIL AND GAS WELL PERMIT

The City Council of the City of Midland, Texas, at its regular meeting on October 25, 2022, considered the application of Pioneer Natural Resources, USA, Inc. ("Operator") dated April 27, 2022, to drill an oil and gas well inside the territorial limits of the City of Midland, Texas. The City Council of the City of Midland, Texas, by appropriate action approved the application and authorized the issuance of this permit.

This documentation hereby constitutes a permit, issued in accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), to drill an oil and gas well as requested in Operator's application that has been filed with the Oil & Gas Compliance Coordinator and is incorporated herein for all legal purposes.

The location of Operator's Stimson E17D 104H oil and gas well shall be 406 feet from the north line and 1,302 feet from the east line, Section 17, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

This permit shall be effective from October 25, 2022 through October 25, 2023, and so long thereafter as oil or gas is produced, or until such time as Operator has permanently abandoned the operations of the well or facility for which this permit is issued.

The issuance of this permit by the City of Midland does not in any way alter or modify the rights as between the surface estate owner(s) and mineral estate owner(s) if there exists a severance of the surface estate and mineral estate. This permit in no way exempts Operator from its responsibilities or obligations as to third parties. The issuance of this permit only means that Operator has, at this time, complied with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance No. 8769) and that the Midland City Council, as a regulatory body, will allow Operator to proceed under the conditions of this permit. The issuance of this permit is intended to be only a negative pronouncement that grants no affirmative rights to the permittee to occupy the property. It is expressly provided that this permit does not authorize a trespass by the permittee as to any third party. This

permit does not in any way restrict the use of the surface estate. Securing a permit does not authorize Operator to act with impunity as to third parties, nor does it insulate Operator from the consequences of its actions with regard to those third parties. The receipt of a permit does not undertake to adjudicate property rights.

This permit granted by the City of Midland does not act to immunize Operator from civil tort liability from private parties for actions arising out of the use of the permit. This is because the permit is a "negative pronouncement" that grants no affirmative rights to the permittee. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of State or local law or regulations. Operator has obtained a permit from the City of Midland but the consequences of acting under the permit have not been immunized. The fact that the City of Midland has issued a permit to drill an oil and gas well does not shield Operator from third party tort liability stemming from the consequences of the permitted activity.

NOTWITHSTANDING ANY OTHER PROVISION, OPERATOR HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY OF MIDLAND, CITY OF MIDLAND'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH OPERATOR HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKING CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS OR CITY OF MIDLAND'S NEGLIGENCE.

OPERATOR AGREES TO INDEMNIFY AND HOLD HARMLESS AND DEFEND THE CITY OF MIDLAND, THE CITY'S OFFICERS, AGENTS, AND EMPLOYEES FROM ANY AND ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITY OF ANY KIND, INCLUDING ALL EXPENSES OF LITIGATION, COURT COSTS, AND ATTORNEY'S FEES, FOR INJURY TO OR DEATH OF ANY PERSON, OR FOR DAMAGE TO ANY PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE WORK DONE BY OPERATOR UNDER AN OIL AND GAS WELL PERMIT WHERE SUCH INJURIES, DEATH, OR DAMAGES ARE CAUSED BY OPERATOR'S SOLE NEGLIGENCE OR THE JOINT NEGLIGENCE OF THE OPERATOR AND ANY OTHER PERSON OR ENTITY.

A right-of-way license agreement approved by a resolution of the Midland City Council is required for any oil and/or gas flowline or pipeline or any other device associated with a proposed well site that extends into, on, above, in, under, across or through any City rights-of-way, including but not limited to streets, alleys, and utility and drainage rights-of-way.

If the well that is the subject of this permit is not located within the County of Midland, Texas, Operator shall notify the Midland Central Appraisal District of the following: (1) the well's location within the territorial limits of the City of Midland; and (2) that the City of

Midland is to be included as a taxing entity. Operator shall make said notification no later than 60 days after completion of the well.

The Midland City Council, in granting this permit, also grants the following variance(s):

1. Twenty-four hour hydraulic fracturing operations are permitted.
2. Close reserve pit 3 months (90 days) after operations are completed on all wells on the pad.
3. Drill cuttings shall be removed from the surface location.
4. No landscaping or irrigation are required.

This permit shall constitute a written contract for purposes of insurance requirements.

In addition to the requirements of this permit and the Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), including, but not limited to Subsections (K) through (Z), Operator shall develop, maintain and operate the well described herein in accordance with the conditions, limitations and safeguards contained in Operator's application for said well.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of October 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Pioneer Natural Resources, USA, Inc.

By: _____

Laura Wallace

Regulatory Specialist

EXHIBIT "D"

OIL AND GAS WELL PERMIT

The City Council of the City of Midland, Texas, at its regular meeting on October 25, 2022, considered the application of Pioneer Natural Resources, USA, Inc. ("Operator") dated April 27, 2022, to drill an oil and gas well inside the territorial limits of the City of Midland, Texas. The City Council of the City of Midland, Texas, by appropriate action approved the application and authorized the issuance of this permit.

This documentation hereby constitutes a permit, issued in accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), to drill an oil and gas well as requested in Operator's application that has been filed with the Oil & Gas Compliance Coordinator and is incorporated herein for all legal purposes.

The location of Operator's Stimson E17E 105H oil and gas well shall be 406 feet from the north line and 1,282 feet from the east line, Section 17, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

This permit shall be effective from October 25, 2022 through October 25, 2023, and so long thereafter as oil or gas is produced, or until such time as Operator has permanently abandoned the operations of the well or facility for which this permit is issued.

The issuance of this permit by the City of Midland does not in any way alter or modify the rights as between the surface estate owner(s) and mineral estate owner(s) if there exists a severance of the surface estate and mineral estate. This permit in no way exempts Operator from its responsibilities or obligations as to third parties. The issuance of this permit only means that Operator has, at this time, complied with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance No. 8769) and that the Midland City Council, as a regulatory body, will allow Operator to proceed under the conditions of this permit. The issuance of this permit is intended to be only a negative pronouncement that grants no affirmative rights to the permittee to occupy the property. It is expressly provided that this permit does not authorize a trespass by the permittee as to any third party. This

permit does not in any way restrict the use of the surface estate. Securing a permit does not authorize Operator to act with impunity as to third parties, nor does it insulate Operator from the consequences of its actions with regard to those third parties. The receipt of a permit does not undertake to adjudicate property rights.

This permit granted by the City of Midland does not act to immunize Operator from civil tort liability from private parties for actions arising out of the use of the permit. This is because the permit is a "negative pronouncement" that grants no affirmative rights to the permittee. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of State or local law or regulations. Operator has obtained a permit from the City of Midland but the consequences of acting under the permit have not been immunized. The fact that the City of Midland has issued a permit to drill an oil and gas well does not shield Operator from third party tort liability stemming from the consequences of the permitted activity.

NOTWITHSTANDING ANY OTHER PROVISION, OPERATOR HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY OF MIDLAND, CITY OF MIDLAND'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH OPERATOR HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKING CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS OR CITY OF MIDLAND'S NEGLIGENCE.

OPERATOR AGREES TO INDEMNIFY AND HOLD HARMLESS AND DEFEND THE CITY OF MIDLAND, THE CITY'S OFFICERS, AGENTS, AND EMPLOYEES FROM ANY AND ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITY OF ANY KIND, INCLUDING ALL EXPENSES OF LITIGATION, COURT COSTS, AND ATTORNEY'S FEES, FOR INJURY TO OR DEATH OF ANY PERSON, OR FOR DAMAGE TO ANY PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE WORK DONE BY OPERATOR UNDER AN OIL AND GAS WELL PERMIT WHERE SUCH INJURIES, DEATH, OR DAMAGES ARE CAUSED BY OPERATOR'S SOLE NEGLIGENCE OR THE JOINT NEGLIGENCE OF THE OPERATOR AND ANY OTHER PERSON OR ENTITY.

A right-of-way license agreement approved by a resolution of the Midland City Council is required for any oil and/or gas flowline or pipeline or any other device associated with a proposed well site that extends into, on, above, in, under, across or through any City rights-of-way, including but not limited to streets, alleys, and utility and drainage rights-of-way.

If the well that is the subject of this permit is not located within the County of Midland, Texas, Operator shall notify the Midland Central Appraisal District of the following: (1) the well's location within the territorial limits of the City of Midland; and (2) that the City of

Midland is to be included as a taxing entity. Operator shall make said notification no later than 60 days after completion of the well.

The Midland City Council, in granting this permit, also grants the following variance(s):

1. Twenty-four hour hydraulic fracturing operations are permitted.
2. Close reserve pit 3 months (90 days) after operations are completed on all wells on the pad.
3. Drill cuttings shall be removed from the surface location.
4. No landscaping or irrigation are required.

This permit shall constitute a written contract for purposes of insurance requirements.

In addition to the requirements of this permit and the Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), including, but not limited to Subsections (K) through (Z), Operator shall develop, maintain and operate the well described herein in accordance with the conditions, limitations and safeguards contained in Operator's application for said well.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of October 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Pioneer Natural Resources, USA, Inc.

By: _____

Laura Wallace

Regulatory Specialist

EXHIBIT "E"

OIL AND GAS WELL PERMIT

The City Council of the City of Midland, Texas, at its regular meeting on October 25, 2022, considered the application of Pioneer Natural Resources, USA, Inc. ("Operator") dated April 27, 2022, to drill an oil and gas well inside the territorial limits of the City of Midland, Texas. The City Council of the City of Midland, Texas, by appropriate action approved the application and authorized the issuance of this permit.

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The location of Operator's Stimson E17F 106H oil and gas well shall be 406 feet from the north line and 1,262 feet from the east line, Section 17, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

This permit shall be effective from October 25, 2022 through October 25, 2023, and so long thereafter as oil or gas is produced, or until such time as Operator has permanently abandoned the operations of the well or facility for which this permit is issued.

The issuance of this permit by the City of Midland does not in any way alter or modify the rights as between the surface estate owner(s) and mineral estate owner(s) if there exists a severance of the surface estate and mineral estate. This permit in no way exempts Operator from its responsibilities or obligations as to third parties. The issuance of this permit only means that Operator has, at this time, complied with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance No. 8769) and that the Midland City Council, as a regulatory body, will allow Operator to proceed under the conditions of this permit. The issuance of this permit is intended to be only a negative pronouncement that grants no affirmative rights to the permittee to occupy the property. It is expressly provided that this permit does not authorize a trespass by the permittee as to any third party. This

permit does not in any way restrict the use of the surface estate. Securing a permit does not authorize Operator to act with impunity as to third parties, nor does it insulate Operator from the consequences of its actions with regard to those third parties. The receipt of a permit does not undertake to adjudicate property rights.

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Midland is to be included as a taxing entity. Operator shall make said notification no later than 60 days after completion of the well.

The Midland City Council, in granting this permit, also grants the following variance(s):

1. Twenty-four hour hydraulic fracturing operations are permitted.
2. Close reserve pit 3 months (90 days) after operations are completed on all wells on the pad.
3. Drill cuttings shall be removed from the surface location.
4. No landscaping or irrigation are required.

This permit shall constitute a written contract for purposes of insurance requirements.

In addition to the requirements of this permit and the Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), including, but not limited to Subsections (K) through (Z), Operator shall develop, maintain and operate the well described herein in accordance with the conditions, limitations and safeguards contained in Operator's application for said well.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of October 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Pioneer Natural Resources, USA, Inc.

By: _____

Laura Wallace

Regulatory Specialist

EXHIBIT "F"

OIL AND GAS WELL PERMIT

The City Council of the City of Midland, Texas, at its regular meeting on October 25, 2022, considered the application of Pioneer Natural Resources, USA, Inc. ("Operator") dated April 27, 2022, to drill an oil and gas well inside the territorial limits of the City of Midland, Texas. The City Council of the City of Midland, Texas, by appropriate action approved the application and authorized the issuance of this permit.

This documentation hereby constitutes a permit, issued in accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), to drill an oil and gas well as requested in Operator's application that has been filed with the Oil & Gas Compliance Coordinator and is incorporated herein for all legal purposes.

The location of Operator's Stimson E17G 107H oil and gas well shall be 406 feet from the north line and 1,242 feet from the east line, Section 17, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

This permit shall be effective from October 25, 2022 through October 25, 2023, and so long thereafter as oil or gas is produced, or until such time as Operator has permanently abandoned the operations of the well or facility for which this permit is issued.

The issuance of this permit by the City of Midland does not in any way alter or modify the rights as between the surface estate owner(s) and mineral estate owner(s) if there exists a severance of the surface estate and mineral estate. This permit in no way exempts Operator from its responsibilities or obligations as to third parties. The issuance of this permit only means that Operator has, at this time, complied with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance No. 8769) and that the Midland City Council, as a regulatory body, will allow Operator to proceed under the conditions of this permit. The issuance of this permit is intended to be only a negative pronouncement that grants no affirmative rights to the permittee to occupy the property. It is expressly provided that this permit does not authorize a trespass by the permittee as to any third party. This

permit does not in any way restrict the use of the surface estate. Securing a permit does not authorize Operator to act with impunity as to third parties, nor does it insulate Operator from the consequences of its actions with regard to those third parties. The receipt of a permit does not undertake to adjudicate property rights.

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NOTWITHSTANDING ANY OTHER PROVISION, OPERATOR HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY OF MIDLAND, CITY OF MIDLAND'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH OPERATOR HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKING CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS OR CITY OF MIDLAND'S NEGLIGENCE.

OPERATOR AGREES TO INDEMNIFY AND HOLD HARMLESS AND DEFEND THE CITY OF MIDLAND, THE CITY'S OFFICERS, AGENTS, AND EMPLOYEES FROM ANY AND ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITY OF ANY KIND, INCLUDING ALL EXPENSES OF LITIGATION, COURT COSTS, AND ATTORNEY'S FEES, FOR INJURY TO OR DEATH OF ANY PERSON, OR FOR DAMAGE TO ANY PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE WORK DONE BY OPERATOR UNDER AN OIL AND GAS WELL PERMIT WHERE SUCH INJURIES, DEATH, OR DAMAGES ARE CAUSED BY OPERATOR'S SOLE NEGLIGENCE OR THE JOINT NEGLIGENCE OF THE OPERATOR AND ANY OTHER PERSON OR ENTITY.

A right-of-way license agreement approved by a resolution of the Midland City Council is required for any oil and/or gas flowline or pipeline or any other device associated with a proposed well site that extends into, on, above, in, under, across or through any City rights-of-way, including but not limited to streets, alleys, and utility and drainage rights-of-way.

If the well that is the subject of this permit is not located within the County of Midland, Texas, Operator shall notify the Midland Central Appraisal District of the following: (1) the well's location within the territorial limits of the City of Midland; and (2) that the City of

Midland is to be included as a taxing entity. Operator shall make said notification no later than 60 days after completion of the well.

The Midland City Council, in granting this permit, also grants the following variance(s):

1. Twenty-four hour hydraulic fracturing operations are permitted.
2. Close reserve pit 3 months (90 days) after operations are completed on all wells on the pad.
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CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Pioneer Natural Resources, USA, Inc.

By: _____

Laura Wallace

Regulatory Specialist

EXHIBIT "G"

OIL AND GAS WELL PERMIT

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The location of Operator's Stimson E17H 108H oil and gas well shall be 406 feet from the north line and 1,222 feet from the east line, Section 17, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

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GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of October 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Pioneer Natural Resources, USA, Inc.

By: _____

Laura Wallace

Regulatory Specialist

EXHIBIT "H"

OIL AND GAS WELL PERMIT

The City Council of the City of Midland, Texas, at its regular meeting on October 25, 2022, considered the application of Pioneer Natural Resources, USA, Inc. ("Operator") dated April 27, 2022, to drill an oil and gas well inside the territorial limits of the City of Midland, Texas. The City Council of the City of Midland, Texas, by appropriate action approved the application and authorized the issuance of this permit.

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The location of Operator's Stimson E17I 109H oil and gas well shall be 406 feet from the north line and 1,202 feet from the east line, Section 17, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

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CITY OF MIDLAND, TEXAS

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Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Pioneer Natural Resources, USA, Inc.

By: _____

Laura Wallace

Regulatory Specialist

EXHIBIT "I"

OIL AND GAS WELL PERMIT

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GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of October 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Pioneer Natural Resources, USA, Inc.

By: _____

Laura Wallace

Regulatory Specialist

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
04/27/2022	Pioneer Natural Resources, USA, Inc.	777 Hidden Ridge Lane Irving, Texas 75038

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Matt Mathis, Field Production Operations Manager	3617 N Big Spring St Midland, Texas 79705	432-571-3086 Office 469-203-5174 Mobile Rep. Fax
Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1): Laura Wallace, Sr Staff Regulatory Specialist
972-969-1742 Office or 817-682-3483 Mobile

Option A:

24/7 Answering Services - No. 1 (Tele.): 432-571-2666 **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** Attached as Exhibit A

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):
Pioneer Remote Operations Hub
3617 N Big Spring St. Midland, Texas 79705
432-571-2666 (Available 24/7)

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** Attached as Exhibit B

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1. See Attached Exhibit C
2.
3.

ATTACHED AS EXHIBIT C **is (a** ***Title Opinion by*** Various - See Exhibits ***, a licensed Texas Attorney/Title Commitment by Abstract Company/a Take-off from , a Certified Petroleum Landman/an opinion letter from ,*** ***a licensed Texas Attorney)*** **indicating that [Operator] has a legal right to develop the mineral estate that is the subject of this Application. [See § J(5)].**

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):

Located in Section 17, Block 38, T1S, T&P RR Co., Abstract 152, Midland County, Texas

Surface is owned by Pioneer Natural Resources. There are seven additional owners of property within 860' of proposed Surface Hole Locations. See attached Exhibit C for details.

Property is currently undeveloped. Tank battery will be located outside the city limits.

ATTACHED AS EXHIBIT D **is a Current Tax Roll from Martin & Midland Central Appraisal District.**

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Stimson E17B 102H

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

A wellbore schematic with the applicable information is attached within Exhibit G.

Legal Description of Proposed Well Site: Surface Hole Location:

405' FNL, 1342' FEL, Section 17, Block 38, T1S, T&P RR Co., Abstract 152, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

***ATTACHED AS EXHIBIT I* is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].**

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Pioneer Natural Resources
[NAME OF COMPANY]

By Laura E Wallace
Its Regulatory Advisor

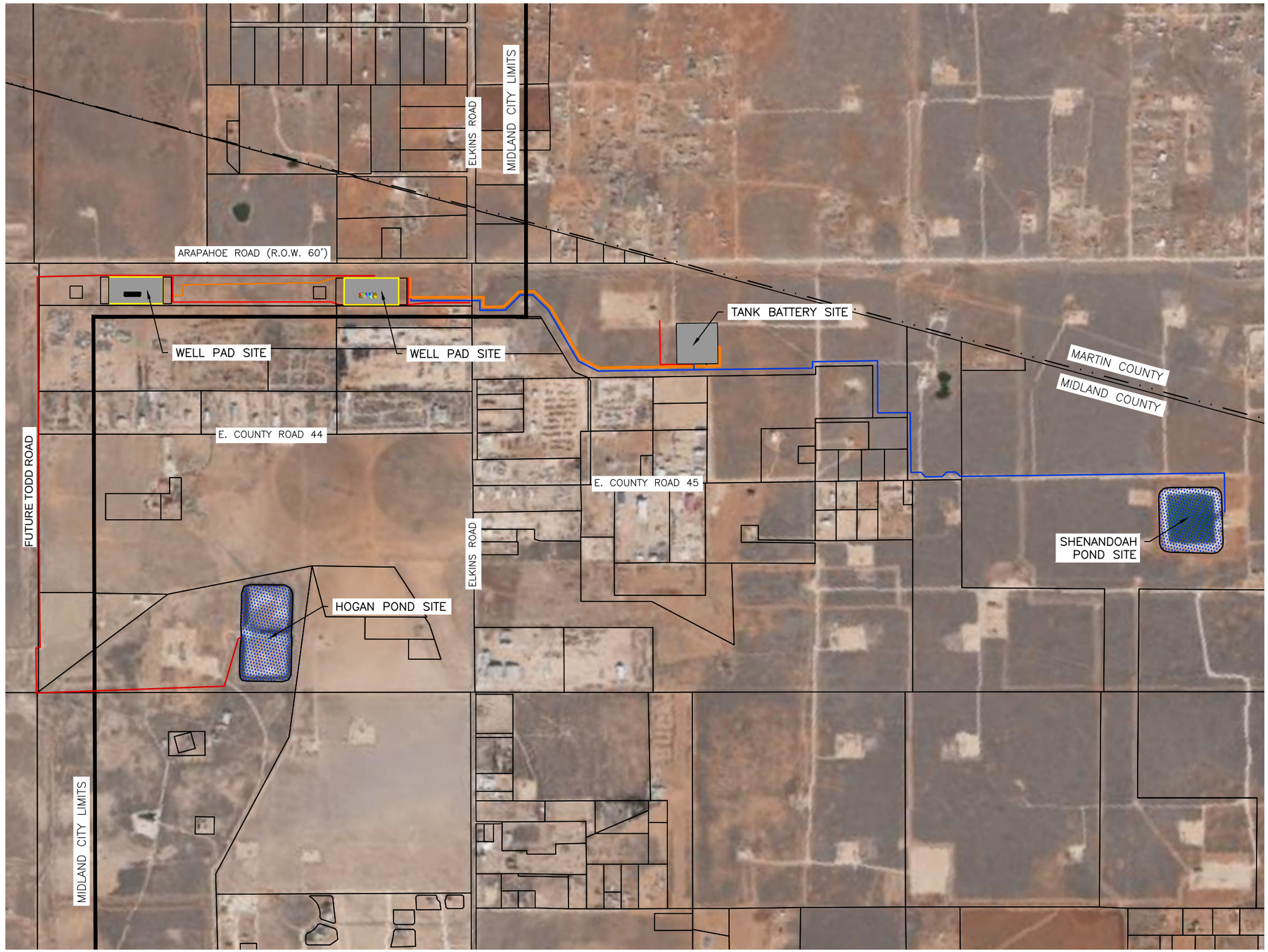
State of Texas)

County of DALLAS)

, personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

HEATHER M BARCIA
NOTARY PUBLIC
ID# 11239288
State of Texas
Comm. Exp. 06-01-2022
[SEAL]

Notary Public, State of 6/01/2022



N

0' 1200' 2400'

SCALE: 1" = 1200'

NOTES:

1. THIS DOES NOT CONSTITUTE A BOUNDARY SURVEY.
2. ANY ADJACENT WELLS ARE BASED SOLELY OFF RAILROAD COMMISSION (RRC) RECORDS AND ACCURACY CANNOT BE GUARANTEED.
3. ANY LEASE INFORMATION DEPICTED IS PROVIDED BY THE CLIENT.
4. WELL LOCATION IS APPROXIMATELY 2.0 MILES NORTH/ NORTHEAST OF MIDLAND, TEXAS.

LEGEND

- WELL SURFACE LOCATION
- PROPOSED WELL PAD SITE
- TANK BATTERY SITE
- POND SITE
- PROPOSED FLOWLINE
- PROPOSED PRODUCED WATERLINE
- PROPOSED TEMPORARY WATERLINE
- PROPOSED ELECTRICAL
- E — E — EXISTING OVERHEAD ELECTRICAL
- UG — UG — EXISTING BURIED PIPELINE

HALFF®
3300 NORTH A STREET, BUILDING 2, SUITE 120
MIDLAND, TX 79705-5471
TEL (432) 253-3255
TBPELS SURVEYING FIRM #10193998

DATE: 4/27/2022
REV.: 05/16/2022 J. ALVAREZ
BY: J. GONZALEZ
AVO: 39678.698

PIONEER NATURAL RESOURCES USA, INC.

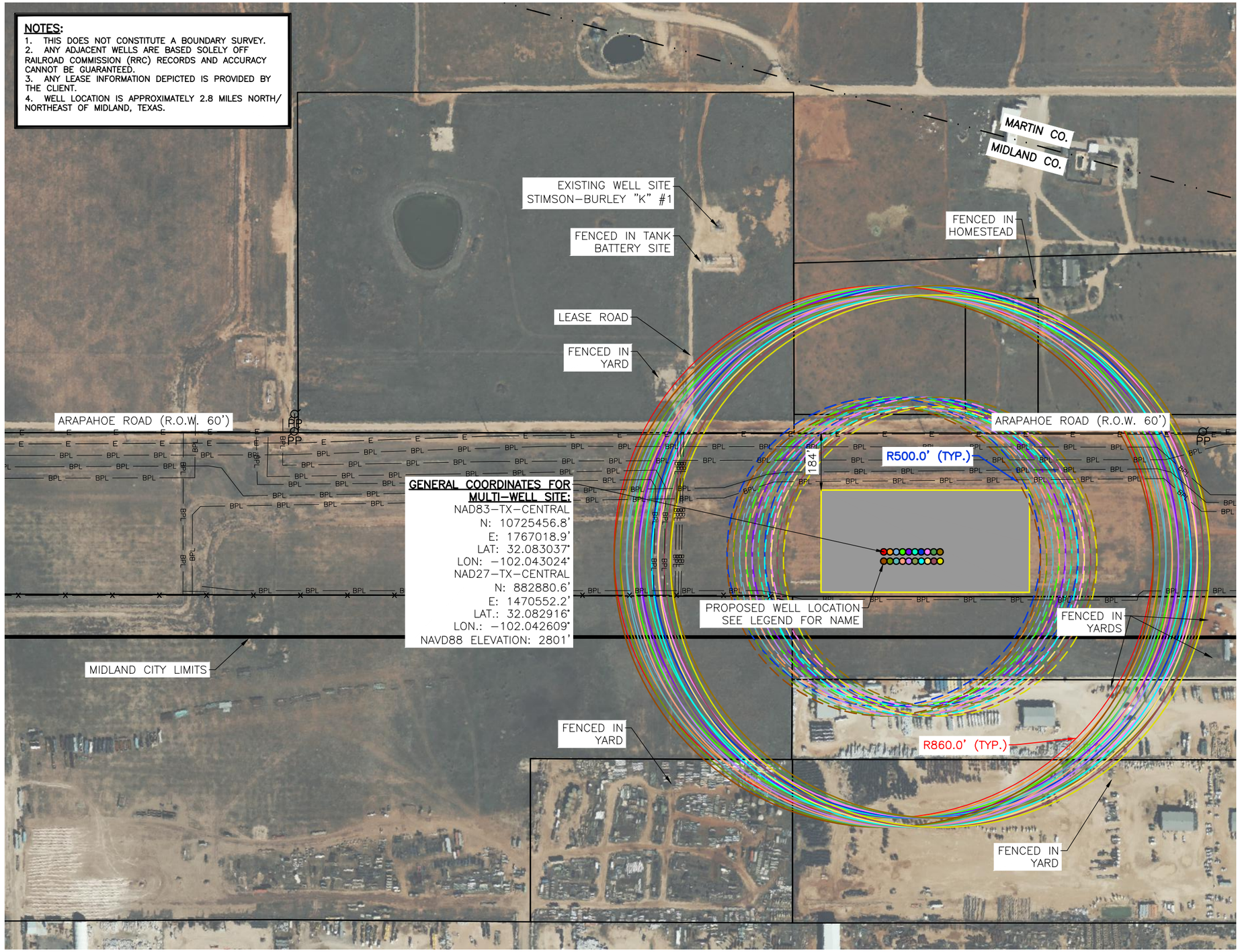
EXHIBIT "N"
DRILL SITE, GATHERING LINES, ELECTRICAL

STIMSON 17 PADS

LOCATED IN
SECTION 17, BLOCK 38,
TOWNSHIP-1-SOUTH,
T. & P. R.R. CO. SURVEY,
ABSTRACT NO. 152,
MIDLAND COUNTY, TEXAS

I:\39000s\39678\698\CADD\SheetsMLD\EXHIBIT_PLATS\039678.698_EXHIBIT_N_DRILL_SITE.dwg

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LEGEND

	STIMSON E17A #101H
	STIMSON E17B #102H
	STIMSON E17C #103H
	STIMSON E17D #104H
	STIMSON E17E #105H
	STIMSON E17F #106H
	STIMSON E17G #107H
	STIMSON E17H #108H
	STIMSON E17I #109H
	STIMSON E17J #110H
	STIMSON E17K #111H
	STIMSON E17L #112H
	STIMSON E17M #113H
	STIMSON E17N #114H
	STIMSON E17O #115H
	STIMSON E17P #116H
	STIMSON E17Q #117H
	STIMSON E17R #118H
	STIMSON E17S #119H
	STIMSON E17T #120H
MULTI–COLOR	860–FOOT BUFFER/HALO
MULTI–COLOR	500–FOOT BUFFER/HALO
	PROPOSED WELL PAD SITE
	PROPERTY OWNERSHIP BOUNDARY
	COUNTY LINE
	CITY LIMITS
BPL	BURIED PIPELINE
E	OVERHEAD ELCTRIC
X	FENCE

N

0' 300' 600'

SCALE: 1" = 300'

HALFF®
3300 NORTH A STREET, BUILDING 2, SUITE 120
MIDLAND, TX 79705-5471
TEL (432) 253-3255
TBPELS SURVEYING FIRM #10193998

DATE: 10/20/2021
REV.: 05/16/2022
BY: J. ALVAREZ
AVO: 39678.704

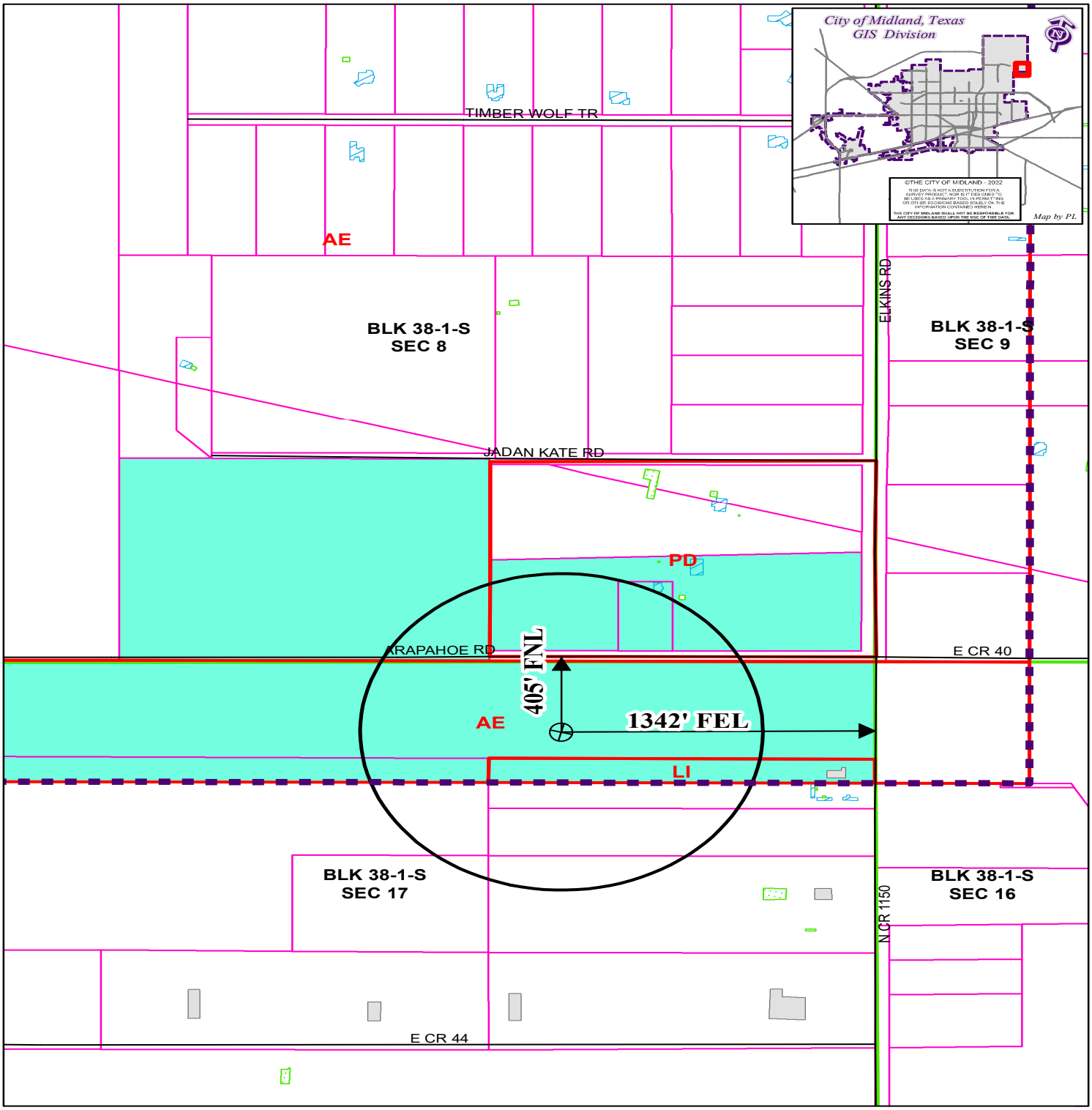
PIONEER NATURAL RESOURCES USA, INC.

EXHIBIT "E"
AERIAL SITE PLAN

STIMSON E17A–E17T
#101H–#120H

LOCATED IN
SECTION 17, BLOCK 38,
TOWNSHIP–1–SOUTH,
T. & P. R.R. CO. SURVEY,
ABSTRACT NO. 152,
MIDLAND COUNTY, TEXAS

I:\39000s\39678\704\CADD\SheetsMLD\EXHIBIT_PLATS\039678.704_EXHIBIT_E_AERIAL_SITE_PLAN.dwg



LOCATION AND ZONING MAP

Oil-044054-2022 **Scale: 1" = 600'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 405' FNL and 1342' FEL, Section 17, Block 38-1-S, T&P RR CO Survey, Midland County, Texas.

Generally located 405 feet south of Arapahoe Road and 1,342 feet west of Elkins Road.

Stimson E17B 102H

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, 02	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	CR1, CR2, CLRS	LOCAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
04/27/2022	Pioneer Natural Resources, USA, Inc.	777 Hidden Ridge Lane Irving, Texas 75038

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Matt Mathis, Field Production Operations Manager	3617 N Big Spring St Midland, Texas 79705	432-571-3086 Office 469-203-5174 Mobile Rep. Fax
Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1): Laura Wallace, Sr Staff Regulatory Specialist
972-969-1742 Office or 817-682-3483 Mobile

Option A:

24/7 Answering Services - No. 1 (Tele.): 432-571-2666 **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** Attached as Exhibit A

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3617 N Big Spring St. Midland, Texas 79705
432-571-2666 (Available 24/7)

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** Attached as Exhibit B

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1. See Attached Exhibit C
2.
3.

ATTACHED AS EXHIBIT C **is (a** ***Title Opinion by*** Various - See Exhibits ***, a licensed Texas Attorney/Title Commitment by Abstract Company/a Take-off from , a Certified Petroleum Landman/an opinion letter from ,*** ***a licensed Texas Attorney)*** **indicating that [Operator] has a legal right to develop the mineral estate that is the subject of this Application. [See § J(5)].**

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):

Located in Section 17, Block 38, T1S, T&P RR Co., Abstract 152, Midland County, Texas

Surface is owned by Pioneer Natural Resources. There are seven additional owners of property within 860' of proposed Surface Hole Locations. See attached Exhibit C for details.

Property is currently undeveloped. Tank battery will be located outside the city limits.

ATTACHED AS EXHIBIT D **is a Current Tax Roll from Martin & Midland Central Appraisal District.**

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Stimson E17C 103H

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

A wellbore schematic with the applicable information is attached within Exhibit G.

Legal Description of Proposed Well Site: Surface Hole Location:

405' FNL, 1322' FEL, Section 17, Block 38, T1S, T&P RR Co., Abstract 152, Midland County, Texas

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Pioneer Natural Resources
[NAME OF COMPANY]

By Laura E Wallace
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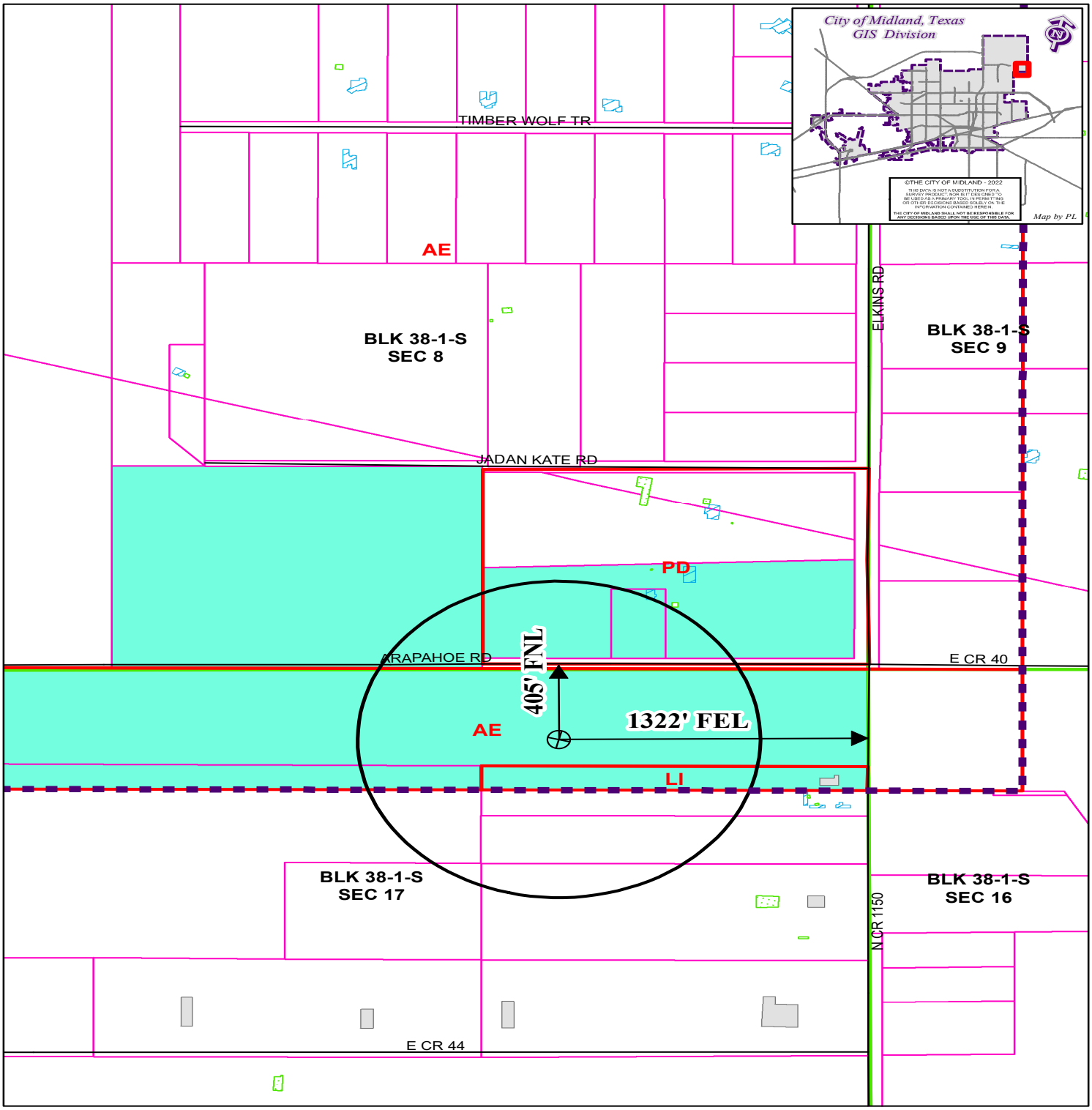
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Comm. Exp. 06-01-2022
[SEAL]

Notary Public, State of 6/01/2022



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Stimson E17C 103H

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CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
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(Pursuant to Midland City Ordinance No. 8769)

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Pioneer Natural Resources
[NAME OF COMPANY]

By Laura E Wallace
Its Regulatory Advisor

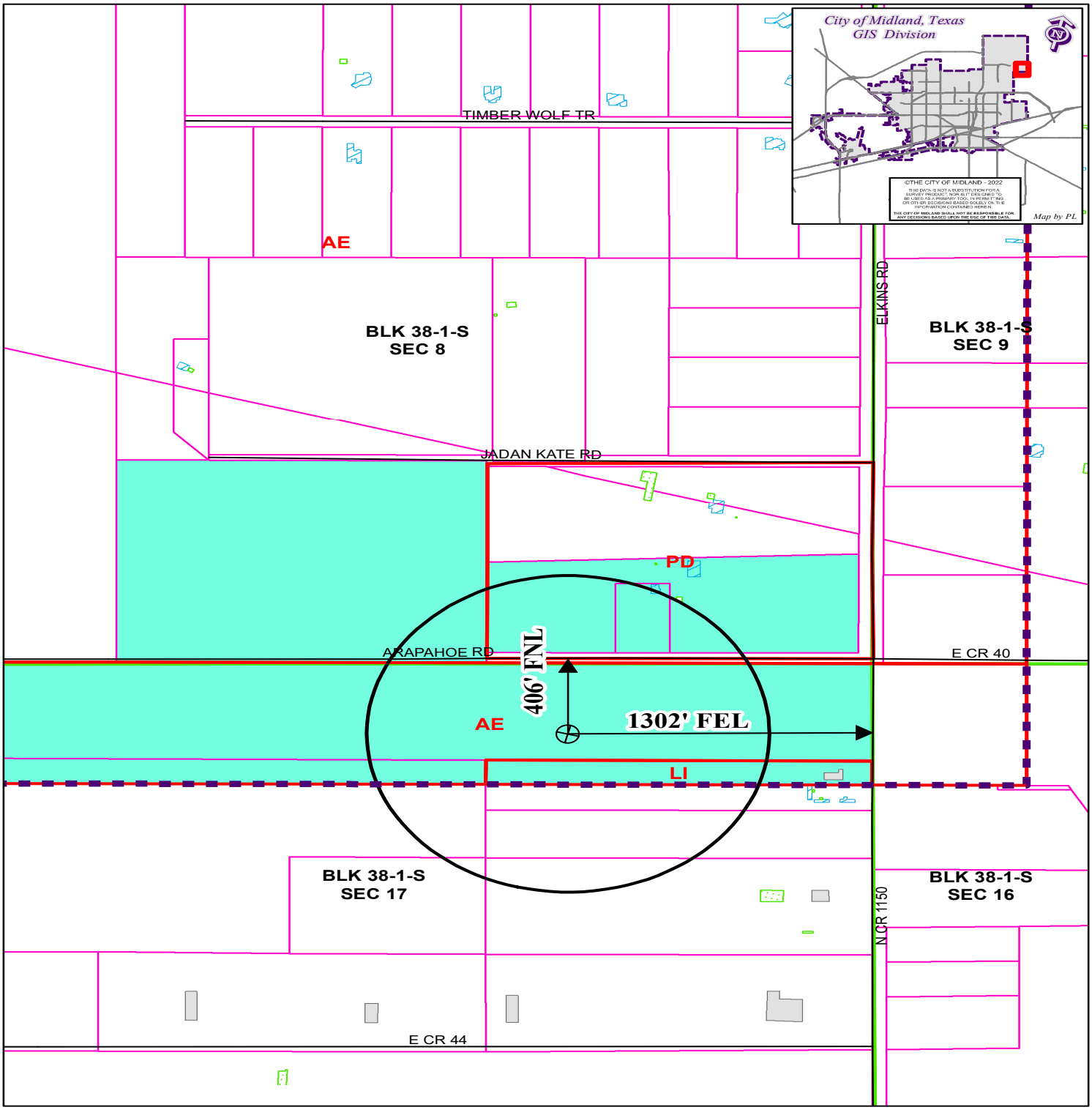
State of Texas)

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NOTARY PUBLIC
ID# 11239288
State of Texas
Comm. Exp. 06-01-2022
[SEAL]

Notary Public, State of 6/01/2022



LOCATION AND ZONING MAP

Oil-044057-2022 **Scale: 1" = 600'**

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Stimson E17D 104H

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

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AE	AGRICULTURE ESTATE	01, 02	OFFICE
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1F, 1F2, 1F3	ONE-FAMILY DWELLING	CR1, CR2, CR3	LOCAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
04/27/2022	Pioneer Natural Resources, USA, Inc.	777 Hidden Ridge Lane Irving, Texas 75038

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Matt Mathis, Field Production Operations Manager	3617 N Big Spring St Midland, Texas 79705	432-571-3086 Office 469-203-5174 Mobile Rep. Fax
Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1): Laura Wallace, Sr Staff Regulatory Specialist
972-969-1742 Office or 817-682-3483 Mobile

Option A:

24/7 Answering Services - No. 1 (Tele.): 432-571-2666 **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** Attached as Exhibit A

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):
Pioneer Remote Operations Hub
3617 N Big Spring St. Midland, Texas 79705
432-571-2666 (Available 24/7)

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** Attached as Exhibit B

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1. See Attached Exhibit C
2.
3.

ATTACHED AS EXHIBIT C **is (a** ***Title Opinion by*** Various - See Exhibits ***, a licensed Texas Attorney/Title Commitment by Abstract Company/a Take-off from , a Certified Petroleum Landman/an opinion letter from ,*** ***a licensed Texas Attorney)*** **indicating that [Operator] has a legal right to develop the mineral estate that is the subject of this Application. [See § J(5)].**

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General Description of Current Surface Use (within 860 feet of proposed surface location):

Located in Section 17, Block 38, T1S, T&P RR Co., Abstract 152, Midland County, Texas

Surface is owned by Pioneer Natural Resources. There are seven additional owners of property within 860' of proposed Surface Hole Locations. See attached Exhibit C for details.

Property is currently undeveloped. Tank battery will be located outside the city limits.

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***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Stimson E17E 105H

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

A wellbore schematic with the applicable information is attached within Exhibit G.

Legal Description of Proposed Well Site: Surface Hole Location:

406' FNL, 1282' FEL, Section 17, Block 38, T1S, T&P RR Co., Abstract 152, Midland County, Texas

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The route for electric lines can be found on Exhibit N

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Pioneer Natural Resources
[NAME OF COMPANY]

By Laura E Wallace
Its Regulatory Advisor

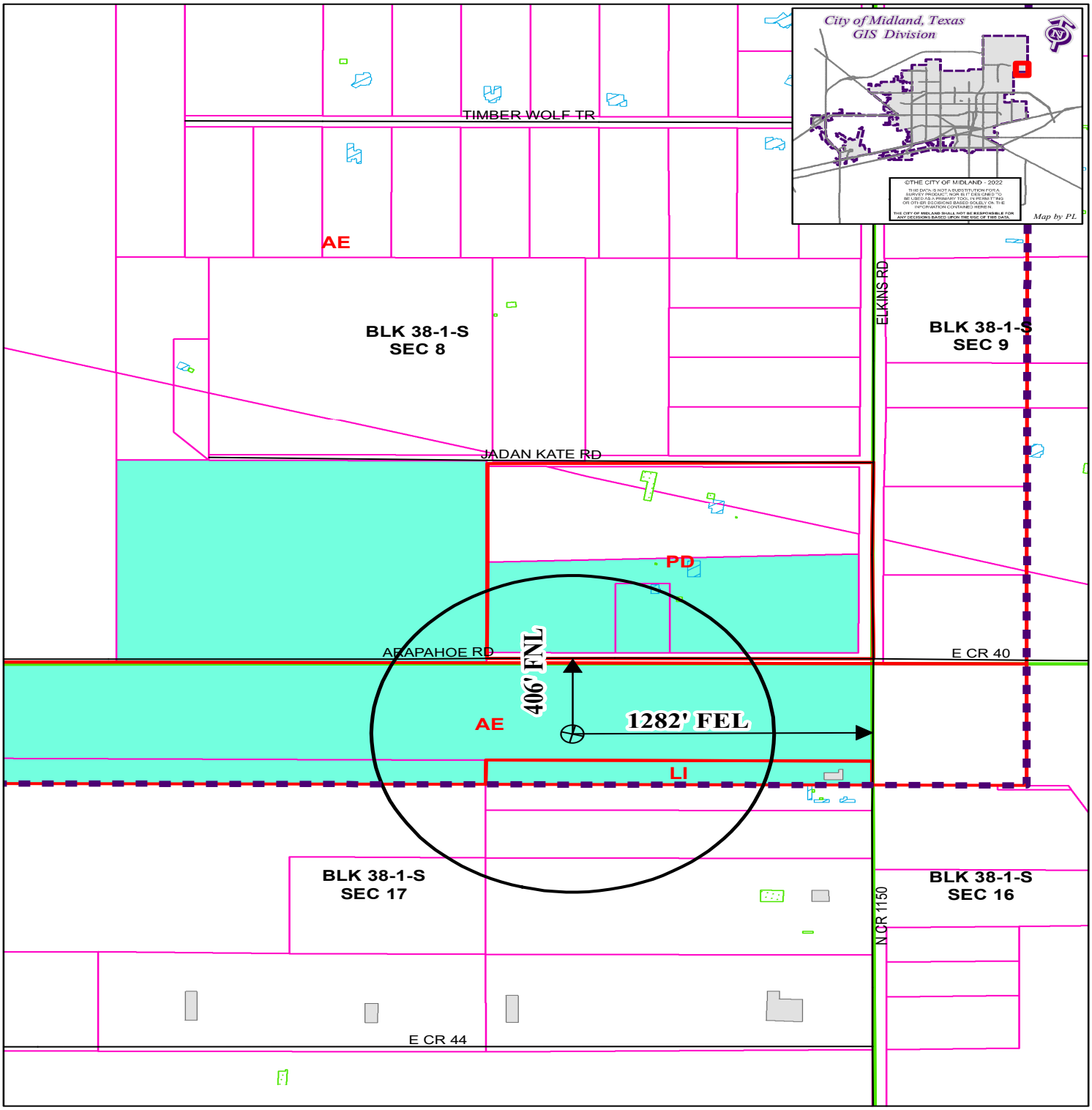
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NOTARY PUBLIC
ID# 11239288
State of Texas
Comm. Exp. 06-01-2022
[SEAL]

Notary Public, State of 6/01/2022



LOCATION AND ZONING MAP

Oil-044058-2022 **Scale: 1" = 600'**

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Generally located 406 feet south of Arapahoe Road and 1,282 feet west of Elkins Road.

Stimson E17E 105H

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
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ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

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IV. Well & Operations Information

Proposed Well Name: Stimson E17F 106H

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

A wellbore schematic with the applicable information is attached within Exhibit G.

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Pioneer Natural Resources
[NAME OF COMPANY]

By Laura E Wallace
Its Regulatory Advisor

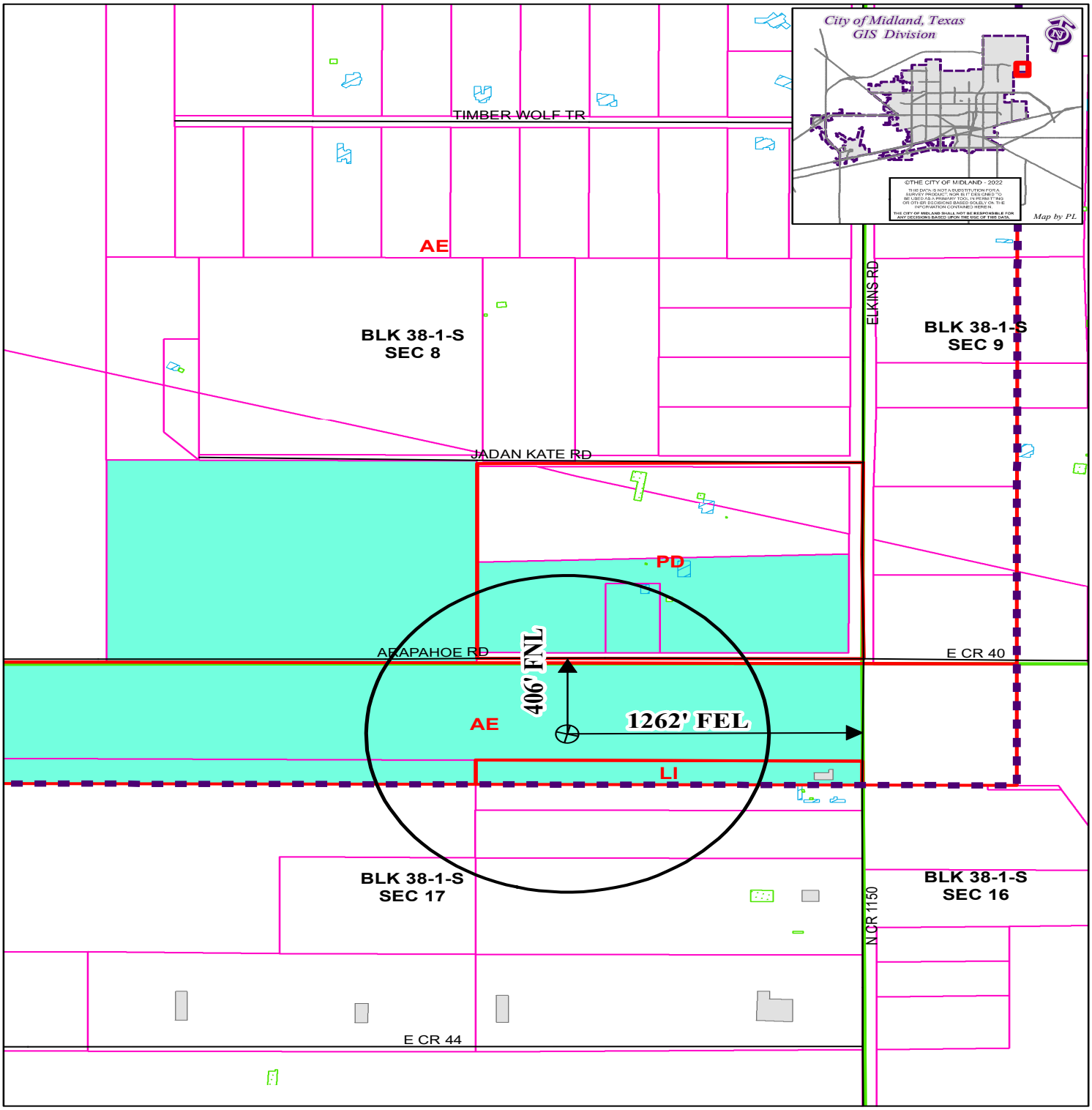
State of Texas)

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HEATHER M BARCIA
NOTARY PUBLIC
ID# 11239288
State of Texas
Comm. Exp. 06-01-2022
[SEAL]

Notary Public, State of 6/01/2022



LOCATION AND ZONING MAP

Oil-044059-2022 **Scale: 1" = 600'**

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Stimson E17F 106H

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
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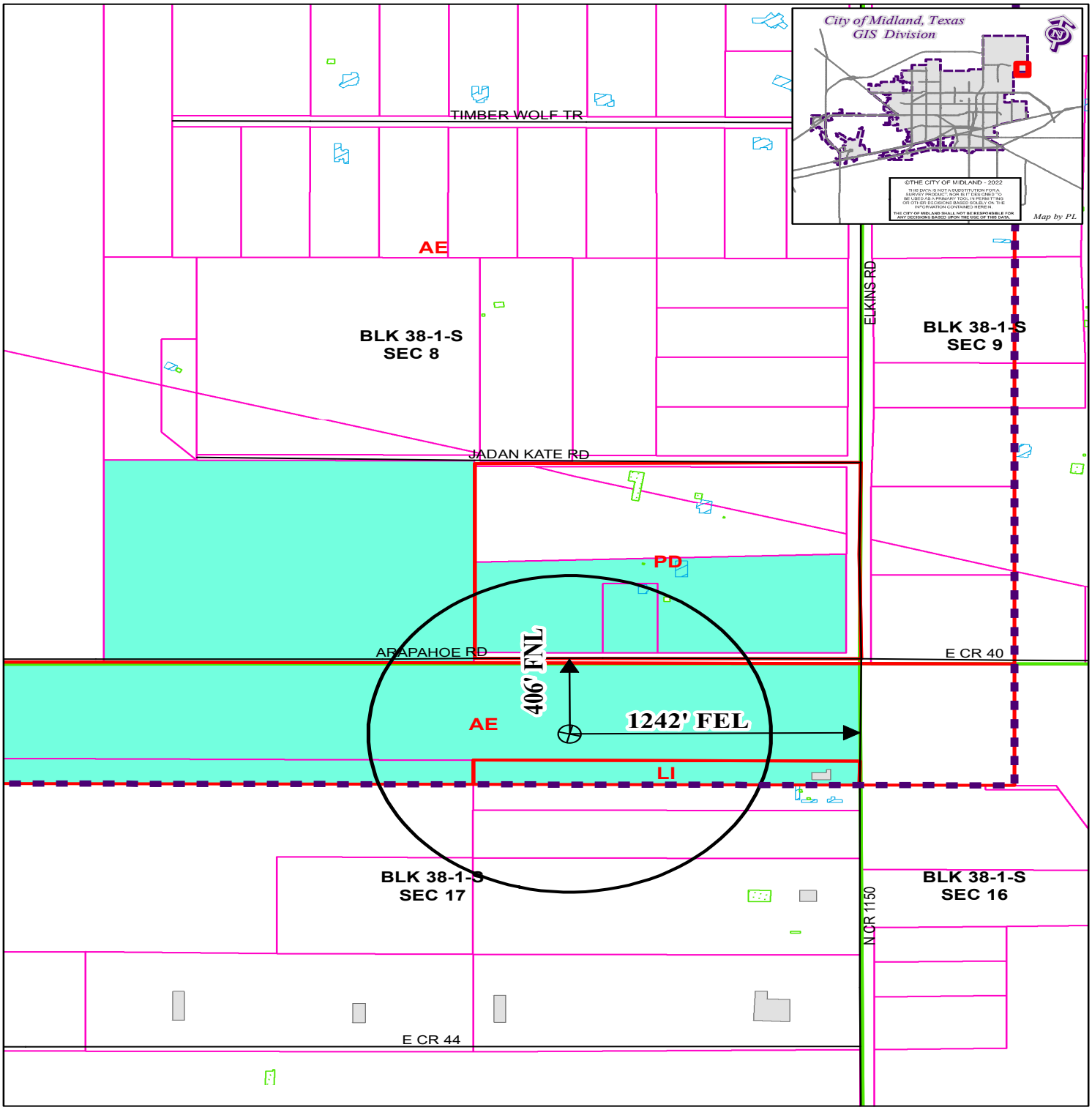
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Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** Attached as Exhibit A

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):
Pioneer Remote Operations Hub
3617 N Big Spring St. Midland, Texas 79705
432-571-2666 (Available 24/7)

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** Attached as Exhibit B

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1. See Attached Exhibit C
2.
3.

ATTACHED AS EXHIBIT C **is (a** ***Title Opinion by*** Various - See Exhibits ***, a licensed Texas Attorney/Title Commitment by Abstract Company/a Take-off from , a Certified Petroleum Landman/an opinion letter from ,*** ***a licensed Texas Attorney)*** **indicating that [Operator] has a legal right to develop the mineral estate that is the subject of this Application. [See § J(5)].**

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):

Located in Section 17, Block 38, T1S, T&P RR Co., Abstract 152, Midland County, Texas

Surface is owned by Pioneer Natural Resources. There are seven additional owners of property within 860' of proposed Surface Hole Locations. See attached Exhibit C for details.

Property is currently undeveloped. Tank battery will be located outside the city limits.

ATTACHED AS EXHIBIT D **is a Current Tax Roll from Martin & Midland Central Appraisal District.**

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Stimson E17H 108H

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

A wellbore schematic with the applicable information is attached within Exhibit G.

Legal Description of Proposed Well Site: Surface Hole Location:

406' FNL, 1222' FEL, Section 17, Block 38, T1S, T&P RR Co., Abstract 152, Midland County, Texas

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***ATTACHED AS EXHIBIT N* is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: N/A

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Description of water source to be used during Drilling:

Water for drilling will be pulled from an existing fresh water pond located 3750' southeast of the pad. See Exhibit N.

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The route for electric lines can be found on Exhibit N

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]:

A freshwater pit is proposed. See Exhibit O and V for details on closing. Variance on timing is requested.

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Pioneer Natural Resources
[NAME OF COMPANY]

By Laura E Wallace
Its Regulatory Advisor

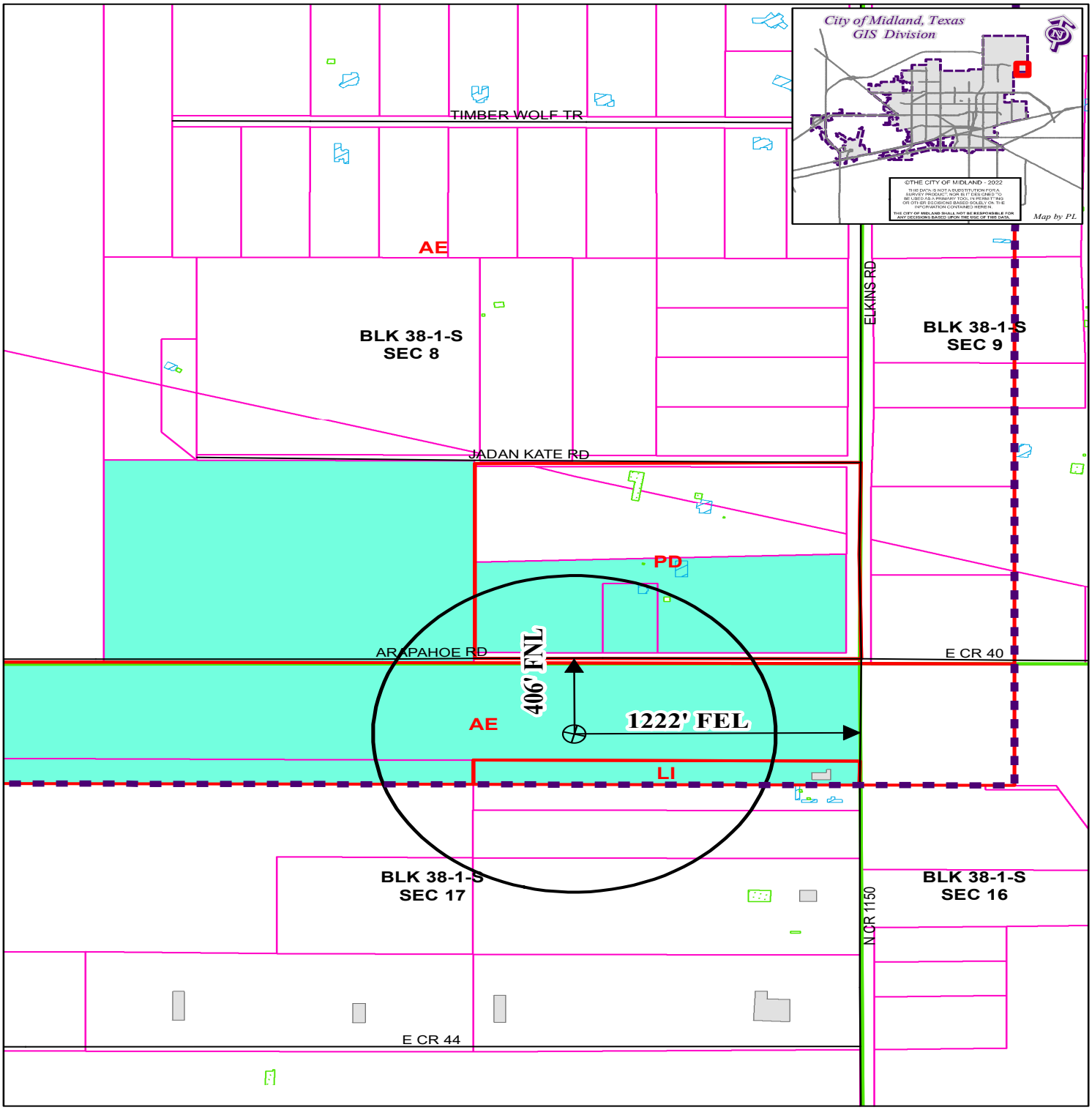
State of Texas)

County of DALLAS)

, personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

HEATHER M BARCIA
NOTARY PUBLIC
ID# 11239288
State of Texas
Comm. Exp. 06-01-2022
[SEAL]

Notary Public, State of 6/01/2022



LOCATION AND ZONING MAP

Oil-044063-2022 **Scale: 1" = 600'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 406' FNL and 1222' FEL, Section 17, Block 38-1-S, T&P RR CO Survey, Midland County, Texas.

Generally located 406 feet south of Arapahoe Road and 1,222 feet west of Elkins Road.

Stimson E17H 108H

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F, 1H2, 3F3	ONE-FAMILY DWELLING	C1R, C2R, LLRS	LOCAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
04/27/2022	Pioneer Natural Resources, USA, Inc.	777 Hidden Ridge Lane Irving, Texas 75038

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Matt Mathis, Field Production Operations Manager	3617 N Big Spring St Midland, Texas 79705	432-571-3086 Office 469-203-5174 Mobile Rep. Fax
Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1): Laura Wallace, Sr Staff Regulatory Specialist
972-969-1742 Office or 817-682-3483 Mobile

Option A:

24/7 Answering Services - No. 1 (Tele.): 432-571-2666 **No. 2 (Tele.):**

Option B:

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IV. Well & Operations Information

Proposed Well Name: Stimson E17I 109H

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

A wellbore schematic with the applicable information is attached within Exhibit G.

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Pioneer Natural Resources
[NAME OF COMPANY]

By Laura E Wallace
Its Regulatory Advisor

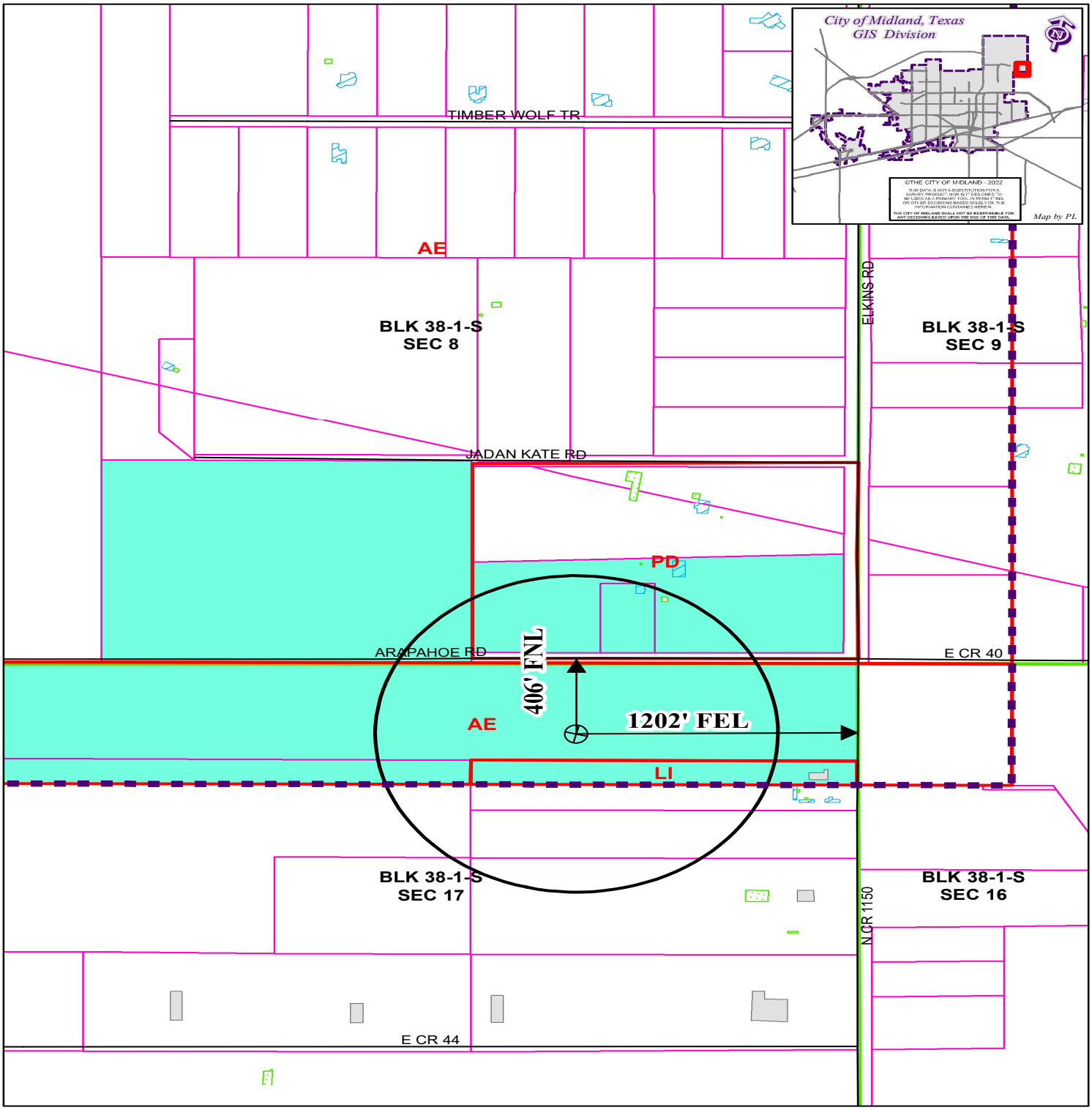
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Comm. Exp. 06-01-2022
[SEAL]

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(Pursuant to Midland City Ordinance No. 8769)

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Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Matt Mathis, Field Production Operations Manager	3617 N Big Spring St Midland, Texas 79705	432-571-3086 Office 469-203-5174 Mobile Rep. Fax
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Pioneer Natural Resources
[NAME OF COMPANY]

By Laura E Wallace
Its Regulatory Advisor

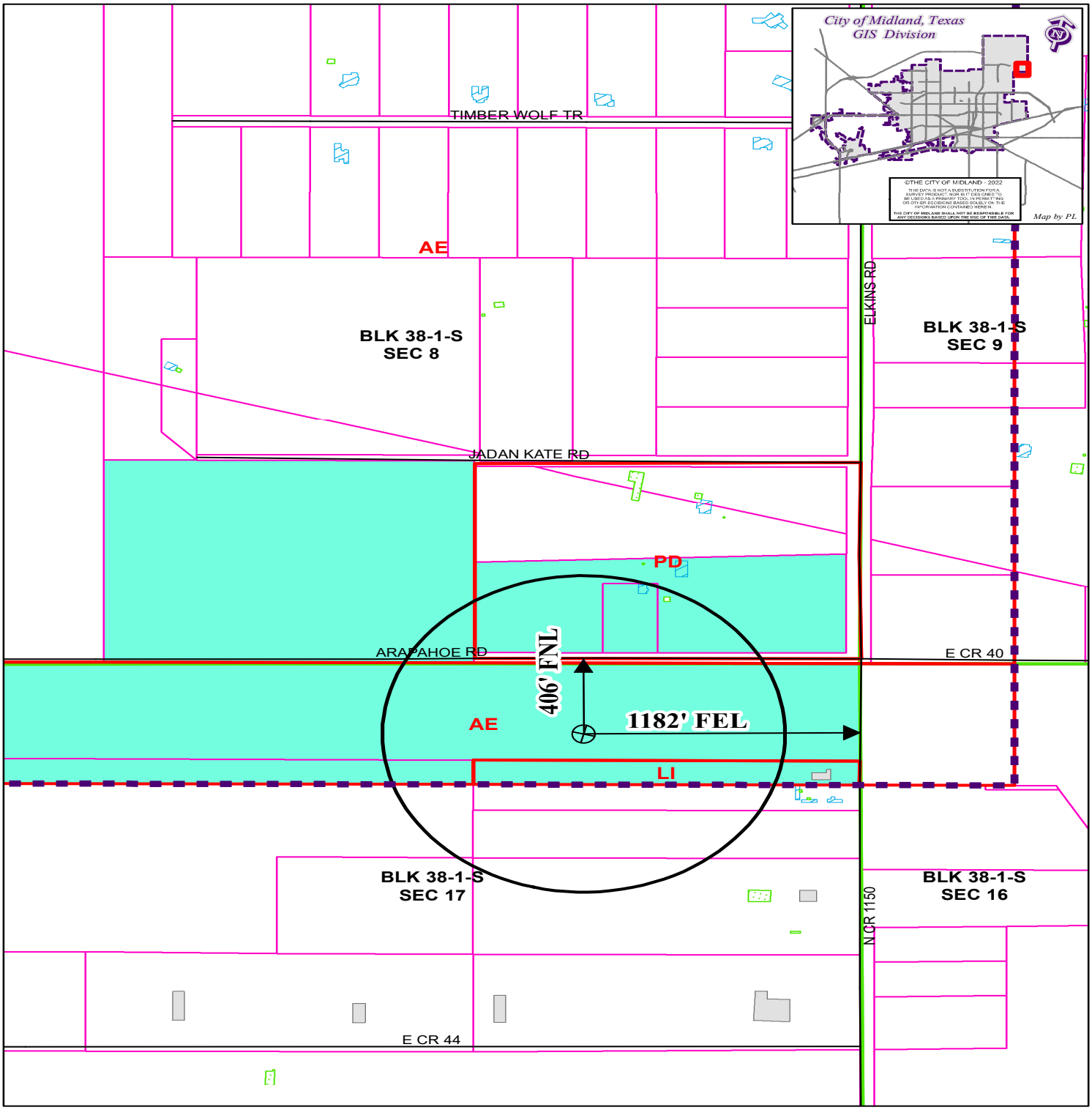
State of Texas)

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HEATHER M BARCIA
NOTARY PUBLIC
ID# 11239288
State of Texas
Comm. Exp. 06-01-2022
[SEAL]

Notary Public, State of 6/01/2022



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CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
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2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

OIL AND GAS WELL PERMIT

The City Council of the City of Midland, Texas, at its regular meeting on October 25, 2022, considered the application of Pioneer Natural Resources, USA, Inc. ("Operator") dated April 27, 2022, to drill an oil and gas well inside the territorial limits of the City of Midland, Texas. The City Council of the City of Midland, Texas, by appropriate action approved the application and authorized the issuance of this permit.

This documentation hereby constitutes a permit, issued in accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), to drill an oil and gas well as requested in Operator's application that has been filed with the Oil & Gas Compliance Coordinator and is incorporated herein for all legal purposes.

The location of Operator's Stimson E17B 102H oil and gas well shall be 405 feet from the north line and 1,342 feet from the east line, Section 17, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

This permit shall be effective from October 25, 2022 through October 25, 2023, and so long thereafter as oil or gas is produced, or until such time as Operator has permanently abandoned the operations of the well or facility for which this permit is issued.

The issuance of this permit by the City of Midland does not in any way alter or modify the rights as between the surface estate owner(s) and mineral estate owner(s) if there exists a severance of the surface estate and mineral estate. This permit in no way exempts Operator from its responsibilities or obligations as to third parties. The issuance of this permit only means that Operator has, at this time, complied with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance No. 8769) and that the Midland City Council, as a regulatory body, will allow Operator to proceed under the conditions of this permit. The issuance of this permit is intended to be only a negative pronouncement that grants no affirmative rights to the permittee to occupy the property. It is expressly provided that this permit does not authorize a trespass by the permittee as to any third party. This

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NOTWITHSTANDING ANY OTHER PROVISION, OPERATOR HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY OF MIDLAND, CITY OF MIDLAND'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH OPERATOR HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKING CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS OR CITY OF MIDLAND'S NEGLIGENCE.

OPERATOR AGREES TO INDEMNIFY AND HOLD HARMLESS AND DEFEND THE CITY OF MIDLAND, THE CITY'S OFFICERS, AGENTS, AND EMPLOYEES FROM ANY AND ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITY OF ANY KIND, INCLUDING ALL EXPENSES OF LITIGATION, COURT COSTS, AND ATTORNEY'S FEES, FOR INJURY TO OR DEATH OF ANY PERSON, OR FOR DAMAGE TO ANY PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE WORK DONE BY OPERATOR UNDER AN OIL AND GAS WELL PERMIT WHERE SUCH INJURIES, DEATH, OR DAMAGES ARE CAUSED BY OPERATOR'S SOLE NEGLIGENCE OR THE JOINT NEGLIGENCE OF THE OPERATOR AND ANY OTHER PERSON OR ENTITY.

A right-of-way license agreement approved by a resolution of the Midland City Council is required for any oil and/or gas flowline or pipeline or any other device associated with a proposed well site that extends into, on, above, in, under, across or through any City rights-of-way, including but not limited to streets, alleys, and utility and drainage rights-of-way.

If the well that is the subject of this permit is not located within the County of Midland, Texas, Operator shall notify the Midland Central Appraisal District of the following: (1) the well's location within the territorial limits of the City of Midland; and (2) that the City of

Midland is to be included as a taxing entity. Operator shall make said notification no later than 60 days after completion of the well.

The Midland City Council, in granting this permit, also grants the following variance(s):

1. Twenty-four hour hydraulic fracturing operations are permitted.
2. Close reserve pit 3 months (90 days) after operations are completed on all wells on the pad.
3. Drill cuttings shall be removed from the surface location.
4. No landscaping or irrigation are required.

This permit shall constitute a written contract for purposes of insurance requirements.

In addition to the requirements of this permit and the Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), including, but not limited to Subsections (K) through (Z), Operator shall develop, maintain and operate the well described herein in accordance with the conditions, limitations and safeguards contained in Operator's application for said well.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of October 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Pioneer Natural Resources, USA, Inc.

By: _____

Laura Wallace

Regulatory Specialist

OIL AND GAS WELL PERMIT

The City Council of the City of Midland, Texas, at its regular meeting on October 25, 2022, considered the application of Pioneer Natural Resources, USA, Inc. ("Operator") dated April 27, 2022, to drill an oil and gas well inside the territorial limits of the City of Midland, Texas. The City Council of the City of Midland, Texas, by appropriate action approved the application and authorized the issuance of this permit.

This documentation hereby constitutes a permit, issued in accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), to drill an oil and gas well as requested in Operator's application that has been filed with the Oil & Gas Compliance Coordinator and is incorporated herein for all legal purposes.

The location of Operator's Stimson E17C 103H oil and gas well shall be 405 feet from the north line and 1,322 feet from the east line, Section 17, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

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Laura Wallace

Regulatory Specialist

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The location of Operator's Stimson E17D 104H oil and gas well shall be 406 feet from the north line and 1,302 feet from the east line, Section 17, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

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BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

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Laura Wallace

Regulatory Specialist

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The location of Operator's Stimson E17E 105H oil and gas well shall be 406 feet from the north line and 1,282 feet from the east line, Section 17, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

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The location of Operator's Stimson E17F 106H oil and gas well shall be 406 feet from the north line and 1,262 feet from the east line, Section 17, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

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OIL AND GAS WELL PERMIT

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This documentation hereby constitutes a permit, issued in accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), to drill an oil and gas well as requested in Operator's application that has been filed with the Oil & Gas Compliance Coordinator and is incorporated herein for all legal purposes.

The location of Operator's Stimson E17G 107H oil and gas well shall be 406 feet from the north line and 1,242 feet from the east line, Section 17, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

This permit shall be effective from October 25, 2022 through October 25, 2023, and so long thereafter as oil or gas is produced, or until such time as Operator has permanently abandoned the operations of the well or facility for which this permit is issued.

The issuance of this permit by the City of Midland does not in any way alter or modify the rights as between the surface estate owner(s) and mineral estate owner(s) if there exists a severance of the surface estate and mineral estate. This permit in no way exempts Operator from its responsibilities or obligations as to third parties. The issuance of this permit only means that Operator has, at this time, complied with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance No. 8769) and that the Midland City Council, as a regulatory body, will allow Operator to proceed under the conditions of this permit. The issuance of this permit is intended to be only a negative pronouncement that grants no affirmative rights to the permittee to occupy the property. It is expressly provided that this permit does not authorize a trespass by the permittee as to any third party. This

permit does not in any way restrict the use of the surface estate. Securing a permit does not authorize Operator to act with impunity as to third parties, nor does it insulate Operator from the consequences of its actions with regard to those third parties. The receipt of a permit does not undertake to adjudicate property rights.

This permit granted by the City of Midland does not act to immunize Operator from civil tort liability from private parties for actions arising out of the use of the permit. This is because the permit is a "negative pronouncement" that grants no affirmative rights to the permittee. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of State or local law or regulations. Operator has obtained a permit from the City of Midland but the consequences of acting under the permit have not been immunized. The fact that the City of Midland has issued a permit to drill an oil and gas well does not shield Operator from third party tort liability stemming from the consequences of the permitted activity.

NOTWITHSTANDING ANY OTHER PROVISION, OPERATOR HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY OF MIDLAND, CITY OF MIDLAND'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH OPERATOR HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKING CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS OR CITY OF MIDLAND'S NEGLIGENCE.

OPERATOR AGREES TO INDEMNIFY AND HOLD HARMLESS AND DEFEND THE CITY OF MIDLAND, THE CITY'S OFFICERS, AGENTS, AND EMPLOYEES FROM ANY AND ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITY OF ANY KIND, INCLUDING ALL EXPENSES OF LITIGATION, COURT COSTS, AND ATTORNEY'S FEES, FOR INJURY TO OR DEATH OF ANY PERSON, OR FOR DAMAGE TO ANY PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE WORK DONE BY OPERATOR UNDER AN OIL AND GAS WELL PERMIT WHERE SUCH INJURIES, DEATH, OR DAMAGES ARE CAUSED BY OPERATOR'S SOLE NEGLIGENCE OR THE JOINT NEGLIGENCE OF THE OPERATOR AND ANY OTHER PERSON OR ENTITY.

A right-of-way license agreement approved by a resolution of the Midland City Council is required for any oil and/or gas flowline or pipeline or any other device associated with a proposed well site that extends into, on, above, in, under, across or through any City rights-of-way, including but not limited to streets, alleys, and utility and drainage rights-of-way.

If the well that is the subject of this permit is not located within the County of Midland, Texas, Operator shall notify the Midland Central Appraisal District of the following: (1) the well's location within the territorial limits of the City of Midland; and (2) that the City of

Midland is to be included as a taxing entity. Operator shall make said notification no later than 60 days after completion of the well.

The Midland City Council, in granting this permit, also grants the following variance(s):

1. Twenty-four hour hydraulic fracturing operations are permitted.
2. Close reserve pit 3 months (90 days) after operations are completed on all wells on the pad.
3. Drill cuttings shall be removed from the surface location.
4. No landscaping or irrigation are required.

This permit shall constitute a written contract for purposes of insurance requirements.

In addition to the requirements of this permit and the Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), including, but not limited to Subsections (K) through (Z), Operator shall develop, maintain and operate the well described herein in accordance with the conditions, limitations and safeguards contained in Operator's application for said well.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of October 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Pioneer Natural Resources, USA, Inc.

By: _____

Laura Wallace

Regulatory Specialist

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The location of Operator's Stimson E17H 108H oil and gas well shall be 406 feet from the north line and 1,222 feet from the east line, Section 17, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

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Midland is to be included as a taxing entity. Operator shall make said notification no later than 60 days after completion of the well.

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Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Pioneer Natural Resources, USA, Inc.

By: _____

Laura Wallace

Regulatory Specialist

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The location of Operator's Stimson E17I 109H oil and gas well shall be 406 feet from the north line and 1,202 feet from the east line, Section 17, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

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CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Pioneer Natural Resources, USA, Inc.

By: _____

Laura Wallace

Regulatory Specialist

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GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of October 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Pioneer Natural Resources, USA, Inc.

By: _____

Laura Wallace

Regulatory Specialist

City Council Meeting

Item Number: 14

Meeting Date: October 25, 2022

To: City Council / City Manager

From: Ron Jenkins, Oil and Gas Coordinator

Subject: RESOLUTION APPROVING THE ISSUANCE OF A PERMIT TO PERMIAN DEEP ROCK OIL CO., LLC ("OPERATOR") TO DRILL AN OIL AND GAS WELL WITHIN THE CITY LIMITS LOCATED IN SECTION 12, BLOCK 39, T-2-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED 410 FEET EAST OF SOUTH LAMESA ROAD AND 463 FEET SOUTH OF INTERSTATE 20); AND PROVIDING THAT SAID PERMIT DOES NOT REQUIRE A NEW ROAD REPAIR AGREEMENT BUT SHALL BE CONSOLIDATED UNDER AN EXISTING ROAD REPAIR AGREEMENT (DISTRICT 2) (DEVELOPMENT SERVICES)

Purpose:

Resolution approving the issuance of permit to Permian Deep Rock Oil Co., LLC ("Operator") for the drilling of the oil and gas well Rebel 115 MIPA Unit #H120LS; said well being generally located 410 feet east of South Lamesa Road and 463 feet south of I-20. The required 30-day public comment has passed, and the Council may consider this request. No notices of objection received.

Recommended City Council Action:

Approve

Fiscal Impact:

There is no cost to the City to process this application.

Discussion:

The Oil and Gas Advisory Committee has reviewed the well site in detail and recommends approval with updated exhibit. A 160 ft. long 16 ft. sound wall will be used during drilling and completion operations being located on the north side of location. Tank battery is in the county.

There have been previous permitted applications near this well pad requiring the same variances. The operator has a surface agreement with the surface owner. Receiving support of the Oil & Gas Advisory Committee, Permian Deep Rock Oil is requesting the following variances:

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(1) Permian Deep Rock Oil Company requests to allow for twenty-four-hour fracing operations.
(2) Permian Deep Rock Oil Company requests variance for fence of the drill pad instead of individual well
(3) Permian Deep Rock Oil Company requests a variance to the requirement of landscaping and irrigation due to no city water is available.

Attachments: Applications; Location maps; Exhibit - Drill site maps, Exhibit – Flow Line Location.

Morris William Jr.

City Manager's Office

RESOLUTION NO. _____

RESOLUTION APPROVING THE ISSUANCE OF A PERMIT TO PERMIAN DEEP ROCK OIL CO., LLC ("OPERATOR") TO DRILL AN OIL AND GAS WELL WITHIN THE CITY LIMITS LOCATED IN SECTION 12, BLOCK 39, T-2-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED 410 FEET EAST OF SOUTH LAMESA ROAD AND 463 FEET SOUTH OF INTERSTATE 20); AND PROVIDING THAT SAID PERMIT DOES NOT REQUIRE A NEW ROAD REPAIR AGREEMENT BUT SHALL BE CONSOLIDATED UNDER AN EXISTING ROAD REPAIR AGREEMENT

WHEREAS, on December 8, 2009, the City Council of the City of Midland duly approved Ordinance No. 8769 which amended Title VI, "Police Regulations," Chapter 1, "General Offenses," of the City Code of Midland, Texas, so as to establish Section 23, "Oil and Gas Well Permits issued on or after January 1, 2010," which governs the granting or rejecting of Oil and Gas Well Permits; and

WHEREAS, the purpose of said section is to establish reasonable and uniform limitations, safeguards, and regulations for present and future operations related to the exploring, drilling, developing, producing, transporting and storing of oil or gas or other substances produced in association with oil and gas within the City of Midland to protect the health, safety, and general welfare of the public and the orderly development of the City of Midland; abate or prevent potential public nuisances; minimize the potential adverse impact to surface and mineral owners, protect the quality of the environment and encourage the orderly production of available mineral resources; and

WHEREAS, Section 6-1-23(C) of the City Code of Midland, Texas, makes it an offense to knowingly drill or participate in the drilling of any well or to re-enter any well within the corporate limits of the City of Midland without a permit having first been issued by the authority of the City Council; and

WHEREAS, Operator has submitted an application to the City of Midland to drill an oil and gas well on the property described in Section Two hereof; and

WHEREAS, notice of the public hearing on this matter was provided in accordance with Section 6-1-23(H)(1) and a public hearing was held on September 13, 2022; and

WHEREAS, subsequent to said public hearing, and in accordance with Section 6-1-23(H)(1), the City Council allowed the public and Operator thirty (30) days to submit written input to the City Manager regarding Operator's application to drill an oil and gas well on the property described in Section Two hereof; and

WHEREAS, the City Council has considered those issues set forth in Section 6-1-23(I) in determining whether to grant or deny a permit to Operator to drill an oil and gas well on the property described in Section Two hereof; and

WHEREAS, the City Council finds it to be in the public interest to approve the issuance of a permit to Operator to drill an oil and gas well on the property described in Section Two hereof;

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

SECTION ONE. That the above recitals are hereby adopted and approved by the City Council of the City of Midland.

SECTION TWO. That the Mayor is hereby authorized and directed to execute a permit, on behalf of the City of Midland, that will allow Operator to drill the following oil and gas well:

Rebel 115 MIPA Unit #H120LS

located in Section 12, Block 39, T-2-S, T&P RR Co. Survey, City and County of Midland, Texas. Said permit is attached hereto as Exhibit "A" and incorporated herein for all legal purposes.

SECTION THREE. That said permit does not require a new road repair agreement but shall be consolidated under the existing road repair agreement between Operator and the City of Midland for Operator's wells located on the property described in Section Two

hereof.

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., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

EXHIBIT "A"

OIL AND GAS WELL PERMIT

The City Council of the City of Midland, Texas, at its regular meeting on October 25, 2022, considered the application of Permian Deep Rock Oil Co., LLC ("Operator") dated July 1, 2022, to drill an oil and gas well inside the territorial limits of the City of Midland, Texas. The City Council of the City of Midland, Texas, by appropriate action approved the application and authorized the issuance of this permit.

This documentation hereby constitutes a permit, issued in accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), to drill an oil and gas well as requested in Operator's application that has been filed with the Oil & Gas Compliance Coordinator and is incorporated herein for all legal purposes.

The location of Operator's Rebel 115 MIPA Unit #H120LS oil and gas well shall be 183 feet from the north line and 410 feet from the west line, Section 12, Block 39, T-2-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

This permit shall be effective from October 25, 2022 through October 25, 2023, and so long thereafter as oil or gas is produced, or until such time as Operator has permanently abandoned the operations of the well or facility for which this permit is issued.

The issuance of this permit by the City of Midland does not in any way alter or modify the rights as between the surface estate owner(s) and mineral estate owner(s) if there exists a severance of the surface estate and mineral estate. This permit in no way exempts Operator from its responsibilities or obligations as to third parties. The issuance of this permit only means that Operator has, at this time, complied with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance No. 8769) and that the Midland City Council, as a regulatory body, will allow Operator to proceed under the conditions of this permit. The issuance of this permit is intended to be only a negative pronouncement that grants no affirmative rights to the permittee to occupy the property. It is expressly provided that this permit does not authorize a trespass by the permittee as to any third party. This

permit does not in any way restrict the use of the surface estate. Securing a permit does not authorize Operator to act with impunity as to third parties, nor does it insulate Operator from the consequences of its actions with regard to those third parties. The receipt of a permit does not undertake to adjudicate property rights.

This permit granted by the City of Midland does not act to immunize Operator from civil tort liability from private parties for actions arising out of the use of the permit. This is because the permit is a "negative pronouncement" that grants no affirmative rights to the permittee. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of State or local law or regulations. Operator has obtained a permit from the City of Midland but the consequences of acting under the permit have not been immunized. The fact that the City of Midland has issued a permit to drill an oil and gas well does not shield Operator from third party tort liability stemming from the consequences of the permitted activity.

NOTWITHSTANDING ANY OTHER PROVISION, OPERATOR HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY OF MIDLAND, CITY OF MIDLAND'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH OPERATOR HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKING CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS OR CITY OF MIDLAND'S NEGLIGENCE.

OPERATOR AGREES TO INDEMNIFY AND HOLD HARMLESS AND DEFEND THE CITY OF MIDLAND, THE CITY'S OFFICERS, AGENTS, AND EMPLOYEES FROM ANY AND ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITY OF ANY KIND, INCLUDING ALL EXPENSES OF LITIGATION, COURT COSTS, AND ATTORNEY'S FEES, FOR INJURY TO OR DEATH OF ANY PERSON, OR FOR DAMAGE TO ANY PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE WORK DONE BY OPERATOR UNDER AN OIL AND GAS WELL PERMIT WHERE SUCH INJURIES, DEATH, OR DAMAGES ARE CAUSED BY OPERATOR'S SOLE NEGLIGENCE OR THE JOINT NEGLIGENCE OF THE OPERATOR AND ANY OTHER PERSON OR ENTITY.

A right-of-way license agreement approved by a resolution of the Midland City Council is required for any oil and/or gas flowline or pipeline or any other device associated with a proposed well site that extends into, on, above, in, under, across or through any City rights-of-way, including but not limited to streets, alleys, and utility and drainage rights-of-way.

If the well that is the subject of this permit is not located within the County of Midland, Texas, Operator shall notify the Midland Central Appraisal District of the following: (1) the well's location within the territorial limits of the City of Midland; and (2) that the City of

Midland is to be included as a taxing entity. Operator shall make said notification no later than 60 days after completion of the well.

The Midland City Council, in granting this permit, also grants the following variance(s):

1. Twenty-four hour hydraulic fracturing operations.
2. In lieu of constructing a perimeter fence around this permitted well, a perimeter fence around the well pad site may be constructed. Said perimeter fence around the well pad site shall, at a minimum, meet the requirements of Ordinance No. 8769.
3. No landscaping or irrigation is required because City water is not available.

Sound walls shall be used during drilling and completion operations as noted in the application.

This permit shall constitute a written contract for purposes of insurance requirements.

In addition to the requirements of this permit and the Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), including, but not limited to Subsections (K) through (Z), Operator shall develop, maintain and operate the well described herein in accordance with the conditions, limitations and safeguards contained in Operator's application for said well.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of October 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Permian Deep Rock Oil Co., LLC

By: _____

Kyle M. Hammond

General Manager

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
07/01/2022	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Kyle M. Hammond	500 W. Wall St. Ste 300 Midland, TX 79701	432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes✓ No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** See Exhibit "B"

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1.

2.

3.

ATTACHED AS EXHIBIT C **is** List of subdivisions within Rebel Unit

See Exhibit "C"

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):
Surface use: Undeveloped pastures, service company yards and apartment complex

See Exhibit "D"

ATTACHED AS EXHIBIT D **is** ,

Current Tax Roll from Midland Central Appraisal District), **which lists**

the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Rebel 115 MIPA Unit #H120LS

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 183' FNL & 410' FWL,
Section 12 Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

***ATTACHED AS EXHIBIT I* is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].**

***ATTACHED AS EXHIBIT J* is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

***ATTACHED AS EXHIBIT K (if applicable)* is the list of alternative locations developed in consultation with the Oil & Gas Advisory Committee. [See § J(27)].**

***ATTACHED AS EXHIBIT L* is the Fencing and Irrigation Plan. [See § J(30)].**

***ATTACHED AS EXHIBIT M*: Road use and repair agreement attached**

***ATTACHED AS EXHIBIT N* is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

See Exhibit "N"

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

See Exhibit "O"

V. Additional Required Exhibits

***ATTACHED AS EXHIBIT P* is the *Letter of Credit/Certificate of Deposit* in accordance with Subsection (K)(2). [See § J(18)].**

***ATTACHED AS EXHIBIT Q* : Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by applicant are current. (See § J(29)**

***ATTACHED AS EXHIBIT R* is the required Insurance Certificate. [See § J(19) and § K(3)].**

***ATTACHED AS EXHIBIT S (if applicable)* is the Drainage Plan relating to Applicant's proposed operations. [See § J(21)].**

***ATTACHED AS EXHIBIT T* is Applicant's Emergency Action Response Plan. [See § J(22)].**

***ATTACHED AS EXHIBIT U* is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

ATTACHED AS EXHIBIT V: Applicants variances

Permian Deep Rock Oil Compnay
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

County of Midland)

Kyle Hammond , personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

Estella Peña
Notary Public, State of Texas

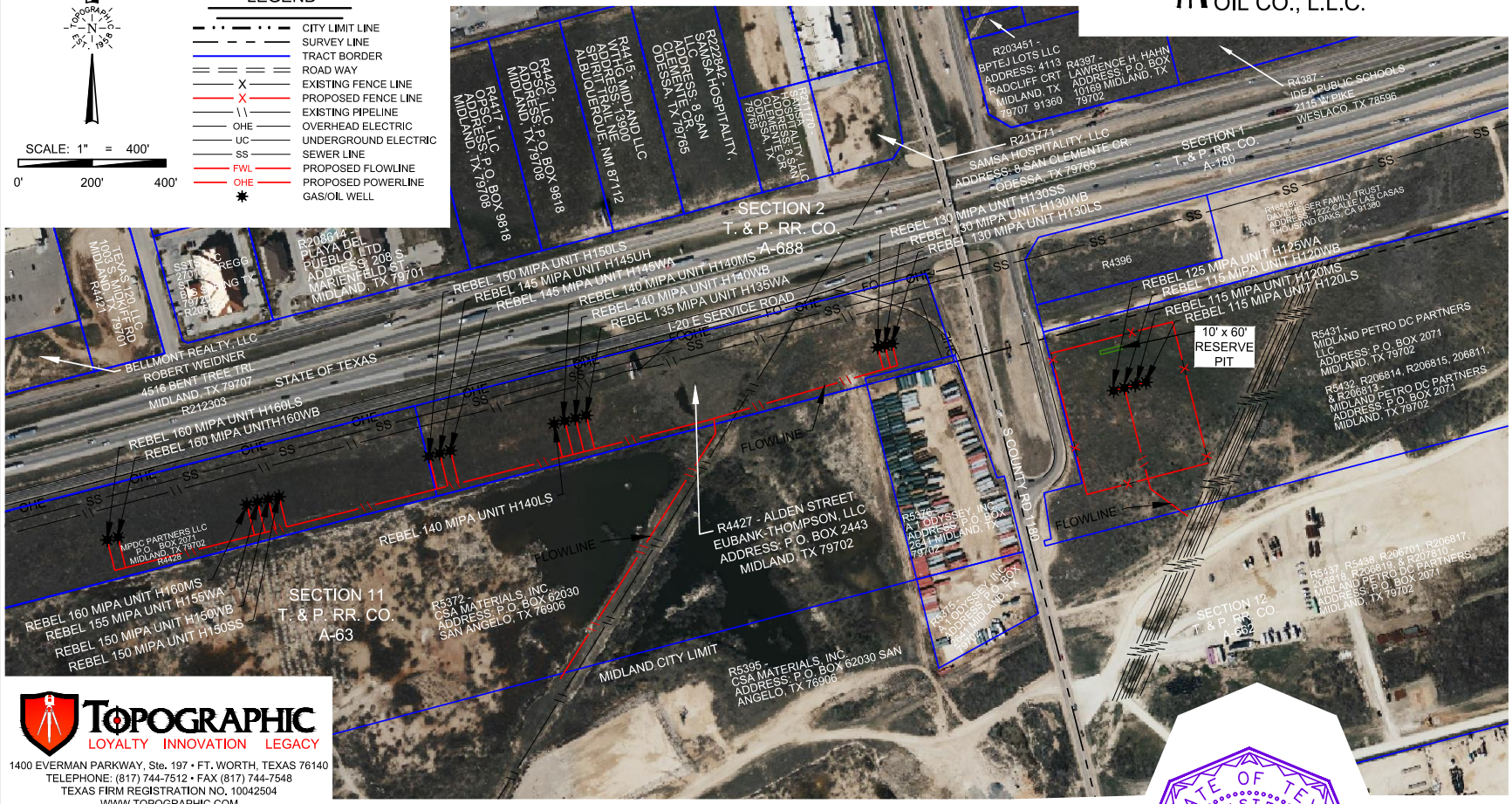
[S E A L]

ESTELLA PENA
Notary Public, State of Texas
My Commission Expires
August 03, 2025
NOTARY ID 13123361-8

EXHIBIT "G"

SECTION 12, BLOCK 39, T2S, T. & P. RR. CO. SURVEY, A-662
MIDLAND COUNTY, TEXAS

PERMIAN DEEP ROCK OIL CO., L.L.C.



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

REBEL UNIT
CITY PERMIT

DATE:	12/22/2021
FILE:	SK_REBEL_UNIT_PERMIT_E_PAD_REV10
DRAWN BY:	DRH
SHEET :	3 OF 8

REVISION:	
DRH	04/11/2022
DRH	04/14/2022
DRH	04/26/2022
DRH	06/03/2022
DRH	06/10/2022
DRH	06/21/2022
DRH	06/22/2022

NOTES:
1. ORIGINAL DOCUMENT SIZE: 11" X 8.5"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. CERTIFICATION IS MADE ONLY FOR PROPOSED UTILITIES AND SITES, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY PERMIAN DEEP ROCK OIL CO., L.L.C. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
4. ALL PROPOSED INFRASTRUCTURE SHOWN HEREON IS SOLELY FOR THE PURPOSE OF APPLYING FOR A PERMIT WITH THE CITY OF MIDLAND, TEXAS. THIS IS EXHIBIT IS NOT TO BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH THE T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THESE ARE FOR PLANNING PURPOSES ONLY.
5. ADJOINER INFORMATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
LAND SURVEYOR

JEFFREY N LUEDERS, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: October 7, 2021

S:\SURVEY\ARRINGTON\DP_7B_UNIT\FINAL_PRODUCTS\SKETCH\SK_REBEL_UNIT_PERMIT_E_PAD_REV10.DWG 6/23/2022 10:45:34 AM dharris

SCALE: 1" = 300'

0' 150' 300'

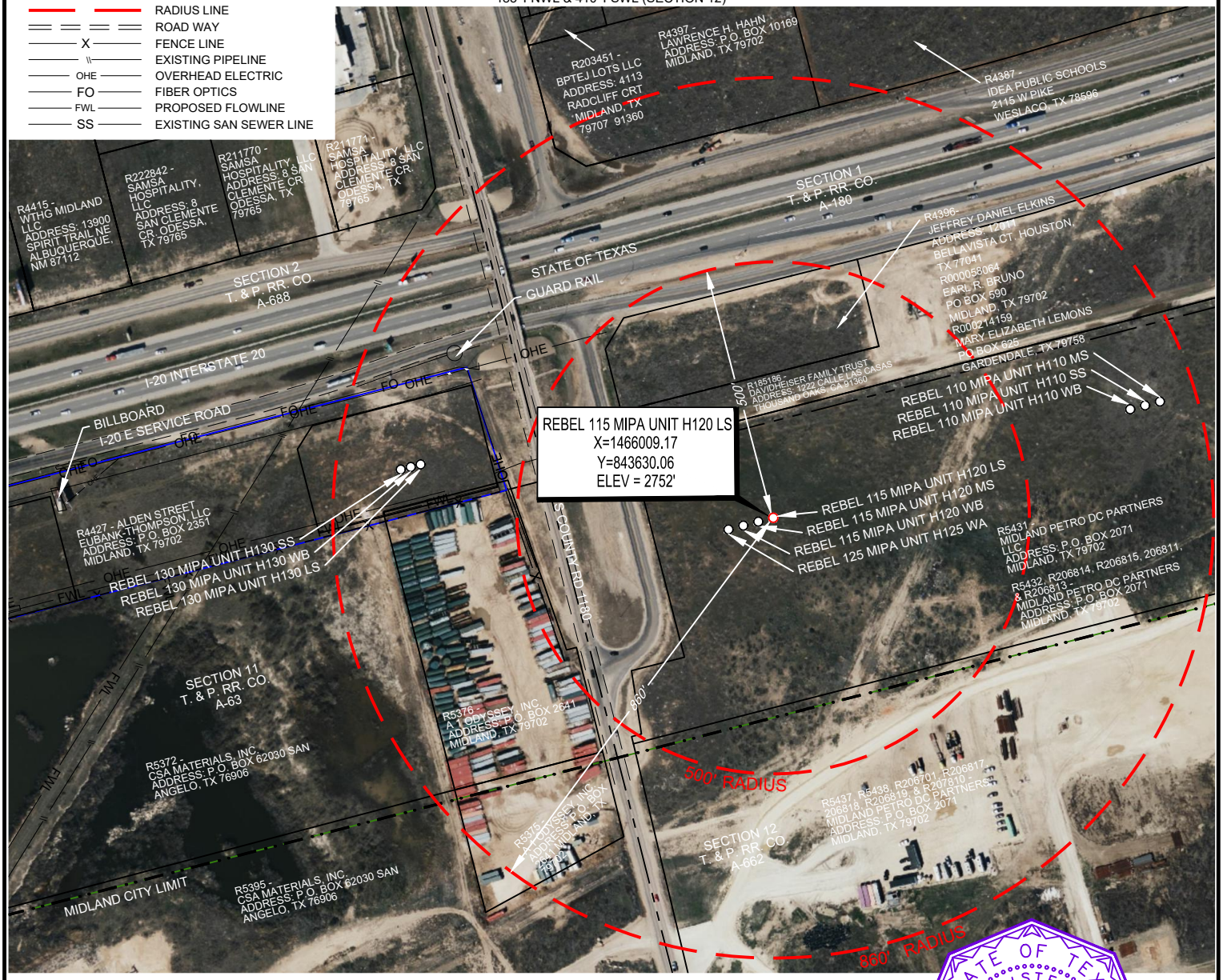
LEGEND

- SURVEY/SECTION LINE
- TRACT BORDER
- RADIUS LINE
- ROAD WAY
- X — FENCE LINE
- \\ — EXISTING PIPELINE
- OHE — OVERHEAD ELECTRIC
- FO — FIBER OPTICS
- FWL — PROPOSED FLOWLINE
- SS — EXISTING SAN SEWER LINE

SECTION 12, T. & P. RR. CO. SURVEY, A-662
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS

SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED REBEL 115 MIPA UNIT H120 LS
183' FNWL & 410' FSWL (SECTION 12)

PERMIAN DEEP ROCK OIL CO., L.L.C.



N

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
LAND SURVEYOR

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
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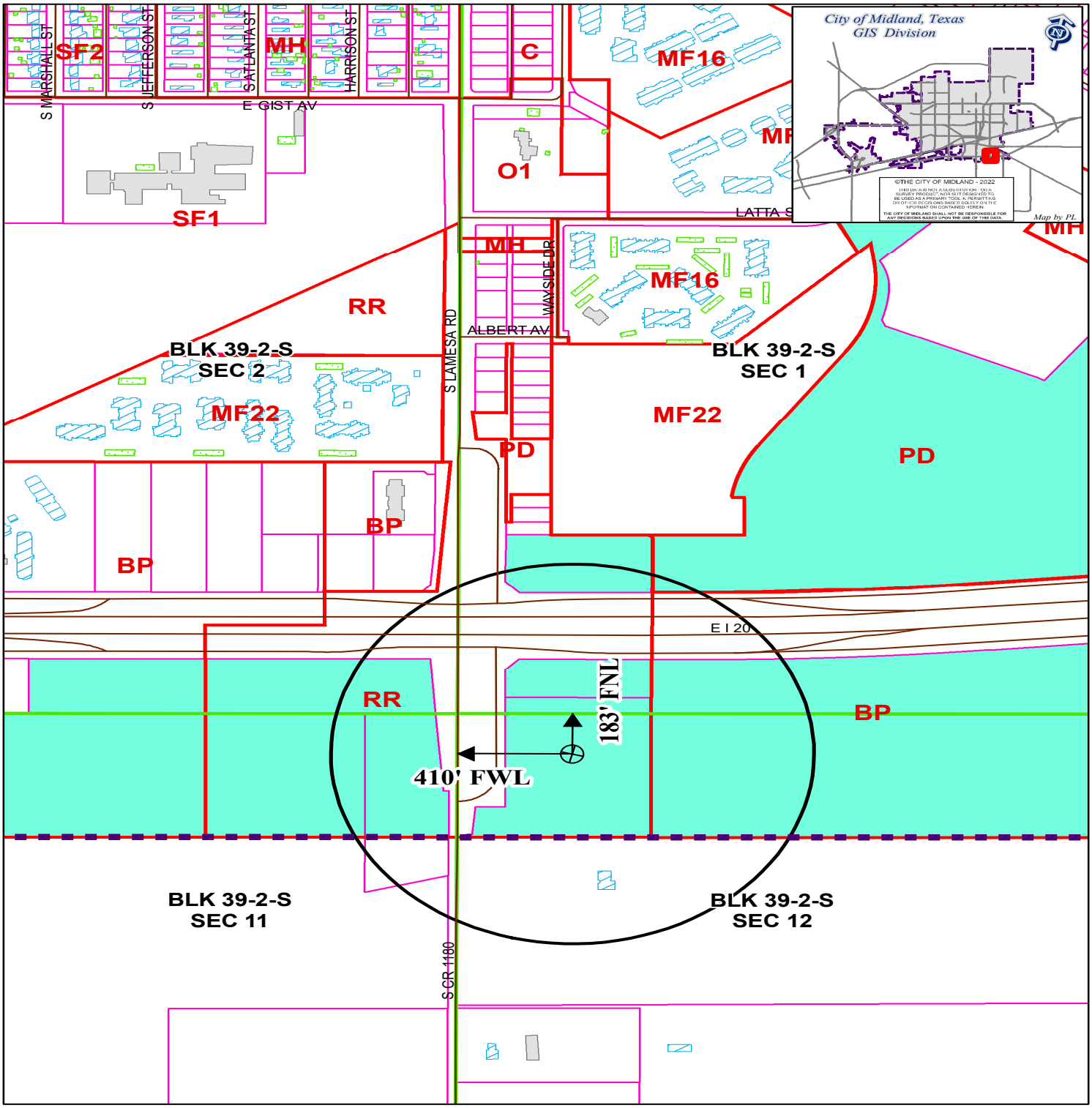
Jeffrey N. Lueders, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: October 7, 2021

REBEL 115 MIPA UNIT H120 LS	REVISION:	
	INT	DATE
DATE: 06/20/2022		
FILE: CD_REBEL115 MIPA UNIT H120 LS		
DRAWN BY: RAM		
SHEET : 1 OF 2		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. THIS PROPOSED LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED PERMIAN DEEP ROCK OIL CO., LLC. THIS PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE.
4. OWNERSHIP INFORMATION SHOWN HEREON WAS TAKEN FROM THE CITY OF MIDLAND, TEXAS GIS SITE.
5. DISTANCES SHOWN HEREON TO EXISTING STRUCTURES ARE SCALED PER AERIAL MAP.

PACKET
14.15
October 25, 2022

S:\SURVEY\ARRINGTON\DP_7B_UNIT\FINAL_PRODUCTS\CITY_PERMITS\CD_REBEL115 MIPA UNIT H120 LS.DWG 6/20/2022 1:15:17 PM jlueders



LOCATION AND ZONING MAP

Oil - 044950 - 2022 **Scale: 1" = 500'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 183' FNL and 410' FWL, Section 12, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 410 feet east of South Lamesa Road and 463 feet south of I-20.

Rebel 115 MIPA Unit #H120LS

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, 02	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F, 1F1, 1F2, 1F3	ONE-FAMILY DWELLING	CR2, CR3, CLR	COMMERCIAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

OIL AND GAS WELL PERMIT

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GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of October 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Permian Deep Rock Oil Co., LLC

By: _____

Kyle M. Hammond

General Manager

City Council Meeting

Item Number: 15

Meeting Date: October 25, 2022

To: City Council / City Manager

From: Ron Jenkins, Oil and Gas Coordinator

Subject: RESOLUTION APPROVING THE ISSUANCE OF A PERMIT TO PERMIAN DEEP ROCK OIL CO., LLC ("OPERATOR") TO DRILL AN OIL AND GAS WELL WITHIN THE CITY LIMITS LOCATED IN SECTION 2, BLOCK 39, T-2-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED 1,172 FEET WEST OF SOUTH LAMESA ROAD AND 185 FEET SOUTH OF INTERSTATE 20); AND WAIVING THE REQUIREMENT OF A ROAD REPAIR AGREEMENT (DISTRICT 2) (DEVELOPMENT SERVICES)

Purpose:

Resolution approving the issuance of permit to Permian Deep Rock Oil Co., LLC ("Operator") for the drilling of the oil and gas well Rebel 140 MIPA Unit #H140LS; said well being generally located 1,172 feet west of South Lamesa Road and 185 feet south of I-20. The required 30-day public comment has passed, and the Council may consider this request. No notices of objection received.

Recommended City Council Action:

Approve

Fiscal Impact:

There is no cost to the City to process this application.

Discussion:

The Oil and Gas Advisory Committee has reviewed the well site in detail and recommends approval with updated exhibit. A 16 ft. sound wall will be used during drilling and completion operations being located on the north side of location. Tank battery is in the county. There have been previous permitted applications near this well pad requiring the same variances.

The operator has a surface agreement with the surface owner. Receiving support of the Oil & Gas Advisory Committee, Permian Deep Rock Oil is requesting the following variances:

.
(1) Permian Deep Rock Oil Company requests to allow for twenty-four-hour fracing operations.
(2) Permian Deep Rock Oil Company requests variance for fence of the drill pad instead of individual well
(3) Permian Deep Rock Oil Company requests a variance to the requirement of landscaping and irrigation due to no city water is available.
(4) Permian Deep Rock Oil Company requests variance to the Road Repair Agreement due to no city streets will be used.

Attachments: Applications; Location maps; Exhibit - Drill site maps, Exhibit – Flow Line Location.

Morris Williams Jr.

City Manager's Office

RESOLUTION NO. _____

RESOLUTION APPROVING THE ISSUANCE OF A PERMIT TO PERMIAN DEEP ROCK OIL CO., LLC ("OPERATOR") TO DRILL AN OIL AND GAS WELL WITHIN THE CITY LIMITS LOCATED IN SECTION 2, BLOCK 39, T-2-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED 1,172 FEET WEST OF SOUTH LAMESA ROAD AND 185 FEET SOUTH OF INTERSTATE 20); AND WAIVING THE REQUIREMENT OF A ROAD REPAIR AGREEMENT

WHEREAS, on December 8, 2009, the City Council of the City of Midland duly approved Ordinance No. 8769 which amended Title VI, "Police Regulations," Chapter 1, "General Offenses," of the City Code of Midland, Texas, so as to establish Section 23, "Oil and Gas Well Permits issued on or after January 1, 2010," which governs the granting or rejecting of Oil and Gas Well Permits; and

WHEREAS, the purpose of said section is to establish reasonable and uniform limitations, safeguards, and regulations for present and future operations related to the exploring, drilling, developing, producing, transporting and storing of oil or gas or other substances produced in association with oil and gas within the City of Midland to protect the health, safety, and general welfare of the public and the orderly development of the City of Midland; abate or prevent potential public nuisances; minimize the potential adverse impact to surface and mineral owners, protect the quality of the environment and encourage the orderly production of available mineral resources; and

WHEREAS, Section 6-1-23(C) of the City Code of Midland, Texas, makes it an offense to knowingly drill or participate in the drilling of any well or to re-enter any well within the corporate limits of the City of Midland without a permit having first been issued by the authority of the City Council; and

WHEREAS, Operator has submitted an application to the City of Midland to drill an oil and gas well on the property described in Section Two hereof; and

WHEREAS, notice of the public hearing on this matter was provided in accordance

with Section 6-1-23(H)(1) and a public hearing was held on September 13, 2022; and

WHEREAS, subsequent to said public hearing, and in accordance with Section 6-1-23(H)(1), the City Council allowed the public and Operator thirty (30) days to submit written input to the City Manager regarding Operator's application to drill an oil and gas well on the property described in Section Two hereof; and

WHEREAS, the City Council has considered those issues set forth in Section 6-1-23(I) in determining whether to grant or deny a permit to Operator to drill an oil and gas well on the property described in Section Two hereof; and

WHEREAS, the City Council finds it to be in the public interest to approve the issuance of a permit to Operator to drill an oil and gas well on the property described in Section Two hereof;

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

SECTION ONE. That the above recitals are hereby adopted and approved by the City Council of the City of Midland.

SECTION TWO. That the Mayor is hereby authorized and directed to execute a permit, on behalf of the City of Midland, that will allow Operator to drill the following oil and gas well:

Rebel 140 MIPA Unit #H140LS

located in Section 2, Block 39, T-2-S, T&P RR Co. Survey, City and County of Midland, Texas. Said permit is attached hereto as Exhibit "A" and incorporated herein for all legal purposes.

SECTION THREE. That the requirement of a Road Repair Agreement between Operator and the City of Midland is hereby waived in regard to said permit.

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., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

EXHIBIT "A"

OIL AND GAS WELL PERMIT

The City Council of the City of Midland, Texas, at its regular meeting on October 25, 2022, considered the application of Permian Deep Rock Oil Co., LLC ("Operator") dated July 1, 2022, to drill an oil and gas well inside the territorial limits of the City of Midland, Texas. The City Council of the City of Midland, Texas, by appropriate action approved the application and authorized the issuance of this permit.

This documentation hereby constitutes a permit, issued in accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), to drill an oil and gas well as requested in Operator's application that has been filed with the Oil & Gas Compliance Coordinator and is incorporated herein for all legal purposes.

The location of Operator's Rebel 140 MIPA Unit #H140LS oil and gas well shall be 110 feet from the south line and 1,172 feet from the east line, Section 2, Block 39, T-2-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

This permit shall be effective from October 25, 2022 through October 25, 2023, and so long thereafter as oil or gas is produced, or until such time as Operator has permanently abandoned the operations of the well or facility for which this permit is issued.

The issuance of this permit by the City of Midland does not in any way alter or modify the rights as between the surface estate owner(s) and mineral estate owner(s) if there exists a severance of the surface estate and mineral estate. This permit in no way exempts Operator from its responsibilities or obligations as to third parties. The issuance of this permit only means that Operator has, at this time, complied with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance No. 8769) and that the Midland City Council, as a regulatory body, will allow Operator to proceed under the conditions of this permit. The issuance of this permit is intended to be only a negative pronouncement that grants no affirmative rights to the permittee to occupy the property. It is expressly provided that this permit does not authorize a trespass by the permittee as to any third party. This

permit does not in any way restrict the use of the surface estate. Securing a permit does not authorize Operator to act with impunity as to third parties, nor does it insulate Operator from the consequences of its actions with regard to those third parties. The receipt of a permit does not undertake to adjudicate property rights.

This permit granted by the City of Midland does not act to immunize Operator from civil tort liability from private parties for actions arising out of the use of the permit. This is because the permit is a "negative pronouncement" that grants no affirmative rights to the permittee. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of State or local law or regulations. Operator has obtained a permit from the City of Midland but the consequences of acting under the permit have not been immunized. The fact that the City of Midland has issued a permit to drill an oil and gas well does not shield Operator from third party tort liability stemming from the consequences of the permitted activity.

NOTWITHSTANDING ANY OTHER PROVISION, OPERATOR HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY OF MIDLAND, CITY OF MIDLAND'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH OPERATOR HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKING CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS OR CITY OF MIDLAND'S NEGLIGENCE.

OPERATOR AGREES TO INDEMNIFY AND HOLD HARMLESS AND DEFEND THE CITY OF MIDLAND, THE CITY'S OFFICERS, AGENTS, AND EMPLOYEES FROM ANY AND ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITY OF ANY KIND, INCLUDING ALL EXPENSES OF LITIGATION, COURT COSTS, AND ATTORNEY'S FEES, FOR INJURY TO OR DEATH OF ANY PERSON, OR FOR DAMAGE TO ANY PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE WORK DONE BY OPERATOR UNDER AN OIL AND GAS WELL PERMIT WHERE SUCH INJURIES, DEATH, OR DAMAGES ARE CAUSED BY OPERATOR'S SOLE NEGLIGENCE OR THE JOINT NEGLIGENCE OF THE OPERATOR AND ANY OTHER PERSON OR ENTITY.

A right-of-way license agreement approved by a resolution of the Midland City Council is required for any oil and/or gas flowline or pipeline or any other device associated with a proposed well site that extends into, on, above, in, under, across or through any City rights-of-way, including but not limited to streets, alleys, and utility and drainage rights-of-way.

If the well that is the subject of this permit is not located within the County of Midland, Texas, Operator shall notify the Midland Central Appraisal District of the following: (1) the well's location within the territorial limits of the City of Midland; and (2) that the City of

Midland is to be included as a taxing entity. Operator shall make said notification no later than 60 days after completion of the well.

The Midland City Council, in granting this permit, also grants the following variance(s):

1. Twenty-four hour hydraulic fracturing operations.
2. In lieu of constructing a perimeter fence around this permitted well, a perimeter fence around the well pad site may be constructed. Said perimeter fence around the well pad site shall, at a minimum, meet the requirements of Ordinance No. 8769.
3. No landscaping or irrigation is required because City water is not available.
4. No road repair agreement is required because no City streets will be used to access the well site.

Sound walls shall be used during drilling and completion operations as noted in the application.

This permit shall constitute a written contract for purposes of insurance requirements.

In addition to the requirements of this permit and the Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), including, but not limited to Subsections (K) through (Z), Operator shall develop, maintain and operate the well described herein in accordance with the conditions, limitations and safeguards contained in Operator's application for said well.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of October 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Permian Deep Rock Oil Co., LLC

By: _____

Kyle M. Hammond

General Manager

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
07/01/2022	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Kyle M. Hammond	500 W. Wall St. Ste 300 Midland, TX 79701	432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes✓ No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** See Exhibit "B"

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1.

2.

3.

ATTACHED AS EXHIBIT C **is** List of subdivisions within Rebel Unit

See Exhibit "C"

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):
Surface use: Undeveloped pastures, service company yards and apartment complex

See Exhibit "D"

ATTACHED AS EXHIBIT D **is** ,

Current Tax Roll from Midland Central Appraisal District), **which lists**

the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Rebel 140 MIPA Unit #H140LS

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 110' FSL & 1172' FEL,
Section 2 Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

***ATTACHED AS EXHIBIT I* is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].**

***ATTACHED AS EXHIBIT J* is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

***ATTACHED AS EXHIBIT K (if applicable)* is the list of alternative locations developed in consultation with the Oil & Gas Advisory Committee. [See § J(27)].**

***ATTACHED AS EXHIBIT L* is the Fencing and Irrigation Plan. [See § J(30)].**

***ATTACHED AS EXHIBIT M*: No city roads will be used**

***ATTACHED AS EXHIBIT N* is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

See Exhibit "N"

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

See Exhibit "O"

V. Additional Required Exhibits

***ATTACHED AS EXHIBIT P* is the *Letter of Credit/Certificate of Deposit* in accordance with Subsection (K)(2). [See § J(18)].**

***ATTACHED AS EXHIBIT Q* : Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by applicant are current. (See § J(29)**

***ATTACHED AS EXHIBIT R* is the required Insurance Certificate. [See § J(19) and § K(3)].**

***ATTACHED AS EXHIBIT S (if applicable)* is the Drainage Plan relating to Applicant's proposed operations. [See § J(21)].**

***ATTACHED AS EXHIBIT T* is Applicant's Emergency Action Response Plan. [See § J(22)].**

***ATTACHED AS EXHIBIT U* is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

ATTACHED AS EXHIBIT V: Applicants variances

Permian Deep Rock Oil Compnay
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

County of Midland)

Kyle Hammond , personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

Estella Peña
Notary Public, State of Texas

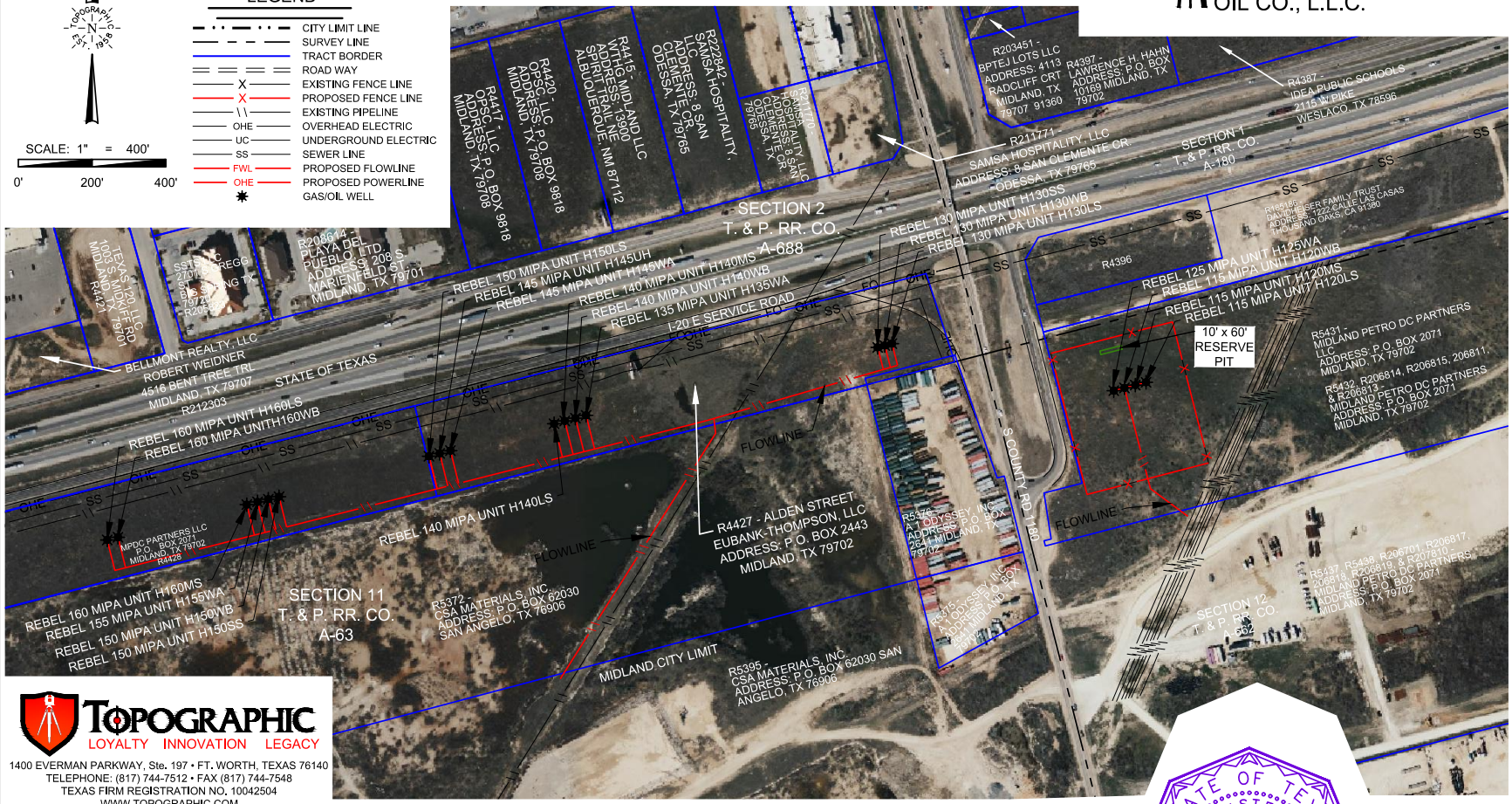
[S E A L]

ESTELLA PENA
Notary Public, State of Texas
My Commission Expires
August 03, 2025
NOTARY ID 13123361-8

EXHIBIT "G"

SECTION 12, BLOCK 39, T2S, T. & P. RR. CO. SURVEY, A-662
MIDLAND COUNTY, TEXAS

PERMIAN DEEP ROCK OIL CO., L.L.C.



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

REBEL UNIT
CITY PERMIT

DATE: 12/22/2021
FILE: SK_REBEL_UNIT_PERMIT_E_PAD_REV10
DRAWN BY: DRH
SHEET : 3 OF 8

REVISION:	
DRH	04/11/2022
DRH	04/14/2022
DRH	04/26/2022
DRH	06/03/2022
DRH	06/10/2022
DRH	06/21/2022
DRH	06/22/2022

NOTES:
1. ORIGINAL DOCUMENT SIZE: 11" X 8.5"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. CERTIFICATION IS MADE ONLY FOR PROPOSED UTILITIES AND SITES, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY PERMIAN DEEP ROCK OIL CO., L.L.C. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
4. ALL PROPOSED INFRASTRUCTURE SHOWN HEREON IS SOLELY FOR THE PURPOSE OF APPLYING FOR A PERMIT WITH THE CITY OF MIDLAND, TEXAS. THIS IS EXHIBIT IS NOT TO BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH THE T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THESE ARE FOR PLANNING PURPOSES ONLY.
5. ADJOINER INFORMATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
LAND SURVEYOR

JEFFREY N LUEDERS, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: October 7, 2021

S:\SURVEY\ARRINGTON\DP_7B_UNIT\FINAL_PRODUCTS\SKETCH\SK_REBEL_UNIT_PERMIT_E_PAD_REV10.DWG 6/23/2022 10:45:34 AM dharris

SCALE: 1" = 300'

0' 150' 300'

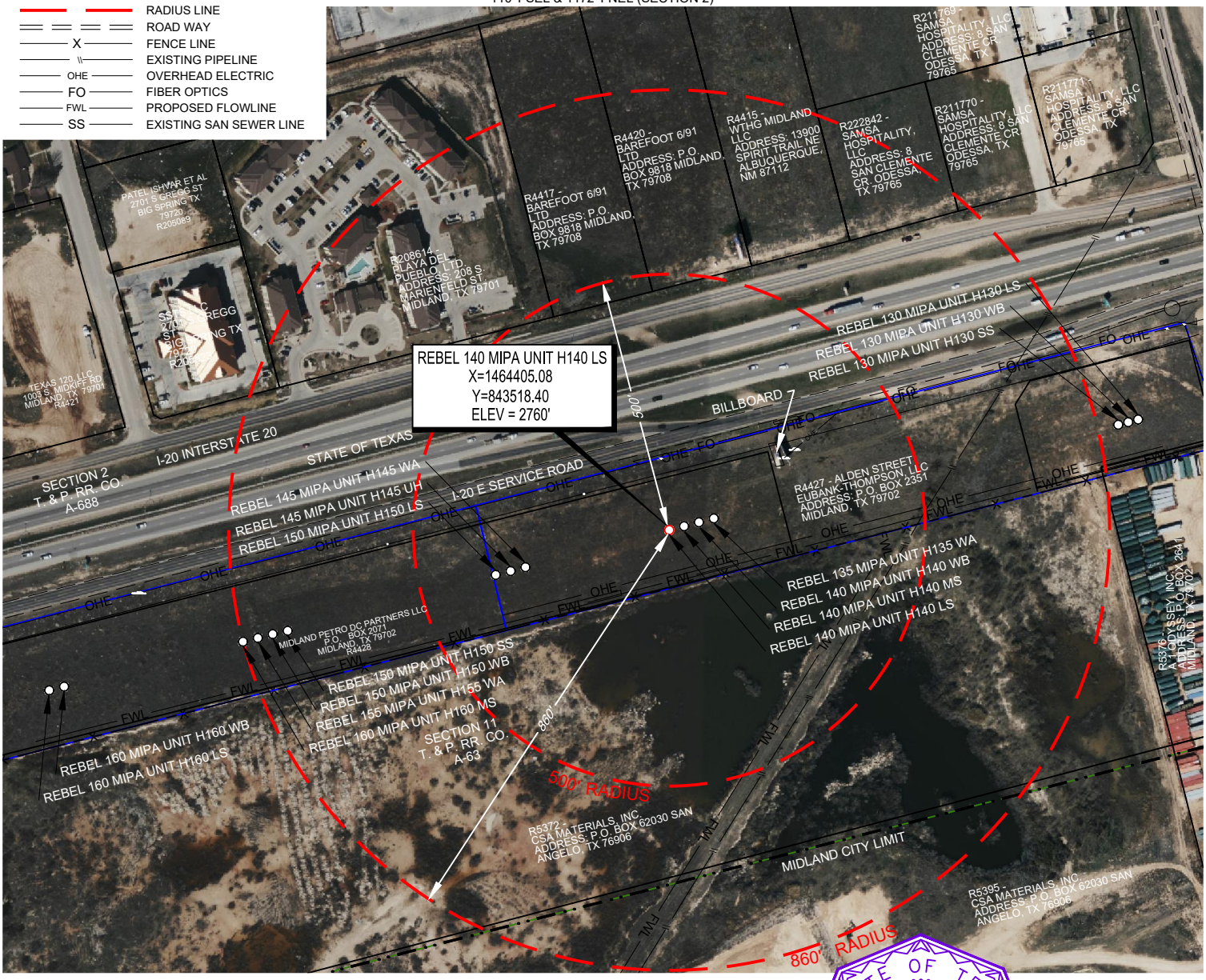
LEGEND

- SURVEY/SECTION LINE
- TRACT BORDER
- RADIUS LINE
- ROAD WAY
- X — FENCE LINE
- \\ — EXISTING PIPELINE
- OHE — OVERHEAD ELECTRIC
- FO — FIBER OPTICS
- FWL — PROPOSED FLOWLINE
- SS — EXISTING SAN SEWER LINE

SECTION 2, T. & P. RR. CO. SURVEY, A-688
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS

SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED REBEL 140 MIPA UNIT H140 LS
110' FSEL & 1172' FNEL (SECTION 2)

PERMIAN DEEP ROCK OIL CO., L.L.C.



N

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
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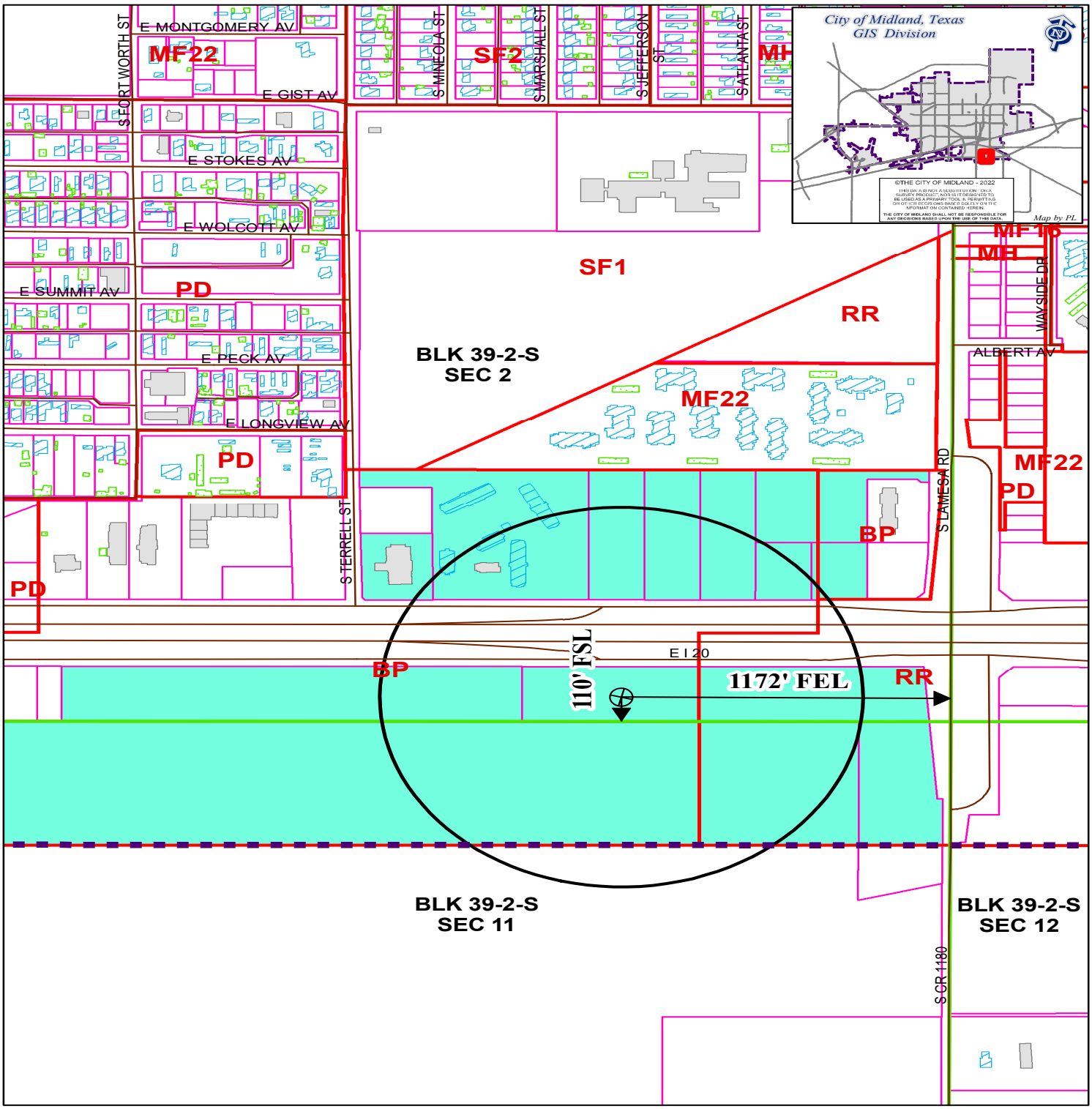
STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
SURVEYOR

Jeffrey N. Lueders, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: APRIL 5, 2022

REBEL 140 MIPA UNIT H140 LS	REVISION:	
	INT	DATE
DATE: 06/20/2022		
FILE: CD_REBEL140 MIPA UNIT H140 LS		
DRAWN BY: RAW		
SHEET : 1 OF 2		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. THIS PROPOSED LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED PERMIAN DEEP ROCK OIL CO., LLC. THIS PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE.
4. OWNERSHIP INFORMATION SHOWN HEREON WAS TAKEN FROM THE CITY OF MIDLAND, TEXAS GIS SITE.
5. DISTANCES SHOWN HEREON TO EXISTING STRUCTURES ARE SCALED PER AERIAL MAP.

PACKET
15.15
October 25, 2022



LOCATION AND ZONING MAP

Oil - 044948 - 2022 **Scale: 1" = 500'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 110' FSL and 1,172' FEL, Section 2, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 1,172 feet west of South Lamesa Road and 185 feet south of I-20.

Rebel 140 MIPA Unit #H140LS

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	O1, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
SF1, SF2, SF3	ONE-FAMILY DWELLING	CR1, CR2, CR3	LOCAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

OIL AND GAS WELL PERMIT

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The location of Operator's Rebel 140 MIPA Unit #H140LS oil and gas well shall be 110 feet from the south line and 1,172 feet from the east line, Section 2, Block 39, T-2-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

This permit shall be effective from October 25, 2022 through October 25, 2023, and so long thereafter as oil or gas is produced, or until such time as Operator has permanently abandoned the operations of the well or facility for which this permit is issued.

The issuance of this permit by the City of Midland does not in any way alter or modify the rights as between the surface estate owner(s) and mineral estate owner(s) if there exists a severance of the surface estate and mineral estate. This permit in no way exempts Operator from its responsibilities or obligations as to third parties. The issuance of this permit only means that Operator has, at this time, complied with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance No. 8769) and that the Midland City Council, as a regulatory body, will allow Operator to proceed under the conditions of this permit. The issuance of this permit is intended to be only a negative pronouncement that grants no affirmative rights to the permittee to occupy the property. It is expressly provided that this permit does not authorize a trespass by the permittee as to any third party. This

permit does not in any way restrict the use of the surface estate. Securing a permit does not authorize Operator to act with impunity as to third parties, nor does it insulate Operator from the consequences of its actions with regard to those third parties. The receipt of a permit does not undertake to adjudicate property rights.

This permit granted by the City of Midland does not act to immunize Operator from civil tort liability from private parties for actions arising out of the use of the permit. This is because the permit is a "negative pronouncement" that grants no affirmative rights to the permittee. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of State or local law or regulations. Operator has obtained a permit from the City of Midland but the consequences of acting under the permit have not been immunized. The fact that the City of Midland has issued a permit to drill an oil and gas well does not shield Operator from third party tort liability stemming from the consequences of the permitted activity.

NOTWITHSTANDING ANY OTHER PROVISION, OPERATOR HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY OF MIDLAND, CITY OF MIDLAND'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH OPERATOR HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKING CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS OR CITY OF MIDLAND'S NEGLIGENCE.

OPERATOR AGREES TO INDEMNIFY AND HOLD HARMLESS AND DEFEND THE CITY OF MIDLAND, THE CITY'S OFFICERS, AGENTS, AND EMPLOYEES FROM ANY AND ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITY OF ANY KIND, INCLUDING ALL EXPENSES OF LITIGATION, COURT COSTS, AND ATTORNEY'S FEES, FOR INJURY TO OR DEATH OF ANY PERSON, OR FOR DAMAGE TO ANY PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE WORK DONE BY OPERATOR UNDER AN OIL AND GAS WELL PERMIT WHERE SUCH INJURIES, DEATH, OR DAMAGES ARE CAUSED BY OPERATOR'S SOLE NEGLIGENCE OR THE JOINT NEGLIGENCE OF THE OPERATOR AND ANY OTHER PERSON OR ENTITY.

A right-of-way license agreement approved by a resolution of the Midland City Council is required for any oil and/or gas flowline or pipeline or any other device associated with a proposed well site that extends into, on, above, in, under, across or through any City rights-of-way, including but not limited to streets, alleys, and utility and drainage rights-of-way.

If the well that is the subject of this permit is not located within the County of Midland, Texas, Operator shall notify the Midland Central Appraisal District of the following: (1) the well's location within the territorial limits of the City of Midland; and (2) that the City of

Midland is to be included as a taxing entity. Operator shall make said notification no later than 60 days after completion of the well.

The Midland City Council, in granting this permit, also grants the following variance(s):

1. Twenty-four hour hydraulic fracturing operations.
2. In lieu of constructing a perimeter fence around this permitted well, a perimeter fence around the well pad site may be constructed. Said perimeter fence around the well pad site shall, at a minimum, meet the requirements of Ordinance No. 8769.
3. No landscaping or irrigation is required because City water is not available.
4. No road repair agreement is required because no City streets will be used to access the well site.

Sound walls shall be used during drilling and completion operations as noted in the application.

This permit shall constitute a written contract for purposes of insurance requirements.

In addition to the requirements of this permit and the Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), including, but not limited to Subsections (K) through (Z), Operator shall develop, maintain and operate the well described herein in accordance with the conditions, limitations and safeguards contained in Operator's application for said well.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of October 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of October 2022.

Permian Deep Rock Oil Co., LLC

By: _____

Kyle M. Hammond

General Manager

City Council Meeting

Item Number: 16

Meeting Date: October 25, 2022

To: City Council / City Manager

From: Ron Jenkins, Oil and Gas Coordinator

Subject: **RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE, ON BEHALF OF THE CITY OF MIDLAND, A SUBSURFACE USE AGREEMENT GRANTING TO PIONEER NATURAL RESOURCES USA, INC. ("OPERATOR") A SUBSURFACE EASEMENT LOCATED ON A CITY-OWNED TRACT OF LAND DESCRIBED AS THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SECTION 8, BLOCK 38, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS, FOR THE PURPOSE OF DRILLING, COMPLETING, PRODUCING, TRANSPORTING PRODUCTION THROUGH, PLUGGING AND ABANDONING WELLBORES UNDER, ACROSS AND THROUGH SAID TRACT OF LAND TO BENEFIT OIL AND GAS PRODUCTION FROM WELLS DRILLED OR TO BE DRILLED BY OPERATOR, ITS SUCCESSORS OR ASSIGNS ON LANDS LOCATED IN SECTIONS 17 AND 20, BLOCK 38, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS (DISTRICT 1) (DEVELOPMENT SERVICES)**

Purpose:

Resolution authorizing the City Manager to execute a subsurface easement agreement between the City of Midland and Pioneer Natural Resources, USA, Inc., located on S/2 SW/4 of Section 8, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas.

Recommended City Council Action:

Approve

Fiscal Impact:

There is no cost to the City to process this application.

Discussion:

This is a subsurface easement located on City of Midland Property. Pioneer Natural Resources is requesting to cross City of Midland property to access minerals they have under lease on property located on Sections 17 and 20, Block 38, T-1-S, Midland County, Texas. The area of Section 8 is city owned airport property located north of Arapahoe Road extension.

Attachments: Exhibit Subsurface Easement Agreement

Morris Williams Jr.

City Manager's Office

RESOLUTION NO. _____

RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE, ON BEHALF OF THE CITY OF MIDLAND, A SUBSURFACE USE AGREEMENT GRANTING TO PIONEER NATURAL RESOURCES USA, INC. ("OPERATOR") A SUBSURFACE EASEMENT LOCATED ON A CITY-OWNED TRACT OF LAND DESCRIBED AS THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SECTION 8, BLOCK 38, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS, FOR THE PURPOSE OF DRILLING, COMPLETING, PRODUCING, TRANSPORTING PRODUCTION THROUGH, PLUGGING AND ABANDONING WELLBORES UNDER, ACROSS AND THROUGH SAID TRACT OF LAND TO BENEFIT OIL AND GAS PRODUCTION FROM WELLS DRILLED OR TO BE DRILLED BY OPERATOR, ITS SUCCESSORS OR ASSIGNS ON LANDS LOCATED IN SECTIONS 17 AND 20, BLOCK 38, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS

WHEREAS, the City of Midland owns a tract of land described as the south half of the southwest quarter of Section 8, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas (the "Property"); and

WHEREAS, the City Council finds it to be in the public interest to authorize the City Manager to execute a subsurface use agreement granting to Pioneer Natural Resources USA, Inc. ("Operator") a subsurface easement located on the Property for the purpose of drilling, completing, producing, transporting production through, plugging and abandoning wellbores under, across and through said Property to benefit oil and gas production from wells drilled or to be drilled by Operator, its successors or assigns on lands located in Sections 17 and 20, Block 38, T-1-S, T-1-S, T&P RR Co. Survey, Midland County, Texas (the "Easement Agreement"), said Easement Agreement to be in a form substantially similar to that attached hereto as Exhibit A;

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

THAT the City Manager is hereby authorized and directed to execute, on behalf of the City of Midland, the Easement Agreement and to deliver the executed Easement

Agreement to Operator.

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., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

S:\Resolutions\Planning\Easement\Granting Easement\2022\Pioneer - Subsurface Use Agreement.wpd

EXHIBIT "A"

EXECUTION VERSION

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

SUBSURFACE USE AGREEMENT

THE STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF MIDLAND §

This Subsurface Use Agreement (this "Agreement") is entered into effective as of _____ ___, 2022 (the "Effective Date"), by and between the City of Midland, Texas ("Grantor"), whose address is 300 N. Loraine, Midland, Texas 79701, and Pioneer Natural Resources USA, Inc., a Delaware corporation ("Operator"), whose address is P.O. Box 3178, Midland, Texas 79702. Grantor and Operator are sometimes referred to singularly as a "Party," and collectively as the "Parties."

BACKGROUND

Grantor owns an interest in the land in Midland County, Texas, more particularly described on the attached Exhibit A (collectively, the "Land"). Operator desires to drill horizontal wells through the Land for the production of oil and gas, said production not from the Land, but from other lands in the area (such wells, the "Wellbores"). The Parties are entering into this Agreement to provide the terms with respect to the use of the Land for such purposes.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Grantor and Operator agree as provided below:

ARTICLE I - AGREEMENT

1.1 Grant, Limitations.

Grantor grants, transfers, and conveys unto Operator a non-exclusive easement to use and occupy the subsurface underlying the Land for the purposes of drilling no more than ten (10) Wellbores through the subsurface of the Land, for the purposes of completing the Wellbores and producing or flowing oil and/or gas from lands in the vicinity of the Land through such Wellbores. This is a grant of subsurface use only and this Agreement does not grant the right to use the surface of the ground of the Land for any purpose, including, without limitation, any oil and gas operation. This Agreement does not grant any interest in and to the oil, gas, or other minerals in, on or under the Land, nor shall this Agreement grant Operator the right to produce any of the oil, gas or other minerals from the Land. Neither this Agreement, nor the consideration provided for herein, is intended to apply to wells that Operator has drilled or drills in the future through the Land via oil and gas lease rights or any other rights under any other agreement that Operator may have covering the Land.

1.2 Term, End of Term.

(a) This Agreement will be for a term of three (3) years, and for so long thereafter as Operator produces or flows oil and/or gas from lands in the vicinity of the Land through any Wellbore with no cessation of three hundred sixty-five (365) continuous days or more. Upon the expiration of this Agreement under the immediately preceding sentence, the rights granted under this Agreement to Operator shall *ipso facto* cease and automatically terminate; provided, however, that notwithstanding any expiration or termination of this Agreement Operator's liability for performance of its obligations hereunder and Operator's indemnity and defense obligations hereunder shall survive any expiration or termination of this Agreement. Upon expiration or termination of this Agreement, Operator shall promptly give Grantor written notice of such expiration or termination and Operator shall have the right to remove all pipe, casing and other subsurface equipment as may be situated in and under the Land, and shall conduct such plugging and abandonment operations as may be required by applicable law. In addition, upon the expiration or termination hereof, Operator shall prepare and file in Midland County, Texas, a release of this Agreement and pay the required filing fees for same. Operator may at any time surrender all or any part of its rights hereunder by filing a release in the appropriate public record.

(b) The Wellbores and corresponding equipment and materials placed on or in the subsurface of the Land by Operator shall be and remain the property of Operator.

1.3 Operator Rights and Obligations; Consideration.

(a) Operator agrees that it will comply in all its operations under this Agreement with all applicable ordinances, laws, rules and regulations of each governmental, municipal and/or regulatory authority having jurisdiction over such operations, including, without limitation, the City of Midland Oil and Gas Drilling requirements as applied under current Ordinance 8769, as codified in the City of Midland Municipal Code Section 6-1-23, as the same may be hereafter amended from time to time, if and to the extent applicable, and all applicable environmental rules and regulations. **OPERATOR AGREES TO INDEMNIFY, DEFEND, AND HOLD GRANTOR AND GRANTOR'S OFFICERS, EMPLOYEES, TENANTS, AGENTS, REPRESENTATIVES, SUCCESSORS AND ASSIGNS ("GRANTOR INDEMNITEES"), HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS, LOSSES, DAMAGES, FINES, PENALTIES, DEMANDS, CAUSES OF ACTION OR OTHER EXPENSES OF ANY KIND OR CHARACTER (INCLUDING, WITHOUT LIMITATION, ALL COSTS AND EXPENSES OF LITIGATION AND ATTORNEYS' FEES) ASSERTED AGAINST OR SUFFERED BY ANY GRANTOR INDEMNITEE BY REASON OF THE GRANT OF THE EASEMENT UNDER THIS AGREEMENT AND/OR ARISING OUT OF OPERATOR'S OPERATIONS UNDER THE LAND UNDER THIS AGREEMENT.**

(b) As additional consideration for the easement conveyed by Grantor herein, during the term of this Agreement, Operator shall pay to Grantor the amount of Ten Thousand and No/100ths Dollars ($10,000.00) per Wellbore with any portion thereof to be drilled in, under or through the Land pursuant to the terms of this Agreement, with each such amount being due and payable to Grantor on or before the spud date of the applicable Wellbore. Any such amount owing to Grantor that is not received by Grantor on or before the spud date of the applicable Wellbore shall accrue interest at the lesser of (i) fifteen percent (15%) per year; or (ii) the highest rate allowed by

applicable law, from the spud date of the applicable Wellbore until such amount is received by Grantor. Within thirty (30) days of Grantor's written request to Operator, Operator shall furnish to Grantor wellbore plats of the Wellbores drilled in, under or through the Land together with such other location and spud date information pertaining to the Wellbores as may be reasonably requested by Grantor.

1.4 Grantor Rights and Obligations.

(a) The subsurface easement granted hereunder is granted by Grantor without warranty of title, express or implied. **OPERATOR IS FULLY FAMILIAR WITH THE LAND, ITS CONDITION AND STATE OF REPAIR FROM OPERATOR'S OWN INVESTIGATION OF SAME. OPERATOR ACKNOWLEDGES THAT GRANTOR HAS MADE NO EXPRESS WARRANTIES WITH REGARD TO THE LAND OR THE CONDITION THEREOF AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, GRANTOR HEREBY DISCLAIMS, AND OPERATOR HEREBY WAIVES THE BENEFIT OF, ANY AND ALL IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF HABITABILITY, OR FITNESS OR SUITABILITY FOR OPERATOR'S PURPOSES.** Operator has the right to discharge or redeem for Grantor, in whole or in part, any mortgage, tax or other lien relating to the Land and thereupon be subrogated to such lien if Grantor defaults on any mortgage covering the Land.

(b) Grantor will receive payment hereunder in such proportion as its undivided interest in the affected portion of the Land traversed by an individual Wellbore bears to the fee simple title of the Land.

ARTICLE II - MISCELLANEOUS

2.1 Nature of Agreement. The terms and provisions of this Agreement shall inure to the benefit of and be binding upon Grantor and Operator and their respective heirs, successors, representatives and assigns. Grantor confirms and agrees that Grantor has been made no promise or agreement by Operator or any agent (which is not expressed herein) in executing this Agreement, that Grantor is not relying upon any statement or representation of Operator, or any agent and that Grantor's execution of this Agreement is free and voluntary. This Agreement may not be amended except by a writing signed by the Party against whom said modification or amendment is to be enforced and no Party shall be liable or bound to any other Party except as specifically set forth herein.

2.2 No Waiver of Governmental or Sovereign Immunity. By executing this Agreement Grantor is not waiving its right of governmental or sovereign immunity. Grantor is retaining its immunity from suit. Grantor is not granting consent to be sued by legislative resolution or action. **THERE IS NO WAIVER OF GOVERNMENTAL OR SOVEREIGN IMMUNITY.**

2.3 Public Purpose; Governmental Functions. The Parties acknowledge and agree that this Agreement is in the public interest and serves a public purpose. The Parties acknowledge and agree that Grantor's obligations and performance under this Agreement are governmental functions. By entering into this Agreement, Operator waives and releases any present or future claim asserting Grantor's obligations or performance under this Agreement are not governmental functions.

2.4 Chapter 271 of Texas Local Government Code. The Parties agree that this Agreement does not constitute an agreement for providing goods or services to Grantor as described in Subchapter I of Chapter 271 of the Texas Local Government Code, and the Parties expressly covenant and agree that this Agreement shall not constitute nor be interpreted as a waiver of Grantor's governmental immunity under Subchapter I of Chapter 271 of the Texas Local Government Code. Operator acknowledges and agrees that any provision in this Agreement that restricts the use of property to a specific purpose shall not require the use of property for that specific purpose. Any such provision shall be deemed to be a covenant against noncomplying use, not a covenant to use. Operator's use of property in compliance with a restriction shall not constitute a service, and such complying use shall not operate to waive Grantor's governmental immunity.

2.5 Instruments. The rights of either Party hereunder may be assigned, in whole or in part, and the provisions hereof shall extend to the respective heirs, successors, representatives and assigns of the Parties. This Agreement does not waive or diminish any rights conveyed to Operator by virtue of any oil and gas lease, or other instrument affecting the Land. This Agreement shall be governed by and construed in accordance with the laws of the State of Texas without reference to the conflict of law principles thereof. Without limiting paragraphs 2.2, 2.3 or 2.4 of this Agreement, (i) should any dispute arise hereunder the Parties stipulate that venue will lie in Midland County, Texas, and (ii) as to any action arising hereunder or related hereto, the Parties agree to and do hereby irrevocably waive any and all right to a trial by jury to the fullest extent permitted by law. This Agreement may be signed in multiple counterparts, and all such counterparts shall be deemed as originals and binding upon the Party executing and their respective heirs, representatives, successors and assigns. For recording, multiple signature pages may be compiled into a single document.

2.6 Attorneys' Fees. Operator shall reimburse Grantor for Grantor's attorneys' fees incurred in connection with the preparation and negotiation of this Agreement, such fees in connection with the preparation and negotiation of this Agreement not to exceed $5,000.00. The invoice for such attorneys' fees shall be provided to Operator within thirty (30) days of execution of this Agreement, and paid by Operator within sixty (60) days of execution.

2.7 Memorandum. In lieu of recording this Agreement, Grantor agrees to execute, and Operator shall file in the Official Public Records of the applicable county, a Memorandum of this Agreement substantially in the form of Exhibit B attached hereto (the "Memorandum"). Except for the Memorandum, this Agreement shall not be filed in any public records without the prior written consent of Grantor.

[Signature Pages Follow]

GRANTOR:
CITY OF MIDLAND, TEXAS

By:_____
Name: Robert Patrick
Title: City Manager

THE STATE OF TEXAS §
§
COUNTY OF MIDLAND §

This instrument was acknowledged before me this ___ day of _____, 20__, by _____, _____ of the City of Midland, Texas, a home rule municipal corporation, on behalf of said entity.

_____
Notary Public, State of Texas

OPERATOR:
PIONEER NATURAL RESOURCES USA, INC.

By: _____
Name: Daniel M. Pender
Title: Surface Land and Business Development Director

THE STATE OF TEXAS §
§
COUNTY OF MIDLAND §

This instrument was acknowledged before me this ____ day of _____, 2022, by DANIEL M. PENDER, Surface Land and Business Development Director of PIONEER NATURAL RESOURCES USA, INC., for and on behalf of said corporation.

_____
Notary Public, State of Texas

EXHIBIT A

to

Subsurface Use Agreement between the City of Midland, Texas, as Grantor, and Pioneer Natural Resources USA, Inc., as Operator

The Land

The S/2 SW/4 of Section 8, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas, more fully described by metes and bounds in that certain Warranty Deed dated March 14, 1984, between K & S Land Company, Inc. and The City of Midland, Texas, recorded in Vol. 239, pg. 49, Deed Records of Midland County, Texas.

EXHIBIT B

to

Subsurface Use Agreement between the City of Midland, Texas, as Grantor, and Pioneer Natural Resources USA, Inc., as Operator

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

STATE OF TEXAS §
§
COUNTY OF MIDLAND §

MEMORANDUM OF SUBSURFACE USE AGREEMENT

This Memorandum of Subsurface Use Agreement (this "Memorandum") is made effective as of the _____ day of _____, 2022 (the "Effective Date"), by and between the City of Midland, Texas ("Grantor"), whose address is 300 N. Loraine, Midland, Texas 79701, and Pioneer Natural Resources USA, Inc., a Delaware corporation ("Operator"), whose address is P.O. Box 3178, Midland, Texas 79702. Grantor and Operator are sometimes referred to singularly as a "Party," and collectively as the "Parties."

1. Land. This Memorandum pertains to land in which Grantor owns an interest which is more fully described in the legal description in Exhibit A attached hereto and incorporated herein by reference (the "Land").

2. Grant of Subsurface Easement. The Parties entered into that certain Subsurface Use Agreement dated effective as of the Effective Date (the "Agreement"), under which Grantor granted, transferred, and conveyed unto Operator a non-exclusive easement to use and occupy the subsurface underlying the Land for the purposes of drilling no more than ten (10) horizontal wells through the Land for the production of oil and gas, said production not from the Land, but from other lands in the area through the subsurface of the Land, for the purposes of completing the Wellbores and producing or flowing oil and/or gas from lands in the vicinity of the Land through such Wellbores. The Agreement sets forth the consideration paid or to be paid by Operator to Grantor and the terms and conditions under which Grantor granted and conveyed unto Operator such subsurface easement under the Land.

3. Modification. This Memorandum does not alter, amend or modify the terms and conditions of the Agreement, but is executed solely for the purpose of giving notice of the existence of the Agreement and Operator's rights with respect to the Land. The Agreement is incorporated by reference for all purposes to the same extent and with the same effect as if set forth herein in full.

4. Counterparts. This Memorandum may be executed in multiple counterparts, each of which shall be deemed an original instrument, but all of which together shall constitute one and the same instrument.

[*Remainder of Page Intentionally Left Blank*]

[*Signature and Acknowledgement Pages Follow*]

IN WITNESS WHEREOF, Grantor and Operator have executed this Memorandum as of the dates of their respective acknowledgements below, to be effective as of the Effective Date.

GRANTOR:
CITY OF MIDLAND, TEXAS

By: [DO NOT SIGN – EXHIBIT ONLY]
Name: Robert Patrick
Title: City Manager

THE STATE OF TEXAS §
§
COUNTY OF MIDLAND §

This instrument was acknowledged before me this ___ day of _____, 20__, by _____, _____ of the City of Midland, Texas, a home rule municipal corporation, on behalf of said entity.

[DO NOT SIGN – EXHIBIT ONLY]
Notary Public, State of Texas

OPERATOR:
PIONEER NATURAL RESOURCES USA, INC.

By: [DO NOT SIGN – EXHIBIT ONLY]
Name: Daniel M. Pender
Title: Surface Land and Business Development Director

THE STATE OF TEXAS §
§
COUNTY OF MIDLAND §

This instrument was acknowledged before me this ____ day of _____, 2022, by DANIEL M. PENDER, Surface Land and Business Development Director of PIONEER NATURAL RESOURCES USA, INC., for and on behalf of said corporation.

[DO NOT SIGN – EXHIBIT ONLY]
Notary Public, State of Texas

EXHIBIT A

to

Memorandum of Subsurface Use Agreement between the City of Midland, Texas, as Grantor, and Pioneer Natural Resources USA, Inc., as Operator

The Land

The S/2 SW/4 of Section 8, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas, more fully described by metes and bounds in that certain Warranty Deed dated March 14, 1984, between K & S Land Company, Inc. and The City of Midland, Texas, recorded in Vol. 239, pg. 49, Deed Records of Midland County, Texas.

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

STATE OF TEXAS §
§
COUNTY OF MIDLAND §

MEMORANDUM OF SUBSURFACE USE AGREEMENT

This Memorandum of Subsurface Use Agreement (this "Memorandum") is made effective as of the _____ day of _____, 2022 (the "Effective Date"), by and between the City of Midland, Texas ("Grantor"), whose address is 300 N. Loraine, Midland, Texas 79701, and Pioneer Natural Resources USA, Inc., a Delaware corporation ("Operator"), whose address is P.O. Box 3178, Midland, Texas 79702. Grantor and Operator are sometimes referred to singularly as a "Party," and collectively as the "Parties."

1. Land. This Memorandum pertains to land in which Grantor owns an interest which is more fully described in the legal description in Exhibit A attached hereto and incorporated herein by reference (the "Land").

2. Grant of Subsurface Easement. The Parties entered into that certain Subsurface Use Agreement dated effective as of the Effective Date (the "Agreement"), under which Grantor granted, transferred, and conveyed unto Operator a non-exclusive easement to use and occupy the subsurface underlying the Land for the purposes of drilling no more than ten (10) horizontal wells through the Land for the production of oil and gas, said production not from the Land, but from other lands in the area through the subsurface of the Land, for the purposes of completing the Wellbores and producing or flowing oil and/or gas from lands in the vicinity of the Land through such Wellbores. The Agreement sets forth the consideration paid or to be paid by Operator to Grantor and the terms and conditions under which Grantor granted and conveyed unto Operator such subsurface easement under the Land.

3. Modification. This Memorandum does not alter, amend or modify the terms and conditions of the Agreement, but is executed solely for the purpose of giving notice of the existence of the Agreement and Operator's rights with respect to the Land. The Agreement is incorporated by reference for all purposes to the same extent and with the same effect as if set forth herein in full.

4. Counterparts. This Memorandum may be executed in multiple counterparts, each of which shall be deemed an original instrument, but all of which together shall constitute one and the same instrument.

[*Remainder of Page Intentionally Left Blank*]

[*Signature and Acknowledgement Pages Follow*]

IN WITNESS WHEREOF, Grantor and Operator have executed this Memorandum as of the dates of their respective acknowledgements below, to be effective as of the Effective Date.

GRANTOR:
CITY OF MIDLAND, TEXAS

By: _____
Name: Robert Patrick
Title: City Manager

THE STATE OF TEXAS §
§
COUNTY OF MIDLAND §

This instrument was acknowledged before me this ___ day of _____, 20__, by _____, _____ of the City of Midland, Texas, a home rule municipal corporation, on behalf of said entity.

_____
Notary Public, State of Texas

OPERATOR:
PIONEER NATURAL RESOURCES USA, INC.

By: _____
Name: Daniel M. Pender
Title: Surface Land and Business Development Director

THE STATE OF TEXAS §
§
COUNTY OF MIDLAND §

This instrument was acknowledged before me this ____ day of _____, 2022, by DANIEL M. PENDER, Surface Land and Business Development Director of PIONEER NATURAL RESOURCES USA, INC., for and on behalf of said corporation.

_____
Notary Public, State of Texas

EXHIBIT A

to

Memorandum of Subsurface Use Agreement between the City of Midland, Texas, as Grantor, and Pioneer Natural Resources USA, Inc., as Operator

The Land

The S/2 SW/4 of Section 8, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas, more fully described by metes and bounds in that certain Warranty Deed dated March 14, 1984, between K & S Land Company, Inc. and The City of Midland, Texas, recorded in Vol. 239, pg. 49, Deed Records of Midland County, Texas.

EXECUTION VERSION

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

SUBSURFACE USE AGREEMENT

THE STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF MIDLAND §

This Subsurface Use Agreement (this "Agreement") is entered into effective as of _____ ___, 2022 (the "Effective Date"), by and between the City of Midland, Texas ("Grantor"), whose address is 300 N. Loraine, Midland, Texas 79701, and Pioneer Natural Resources USA, Inc., a Delaware corporation ("Operator"), whose address is P.O. Box 3178, Midland, Texas 79702. Grantor and Operator are sometimes referred to singularly as a "Party," and collectively as the "Parties."

BACKGROUND

Grantor owns an interest in the land in Midland County, Texas, more particularly described on the attached Exhibit A (collectively, the "Land"). Operator desires to drill horizontal wells through the Land for the production of oil and gas, said production not from the Land, but from other lands in the area (such wells, the "Wellbores"). The Parties are entering into this Agreement to provide the terms with respect to the use of the Land for such purposes.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Grantor and Operator agree as provided below:

ARTICLE I - AGREEMENT

1.1 Grant, Limitations.

Grantor grants, transfers, and conveys unto Operator a non-exclusive easement to use and occupy the subsurface underlying the Land for the purposes of drilling no more than ten (10) Wellbores through the subsurface of the Land, for the purposes of completing the Wellbores and producing or flowing oil and/or gas from lands in the vicinity of the Land through such Wellbores. This is a grant of subsurface use only and this Agreement does not grant the right to use the surface of the ground of the Land for any purpose, including, without limitation, any oil and gas operation. This Agreement does not grant any interest in and to the oil, gas, or other minerals in, on or under the Land, nor shall this Agreement grant Operator the right to produce any of the oil, gas or other minerals from the Land. Neither this Agreement, nor the consideration provided for herein, is intended to apply to wells that Operator has drilled or drills in the future through the Land via oil and gas lease rights or any other rights under any other agreement that Operator may have covering the Land.

1.2 Term, End of Term.

(a) This Agreement will be for a term of three (3) years, and for so long thereafter as Operator produces or flows oil and/or gas from lands in the vicinity of the Land through any Wellbore with no cessation of three hundred sixty-five (365) continuous days or more. Upon the expiration of this Agreement under the immediately preceding sentence, the rights granted under this Agreement to Operator shall *ipso facto* cease and automatically terminate; provided, however, that notwithstanding any expiration or termination of this Agreement Operator's liability for performance of its obligations hereunder and Operator's indemnity and defense obligations hereunder shall survive any expiration or termination of this Agreement. Upon expiration or termination of this Agreement, Operator shall promptly give Grantor written notice of such expiration or termination and Operator shall have the right to remove all pipe, casing and other subsurface equipment as may be situated in and under the Land, and shall conduct such plugging and abandonment operations as may be required by applicable law. In addition, upon the expiration or termination hereof, Operator shall prepare and file in Midland County, Texas, a release of this Agreement and pay the required filing fees for same. Operator may at any time surrender all or any part of its rights hereunder by filing a release in the appropriate public record.

(b) The Wellbores and corresponding equipment and materials placed on or in the subsurface of the Land by Operator shall be and remain the property of Operator.

1.3 Operator Rights and Obligations; Consideration.

(a) Operator agrees that it will comply in all its operations under this Agreement with all applicable ordinances, laws, rules and regulations of each governmental, municipal and/or regulatory authority having jurisdiction over such operations, including, without limitation, the City of Midland Oil and Gas Drilling requirements as applied under current Ordinance 8769, as codified in the City of Midland Municipal Code Section 6-1-23, as the same may be hereafter amended from time to time, if and to the extent applicable, and all applicable environmental rules and regulations. **OPERATOR AGREES TO INDEMNIFY, DEFEND, AND HOLD GRANTOR AND GRANTOR'S OFFICERS, EMPLOYEES, TENANTS, AGENTS, REPRESENTATIVES, SUCCESSORS AND ASSIGNS ("GRANTOR INDEMNITEES"), HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS, LOSSES, DAMAGES, FINES, PENALTIES, DEMANDS, CAUSES OF ACTION OR OTHER EXPENSES OF ANY KIND OR CHARACTER (INCLUDING, WITHOUT LIMITATION, ALL COSTS AND EXPENSES OF LITIGATION AND ATTORNEYS' FEES) ASSERTED AGAINST OR SUFFERED BY ANY GRANTOR INDEMNITEE BY REASON OF THE GRANT OF THE EASEMENT UNDER THIS AGREEMENT AND/OR ARISING OUT OF OPERATOR'S OPERATIONS UNDER THE LAND UNDER THIS AGREEMENT.**

(b) As additional consideration for the easement conveyed by Grantor herein, during the term of this Agreement, Operator shall pay to Grantor the amount of Ten Thousand and No/100ths Dollars ($10,000.00) per Wellbore with any portion thereof to be drilled in, under or through the Land pursuant to the terms of this Agreement, with each such amount being due and payable to Grantor on or before the spud date of the applicable Wellbore. Any such amount owing to Grantor that is not received by Grantor on or before the spud date of the applicable Wellbore shall accrue interest at the lesser of (i) fifteen percent (15%) per year; or (ii) the highest rate allowed by

applicable law, from the spud date of the applicable Wellbore until such amount is received by Grantor. Within thirty (30) days of Grantor's written request to Operator, Operator shall furnish to Grantor wellbore plats of the Wellbores drilled in, under or through the Land together with such other location and spud date information pertaining to the Wellbores as may be reasonably requested by Grantor.

1.4 Grantor Rights and Obligations.

(a) The subsurface easement granted hereunder is granted by Grantor without warranty of title, express or implied. **OPERATOR IS FULLY FAMILIAR WITH THE LAND, ITS CONDITION AND STATE OF REPAIR FROM OPERATOR'S OWN INVESTIGATION OF SAME. OPERATOR ACKNOWLEDGES THAT GRANTOR HAS MADE NO EXPRESS WARRANTIES WITH REGARD TO THE LAND OR THE CONDITION THEREOF AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, GRANTOR HEREBY DISCLAIMS, AND OPERATOR HEREBY WAIVES THE BENEFIT OF, ANY AND ALL IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF HABITABILITY, OR FITNESS OR SUITABILITY FOR OPERATOR'S PURPOSES.** Operator has the right to discharge or redeem for Grantor, in whole or in part, any mortgage, tax or other lien relating to the Land and thereupon be subrogated to such lien if Grantor defaults on any mortgage covering the Land.

(b) Grantor will receive payment hereunder in such proportion as its undivided interest in the affected portion of the Land traversed by an individual Wellbore bears to the fee simple title of the Land.

ARTICLE II - MISCELLANEOUS

2.1 Nature of Agreement. The terms and provisions of this Agreement shall inure to the benefit of and be binding upon Grantor and Operator and their respective heirs, successors, representatives and assigns. Grantor confirms and agrees that Grantor has been made no promise or agreement by Operator or any agent (which is not expressed herein) in executing this Agreement, that Grantor is not relying upon any statement or representation of Operator, or any agent and that Grantor's execution of this Agreement is free and voluntary. This Agreement may not be amended except by a writing signed by the Party against whom said modification or amendment is to be enforced and no Party shall be liable or bound to any other Party except as specifically set forth herein.

2.2 No Waiver of Governmental or Sovereign Immunity. By executing this Agreement Grantor is not waiving its right of governmental or sovereign immunity. Grantor is retaining its immunity from suit. Grantor is not granting consent to be sued by legislative resolution or action. **THERE IS NO WAIVER OF GOVERNMENTAL OR SOVEREIGN IMMUNITY.**

2.3 Public Purpose; Governmental Functions. The Parties acknowledge and agree that this Agreement is in the public interest and serves a public purpose. The Parties acknowledge and agree that Grantor's obligations and performance under this Agreement are governmental functions. By entering into this Agreement, Operator waives and releases any present or future claim asserting Grantor's obligations or performance under this Agreement are not governmental functions.

2.4 Chapter 271 of Texas Local Government Code. The Parties agree that this Agreement does not constitute an agreement for providing goods or services to Grantor as described in Subchapter I of Chapter 271 of the Texas Local Government Code, and the Parties expressly covenant and agree that this Agreement shall not constitute nor be interpreted as a waiver of Grantor's governmental immunity under Subchapter I of Chapter 271 of the Texas Local Government Code. Operator acknowledges and agrees that any provision in this Agreement that restricts the use of property to a specific purpose shall not require the use of property for that specific purpose. Any such provision shall be deemed to be a covenant against noncomplying use, not a covenant to use. Operator's use of property in compliance with a restriction shall not constitute a service, and such complying use shall not operate to waive Grantor's governmental immunity.

2.5 Instruments. The rights of either Party hereunder may be assigned, in whole or in part, and the provisions hereof shall extend to the respective heirs, successors, representatives and assigns of the Parties. This Agreement does not waive or diminish any rights conveyed to Operator by virtue of any oil and gas lease, or other instrument affecting the Land. This Agreement shall be governed by and construed in accordance with the laws of the State of Texas without reference to the conflict of law principles thereof. Without limiting paragraphs 2.2, 2.3 or 2.4 of this Agreement, (i) should any dispute arise hereunder the Parties stipulate that venue will lie in Midland County, Texas, and (ii) as to any action arising hereunder or related hereto, the Parties agree to and do hereby irrevocably waive any and all right to a trial by jury to the fullest extent permitted by law. This Agreement may be signed in multiple counterparts, and all such counterparts shall be deemed as originals and binding upon the Party executing and their respective heirs, representatives, successors and assigns. For recording, multiple signature pages may be compiled into a single document.

2.6 Attorneys' Fees. Operator shall reimburse Grantor for Grantor's attorneys' fees incurred in connection with the preparation and negotiation of this Agreement, such fees in connection with the preparation and negotiation of this Agreement not to exceed $5,000.00. The invoice for such attorneys' fees shall be provided to Operator within thirty (30) days of execution of this Agreement, and paid by Operator within sixty (60) days of execution.

2.7 Memorandum. In lieu of recording this Agreement, Grantor agrees to execute, and Operator shall file in the Official Public Records of the applicable county, a Memorandum of this Agreement substantially in the form of Exhibit B attached hereto (the "Memorandum"). Except for the Memorandum, this Agreement shall not be filed in any public records without the prior written consent of Grantor.

[Signature Pages Follow]

GRANTOR:
CITY OF MIDLAND, TEXAS

By:_____
Name: Robert Patrick
Title: City Manager

THE STATE OF TEXAS §
§
COUNTY OF MIDLAND §

This instrument was acknowledged before me this ___ day of _____, 20__, by _____, _____ of the City of Midland, Texas, a home rule municipal corporation, on behalf of said entity.

_____
Notary Public, State of Texas

OPERATOR:
PIONEER NATURAL RESOURCES USA, INC.

By: _____
Name: Daniel M. Pender
Title: Surface Land and Business Development Director

THE STATE OF TEXAS §
§
COUNTY OF MIDLAND §

This instrument was acknowledged before me this ____ day of _____, 2022, by DANIEL M. PENDER, Surface Land and Business Development Director of PIONEER NATURAL RESOURCES USA, INC., for and on behalf of said corporation.

_____
Notary Public, State of Texas

EXHIBIT A

to

Subsurface Use Agreement between the City of Midland, Texas, as Grantor, and Pioneer Natural Resources USA, Inc., as Operator

The Land

The S/2 SW/4 of Section 8, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas, more fully described by metes and bounds in that certain Warranty Deed dated March 14, 1984, between K & S Land Company, Inc. and The City of Midland, Texas, recorded in Vol. 239, pg. 49, Deed Records of Midland County, Texas.

EXHIBIT B

to

Subsurface Use Agreement between the City of Midland, Texas, as Grantor, and Pioneer Natural Resources USA, Inc., as Operator

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

STATE OF TEXAS §
§
COUNTY OF MIDLAND §

MEMORANDUM OF SUBSURFACE USE AGREEMENT

This Memorandum of Subsurface Use Agreement (this "Memorandum") is made effective as of the _____ day of _____, 2022 (the "Effective Date"), by and between the City of Midland, Texas ("Grantor"), whose address is 300 N. Loraine, Midland, Texas 79701, and Pioneer Natural Resources USA, Inc., a Delaware corporation ("Operator"), whose address is P.O. Box 3178, Midland, Texas 79702. Grantor and Operator are sometimes referred to singularly as a "Party," and collectively as the "Parties."

1. Land. This Memorandum pertains to land in which Grantor owns an interest which is more fully described in the legal description in Exhibit A attached hereto and incorporated herein by reference (the "Land").

2. Grant of Subsurface Easement. The Parties entered into that certain Subsurface Use Agreement dated effective as of the Effective Date (the "Agreement"), under which Grantor granted, transferred, and conveyed unto Operator a non-exclusive easement to use and occupy the subsurface underlying the Land for the purposes of drilling no more than ten (10) horizontal wells through the Land for the production of oil and gas, said production not from the Land, but from other lands in the area through the subsurface of the Land, for the purposes of completing the Wellbores and producing or flowing oil and/or gas from lands in the vicinity of the Land through such Wellbores. The Agreement sets forth the consideration paid or to be paid by Operator to Grantor and the terms and conditions under which Grantor granted and conveyed unto Operator such subsurface easement under the Land.

3. Modification. This Memorandum does not alter, amend or modify the terms and conditions of the Agreement, but is executed solely for the purpose of giving notice of the existence of the Agreement and Operator's rights with respect to the Land. The Agreement is incorporated by reference for all purposes to the same extent and with the same effect as if set forth herein in full.

4. Counterparts. This Memorandum may be executed in multiple counterparts, each of which shall be deemed an original instrument, but all of which together shall constitute one and the same instrument.

[*Remainder of Page Intentionally Left Blank*]

[*Signature and Acknowledgement Pages Follow*]

IN WITNESS WHEREOF, Grantor and Operator have executed this Memorandum as of the dates of their respective acknowledgements below, to be effective as of the Effective Date.

GRANTOR:
CITY OF MIDLAND, TEXAS

By: [DO NOT SIGN – EXHIBIT ONLY]
Name: Robert Patrick
Title: City Manager

THE STATE OF TEXAS §
§
COUNTY OF MIDLAND §

This instrument was acknowledged before me this ___ day of _____, 20__, by _____, _____ of the City of Midland, Texas, a home rule municipal corporation, on behalf of said entity.

[DO NOT SIGN – EXHIBIT ONLY]
Notary Public, State of Texas

OPERATOR:
PIONEER NATURAL RESOURCES USA, INC.

By: [DO NOT SIGN – EXHIBIT ONLY]
Name: Daniel M. Pender
Title: Surface Land and Business Development Director

THE STATE OF TEXAS §
§
COUNTY OF MIDLAND §

This instrument was acknowledged before me this ____ day of _____, 2022, by DANIEL M. PENDER, Surface Land and Business Development Director of PIONEER NATURAL RESOURCES USA, INC., for and on behalf of said corporation.

[DO NOT SIGN – EXHIBIT ONLY]
Notary Public, State of Texas

EXHIBIT A

to

Memorandum of Subsurface Use Agreement between the City of Midland, Texas, as Grantor, and Pioneer Natural Resources USA, Inc., as Operator

The Land

The S/2 SW/4 of Section 8, Block 38, T-1-S, T&P RR Co. Survey, Midland County, Texas, more fully described by metes and bounds in that certain Warranty Deed dated March 14, 1984, between K & S Land Company, Inc. and The City of Midland, Texas, recorded in Vol. 239, pg. 49, Deed Records of Midland County, Texas.

City Council Meeting

Item Number: 17

Meeting Date: October 25, 2022

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 MIDLAND COUNTY HOSPITAL DISTRICT, MIDLAND PARKER PLACE, INC., MISSION HEALTH CARE, INC., THE SALVATION ARMY OF MIDLAND, AND SENIOR LIFE MIDLAND, 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:

Consider A 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 $1,042,971 will be appropriated to the 2022-2023 CDBG Block Grant (060) for stated purposes, and $471,782 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 for the Home Cleaning Program in the amount of $45,000.00, Mission Health Care, Inc. Take Home Terrific Meal Program in the amount of $35,000.00, Casa de Amigos Senior

Nutrition Program in the amount of $68,000.00, Casa de Amigos Senior Resiliency Program CV19 in the amount of $46,610.00, The Salvation Army of Midland Homeless Nutrition CV19 Programs in the amount of $120,172.00, Midland County Hospital District (Mental Health & Wellness (CRISP) CV19 Program in the amount of $260,000.00, Senior Life Midland (SLM) Meals on Wheels CV19 Program in the amount of $45,00.00, Midland Parker Place Parking Lot in the amount of $75,000.00 and appropriating CDBG Block Grant funds (060) for stated purposes to OHAP Major-down payment assistance in the amount of $200,000.00; City of Midland Parks & Rec Department MLK Center Weight Room in the amount of $84,000.00; City of Midland Parks & Rec Department South East Senior Center Parking Lot in the amount of $90,000.00; City of Midland Parks & Rec Department South East Senior Center Covered Patio in the amount of $200,000.00

Morris Williams Jr.

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 MIDLAND COUNTY HOSPITAL DISTRICT, MIDLAND PARKER PLACE, INC., MISSION HEALTH CARE, INC., THE SALVATION ARMY OF MIDLAND, AND SENIOR LIFE MIDLAND, 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 $68,000.00; and

WHEREAS, Casa de Amigos of Midland, Texas, Incorporated, has agreed to provide services for the Casa de Amigos Senior Resiliency CV19 Program for $46,610.00; and

WHEREAS, the Midland County Hospital District has agreed to provide services for the Community Referral and Indigent Services CV19 Program for $260,000.00; and

WHEREAS, Midland Parker Place, Inc., has agreed to provide services for the Midland Parker Place Parking Infrastructure Project for $75,000.00; and

WHEREAS, Mission Health Care, Inc., has agreed to provide services for the Mission Center Take Home Terrific Meal Program for $35,000.00; and

WHEREAS, the Salvation Army of Midland has agreed to provide services for the Homeless Nutrition CV19 Program for $120,172.00; and

WHEREAS, Senior Life Midland, Inc. Has agreed to provide services for the Senior Life Midland Meals on Wheels CV19 Program for $45,000.00; 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 $200,000.00 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 $84,000.00 to the City of Midland Parks and Recreation Department MLK Center Weight Room Program; and

WHEREAS, the City Council finds it to be in the public interest to allocate funds in the amount of $90,000.00 to the City of Midland Parks and Recreation Department South East Senior Center Parking Lot Program; and

WHEREAS, the City Council finds it to be in the public interest to allocate funds in the amount of $200,000.00 to the City of Midland Parks and Recreation Department South East Senior Center Covered Patio 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 Midland County Hospital District, Midland Parker Place, Inc., Mission Health Care, Inc., the Salvation Army of Midland, and Senior Life Midland, 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 City of Midland Parks and Recreation Department MLK Center Weight Room Program, the City of Midland Parks and Recreation Department South East Senior Center Parking Lot Program, and the City of Midland Parks and Recreation Department South East Senior Center Covered Patio Program.

SECTION THREE. That funds in the amount of $1,042,971 will be appropriated

to the 2022-2023 CDBG Block Grant Project and $471,782 will 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 Midland County Hospital District, Midland Parker Place, Inc., Mission Health Care, Inc., the Salvation Army of Midland, and Senior Life Midland, Inc., pursuant to the terms of their respective contracts, not to exceed the contracted price, from funds available in the Community Development Block Grant Fund (060) 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., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, 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

City Council Meeting

Item Number: 18

Meeting Date: October 25, 2022

To: City Council / City Manager

From: Isaac Garnett, Manager, Community Development

Subject: Motion authorizing the research, development and submission of grant applications to federal, state, and local agencies for the express purpose of preventing and ending homelessness in Midland County (DISTRICT: ALL) (DEVELOPMENT SERVICES)

Purpose:

Consider a motion authorizing the research, development and submission of grant applications to federal, state, and local agencies for the express purpose of preventing and ending homelessness in Midland County.

Recommended City Council Action:

Directional / Informational

Fiscal Impact:

No fiscal impact at this time.

Discussion:

The CDBG office in conjunction with the Midland Homeless Coalition (Continuum of Care), will seek funding opportunities for advocacy and direct service administration to homeless individuals and families. The City of Midland CDBG Office and the Midland Homeless Coalition (Continuum of Care) has a stated goal of ending homelessness within Midland County and impacting the life circumstances that contribute to homelessness. Individuals and families experiencing homelessness will move from unsheltered to sheltered, transitional and permanent housing with “wrap around services” delivery.

Morris Williams Jr.

City Manager's Office

City Council Meeting

Item Number: 19

Meeting Date: October 25, 2022

To: City Council / City Manager

From: Seth Herman, Police Chief

Subject: **RESOLUTION AUTHORIZING THE SUBMISSION OF AN APPLICATION TO THE U.S. DEPARTMENT OF JUSTICE, OFFICE OF JUSTICE PROGRAMS, BUREAU OF JUSTICE ASSISTANCE FOR THE FISCAL YEAR 2023 EDWARD BYRNE JUSTICE ASSISTANCE GRANT PROGRAM; AUTHORIZING THE ACCEPTANCE OF GRANT FUNDS IN THE AMOUNT OF $81,079.12 FOR THE PURCHASE OF TWO EXPLOSIVE ORDNANCE DISPOSAL SUITS AND ACCOMPANYING EQUIPMENT; AUTHORIZING THE EXECUTION OF ALL NECESSARY DOCUMENTS FOR THE ACCEPTANCE OF SAID GRANT FUNDS; AND PROVIDING FOR THE APPROPRIATION OF SAID GRANT FUNDS UPON RECEIPT (DISTRICT: ALL) (POLICE)**

Purpose:

RESOLUTION AUTHORIZING THE SUBMISSION OF AN APPLICATION TO THE U.S. DEPARTMENT OF JUSTICE (DOJ), OFFICE OF JUSTICE PROGRAMS (OJP), BUREAU OF JUSTICE ASSISTANCE (BJA) FOR THE FISCAL YEAR 2023 EDWARD BYRNE JUSTICE ASSISTANCE GRANT; AUTHORIZING THE ACCEPTANCE OF GRANT FUNDS IN THE AMOUNT OF $81,079.12 FOR THE PURCHASE OF TWO - EXPLOSIVE ORDNANCE DISPOSAL SUITS AND ACCOMPANYING EQUIPMENT.

Recommended City Council Action:

Approve

Fiscal Impact:

NONE TO THE CITY.

Discussion:

In order to safely address calls for services centering on explosive devices, the Midland Police Department maintains a team of specialized technicians derived from licensed peace officers employed by the City of Midland Police Department, Midland Fire Department and the Midland County District Attorney's Office - identified as the Explosive Ordnance Disposal Unit. Operations specific to this group require the use of safety equipment in order to protect technicians tasked with the identification, dismantling and retrieval of hazardous explosive devices - to include suits manufactured to absorb blasts in protection of the wearer. The current suits maintained by the team have been in use for over eighteen years, requiring replacement in order to ensure that the maximum amount of protection is afforded these technicians.

Robert Patrick

City Manager's Office

RESOLUTION NO. _____

RESOLUTION AUTHORIZING THE SUBMISSION OF AN APPLICATION TO THE U.S. DEPARTMENT OF JUSTICE, OFFICE OF JUSTICE PROGRAMS, BUREAU OF JUSTICE ASSISTANCE FOR THE FISCAL YEAR 2023 EDWARD BYRNE JUSTICE ASSISTANCE GRANT PROGRAM; AUTHORIZING THE ACCEPTANCE OF GRANT FUNDS IN THE AMOUNT OF $81,079.12 FOR THE PURCHASE OF TWO EXPLOSIVE ORDNANCE DISPOSAL SUITS AND ACCOMPANYING EQUIPMENT; AUTHORIZING THE EXECUTION OF ALL NECESSARY DOCUMENTS FOR THE ACCEPTANCE OF SAID GRANT FUNDS; AND PROVIDING FOR THE APPROPRIATION OF SAID GRANT FUNDS UPON RECEIPT

WHEREAS, the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Assistance announced the availability of grant funds in the amount of $81,079.12 through the Fiscal Year 2023 Edward Byrne Justice Assistance Grant Program; and

WHEREAS, the Midland Police Department wishes to submit an application for said grant funds in order to purchase two (2) explosive ordnance disposal suits and accompanying equipment; and

WHEREAS, the City Council finds it to be in the public interest to authorize the submission of an application for said grant funds and to designate the City Manager, or his designee, as the City of Midland's authorized signatory; and

WHEREAS, the City Council finds it to be in the public interest to authorize the acceptance of said grant funds for the purchase of two (2) explosive ordnance disposal suits and accompanying equipment; and

WHEREAS, the City Council finds it to be in the public interest to authorize the City Manager or his designee to execute all necessary documents to provide for the acceptance of said grant funds; and

WHEREAS, the City of Midland shall not use the grant funds to offset or decrease total salaries, expenses and allowances that the City of Midland receives from the governing body at or after the time the grant funds are awarded; and

WHEREAS, in the event of loss or misuse of said grant funds, the City of Midland assures that the grant funds shall be returned to the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Assistance in full;

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

SECTION ONE. That the City of Midland is hereby authorized to submit a grant application to the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Assistance in order to receive grant funds in the amount of $81,079.12 for the purchase of two (2) explosive ordnance disposal suits and accompanying equipment for the Police Department.

SECTION TWO. That the City of Midland shall not use the grant funds to offset or decrease total salaries, expenses and allowances that the City of Midland receives from the governing body at or after the time the grant funds are awarded.

SECTION THREE. That in the event of loss or misuse of the grant funds from the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Assistance, the City of Midland assures that the grant funds shall be returned to the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Assistance in full.

SECTION FOUR. That the City Manager, or his designee, is designated as the City of Midland's authorized signatory and is hereby authorized to apply, accept, reject, alter or terminate the grant on behalf of the City of Midland.

SECTION FIVE. That upon the approval of the City of Midland's application for the grant funds through the Fiscal Year 2023 Edward Byrne Justice Assistance Grant Program, the City Manager or his designee is hereby authorized and directed to execute all necessary documents to provide for the acceptance of said grant funds.

SECTION SIX. Upon the City of Midland's receipt of said grant funds, the City Treasurer is hereby authorized and directed to appropriate $81,079.12 in the Police Justice

Grant Fund (074).

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., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Seth Herman, Chief of Police

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

QUOTATION

801 W. 116th Avenue
Ste #400
Westminster, CO 80234
303-322-3577
www.safewareinc.com

Order Number	
1913712	
Order Date	Page
07/29/2022 14:10:25	1 of 2

Quote Expires On: 08/28/2022

Bill To: **Customer ID:** 84267

Midland Police Department
601 N. Loraine
Midland, TX

Ship To:

Midland Police Department
601 N. Loraine
Midland, TX

432-685-7568

Requested By: Brian Rackow

PO Number	*Taker*	*Email*
EOD suit	Vicky Garcia	vgarcia@safewareinc.com
Freight Terms	***Phone***	***Fax***
Bill Freight		
Sales Representative		
Kenneth Crawford		

Quantities					*Item ID* / *Item Description*	*Pricing UOM* / *Unit Size*	*Unit Price*	*Extended Price*
Ordered	*Allocated*	*Remaining*	*UOM* / *Unit Size*	*Disp.*				
1.00	0.00	1.00	EA	1.0	K_CRAWFORD For questions concerning this proposal please contact your local Safeware territory Manager Kenneth Crawford Direct line- 281-755-3692 Safeware Office: 1-800-282-4782 Email- Kcrawford@safewareinc.com	EA 1.0	0.00	0.00
1.00	0.00	1.00	EA	1.0	OMNIA OMNIA Contract #4400008468 Lead Agency: Fairfax County, VA Public Safety and Emergency Preparedness Standard freight within continental US is paid, all HAZMAT or expedited freight will be billed. *Register with OMNIA at www.omniapartners.com/publicsector	EA 1.0	0.00	0.00
2.00	0.00	2.00	EA	1.0	MED 8002579 Suit EOD 10E Olive Drab LG	EA 1.0	19,676.75	39,353.50
2.00	0.00	2.00	EA	1.0	MED 8002581 EOD 10E Helmet Pkg. Olive Drab	EA 1.0	15,884.89	31,769.78
2.00	0.00	2.00	EA	1.0	MED 8001061 BB-2590 BATTERY W/CHARGER KIT	EA 1.0	810.47	1,620.94
2.00	0.00	2.00	EA	1.0	MED 8001051 Med Eng EOD 10 BA Field Shield Assy Kit	EA 1.0	2,977.91	5,955.82
2.00	0.00	2.00	EA		MED 8001772	EA	294.19	588.38

SAFEWARE

QUOTATION

801 W. 116th Avenue
Ste #400
Westminster, CO 80234
303-322-3577
www.safewareinc.com

Order Number	
1913712	
Order Date	Page
07/29/2022 14:10:25	2 of 2

Quote Expires On: 08/28/2022

Quantities					Item ID / Item Description	Pricing UOM / Unit Size	Unit Price	Extended Price
Ordered	Allocated	Remaining	UOM / Unit Size	Disp.				
			1.0		Forced Air Suit Cooling Set	1.0		
2.00	0.00	2.00	EA		MED 4975591	EA	895.35	1,790.70
			1.0		Kit, Blast Tracker, Pkg'D	1.0		

Total Lines: 8

SUB-TOTAL:	81,079.12
TAX:	0.00
AMOUNT DUE:	**81,079.12**

Actual freight added per freight terms

City Council Meeting

Item Number: 20

Meeting Date: October 11, 2022

To: City Council / City Manager

From: Landon Ochoa, Planner

Subject: AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE A 317.56-ACRE TRACT OF LAND OUT OF SECTION 18, BLOCK 38, T-1-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS, FROM SF-1, SINGLE-FAMILY DWELLING DISTRICT, IN PART, SF-2, SINGLE-FAMILY DWELLING DISTRICT, IN PART, SF-3, SINGLE-FAMILY DWELLING DISTRICT, IN PART, TH, TOWNHOUSE (ATTACHED) DWELLING DISTRICT, IN PART, 2F, TWO-FAMILY DWELLING (DUPLEX) DISTRICT, IN PART, MF-16, MULTIPLE-FAMILY DWELLING DISTRICT, IN PART, AND RR, REGIONAL RETAIL DISTRICT, IN PART, TO PD, PLANNED DEVELOPMENT DISTRICT FOR A HOUSING DEVELOPMENT (GENERALLY LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF NORTH FAIRGROUNDS AND EAST MOCKINGBIRD ROAD); 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, Maverick Engineering, is requesting a zone change from SF-3, Single-Family Dwelling District, in part, TH, Townhouse Dwelling District, in part, SF-2, Single-Family Dwelling District, in part, MF-16, Multiple-Family Dwelling District, in part, SF-1, Single-Family Dwelling District, in part, 2F, Two-Family Dwelling (Duplex) District, in part, and RR, Regional Retail District, in part, to PD, Planned Development District for Housing Development to allow for the development of multi-use site including single family housing, townhomes, cottage housing, retail, and greenspace/detention.

Recommended City Council Action:

Approve

Fiscal Impact:

This project will not require any City funds.

Current Zoning:

SF-3, Single-Family Dwelling District, in part, TH, Townhouse Dwelling District, in part, SF-2, Single-Family Dwelling District, in part, MF-16, Multiple-Family Dwelling District, in part, SF-1, Single-Family Dwelling District, in part, 2F, Two-Family Dwelling (Duplex) District, in part, and RR, Regional Retail District, in part.

Surrounding Zoning and Land Use:

The property to the north is zoned SF-3, Single-Family Dwelling District, in part, TH, Townhouse Dwelling District, in part, SF-2, Single-Family Dwelling District, in part, MF-16, Multiple-Family Dwelling District, in part, SF-1, Single-Family Dwelling District, in part, 2F, Two-Family Dwelling (Duplex) District, in part, and LR, Local Retail District, in part. The property to east and south is zoned AE, Agricultural Estate District. The properties to the west are zoned SF-3 Single-Family-Dwelling District, in part, PD, Planned Development District for Housing Development, in part, SF-2, Single-Family Dwelling District, in part, 2F, Two-Family Dwelling (Duplex) District, MF-16, Multiple-Family Dwelling District, in part, LR, Local Retail District.

Analysis:

The applicant, Maverick Engineering, who is representing Betenbough, is requesting approval of a zone change for the development of a multi-use site, including a mix of residential, commercial, and greenspace uses. This proposed subdivision will have a total of nine hundred and twenty-four (924) residential lots, one approximately 6.235-acre local retail lot, and approximately 72.91 acres of greenspace/detention pond that is composed of parks, trails, common areas, and drainage ponds.

The current zoning is SF-3, Single-Family Dwelling District, in part, TH, Townhouse Dwelling District, in part, SF-2, Single-Family Dwelling District, in part, MF-16, Multiple-Family Dwelling District, in part, SF-1, Single-Family Dwelling District, in part, 2F, Two-Family Dwelling (Duplex) District, in part, and RR, Regional Retail District, in part, and the location of vacant lots. The proposed development will consist of a variety of uses but will predominantly be a residential development. The proposed residential districts include, SF, Single Family Dwelling District lots, and TH, Townhouse (Attached) Dwelling District lots. The applicant is also proposing to provide a local retail zoning area along the northeast corner of the intersection of E. Mockingbird Lane and N. Fairgrounds Road. Throughout the proposed development is a greenspace/detention that will be a new concept to Midlander’s.

The applicant is proposing the development to be executed in nine (9) phases. The lots width will vary from either 45, 50, 60, 75, or 85 feet and the minimum depth would be 77 feet. The properties that fall in the minimum lot depth is less than 1%. Below is a chart with the lot class tabulation, representing them by phases and percentage by lot widths.

LOT CLASS TABULATION

Product Class		Phases									Percent of Total
		1	2	3	4	5	6	7	8	9	
Core	45'	49	17		15	23	30		31	19	19.9%
	50'	89	22		43	89	82		115	63	54.4%
Reserve	50'			14				12			4.3%
	60'			44		2		21			7.3%
	75'			5		3		1			1.0%
	85'			6				4			1.1%
Cottages						62			23		9.2%
Townhome 30' Lots			14							26	2.8%
PHASE TOTAL		138	53	69	58	179	112	38	169	108	100%
OVERALL TOTAL		924									

The site plan introduces a new housing prototype called Cottages. These homes will have an underlying zoning of SF-3, Single Family Dwelling District but with the following amendments.

1. A minimum lot Width shall be 50 feet;
2. A minimum lot Depth be 77 feet; and
3. A minimum lot Area shall be 4,200 square feet

The site plan also introduces a new housing prototype called Core, that split into two front widths. These homes will have an underlying zoning of SF-3, Single Family Dwelling District. However, the 45' Front Width Core will have an underlying zoning of SF-3, Single Family Dwelling District but with the following amendment.

1. A minimum lot Width shall be 45 feet.

Furthermore, the site plan also shows housing prototype called Townhomes. These homes will have an underlying zoning of TH, Townhouse Dwelling but with the following amendments.

1. A one-car garage, provided, that each lot shall have two additional off-street parking.

As mentioned before this development will consist of a variety of uses but will predominantly be a residential development. The proposed residential districts include:

- 687 - Core (SF-3, Single Family Dwelling District lots);
- 112 - Reserve (SF-3, Single Family Dwelling District lots);
- 26 – Townhomes (TH, Townhouse Dwelling District lots);
- 99 – Cottages (SF-3, Single Dwelling District lots);

The proposed density for each district is as followed:

- Core (SF-3): 4.56 units per acre
- Cottage (SF-3): 6.6 units per acre
- Townhouse (TH-Attached): 8.3 units per acre
- Reserve (SF-3): 3.9 units per acre

The appropriate setbacks and maximum height of future development must meet the regulations as described in Section 5.04 Residential Zoning District Dimensional Regulations chart. The proposed lots meet or exceed these requirements.

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 comments.

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, 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 objection to zone change. [For the 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 the Applicant's information only.]

Code: (Approved)

Phase I, page1 -The Plugged and Abandoned well Stimson Burley #18 #2- API 329-31184 is identified being in the street. Phase 6 page 2 – the Stinson-Burley B #2 API 329-31044 is identified with a 135 ft radius as requested for a non-City permitted well. Phase I Page 3- the non-city permitted Stimson Burley #1M API 329-31751 has the required 135 ft. Phase 8, page 3 -the non-City permitted Stimson Burley B #3 API 32--31045 is identified on plat with the required 135 ft. radius and noted to be P&A well. No building permits are allowed in the 135 ft radius of existing well until it is P&A. In addition, the City permitted Endeavor operated Willow Lakes 19 #191 (located south of Mockingbird Lane) is identified with a 500 ft. radius that is located below Mockingbird Lane. The occupied residential/commercial building permits inside the 500 ft. radius will require a variance to the permitted well from the City Council. The variance request would need to be made thru the Building Official. Informational: Please note

if oil & gas wells are not identified or left off plat, this could prevent receiving city permits for structures.

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:

This request is not in compliance with the Tall City Tomorrow Comprehensive Plan, Chapter 3 An Integrated Land Use Vision, "Future Land Use Map". However, the area is classified as Urban Residential-Low, in part, which calls for restrictive land use, emphasizing single-family detached development. The area is also classified as Urban Medium which calls for a mix of complementary uses, including single-family housings, multi-family housing, schools, mid-sized parks and churches, commercial and mixed use. The plan also calls for a parkway that would run through the property which is identified on the site plan.

The Tall City Tomorrow Comprehensive Plan, Chapter 3 An Integrated Land Use Vision, "Development Policy Areas" labels this area as part of the "Current Development Area" which seeks to address the compatibility of uses, "specifically between different housing intensities," As shown in the proposed site plan, the applicant is planning to create a gradual transition from existing housing developments at the western edge of the property in question.

Principle 4 of Chapter 3 of the Tall City Tomorrow Plan seeks to increase the diversity of the housing stock in Midland specifically including the need of smaller lot homes. This proposal works in compliance since the development will be introducing a neighborhood with a mix of housing intensities to include smaller townhouse sized lots as well as larger single-family lots. Additionally, Principle 8 of the Chapter 3 requests that land use policies and regulations support the creation of more balanced neighborhoods, which include "a variety of housing options, access to open space, and contain activity centers such as parks…" The applicant is proposing to develop more specifically delineated park space and trails in the development which will help give the residents a diversity of recreation allowing for a more balance feel.

Principle 5 of Chapter 3 requests planning for community amenities such as parks and open space to support "community activity, personal interaction a sense of place, and ultimately a sense of ownership in the community." The applicant is proposing to include a park, greenspace, and trails all of which will contribute to creating a sense of place for new residents.

This request was recommended for approval at the August 15, 2022, Planning and Zoning Commission Meeting.

The base zoning districts to which the use and development of the Property shall conform, except as modified by conditions listed below, are as follows:

A. That the portions of the Property identified as "Commercial" in Exhibit A, LR, Local Retail District;

B. That the portions of the Property identified as "Core" in Exhibit A, SF-3, Single-Family Dwelling District;

C. That the portions of the Property identified as "Cottages" in Exhibit A, SF-3, Single-Family Dwelling District;

D. That the portions of the Property identified as "Townhomes" in Exhibit A, TH, Townhouse Dwelling District;

E. That the portions of the Property identified as "Reserve" in Exhibit A, SF-3, Single-Family Dwelling District;

If this Zone Change from SF-3, Single-Family Dwelling District, in part, TH, Townhouse Dwelling District, in part, SF-2, Single-Family Dwelling District, in part, MF-16, Multiple-Family Dwelling District, in part, SF-1, Single-Family Dwelling District, in part, 2F, Two-Family Dwelling (Duplex) District, in part, and RR, Regional Retail District, in part. to PD, Planned Development District for Housing Development, is approved, staff recommends that is should be subject to conditions A through F.

Conditions:

A. That the Property shall significantly conform to the site plan attached hereto as Exhibit "A & B".

B. That each lot identified as Exhibit "A" as "Cottage" is subject to the following conditions and regulation:

1. The minimum lot Width shall be 50 feet.

2. The minimum lot Depth be 77 feet.

3. The minimum lot Area shall be 4,200 square feet

C. That each lot identified as Exhibit "A" as "45' Front Width - Core" is subject to the following condition and regulation:

1. The minimum lot Width shall be 45 feet.

D. That each lot identified as Exhibit "A" as "Townhomes" is subject to the following condition and regulation:

1. A one-car garage and off-street parking for two vehicles.

E. That the landscaping shown in Exhibit "A" shall be considered illustrative. The landscape shall conform to the regulations set forth in Title XI, Chapter 9 of the City Code.

F. That the signs on the property shall conform to the regulations set in Title XI, Chapter 7a.

Letters of Objection:

Staff has not received any letters of objection as of September 29, 2022.

Attachments:

Application
Sit Plan (Exhibit A)
Metes and Bounds (Exhibit B)
Detail Site Plan 1
Detail Site Plan 2
Detail Site Plan 3
Open Space Concept
Entry Concept
Rendering of Cottage Homes
Maps

.

Morris William Jr.

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE A 317.56-ACRE TRACT OF LAND OUT OF SECTION 18, BLOCK 38, T-1-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS, FROM SF-1, SINGLE-FAMILY DWELLING DISTRICT, IN PART, SF-2, SINGLE-FAMILY DWELLING DISTRICT, IN PART, SF-3, SINGLE-FAMILY DWELLING DISTRICT, IN PART, TH, TOWNHOUSE (ATTACHED) DWELLING DISTRICT, IN PART, 2F, TWO-FAMILY DWELLING (DUPLEX) DISTRICT, IN PART, MF-16, MULTIPLE-FAMILY DWELLING DISTRICT, IN PART, AND RR, REGIONAL RETAIL DISTRICT, IN PART, TO PD, PLANNED DEVELOPMENT DISTRICT FOR A HOUSING DEVELOPMENT (GENERALLY LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF NORTH FAIRGROUNDS AND EAST MOCKINGBIRD ROAD); 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 a 317.56-acre tract of land out of Section 18, Block 38, 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"), to PD, Planned Development District for a Housing Development and adopting a site plan therefor, 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 SF-1, Single-Family Dwelling District, in part,

SF-2, Single-Family Dwelling District, in part, SF-3, Single-Family Dwelling District, in part, TH, Townhouse (Attached) Dwelling District, in part, 2F, Two-Family Dwelling (Duplex) District, in part, MF-16, Multiple-Family Dwelling District, in part, and RR, Regional Retail District, in part to PD, Planned Development District for a Housing Development.

SECTION TWO. That the base zoning districts to which the use and development of the Property shall conform, except as modified by Section Three of this ordinance, are as follows:

A. For the portions of the Property identified as "COMMERCIAL TRACT" in Exhibit "B", which is attached hereto and incorporated herein for all purposes, LR, Local Retail District;

B. For the portions of the Property identified as "45' FRONT WIDTH - CORE", "50' FRONT WIDTH - CORE", "50' FRONT WIDTH - COTTAGE", "50' FRONT WIDTH - RESERVE", "60' FRONT WIDTH - RESERVE", "75' FRONT WIDTH - RESERVE" and "80' FRONT WIDTH - RESERVE" in Exhibit "B", SF-3, Single-Family Dwelling District; and

C. For the portions of the Property identified as "30' FRONT WIDTH - TOWNHOME" in Exhibit "B", TH, Townhouse (Attached) Dwelling District.

SECTION THREE. That a site plan, which is attached hereto as Exhibit "B" and incorporated herein for all purposes, is hereby adopted, and the use and development of the Property shall be subject to the following conditions and restrictions:

A. That the Property shall significantly conform to the site plan attached hereto as Exhibit "B".

B. That each lot identified as "50' FRONT WIDTH - COTTAGE" in Exhibit "B" shall have:

1. A minimum lot width of 50 feet;
2. A minimum lot depth of 77 feet; and
3. A minimum lot area of 4,200 square feet.

C. That each lot identified as "45' FRONT WIDTH - CORE" in Exhibit "B" shall have a minimum lot width of 45 feet.

D. That each lot identified as "30' FRONT WIDTH - TOWNHOME" in Exhibit "B" shall be allowed to have a one-car garage; provided, however, that each lot shall have two additional off-street parking spaces.

E. That the landscaping shall conform to the regulations set forth in Title XI, Chapter 9 of the City Code.

F. That all signage shall conform to the regulations set forth in Title XI, Chapter 7a of the City Code.

SECTION FOUR. 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 FIVE. 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 SIX. 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 SEVEN. 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 EIGHT. 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., 2022; 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., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

EXHIBIT "A"

STATE OF TEXAS §
COUNTY OF MIDLAND §

SECTION 18, BLOCK 38, TOWNSHIP 1 SOUTH,
TEXAS and PACIFIC RAILWAY COMPANY SURVEY
MIDLAND COUNTY, TEXAS.

FIELD NOTE DESCRIPTION OF A 317.56 ACRE TRACT OF LAND, SITUATED IN SECTION 18, BLOCK 38, TOWNSHIP 1 SOUTH, ABSTRACT NUMBER 734, GLO FILE NUMBER 66103, TEXAS and PACIFIC RAILWAY COMPANY SURVEY, MIDLAND COUNTY, TEXAS, AND BEING A PORTION OF THAT CALLED 340.49 TRACT DESCRIBED IN DOCUMENT NUMBER 2021-35675 OF THE OFFICIAL PUBLIC RECORDS OF SAID MIDLAND COUNTY, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

BEGINNING AT N.(Y):10719693.07, E.(X):1764462.90, A FIVE EIGHTHS INCH IRON ROD FOUND IN THE NORTH LINE OF SECTION 20, SAME BLOCK, FOR THE SOUTH COMMON CORNER OF SECTION 17, SAME BLOCK AND SAID SECTION 18, FROM WHICH A SIX INCH STEEL FENCE POST CALLED THE NORTHWEST CORNER OF A CALLED 244.4 ACRE TRACT AS DESCRIBED IN DOCUMENT NUMBER 2017-34694, OF SAID OFFICIAL PUBLIC RECORDS, BEARS N.63°31'14"W., 44.34 FEET, AND A 2 INCH IRON PIPE CALLED THE SOUTHWEST CORNER OF A CALLED 316.39 ACRE TRACT IN DOCUMENT NUMBER 2011-8666 OF SAID OFFICIAL PUBLIC RECORDS BEARS N.82°07'34"W., 36.64 FEET, AND BEING THE SOUTHEAST CORNER HEREOF;

THENCE S.75°43'57"W., ALONG THE LINE COMMON TO SAID SECTIONS 20 AND 18, AT 75.80 FEET PASSING NEAR A ONE HALF INCH IRON ROD AT OR NEAR THE NORTH COMMON CORNER OF SAID SECTION 20 AND SECTION 19, SAME BLOCK, CONTINUING ALONG SAID COMMON LINE, AT 572.95 FEET PASSING NEAR A ONE HALF INCH IRON ROD AT THE NORTH COMMON CORNER OF TRACTS 2 AND 3 AS DESCRIBED IN DOCUMENT NUMBER 2018-20726, OF SAID OFFICIAL PUBLIC RECORDS, AT 1981.61 FEET PASSING A ONE HALF INCH IRON ROD AT THE NORTH COMMON CORNER OF SAID TRACT 2 AND A CALLED "TRACT 3" IN DOCUMENT NUMBER 2018-2268, OF SAID OFFICIAL PUBLIC RECORDS, AT 3801.97 FEET PASSING A COPPERWELD ROD WITH CAP AT THE NORTHWEST CORNER OF SAID TRACT 3, BEING THE NORTHEAST CORNER OF A TRACT CALLED 12.3 ACRES IN VOLUME 867 ON PAGE 35 OF THE DEED RECORDS OF SAID MIDLAND COUNTY, AT 3951.98 FEET PASSING A COPPERWELD ROD WITH CAP AT THE NORTHWEST CORNER OF SAID CALLED 12.3 ACRE TRACT, BEING THE NORTHEAST CORNER OF A CALLED TRACT 1, IN SAID DOCUMENT NUMBER 2018-2268, IN ALL 4984.62 FEET TO A ONE HALF INCH IRON ROD WITH A RED PLASTIC CAP MARKED "MAVERICK FIRM#10194514" (RPC) SET AT THE SOUTHEAST CORNER OF A CALLED 22.96 ACRE TRACT, DESCRIBED IN DOCUMENT NUMBER 2019-3532 OF SAID OFFICIAL PUBLIC RECORDS, FROM WHICH A ONE HALF INCH IRON ROD WITH A GREEN PLASTIC CAP MARKED "ASB 5689" BEARS S.75°43'57"W., 388.28 FEET AND A ONE HALF INCH IRON ROD WITH A RED PLASTIC CAP MARKED "PSC RPLS 6453" BEARS S.75°08'25"W., 392.12, FOR THE SOUTHWEST CORNER HEREOF;

THENCE THE FOLLOWING NINE COURSES AND DISTANCES ALONG THE EAST LINE OF SAID CALLED 22.96 ACRE TRACT FOR THE WEST LINE HEREOF;

1. N.14°23'29"W., 60.57 FEET TO A POINT;
2. N.58°53'33"W., 71.33 FEET TO A POINT;
3. N.14°23'29"W., 82.07 FEET TO THE POINT OF CURVATURE FOR A CURVE TO THE LEFT;
4. ALONG THE ARC OF SAID CURVE TO THE LEFT HAVING A RADIUS OF 1490.00 FEET WITH A CHORD BEARING AND DISTANCE OF N.22°49'41"W., 436.87 FEET, AN ARC DISTANCE OF 438.35 FEET TO THE POINT OF REVERSE CURVATURE;
5. ALONG THE ARC OF SAID CURVE TO THE RIGHT HAVING A RADIUS OF 1360.00 FEET WITH A CHORD BEARING AND DISTANCE OF N.22°49'41"W., 398.75 FEET, AN ARC DISTANCE OF 400.19 FEET TO A MAG NAIL FOUND THE POINT OF TANGENCY;
6. N.14°23'53"W., 99.99 FEET TO A MAG NAIL FOUND AT THE POINT OF CURVATURE FOR A CURVE TO THE LEFT;
7. ALONG THE ARC OF SAID CURVE TO THE LEFT HAVING A RADIUS OF 1500.00 FEET WITH A CHORD BEARING AND DISTANCE OF N.20°18'24"W., 308.82 FEET, AN ARC DISTANCE OF 309.37 FEET TO A MAG NAIL FOUND AT THE POINT OF REVERSE CURVATURE;
8. ALONG THE ARC OF SAID CURVE TO THE RIGHT HAVING A RADIUS OF 1350.00 FEET WITH A CHORD BEARING AND DISTANCE OF N.20°18'24"W., 277.95 FEET, AN ARC DISTANCE OF 278.44 FEET TO A MAG NAIL FOUND THE POINT OF TANGENCY;
9. N.14°24'01" W., 859.28 FEET TO AN "RPC" SET IN SAID EAST LINE FOR THE NORTHWEST CORNER HEREOF;

THENCE N.75°43'57"E., 95.07 FEET TO AN "RPC" SET FOR AN EXTERIOR CORNER HEREOF;

THENCE N.74°47'34"E., 79.96 FEET TO AN "RPC" SET FOR AN EXTERIOR CORNER HEREOF;

THENCE S.59°20'03"E., 28.32 FEET TO AN "RPC" SET FOR AN INTERIOR CORNER HEREOF;

THENCE N.75°43'57"E., 651.20 FEET TO AN "RPC" SET AT THE POINT OF CURVATURE FOR A CURVE TO THE LEFT HAVING A RADIUS OF 920.00 FEET AND A CHORD BEARING AND DISTANCE OF N.64°37'59"E., 354.21 FEET;

THENCE ALONG THE ARC OF SAID CURVE, BEING CONCAVE TO THIS TRACT, 356.44 FEET TO AN "RPC" SET AT THE POINT OF REVERSE CURVATURE FOR A CURVE TO THE RIGHT HAVING A RADIUS OF 1950.00 FEET AND A CHORD BEARING AND DISTANCE OF N.77°01'32"E., 1554.60 FEET;

THENCE ALONG THE ARC OF SAID CURVE, BEING CONVEX TO THIS TRACT, 1599.03 FEET TO AN "RPC" SET AT THE POINT OF REVERSE CURVATURE FOR A CURVE TO THE LEFT HAVING A RADIUS OF 1110.00 FEET AND A CHORD BEARING AND DISTANCE OF S.88°33'08"E., 349.94 FEET;

THENCE ALONG THE ARC OF SAID CURVE, BEING CONCAVE TO THIS TRACT, 351.41 FEET TO AN "RPC" SET AT A POINT OF INTERSECTION LEFT;

THENCE N.07°37'18"W., 115.00 FEET TO A POINT OF INTERSECTION AT THE POINT OF CURVATURE ON A CURVE TO THE NORTHEAST, HAVING A RADIUS OF 995.00 FEET AND A CHORD BEARING AND DISTANCE OF N.78°25'37"E., 137.13 FEET;

THENCE ALONG THE ARC OF SAID CURVE, BEING CONCAVE TO THIS TRACT, 137.24 FEET TO AN "RPC" SET AT THE POINT OF TANGENCY;

THENCE N.72°23'25"E., 72.42 FEET TO AN "RPC" SET AT THE POINT OF CURVATURE FOR A CURVE TO THE LEFT HAVING A RADIUS OF 995.00 FEET AND A CHORD BEARING AND DISTANCE OF N.51°36'34"E., 637.86 FEET;

THENCE ALONG THE ARC OF SAID CURVE, BEING CONCAVE TO THIS TRACT, 649.32 FEET TO AN "RPC" SET AT A POINT OF INTERSECTION RIGHT;

THENCE S.57°05'08"E., 115 FEET TO A POINT OF INTERSECTION AT THE POINT OF CURVATURE ON A CURVE TO THE NORTHEAST, HAVING A RADIUS OF 1110.00 FEET AND A CHORD BEARING AND DISTANCE OF N.30°10'44"E., 105.95 FEET;

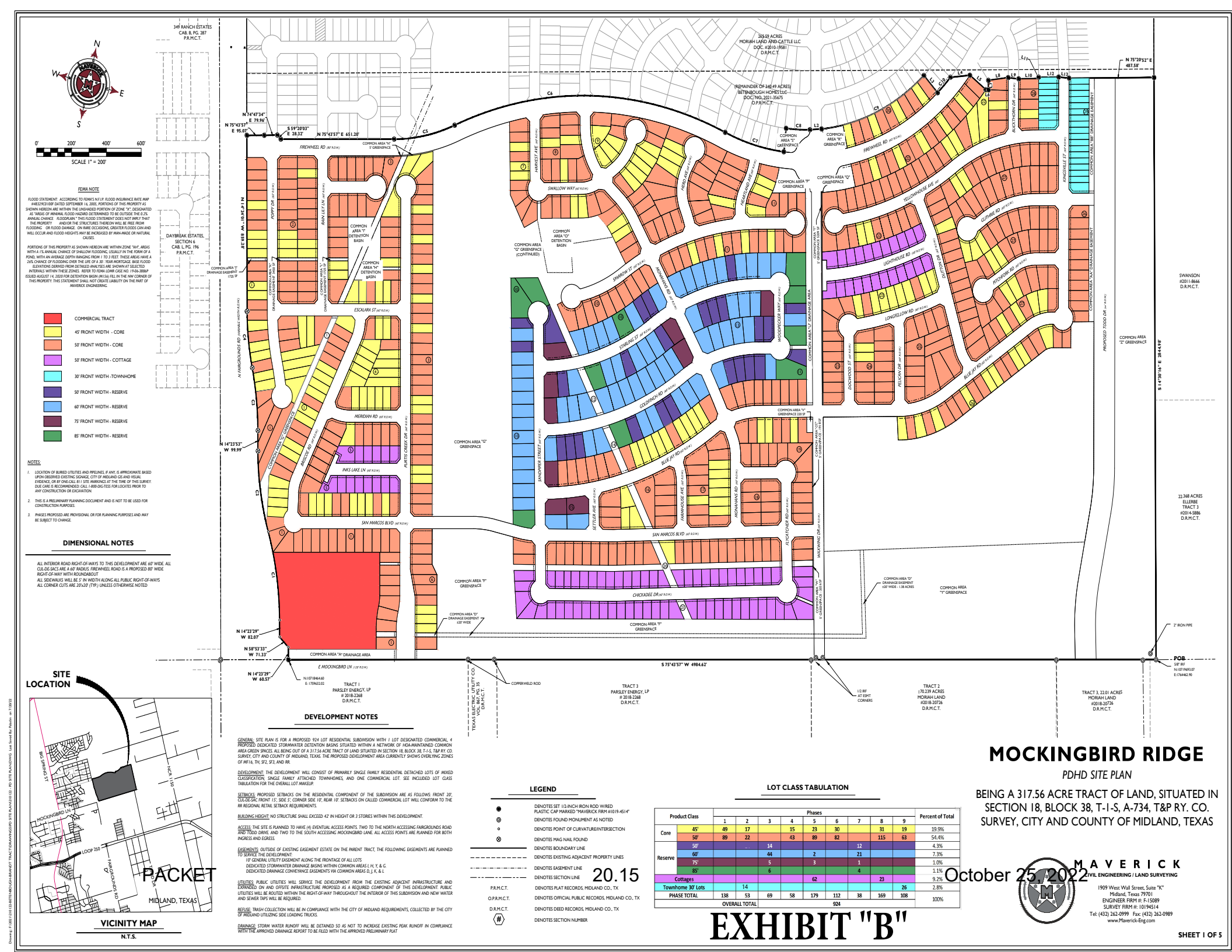
THENCE ALONG THE ARC OF SAID CURVE, BEING CONCAVE TO THIS TRACT, 105.99 FEET TO AN "RPC" SET AT A POINT OF INTERSECTION RIGHT, FOR AN EXTERIOR CORNER HEREOF;

THENCE THE FOLLOWING 11 COURSES AND DISTANCES, ALL TO AN "RPC" FOR ANGLE POINTS IN THE BOUNDARY HEREOF;

1. N.70°45'27"E., 112.51 FEET;
2. S.66°30'04"E., 115.00 FEET;
3. N.77°16'15"E., 15.51 FEET;
4. N.14°39'08"W., 46.14 FEET;
5. N.69°08'15"E., 114.62 FEET;
6. N.81°18'37"E., 60.27 FEET;
7. N.75°20'52"E., 115.00 FEET;
8. N.14°25'02"W., 7.06 FEET;
9. N.75°20'52"E., 115.00 FEET;
10. N.80°51'01"E., 60.26 FEET;
11. N.75°20'52"E., 487.58 FEET TO AN "RPC" SET ON THE WEST LINE OF A CALLED 632.79 ACRE TRACT, DESCRIBED IN DOCUMENT NUMBER 2011-8666 OF SAID DEED RECORDS, ON THE LINE COMMON TO SAID SECTIONS 17 AND 18, FOR THE NORTHWEST CORNER HEREOF;

THENCE S.14°30'16"E., ALONG THE COMMON LINE OF SAID SECTIONS 17 AND 18, AT 1623.59 FEET PASSING A ONE HALF INCH IRON ROD FOR THE NORTHWEST CORNER OF A CALLED 22.368 ACRE TRACT IN DOCUMENT NUMBER2014-5886 OF SAID OFFICIAL PUBLIC RECORDS, BEARING S.75°32'01"W., 15.87 FEET, AT 2815.90 FEET PASSING SAID 6 INCH STEEL FENCE POST BEARING S.75°29'44"W., 33.47 FEET, IN ALL 2844.98 FEET TO THE **POINT OF BEGINNING**, CONTAINING 317.56 ACRES OF LAND.

BASIS OF BEARING, DISTANCE, COORDINATES AND AREA ARE A LAMBERT CONICAL PROJECTION OF THE TEXAS COORDINATE SYSTEM, STATE PLANE GRID, NORTH AMERICAN DATUM OF 1983, U.S. SURVEY FOOT, HAVING A CONVERGENCE ANGLE (theta) OF -0°53'04.89" AND A COMBINED SCALE FACTOR OF 0.999925027 AT THE POINT OF BEGINNING.


N
S
E
W
0'
200'
400'
600'
SCALE 1" = 200'
FEMA NOTE
FLOOD STATEMENT: ACCORDING TO FEMA'S N.F.I.P. FLOOD INSURANCE RATE MAP #48329C0150F DATED SEPTEMBER 26, 2008, PORTIONS OF THIS PROPERTY AS SHOWN HEREON ARE WITHIN THE UNSHADED PORTION OF ZONE "X", DESIGNATED AS "AREAS OF MINIMAL FLOOD HAZARD 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.
PORTIONS OF THIS PROPERTY AS SHOWN HEREON ARE WITHIN ZONE "AH", AREAS WITH A 1% ANNUAL CHANCE OF SHALLOW FLOODING, USUALLY IN THE FORM OF A POND, WITH AN AVERAGE DEPTH RANGING FROM 1 TO 3 FEET. THESE AREAS HAVE A 26% CHANCE OF FLOODING OVER THE LIFE OF A 30 - YEAR MORTGAGE. BASE FLOOD ELEVATIONS DERIVED FROM DETAILED ANALYSES ARE SHOWN AT SELECTED INTERVALS WITHIN THESE ZONES. REFER TO FEMA LOMR CASE NO. 19-06-3886P ISSUED AUGUST 14, 2020 FOR DETENTION BASIN (M1-5A) FILL IN THE NW CORNER OF THIS PROPERTY. THIS STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF MAVERICK ENGINEERING.
COMMERCIAL TRACT
45' FRONT WIDTH - CORE
50' FRONT WIDTH - CORE
50' FRONT WIDTH - COTTAGE
30' FRONT WIDTH -TOWNHOME
50' FRONT WIDTH - RESERVE
60' FRONT WIDTH - RESERVE
75' FRONT WIDTH - RESERVE
85' FRONT WIDTH - RESERVE
NOTES:
1. 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.
2. THIS IS A PRELIMINARY PLANNING DOCUMENT AND IS NOT TO BE USED FOR CONSTRUCTION PURPOSES.
3. PHASES PROPOSED ARE PROVISIONAL OR FOR PLANNING PURPOSES AND MAY BE SUBJECT TO CHANGE.
DIMENSIONAL NOTES
ALL INTERIOR ROAD RIGHT-OF-WAYS TO THIS DEVELOPMENT ARE 60' WIDE. ALL CUL-DE-SACS ARE A 60' RADIUS. FIREWHEEL ROAD IS A PROPOSED 80' WIDE RIGHT-OF-WAY WITH ROUNDABOUT.
ALL SIDEWALKS WILL BE 5' IN WIDTH ALONG ALL PUBLIC RIGHT-OF-WAYS
ALL CORNER CUTS ARE 10'x20' (TYP.) UNLESS OTHERWISE NOTED
349 RANCH ESTATES CAB. B, PG. 287 P.R.M.C.T.
265.59 ACRES MORIAH LAND AND CATTLE LLC DOC. #2018-19681 O.P.R.M.C.T.
REMAINDER OF 240.49 ACRES BETENBOUGH HOMES LLC DOC. NO. 2021-35675 O.P.R.M.C.T.
DAYBREAK ESTATES, SECTION 6 CAB. L, PG. 196 P.R.M.C.T.
SWANSON #2011-8666 O.P.R.M.C.T.
22.368 ACRES ELLERBE TRACT 3 #2014-5886 O.P.R.M.C.T.
N 75°43'57" E 95.00'
N 74°47'34" E 79.96'
S 59°20'03" E 28.32'
N 75°43'57" E 651.20'
N 75°20'52" E 487.58'
S 14°39'16" E 2854.59'
S 75°43'57" W 4984.62'
N 14°23'53" W 99.99'
N 14°23'29" W 82.07'
N 58°53'33" W 71.33'
N 14°23'29" W 60.57'
FIREWHEEL RD (80' R.O.W.)
E MOCKINGBIRD LN (120' R.O.W.)
N. FAIRGROUNDS RD (VARIABLE WIDTH R.O.W.)
POPPY DR (60' R.O.W.)
RAIN LILY LN (60' R.O.W.)
ESCALARA ST (60' R.O.W.)
MERIDIAN RD (60' R.O.W.)
MISSOURI RD (60' R.O.W.)
INKS LAKE LN (60' R.O.W.)
SAN MARCOS BLVD (60' R.O.W.)
PURITAS CREEK DR (60' R.O.W.)
HARVEST AVE (60' R.O.W.)
HERO AVE (60' R.O.W.)
HEARTLAND AVE (60' R.O.W.)
SWALLOW WAY (60' R.O.W.)
SPARROW ST (60' R.O.W.)
MOCKINGBIRD RD (60' R.O.W.)
STERLING ST (60' R.O.W.)
GOLDFINCH RD (60' R.O.W.)
SANDPIPER STREET (60' R.O.W.)
BLUE JAY RD (60' R.O.W.)
SETTLER AVE (60' R.O.W.)
FARMHOUSE AVE (60' R.O.W.)
IRONHAWK RD (60' R.O.W.)
WOODPECKER WAY (60' R.O.W.)
CHICKADEE DR (60' R.O.W.)
FLYCATCHER RD (60' R.O.W.)
WAXWING DR (60' R.O.W.)
BLACKTHORN DR (60' R.O.W.)
KINGSVILLE ST (60' R.O.W.)
YELLOWHOUSE AVE (60' R.O.W.)
CULTURE RD (60' R.O.W.)
LIGHTHOUSE RD (60' R.O.W.)
PITCHFORK RD (60' R.O.W.)
LONGFELLOW RD (60' R.O.W.)
DOCKSHORT ST (60' R.O.W.)
PELICAN DR (60' R.O.W.)
BLUE JAY RD (60' R.O.W.)
PROPOSED TODD DR (60' R.O.W.)
COMMON AREA "A" 5' GREENSPACE
COMMON AREA "B" GREENSPACE
COMMON AREA "C" GREENSPACE
COMMON AREA "D" GREENSPACE
COMMON AREA "E" GREENSPACE
COMMON AREA "F" GREENSPACE
COMMON AREA "G" GREENSPACE
COMMON AREA "G" GREENSPACE (CONTINUED)
COMMON AREA "I" GREENSPACE
COMMON AREA "J" GREENSPACE
COMMON AREA "K" GREENSPACE
COMMON AREA "L" GREENSPACE
COMMON AREA "M" GREENSPACE
COMMON AREA "N" GREENSPACE
COMMON AREA "O" GREENSPACE
COMMON AREA "P" GREENSPACE
COMMON AREA "Q" GREENSPACE
COMMON AREA "R" GREENSPACE
COMMON AREA "S" GREENSPACE
COMMON AREA "T" GREENSPACE
COMMON AREA "U" GREENSPACE
COMMON AREA "V" GREENSPACE
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COMMON AREA "AD" GREENSPACE
COMMON AREA "AE" GREENSPACE
COMMON AREA "AF" GREENSPACE
COMMON AREA "AG" GREENSPACE
COMMON AREA "AH" GREENSPACE
COMMON AREA "AI" GREENSPACE
COMMON AREA "AJ" GREENSPACE
COMMON AREA "AK" GREENSPACE
COMMON AREA "AL" GREENSPACE
COMMON AREA "AM" GREENSPACE
COMMON AREA "AN" GREENSPACE
COMMON AREA "AO" GREENSPACE
COMMON AREA "AP" GREENSPACE
COMMON AREA "AQ" GREENSPACE
COMMON AREA "AR" GREENSPACE
COMMON AREA "AS" GREENSPACE
COMMON AREA "AT" GREENSPACE
COMMON AREA "AU" GREENSPACE
COMMON AREA "AV" GREENSPACE
COMMON AREA "AW" GREENSPACE
COMMON AREA "AX" GREENSPACE
COMMON AREA "AY" GREENSPACE
COMMON AREA "AZ" GREENSPACE
COMMON AREA "A" DRAINAGE AREA
COMMON AREA "T" DETENTION BASIN
COMMON AREA "Q" DETENTION BASIN
COMMON AREA "AA" DRAINAGE EASEMENT
COMMON AREA "T" DRAINAGE EASEMENT
COMMON AREA "Q" DRAINAGE AREA
COMMON AREA "D" DRAINAGE EASEMENT
COMMON AREA "Y" DRAINAGE EASEMENT
COMMON AREA "T" DRAINAGE EASEMENT
COMMON AREA "AA" DRAINAGE EASEMENT
TRACT 1 PARSLEY ENERGY, LP # 2018-2268 D.R.M.C.T.
TRACT 3 PARSLEY ENERGY, LP # 2018-2268 D.R.M.C.T.
TRACT 2 170.239 ACRES MORIAH LAND #2018-20726 D.R.M.C.T.
TRACT 3, 22.01 ACRES MORIAH LAND #2018-20726 D.R.M.C.T.
TEXAS ELECTRIC UTILITY CO. VOL. 867, PG. 35 D.R.M.C.T.
N:10718944.48 E: 1739633.02
COPPERWELD ROD
1/2 IRF AT EIGHT CORNERS
2" IRON PIPE
POB 5/8" IRF N:10719693.07 E:1764462.90
SITE LOCATION
BIG SPRING ST
MOCKINGBIRD LN
LOOP 250
FAIRGROUNDS RD
N.C.R. 1105
MIDLAND, TEXAS
VICINITY MAP
N.T.S.
DEVELOPMENT NOTES
GENERAL: SITE PLAN IS FOR A PROPOSED 924 LOT RESIDENTIAL SUBDIVISION WITH 1 LOT DESIGNATED COMMERCIAL, 4 PROPOSED DEDICATED STORMWATER DETENTION BASINS SITUATED WITHIN A NETWORK OF HOA-MAINTAINED COMMON AREA GREEN SPACES. ALL BEING OUT OF A 317.56 ACRE TRACT OF LAND SITUATED IN SECTION 18, BLOCK 38, T-1-S, T&P RY. CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS. THE PROPOSED DEVELOPMENT AREA CURRENTLY SHOWS OVERLYING ZONES OF MF16, TH, SF2, SF3, AND RR.
DEVELOPMENT: THE DEVELOPMENT WILL CONSIST OF PRIMARILY SINGLE FAMILY RESIDENTIAL DETACHED LOTS OF MIXED CLASSIFICATION, SINGLE FAMILY ATTACHED TOWNHOMES, AND ONE COMMERCIAL LOT. SEE INCLUDED LOT CLASS TABULATION FOR THE OVERALL LOT MAKEUP.
SETBACKS: PROPOSED SETBACKS ON THE RESIDENTIAL COMPONENT OF THE SUBDIVISION ARE AS FOLLOWS: FRONT 20', CUL-DE-SAC FRONT 15', SIDE 5', CORNER SIDE 10', REAR 10'. SETBACKS ON CALLED COMMERCIAL LOT WILL CONFORM TO THE RR REGIONAL RETAIL SETBACK REQUIREMENTS.
BUILDING HEIGHT: NO STRUCTURE SHALL EXCEED 42' IN HEIGHT OR 3 STORIES WITHIN THIS DEVELOPMENT.
ACCESS: THE SITE IS PLANNED TO HAVE (4) EVENTUAL ACCESS POINTS. TWO TO THE NORTH ACCESSING FAIRGROUNDS ROAD AND TODD DRIVE, AND TWO TO THE SOUTH ACCESSING MOCKINGBIRD LANE. ALL ACCESS POINTS ARE PLANNED FOR BOTH INGRESS AND EGRESS.
EASEMENTS: OUTSIDE OF EXISTING EASEMENT ESTATE ON THE PARENT TRACT, THE FOLLOWING EASEMENTS ARE PLANNED TO SERVICE THE DEVELOPMENT:
10' GENERAL UTILITY EASEMENT ALONG THE FRONTAGE OF ALL LOTS
DEDICATED STORMWATER DRAINAGE BASINS WITHIN COMMON AREAS E, H, Y, & G.
DEDICATED DRAINAGE CONVEYANCE EASEMENTS VIA COMMON AREAS D, J, K, & L.
UTILITIES: PUBLIC UTILITIES WILL SERVICE THE DEVELOPMENT FROM THE EXISTING ADJACENT INFRASTRUCTURE AND EXPANDED ON AND OFFSITE INFRASTRUCTURE PROPOSED AS A REQUIRED COMPONENT OF THIS DEVELOPMENT. PUBLIC UTILITIES WILL BE ROUTED WITHIN THE RIGHT-OF-WAY THROUGHOUT THE INTERIOR OF THIS SUBDIVISION AND NEW WATER AND SEWER TAPS WILL BE REQUIRED.
REFUSE: TRASH COLLECTION WILL BE IN COMPLIANCE WITH THE CITY OF MIDLAND REQUIREMENTS, COLLECTED BY THE CITY OF MIDLAND UTILIZING SIDE LOADING TRUCKS.
DRAINAGE: STORM WATER RUNOFF WILL BE DETAINED SO AS NOT TO INCREASE EXISTING PEAK RUNOFF IN COMPLIANCE WITH THE APPROVED DRAINAGE REPORT TO BE FILED WITH THE APPROVED PRELIMINARY PLAT
LEGEND
DENOTES SET 1/2-INCH IRON ROD WIRED PLASTIC CAP MARKED "MAVERICK FIRM #10194514"
DENOTES FOUND MONUMENT AS NOTED
DENOTES POINT OF CURVATURE/INTERSECTION
DENOTES MAG NAIL FOUND
DENOTES BOUNDARY LINE
DENOTES EXISTING ADJACENT PROPERTY LINES
DENOTES EASEMENT LINE
DENOTES SECTION LINE
P.R.M.C.T. DENOTES PLAT RECORDS, MIDLAND CO., TX
O.P.R.M.C.T. DENOTES OFFICIAL PUBLIC RECORDS, MIDLAND CO., TX
D.R.M.C.T. DENOTES DEED RECORDS, MIDLAND CO., TX
(#) DENOTES SECTION NUMBER
LOT CLASS TABULATION
Product Class | Phases 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Percent of Total
Core 45' | 49 | 17 | | 15 | 23 | 30 | | 31 | 19 | 19.9%
Core 50' | 89 | 22 | | 43 | 89 | 82 | | 115 | 63 | 54.4%
Reserve 50' | | | 14 | | | | 12 | | | 4.3%
Reserve 60' | | | 44 | | 2 | | 21 | | | 7.3%
Reserve 75' | | | 5 | | 3 | | 1 | | | 1.0%
Reserve 85' | | | 6 | | | | 4 | | | 1.1%
Cottages | | | | | 62 | | | 23 | | 9.2%
Townhome 30' Lots | | 14 | | | | | | | 26 | 2.8%
PHASE TOTAL | 138 | 53 | 69 | 58 | 179 | 112 | 38 | 169 | 108 | 100%
OVERALL TOTAL 924
EXHIBIT "B"
MOCKINGBIRD RIDGE
PDHD SITE PLAN
BEING A 317.56 ACRE TRACT OF LAND, SITUATED IN SECTION 18, BLOCK 38, T-1-S, A-734, T&P RY. CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS
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
SHEET 1 OF 5
PACKET 20.15 October 25, 2022

MIDLAND
Planning Division

Zone Change/Planned District Amendment/Site Plan Approval

Project Number: Z-22-0299

Case Number:

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: Betenbough Homes		Phone ( ) Email	
Address	City	State	Zip

Property Owner Printed Name: See Applicant		Phone ( ) Email	
Address	City	State	Zip

Representative *(if different from Applicant or Property Owner)* Firm: Maverick Engineering Printed Name: Paladin Huckaba		Phone (432) 262-0999 Email phuckaba@maverick-eng.com	
Address 1909 W Wall St Ste K	City Midland	State TX	Zip 79701

Street Address: NA County Rd 40

Legal Description
Lot: Block: 38 T-1-S Subdivision:

Current Zoning: In Part: SF3, TH, SF2, MF16, SF1, 2F, RR

Proposed Zone: PDHD
(List by tracts if more than one district is requested)

Reason for Zone Change Request: To advance the proposed housing development associated with this request

Present Use of Property: vacant

Proposed Use of Property: residential

How would this zone change affect the public health, safety and welfare? This development will contribute to the housing inventory of the City of Midland, adding needed options to the housing makeup of the community

Describe how conditions affecting the property have changed since present zoning designation: No change since original zoning

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): Chris Berry	Date: 7-18-2022
Applicant (printed): Chris Berry	
Property Owner (signature): See Applicant	Date:
Property Owner (printed) : _____	

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.

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 Millen who, being by me duly sworn, upon oath says: That (s)he is authorized by Bitterbough Homes, 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 Millen

Authorized Agent (*signature*)

Subscribed and sworn to before me, this 20th day of July, 2022, to certify which witness my hand and seal of office.

Kelsey Ann Lewis
My Commission Expires
2/19/2026
Notary ID
131456388

Kelsey Lewis

NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY

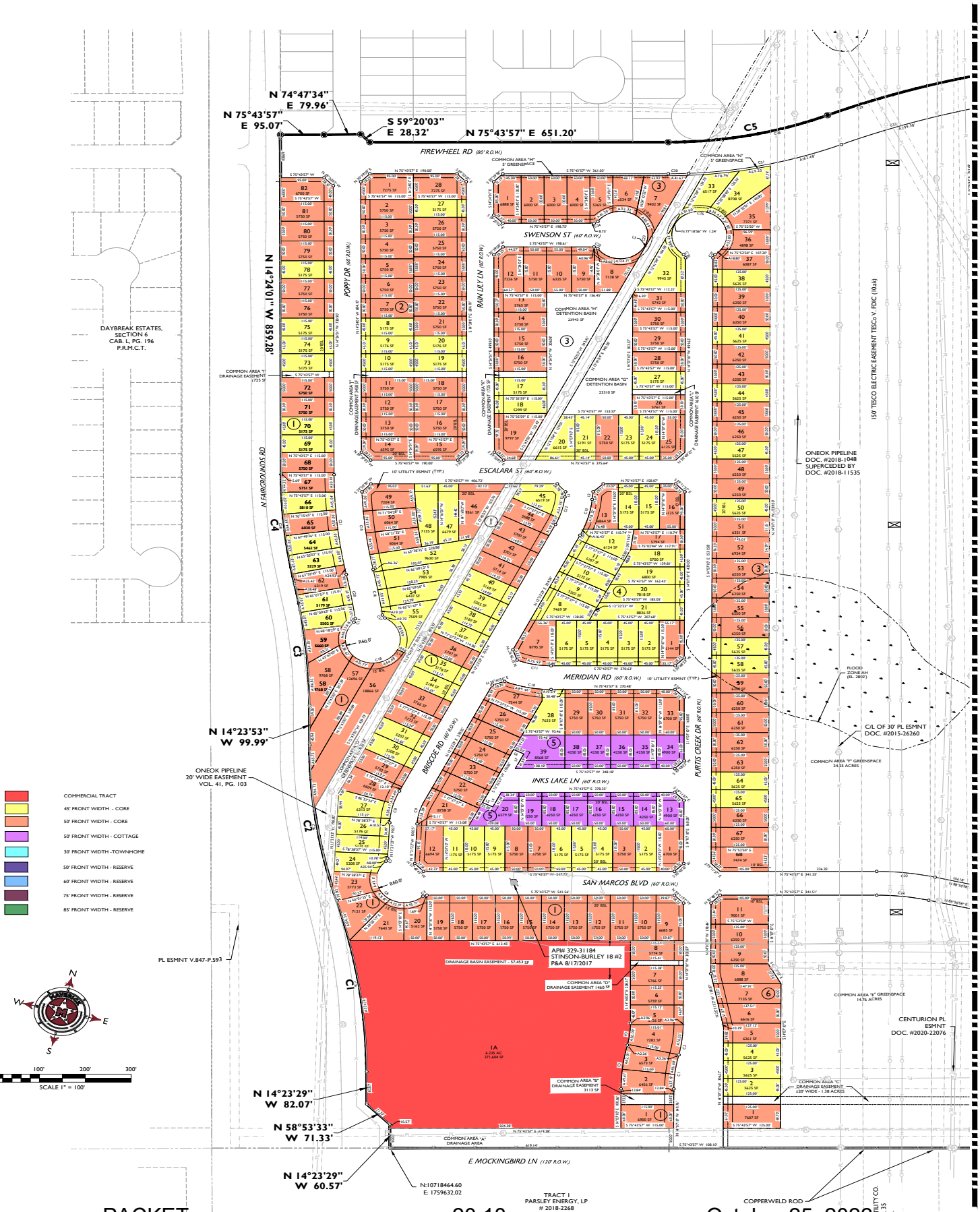
☒ Property Owner Authorization	☒ Dimensioned Site Plan
☒ Application Fee Check # 3818	☒ Plans in Digital Format (PDF/JPEG)
Received By: KM	Date: JUL 20 2022

****Application will not be considered for scheduling until reviewed by a planner.**

MOCKINGBIRD RIDGE

DETAIL SHEET #1

BEING A 317.56 ACRE TRACT OF LAND, SITUATED IN
SECTION 18, BLOCK 38, T-1-S, A-734, T&P RY. CO.
SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS

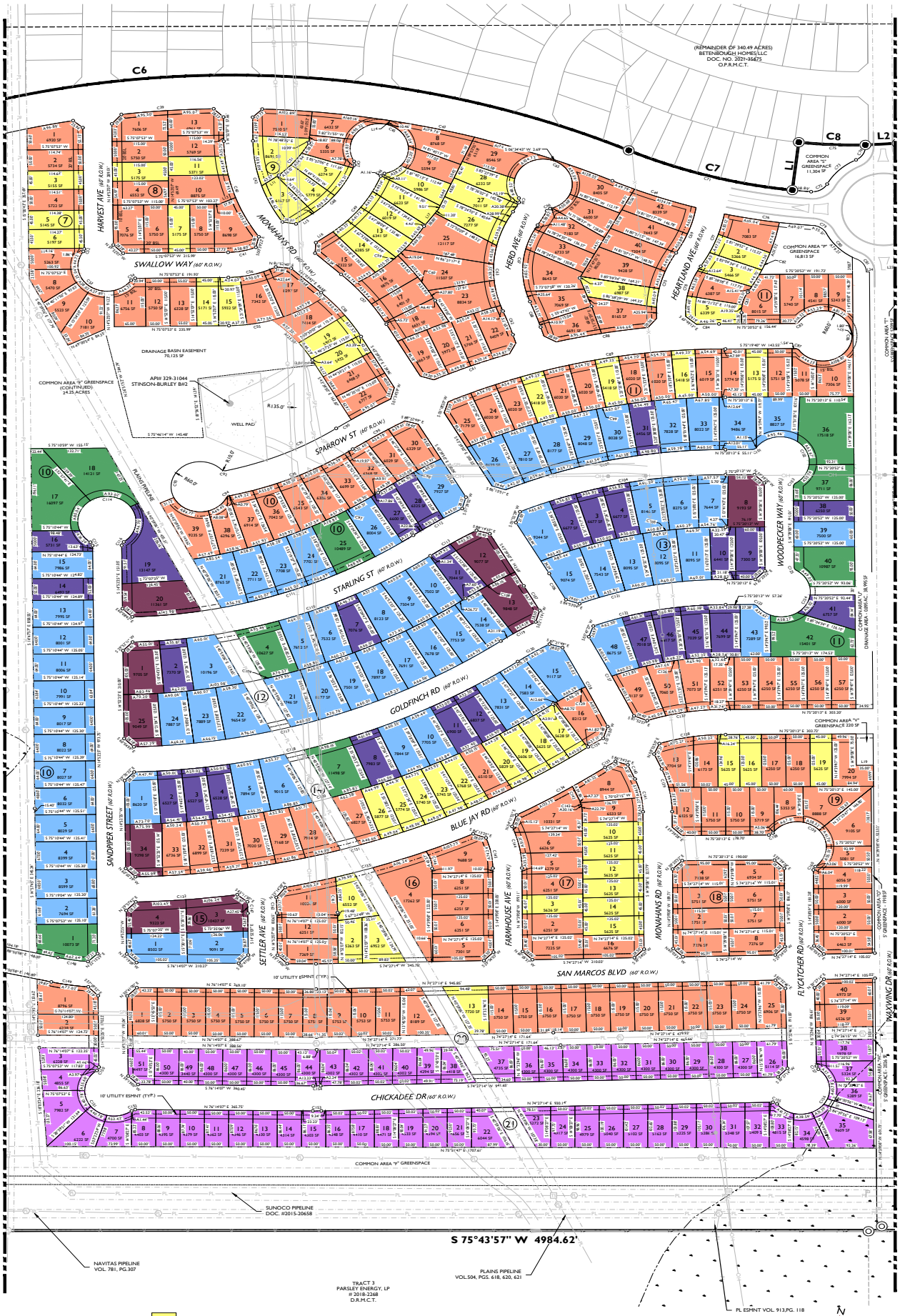


PACKET 20.18 October 25, 2022

MAVERICK
ENGINEERING / SURVEY / WATER RESOURCES
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

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T:\2021\101238\TEXT\BOUGHBRANCH\OT TRACT\DWG\PD SITE PLAN\101223 - PD SITE PLAN.DWG



45' FRONT WIDTH - CORE
50' FRONT WIDTH - CORE
50' FRONT WIDTH - COTTAGE
30' FRONT WIDTH -TOWNHOME
50' FRONT WIDTH - RESERVE
60' FRONT WIDTH - RESERVE
75' FRONT WIDTH - RESERVE
85' FRONT WIDTH - RESERVE

MOCKINGBIRD RIDGE

DETAIL SHEET #2

BEING A 317.56 ACRE TRACT OF LAND, SITUATED IN SECTION 18, BLOCK 38, T-1-S, A-734, T&P RY. CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS

PACKET

20.19 October 25, 2022

SCALE 1" = 100'

SHEET 3 OF 5

MAVERICK
ENGINEERING / SURVEY / WATER RESOURCES
1909 West Wall Street, Suite "K"
Midland, Texas 79701
ENGINEER FIRM #: F-10089
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MOCKINGBIRD RIDGE

DETAIL SHEET #3

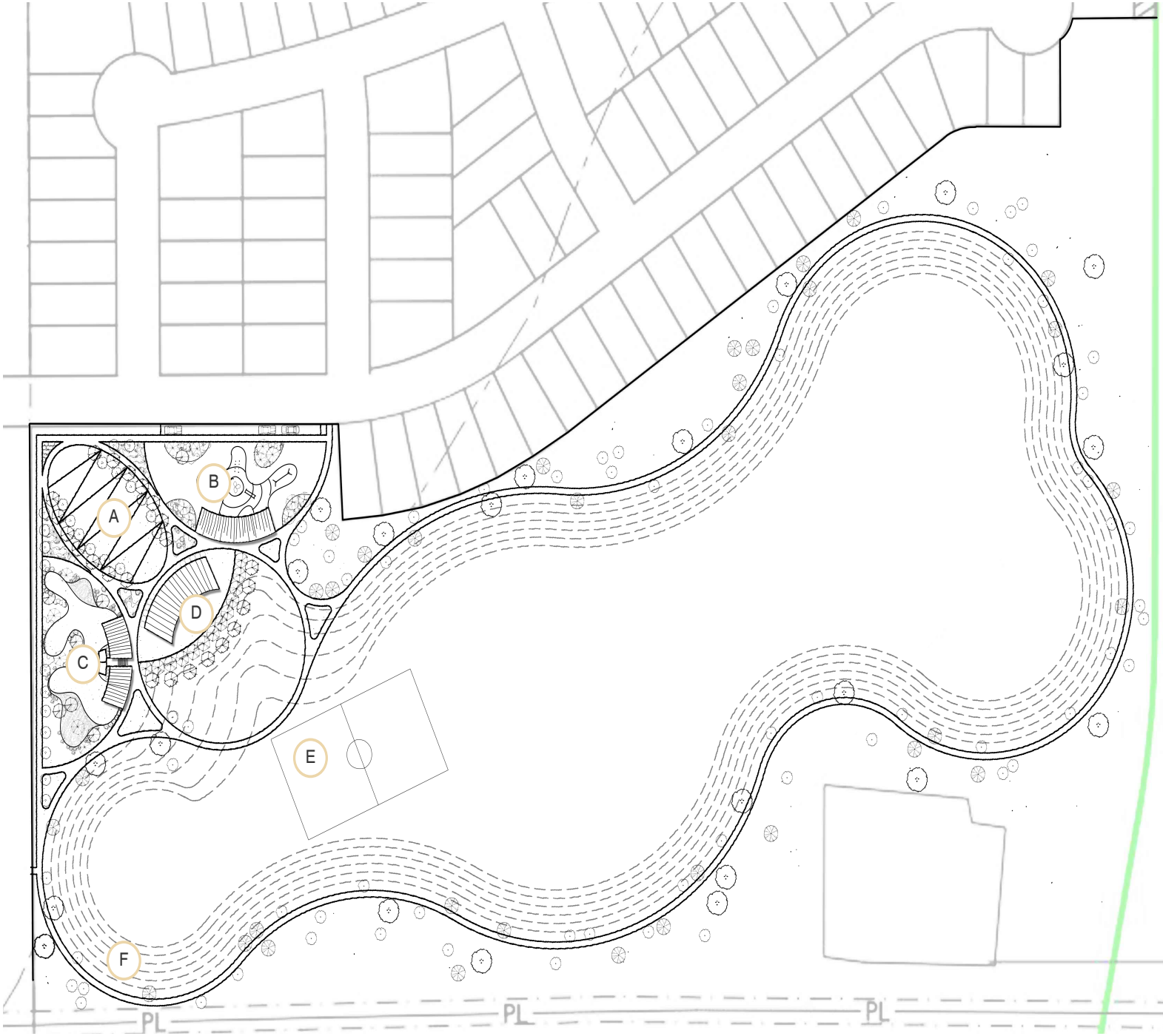
BEING A 317.56 ACRE TRACT OF LAND, SITUATED IN SECTION 18, BLOCK 38, T-1-S, A-734, T&P RY. CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS

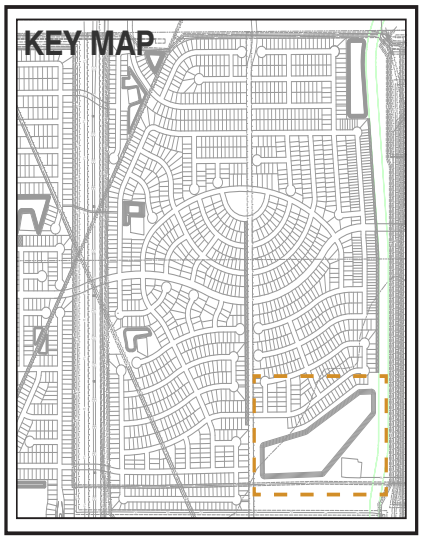
20.20 PACKET October 25, 2022

MAVERICK
ENGINEERING / SURVEY / WATER RESOURCES
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Midland, Texas 79701
ENGINEER FIRM #: F-15089
SURVEY FIRM #: 10194514
Tel: (432) 262-0999 Fax: (432) 262-0989
www.Maverick-Eng.com

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F:\2021\2012\BETHOUGH\BKADT TRACT\DWG\PDS\PLAT\PLAN\201012 - PDS PLAT PLAN.DWG





SCALE: NOT TO SCALE

LEGEND

- A ACTIVITY LAWN
- B PLAYGROUND + PAVILLION
- C DOG PARK + PAVILLIONS
- D EVENT PAVILLION
- E SPORTS FIELD
- F TRAIL SYSTEM

NORTH

0 15' 30' 60' 120'

SCALE: 1" = 60'

PACKET 20.21 October 25, 2022

MOCKINGBIRD RIDGE

MIDLAND, TX

OPEN SPACE CONCEPT

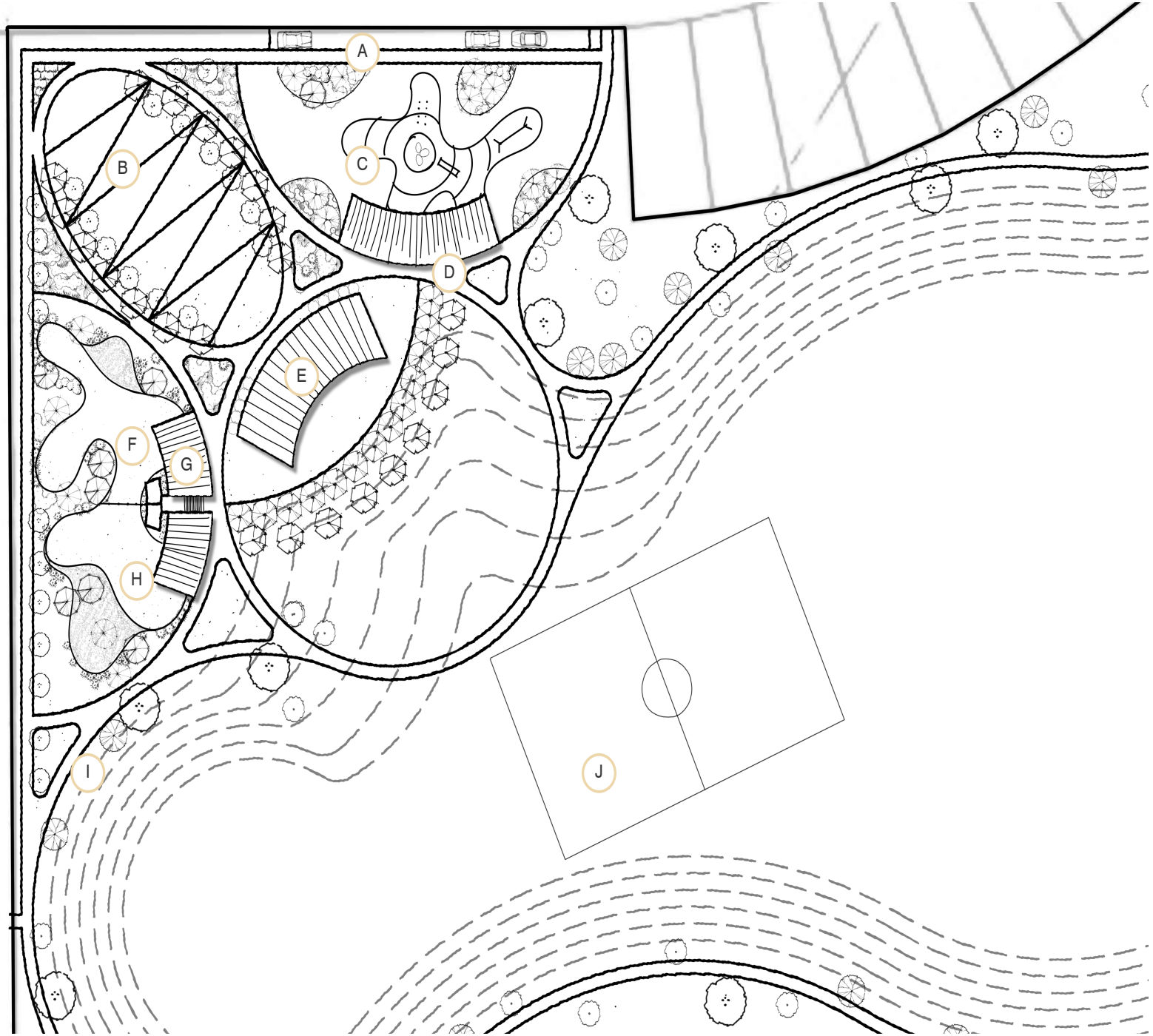
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BETENBOUGH HOMES®

Kimley»Horn

6/28/2022

THIS GRAPHIC IS CONCEPTUAL. THE INFORMATION SHOWN IS BASED ON THE BEST INFORMATION AVAILABLE AND IS SUBJECT TO CHANGE WITHOUT NOTICE.



LEGEND

- A ON STREET PARKING
- B ACTIVITY LAWN WITH FESTOON LIGHTING
- C "THE NEST" ALL AGES PLAYGROUND
- D SHADE & PICNIC PAVILLION
- E ACTIVITY PAVILLION
- F SMALL DOG PARK
- G DOG PARK ENTRY WITH COVERED SEATING AREAS
- I TRAIL SYSTEM
- J SPORTS FIELD

NORTH
0 5' 15' 30' 60'
SCALE: 1" = 30'

PACKET

20.22

October 25, 2022

MOCKINGBIRD RIDGE

MIDLAND, TX

OPEN SPACE CONCEPT

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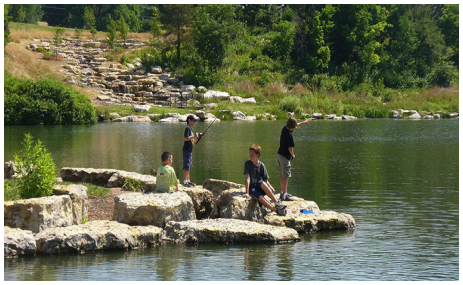
Kimley»Horn

6/28/2022

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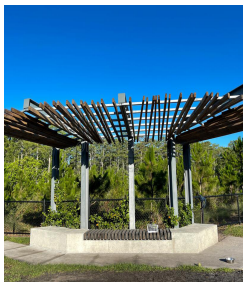


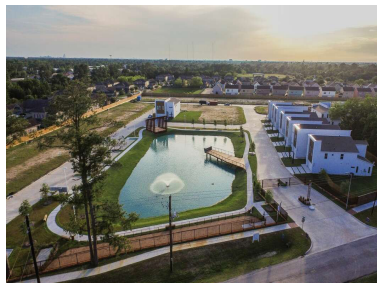








PACKET

20.23

October 25, 2022

MOCKINGBIRD RIDGE

MIDLAND, TX

OPEN SPACE CONCEPT

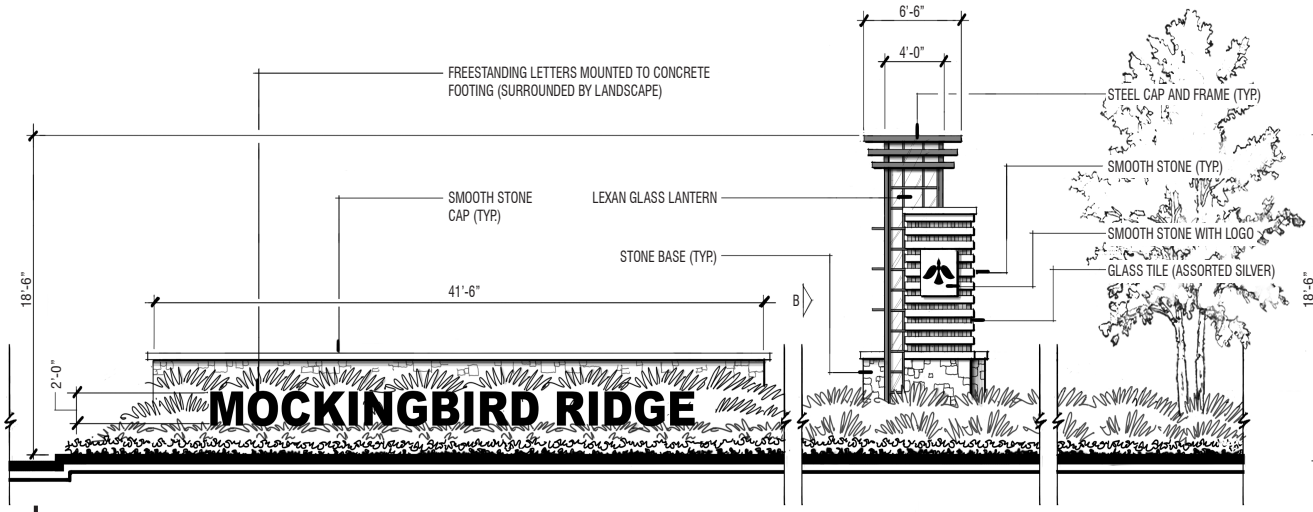
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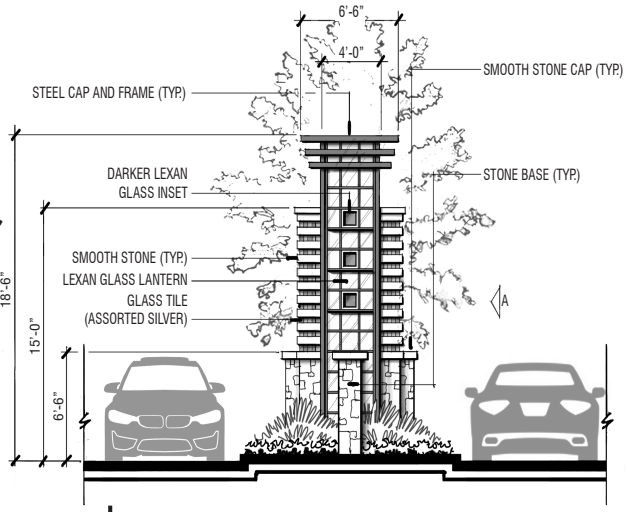
Kimley»Horn

6/28/2022

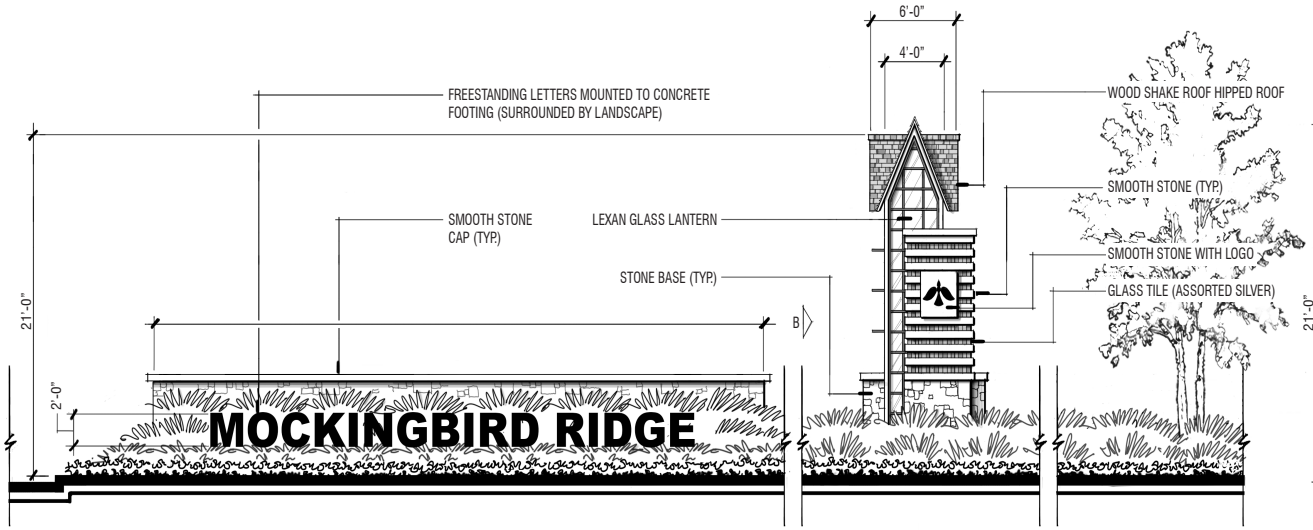
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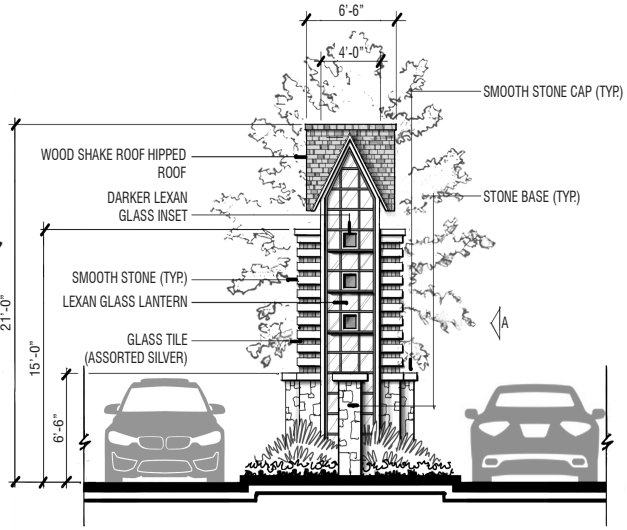
A OPTION 2 (SIDE ELEVATION)
SCALE: 1/4" = 1'-0"



B OPTION 2 (FRONT ELEVATION)
SCALE: 1/4" = 1'-0"



A OPTION 1 (SIDE ELEVATION)
SCALE: 1/4" = 1'-0"



B OPTION 1 (FRONT ELEVATION)
SCALE: 1/4" = 1'-0"

COMMUNITY ENTRY SCHEMATIC DESIGN PACKET

MOCKINGBIRD RIDGE

October 25, 2022

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Kimley»Horn

FEBRUARY 15, 2022

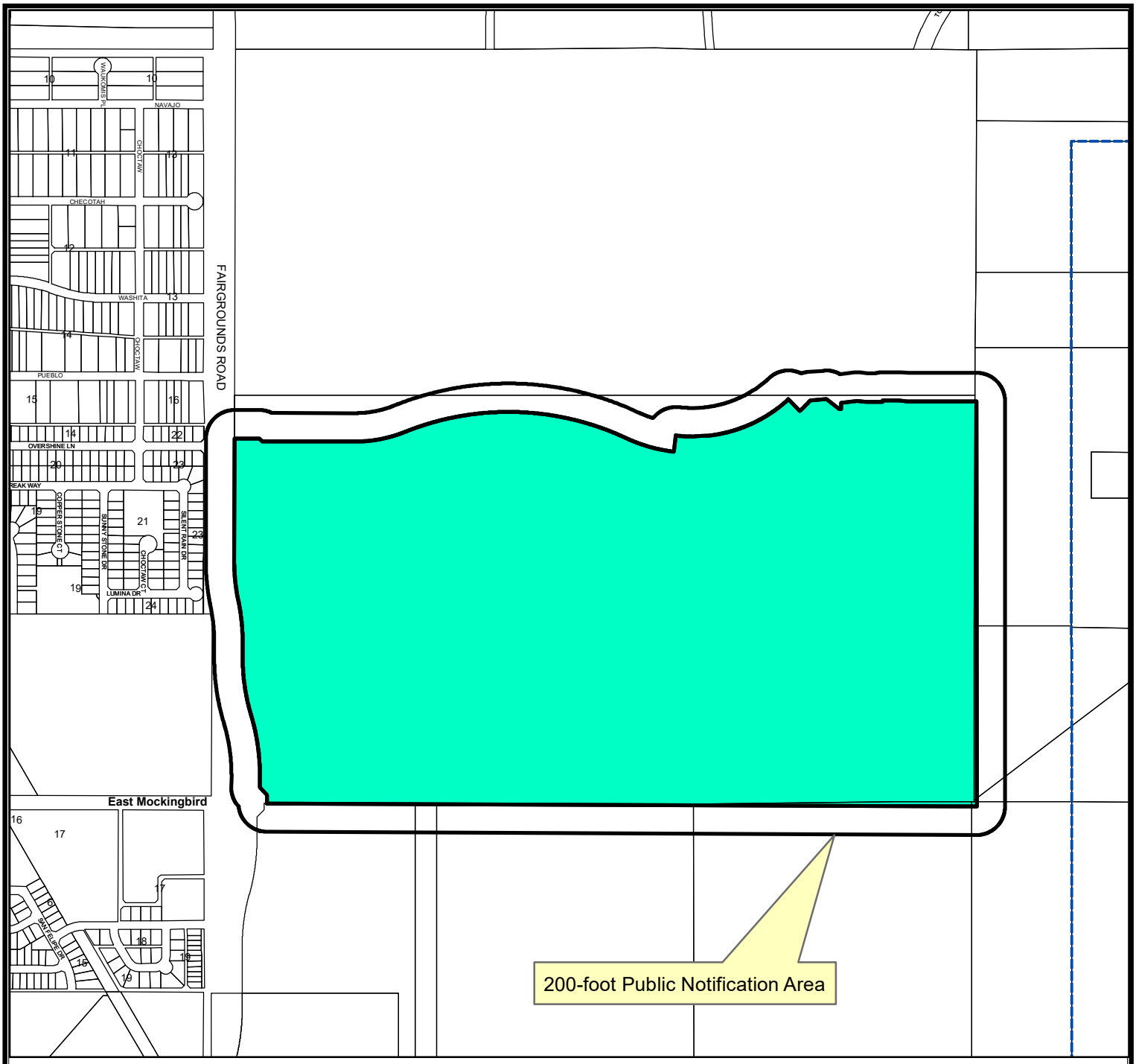
Renderings of Cottage Homes:

The April Plan: 3/2 w 1,109 SQ FT



The Annabeth Plan: 3/2 w 1,231 SQ FT





LOCATION MAP

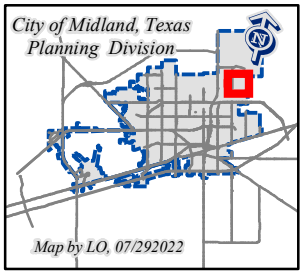
Z-22-0299 **Scale: 1" = 12,044'**

Consider a request by Maverick Engineering for a zone change from, SF-3, Single-Family Dwelling District, in part, TH, Townhouse Dwelling District, in part, SF-2, Single-Family Dwelling District, in part, MF-16, Multiple-Family Dwelling District, in part, SF-1, Single-Family Dwelling District, in part, 2F, Two-Family Dwelling (Duplex) District, in part, and RR, Regional Retail District, in part, to PD, Planned Development District for Housing Development out of a 317.56-acre tract of land, in Section 18, Block 38, T-I-S, A-734, T&P RY. CO. Survey, City and County of Midland, Texas.

Generally located on the northeast corner of the intersection of North Fairgrounds and East Mockingbird Road. (Council District 1)

LEGEND

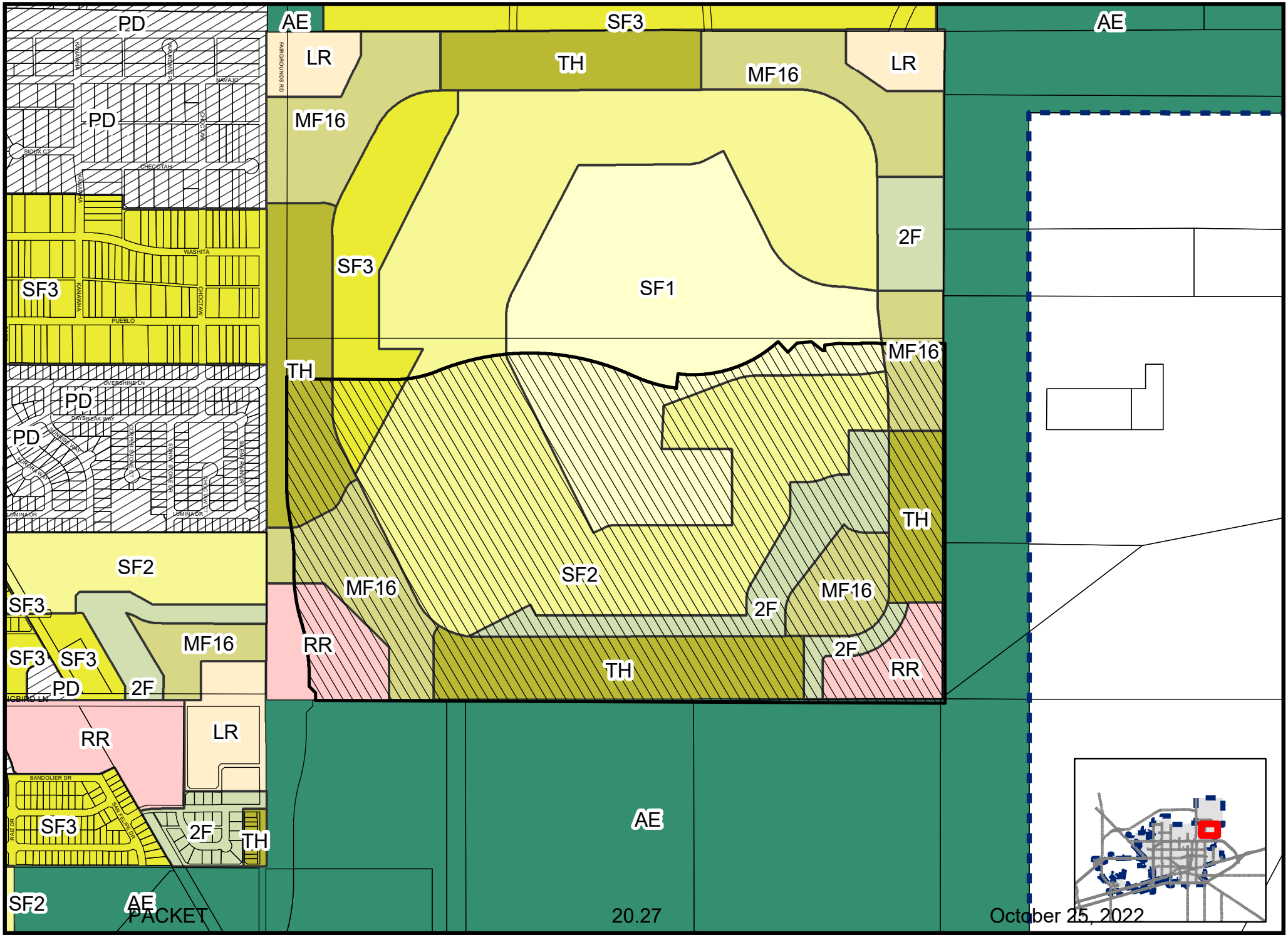
- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



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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, 7/29/2022

Z-22-0299

Scale: 1" = 11,434'

ZONING MAP

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PRIVATE
PROPERTY



City Council Meeting

Item Number: 21

Meeting Date: October 11, 2022, October 25, 2022

To: City Council / City Manager

From: Alexandra Walling, Planner

Subject: AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOTS 5 AND 6, BLOCK 2, COWDEN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM MF-22, MULTIPLE-FAMILY DWELLING DISTRICT TO TH, TOWNHOUSE (ATTACHED) DWELLING DISTRICT (GENERALLY LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF WEST SCHARBAUER DRIVE AND NORTH MARIENFELD STREET); 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, Justin Roland, is requesting a Zone Change from MF-22, Multiple-Family Dwelling District to TH, Townhouse (Attached) Dwelling District, for a future development of townhouses at 411 and 413 Humble Avenue.

Recommended City Council Action:

Approve

Fiscal Impact:

No City funds would be required for this project.

Discussion:

Current Zoning:

MF-22, Multi-Family Dwelling District

Surrounding Zoning and Land Use:

The properties to the north are zoned PD, Planned Development District for a Housing Development, in part and O-1, Office District, in part, and the location of apartments and single-family dwellings. The properties to the east are zoned MF-22, Multiple-Family Dwelling District, in part, SF-2, Single-Family Dwelling District, in part, and O-1, Office District, and are the locations of single-family and apartment residences. The properties to the south are zoned SF-2, Single-Family Dwelling District, and the location of single-family houses. Lastly, the properties to the west are zoned MF-16, Multiple-Family Dwelling District, and the location of apartments.

Analysis:

The applicant, Justin Roland, is requesting to rezone the properties from MF-22, Multiple-Family Dwelling District to TH, Townhouse (Attached) Dwelling District, for a housing development at 411 and 413 Humble Avenue, these properties are currently vacant. Townhouse (Attached) Dwelling are not allowed in a MF-22, Multiple-Family Dwelling District. Therefore, this zone change request will bring this lot into conformance with the current zoning ordinance and allow for the redevelopment of the site. Additionally, TH, Townhouse (Attached) Dwelling District, is intended to provide townhouse development at the density of three to twelve units per acre. These lots are required to have a minimum of 2,500 square feet, with a minimum width of 25-feet for an interior lot or 30-feet for a corner lot.

Additionally, this property is in the process of platting. The applicant intends to parcel out the two lots into five lots and change the frontage of the lots to Marienfeld Street for the purpose of adding alternative housing options to Midland residents.

The current lot dimensions do not meet the minimum standards of MF-22, Multiple-Family Dwelling District according to the Residential Zoning District Regulations Chart within the City of Midland Zoning Ordinance Section 5.04. - Residential Zoning District Dimensional Regulations Chart. Based on the established neighborhood characteristic, this development will serve as a transition from the Single-Family Dwellings located to the south, into the Multi-Family Dwellings located north, east, and west of the site. In addition to creating a buffer from a collector street such as Scharbauer Drive.

The applicant will be required to adhere to the site plan review standards outline within the City of Midland Zoning Ordinance Section 5.04: - Residential Zoning District Dimensional Regulations Chart.

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 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, 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 objection to zone change.

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.

Our staff has examined the FEMA flood map and it appears that this property lies partially within Zone AE, which is a Special Flood Hazard Area subject to inundation by the 1% annual chance flood. An elevation certificate based off of construction drawings will be required to get a building permit to show compliance to the 1 foot of freeboard above the base flood elevation for residential structures.

An elevation certificate based off of finish construction will be required for the Certificate of Occupancy.

Code: (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:

According to the Tall City Tomorrow Comprehensive Plan, Urban-High (U-H) land use includes higher density housing zones such as Townhouse District and Multiple-Family District while also mixing with complementary uses, such as office buildings, churches, schools, or hospitals. The current surrounding uses include Multi-Family dwellings, Single-Family Dwellings, and Office Districts. Therefore, the City of Midland Planning Department supports this zone change because townhomes would fit the Urban-High (U-H) intended land use appropriately.

This request was recommended for approval at the September 19, 2022, Planning and Zoning

Commission Meeting.

Staff recommends approval of this zone change from MF-22, Multi-Family Dwelling District to TH, Townhouse (Attached) Dwelling District, subject to condition A.

Conditions:

A. That the use and development of this property shall conform to the regulations of the TH, Townhouse (Attached) Dwelling District.

Letters of Objection:

Staff has not received any letters of objection as of September 29, 2022.

Attachments:

Application
Survey (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 LOTS 5 AND 6, BLOCK 2, COWDEN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM MF-22, MULTIPLE-FAMILY DWELLING DISTRICT TO TH, TOWNHOUSE (ATTACHED) DWELLING DISTRICT (GENERALLY LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF WEST SCHARBAUER DRIVE AND NORTH MARIENFELD STREET); 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 5 and 6, Block 2, Cowden Addition, City and County of Midland, Texas (the "Property") to TH, Townhouse (Attached) 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 MF-22, Multiple-Family Dwelling District to TH, Townhouse (Attached) 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., 2022; 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., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, 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: 2-22-0302

Case Number:

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: JUSTIN ROLAND		Phone (432) 352-0927 Email JUSTIN@ROLAND-RE.COM	
Address 105 N G ST, STE 205	City MIDLAND	State TX	Zip 79701
Property Owner Printed Name: MIDLAND LOTS, LLC		Phone ( ) Email	
Address 4108 N BIG SPRING. ST	City MIDLAND	State TX	Zip 79705
Representative *(if different from Applicant or Property Owner)* Firm: ROLAND REAL ESTATE Printed Name: JUSTIN ROLAND		Phone (432) 352-0927 Email JUSTIN@ROLAND-RE.COM	
Address 105 N G ST, STE 205	City MIDLAND	State TX	Zip 79701

Street Address: 411 & 413 HUMBLE

Legal Description
Lot: 5&6 Block: 2 Subdivision: COWDEN

Current Zoning: MF22	**Proposed Zone:** *(List by tracts if more than one district is requested)*

Reason for Zone Change Request: LOT DIMENSIONS ARE INSUFFICENT TO ADAQUATELY BUILD AN MF22 PROJECT.

Present Use of Property: VACANT

Proposed Use of Property: TOWN HOUSE

How would this zone change affect the public health, safety and welfare? THEY WOULD BE A POSITIVE EFFECT AS NEW PROJECTS BRING REVITALIZATION

Describe how conditions affecting the property have changed since present zoning designation: LOT SIZE AND SET BACKS CREATE A SERIOUS HURDLE FOR BUILDING A LARGER COMPLEX

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: 5-23-22
Applicant (printed): Justin Rolland	
Property Owner (signature):	Date:
Property Owner (printed) :	

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 Justin Rolland who, being by me duly sworn, upon oath says: That (s)he is the owner of 411 & 413 Humble or 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.

MELISSA CONLEY
Notary Public, State of Texas
Comm. Expires 09-07-2022
Notary ID 131707492

Melissa Conley
Authorized Agent (*signature*)

Subscribed and sworn to before me, this 24 day of May, 2022, to certify which witness my hand and seal of office.

NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

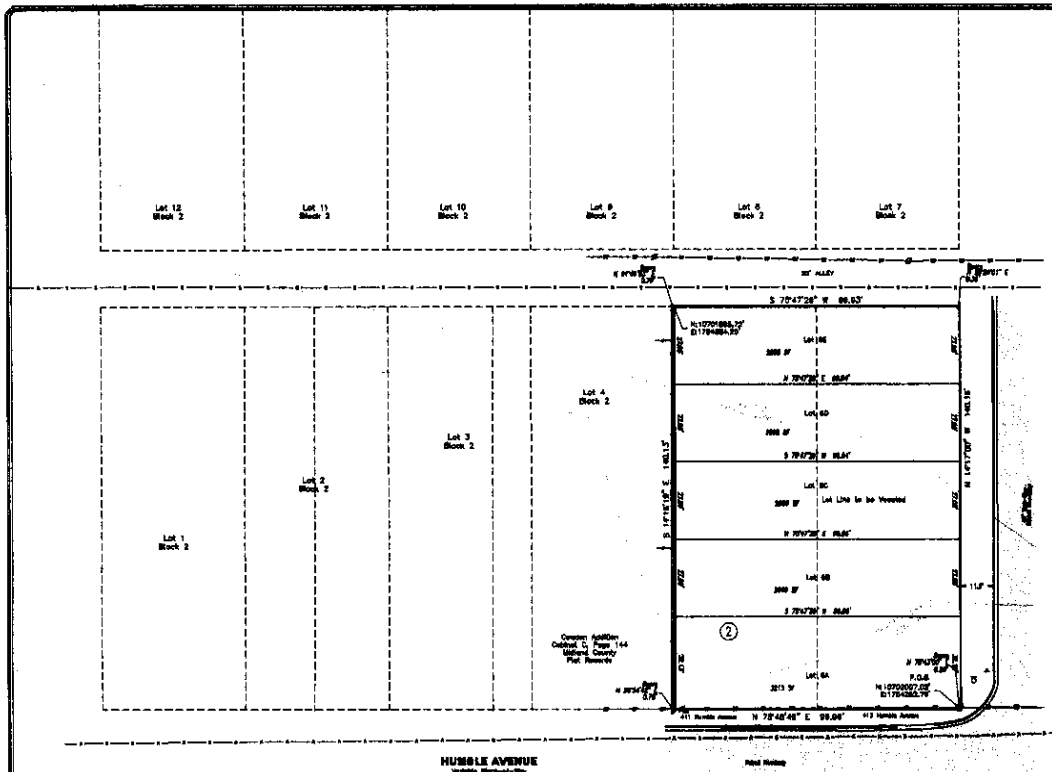
FOR OFFICE USE ONLY	
☐ Property Owner Authorization	☐ Dimensioned Site Plan
☐ Application Fee	☐ Plans in Digital Format (PDF/JPEG)
Check # _____	
Received By:	Date:

****Application will not be considered for scheduling until reviewed by a planner.****

COWDEN ADDITION, SECTION 7

Being a Replat of Lot 5 & Lot 6, Block 2, Cowden Addition, City & County of Midland, Texas.

October 25, 2022



OWNERS' CERTIFICATE:

THE STATE OF TEXAS
COUNTY OF MIDLAND

WHEREAS, I, _____, as the recorded owner of a 0.322 Acre Tract of land recorded in Doc. No. _____, Midland County Official Public Records, County Of Midland, Texas, and more particularly shown hereon;

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

THAT, I, _____ does hereby adopt this plat designating the herein above described property as "COWDEN ADDITION, SECTION 7" an Addition to the City of Midland, Midland County, Texas, and do hereby dedicate to the public use forever the streets, alleys, and easements shown thereon.

WITNESS our hands of Midland, Texas, this the_____day of_____ 2022.

_____

_____

ACKNOWLEDGMENT
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 the same was the act on owner, and that he executed the same as the act for the purposes and consideration therein expressed and in the capacity therein stated.

Given under my hand and seal of office this _____day of _____ 2022.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

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. A BLANKET EASEMENT OF SHARED AND EXPRESS WILL BE GRANTED FOR COWDEN ADDITION, SECTION 7 TO THE CITY OF MIDLAND FOA DRAINAGE AND TRASH COLLECTION AND LOCATION AND MAINTENANCE OF TRASH STRUCTURES, SAVE AND EXCEPT THOSE AREAS OCCUPIED BY A BUILDING OR STRUCTURE, SAID EASEMENT IS CONSTRAINED SUCH THAT EXACT LOCATION OF SAID CONTAINERS AND THE EASEMENTS IN CONNECTION THEREWITH HAVE BEEN SELECTED AND APPROVED BY THE DIRECTOR OF UTILITIES.

4. BEARING & COORDINATES SHOWN ON THIS SURVEY ARE RELATIVE TO THE TEXAS COORDINATE SYSTEM, NAD 1983, CENTRAL ZONE (4205).

5. A PORTION OF THIS PROPERTY IS IN ZONE AE & SHADED ZONE X AND DOES LIE WITHIN A SPECIAL FLOOD HAZARD AREA AS GRAPHICALLY SCALED, DATED FEMA MAP NO. 48329C0008F, DATED SEPTEMBER 18, 2009, PREPARED FOR MIDLAND COUNTY, TEXAS.

6. INITIAL 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 INCREASES.

UTILITY COMPANY'S CERTIFICATE

THIS PLAT HAS BEEN CHECKED FOR ACCESSIBILITY OF UTILITIES.

SIGNED: _____ ATMOS ENERGY PRINT NAME

SIGNED: _____ ONCOR ELECTRIC DELIVERY PRINT NAME

SIGNED: _____ AT&T TEXAS PRINT NAME

SIGNED: _____ SUDDENLINK COMMUNICATIONS PRINT NAME

SIGNED: _____ GRANDE COMMUNICATIONS PRINT NAME

CERTIFICATE OF APPROVAL

This is to certify that the above and foregoing plat of "COWDEN ADDITION, SECTION 7" was approved by proper action of the City Planning and Zoning Commission of the City of Midland, on this_____day of _____ 2022.

SIGNED:_____
Chairman
LUCY SEMAZA

ATTEST:_____
Secretary
ELIZABETH SHAUGHNESSY

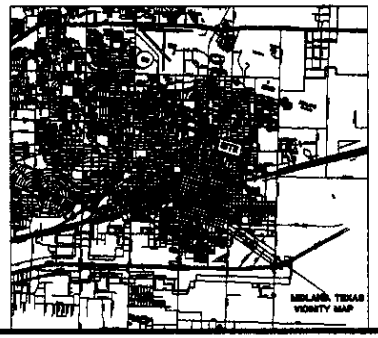
THAT I, AARON S. BURRELL, A REGISTERED PROFESSIONAL LAND SURVEYOR OF THE STATE OF TEXAS, DO HEREBY CERTIFY THAT I PREPARED THIS PLAT FROM AN ACTUAL AND ACCURATE SURVEY OF THE LAND AND THAT THE CORNER MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY PERSONAL SUPERVISION, IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS OF THE CITY OF MIDLAND, TEXAS

20 July 2022
DATE

AARON SCOTT BURRELL IV, RPLS 5889

Legend
- Set 1/2" iron rod with cap stamped "Burrell 5889"
- Found 1/2" iron Rod
- Found Iron Pipe
- Boundary
- Centerline

OWNER:
_____
MIDLAND, TEXAS 79701
(432)___-____

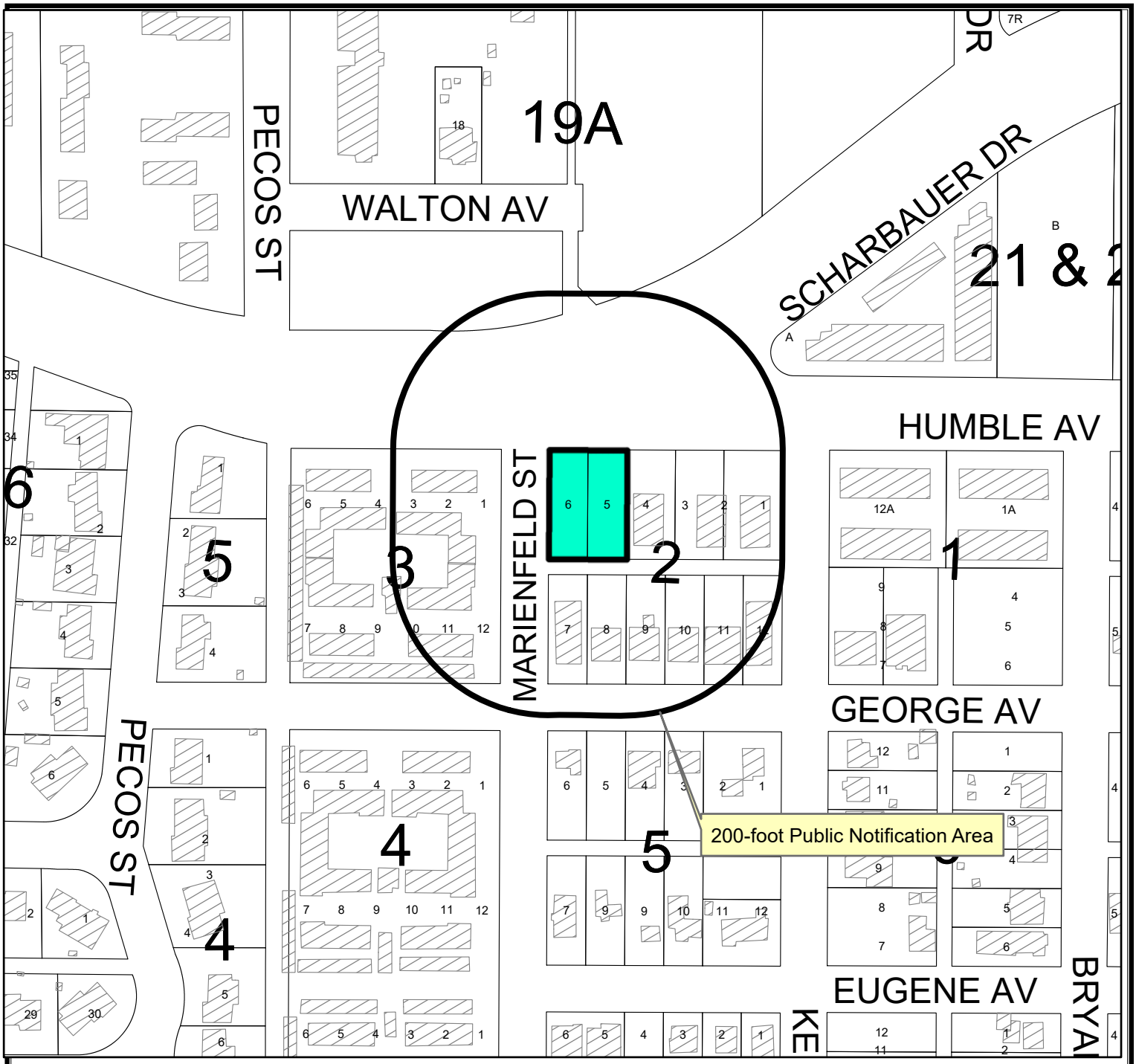


PLAT FILED FOR RECORD
MIDLAND COUNTY, TEXAS
NO._____CABINET_____
DATE_____PAGE_____

PACKET 221.10

SKETCH PLAT
COWDEN ADDITION, SECTION 7

Professional Land Surveying Firm
Aaron Burrell Land Surveyors, LLC



LOCATION MAP

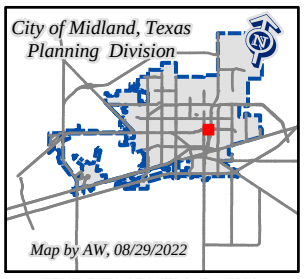
Z-22-0302 **Scale: 1" = 200'**

Consider a request by Ronald Real Estate for a zone change from MF-22, Multi-Family Dwelling District to TH, Townhose (Attached) Dwelling District on Lots 5 and 6, Block 2, Cowden Addition, City and County of Midland, Texas.

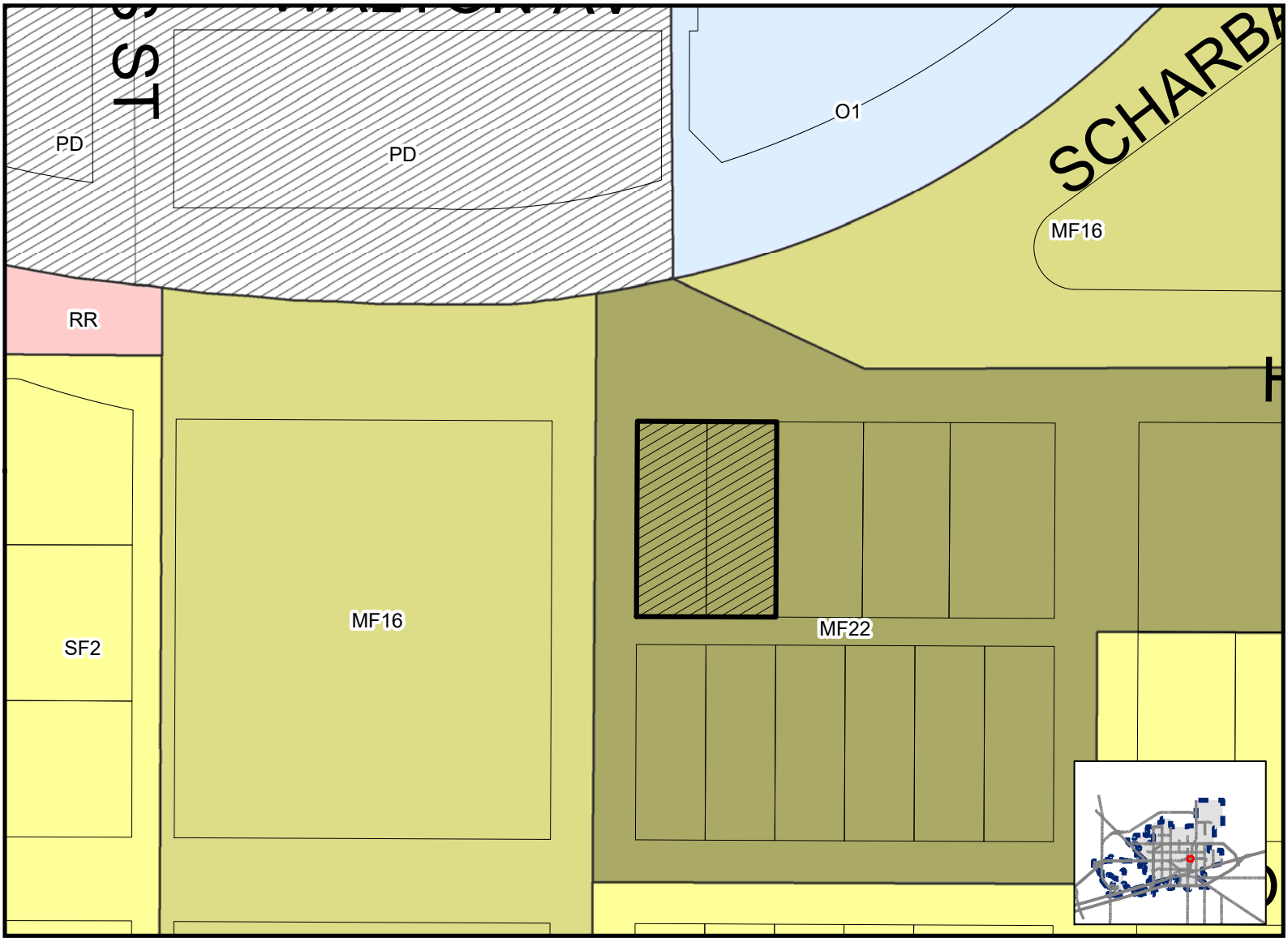
Generally located on the southeast corner of the interesection of West Scharbauer Drive and North Marienfeld Street. (Council District 3)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



October 25, 2022



Map By AW, 8/29/2022 **Z-22-0302** **Scale: 1" = 200'** **ZONING MAP**

© THE CITY OF NI
TO BE USED AS A PR
HEREIN.THE CITY OF
UCT, NOR IS IT DESIGNED
INFORMATION CONTAINED
THE USE OF THIS DATA.


STOP






NO PARKING
FOR RESIDENTS
ONLY

City Council Meeting

Item Number: 22

Meeting Date: October 11, 2022, October 25, 2022

To: City Council / City Manager

From: Alexandra Walling, Planner

Subject: AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITH TERM FOR LOTS 4 THROUGH 6, BLOCK 24, COWDEN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF NORTH BIG SPRING STREET AND WEST PARKER AVENUE), WHICH IS PRESENTLY ZONED LR, LOCAL RETAIL DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR THE SALE OF ALL ALCOHOLIC BEVERAGES IN A RESTAURANT FOR ON-PREMISES CONSUMPTION; 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 3) (DEVELOPMENT SERVICES)

Purpose:

The applicant, Jorge Ramos, representing Culichi's Restaurant, is requesting a Specific Use Designation (SUD) for the sale of all alcoholic beverages, for on-premises consumption, in a restaurant conducting business as Culichi's Restaurant, located at 1501 North Big Spring Street.

Recommended City Council Action:

Approve

Fiscal Impact:

This proposal does not have a significant financial impact to the City.

Discussion:

Current Zoning:

LR, Local Retail District

Surrounding Zoning and Land Use:

The properties to the north are zoned LR, Local Retail District, and the location of businesses. The properties to the east are zoned LR, Local Retail District and SF-2, Single-Family Dwelling District, and location of businesses and single-family houses. To the south, the properties are zoned RR, Regional Retail District, and the location of businesses. The properties to the west are zoned SF-2, Single-Family Dwelling District and PD, Planned District for a Transition District and location of single-family houses.

Discussion:

The applicant, Jorge Ramos, representing Culichi's Restaurant, is requesting a Specific Use Designation (SUD) for the sale of all alcoholic beverages, for on-premises consumption, in a restaurant conducting business as Culichi's Restaurant, located at 1501 North Big Spring Street.

The restaurant is not in operation currently. The property is zoned LR, Local Retail District, which permits the sale of alcoholic beverages with the approval of a Specific Use Permit. The floor plan provided, attached hereto as Exhibit A, shows a total square footage of 5,155.51 square feet, with an alcohol serviceable area of 2,537.74 square feet. The site currently has adequate parking and access.

The restaurant has the following hours of operation:

Monday through Sunday from 11 a.m. to 12 a.m. (the next day)

The restaurant is proposing the following hours of alcohol service:

Monday through Sunday from 11 a.m. to 12 a.m. (the next day)

Per Midland City Code, Section 5-4-4, Prohibited Places of Business:

The sale of any alcoholic beverage is hereby prohibited by any person, where the place of business of any such dealer is within 300 feet of any church, public-school, public-school ground, athletic stadium used by any public school or public hospital, the measurements to be along the property lines of the street fronts and from front door to front door and in a direct line across intersections where they occur.

There are no schools or churches within 300 feet of the property.

This project has been circulated to all City departments for review. Below are the department comments.

Fire: (Approved)

No objections to zone change request.

Engineering: (Approved)

No objections.

Oil & Gas: (Approved)

No objections.

Transportation: (Approved)

No objections.

Building Code: (Approved)

The SUD is acceptable. The property must adhere to the maximum occupant load of 173 for the alcohol serviceable area. Occupancy loads must be posted in accordance with section 1004.3 of the 2015 International Fire Code.

Planning:

This request is in compliance with the Tall City Tomorrow Comprehensive Plan, Chapter 6-Character Plan Goal 3, which discusses “balanced neighborhoods” where residents can easily access an array of restaurants, shops, and engage in the community (Tall City Tomorrow page 137). Culichi’s is an establishment that promotes a positive environment where local residents can interact and build new connections.

This request was recommended for approval at the September 19, 2022, Planning and Zoning Commission Meeting.

Staff recommends approval of this Specific Use Designation with Term for the sale of all alcoholic beverages, for on-premises consumption, in a restaurant, subject to conditions A through G.

Conditions:

A. **That the serviceable area of the restaurant shall be limited to approximately 2,537.74 square feet as shown in Exhibit "A", which is attached hereto and incorporated herein for all purposes.**

B. **That the days and hours of alcoholic beverages sales and consumption shall be limited to:**

Monday through Sunday from 11 a.m. to 12 a.m. (the next day)

C. **That the occupancy of the establishment shall not exceed the maximum occupancy determined by the Building Code and Fire Code.**

D. **That the establishment shall meet all requirements of the Fire Department and Code Administration.**

E. **That the sale and on-premises consumption of alcoholic beverages shall conform to applicable state and local laws.**

F. **That the applicant shall obtain a Certificate of Occupancy prior to the commencement of the sale of alcoholic beverages for on premises consumption to ensure that the conditions of this permit are satisfied.**

G. **That in accordance with Section 9.07.E.3 of the zoning ordinance, the restaurant shall be in operation within 120 days from the final adoption date of this ordinance.**

Letters of Objection:

As of September 29, 2022, staff has received one letter of objection.

Attachments:

Application
Floor Plan (Exhibit A)
Site Plan (Exhibit B)
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 WITH TERM FOR LOTS 4 THROUGH 6, BLOCK 24, COWDEN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF NORTH BIG SPRING STREET AND WEST PARKER AVENUE), WHICH IS PRESENTLY ZONED LR, LOCAL RETAIL DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR THE SALE OF ALL ALCOHOLIC BEVERAGES IN A RESTAURANT FOR ON-PREMISES CONSUMPTION; 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 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 With Term for Lots 4 through 6, Block 24, Cowden Addition, City and County of Midland, Texas (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 With Term for the sale of all alcoholic beverages in a restaurant (the "Establishment") for on-premises consumption, together with the uses permitted in the present LR, Local Retail District.

SECTION TWO. That the Property shall be subject to the following conditions and

restrictions:

A. That the serviceable area of the Establishment shall be limited to approximately 2,537.74 square feet as shown in Exhibit "A", which is attached hereto and incorporated herein for all purposes.

B. That the sale and on-premises consumption of alcoholic beverages shall conform to all applicable state and local laws.

C. That the days and hours of alcoholic beverage sales and consumption shall be limited to Monday through Sunday from 11:00 a.m. to 12:00 a.m. (midnight).

D. That the occupancy of the Establishment shall not exceed the maximum occupancy determined by the Building Code and Fire Code.

E. That the Establishment shall meet the requirements of the Fire Department and the Code Administration Division.

F. That the operator of the Establishment shall obtain a Certificate of Occupancy prior to the commencement of the sale of alcoholic beverages for on-premises consumption to ensure that the conditions of this Specific Use Designation With Term are satisfied.

G. That in accordance with Section 11-1-9.07.E.3 of the City Code, the Establishment shall be in operation within 120 days from the final adoption date of this ordinance.

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., 2022; 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., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

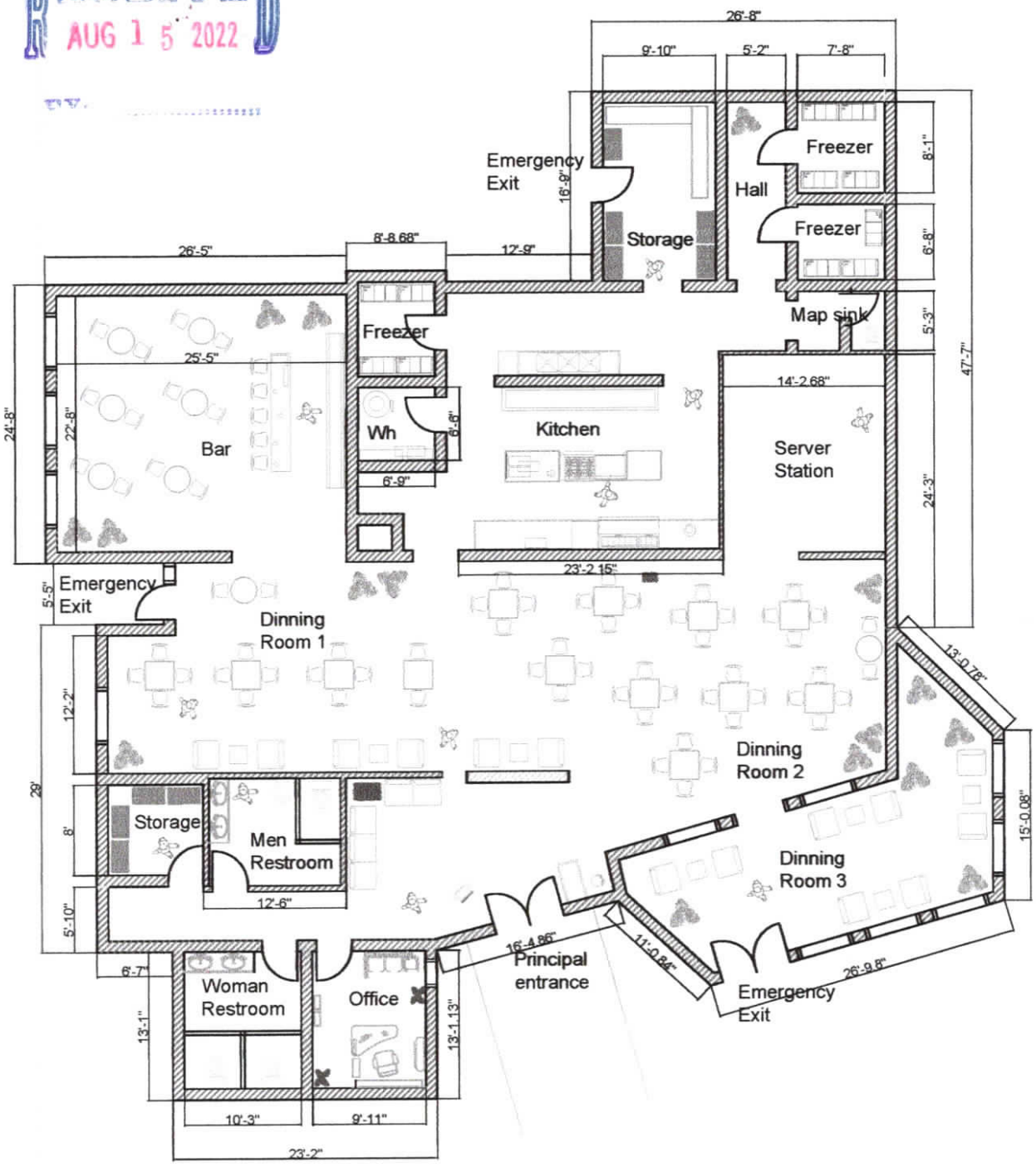
_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

EXHIBIT "A"

RECEIVED
AUG 15 2022

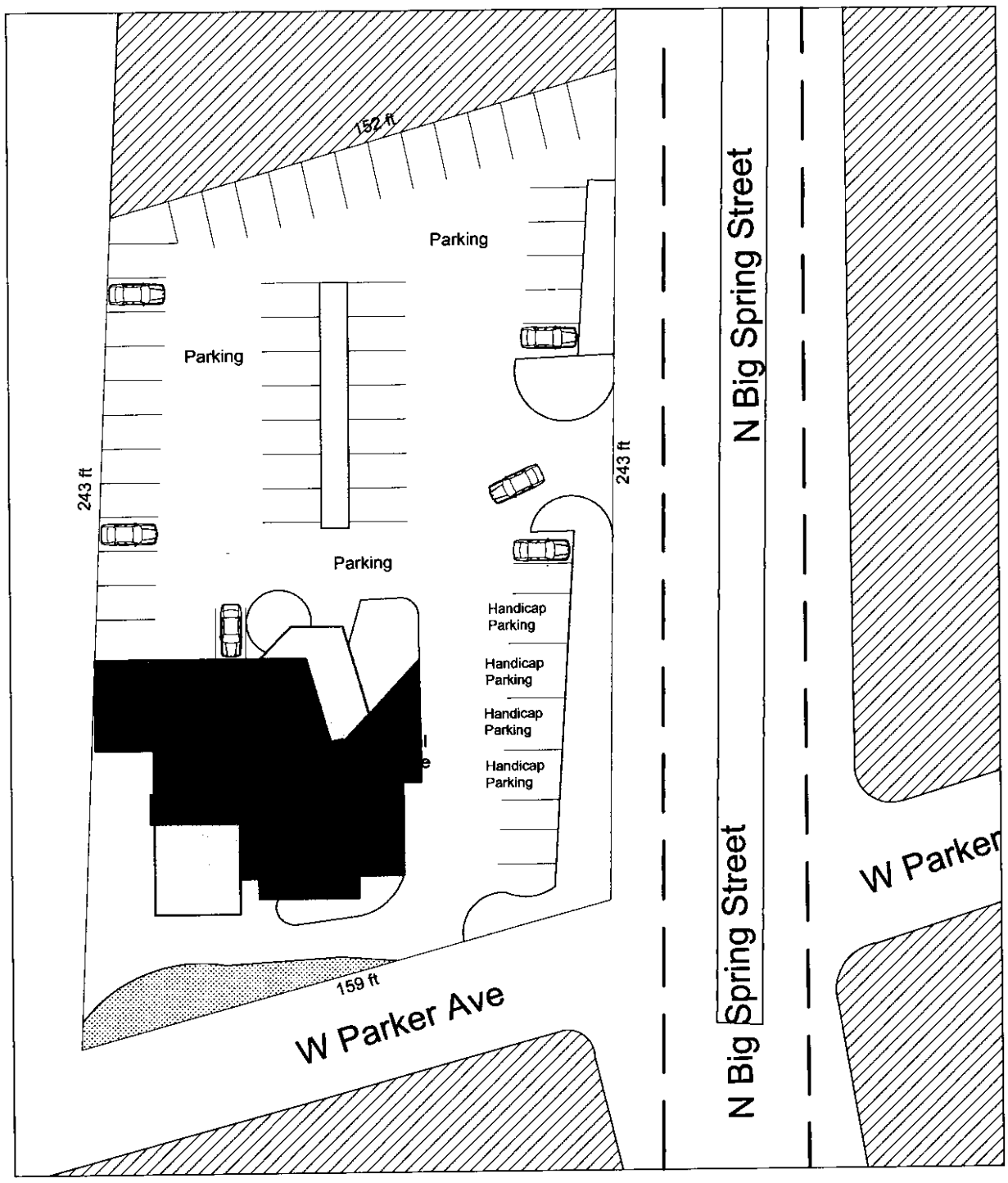


Location: 1501 Big Spring, Midland, Texas Date: August 2022

Area: 5,155.41 square ft Scale: 1 inch = 150 units

Serviceable Square Footage: 2,537.74 square ft

Total Area: 36,122.11 square ft Units: feet, inches



Location: 1501 Big Spring, Midland, Texas
Total Area: 36,122.11 square ft
Date: August 2022
Scale: 1 inch = 500 units
Units: feet, inches

MIDLAND
Planning Division

Specific Use Designation with Term for the Sale of Alcoholic Beverages for On-Premises Consumption

Project Number: SUD-22-0139

Case Number:

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: JORGE RAMOS/ ALEGRES3 LLC		Phone (806)274-1469 Email jr9118223@gmail.com	
Address 1501 N BIG SPRING ST	City MIDLAND	State TX	Zip 79701

Property Owner Printed Name: DEBBIE CHIU		Phone (432)230-9610 Email TEHYUCHIU@GMAIL.COM	
Address 5003 TEAKWOOD	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: 1501 N BIG SPRING ST MIDLAND, TX 79701

Business Name: CULICHIS RESTAURANT

Legal Description
Lot: 004 THRU 6 Block: 024 Subdivision: DOWDEN

Current Zoning: RESTAURANT - LR

Reason for Request: WE WANT TO BE ABLE TO OFFER OUR CUSTOMERS A DRINK WITH THEIR MEAL.

Type of Business *(restaurant, bar, lounge, nightclub, etc.)*: RESTAURANT

Proposed/Current Days and Hours of Operation:
MON-SUN 11 AM-12AM

Proposed Days and Hours of Alcohol Service:
MON-SUN 11AM-12AM

Total Square Footage of Business: 5,000 SQ FT

Square Footage of Alcohol Serviceable Area: 2600

Restroom Fixtures:			
Men	**Toilets/Urinals:** 1 / 2	**Bathroom Sinks:** 1
Women	**Toilets:** 3	**Bathroom Sinks:** 2

RECEIVED
AUG 15 2022

Submittal and Fees

Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Floor Plan showing:
  - Seating
  - Exits
  - Restrooms
  - Kitchen (if applicable)
  - Total Square Footage
  - Serviceable Square Footage
- Dimensioned Site Plan showing:
  - Parking
  - Business Footprint
- Digital Copies of Floor Plan & Site Plan (PDF/JPEG)

Signatures

Applicant (signature):	Date: 8/3/22
Applicant (printed): JORGE V RAMOS	
Property Owner (signature):	Date: 8/3/22
Property Owner (printed) : DEBBIE CHIU	

The Specific Use Designation with Term for the sale of all alcoholic beverages 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 Jorge Ramos Nunez 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 4th day of July, 2022, to certify which witness my hand and seal of office.

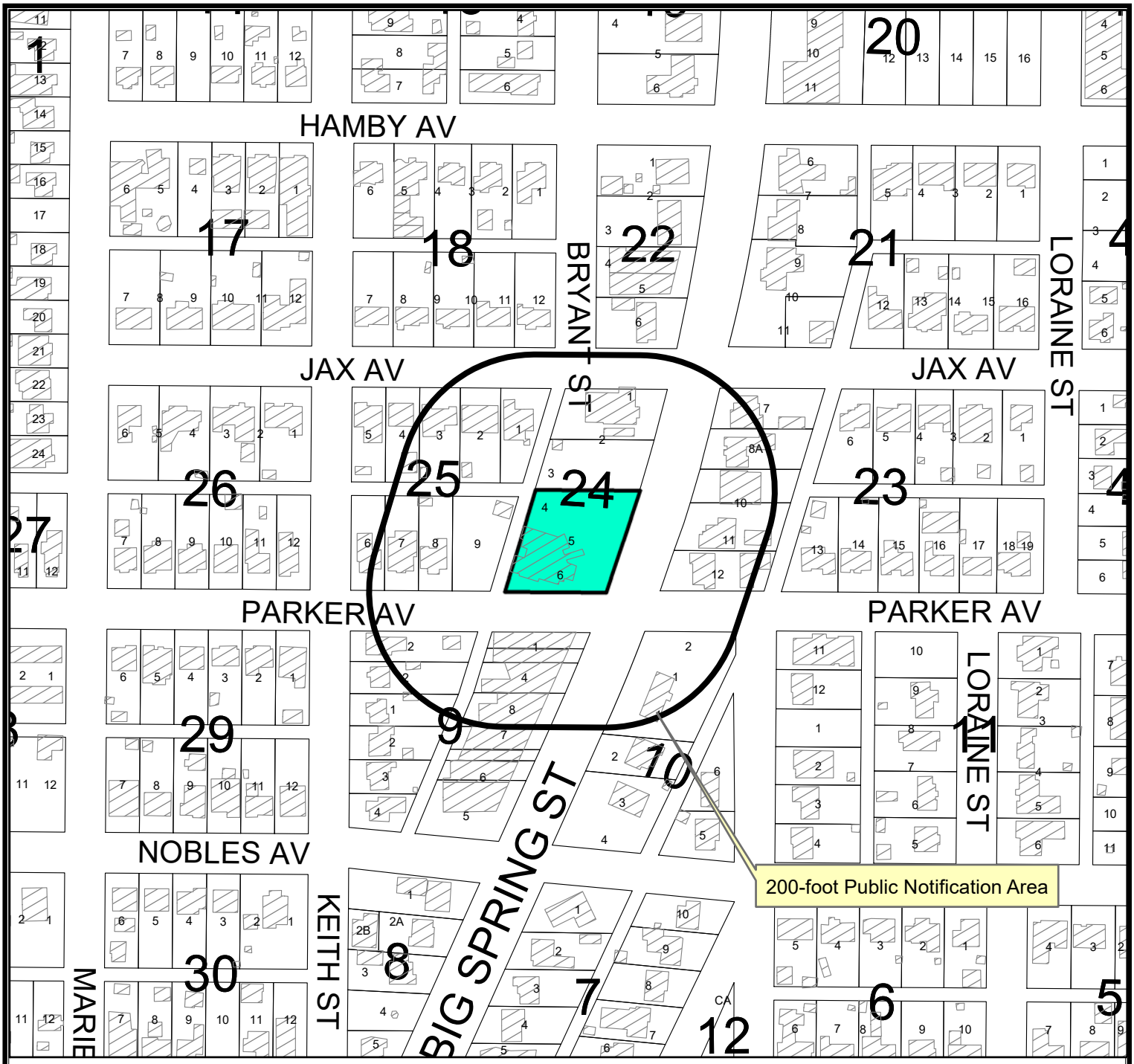
NOTARY PUBLIC STATE OF TEXAS
DALIA SALINAS
My Notary ID # 128541568
Expires March 9, 2023

_____
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

****Application will not be considered for scheduling until reviewed by a planner.****

FOR OFFICE USE ONLY	
☒ Property Owner Authorization	☒ Dimensioned Floor Plan
☐ Application Fee	☒ Site Plan
Check # CC	☒ Plans in Digital Format (PDF/JPEG)
Received By: DK	Date: RECEIVED AUG 15 2022 BY:

****Application will not be considered for scheduling until reviewed by a planner.****



LOCATION MAP

SUD-22-0139 **Scale: 1" = 200'**

Request by Jorge Ramos for a Specific Use Designation with Term for on-premises consumption, in a 5,155 square foot portion of Lots 4-6, Block 24, Cowden Addition, City and County of Midland, Texas.

Generally located on the northeast corner of the intersection at North Big Spring Street and West Parker Avenue. (Council District 3)

PACKET 22.15

LEGEND

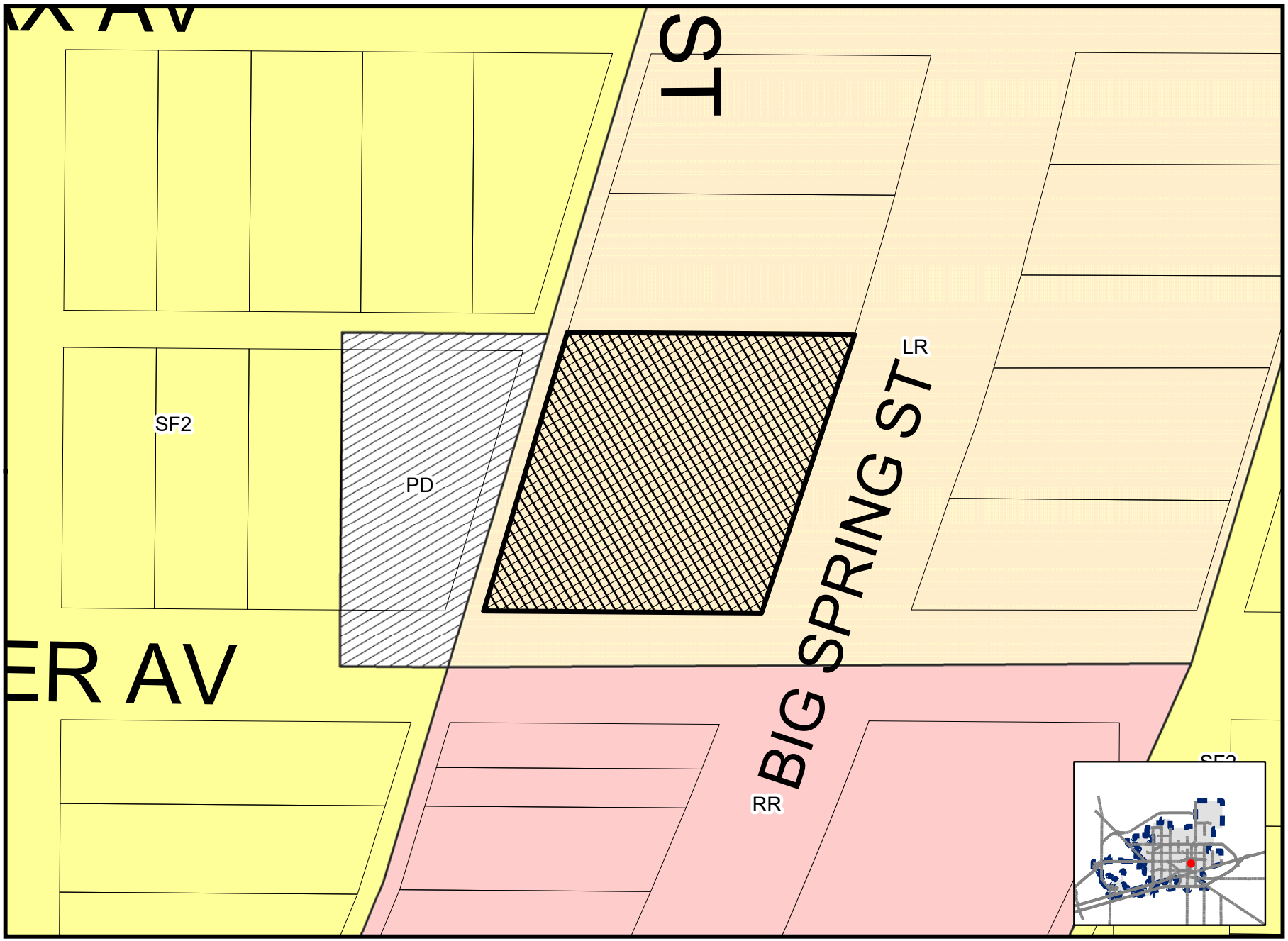
CITY LIMITS

PARCEL

PRIVATE BLDGS



October 25, 2022



Map By AW, 9/29/2022

SUD-22-0139

Scale: 1" = 200'

ZONING MAP

NOR IS IT DESIGNED
INFORMATION CONTAINED
THE USE OF THIS MAP


LOCKSMITH
KEYS
Big Spring St







MIDLAND
Planning Division

RECEIVED
SEP 29 2022
BY: .....

WINCHESTER ASSET MGMT LTD
PO BOX 1828
MIDLAND TX 79702 1828

PUBLIC NOTICE

The **City Council** of the City of Midland, Texas, will hold a public hearing at **10:00 a.m.** on **Tuesday, October 11, 2022,** in the Council Chamber, City Hall, 300 N. Loraine Street, Midland, TX 79701, on a request by **Jose Ramos,** for a **Specific Use Designation with Term** on the following described property:

LEGAL DESCRIPTION: Lots 4-6, Block 24, Cowden Addition, City and County of Midland, Texas.

LOCATION: Generally located on the northwest corner of the intersection of North Big Spring Street and West Parker Avenue. (Council District 3)

CURRENT ZONING: LR, Local Retail District

SPECIFIC USE: For the sale of all alcoholic beverages for on-premises consumption, in a restaurant.

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:**

Required Information:

Property Owner's Signature

ALAN D. BOYD, PGR
WINCHESTER ASSET MGT.
Printed Name

1504 N. Big Spring
Mid 79701
Property Address (**No P.O. Boxes**)

If any further information is desired, please contact the Planning Division at (432) 685-7400.
Si ud. desea más información en Español sobre esta cuestión, llame al : (432) 685-7400.

Notices Mailed: 22
Date Mailed: September 23, 2022
Case Number: SUD-22-0139
Case Name: Culichi's Restaurant
AW : Planner's Initials

Elizabeth Shaughnessy
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: 23

Meeting Date: October 11, 2022, October 25, 2022

To: City Council / City Manager

From: Kelly Martinez, Senior Planner

Subject: AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITHOUT TERM FOR LOTS 1 AND 2, BLOCK J, GARRETT PLACE ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE SOUTH SIDE OF WEST INDIANA AVENUE, APPROXIMATELY 241 FEET EAST OF CARLTON STREET), WHICH IS PRESENTLY ZONED RR, REGIONAL RETAIL DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR A KENNEL; 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 2) (DEVELOPMENT SERVICES)

Purpose:

The applicant, Elisa Matneson is requesting a Specific Use Permit without Term for a Kennel located at 2401 W. Indiana Avenue.

Recommended City Council Action:

Deny

Fiscal Impact:

No City funds are required to process this request.

Current Zoning:

RR, Regional Retail District

Surrounding Zoning and Land Uses:

This property is located at 2401 Indiana Avenue, and is zoned RR, Regional Retail District. The property to the north is zoned RR, Regional Retail District, and is the location of Mac's BBQ. The property to the east is zoned RR, Regional Retail District, and the location of a parking lot. The property to the south is zoned MF-22, Multi-Family Dwelling District, and the location of a residential home. The property to the west is zoned RR, Regional Retail District, and the location of a pest control service.

Analysis:

The property is located at 2401 Indiana Avenue, and the location of a pet groomer. They are wanting to add pet boarding services to this location. According to the Midland Zoning Ordinance, kennels are permitted by a specific use permit in the RR, Regional Retail District. The property approximately has 2,400 square feet of floor area. The building will consist of multiple rooms that will be used for grooming, bathing, drying, and boarding.

There will be 15 kennels available with different sizes. The 4x6 kennel will hold 2 large dogs or 3 small dogs. The 8x7 or 8.5x7 kennel will hold 3 large dogs or 4 small dogs. Finally, the 13x7 kennel will hold 4 large dogs or 5 small dogs. As shown on Table 1.0 Kenel Layout Table below.

Table 1.0 Kennel Layout

SIZE of Kennel	No. of Kennels	Max. No. Large Dogs	Max No. Small Dogs	Max Capasity per Kennel
8.5 X 7	1	3	4	4
8 X 7	1	3	4	4
4 x 6	12	2	3	36
13 X 7	1	4	5	5
Total	*15 Kennels*			*49 small or 34 large dogs; or a combination based on kenel size.*

The dogs will be kept in the kennel for a maximum timeframe of 7 days; however, most stays happen over the weekend. The hours of operation are Monday through Sunday from 7:30 a.m. to 7:30 p.m. Additionally, the dogs are kept overnight for 24 hours. The facility will use the outdoor area as a play area for the dogs. The property is required to have 6 parking spaces. The property does not have any parking located on their property; however, they have a parking agreement in place with the property owner to the east that will allow them to utilize their parking lot for parking.

This request has been circulated to and reviewed by respective City departments for internal review and their comments, conditions, and requirements are as follows:

Engineering: (Approved)

No objections.

Fire: (Approved)

No objections.

Transportation: (Approved)

No objection.

Building Code: (Approved)

No issues. All future structures or construction activity 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, 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.

Animal Services: (Approved with Conditions)

It is not the best ideal location for a kennel as it backs up to a residential area. There aren't any codes that prevent them from having them there if they comply with Chapter 2 Sec. 6-2-5 Barking Dogs.

Planning: (Denied)

The kennel will be located adjacent to residential homes behind the alley. The proposed kennel may affect the tranquility of this neighborhood. Kennels often have many dogs barking and other animal noises. In these environments, the noise level and odor are always a concern. The building is not soundproof and there are currently no plans to make it soundproof. As mentioned earlier, dogs will be allowed outside for some periods of time, and with the potential of having 49 small dogs at one time will make it harder to control the barking noise. The applicant will also need to be responsible for the pet waste on the property.

This request was recommended for approval at the September 19, 2022, Planning and Zoning Commission meeting.

However, staff recommends denial of the Specific Use Designation without Term for a Kennel. However, if approved the property shall be subject to Conditions A through B.

Conditions:

A. That the use and development of this Property as a kennel shall significantly conform to the site plan, which is attached hereto as Exhibit "A" and incorporated herein.

B. That the owner of the Property shall ensure compliance with all applicable provisions of the City Code, including those that specifically apply to the operation of a kennel or the keeping, harboring or maintenance of an animal.

Letters of Objection:

As of September 28, 2022, staff has not received any letters of objections.

Attachments:

Site Plan (Exhibit A)
Application
Letters of Support
Maps

Morris William 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 LOTS 1 AND 2, BLOCK J, GARRETT PLACE ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE SOUTH SIDE OF WEST INDIANA AVENUE, APPROXIMATELY 241 FEET EAST OF CARLTON STREET), WHICH IS PRESENTLY ZONED RR, REGIONAL RETAIL DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR A KENNEL; 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 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 Lots 1 and 2, Block J, Garrett Place Addition, City and County of Midland, Texas (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 a kennel, 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:

A. That the use and development of this Property as a kennel shall significantly conform to the site plan, which is attached hereto as Exhibit "A" and

incorporated herein.

B. That the owner of the Property shall ensure compliance with all applicable provisions of the City Code, including those that specifically apply to the operation of a kennel or the keeping, harboring or maintenance of an animal.

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., 2022; 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., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

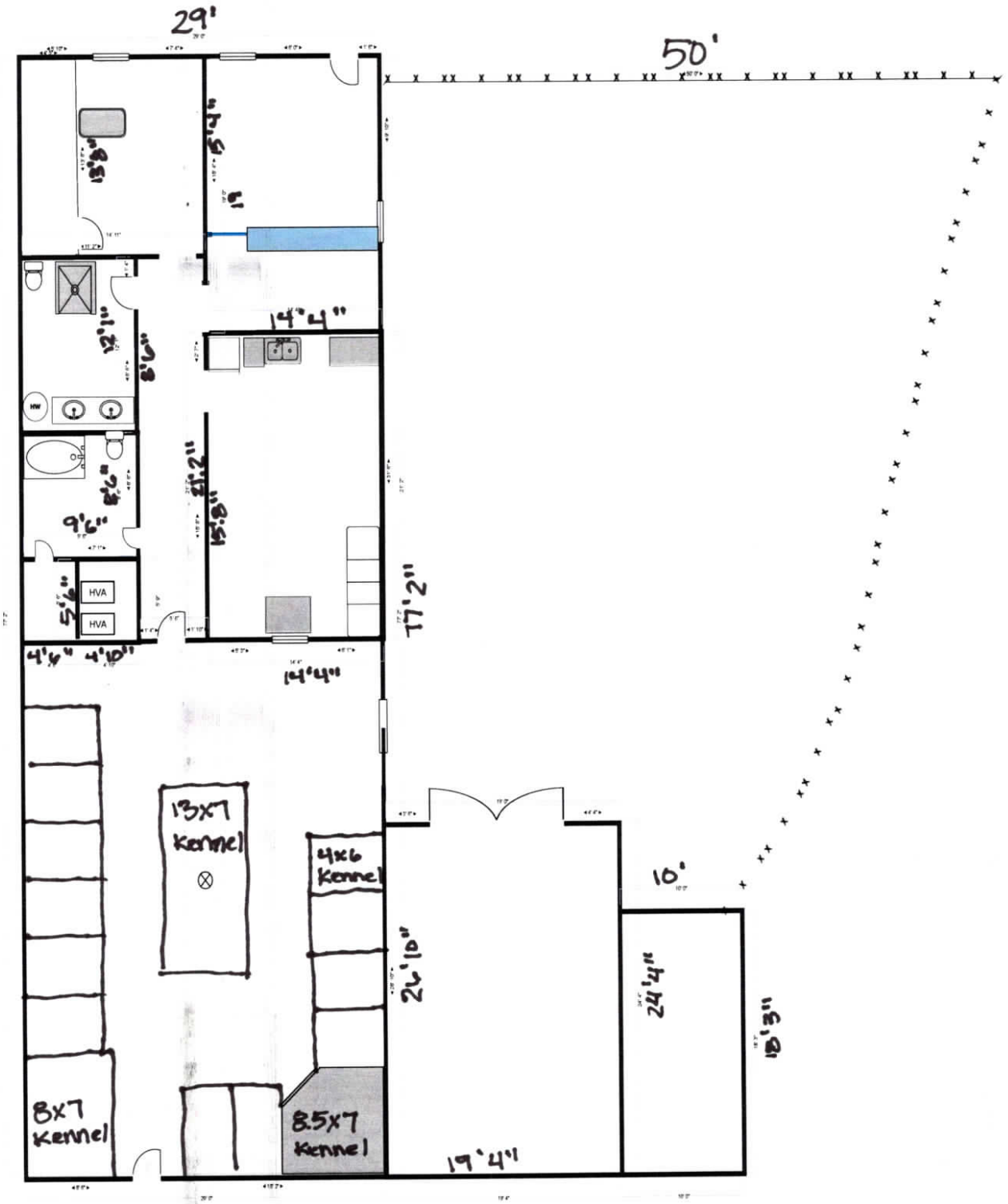
_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney


29'
50'
13'8"
5'4"
19'
12'1"
8'6"
14'4"
9'6"
8'6"
21'2"
15'8"
HVA
HVA
5'6"
4'6"
4'10"
14'4"
77'2"
13x7
Kennel
4x6
Kennel
10'
24'10"
24'4"
15'3"
8x7
Kennel
8.5x7
Kennel
19'4"

MIDLAND
Planning Division

Specific Use Designation Application (Non-Alcohol)

Case Number: SUDuse-22-0028

Ord. Number: _____

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: Elisa Matheson		Phone (432) 262-0546 Email starshollowdogresort@gmail	
Address 3517 N. Michigan Ave	City Midland	State TX	Zip 79703

Property Owner Printed Name: Dennis Baker		Phone ( ) Email	
Address 2405 W. Indiana Ave	City Midland	State TX	Zip 79701

Representative *(if different from Applicant or Property Owner)* Firm: _____ Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Type of Permit:

For Office Use Only

☐ with Term ☐ without Term

Is there any Code Enforcement action pending on property? ☐ Yes ☒ No

Street Address: 2401 W. Indiana Ave. Midland, TX 79701

Legal Description
Lot: 2 Block: J Subdivision: Garrett Place

Current Zoning: Retail - RR, Regional Retail

Maximum Floor Area: 2400 sq. ft. **Maximum Occupancy:**

Proposed hours and days of use or operation: 12am-12pm ~~Sat-Sun~~ Sun-Sat. (dogs)
Mon-Sun 7:30 am - 7:30 p.m.

Reason for request: Kennel; Boarding for dogs

Applicant's opinion as to why the request will not adversely affect the public safety, health, morals, general welfare, and convenience: _____

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)

RECEIVED
AUG 15 2022

Signatures

Applicant (signature):	Date: 8/2/22
Applicant (printed): Elisa Matheson	
Property Owner (signature):	Date: 8/2/22
Property Owner (printed) : Dennis Baker	

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 Elisa Matheson who, being by me duly sworn, upon oath says: That (s)he is authorized by Dennis Baker, 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 15th day of Aug, 20 22, to certify which witness my hand and seal of office.

DALIA SALINAS
My Notary ID # 128541568
Expires March 9, 2023

NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY

- [x] Property Owner Authorization
- [x] Application Fee
  Check # 1006
- [x] Dimensioned Site Plan
- [x] Site Plan in Digital Format (PDF/JPEG)

Received By: DC

Date: RECEIVED AUG 15 2022

****Application will not be considered for scheduling until reviewed by a planner.****

Exhibit "A"


29'
50'
Grooming Room
Reception Area
Restroom
Bathing Room
Drying Room
HVA
HVA
14'4"
77'2"
13x7 Kennel
4x6 Kennel
8x7 Kennel
8.5x7 Kennel
Storage
Storage
10'
24'10"
24'4"
19'4"
15'3"

I, Elouise Church, give Stars Hollow Dog Resort permission to use our parking lot for their boarding/grooming business. This would allow the six spaces that are needed for business to run efficiently.

X _____ Date: 8-1-2022

X _____ Date: 8/2/2022

Elisa Matheson (Owner) Stars Hollow Dog Resort


1
2
3
4
5
11
Parking
2401 W INDIANA
2400 ELIZABETH AVE

STARS HOLLOW
DOG GROOMING
2401 W. INDIANA
MIDLAND, TX 79701
432-262-0546

I, Javier Carlos at 2406 Elizabeth Ave. approve Stars Hollow Dog Grooming to do boarding at the address 2401 W. Indiana Ave. Please take my signature into consideration for approval.

Signature

9-1-22
Date

Yo, _____ direccion _____ apruevo a Stars Hollow Dog Grooming alojamiento de perros en la dirección 2401 W. Indiana Ave. Por favor tome me firma como consideración en favor del establecimiento.

_____
Firma

_____
Fecha

STARS HOLLOW
DOG GROOMING
2401 W. INDIANA
MIDLAND, TX 79701
432-262-0546

I, _____at _____ approve Stars Hollow Dog Grooming to do boarding at the address 2401 W. Indiana Ave. Please take my signature into consideration for approval.

_____
Signature

_____
Date

Yo, Araceli Alfaro direccion 2404 Elizabeth ave. apruevo a Stars Hollow Dog Grooming alojamiento de perros en la dirección 2401 W. Indiana Ave. Por favor tome me firma como consideración en favor del establecimiento.

_____
Firma

11/04/2022.
Fecha

STARS HOLLOW
DOG GROOMING
2401 W. INDIANA
MIDLAND, TX 79701
432-262-0546

I, Andrea Hill at 2400 Elizabeth Avenue approve Stars Hollow Dog Grooming to do boarding at the address 2401 W. Indiana Ave. Please take my signature into consideration for approval.

andrealill
Signature

9/1/22
Date

Yo, _____ direccion _____ apruevo a Stars Hollow Dog Grooming alojamiento de perros en la dirección 2401 W. Indiana Ave. Por favor tome me firma como consideración en favor del establecimiento.

_____
Firma

_____
Fecha

STARS HOLLOW
DOG GROOMING
2401 W. INDIANA
MIDLAND, TX 79701
432-262-0546

I, Justina Hill at 2403 Elizabeth Ave approve Stars Hollow Dog Grooming to do boarding at the address 2401 W. Indiana Ave. Please take my signature into consideration for approval.

Justina Hill
Signature

9-1-22
Date

Yo, _____ direccion _____ apruevo a Stars Hollow Dog Grooming alojamiento de perros en la dirección 2401 W. Indiana Ave. Por favor tome me firma como consideración en favor del establecimiento.

_____
Firma

_____
Fecha

STARS HOLLOW
DOG GROOMING
2401 W. INDIANA
MIDLAND, TX 79701
432-262-0546

I, Beatrice Estrada at 2405 Elizabeth approve Stars Hollow Dog Grooming to do boarding at the address 2401 W. Indiana Ave. Please take my signature into consideration for approval.

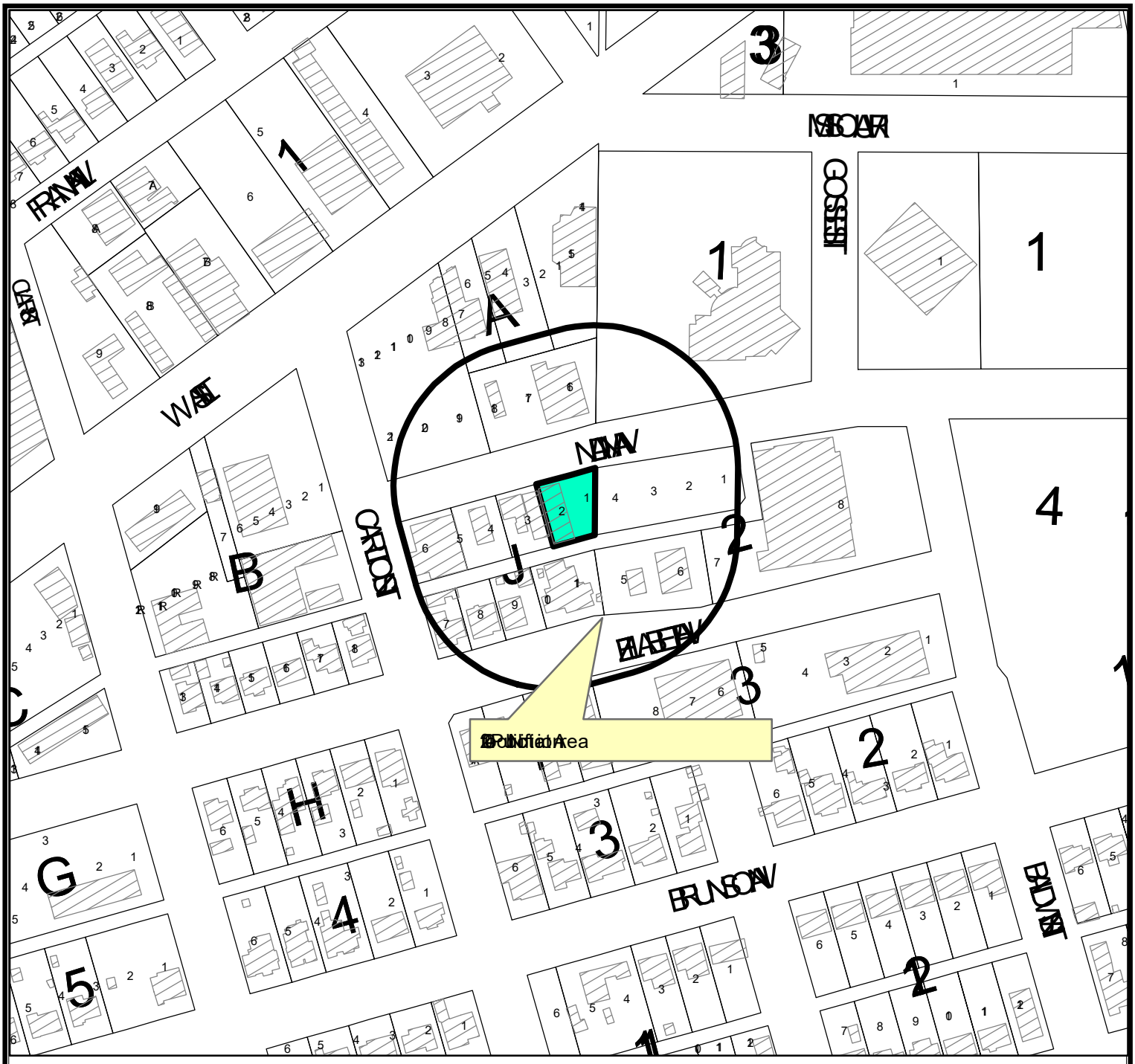
Signature

9-1-22
Date

Yo, _____ direccion _____ apruevo a Stars Hollow Dog Grooming alojamiento de perros en la dirección 2401 W. Indiana Ave. Por favor tome me firma como consideración en favor del establecimiento.

_____
Firma

_____
Fecha



LOCATION MAP

SUDwo-22-0028 **Scale: 1" = 200'**

Consider a request by Elisa Matneson for a Specific Use Designation without Term for a Kennel, on Lots 1 and 2, Block J, Garrett Place, City and County of Midland, Texas.

Generally located on the south side of W. Indiana Avenue, approximately 241-feet east of Carlton Street. (Council District 2)

PACKET 23.19

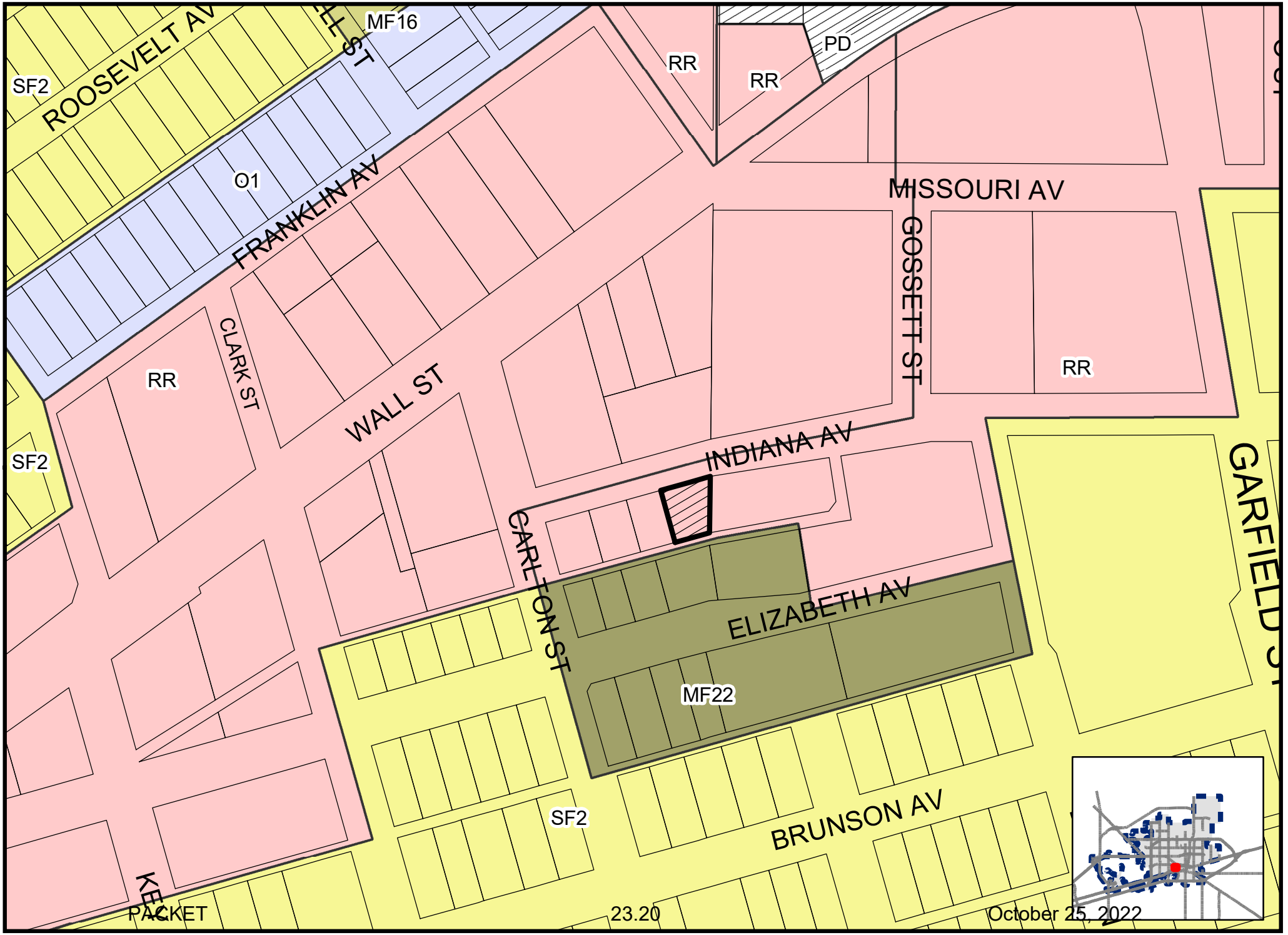
LEGEND

- 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 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.

October 25, 2022



Map By KM, 09/01/2022

SuDwo-22-0028

Scale: 1" = 200'

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.


GREAT FOOD.
GREAT CUSTOMERS.
GREAT MARGARITAS.
MAC'S
LOADING
UNLOADING
MAC'S
CATERING
PICK UP
PARKING ONLY
MAC'S
RESERVED
FOR U.S.
VETERANS






STARS HOLLOW
DOG GROOMING

City Council Meeting

Item Number: 24

Meeting Date: October 11, 2022, October 25, 2022

To: City Council / City Manager

From: James Reber,

Subject: **AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITH TERM FOR A 5,085-SQUARE FOOT PORTION OF LOT 6A, BLOCK 27, WYDEWOOD ESTATES, SECTION 26, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE EAST SIDE OF WEST LOOP 250 NORTH, APPROXIMATELY 800 FEET SOUTH OF WEST WADLEY AVENUE), WHICH IS PRESENTLY ZONED PD, PLANNED DEVELOPMENT DISTRICT FOR A SHOPPING CENTER, ALLOWING SAID PROPERTY TO BE USED FOR THE SALE OF ALL ALCOHOLIC BEVERAGES IN A RESTAURANT FOR ON-PREMISES CONSUMPTION; 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, Lifeng Liang, d/b/a K-Pot Korean BBQ & Hot Pot, is requesting to a Specific Use Designation with term, for the sale of all alcoholic beverages, for on-premises consumption, in a restaurant, located at 3116 N Loop 250 W. Suite 300.

Recommended City Council Action:

Approve

Fiscal Impact:

This proposal does not have a significant financial impact to the City.

Discussion:

Current Zoning:

PD, Planned Development District (Ordinance No. 8249)

Surrounding Zoning and Land Use:

The property to the north, east, and west are zoned PD, Planned Development for a Shopping Center, and is the location of retail. The properties to the south are zoned PD, Planned Development District for Office, and is the location of businesses.

Analysis:

The property is located at 3116 N Loop 250 W. Suite 300 and is currently zoned PD, Planned Development for a Shopping Center (Ordinance No. 8249) with an underline zoning of RR, Regional Retail, which permits the sale of all alcoholic beverages for on-premises consumption, in a restaurant with the approval of a Specific Use Designation with Term.

The restaurant is not in operation currently. The floor plan attached hereto a “Exhibit A” illustrates that the establishment has a total square footage of 4,850 square feet, with an alcohol serviceable area of 2,000 square feet. The site currently has adequate parking, access, and internal circulation.

The proposed days and hours of operation are:

Monday through Thursday from 11:00 a.m. to 9:30 p.m.
Friday and Saturday from 11:00 a.m. to 10:30 p.m.
Sunday from 11:00 a.m. to 9:30 p.m.

The applicant is requesting the following alcohol serviceable hours.

Monday through Thursday from 11:00 a.m. to 9:30 p.m.
Friday and Saturday from 11:00 a.m. to 10:30 p.m.
Sunday from 11:00 a.m. to 9:30 p.m.

Per Midland City Code, Section 5-4-4, Prohibited Places of Business:

The sale of any alcoholic beverage is hereby prohibited by any person, where the place of business of any such dealer is within 300 feet of any church, public-school, public-school ground, athletic stadium used by any public school or public hospital, the measurements to be along the property lines of the street fronts and from front door to front door and in a direct line across intersections where they occur.

There are no schools or churches within 300 feet of the property using the front door to door distance measurement.

This request has been circulated to and reviewed by respective City departments for internal review and their comments, conditions, and requirements are as follows:

Fire: (Approved)

No comments.

Engineering: (Approved)

No objection. [For the Applicant's information]

Oil & Gas: (Approved)

No objections.

Transportation: (Approved)

No objections.

Building Code: (Approved)

The SUD is acceptable. The property must adhere to the maximum occupant load of 136 for the alcohol serviceable area. Occupancy loads must be posted in accordance with section 1004.3 of the 2015 International Fire Code.

Planning:

The request is in compliance with the *Tall City Tomorrow Comprehensive Plan, Chapter 6-Character Plan Goal 4, which is to* "Encourage the development of places where Midland residents can gather and socialize to build connections." (Tall City Tomorrow page 137) K-Pot Korean BBQ & Hot Pot is an establishment that will provide Midland residents with a unique social gathering experience.

This request was recommended for approval at the September 19, 2022, Planning and Zoning Commission Meeting.

Staff recommends approval of this Specific Use Designation with Term for the sale of all alcoholic beverages, for on-premises consumption, in a restaurant, subject to conditions A through G.

Conditions:

A. That the establishment shall not exceed 2,000 contiguous square feet in area as shown in Exhibit "A", which is attached hereto and incorporated herein.

B. That the days and hours of alcoholic beverages sales and consumption shall be limited to:

Monday through Thursday from 11:00 a.m. to 9:30 p.m.
Friday and Saturday from 11:00 a.m. to 10:30 p.m.
Sunday from 11:00 a.m. to 9:30 p.m.

C. That the occupancy of the establishment shall not exceed the maximum occupancy determined by the Building Code and Fire Code.

D. That the establishment shall meet all requirements of the Fire Department and Code Administration.

E. That the sale and on-premises consumption of alcoholic beverages shall conform to applicable state and local laws.

F. That the applicant shall obtain a Certificate of Occupancy prior to the commencement of the sale of alcoholic beverages for on premises consumption to ensure that the conditions of this permit are satisfied.

G. That in accordance with Section 9.07.E.3 of the Zoning Ordinance, the establishment shall be in operation within 120 days from the final adoption date of this ordinance.

Letters of Objection:

As of September 29, 2022, staff has not received any letters of objections.

Attachments:

Application
Floor Plan (Exhibit A)
Site Plan (Exhibit B)
Maps
Ordinance No. 8249

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 WITH TERM FOR A 5,085-SQUARE FOOT PORTION OF LOT 6A, BLOCK 27, WYDEWOOD ESTATES, SECTION 26, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE EAST SIDE OF WEST LOOP 250 NORTH, APPROXIMATELY 800 FEET SOUTH OF WEST WADLEY AVENUE), WHICH IS PRESENTLY ZONED PD, PLANNED DEVELOPMENT DISTRICT FOR A SHOPPING CENTER, ALLOWING SAID PROPERTY TO BE USED FOR THE SALE OF ALL ALCOHOLIC BEVERAGES IN A RESTAURANT FOR ON-PREMISES CONSUMPTION; 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 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 With Term for a 5,085-square foot portion of Lot 6A, Block 27, Wydewood Estates, Section 26, City and County of Midland, Texas (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 With Term for the sale of all alcoholic beverages in a restaurant (the "Establishment") for on-premises consumption, together with the uses permitted in the present PD, Planned Development District for a

Shopping Center.

SECTION TWO. That the Property shall be subject to the following conditions and restrictions:

A. That the serviceable area of the Establishment shall be limited to approximately 2,000 square feet as shown in Exhibit "A", which is attached hereto and incorporated herein for all purposes.

B. That the sale and on-premises consumption of alcoholic beverages shall conform to all applicable state and local laws.

C. That the days and hours of alcoholic beverage sales and consumption shall be limited to the following:

Monday through Thursday from 11:00 a.m. to 9:30 p.m.;
Friday and Saturday from 11:00 a.m. to 10:30 p.m.; and
Sunday from 11:00 a.m. to 9:30 p.m.

D. That the occupancy of the Establishment shall not exceed the maximum occupancy determined by the Building Code and Fire Code.

E. That the Establishment shall meet the requirements of the Fire Department and the Code Administration Division.

F. That the operator of the Establishment shall obtain a Certificate of Occupancy prior to the commencement of the sale of alcoholic beverages for on-premises consumption to ensure that the conditions of this Specific Use Designation With Term are satisfied.

G. That in accordance with Section 11-1-9.07.E.3 of the City Code, the Establishment shall be in operation within 120 days from the final adoption date of this ordinance.

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., 2022; 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., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

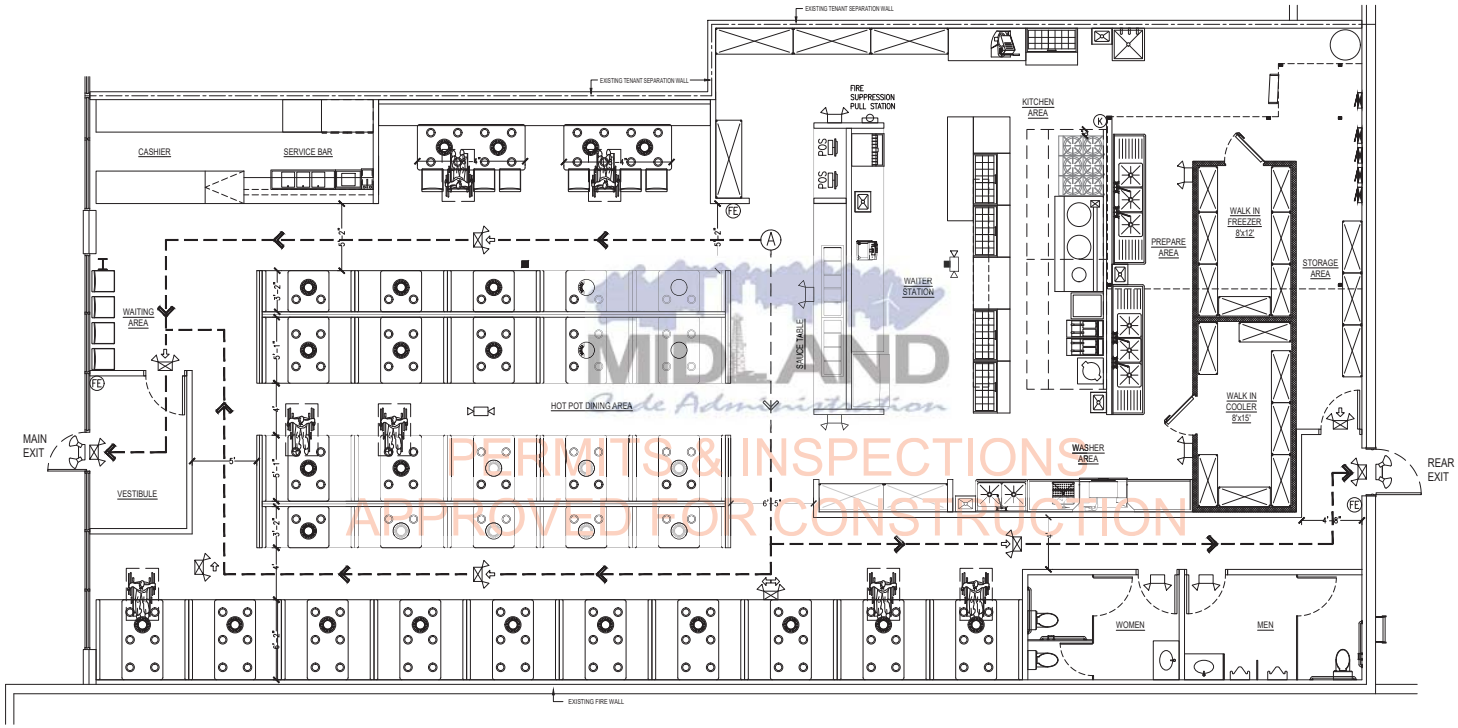
APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

EXHIBIT "A"



MIDLAND
Code Administration
PERMITS & INSPECTIONS
APPROVED FOR CONSTRUCTION

LIFE SAFITY PLAN

SCALE: 1/4"=1'-0"

SYMBOL LEGEND

- TRAVEL PATH TAG
- EXIT/EMERGENCY LIGHT W. BATTERY BACK-UP.
- EMERGENCY LIGHT W. BATTERY BACK-UP.
- REMOTE HEAD BATTERY BACK-UP.
- FIRE SUPPRESSION PULL STATION MOUNTED AT 44" AFF.
- (K) CLASS "K" FIRE EXTINGUISHER (INSTALL MAX. 40" AFF. TO THE TOP OF THE HANDLE)
- (FE) 2A10 "BC" FIRE EXTINGUISHER (INSTALL MAX. 40" AFF. TO THE TOP OF THE HANDLE)

- NUMBER OF EXITS (PER 2018 IBC, SECTION 1006.2.1)
  REQUIRED: 2
  PROVIDED: 2
- EGRESS WIDTH (PER 2018 IBC, SECTION 1005.1)
  EXIT CAPACITY CALCULATIONS (DOORS)
  152 X 0.2 = 30.4" REQUIRED

  MAIN EXIT PROVIDED: 34" > 15.2" (50% OF THE REQUIRED CAPACITY)
  REAR EXIT PROVIDED: 34" > 15.2" (50% OF THE REQUIRED CAPACITY)
  TOTAL EXIT PROVIDED: 68" > 42.8" REQUIRED
- MAXIMUM EXIT ACCESS TRAVEL DISTANCE (PER 2018 IBC, SECTION 1017.2)
  ALLOWED MAX. TRAVEL DISTANCE 250 LF (WITH SPRINKLER SYSTEM)

	EGRESS PATH	MAX. TRAVEL DISTANCE
TRAVEL PATH	A	75' < 250' OKAY
TO MAIN EXIT	67'	
TO REAR EXIT	75'	

FRANK D. MILETO A.I.A.
14 BEAVER BROOK DRIVE, LONG VALLEY, N.J. 07853
Tel:(908) 8796480 Fax:(908) 8796485
Email: fmileto@comcast.net
ARCHITECT PROFESSIONAL PLANNER

LAM & ASSOCIATES CONSULTING, INC.
FOOD SERVICE CONSULTANT
11 EAST BROADWAY, # 810, NEW YORK, NY 10038
TEL: 212-792-9455 FAX: 212-792-9145
EMAIL: REGLAM2@HOTMAIL.COM

KOREAN BBQ & HOT POT
MIDLAND SHOPPING CENTER
3410 A, 3420 AND 3510 MIDLAND, TEXAS 79707

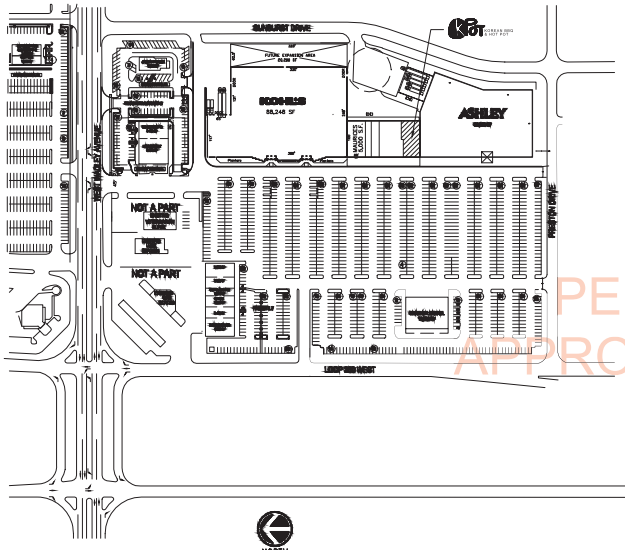
REVISIONS

DATE: 07/15/2022
SCALE: AS NOTE
DRAWN: E.H.
JOB No. B22-042

T-2

KOREAN BBQ & HOT POT

MIDLAND SHOPPING CENTER
3116 N. 250 LOOP WEST, MIDLAND, TEXAS 79707



SITE PLAN SCALE: N.T.S.

PROJECT DATA

1. TOTAL SQUARE FOOTAGE: 4,850 ± SQ. FT.
2. CONSTRUCTION TYPE: II-B
3. USE/OCCUPANCY CLASSIFICATION (302): A-2 ASSEMBLY
4. STORY: 1
5. FIRE SPRINKLER SYSTEMS: YES
   THE BUILDING IS EQUIPPED WITH AUTOMATIC FIRE SUPPRESSION SYSTEM.
   THE SPRINKLER CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR PERMIT AND APPROVAL.
6. BUILDING OCCUPANCY FOR EXISTING (IBC SECTION 1004.5) REQUIREMENTS
   BUILDING OCCUPANCY CALCULATIONS FOR LIFE SAFETY

OCCUPANT LOAD

SPACE DESCRIPTION	SEATING TYPE	AREA		AREA PER OCCUPANT	QUANTITY	CALCULATED OCCUPANT LOAD
HOT POT DINING	BOOTH	3.17	LF	2	20	20
	BOOTH	5.1	LF	2	20	40
	BOOTH	6.17	LF	2	20	60
	FIXED TABLE	8.3	LF	2	4	16
TOTAL						136
WAITING AREA		40	SF	7	N/A	6
KITCHEN & WAITER AREA		1643	SF	200	N/A	8
BAR AREA		172	SF	200	N/A	2
TOTAL						152

7. PLUMBING REQUIREMENTS (N.J.A.C. PLUMBING SUB-CODE, Table 7.21.1):
   TOTAL OCCUPANCY LOAD FOR THIS CALCULATION SHALL BE 152 (76 MEN) (76 WOMEN)

	WATERCLOSETS			LAVATORIES	
	MALE		FEMALE	MALE	FEMALE
REQUIRED	2		2	1	1
PROVIDED	1	URINALS 2	2	1	1

MIDLAND Code Administration
PERMITS & INSPECTIONS
APPROVED FOR CONSTRUCTION

INTERIOR FINISH SCHEDULE

	TOE BASE/ COVING	FLOOR	CEILING	WALL
VESTIBULE	CERAMIC TILE	CERAMIC TILE	OPEN CEILING.	GYPSUM BOARD FIRECODE PAINTED W/2-COATS OF EPOXY PAINT.
HOT POT DINING AREA	CERAMIC TILE	CERAMIC TILE	OPEN CEILING.	GYPSUM BOARD FIRECODE PAINTED W/2-COATS OF EPOXY PAINT.
COCKTAIL BAR	CERAMIC TILE	CERAMIC TILE	2"X6" 16GA. STEEL RECTANGULAR TUBE DECORATION CEILING 10'-0" A.F.F.	GYPSUM BOARD FIRECODE PAINTED W/2-COATS OF EPOXY PAINT.
REAR HALLWAY	CERAMIC TILE	CERAMIC TILE	GYPSUM BOARD CEILING, COMMERCIAL GRADE. FIRECODE PAINTED W/2-COATS OF EPOXY PAINT, SMOOTH SURFACE, WASHABLE.	GYPSUM BOARD FIRECODE PAINTED W/2-COATS OF EPOXY PAINT.
TOILET	CERAMIC TILE	CERAMIC TILE	GYPSUM BOARD CEILING, COMMERCIAL GRADE. FIRECODE PAINTED W/2-COATS OF EPOXY PAINT, SMOOTH SURFACE, WASHABLE.	CERAMIC WALL TILE FINISHED, SMOOTH SURFACE, WASHABLE.
KITCHEN AREA, WAITER STATION, WASHER AREA, PREPARE AREA	QUARRY TILE	QUARRY TILE	2X4 LAY-IN GYPSUM BOARD CEILING, NON-PERFORATED, NON- FISSURED, SMOOTH, WASHABLE, LIGHT-IN COLOR, VINYL FINISH.	STAINLESS STEEL BEHIND HOOD AREA AND FRP PANELING IN OTHER AREA.
WALK-IN COOLER & FREEZER	FLOOR BASE: QUARRY TILE			WALL: PRE-MANUFACTURED FABRICATED

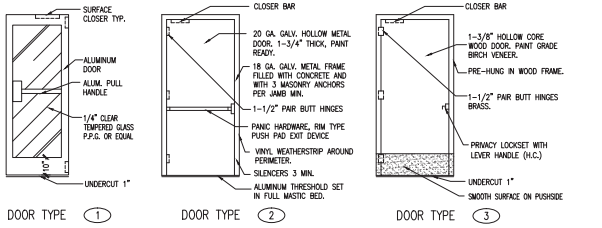
NOTE:
ALL FINISHED SURFACES SHALL BE SMOOTH, EASILY CLEANABLE AND NON ABSORBENT. ALL DAMAGE CREATED OR DISCOVERED IN THE PROCESS OF THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE PROPERLY REFINISHED IN AN APPROVABLE MANNER. ALL SURFACE PENETRATIONS, CRACKS AND CREVICES ARE TO BE SEALED TO ELIMINATE VERMIN HARBORAGE AREAS.

ALL PLUMBING PIPES, ELECTRICAL CONDUITS, GAS LINES, ETC. SHALL BE KEPT WITHIN THE WALL CAVITIES, ABOVE THE CEILING OR UNDER THE FLOOR. IF THE GAS LINE MUST BE RUN OUTSIDE OF THE WALLS, THEN A CLEANLY BE BRACKET MUST BE USED THAT WILL BRACE. THE PIPE AT LEAST 1" OFF OF THE WALL AND AT LEAST AT 12" OFF OF THE FLOOR. UTILITY LINES SHOULD BE STUBBED OUT OF THE WALLS, FLOORS OR CEILINGS AT EACH PIECE OF EQUIPMENT SERVED.

DOOR SCHEDULE

	MARK	TYPE	SIZE		MATERIAL	FRAME	FINISH	RATING	REMARKS
①	MAIN EXIT	①	3'-0" x 7'-0" x 1 3/4"	EXISTING	ALUMINUM & TEMPERED GLASS	ALUM	CLEAR	—	PUSH BAR EXIT
②	VESTIBULE	①	3'-0" x 7'-0" x 1 3/4"	NEW	ALUMINUM & TEMPERED GLASS	ALUM	CLEAR		PUSH BAR EXIT
③	REAR EXIT	②	3'-0" x 7'-0" x 1 3/4"	EXISTING	HOLLOW METAL	METAL	PAINT	—	PUSH BAR EXIT DEVICE (PANIC HARDWARE)
④	KITCHEN EXIT	③	3'-0" x 7'-0" x 1 3/4"	NEW	HOLLOW CORE WOOD	WOOD	PAINT	—	
⑤	WALK-IN UNITS		3'-0" x 6'-6" x 1 3/4"	NEW	ALUMINUM	—	CLEAR	—	
⑥	TOILET	③	3'-0" x 6'-8" x 1 3/4"	NEW	HOLLOW CORE WOOD	WOOD	PAINT	—	ADA COMPLIANT "MEN" & "WOMEN" SIGN MOUNTING HEIGHT @ 48" AFF

DOOR NOTES:
1. LATCH SIDE CLEARANCES AT ALL DOORWAYS SHALL BE IN ACCORDANCE WITH ICC/ANSI.
2. ALL EXITS TO BE LABELED.
3. INTERIOR DOORS TO BE LABELED AS TO INTENDED USE.
4. ALL EXIT DOORS SHALL BE PROVIDED WITH PANIC HARDWARE.
5. THE OPERATING DEVICE ON ALL DOORS SHALL BE CAPABLE OF OPERATION WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE. THE INTERIOR HINGED DOOR SHALL BE 5.0 POUNDS (22.2 N) MAXIMUM PER ANSI A117.1–2009, SECTION 404.2.8.
6. ALL DOORS TO BE LEVER TYPE WITH DOOR CLOSER AND 1/2" THRESHOLD.
7. LANDINGS SHALL BE PROVIDED AT EVERY REQUIRED EXIT IF ABOVE OR BELOW GRADE AND THEY SHALL BE A MINIMUM OF 36 INCHES IN WIDTH AND 44 INCHES LONG IN THE DIRECTION OF TRAVEL.



DOOR TYPE ① DOOR TYPE ② DOOR TYPE ③

CODE CLASSIFICATION

BUILDING CODES

2018 IBC – INTERNATIONAL BUILDING CODE
2015 IFC – INTERNATIONAL FIRE CODE
2018 IMC – INTERNATIONAL MECHANICAL CODE
2018 IPC – INTERNATIONAL PLUMBING CODE
2018 IFGC – INTERNATIONAL FUEL GAS CODE
2015 IECC – INTERNATIONAL ENERGY CONSERVATION CODE
2017 NEC – NATIONAL ELECTRICAL CODE

GENERAL NOTE

1. THE CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO ANY WORK AND SHALL BE RESPONSIBLE FOR ALL WORK AND MATERIALS INCLUDING THAT FURNISHED BY SUBCONTRACTORS.
2. DIMENSIONS TAKE PRECEDENCE OVER DRAWINGS; DO NOT SCALE DRAWINGS TO DETERMINE ANY LOCATION. THE OWNER SHALL BE NOTIFIED IF ANY DISCREPANCY OCCURS PRIOR TO CONTINUING WITH WORK.
3. ALL CONSTRUCTION SHALL COMPLY WITH THE APPLICABLE BUILDING CODES AND LOCAL RESTRICTIONS.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING MECHANICAL AND ELECTRICAL SERVICES AND DISTRIBUTION SYSTEMS WHETHER SHOWN OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE OR REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE PERFORMANCE OF THE WORK.
5. ALL WORK SHALL BE ACCOMPLISHED WITH QUALITY WORKMANSHIP OF THE HIGHEST INDUSTRY STANDARDS. ALL MATERIALS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS. MATERIALS AND METHODS SHALL CONFORM TO THE APPROPRIATE NATIONAL TRADE BOOKS; I.E. TILE COUNCIL OF AMERICA, HANDBOOK FOR CERAMIC TILE INSTALLATION; ARCHITECTURAL WOODWORK INSTITUTE, "QUALITY STANDARDS." ETC.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SAFETY, AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE SAFETY OF WORKERS AND OCCUPANTS AT ALL TIMES.
7. ALL ELECTRICAL, MECHANICAL, AND PLUMBING WORK SHALL CONFORM TO STATE AND LOCAL REQUIREMENTS.
8. REMODEL WORK SHALL NOT OBSTRUCT, OR CAUSE TO BE INOPERATIVE, EXISTING FIRE PROTECTION SYSTEMS. MODIFICATION TO FIRE PROTECTION SYSTEMS SHALL BE PERFORMED BY A FIRE PROTECTION CONTRACTOR, WHO SHALL OBTAIN A PERMIT FROM FIRE LOSS MANAGEMENT PRIOR TO WORK.
9. DECORATIVE MATERIALS, DRAPES, HANGINGS, ETC., SHALL BE NON FLAMMABLE OR FLAME-PROOF PER STATE FIRE MARSHALL REQUIREMENTS.
10. MINIMUM FLAME SPREAD CLASSIFICATION OF INTERIOR FINISH SHALL CONFORM TO THE BUILDING CODE AND LOCAL GOVERNING BUILDING CODES/ORDINANCES.

HEALTH DEPARTMENT NOTES

1. FURNISH 140° WATER TO ALL FIXTURES RECEIVING HOT WATER, EXCEPT HAND WASHING LAV. MAY SUPPLIED WITH AT LEAST 110° WATER THROUGH A MIXING VALVE OR COMBINATION FAUCET.
2. PROVIDE SOAP AND SANITARY TOWELS AT HAND WASHING LAV. IN FOOD PREPARATION AND UTENSIL WASHING AREAS, SOAP AND HAND DRYING DEVICE WILL BE USE IN THE TOILET ROOM.
3. COUNTER-MOUNTED EQUIPMENT ON 4 INCH LEGS, SEALED TO COUNTER, OR PORTABLE.
4. FLOOR-MOUNTED EQUIPMENT ON 6 INCH LEGS, ON CASTERS, OR SEALED TO THE FLOOR.
5. EQUIPMENT NOT CASTERS OR NOT PORTABLE SHALL BE SEALED TO THE WALL AND/OR JOINING EQUIPMENT, OR SPACED TO FACILITATE CLEANING.

DEFERRED SUBMITTAL

- SPRINKLER:
  SPRINKLER CONTRACTOR SHALL SUBMIT SHOP DRAWING FOR APPROVAL AND PERMIT.
- HOOD FIRE SUPPRESSION:
  HOOD FIRE SUPPRESSION CONTRACTOR SHALL SUBMIT FIRE ALARM SHOP DRAWING FOR APPROVAL AND PERMIT.

FINISH NOTES

CLASS A: FLAME SPREAD 0-25, SMOKE DEVELOPE 0-450
CLASS B: FLAME SPREAD 26-75, SMOKE DEVELOPE 0-450
CLASS C: FLAME SPREAD 76-200, SMOKE DEVELOPE 0-450

1. INTERIOR FINISH SHALL COMPLY WITH OBC 801.2, 801.3, 801.4 AND 803.
2. INTERIOR WALL AND CEILING FINISH:
   - VERTICAL EXIT AND EXIT PASSAGEWAYS: CLASS B
   - EXIT ACCESS CORRIDORS AND OTHER EXITWAYS: CLASS B
   - ROOMS AND ENCLOSED SPACES: CLASS C
3. INTERIOR FLOOR FINISH IN VERTICAL EXITS, EXIT PASSAGEWAYS AND EXIT ACCESS CORRIDORS SHALL NOT LESS THAN CLASS II.
4. ALL DECORATIVE MATERIALS SUSPENDED FROM WALLS OR CEILINGS SHALL MEET OBC 801.4 and 803

SHEET INDEX

T-1	TITLE SHEET, INTERIOR FINISH SCHEDULE & DOOR SCHEDULE
T-2	LIFE SAFETY PLAN
A-1	FLOOR PLAN, EQUIPMENT SCHEDULE, SYMBOL LEGEND, WALL DETAIL
A-2	BARRIER FREE DETAIL & PENETRATION DETAIL
E-1	ELECTRICAL PLAN, ELECTRICAL RISER DIAGRAM
E-2	LIGHTING PLAN, LIGHTING SCHEDULE & ROOF ELECTRICAL PLAN
E-3	ELECTRICAL PANEL SCHEDULE
M-1	HVAC PLAN
M-2	VENTILATION DETAIL, ROOF PLAN & AIR BALANCE CALCULATION
M-3	ECON-AIR HOOD DETAILS
M-4	ECON-AIR HOOD DETAILS
M-5	ECON-AIR HOOD DETAILS
P-1	PLUMBING NOTES & DETAILS
P-2	PLUMBING FLOOR PLAN
P-3	PLUMBING & WATER RISER DIAGRAM
P-4	GAS RISER DIAGRAM

FRANK D. MILETO A.I.A.
14 BEAVER BROOK DRIVE, LONG VALLEY, N.J. 07853
Tel (908) 876-9400 Fax (908) 876-9405
Email: fmileo@comcast.net
ARCHITECT-PROFESSIONAL PLANNER

FOOD SERVICE CONSULTANT
LAW & ASSOCIATES CONSULTING, INC.
11 EAST BROADWAY # 10, NEW YORK, NY 10038
TEL: 212.750.3454 FAX: 212.750.3154
EMAIL: MSA_ANDO@YAHOO.COM

KOREAN BBQ & HOT POT
MIDLAND SHOPPING CENTER
3116 N.250 LOOP WEST, MIDLAND, TEXAS 79707

REVISIONS

DATE: 07/15/2022
SCALE: AS NOTE
DRAWN: E.H.
JOB No. B22-042

T-1

MIDLAND
Planning Division

Specific Use Designation with Term for the Sale of Alcoholic Beverages for On-Premises Consumption

Project Number: SUD-22-0140

Case Number: _____

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: Lifeng Liang		Phone (432) 312-7210 Email lsung71@aol.com	
Address: 1110 Mckenzie St.	City: Midland	State: TX	Zip: 79701
Property Owner Printed Name: RAAS TEXAS Venture, LLC		Phone (970) 465 8400 Email jason@realspacetexas.com	
Address: 3900 East Side Ave.	City: Dallas	State: TX	Zip: 75226
Representative *(if different from Applicant or Property Owner)* Firm: _____ Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Street Address: 3116 N Loop 250 W. Suite 300 Midland TX 79707

Business Name: K-pot korean BBQ & Hot pot

Legal Description
Lot: 6A Block: 27 Subdivision: Wydewood Estates, Section 26

Current Zoning: Regional Retail Dist.

Reason for Request: the sale of Alcoholic Beverage for On-Premises Consumption

Type of Business *(restaurant, bar, lounge, nightclub, etc.)*: Restaurant

Proposed/Current Days and Hours of Operation: Mon-Thur: 11:00AM-9:30pm Fri-Sat: 11:00AM-10:30pm Sun: 11:00AM-9:30PM

Proposed Days and Hours of Alcohol Service: Mon-Thur: 11:00AM-9:30pm Fri-Sat: 11:00AM-10:30pm Sun: 11:00AM-9:30pm

Total Square Footage of Business: 4850 square feet

Square Footage of Alcohol Serviceable Area: 2000 square feet

Restroom Fixtures: Men	**Toilets/Urinals:** 1 1 2	**Bathroom Sinks:** 1	
Women	**Toilets:** 2	**Bathroom Sinks:** 1	

Submittal and Fees

Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Floor Plan showing:
  - Seating
  - Exits
  - Restrooms
  - Kitchen (if applicable)
  - Total Square Footage
  - Serviceable Square Footage
- Dimensioned Site Plan showing: *Parking *Business Footprint
- Digital Copies of Floor Plan & Site Plan (PDF/JPEG)

Signatures

Applicant (signature): Lifeng Liang	Date: 8/23/2022
Applicant (printed): Lifeng Liang	
Property Owner (signature): asset manager	Date: 8-24-22
Property Owner (printed): Jason Morahan	

The Specific Use Designation with Term for the sale of all alcoholic beverages 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 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 application on behalf of property owner, agent must complete the affidavit below.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared Jason Morahan who, being by me duly sworn, upon oath says: That (s)he is authorized by RAAS Texas Ventures 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.

Subscribed and sworn to before me, this 24th day of August, 2022, to certify which witness my hand and seal of office.

BEATRICE ALVAREZ
Notary ID #133161111
My Commission Expires
June 16, 2025

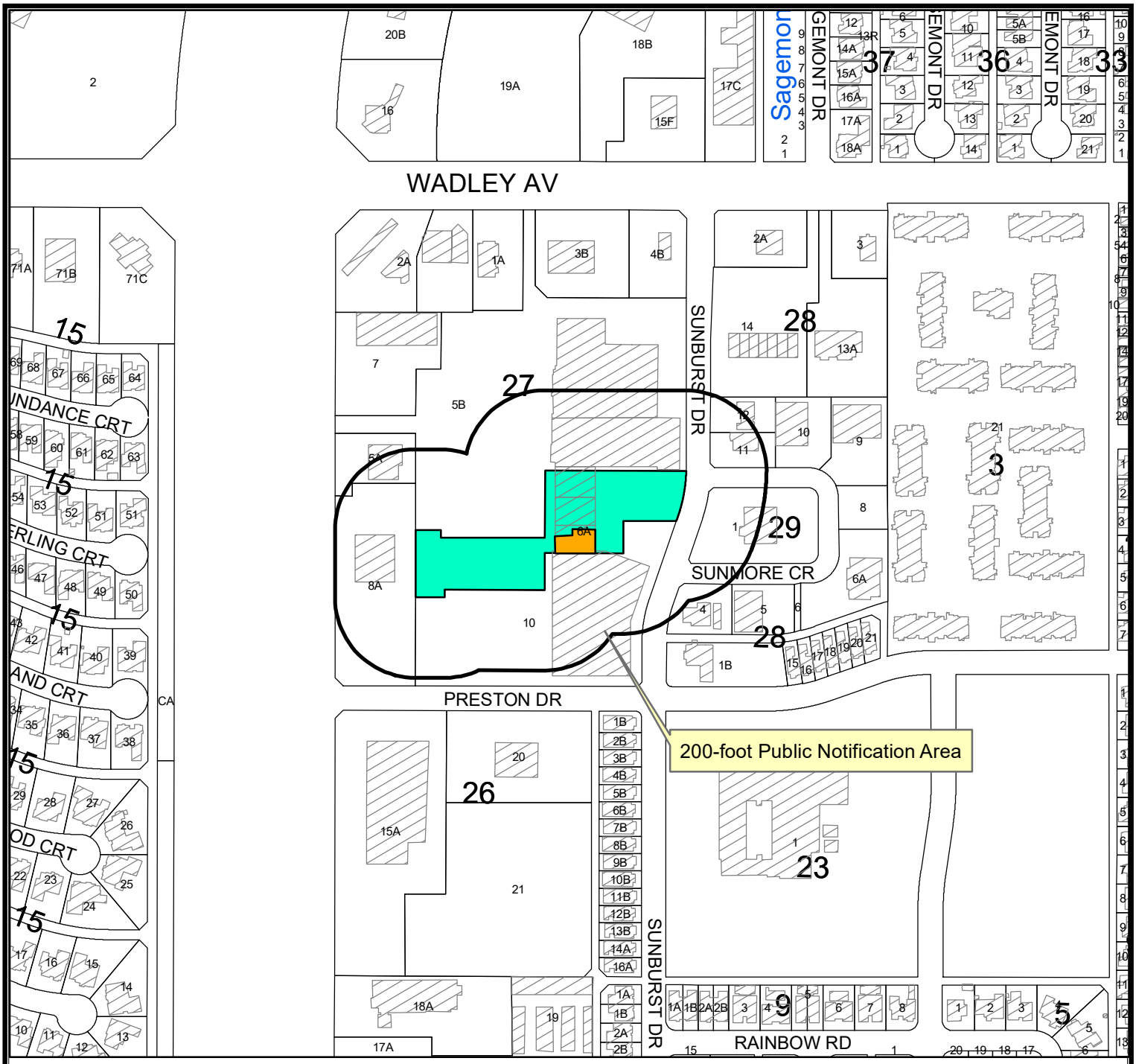
Beatrice Alvarez
Notary Public

FOR OFFICE USE ONLY

☒ Property Owner Authorization	☒ Dimensioned Floor Plan
☒ Application Fee	☒ Site Plan
Check # Cash	☒ Plans in Digital Format (PDF/JPEG)
Received By: KM	Date: 8/26/22

AUG 26 2022

Application will not be considered for scheduling until reviewed by a planner.



LOCATION MAP

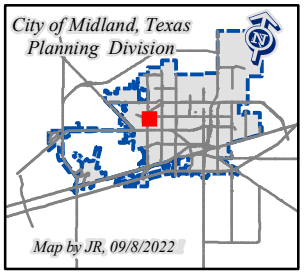
SUD-22-0140 **Scale: 1" = 450'**

Request by K-Pot Korean BBQ & Hot Pot for a Specific Use Designation with Term for on-premises consumption, on 5,085 square foot portion of Lot 6A, Block 27, Wydewood Estates, Section 26, City and County of Midland, Texas.

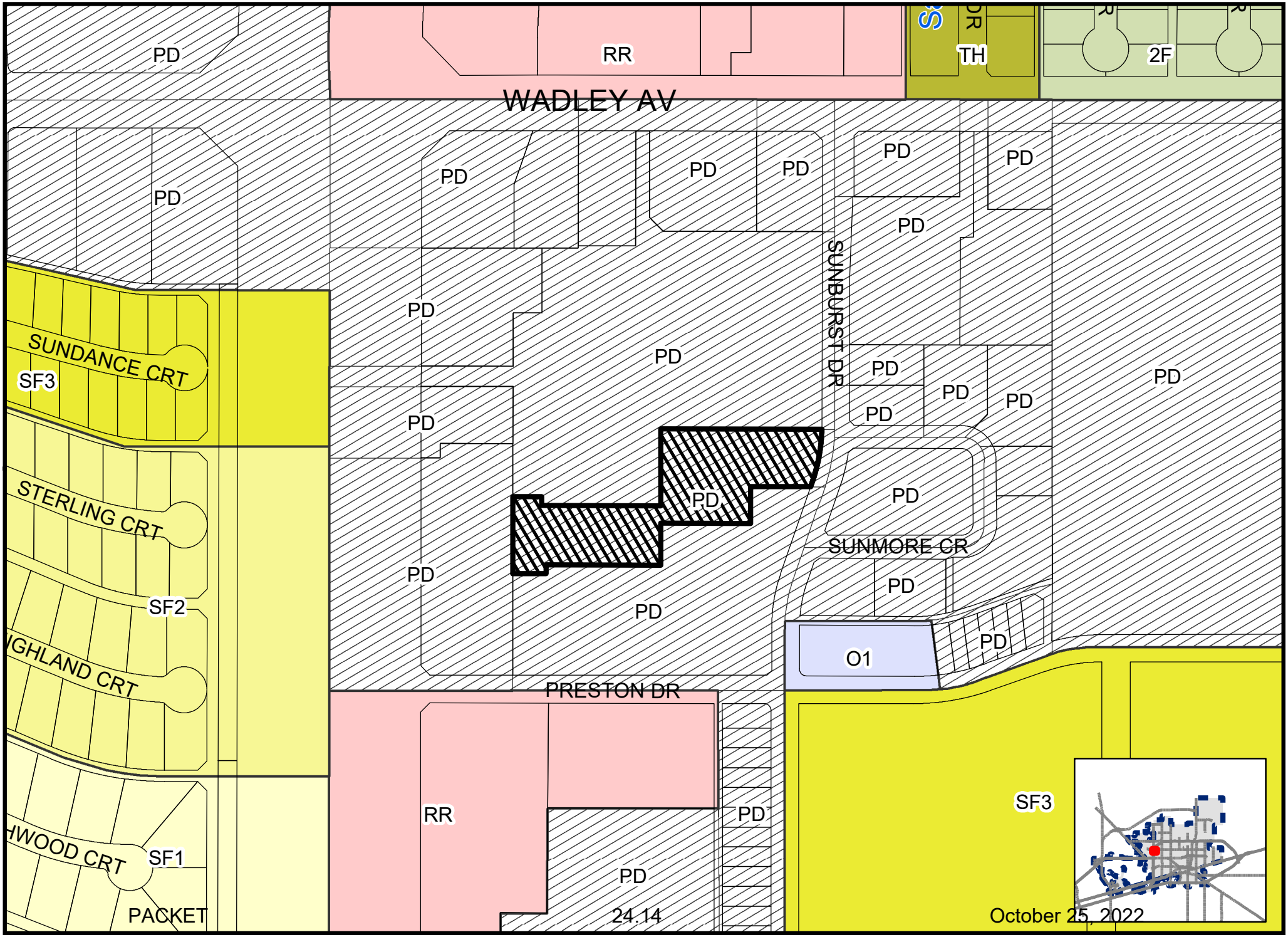
Generally located on the east side of W. Loop 250 North, approximately 800-feet south of W. Wadley Avenue. (Council District 4)

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 JR, 9/8/2022

SUD-22-0140

Scale: 1" = 200'

ZONING MAP

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NAILS
SPA


3116 Suite 500





City Council Meeting

Item Number: 25

Meeting Date: October 11, 2022, October 25, 2022

To: City Council / City Manager

From: Christy Weakland, Director

Subject: AN ORDINANCE ADOPTING A FEE SCHEDULE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING AN APPEAL PROCESS; ESTABLISHING AN EFFECTIVE DATE OF NOVEMBER 1, 2022; AND ORDERING PUBLICATION (DISTRICT: NONE) (FINANCE)

Purpose:

Revise an Ordinance establishing regulatory and user fees collected by the City of Midland in order to adequately cover the costs and expenses incurred by the City in connection with providing the services associated with said fees.

Recommended City Council Action:

Approve

Fiscal Impact:

Regulatory and user fees generate revenue designed to cover the cost of the service being provided by the City of Midland.

Discussion:

Exhibit P will be added to cover Right of Way License fees.

Morris Williams Jr.

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE ADOPTING A FEE SCHEDULE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING AN APPEAL PROCESS; ESTABLISHING AN EFFECTIVE DATE OF NOVEMBER 1, 2022; AND ORDERING PUBLICATION

WHEREAS, the City Council finds it to be in the public interest to establish fees collected by the City of Midland in order to adequately cover the costs and expenses incurred by the City in connection with providing the services associated with said fees; and

WHEREAS, the City Manager's designees have prepared Exhibits "A" through "P", which are attached hereto and incorporated herein for all purposes, identifying said fees (collectively, the "Fee Schedule"); and

WHEREAS, the City Council of the City of Midland, Texas, finds it to be in the public interest to adopt the Fee Schedule and to establish the fees identified therein as the fees to be collected by the City of Midland, said fees being reasonably related to the costs and expenses incurred by the City in connection with providing the services associated with said fees;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS;

SECTION ONE. That the facts and recitations contained in the preamble of this ordinance are hereby found and declared to be true and correct and are adopted as part of this ordinance for all purposes.

SECTION TWO. That the Fee Schedule is hereby approved and adopted. The fees identified in the Fee Schedule are hereby established as the fees to be collected by the City of Midland except for the following types of fees: a fee charged to a requestor who submits a request for information under the Texas Public Information Act; a fee assessed by the Municipal Court that is not identified in the Fee Schedule; a fee established by a contract, to the extent that the fee established by the contract conflicts with or is not identified in the Fee Schedule; a drainage charge; an impact fee; a fee prescribed by a state law, rule, or

regulation; or a fee for which a state law, rule, or regulation, or the City Charter requires a procedure to be followed to establish the fee other than the procedure that was followed to adopt the Fee Schedule.

To the extent that a fee identified in the Fee Schedule conflicts with a fee that was previously established by ordinance (including an ordinance that has been codified in the City Code), resolution, or other City of Midland instrument, this ordinance shall supersede such previous ordinance, resolution, or other instrument, and the fee identified in the Fee Schedule shall be the applicable fee.

To the extent that a fee identified in the Fee Schedule conflicts with a fee prescribed by a state law, rule, or regulation, the fee prescribed by the state law, rule, or regulation shall be the applicable fee.

To the extent that a fee identified in the Fee Schedule is a fee for which a state law, rule, or regulation, or the City Charter requires a procedure to be followed to establish the fee other than the procedure that was followed to adopt the Fee Schedule, such fee that was previously established by following the applicable procedure shall be the applicable fee.

SECTION THREE. Any person wishing to appeal the payment of a fee identified in the Fee Schedule may do so in accordance with the law, rule, regulation, or ordinance that established the procedure for appealing such fee. To the extent no such appeal procedure has been established for a fee identified in the Fee Schedule that is not a fee assessed by the Municipal Court, the following appeal procedure shall apply:

A. Any person may appeal in writing to the City Manager, or the City Manager's designee, prior to paying the fee or after paying the fee. Any person may appeal in writing to the City Manager, or the City Manager's designee, if the person believes that he or she cannot afford the fee. The person may seek an exemption from all or part of the fee. The City Manager, or the City Manager's designee, shall make certain that the fee is not paid under duress.

If a person wishes to appeal after payment of the fee, the person shall appeal in writing to the City Manager, or the City Manager's designee, within ten (10) calendar days of paying the fee.

B. The City shall not file criminal charges against any person related to non-payment of the fee if the fee is not paid. The City shall not file criminal charges against a person in an attempt to collect the fee.

C. The City Manager, or the City Manager's designee, shall provide a full and meaningful review process. The City Manager, or the City Manager's designee, shall provide a fair opportunity for a person to challenge the accuracy and legal validity of his or her fee obligation. The City Manager, or the City Manager's designee, shall also provide a clear and certain remedy for any erroneous or unlawful fee collection to ensure that the opportunity to contest the fee is a meaningful one. Options that the City Manager, or the City Manager's designee, shall consider in providing a clear and certain remedy are a refund of any excess fee paid, as well as other factors, such as ensuring that a person may continue the operation of his or her business.

D. The City Manager, or the City Manager's designee, shall make his or her decision within ten (10) days of receiving the written notice of appeal. The City Manager, or the City Manager's designee, shall ensure that a person has all rights under any applicable law. A person shall incur no financial hardship by exercising his or her right to appeal.

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. That this ordinance shall become effective on November 1, 2022.

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., 2022; 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., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Robert Patrick, City Manager

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

Exhibit A

City Secretary

	Fee
Business Regulations	
Junk and secondhand goods license	$25.00
Renewal of junk and secondhand good	$10.00
Alcoholic Beverage License Fee	1/2 of State Fee
Taxicab annual operating fee (each)	$200.00
Limo or Motorbus operating fee (each)	$100.00
Passports	
Execution Fee (DS-11)	$35.00
Renewal Mailing Fee (DS-82)	$10.00
Passport Photograph	$18.00
Expedited Shipping Fee (DS-11)	$26.40
Expedited Shipping Fee (DS-82)	$32.95
Notarization Fee	$10.00
Copies	$0.25

Exhibit B

Parks

	Fee
TEMP FENCING	
Deposit	$200.00
Rental Fee (per panel)	$20/day
SHOWMOBILE	
Deposit	$1,000.00
Rental Fee (minimum of 4 hours)	$62.50/hour
Extensions	$100.00
Show Lights	$200.00
PORTABLE BLEACHERS	
Deposit	$100.00
Rental Fee (per day)	$100.00
PORTABLE STAGE	
Deposit	$100.00
Rental Fee	$100.00
TRASH CANS	
Deposit	$100.00
Rental Fee (minimum of 10 cans)	$5.00/can/day
PARK PAVILION RENTAL	
Deposit	$100.00
Rental Fee 9am-10pm	$60.00
Rental Fee 9am-3pm	$30.00
Rental Fee 4pm-10pm	$40.00
BEAL RANCH HOUSE	
Deposit no Alcohol	$300.00
Deposit w/Alcohol	$500.00
Rental Fee Per Hour	$50.00
GAZEBO RENTALS - WADLEY AND BEAL	
Deposit	$100.00
Rental Fee 9 am- 3 pm	$50.00
Rental Fee 4 pm-10 pm	$50.00
Rental Fee 9 am-10 pm	$100.00
BASEBALL/SOFTBALL FIELD RENTALS	
Artifical Turf Fields Rental Fee	$50.00/hour
Natural Turf Field Rental Fee	$25.00/hour
Lights	$25.00/hour
Tournament Fee	$25.00/team
FOOTBALL/SOCCER FIELD RENTALS	
Artifical Turf Fields Rental Fee	$50.00/hour
Natural Turf Field Rental Fee	$25.00/hour
Lights	$25.00/hour
Tournament Fee	$30/game
CONCESSION RENTALS	
Concession Stand Deposit	$100.00
Concession Stand Rental	$25.00/hour

ULMER SAND VOLLEYBALL COURT	
Deposit	$25.00
Rental Fee	$25.00/day
WHITEHOUSE RENTAL	
Deposit	$200.00
Rental Fee 10 am - 4 pm	$200.00
Rental Fee 6 pm - 12 am	$200.00
Rental Fee All Day	$400.00

Exhibit C

Recreation

		Fee
CITY POOL RATES		
Entry Fee		$3.00
Children under 2		Free
10 Punch Card		$15.00
25 Punch Card		$35.00
75 Punch Card		$75.00
Personal Cooler Admission		$10.00
Soda		$3.00
Water		$2.00
Snacks		$2.00
Swim lesson (1 week)		$20.00
Life Jacket Rental		$1.00
PRIVATE RENTALS		
DEPOSIT		$150.00
RENTAL FEE (2 hours)		$850.00
POOL PAVILION RENTALS		
(Doug Russell Only)		
DEPOSIT		$100.00
RENTAL FEE		$100/session
MARTIN LUTHER KING RECREATION CENTER	per hour	
Activity Room		
During Operation		$25.00
After Hours		$35.00
Deposit		$100.00
Activity Rm/with Gameroom	per hour	
During Operation		$50.00
After Hours		$70.00
Deposit		$300.00
Auditorium	per hour	
During Operation		$50.00
After Hours		$75.00
Deposit No Alcohol		$500.00
Deposit Alcohol		$750.00
Gymnasium	per hour	
During Operation		$40.00
After Hours		$60.00
Deposit		$200.00
MLK Volleyball Net Setup Fee		$15.00
Training Room	per hour	

Exhibit C

Recreation

	Fee
Sporting Events ONLY	
During Operation	$50.00
After Hours	$75.00
Deposit	$1,000.00
Daily Entrance Fee	$1.00
Monthly Membership	$15.00
MOVIE SCREEN	
Deposit	$1,000.00
Fee (Maximum 4 hours)	$500.00
BUBBLE SOCCER AT MLK Gym Only	
Deposit	$300.00
During Hrs	$100/hour
After Hours	$125/hour
Bubble Soccer at MLK Gym/Activity Rm	
Deposit	$300.00
During Hrs	$125/hour
After Hours	$135/hour
BUBBLE SOCCER AT MLK Gym/Act Rm/Game Rm	
Deposit	$300.00
During Hrs	Not Avaliable
After Hours	$170/hour
BUBBLE SOCCER NOT @MLK	
Deposit	$500.00
Fee (minimum of 2 hours)	$200/hour

Exhibit D

Health and Senior Services

	Fee
Environmental Section	
Mobile Food Vendor	
Mobile Food Vendor	$175.00
Mobile Food (Seasonal)	$105.00
Temporary Permit	$70.00
Food Services Establishments	
1 thru 5 employees	$150.00
6 thru 10 employees	$200.00
11 or more employees	$250.00
Deli/Meat Market/Bakery	$75.00
Farmers Market	$50.00
Retail Food Store	
1 thru 5 employees	$150.00
6 thru 10 employees	$200.00
11 or more employees	$250.00
Temporary Permit	$70.00
Child Care Programs	
Day Care	$100.00
Foster Care	$50.00
Child Care Program for after School	$50.00
Swimming Pool, Spa, or Water Feature Permit	
Swimming Pool or Spa Permit	$100.00
Water Feature Permit	$100.00
Non-Profit Yearly	$30.00
Non-Profit Temporary	$30.00
Re-inspection (When Establishment is shut down)	$75.00
Septic System Inspections	
Septic System Residential	$150.00
Septic System Commercial	$210.00
Septic re-inspection (When fails initial inspection)	$50.00
Late Fee (When not paid by specified date)	25% of Permit Fee

Clinical Section	
Health Department Services	
DTaP	$45.00
Kinrix (DTaP & Polio)	$100.00
Pentacel (DTaP & Polio & Flu Type B)	$140.00
IPV (Polio)	$50.00
Pedi HEP A	$40.00
Pedi HEP B	$35.00

Exhibit D

Health and Senior Services

	Fee
HIB (Flu Type B)	$40.00
Vaxelis (DTaP, HIB, Polio & HEB B)	$150.00
Rototeq/Rotarix (Rotavirus)	$140.00
Proquad (MMR & Varicella)	$255.00
PCV 13 (Pneumococcal Conjugate)	$260.00
PPSV23 (Pneumococcal Conjugate)	$145.00
MMR	$90.00
Varicella	$155.00
TD (Tetanus & Diptheria)	$50.00
TDAP (Tetanus Diptheria and Pertussis)	$60.00
HPV 9	$255.00
MCV4 (Meningitis)	$150.00
Menqaudfi (Meningitis)	$200.00
Trumenba (Meningococcal Group B)	$155.00
Bexsero (Meningococcal Group B)	$185.00
Adult Hep A	$70.00
Adult Hep B	$65.00
Heplisav-Adult Hep B	$125.00
Shingrix (Shingles)	$175.00
Infant flu	$25.00
Flu	$30.00
High Dose Flu	$65.00
Flublok	$60.00
Yellow Fever	$130.00
STD Testing	$15.00
HIV Testing	$15.00
STD Clinic Treatment	$15.00
STD Clinic Retreatment	$15.00
Pregnancy Test-Urine	$10.00
Pregnancy Test - Blood	$15.00
TB Test	$15.00
TB Clinic	$15.00
Administration Fees	
Insured	$25.00
TVFC 1=$10, 2=$20, >or= 3 = $30	
Refugee	$0.00
Medicaid/CHIP	$14.85
Medicare Flu or Pneumonia	$25.00

Exhibit E

Animal Services

	Fee
Adoption Fees	
Adoption Fees (includes micro chipping)	$50 for Cats; $75 for Dogs
Ducks, Rabbits, Other	$5.00
Rescue Fee (rabies, microchip, license)	$32.00
Humane Coalition Transfer Fee (with micro chipping) Range $17 to $25	$25.00
Animal Service Discount	$6.73
Vaccines and Medical Fees	
Rabies ($10 special event and $20 reg)	$10.00 or $20.00
Rabies and Booster ($15 special event)	$15.00
Impoundment Fees	
Impoundment - 1st Offense (altered)	$25.00
Impoundment - 1st Offense (unaltered)	$50.00
Impoundment - 2nd Offense (altered)	$50.00
Impoundment - 2nd Offense (unaltered)	$75.00
Impoundment - 3rd+ Offense (altered)	$60.00
Impoundment - 3rd+ Offense (unaltered)	$100.00
Livestock Impoundment	$100.00
Boarding & Quarantine	
Boarding (per day)	$8.00
Quarantine Fees (minimum of 10 days)	$10.00/day
Home Quarantine Fees (minimum of 10 days)	$5.00/day
Pick-up Fees	
Pickup Fee - Owner release	$15.00
Pickup Fee -Owner release (additional animals)	$5.00/each
Pickup Fee - Deceased	$15.00
Pickup Fee - Dead Small Livestock	$75.00
Pickup Fee- Deceased Livestock	$150.00
Transfer to Vet Fee	$15.00
Miscellaneous Fees	
Drop off Fee - Owner release	$10.00
Rabies Specimen Shipping	$75.00
Wild Animal Permit	$25.00
Dangerous Dog Yearly Registration	$50.00
Off Leash Training Permit	$5.00
Microchipping	
Microchips	$8.00
Pet Services	
Flea/Tick Preventative	$15.00
Euthanasia	
Euthanasia	$15.00
Pet Licenses	
Pet License (yearly)	$7.00
Pet License (replacement)	$1.00
Pigeons	
Loft Permit for Pigeons	$3.00
Renewal of Loft Permit	$2.00

Exhibit F

Golf Course

	Fee
Green Fee - Weekday	$21.25
Green Fee - Weekdays after 4:00	$12.25
Green Fee - Weekend	$26.25
Green Fee - Weekend after 4:00	$16.00
Weekend AM - 9 Holes	$15.00
Green Fee - Senior	$16.25
Green Fee - Junior	$9.50
Cart Fee (90%)	$13.75

Exhibit G

Planning

	Fee
Preliminary Plat Application	
Sketch Plan Application (1st review)	$225.00
Sketch Plan Application (2nd review)	$100.00
Preliminary Plat Application (up to 50 acres)	$350.00
Preliminary Plat Application (over 50 acres)	$500.00
Final Plat Application	
Standard Plat or Residential Up to 50 acres	$350.00
Standard Plat or Residential over 50 acres Max	$500.00
Administrative Plat	$250.00
Digital File Conversion Fee	$50.00
Recording Fees- Plats up to 18"x24"	$61.00
Recording Fees- Plats over 18"x24"	$81.00
Related Documents	$26.00
Replat	
Replat with Public Hearing	$250.00
Replat without Public Hearing	$250.00
Annexation/Zone Change Application	
Standard Zone Change	$500.00
Planned District Zone Change	$650.00
Multiple PD Proposal Basic	$550.00
Multiple PD Proposal Per Additional District	$100.00
Additional PD Regulations	$75.00
Site Plan in PDF Format for City Council	$50.00
Application Fee	$500.00
Zoning Board of Appeal Fee	$600.00
Special Exception Application Fee	$500.00
Oil and Gas	
Application for Oil and Gas Permit	$4,000.00
Credit Access Businesses	
Application Fee	$50.00
Specific Use Permit (SUP) / Specific Use Designation (SUD)	
Application for SUP/SUD with Term for Alcoholic Beverage	$300.00
Application for General SUP/SUD	$400.00
Renewal SUP/SUD	$75.00
Temporary Mobile Home	
Special Temporary Permit for Manufactured Home App (Based on Genuine Hardship Condition)	$50.00
Special Temporary Permit for Manufactured Home App (For Occupancy by a Caretaker, Manager, or Guard)	$100.00
Temporary Land Use	
Application Fee	$300.00
For each additional event date	$25.00
Clean-Up Deposit	$500.00

Exhibit G

Planning

		Fee
	Damage Deposit	$500.00
	Outside sale of dogs	$20.00
Site Plan Review		
	Single PD Amendment	$550.00
	Multiple PD Amendment	$650.00
Dedications		
	Review Fee	$400.00
Vacation		
	Application Fee	$400.00
Creation of a Building Site		
	Application Fee	$400.00
Master Sign Plan		
	Application Fee	$300.00
Traffic Impact		
	Traffic Impact (Staff Study)	$350.00
	Traffic Impact (Review of Submittal)	$600.00
Portable Storage Containers		
Freight or Portable storage cont.- permit fee		$125.00
	Each add'l on same property	$25.00
90- day permit fee for storage container		$150.00
	Each add'l container	$25.00
45- day permit fee for storage container		$125.00
	Each add'l container	$25.00
30 day permit fee for storage container		$75.00
Certificate of occupancy and compliance		
Certificate of occupancy and compliance		$10.00

Exhibit H

Code Enforcement

	Fee
Building Permits	
Construction Permit Fee	31.5 cents per square foot
Sidewalk/ROW Residential (No building permit)	$50.00
Sidewalk/ROW Commercial (No building permit)	$200.00
Street Improvement Fee	23 cents per square foot
Fence Fee	$50.00
Manufactured Home	$200.00
Manufactured Home Skirting Deposit	$100.00
Moving Fee	$200.00
Non-Profit Residential	$150.00
Temporary Structure	$100.00
Detached Assessory (120Sq.ft or less)	$50.00
Detached Assessory (120Sq.ft to 200 sq.ft.)	$100.00
Demolition Permits	
Commercial Demo Fee - Building	$500.00
Commerical Demo Fee - Interior	$100.00
Residential or Accessory Bldg	$50.00
Temporary Sign Permits	
Permanent Sign Permits	$50.00
Temporary sign annual permit fee	$50.00
Failure to remove sign- hauling fee	$50.00
Failure to remove sign- daily storage fee	$10.00
Oil & Gas Drilling Permits	
Amendment Fee	$1,000.00
Certification Fee & Inspection	$300.00
Oil & Gas Application Fee	$4,000.00
Well Tranfer Fee	$500.00
***TX State HB-40 recognizes Ordinance 8769 including fees and may not be amended**	
Mobile Home Park Licenses	
Mobile Home Park Licenses	$25.00 plus $1 ea/addl
Certificate of Occupancy	
Certificate of Occupancy	$50.00
Lot Deposits	
Clearing Deposits (Floor & Foundation) Commercial	$2,000.00
Clearing Deposits (Floor & Foundation) Residential	$600.00
Clearing Deposits (Rubbish, Litter, Lot)	$200.00
Clearing Deposit (Accessory Bldg, Debris, Material	$200.00
Lot Clearing	
Administrative Fee	$100.00
Tree Removal	$70.00

Exhibit H

Code Enforcement

	Fee
Debris Charge	$110 per ton
Mow Vacant Lot	$0.05 per sq. yd.
Mow Lot with Structure	$0.055 per sq. yd.
Mow Acreage	$70 per acre
Mowing Fee	$0.10 per sq. yd.
Special Project	$165.00
Minimum Lot Charge	$45.00
Tires	Reimbursemt+$2.00/tire
Electrical Fees	
Minimum Fee	$50.00
Temporary Service	$50.00
Temporary Construction Pole	$50.00
Parking Lot Wiring	$50.00
Building Wiring	$0.05 per sq.ft
Service Change	$50.00
Sign Electrical Fee	$50.00
Electrical Fixture Fee (for first, $1.00 each after)	$15.00
Mobile Home Rewiring ($5 for each add'l)	$50.00
Clearance for Elec Connect/Disconnect Residential	$50.00
Reinspection (Red Tag)	$50.00
Mechanical Fees (when not part of bldg.permit)	
Minimum Fee	$50.00
Inspection for Heating, AC,Venting,Ductwork,Fridge ($5 for each add'l inspection)	$50.00
Fire Extinguishing Permit	$50.00
Boiler Inspections (33K to 1165 BTU)	$50.00
Boiler Inspections (1165K to 3300 BTU)	$50.00
Boiler Inspections (over 3300 BTU)	$50.00
Reinspection (Red Tag)	$50.00
Gas Fees (when not part of bldg.permit)	
Minimum Fee	$50.00
Floor Furnace, Boiler	$50.00
Vented Recessed Heater	$50.00
Gas line service	$50.00
Vented Appliance ($10 each add'l)	$50.00
Temporary Connection	$50.00
Reinspection (Red Tag)	$50.00
Plumbing Fees (when not part of bldg.permit)	
Minimum Fee	$50.00
Furnace, unit or wall heater ($10 each add'l)	$50.00
Water heater ($10 each add'l)	$50.00
Water softener	$50.00

Exhibit H

Code Enforcement

	Fee
Lawn Sprinkler	$50.00
Water Line Service	$50.00
Sewer Line Service	$50.00
Replumb Bldg	$0.05 Sq. Ft.
Fire Sprinker	$0.05 Sq. Ft.
Backflow Assembly Device ($10 each add'l)	$50.00
Reinspection (Red Tag)	$30.00
Vendor Permit	
Vendor Permit	$100.00
Water Well Fee	
Drill new well	$50.00
Reinspection Fee	
Reinspection (All Permits)	$100.00
Application to Board of Appeals	
Application	$200.00
Public Ways and Property	
House moving permit fee	$25.00
Network Nodes-5 in same application	$500.00
Each additional node in application	$250.00
Node Support Pole Application	$1,000.00
Fee to attach network node to public ROW pole	$20.00

Exhibit I

Engineering

	Fee
Traffic	
Street Name and Traffic Control Sign Fee	$500/intersection
Right of Way Use Permit Fee	$350.00

Exhibit J

Water & Sewer Fees

	Fee (as of July 1, 2020)
Water Rates Inside City:	
Base Rate for All Except Apartments for First 2,000 gallons	$21.61
Base Rate for Apartments per Unit for first 2,000 gallons per Unit	$17.60
Rate per 1,000 gallons over base of 2,000 up to 10,000	$6.11
Rate per 1,000 gallons from 10,001 up to 25,000	$8.03
Rate per 1,000 gallons from 25,001 up to 50,000	$10.80
Irrigation)	$13.50
Sewer Rates Inside City:	
All Customers Base Rate (First 2,000 gallons)	$21.79
All Customers Rate per 1,000 after Base Rate	$0.88
Water Rates Outside City:	
Base Rate for All Except Apartments for First 2,000 gallons	$32.42
Base Rate for Apartments per Unit for first 2,000 gallons per Unit	$26.40
Rate per 1,000 gallons over base of 2,000 up to 10,000	$9.17
Rate per 1,000 gallons from 10,001 up to 25,000	$12.05
Rate per 1,000 gallons from 25,001 up to 50,000	$16.20
Irrigation)	$20.25
Sewer Rates Outside City:	
Residential Base Rate (First 2,000 gallons)	$32.69
Residential Rate per 1,000 after Base Rate	$1.32
Miscellaneous:	
Septage waste hauler discharges and fees (per gallon)	$0.30

Exhibit K

Customer Service/Utility Billing

	Fee
Account Billing	
Residential Utility Deposit	$75.00
Re-read of Water Meter (2nd time)	$25.00
Test of Water Meter (2nd time)	$25.00
Non-sufficient fund check	$30.00
Reconnect-Disconnect fee	$30.00
Application Fee	$20.00
Transfer Fee	$20.00
Tampering/Straight Fee (1st time)	$200.00
Tampering/Straight Fee (2nd time)	$300.00
Water Meters & Tap Fees	
3/4" water meter-with existing meter box	$40.00
1" water meter-with existing meter box	$100.00
1" water meter tap (no paving cut or meter installation)	$390.00
1" service charge for tap and meter with meter box	$425.00
2" water meter- with existing meter box	$240.00
2" water meter tap (no paving cut or meter installation)	$564.00
2" service charge for tap and meter with meter box	$710.00
3" water meter	$375.00
4" water meter	$375.00
4" sewer tap	$350.00
6" sewer tap	$400.00
Replacement sewer tap (per line)	$300.00
Fee to abandon line for replacement	$150.00
Paving cut/Boring & Casing Fee	$400.00
Fire hydrant meter setting or moving	$200.00
Fire Hydrant meter deposit setting	$2,400.00
Drinking Water Testing- Total Coliform (Presence or absence)	$18.00
Non-Potable H2O testing- Total Coliform & E.Coli (MPN)	$25.00
Non-Potable H2O testing- Total Coliform & Fecal Coliform (MPN)	$25.00
Move a service line no more than 5 feet	$150.00

Exhibit L

Sanitation Fees

Inside City Limits

# of Containers	Number of pickups per week			
	2X	3X	4X	5X
Residential				
0.25	$18.82			
0.5	$37.64			
0.75	$56.46			
1	$75.28			
Commercial				
0.25	$25.17	$37.76	$50.34	$62.93
0.5	$50.34	$75.51	$100.68	$125.85
0.75	$75.51	$113.27	$151.02	$188.78
1	$100.67	$151.01	$201.34	$251.68
2	$191.27	$286.91	$382.55	$478.18
3	$281.88	$422.81	$563.75	$704.69
4	$372.48	$558.72	$744.96	$931.20
5	$463.08	$694.62	$926.16	$1,157.71
6	$553.69	$830.53	$1,107.37	$1,384.21
7	$644.29	$966.43	$1,288.58	$1,610.72
8	$734.89	$1,102.34	$1,469.78	$1,837.23
9	$825.49	$1,238.24	$1,650.99	$2,063.74
10	$916.10	$1,374.15	$1,832.19	$2,290.24
11	$1006.70	$1,510.05	$2,013.40	$2,516.75
12	$1,097.30	$1,645.95	$2,194.61	$2,743.26
13	$1,187.91	$1,781.86	$2,375.81	$2,969.77
14	$1,278.51	$1,917.76	$2,557.02	$3,796.27
15	$1,369.11	$2,053.67	$2,738.22	$3,422.78
16	$1,459.72	$2,189.57	$2,919.43	$3,649.29
17	$1,550.32	$2,325.48	$3,100.64	$3,875.80
18	$1,640.92	$2,461.38	$3,281.84	$4,102.30
19	$1,731.52	$2,597.29	$3,463.05	$4,328.81
20	$1,822.13	$2,733.19	$3,644.25	$4,555.32
21	$1,912.73	$2,869.10	$3,825.46	$4,781.83
22	$2,003.33	$3,005.00	$4,006.67	$5,008.33
23	$2,093.94	$3,140.90	$4,187.87	$5,234.84
24	$2,184.54	$3,276.81	$4,369.08	$5,461.35
25	$2,275.14	$3,412.71	$4,550.28	$5,687.86
Per Month				
Recycling fee	$0.50			
Litter Abatement Fee	$1.00			

Exhibit L

Sanitation Fees

Outside City Limits - Sanitation Fees

# of Containers	Number of pickups per week			
	2X	3X	4X	5X
Residential				
0.25	$28.23			
0.5	$56.46			
0.75	$84.69			
1	$112.92			
Commercial				
0.25	$37.76	$56.63	$75.51	$94.39
0.5	$75.51	$113.27	$151.02	$188.78
0.75	$113.27	$169.90	$226.53	$283.16
1	$151.04	$226.56	$302.08	$377.60
2	$286.98	$430.46	$573.95	$717.44
3	$422.91	$634.37	$845.82	$1,057.28
4	$558.85	$838.27	$1,117.70	$1,397.12
5	$694.78	$1,042.18	$1,389.57	$1,736.96
6	$830.72	$1,246.08	$1,661.44	$2,076.80
7	$966.66	$1,449.98	$1,933.31	$2,416.64
8	$1,102.59	$1,653.89	$2,205.18	$2,756.48
9	$1,238.53	$1,857.79	$2,477.06	$3,096.32
10	$1,374.46	$2,061.70	$2,748.93	$3,436.16
11	$1,510.40	$2,265.60	$3,020.80	$3,776.00
12	$1,646.34	$2,469.50	$3,292.67	$4,115.84
13	$1,782.27	$2,673.41	$3,564.54	$4,455.68
14	$1,918.21	$2,877.31	$3,836.42	$4,795.52
15	$2,054.14	$3,081.22	$4,108.29	$5,135.36
16	$2,190.08	$3,285.12	$4,380.16	$5,475.20
17	$2,326.02	$3,489.02	$4,652.03	$5,815.04
18	$2,461.95	$3,692.93	$4,923.90	$6,154.88
19	$2,597.89	$3,896.83	$5,195.78	$6,494.72
20	$2,733.82	$4,100.74	$5,467.65	$6,834.56
21	$2,869.76	$4,304.64	$5,739.52	$7,174.40
22	$3,005.70	$4,508.54	$6,011.39	$78,514.24
23	$3,141.63	$4,712.45	$6,283.26	$7,854.08
24	$3,277.57	$4,916.35	$655.14	$8,193.92
25	$3,413.50	$5,120.26	$6,827.01	$8,533.76

Exhibit L

Sanitation Fees

Open Top/Compactor Fees	
One-time set up fee (Delivery fee)	$33.81 + Tax
Daily Rental	$6.76 + Tax
Haul Charge	$169.13 + Tax
Per Ton Disposal Fee (Landfill Charge)	$42.00 per ton

Removal of Garbage by Other Entity	
Garbage Hauler's Permit	$500.00

Landfill- Dumping and Unloading Charges	
Landfill Access Fee-	$25.00
Unlimited Landfill Access Fee-year	$500.00
Minimum Fee under 1 Ton	$21.00
Per ton Disposal Fee	$42.00
Materials not contained	$15.00
Pull off Fee	$75.00
Special Waste/Minor or TDH permit	
Special Waste Fee- Per Ton	$84.00
Minimum Fee under 1 Ton	$42.00

Exhibit M

Airport

	Fee
Landing Fees (per 1000 pounds of gross landing weight)	$0.70
Air carrier fees (per 1000 pounds of gross landing weight)	$0.70
Public Aircraft parking – locally based aircraft (month)	$25.00
Public Aircraft parking – transient aircraft (day)	$1.50
Customer Facility Charge - vehicle rentals (per transaction day)	$3.00
Public Parking – CI (Covered)	
0-30 minutes	Free
31-60 minutes	$3.00
Every additional hour	$2.00
Maximum per 24-hour period	$15.00
Public Parking – P1 & P3 (Close-In)	
0-30 minutes	Free
31-60 minutes	$2.00
Every additional hour	$1.00
Maximum per 24-hour period	$12.00
Public Parking – P2 &P4 (Economy)	
0-30 minutes	Free
31-60 minutes	$2.00
Every additional hour	$1.00
Maximum per 24-hour period	$9.00
Public Parking – C2 (Remote Covered)	
0-30 minutes	Free
31-60 minutes	$2.00
Every additional hour	$1.00
Maximum per 24-hour period	$11.00
Public Parking – P5 (Remote Economy)	
0-30 minutes	Free
31-60 minutes	$2.00
Every additional hour	$1.00
Maximum per 24-hour period	$7.00
Ground Transportation Permits -per month, per vehicle	
Taxicab	$25.00
Buses	$25.00
Courtesy vehicles for off-aiport hotel	$25.00
Courtesy vehicles for off-aiport car rental (plus 10% airport revenue)	$25.00
Courtesy vehicles for off-aiport parking lot (plus 10% airport revenue)	$25.00

Exhibit M

Airport

	Fee
Employee Parking	
Annual Employee Parking media (prorated monthly)	$40.00

Special assessments

1. Should any person upon driving a vehicle from the paid parking areas of the airport not be able to present an officially issued ticket indicating where that person's vehicle was parked and at what time, then the charge assessed for the parking of that vehicle shall be at least $12.00. In addition to that fee, there shall also be a fee assessed for the parking of that vehicle equal to the amount of the daily rate, times number of days, for the area in which that vehicle was parked as is indicated by the daily lot inventory taken by the airport administration.

2. Whenever a person or an entity shall pay for the parking fees assessed by this Section with a check or draft, and that check or draft is dishonored, then there shall be an additional $25.00 assessed against that person or entity.

Exhibit N

Sports Complex

	Fee
Football/Soccer Stadium	
Sporting Events	
Half Stadium Rental	$1,500.00/day
Whole Stadium Rental	$3,000.00/day
Non-Sporting Events	
Non-Profit Deposit	$1,500.00
Non-Profit Rental	$1,500.00/day
Commercial Deposit	$2,500.00
Commercial Rental	$2,500.00/day
Cleaning Fees	
Less than 2,000 people	$1,500/side
More than 2,000 people	$2,500/side
Lighting Fee	$75.00/hour
Baseball Stadium	
Baseball Events	$750.00/day
Non-Baseball Events	
Non-Profit Deposit	$1,000.00
Non-Profit Rental	$1,000.00/day
Commercial Deposit	$1,500.00
Commercial Rental	$1,500/day
Cleaning Fees assessed by Midland Rockhounds	
Lighting Fee	$75.00/hour
Groundskeeper and Grounds Material Fees assessed by Midland Rockhounds	
Diamon Club Deposit	$100.00
Diamond Club Rental (minimum 2 hours)	$50.00/hour
Diamond Club Cleaning Fee (payable to Midland Rockhounds)	$150.00
OPERATOR FEES FOR BASEBALL AND FOOTBALL/SOCCER STADIU	**Hourly**
Video Board Operator	$50.00
Scoreboard Operator	$50.00
PA Announcer	$50.00
Camera Operator	$45.00
Replay Technician	$45.00
Sound Operator	$45.00
SSC - Common Area/Parking Lot Rentals	
Pavilion	
Non-Profit Deposit	$1,500.00
Non-Profit Rental	$1,500/day
Commercial Deposit	$2,000.00
Commercial Rental	$2,000/day

Parking Lot Only	
Parking Lot Deposit	$1,000.00
Set Up/Tear Down	$1,000/day
Rental Fee	$1,500/day
Cleaning Fees - Common Area/Parking Lot Rentals	
Less than 1,000 people	$1,000.00
1,001 to 2,500 people	$1,500.00
More than 2,500 people	$2,000.00
Lighting Fee	$75.00/hour
SSC - Auxiliary Fields	
Non-Tournament Fees	
Deposit	$100.00
Field Rental	$50.00/hour
Tournament Fees	
Deposit	$100.00/field
Rental	$30.00/game
Cleaning Fee	$150.00/field
Lighting Fee	$25.00/hour
Concession Stand Deposit	$100.00
Concession Stand Rental	$25.00/hour

Exhibit O

Miscellaneous

	Fee
Court Fees	
Municipal Court Building Security Fee	$3.00
Municipal Court Technology Fee	$4.00
Municipal Court Copy Fee	$1.00 per page
Business Regulations	
Closing out sale license fees - 30 days	$100.00
Closing out sale license fees - 60 days	$125.00
Closing out sale license fees - 90 days	$150.00
Peddler license	$4.00
Mobile Home/Travel Trailer Park App Fee	$10.00
Mobile Home/Travel Trailer Park License	$25 plus $1 ea.space
Mobile Home Mini Park location app	$10.00
Mobile Home Mini Park revised site plan	$10.00
City Chauffeur's license app fee	$25.00
Airport Cabstand Permit fee (per month)	$25.00
Special police officer license fee (individual)	$10.00
Special police officer license fee (firm)	$50.00
Carnival operator's license	$50.00
Carnival employee's license	$6.00
Side walk sale application fee	$4.00
Police Regulations	
Ambulance Services- Basic Life Support	$650 + $10 per mile
Ambulance Services- Advanced Life Support	$750 + $10 per mile
Ambulance Services- Advanced Level II	$850 + $10 per mile
Ambulance Waiting Charge	$200 per hour
Ambulance Service- Outside Midland County	$100.00
Food Truck Fire Inspection	$50 per inspection annually
Alarm Permit Application Fee-Commercial	$25.00
Alarm Permit Application Fee-Residential	$20.00
Alarm Permit Renewal Fee -Commercial	$20.00
Alarm Permit Renewal Fee - Residential	$15.00
Alarm Permit Service fee	$50.00
Franchises	
Telecomm Carrier on public ROW Reg. Fee-	$25.00
Franchise application and review fee	$500.00
Franchise renewal application and review fee	$500.00

Exhibit P

Right of Way

Right-of-Way License Fees and Rates for crossing property or public right-of-way owned by the City of Midland.

Fees (non-refundable):

Application Fee:	$ 1,000.00
Application Fee of Expired License:	$ 1,500.00

The City of Midland's Rate and Damage Schedule is 200% of the then-current University Lands Rate and Damage Schedule for a 10-year license.

Fees and rates will be paid at the commencement of the 10-year license in one payment.

City Council Meeting

Item Number: 26

Meeting Date: October 25, 2022

To: City Council / City Manager

From: Landon Ochoa, Planner

Subject: AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITH TERM FOR LOT 3G, BLOCK 6, SCOTSDALE ADDITION, SECTION 19, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE SOUTH SIDE OF WEST WADLEY AVENUE, APPROXIMATELY 535 FEET WEST OF NORTH MIDLAND DRIVE), WHICH IS PRESENTLY ZONED RR, REGIONAL RETAIL DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR THE SALE OF ALL ALCOHOLIC BEVERAGES IN A RESTAURANT FOR ON-PREMISES CONSUMPTION; 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, Zhanwei Deng, is requesting a Specific Use Designation with term for the sale of alcoholic beverages for on-premises consumption in a restaurant at 4501 West Wadley Avenue, Midland, Texas 79707.

Recommended City Council Action:

Approve

Fiscal Impact:

This proposal does not have a significant financial impact to the City.

Discussion:

The properties to the north, south, east, and west are zoned RR, Regional Retail District and the location of businesses such restaurants, an auto part store, and a grocery store.

Analysis:

The applicant, Zhanwei Deng, is requesting a Specific Use Designation (SUD) for the sale of all alcoholic beverages, for on-premises consumption, in a restaurant conducting business as S'zechuan House, located at 4501 W. Wadley Avenue.

The restaurant is currently in operation, conducting business as Tokyo Express. Past businesses did have an approved SUD permit in this location; however, those permits have expired. The property is zoned RR, Regional Retail District, which permits the sale of alcoholic beverages with the approval of a Specific Use Permit.

The floor plan attached hereto as "Exhibit A" illustrates that the establishment has a total square footage of 2,986 square feet, with an alcohol serviceable area of 1,483 square feet.

The restaurant has a total of seating capacity of 92 people. A total of 60 parking spaces are provided, of which 2 will be handicap spaces. Based on the seating occupancy and kitchen floor area, a total of 25 parking spaces are required, therefore existing parking will be sufficient.

The proposed days and hours of operation are:

Monday through Thursday from 11:00 a.m. to 9:30 p.m.
Friday through Saturday from 11:00 a.m. to 10:30 p.m.
Sunday 11:00 a.m. to 9:30 p.m.

The applicant is requesting the same days and hours for alcohol service.

Per Midland City Code, Section 5-4-4, Prohibited Places of Business:

The sale of any alcoholic beverage is hereby prohibited by any person, where the place of business of any such dealer is within 300 feet of any church, public-school, public-school ground, athletic stadium used by any public school or public hospital, the measurements to be along the property lines of the street fronts and from front door to front door and in a direct line across intersections where they occur.

No church or school is located within 300 feet of the proposed property.

This request has been circulated to and reviewed by respective City departments for internal review and their comments, conditions, and requirements are as follows:

Engineering: (Approved)

No objections. [For Applicant's Information Only.]

Fire: (Approved)

No objections

Transportation: (Approved)

No objections. [For the Applicant's information only.]

Code Administration: (Approved)

The SUD is acceptable. The property must adhere to the maximum occupant load of 80 for the alcohol serviceable area. Occupancy loads must be posted in accordance with section 1004.3 of the 2015 International Fire Code.

Planning:

The request follows the *Tall City Tomorrow Comprehensive Plan, Chapter 6-Character Plan Goal 4, which is to* "Encourage the development of places where Midland residents can gather and socialize to build connections." (Tall City Tomorrow page 137). S'Zechuan House will be a friendly neighborhood café that the community can enjoy.

This request meets all requirements; therefore, staff recommends approval of the Specific Use Designation with Term for the sale of all alcoholic beverages, for on-premises consumption, in a restaurant subject to conditions A thought G.

Conditions:

A. **That the alcoholic serviceable area of the restaurant shall be limited to approximately 1,483 square feet as shown in Exhibit "A", which is attached hereto and incorporated herein for all purposes.**

B. **That the days and hours of alcoholic beverages sales and consumption shall be limited to:**

    Monday through Thursday from 11:00 a.m. to 9:30 p.m.
    Friday through Saturday from 11:00 a.m. to 10:30 p.m.
    Sunday 11:00 a.m. to 9:30 p.m.

C. **The occupancy of the establishment shall not exceed the maximum occupancy determined by the Building Code and Fire Code.**

D. **That the establishment shall meet all requirements of the Fire Department and Code Administration.**

E. **That the sale and on-premises consumption of alcoholic beverages shall conform to applicable state and local laws.**

F. **That the applicant shall obtain a Certificate of Occupancy prior to the commencement of the sale of alcoholic beverages for on premises consumption to ensure that the conditions of this permit are satisfied.**

G. **That in accordance with Section 9.07.E.3 of the Zoning Ordinance, the establishment shall be in operation within 120 days from the final adoption date of this ordinance.**

Letters of Objection:

As of October 7, 2022, staff has received one letter of objection.

Attachments:

Floor Plan (Exhibit A)
Site plan (Exhibit B)
Application
Maps

Morris William 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 WITH TERM FOR LOT 3G, BLOCK 6, SCOTSDALE ADDITION, SECTION 19, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE SOUTH SIDE OF WEST WADLEY AVENUE, APPROXIMATELY 535 FEET WEST OF NORTH MIDLAND DRIVE), WHICH IS PRESENTLY ZONED RR, REGIONAL RETAIL DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR THE SALE OF ALL ALCOHOLIC BEVERAGES IN A RESTAURANT FOR ON-PREMISES CONSUMPTION; 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 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 With Term for Lot 3G, Block 6, Scotsdale Addition, Section 19, City and County of Midland, Texas (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 With Term for the sale of all alcoholic beverages in a restaurant (the "Establishment") for on-premises consumption, 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:

A. That the serviceable area of the Establishment shall be limited to approximately 1,483 square feet as shown in Exhibit "A", which is attached hereto and incorporated herein for all purposes.

B. That the sale and on-premises consumption of alcoholic beverages shall conform to all applicable state and local laws.

C. That the days and hours of alcoholic beverage sales and consumption shall be limited to the following:

Monday through Thursday from 11:00 a.m. to 9:30 p.m.;
Friday and Saturday from 11:00 a.m. to 10:30 p.m.; and
Sunday from 11:00 a.m. to 9:30 p.m.

D. That the occupancy of the Establishment shall not exceed the maximum occupancy determined by the Building Code and Fire Code.

E. That the Establishment shall meet the requirements of the Fire Department and the Code Administration Division.

F. That the operator of the Establishment shall obtain a Certificate of Occupancy prior to the commencement of the sale of alcoholic beverages for on-premises consumption to ensure that the conditions of this Specific Use Designation With Term are satisfied.

G. That in accordance with Section 11-1-9.07.E.3 of the City Code, the Establishment shall be in operation within 120 days from the final adoption date of this ordinance.

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., 2022; 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., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

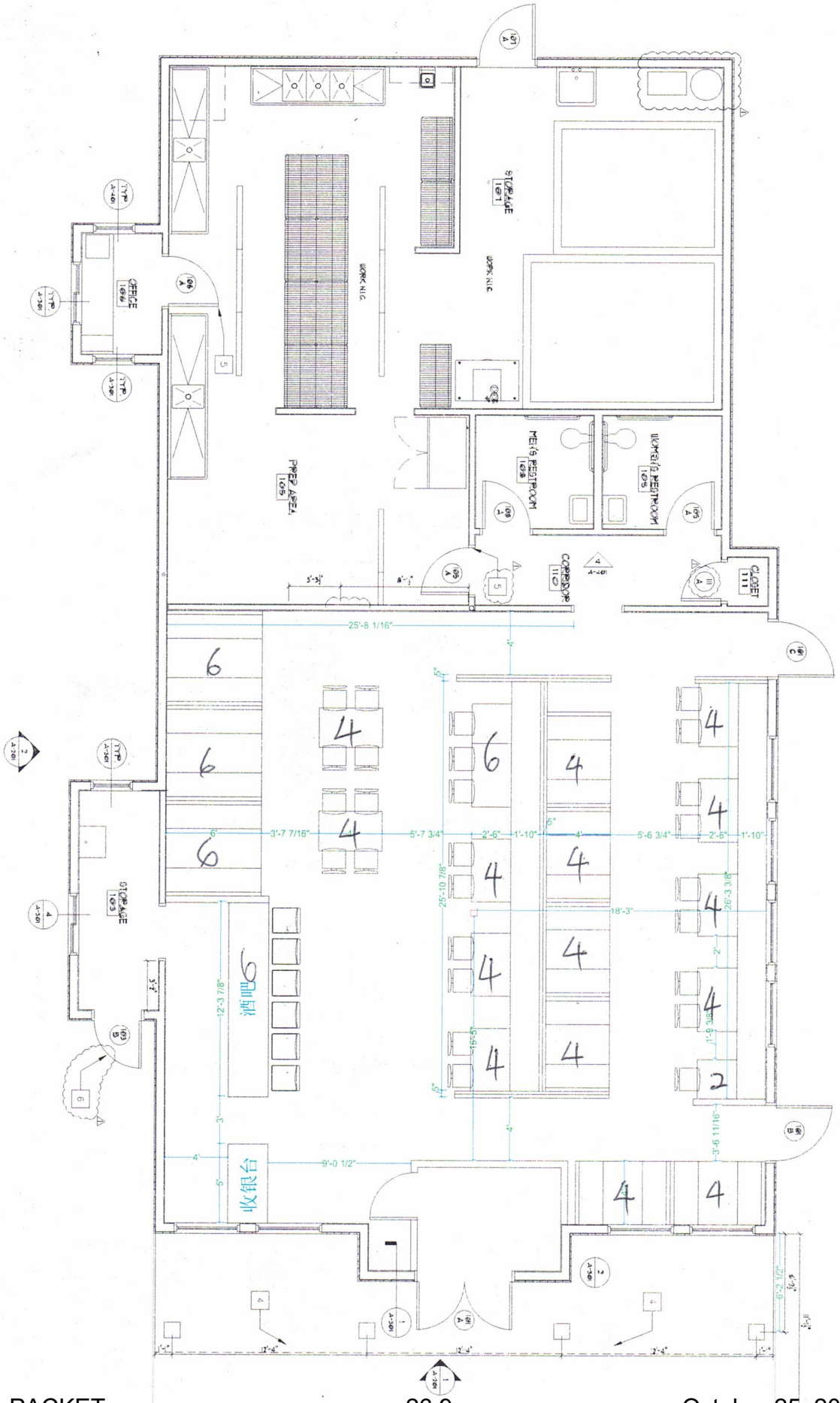
APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

Floor Plan (Exhibit A)



total seating is 92

MIDLAND Planning Division

Specific Use Designation with Term for the Sale of Alcoholic Beverages for On-Premises Consumption

Project Number: SUP-22-0141

Case Number: _____

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: Zhanwei Deng			Phone (432)-312-7240 Email lsing71@aol.com
Address: 2405 W. Cuthbert Ave.	City: Midland	State: TX	Zip: 79701
Property Owner Printed Name: Leeco Energy & Investments, Inc			Phone (432) 550 0073 Email cricket@leecoproperties.com
Address: 3501 Billy Hext Rd.	City: Odessa	State: TX	Zip: 79765
Representative *(if different from Applicant or Property Owner)* Firm: _____ Printed Name:			Phone ( ) Email
Address	City	State	Zip

Street Address: 4501 W. Wadley Ave Midland TX 79707

Business Name: Szechuan House

Legal Description
Lot: 3-G Block: 6 Subdivision: Scotsdale Addition

Current Zoning: RR

Reason for Request: the sale of Alcoholic Beverages for on-Premises Comsumption

Type of Business *(restaurant, bar, lounge, nightclub, etc.)*: Restaurant

Proposed/Current Days and Hours of Operation: Mon-Thur: 11:00AM-9:30pm Fri-Sat: 11:00AM-10:30pm Sun: 11:00AM-9:30pm

Proposed Days and Hours of Alcohol Service: Mon-Thur: 11:00AM-9:30pm Fri-Sat. 11:00Am-10:30pm Sun: 11:00Am-9:30pm

Total Square Footage of Business: 2486 square feet

Square Footage of Alcohol Serviceable Area: ~~1483~~ square feet

Restroom Fixtures:	*Men*	**Toilets/Urinals:**	1 / 0	**Bathroom Sinks:**	1
	Women	**Toilets:**	1	**Bathroom Sinks:**	1

Submittal and Fees

Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Floor Plan showing:
  - Seating
  - Exits
  - Restrooms
  - Kitchen (if applicable)
  - Total Square Footage
  - Serviceable Square Footage
- Dimensioned Site Plan showing: *Parking *Business Footprint
- Digital Copies of Floor Plan & Site Plan (PDF/JPEG)

Signatures

Applicant (signature): Zhanwei Deng	Date: 8/23/2022
Applicant (printed): ZHANWEI DENG	
Property Owner (signature): Cricket Allen (Lecco Energy & Investments)	Date: 8/24/22
Property Owner (printed): Cricket Allen	

The Specific Use Designation with Term for the sale of all alcoholic beverages 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 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 application on behalf of property owner, agent must complete the affidavit below.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared Xing Lin who, being by me duly sworn, upon oath says: That (s)he is authorized by Cricket Allen, 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.

Xing Li

Subscribed and sworn to before me, this 26th day of Aug 2022, to certify which witness my hand and seal of office.

DALIA SALINAS
My Notary ID # 128541568
Expires March 9, 2023

Dalia Salinas
Notary Public

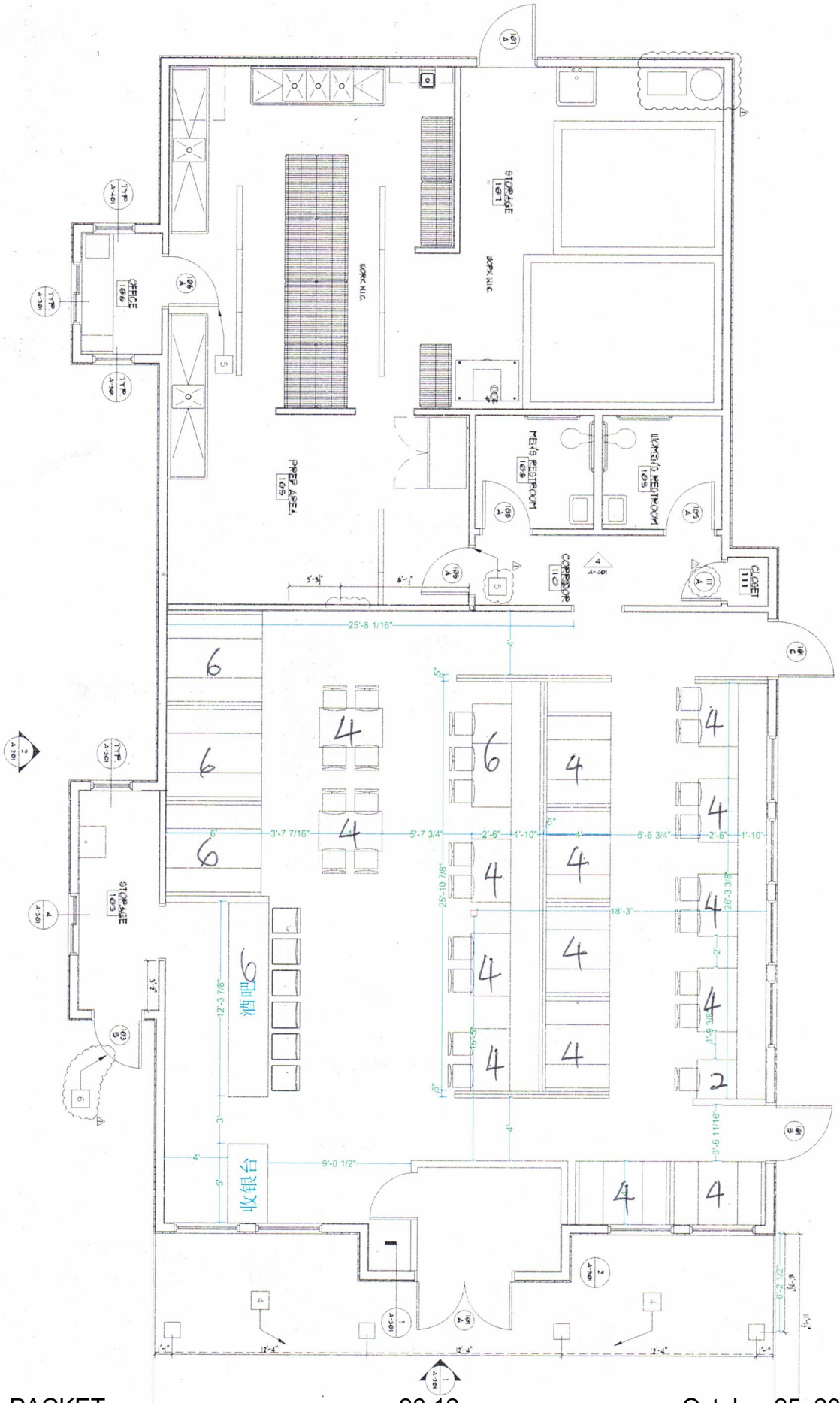
FOR OFFICE USE ONLY

☒ Property Owner Authorization	☒ Dimensioned Floor Plan
☒ Application Fee	☒ Site Plan
Check # Cash	☒ Plans in Digital Format (PDF/JPEG)
Received By: KM	Date: 8/26/22

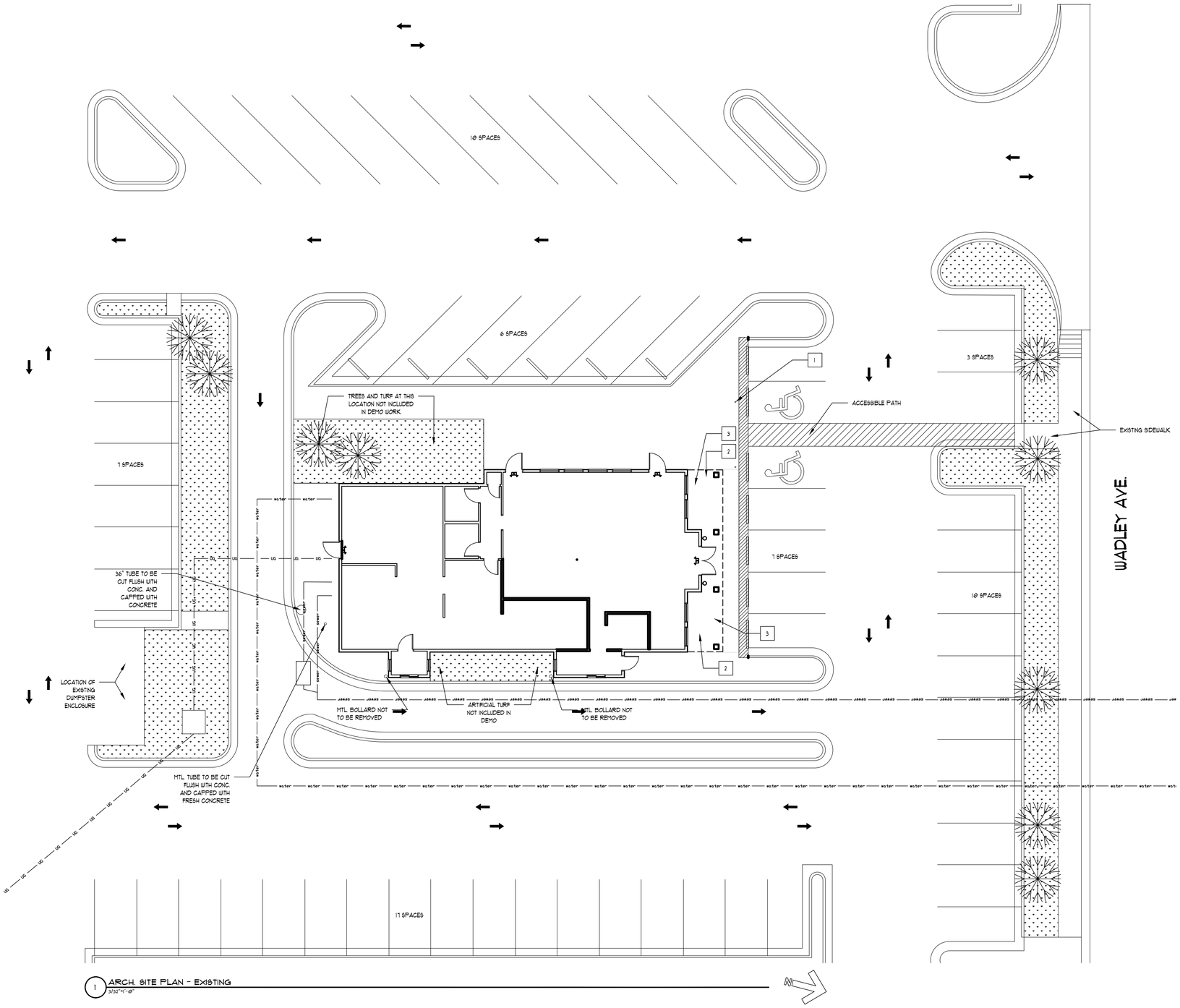
AUG 26 2022

****Application will not be considered for scheduling until reviewed by a planner.****

Floor Plan (Exhibit A)



total seating is 92



1 ARCH. SITE PLAN - EXISTING
3/32"=1'-0"

LEGEND

EXISTING FOLIAGE

EXISTING LANDSCAPING

GENERAL NOTES

- ALL MEP UTILITIES SHALL BE LOCATED BY CIVIL SHEETS, ARCHITECTURAL SITE PLAN IS FOR REFERENCE ONLY.

KEYNOTE LEGNED

1. EXISTING HANDICAP PARKING AND SIGNAGE TO REMAIN
2. ARTIFICIAL TURF TO BE REMOVED
3. CONCRETE FLAT WORK SHALL MEET EXISTING ELEVATIONS AT PARKING ASPHALT AND SLOPE NO MORE THAN 5% IN ANY DIRECTION. SLOPE IF ANY SHALL BE 5% MAX IN TRAVEL AND 2% MAX CROSS SLOPE

RRC DESIGN GROUP
10617 W. CR 72
MIDLAND, TX 79707
O: (432) 618-9939 F:(432)618-0205

LEECO PROPERTIES

The Lost Cajun Restaurant Boiguets & Gumbo

LOST CAJUN
4501 W WADLEY AVE
MIDLAND, TX 79707

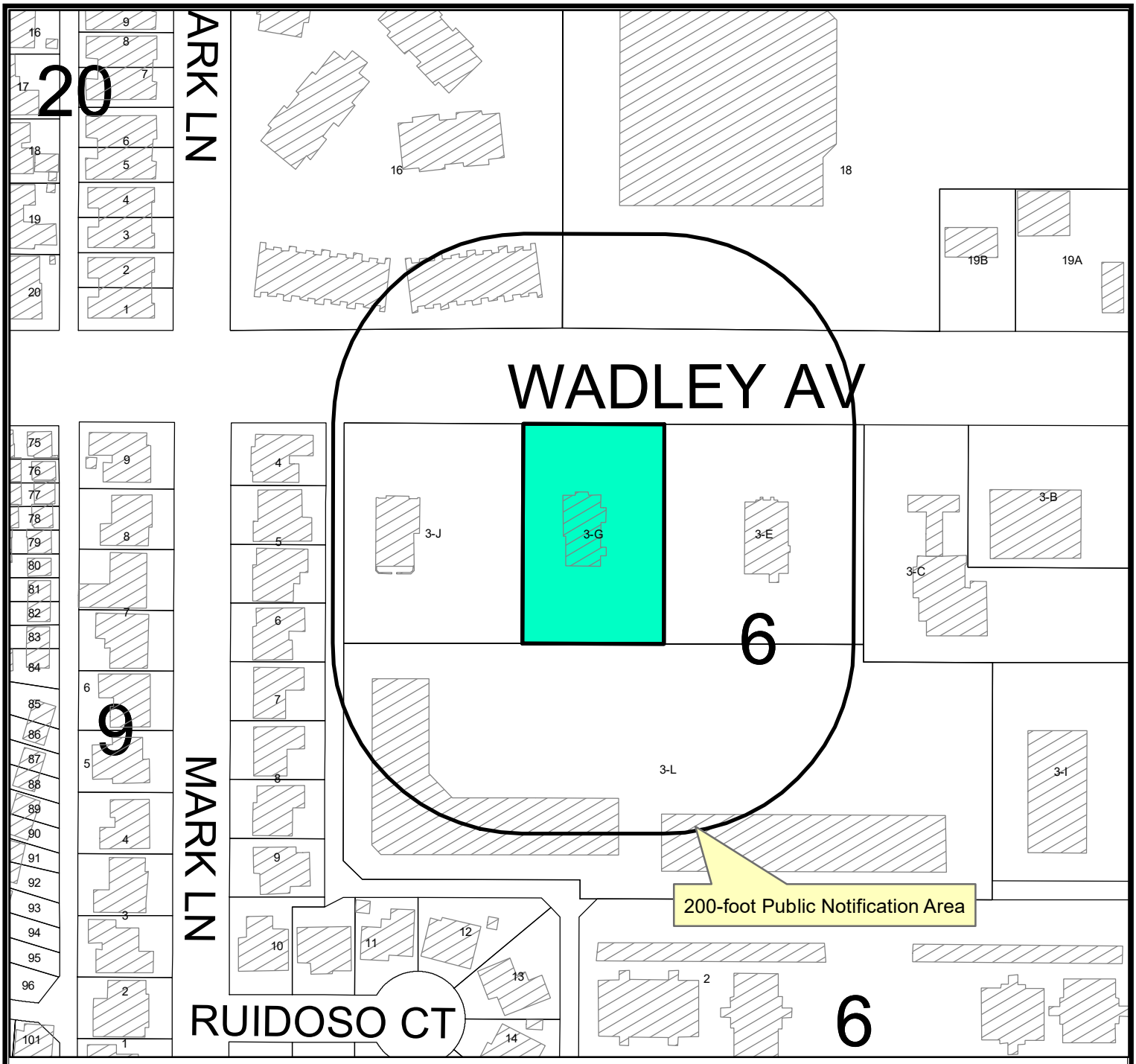
NO.	REVISION/ISSUE	DATE
2	REVISION SET 1	7-5-16
1	95% REVIEW	6-15-16

PROJECT # 03031@001

DATE 7/8/2016

SHEET TITLE ARCHITECTURAL SITE PLAN

SHEET AS-101



LOCATION MAP

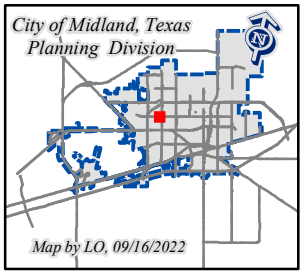
SUD-22-0141 **Scale: 1" = 1,810'**

Consider a request by Zhanwei Deng, for a Specific Use Designation with Term for the Sale of all Alcoholic Beverages, for on premises consumption in a Restaurant on Lot 3-G, Block 6, Scotsdale Addition, Section 19, City and County of Midland, Texas.

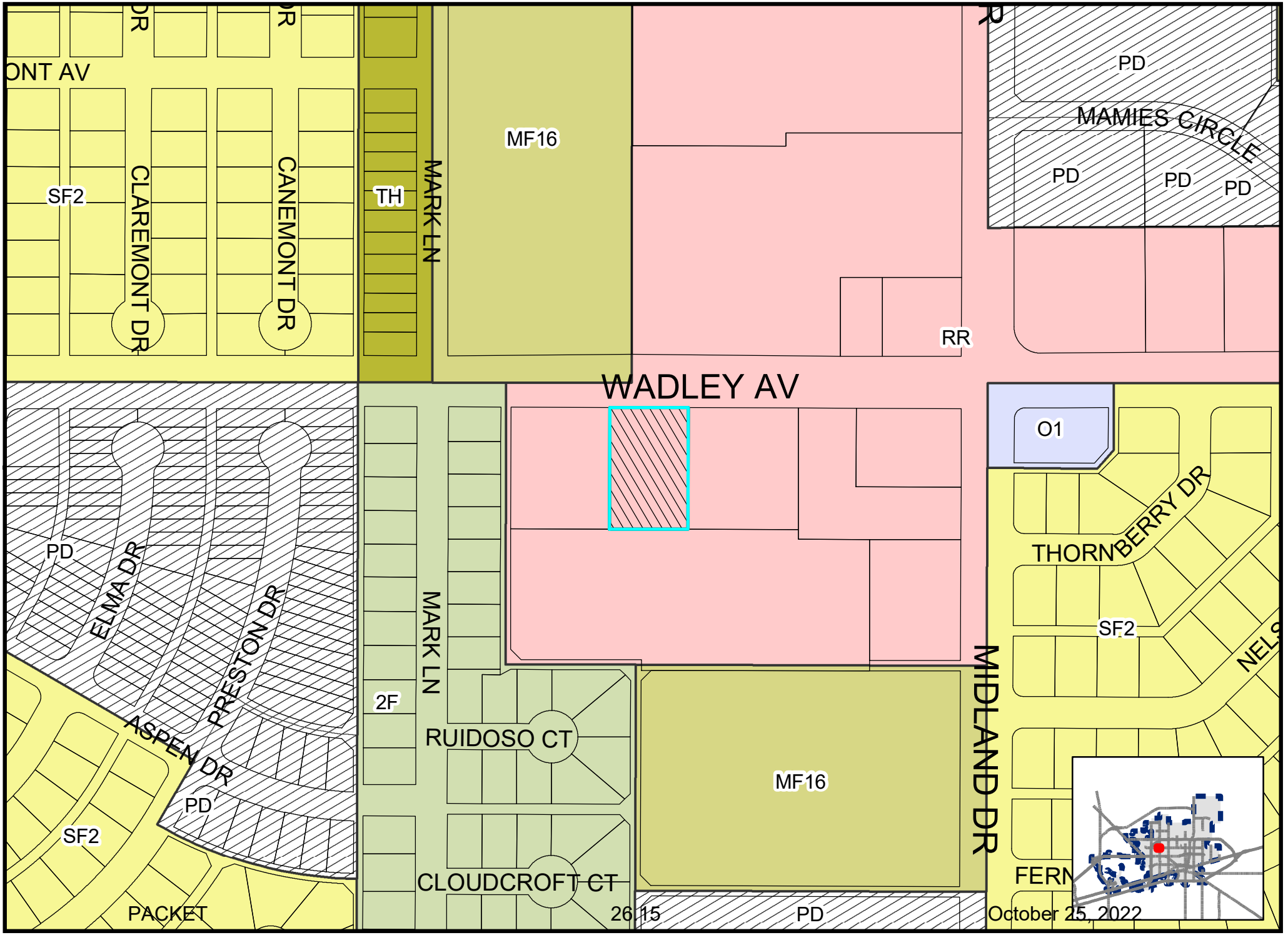
Generally located on the south side of W. Wadley Avenue, approximately 535-feet west N. Midland Drive. (Council District 4)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



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THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY AND IS 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.



Map By LO, 09/16/2022

SUD-22-0141

Scale: 1" = 2,744'

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.




MCALISTER'S


4501
TOKYO
EXPRESS


BUSH'S CHICKEN!
DRIVE THRU
TRY OUR
NEW
HOT WINGS

9/26/2022

City of Midland
Planning & Zoning Commission

RE: Lot 3-G, Block 6, Scottsdale Addition, Section 19

Please accept this letter as by objection to the specific use request of Zhanwei Deng to allow alcoholic beverage sales on the above referenced property.

My property, along with the Bush's Chicken and McAllister's Deli as well the shopping center located to our east share cross access agreements with each other and with Lot 3-G. As such, the allowed consumption of alcoholic beverages by this adjoining property with which we have a cross access agreement could increase our liability exposure and therefore we would oppose the issuance of this specific use permit.

Please do not hesitate to contact me should you have any questions or need additional information.

Thank you,

Jeff Russell
For CHC Family Properties, Inc.
jrussell@wjrussell.com
432-352-8993

RECEIVED
SEP 30 2022
BY: .....

City Council Meeting

Item Number: 27

Meeting Date: October 25, 2022

To: City Council / City Manager

From: James Reber

Subject: **AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR LOT 7, BLOCK 50, EAST MIDLAND ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF SOUTH STREET AND TYLER STREET), BY PERMITTING A REDUCED MINIMUM LOT WIDTH IN THE EVENT THAT THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND IS AMENDED TO REZONE THE PROPERTY FROM HI, HEAVY INDUSTRIAL DISTRICT TO SF-3, SINGLE-FAMILY DWELLING DISTRICT; 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 (COUNCIL DISTRICT 2) (DEVELOPMENT SERVICES)**

Purpose:

The applicant, Erica Hernandez, is requesting a Special Exception from the City of Midland Zoning Ordinance, *Section 5.04 – Residential Zoning District Dimensional Regulations Chart*, concerning the minimum lot dimension to be able to rezone the property into SF-3, Single-Family Dwelling District.

Recommended City Council Action:

Approve

Fiscal Impact:

No City funds are required to process this request.

Discussion:

The property is located at 1301 South Street and is the location of vacant land. The applicant is requesting a special exception to the minimum width for a corner lot to be able to build a single-family home. The proposed single-family home does not fit on the lot as it is currently only fifty feet in width.

The property is currently zoned HI, Heavy Industrial District and does not meet the minimum lot dimensions for either its current district, or the proposed district.

Per our City of Midland Zoning Ordinance, *Section 5.04 – Residential Zoning District Dimensional Regulations Chart:*

SF-3, Single Family Dwelling District
Lot dimensions
Minimum Lot Width:
Corner Lot: 55 Feet

As shown on East Midland Addition plat, this property is currently 50 feet wide and 140 feet deep.

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, 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 Applicant's Information Only.]

Code: (Approved)

No Oil and Gas Issues.

Transportation: (Approved)

No objections. [For the Applicant's information only.]

Planning (Approved):

Planning Analysis:

While this request represents a deviation from the existing Zoning Ordinance, due to the unique circumstances surrounding the lot in question, staff is recommending approval of this application for a Special Exception to the City of Midland Zoning Ordinance, Section 5.04 – Residential Zoning District Dimensional Regulations Chart. This lot has been platted and zoned in a way that prohibits development, therefore, the City has inadvertently forced this property and others around it to remain vacant under the current zoning ordinance. During the initial adoption period of the new zoning ordinance, there were several lots in this area that were re-zoned to SF-3, single family dwelling district that fell into this same issue. Additionally, the area has dispersed single family housing that was developed before the new zoning ordinance took effect, therefore, developing this property as a single-family home would fit with the character of the neighborhood. This special exception is required in order to change the zoning to SF-3 to better conform to develop a single-family residence. This request is in compliance with the Tall City Tomorrow Comprehensive Plan, Chapter 3 An Integrated Land Use Vision, “Future Land Use Map” as it designates this area for Urban Residential-Medium, a classification which calls for “a mix of housing styles including single-family detached, single-family attached, and townhouses.” This special exception would allow for the development of a single-family residence on this lot that would otherwise remain vacant.

Due to these factors, staff is recommending approval of this special exception subject to conditions A and B.

Conditions:

A. **That the minimum lot width shall be 50 feet.**

B. **That approval of a zone change to SF-3, Single Family Dwelling District shall be required prior to any development on the property.**

Letters of Objection:

Staff has not received any letters of objection as of October 7, 2022.

Attachments:

Application
Maps
Survey (Exhibit A)

Morris Williams Jr.

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR LOT 7, BLOCK 50, EAST MIDLAND ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF SOUTH STREET AND TYLER STREET), BY PERMITTING A REDUCED MINIMUM LOT WIDTH IN THE EVENT THAT THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND IS AMENDED TO REZONE THE PROPERTY FROM HI, HEAVY INDUSTRIAL DISTRICT TO SF-3, SINGLE-FAMILY DWELLING DISTRICT; 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 7, Block 50, East Midland Addition, City and County of Midland, Texas (the "Property"). Said special exception shall allow a reduced minimum lot width in the event that the Zoning District Map of the City of Midland, Texas, is amended to rezone the Property from HI, Heavy Industrial District to SF-3, Single-Family Dwelling District.

SECTION TWO. That said special exception is subject to the following special conditions:

A. That the minimum lot width shall be 50 feet.

B. That said special exception shall be of no force or effect unless and until the Property is rezoned as described in Section One of this ordinance.

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., 2022; 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., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

MIDLAND
Planning Division

Special Exception Application

Project Number: E-22-0087

Case Number: _____

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: Erica Hernandez		Phone (432) 215-5108 Email edelaro1@yahoo.com	
Address 102 Cedar Ave	City Midland	State TX	Zip 79705

Property Owner Printed Name: Erica Hernandez		Phone (432) 215-5108 Email edelaro1@yahoo.com	
Address 102 Cedar Ave	City Midland	State TX	Zip 79705

Representative *(if different from Applicant or Property Owner)* Firm: _____ Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Street Address: 1301 South St Midland Tx 79701

Legal Description
Lot: 7 Block: 50 Subdivision: East Midland Addition

Current Zoning: Heavy Industrial

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: Lot is smaller than required minimum dimensions

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: 10-5-22
Applicant (printed): Erica Hernandez	
Property Owner (signature):	Date: 10-5-22
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.

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*)

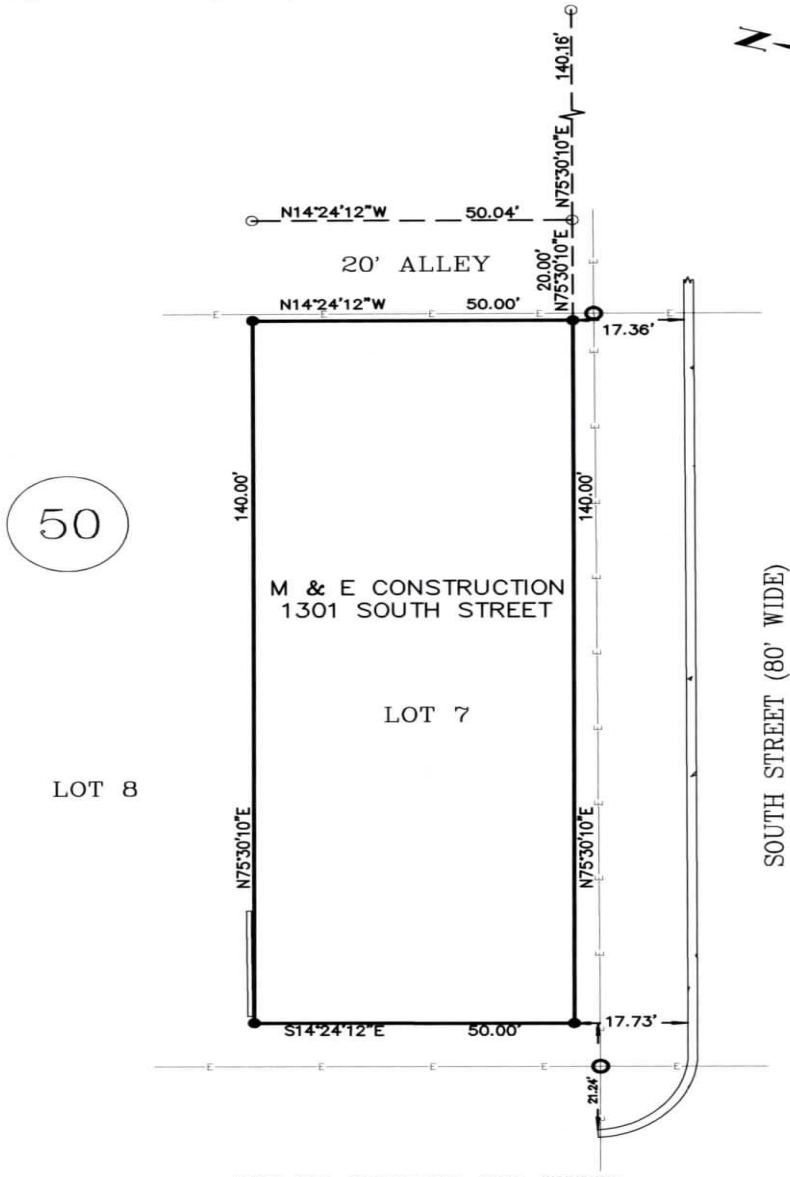
Subscribed and sworn to before me, this _____ day of _____, 20 ___, to certify which witness my hand and seal of office.

_____
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY	
☐ Property Owner Authorization	☐ Dimensioned Site Plan
☐ Application Fee	☐ Plans in Digital Format (PDF/JPEG)
Check #_____	
Received By:	Date:

****Application will not be considered for scheduling until reviewed by a planner.****

COPYRIGHT 2021
This survey plat is being provided solely for the use of: M & E Construction and that no license has been created, express or implied, to copy the survey plat except as is necessary in conjunction with the original transaction dated October 26, 2021, which shall take place within 90 days after the survey was provided.



LEGEND
- ● Set 1/2" I.R. W/Cap "RPLS 4170"
- ○ Fnd. 1/2" I.R.
- O Power Pole
- —E—E— Overhead Electric Line

SURVEY OF
LOT SEVEN (7), BLOCK FIFTY (50), EAST MIDLAND ADDITION, AN ADDITION TO THE CITY OF MIDLAND MIDLAND COUNTY, TEXAS

ACCORDING TO THE MAP OR PLAT THEREOF, RECORDED IN VOLUME 180, PAGE 80, DEED RECORDS, MIDLAND COUNTY, TEXAS

Census Tract: 17

This tract is in Flood Zone "X" as shown on the Flood Insurance Rate Map, Dated September 16, 2005 provided by the Federal Emergency Management Agency Flood Map Number: 48329C0093 F

The undersigned does hereby certify that this survey was this day made on the ground of the property legally described hereon and is correct, and that there are no visible discrepancies, conflicts, shortages in area, boundary line conflicts, encroachments, overlapping of improvements, easements or rights-of-way, except as shown hereon, and that said property has access to and from a dedicated roadway.

Dated this the 26th day of October 2021.

Bruce R. Pennell

Registered Professional Land Surveyor No. 4170
Date: 10/26/2021

(IF SURVEYORS SIGNATURE IS NOT SIGNED IN RED INK, THIS IS NOT AN ORIGINAL DOCUMENT)

Basis of Bearings:
NAD 83 Lambert Grid

Bearings and Distances Shown
Inside ( ) Indicate Record Information

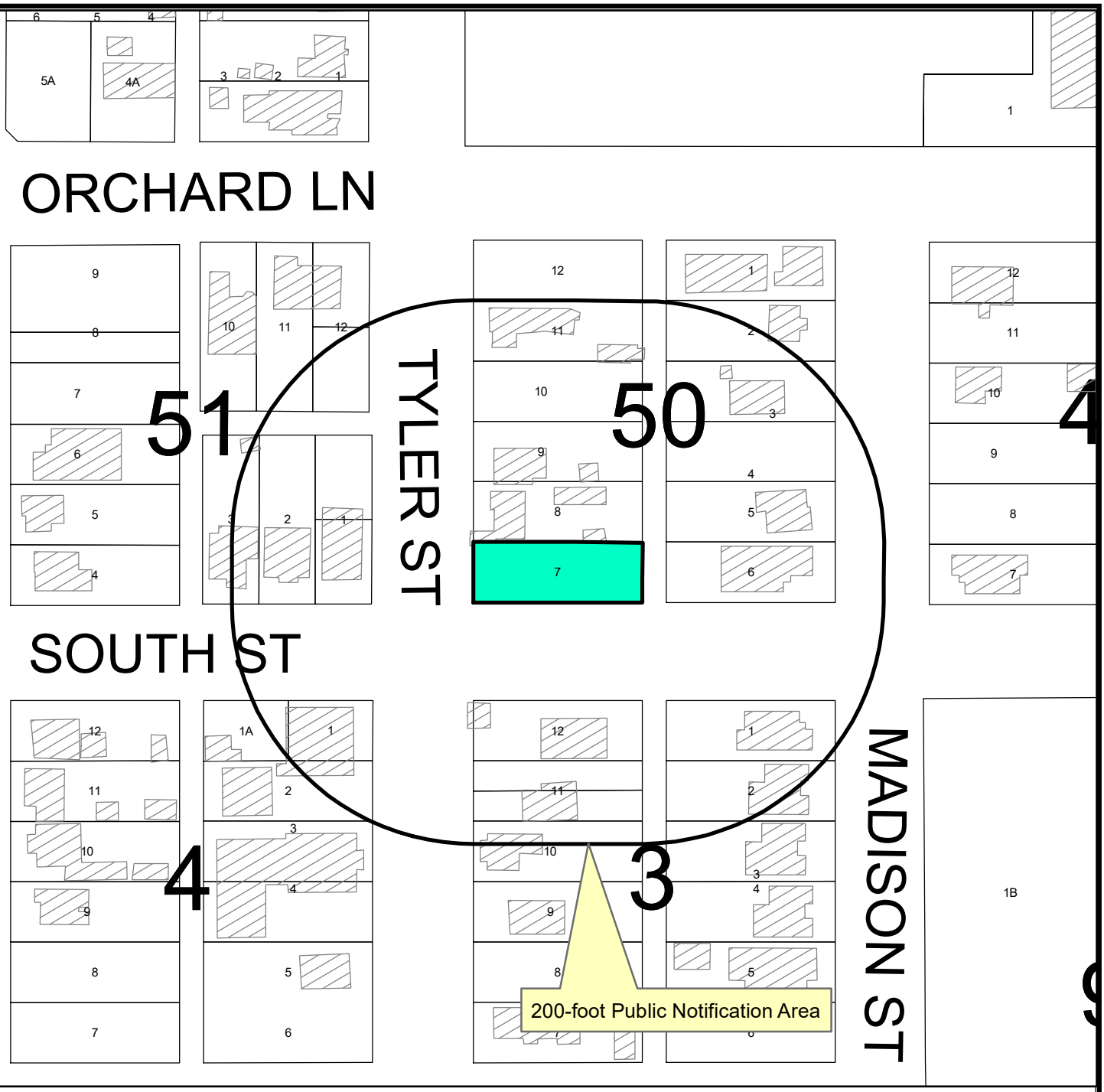
30 15 0 30

SCALE: 1" = 30'

STATE OF TEXAS
REGISTERED
BRUCE R. PENNELL
4170
PROFESSIONAL
LAND SURVEYOR

PENNELL LAND SURVEYING
PROFESSIONAL LAND SURVEYING
P.O. BOX 51622, MIDLAND, TEXAS 79710
VOICE:(432)570-6256 FAX: (432)682-3262 MOBILE: (432)528-1027

ABSTRACT OFFICE: N/A	G.F. #: N/A	COMMITMENT EFFECTIVE DATE: N/A	
CAD FILE: BRP22726	DATA FILE: 1301SOUTH	DRAWN BY: MARCY N.	FIRM NO.: 10193978



LOCATION MAP

E-22-0087 **Scale: 1" = 110'**

Consider a request by Erica Hernandez for a Special Exception from the City of Midland Zoning Ordinance, Section 5.04 – Residential Zoning District Dimensional Regulations Chart, concerning the minimum corner lot width dimension on Lot 7, Block 50, East Midland Addition, City and County of Midland, Texas.

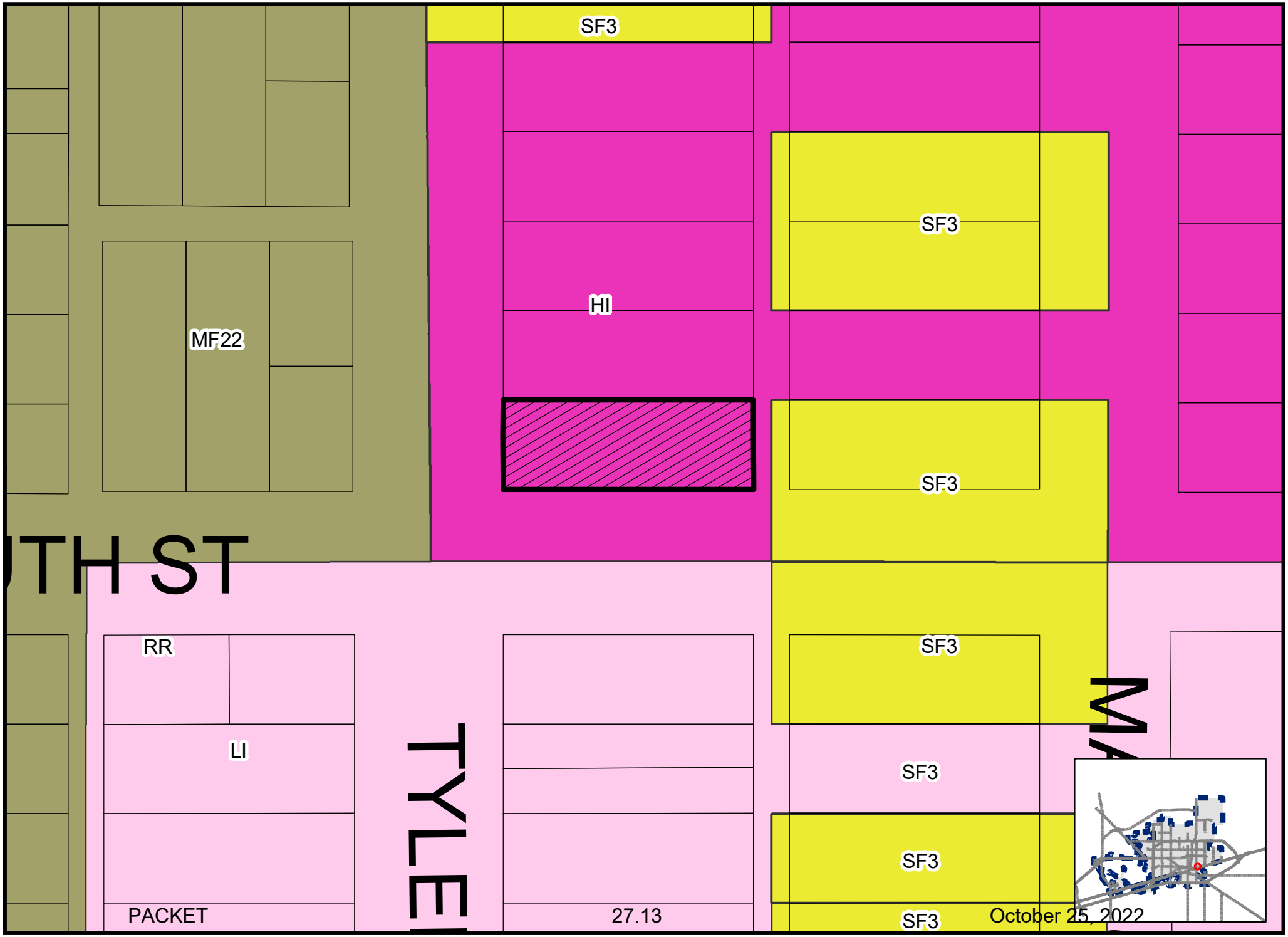
Generally located on the northeast corner of the intersection of South Street and Tyler Street - Council District 2

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.



Map By JR, 9/15/2022

Z-22-0303

Scale: 1" = 100'

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.








TORTILLAS
TAMALES

City Council Meeting

Item Number: 28

Meeting Date: October 25, 2022

To: City Council / City Manager

From: James Reber, Planner

Subject: Motion approving a request by Nader Mezher for a zone change from O-1, Office District, to RR, Regional Retail District, on Lot 1, Block 26, Wedgwood Park, Section 4, City and County of Midland, Texas. (Generally located on the east side of N. Midland Drive, approximately 510-feet north of Neely Avenue - DISTRICT 3) (DEVELOPMENT SERVICES)

Purpose:

The applicant, Nader Mezher**,** is requesting a Zone Change from O-1, Office District to RR, Regional Retail District, for a future development of retail and office space located at 2800 North Midland Drive.

Recommended City Council Action:

Approve

Fiscal Impact:

No City funds are required to process this request.

Current Zoning:

HI, Heavy Industrial District.

Surrounding Zoning and Land Use:

The properties to the north and east are zoned HI, Heavy Industrial District, with the exception of three lots to the north and east who's zoning has been corrected to SF-3, Single-Family Dwelling District. Properties to the west zoned MF-22, Multi-Family Dwelling District. Properties to the south are zoned LI, Light Industrial District, RR, Regional Retail District, with the exception

of four lots who's zoning has been corrected to SF-3, Single-Family Dwelling District.
Analysis:

The property is currently vacant and in the process of being platted. They are proposing to develop the property for office use and retail. The current zoning district does not allow for the development of an office center and retail. Therefore, the new proposed district will allow flexibility in the development of offices and retail.

They will need to comply with Section 5.05, Nonresidential Zoning District Dimensional Regulations Chart and Chapter 9-Landscaping Regulations.

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 objections to zone change request.

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, 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.]

Code: (Approved)

No Oil and Gas issues.

Transportation: (Approved)

No objection to zone change. [For the Applicant's information only.]

Planning (Approved):

The request does fit with the Tall City Tomorrow Comprehensive Plan, Chapter 3-Land Use Vision. This designation calls for U-M, Urban-Medium. These areas are designed to be vibrant, urban areas that draw customers and employees from outside the immediate area. A mix of housing types, neighborhood, and community commercial, office, and service uses. The City of Midland Planning Department supports this rezone because the surrounding area already has many offices and retail uses bordering the single-family dwellings and multi-family dwellings. Urban-Medium is intended to encourage closer proximity between transportation, housing, and

shopping choices.

This request was recommended for approval at the October 17, 2022, Planning and Zoning Commission meeting.

Therefore, staff recommends approval of this zone change from O-1, Office District to RR, Regional Retail District to conditions 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:

Staff has not received any letters of objection as of October 19, 2022.

Attachments:

Application
Maps
Site Plan (Exhibit A)

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOT 1, BLOCK 26, WEDGWOOD PARK ADDITION, SECTION 4, CITY AND COUNTY OF MIDLAND, TEXAS, FROM O-1, OFFICE DISTRICT, TO RR, REGIONAL RETAIL DISTRICT (GENERALLY LOCATED ON THE EAST SIDE OF NORTH MIDLAND DRIVE, APPROXIMATELY 510 FEET NORTH OF NEELY AVENUE); 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 1, Block 26, Wedgwood Park Addition, Section 4, 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 O-1, Office 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., 2022; 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., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, 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: 2-22-0308

Case Number:

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: Nader Mezher		Phone (832) 509-6216 Email	
Address 703 W Indiana Ave #28	City Midland	State TX	Zip 79701

Property Owner Printed Name: MR Property Holdings LLC		Phone (832) 509-6216 Email	
Address 1001 Sinclair Ave	City Midland	State TX	Zip 79705

Representative *(if different from Applicant or Property Owner)* Firm: Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Street Address: 2800 N Midland Dr, Midland TX 79707

Legal Description
Lot: 001 Block: 026 Subdivision: WEDGEWOOD PARK, SEC 4

Current Zoning: O1 **Proposed Zone:** RR
(List by tracts if more than one district is requested)

Reason for Zone Change Request: New Development

Present Use of Property: Vacant

Proposed Use of Property: Retail

How would this zone change affect the public health, safety and welfare?

Describe how conditions affecting the property have changed since present zoning designation: Building was demolished

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: 09/28/2022
Applicant (printed): Nader Mezher	
Property Owner (signature):	Date: 09/28/2022
Property Owner (printed) : MR Property Holdings LLC	

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 Nader Mezher who, being by me duly sworn, upon oath says: That (s)he is the owner of MR Property Holding LLC or 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 28 day of September, 2022, to certify which witness my hand and seal of office.

JANET LEE PRUITT
Notary Public, State of Texas
Comm. Expires 04-14-2025
Notary ID 130905056

Janet Lee Pruitt

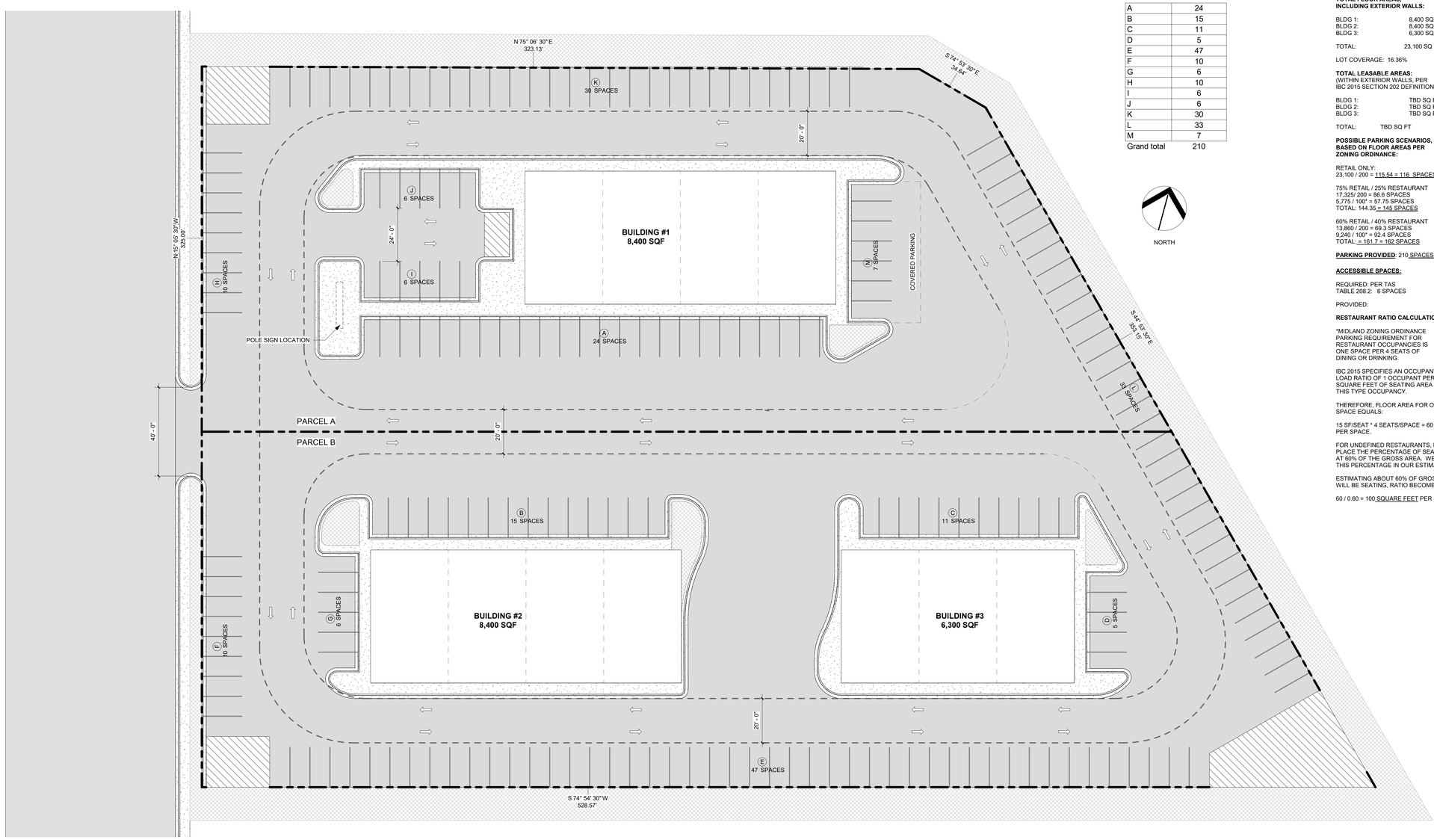
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY

☑ Property Owner Authorization	☑ Dimensioned Site Plan
☑ Application Fee	☐ Plans in Digital Format (PDF/JPEG)
Check # Credit Card	
Received By: James Reber	Date: 9/28/22

RECEIVED
SEP 28 2022
BY: James Reber

****Application will not be considered for scheduling until reviewed by a planner.****



1 Site Plan
A-101.1
1" = 20'-0"

PARCEL A: 63,787 SQF

PARCEL B: 77,528 SQF

Parking Schedule	
Mark	Spaces
A	24
B	15
C	11
D	5
E	47
F	10
G	6
H	10
I	6
J	6
K	30
L	33
M	7
Grand total	210

NORTH

Site Development Data

ZONING: LR-3 Local Retail District

Use: Retail / Personal Service

Provision will be made for some reasonable percentage of restaurant occupants. See below.

Parking Requirements:

Retail/Personal Service: 1 space per 200 Sq Ft

Restaurant: 1 space per 4 seats

TOTAL LOT AREA: 141,163 SQ FT

TOTAL FLOOR AREAS, INCLUDING EXTERIOR WALLS:

BLDG 1: 8,400 SQ FT
BLDG 2: 8,400 SQ FT
BLDG 3: 6,300 SQ FT

TOTAL: 23,100 SQ FT

LOT COVERAGE: 16.36%

TOTAL LEASABLE AREAS: (WITHIN EXTERIOR WALLS, PER IBC 2015 SECTION 202 DEFINITION)

BLDG 1: TBD SQ FT
BLDG 2: TBD SQ FT
BLDG 3: TBD SQ FT

TOTAL: TBD SQ FT

POSSIBLE PARKING SCENARIOS, BASED ON FLOOR AREAS PER ZONING ORDINANCE:

RETAIL ONLY:
23,100 / 200 = 115.54 = 116 SPACES

75% RETAIL / 25% RESTAURANT
17,325/ 200 = 86.6 SPACES
5,775 / 100* = 57.75 SPACES
TOTAL: 144.35 = 145 SPACES

60% RETAIL / 40% RESTAURANT
13,860 / 200 = 69.3 SPACES
9,240 / 100* = 92.4 SPACES
TOTAL: = 161.7 = 162 SPACES

PARKING PROVIDED: 210 SPACES

ACCESSIBLE SPACES:

REQUIRED: PER TAS TABLE 208.2: 6 SPACES

PROVIDED:

RESTAURANT RATIO CALCULATIONS

*MIDLAND ZONING ORDINANCE PARKING REQUIREMENT FOR RESTAURANT OCCUPANCIES IS ONE SPACE PER 4 SEATS OF DINING OR DRINKING.

IBC 2015 SPECIFIES AN OCCUPANT LOAD RATIO OF 1 OCCUPANT PER 15 SQUARE FEET OF SEATING AREA FOR THIS TYPE OCCUPANCY.

THEREFORE, FLOOR AREA FOR ONE PARKING SPACE EQUALS:

15 SF/SEAT * 4 SEATS/SPACE = 60 SQUARE FEET PER SPACE.

FOR UNDEFINED RESTAURANTS, MANY SOURCES PLACE THE PERCENTAGE OF SEATING AREAS AT 60% OF THE GROSS AREA. WE WILL USE THIS PERCENTAGE IN OUR ESTIMATE.

ESTIMATING ABOUT 60% OF GROSS AREA WILL BE SEATING, RATIO BECOMES:

60 / 0.60 = 100 SQUARE FEET PER SPACE.

ARRIS consulting
219 34th Street Lubbock, Texas
806-773-6763

THIS DOCUMENT IS RELEASED ON 09-14-22 UNDER THE AUTHORITY OF STEPHEN LINDEL FILLIPP, TEXAS R.A. #9733, FOR PURPOSES OF INTERIM REVIEW ONLY.

NOT FOR USE IN CONSTRUCTION OR REGULATORY APPROVAL.

Consultant
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No.	Description	Date

Nader Merher, Jose Corpus, Lucy Sisniega

2800 N. Midland Drive

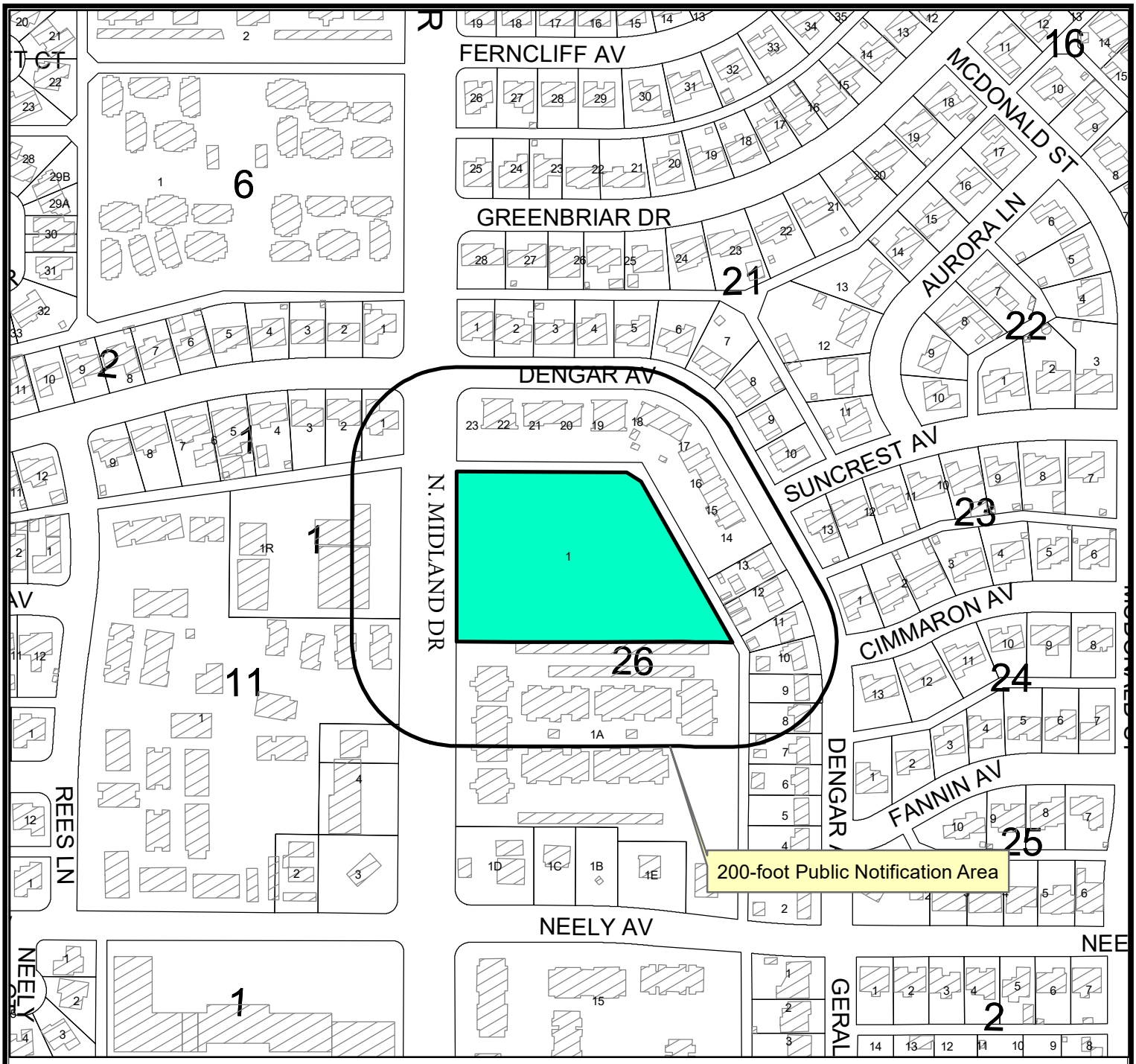
Architectural Site Plan

Project Number	22.002
Date	09-14-22
Drawn By	Author
Checked By	Checker

A-101.1

Scale	1" = 20'-0"

9/14/2022 3:32:56 PM



LOCATION MAP

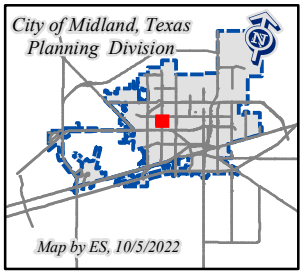
Z-22-0308 **Scale: 1" = 200'**

Consider a request by Nader Mezher for a zone change from O-1, Office District, to RR, Regional Retail District, on Lot 1, Block 26, Wedgwood Park, Section 4, City and County of Midland, Texas.

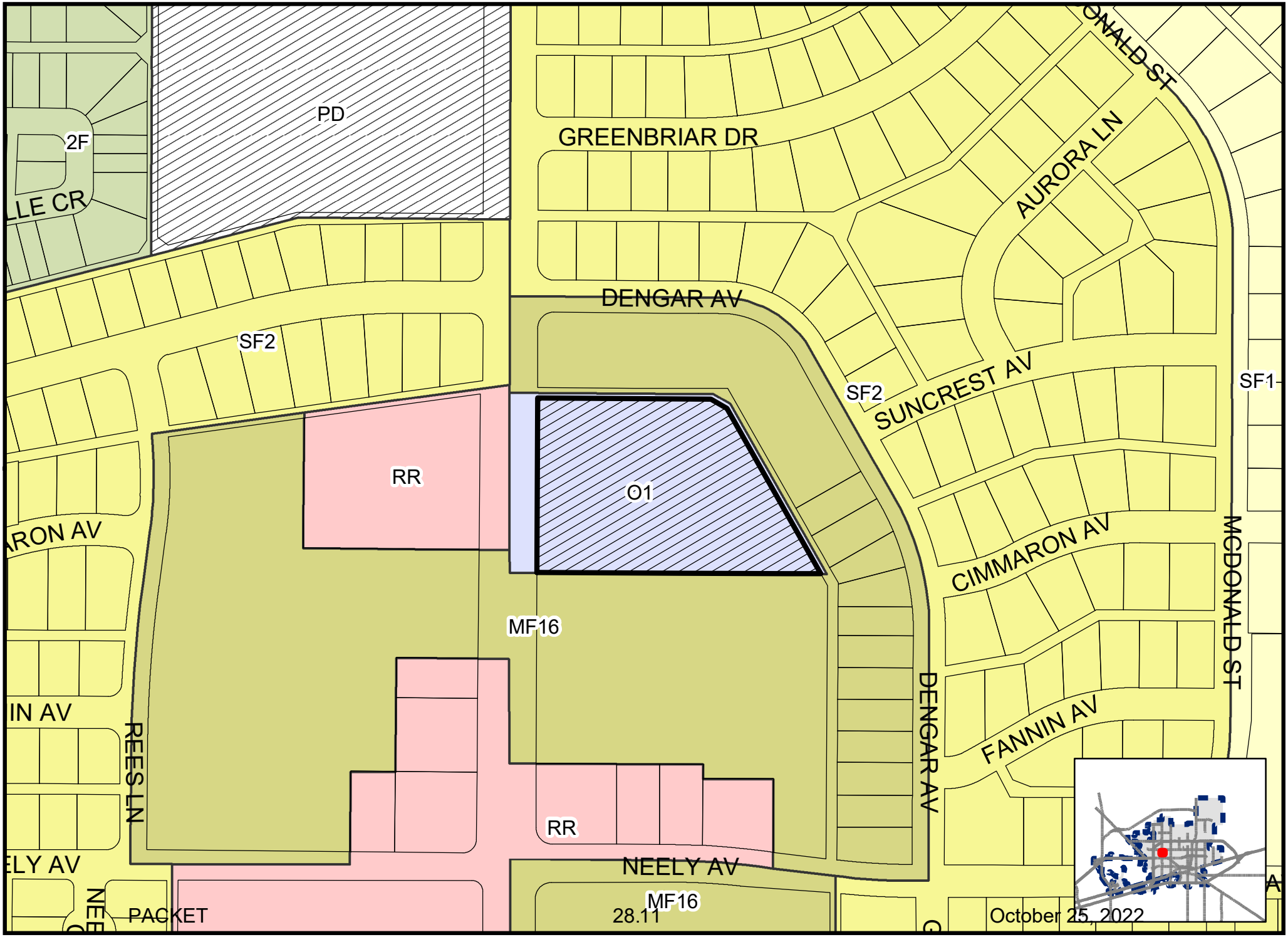
Generally located on the east side of N. Midland Drive, approximately 510-feet north of Neely Avenue. (Council District 3)

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 JR, 10/5/2022

Z-22-0308

Scale: 1" = 200'

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.


STELLAR
IMMEDIATE
MOVE-IN!







City Council Meeting

Item Number: 29

Meeting Date: October 25, 2022

To: City Council / City Manager

From: Alexandra Walling, Planner

Subject: **AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR THE WEST 40 FEET OF LOT 4 AND THE EAST 25 FEET OF LOT 5, BLOCK J, GARRETT PLACE ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE SOUTH SIDE OF WEST INDIANA AVENUE, APPROXIMATELY 80 FEET EAST OF CARLTON STREET), BY PERMITTING A REDUCED MINIMUM LOT DEPTH; 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 3) (DEVELOPMENT SERVICES)**

Purpose:

The applicant, Robert Wilson Sr., is requesting a Special Exception from the City of Midland Zoning Ordinance, Section 5.05 – *Nonresidential Zoning District Dimensional Regulations Chart*, concerning the minimum lot dimensions for the property located at 2407 West Indiana Avenue, for the purpose of future re-platting.

Recommended City Council Action:

Approve

Fiscal Impact:

No City funds are required to process this request.

Discussion:

The applicant's property is located at 2407 West Indiana Avenue and the location of an

established business. The applicant is requesting a special exception to the minimum lot depth dimension of the current zoning RR, Regional Retail District to be able to proceed with his application of re-plating for ownership purpose.

As mentioned previously the property is zoned RR, Regional Retail District and does not meet the minimum lot depth dimension. Per our City of Midland Zoning Ordinance, *Section 5.05 – Nonresidential Zoning District Dimensional Regulations Chart:*

RR, Regional Retail District
Lot Dimensions
Minimum Lot Depth:
Lot: 100 Feet

As shown on original plat of Garrett Place, all lots where originally subdivided with lot dimensions 50 feet wide and 80 feet deep, making it conforming at that time. Therefore, the applicant is requesting to reduce the required minimum lot depth dimension for the proposed lot to be approximately 90-feet deep, in order to proceed with the re-plating process.

This request has been circulated to all pertinent City departments for review. Below are the departments' comments.

Engineering: (Approved)

No objections. [For the Applicant's information only.]

Transportation: (Approved)

No objections to plat. [For the Applicant's information only.]

Fire: (Approved)

No objections.

Code Compliance: (Approved)

No Oil and Gas issues.

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, 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.

Planning Analysis:

While this request represents a deviation from the existing Zoning Ordinance, due to the unique circumstances surrounding the lot in question, staff is recommending approval of this application for a Special Exception to the City of Midland Zoning Ordinance, Section 5.05 - Nonresidential Zoning District Dimensional Regulations Chart. This lot has been platted and zoned in a way that prohibits further development, therefore, the City has inadvertently forced this property and others around it to be restricted of any modifications to existing development under the current zoning ordinance. Furthermore, the area has developed into a local business district and most of the development happened with the original plat of Garrett Place, therefore, continue developing this property as a business would fit with the character of the neighborhood. This special exception is required to re-plat. This request is in compliance with the Tall City Tomorrow Comprehensive Plan, Chapter 3 An Integrated Land Use Vision, "Future Land Use Map" as it designates this area for Urban-Low, a classification which calls for "neighborhoods with relatively low-density housing and easily accessed neighborhood commercial services." This special exception would allow for the existing business to be in compliance on this lot.

Due to these factors, staff is recommending approval of this special exception subject to condition A.

Condition:

A. That the minimum lot depth of the property shall be 90-feet.

Letters of Objection:

As of October 14, 2022, staff has not received any letters of objection.

Attachments:

Application
Site Plan (Exhibit A)
Maps

Morris William Jr.

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR THE WEST 40 FEET OF LOT 4 AND THE EAST 25 FEET OF LOT 5, BLOCK J, GARRETT PLACE ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE SOUTH SIDE OF WEST INDIANA AVENUE, APPROXIMATELY 80 FEET EAST OF CARLTON STREET), BY PERMITTING A REDUCED MINIMUM LOT DEPTH; 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 the west 40 feet of Lot 4 and the east 25 feet of Lot 5, Block J, Garrett Place Addition, City and County of Midland, Texas (the "Property"). Said special exception shall allow a reduced minimum lot depth.

SECTION TWO. Said special exception is subject to the following special condition:

That the minimum lot depth on the Property shall be 90 feet.

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., 2022; 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., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____

John Ohnemiller, City Attorney

MIDLAND Planning Division

Special Exception Application

Project Number: E-22-0086

Case Number: _____

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Property Owner Printed Name: Robert Wilson Jr.		Phone ( ) Email	
Address	City	State	Zip

Representative *(if different from Applicant or Property Owner)* Firm: Schumann Engineering Printed Name:		Phone (432) 684-5548 Email ealeman@schumannonline.net	
Address 800 N. Marienfeld, Suite 100	City Midland	State ~~TX~~	Zip 79701

Street Address:

Legal Description E 25' of Lot 5 & W. 40' of Lot 4

Lot: ~~25~~ Block: J Subdivision: Garrett Place.

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: Lot width doesn't meet minimum Requirement by 10 Feet.

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): Eduardo J Aleman	Date: 9-19-22
Applicant (printed): Ed Aleman	
Property Owner (signature):	Date: 9-19-22
Property Owner (printed) : Robert Wilson Jr.	

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 Ed Aleman who, being by me duly sworn, upon oath says: That (s)he is authorized by Robert Wilson Jr., 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.

Eduardo J Aleman
Authorized Agent (*signature*)

Subscribed and sworn to before me, this 19th day of September, 20 22, to certify which witness my hand and seal of office.

DALIA SALINAS
My Notary ID # 128541568
Expires March 9, 2023

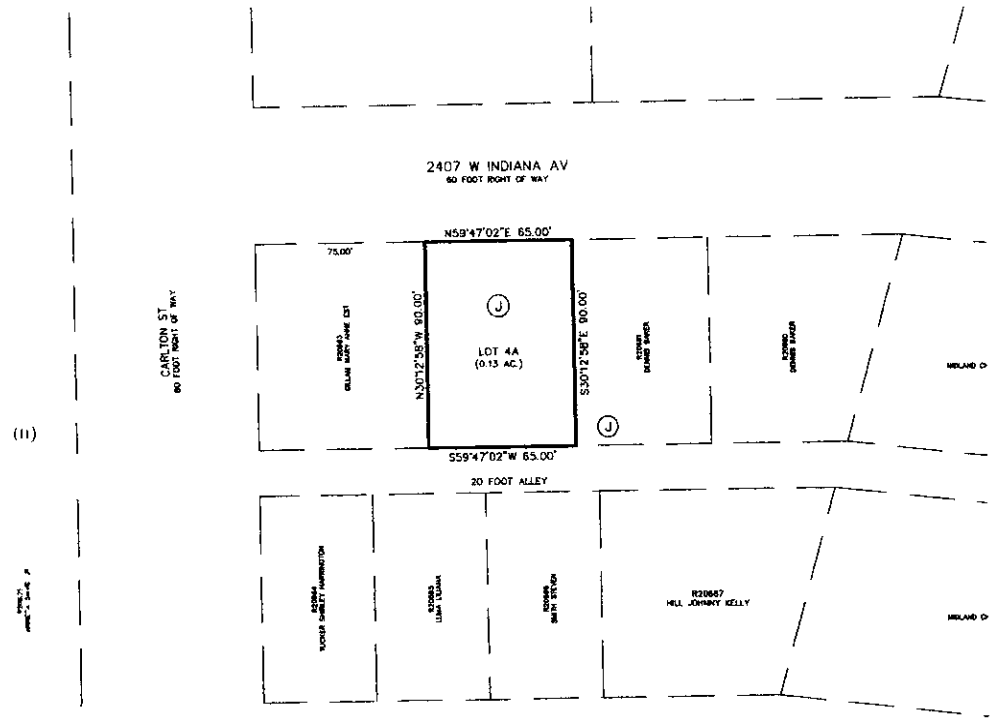
Dalia Salinas
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

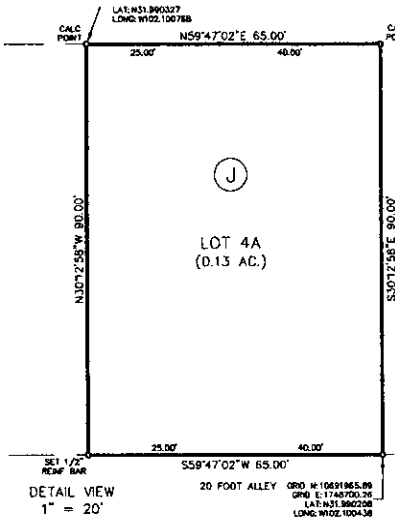
FOR OFFICE USE ONLY

☒ Property Owner Authorization	☒ Dimensioned Site Plan
☒ Application Fee	☐ Plans in Digital Format (PDF/JPEG)
Check # CC	
Received By: KM	Date: 9/21/22

SEP 21 2022

****Application will not be considered for scheduling until reviewed by a planner.****





BEING A RE-PLAT
5 AND THE WEST 4
AS RECORDED
PI
CITY AND CO

STATE OF TEXAS

COUNTY OF MIDLAND

WHEREAS, I AM THE RECORD
PLACE, CITY AND COUNTY OF

NOW, THEREFORE, KNOW ALL

THAT I DO HEREBY ADOPT TH
AS GARRETT PLACE, SECTION
DEDICATE TO THE PUBLIC USE
PARKWAYS) SHOWN HEREON.

WITNESS MY HAND AT MIDLAN

ROBERT WILSON JR

STATE OF TEXAS:
COUNTY OF MIDLAND:

THIS INSTRUMENT WAS ACKNO
_____, 20__

NOTARY PUBLIC
MIDLAND COUNTY, TEXAS

OWNER:

ROBERT WILSON JR
PO BOX 9693
MIDLAND, TEXAS 78708

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. BEARINGS, DISTANCES AND ACREAGE SHOWN ARE BASED ON GPS OBSERVATIONS AND CONFORM TO THE "TEXAS COORDINATE SYSTEM" TEXAS CENTRAL ZONE, NORTH AMERICAN DATUM OF 1983.

4. THE INSTALLATION OF PUBLIC IMPROVEMENTS MAY BE REQUIRED BY THE CITY OF MIDLAND AS SUCH TIME AS: (1) THE 43.867 ACRE TRACT IS RE-PLATTED FOR SUBDIVISION INTO MORE THAN ONE TRACT OR (2) THE PROPERTY IS REZONED FOR A MORE INTENSIVE USE.

5. INITIAL 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 INCREASES.

6. THIS PROPERTY LIES WITHIN ZONE "X" AS PER THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) 48329-C0201F WITH THE EFFECTIVE DATE OF SEPTEMBER 16, 2005.

LEGEND

MONUMENT AS DESCRIBED	PROPERTY LINE
ADJOINING PROPERTIES	FENCE LINE
SANITARY SEWER MANHOLE	CONCRETE
AIR CONDITIONER	LIGHT POLE
FIRE HYDRANT / COVERED	GAS METER
WATER LINE	WATER VALVE
SEWER LINE	CLEAN OUT
SANITARY SEWER MANHOLE	MIDLAND TAX ACCT ID

Texas 811
Know what's below.
Call before you dig.

THIS PLAT HAS BEEN CHECKED FOR ACCESSIBILITY OF UTILITIES.

SIGNED: _____
ONCOR ELECTRIC DELIVERY COMPANY

SIGNED: _____
AT&T TEXAS

SIGNED: _____
ATMOS ENERGY

SIGNED: _____
SUDDENLINK COMMUNICATIONS

CERTIFICATE OF APPROVAL

FOR APPROVAL BY THE COMMISSION:

THIS IS TO CERTIFY THAT THE ABOVE AND FOREGOING PLAT OF GARRETT PLACE, SECTION 7, WAS APPROVED BY PROPER ACTION OF THE CITY PLANNING AND ZONING COMMISSION OF THE CITY OF MIDLAND, ON THIS _____ DAY OF _____ 2022.

SIGNED: _____
CHAIRMAN LUCY SISNIEGA

ATTEST: _____
SECRETARY ELIZABETH SHAUGHNESSY

THAT I, RJ DAUM, 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 THEREON WERE PROPERLY PLACED UNDER MY PERSONAL SUPERVISION, IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS OF THE CITY OF MIDLAND, TEXAS.

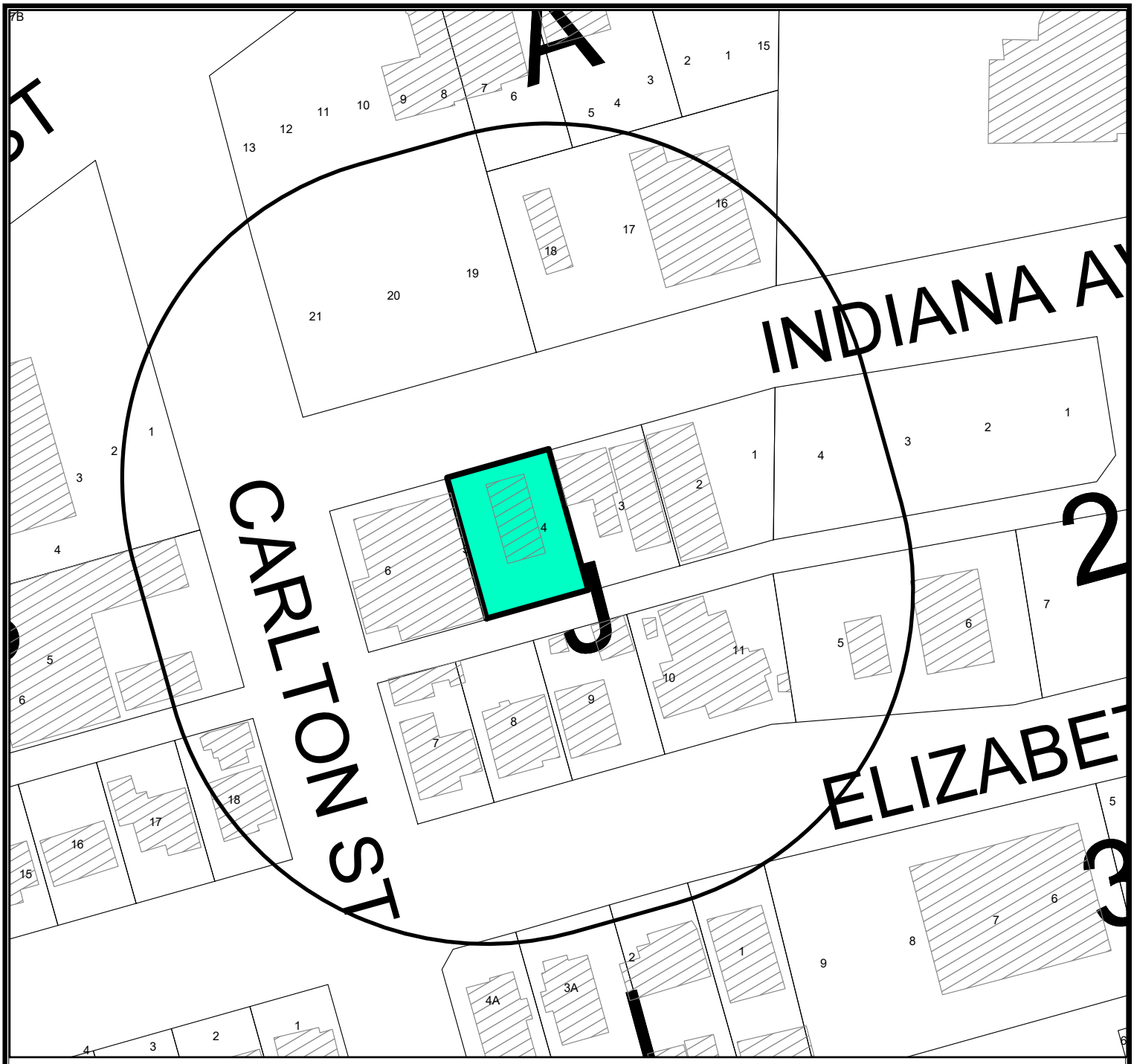
"THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW AND MARK-UP UNDER THE AUTHORITY OF RJ DAUM, RPLS 4826, ON AUGUST 4TH, 2022. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, PERMIT OR RECORDING PURPOSES."

STATE OF TEXAS
REGISTERED
RJ DAUM
4826
PROFESSIONAL
LAND SURVEYOR

RJ DAUM
TEXAS RPLS 4826

GRAPHIC SCALE

DRAWN BY: KDS DATE: 08/04/2022



LOCATION MAP

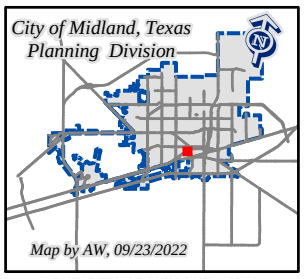
E-22-0086 **Scale: 1" = 200'**

Consider a request by Robert Wilson Sr. for a Special Exception from the City of Midland Zoning Ordinance, Section 5.05 - Nonresidential Zoning District Dimensional Regulations Chart, concerning the minimum lot depth on the east 25-feet of Lot 5 and the west 40-feet of Lot 4, Block J, Garrett Place, City and County of Midland, Texas.

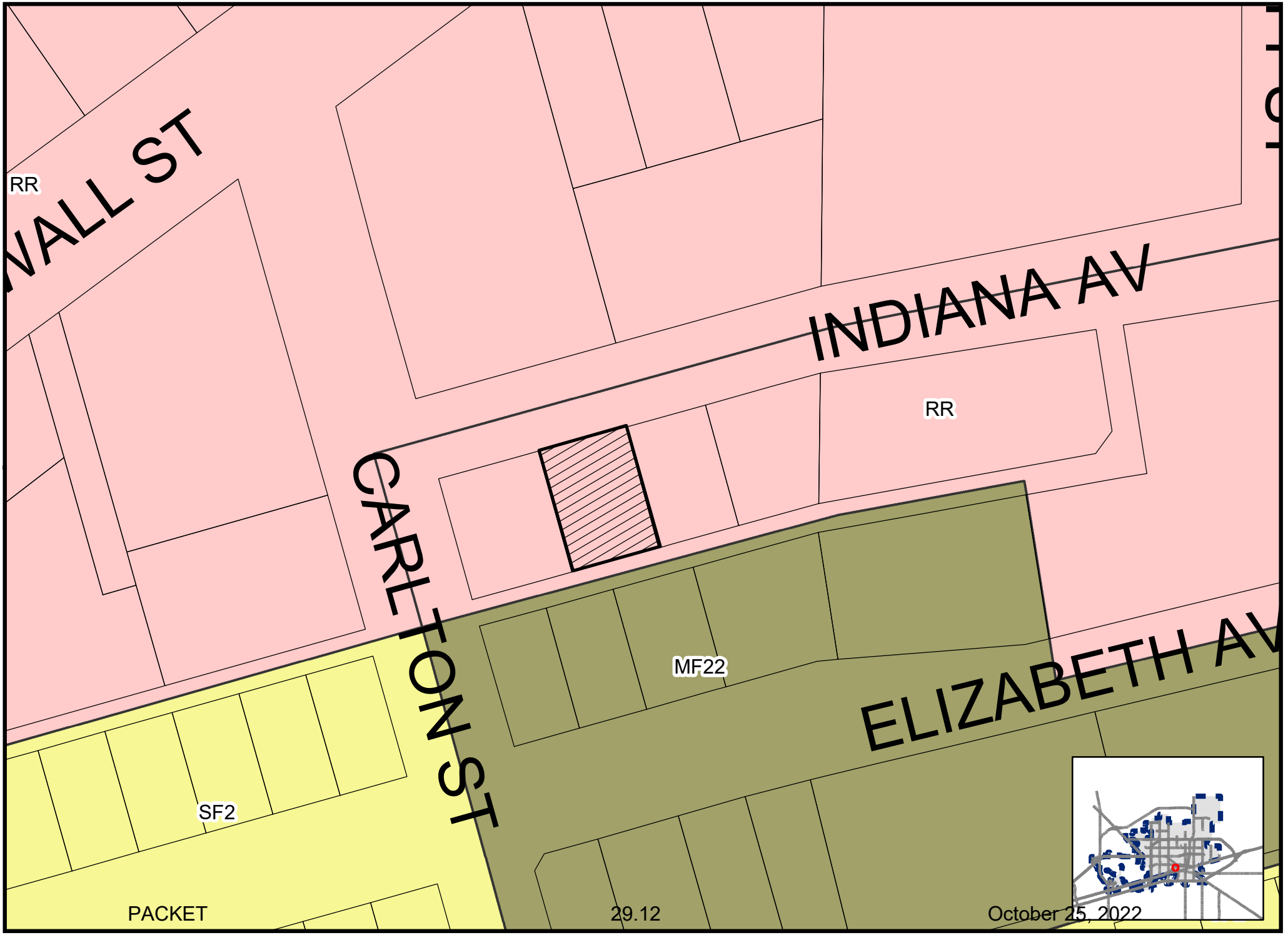
Generally located on the sout side of West Indiana Avenue,approximately 80-feet east of Carton Street (Council District 2)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



October 25, 2022



Map By AW, 10/10/2022

E-22-0086

Scale: 1" = 200'

ZONING MAP

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NO
PARKING



City Council Meeting

Item Number: 30

Meeting Date: October 25, 2022

To: City Council / City Manager

From: Landon Ochoa, Planner

Subject: AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITHOUT TERM FOR LOT 22 AND THE WEST 97.3 FEET OF LOT 23, BLOCK 81, PERMIAN ESTATES ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE NORTH SIDE OF WEST WALL STREET, APPROXIMATELY 438 FEET WEST OF THOMASON DRIVE), WHICH IS PRESENTLY ZONED RR, REGIONAL RETAIL DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR AUTOMOBILE OR OTHER MOTORIZED VEHICLE SALES AND SERVICE; 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 2) (DEVELOPMENT SERVICES)

Purpose:

The applicant, LCA Inc., is requesting a Specific Use Designation without Term for to operate a Car Dealership.

Recommended City Council Action:

Approve

Fiscal Impact:

This proposal does not have a significant financial impact to the City.

Surrounding Zoning and Land Use:

This property is currently zoned RR, Regional Retail District, and has an approved SUD without Term for a Food Truck. The properties to the north are zoned SF-2, Single-Family Dwelling District, and the location of residential. The properties to the east and west are zoned RR, Regional Retail and the location of motels. The property to the south across W. Wall Street is zoned C, Commercial District, and the location of a dealership.

Discussion:

The applicant is proposing to use the former used Mobile Food Vendor Park as a Car Dealership. The property is currently vacant and is zoned RR, Regional Retail District. Per section 4.03 Use Chart of the zoning ordinance, a car dealership is allowed in the RR, Regional Retail District with a Specific Use Designation without Term.

The site plan (Exhibit A) provided shows the front of the property will be used for customer parking and car display, while the rear will have parking for additional cars for sale. There is an existing 4,200 square foot building that will only be use as office space; the building has one (1) women's and one (1) men's restroom.

The proposed hours of operation are the following:

Monday through Saturday, 8:00 a.m. to 7:00 p.m.

The Automobile or Other Motorized Vehicle Sales and Services will need to comply with the standards as listed in Section 4.04.A.6 of the Zoning Ordinances.

6. Automobile or Other Motorized Vehicle Sales and Service Standards

a. Allowed by Specific Use Designation, according to the permitted Use Chart.

b. All exterior light sources shall be of a down-light type, indirect, diffused, or shielded type luminaries and so installed as to reduce glare effect and consequent interference with use of adjacent properties and boundary streets.

c. No intermittent or flashing lights shall be permitted.

d. Luminaries shall be mounted at a height not to exceed 30 feet as measured vertically from the horizontal surface of the nearest parking pavement.

e. All building façades shall be constructed with the same masonry materials that meet the masonry regulations for the zoning district in which the property is located.

f. No exterior auditory devices shall be permitted.

This project has been circulated to all City departments for review. Below are the department comments.

Engineering: (Approved)

No objections.

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.]

Building Code: (Approved)

No objections.

Fire: (Approved)

No objection

Planning: (Approved)

No objections.

The Future Land Use Map in the Tall City Tomorrow Comprehensive Plan calls for Urban-High uses in this area, encompassing a higher mix of housing types, major commercial, office and services uses, and limited industrial in suitable locations. Therefore, the new car dealership fit the recommendations of the Tall City Tomorrow Comprehensive Plan. Furthermore, it will stich itself with the already existing businesses that are primary Car Dealerships.

This request was recommended for approval at the September 19, 2022, Planning and Zoning Commission Meeting.

This request meets all requirements; therefore, staff recommends approval of the request of the Specific Use Designation without Term for an Automobile or other Motorized Vehicle Sales and Services, subject to Condition A through C.

Conditions:

A. **That the Automobile and other Motorized Vehicle Sales and Service shall significantly conform to the Site Plan (Exhibit A) which is attached hereto and incorporated herein for all purposes.**

B. **That the development of the automobile or other motorized vehicle sales and services shall comply with the standards listed in Section 4.04. A.6 of the Zoning Ordinance.**

C. **That the applicant shall obtain a Certificate of Occupancy prior to the commencement of the Automobile Sales and Services to ensure that the conditions of this permit are satisfied**

Letters of Objection:

As of October 22, 2022, staff has not received any letters of objection.

Attachments:

Site Plan (Exhibit A)
Application
Maps

.

Morris William 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 LOT 22 AND THE WEST 97.3 FEET OF LOT 23, BLOCK 81, PERMIAN ESTATES ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE NORTH SIDE OF WEST WALL STREET, APPROXIMATELY 438 FEET WEST OF THOMASON DRIVE), WHICH IS PRESENTLY ZONED RR, REGIONAL RETAIL DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR AUTOMOBILE OR OTHER MOTORIZED VEHICLE SALES AND SERVICE; 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 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 Lot 22 and the west 97.3 feet of Lot 23, Block 81, Permian Estates Addition, City and County of Midland, Texas (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 automobile or other motorized vehicle sales and service (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:

A. That the use and development of the Property for the Specific Use:

1. shall significantly conform to the site plan, which is attached hereto as Exhibit "A" and incorporated herein for all purposes; and

2. shall conform to standards set forth in Section 11-4.04.A.6 of the City Code.

B. That the operator shall obtain a Certificate of Occupancy prior to engaging in the Specific Use to ensure that the conditions of this Specific Use Designation Without Term are satisfied.

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., 2022; 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., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

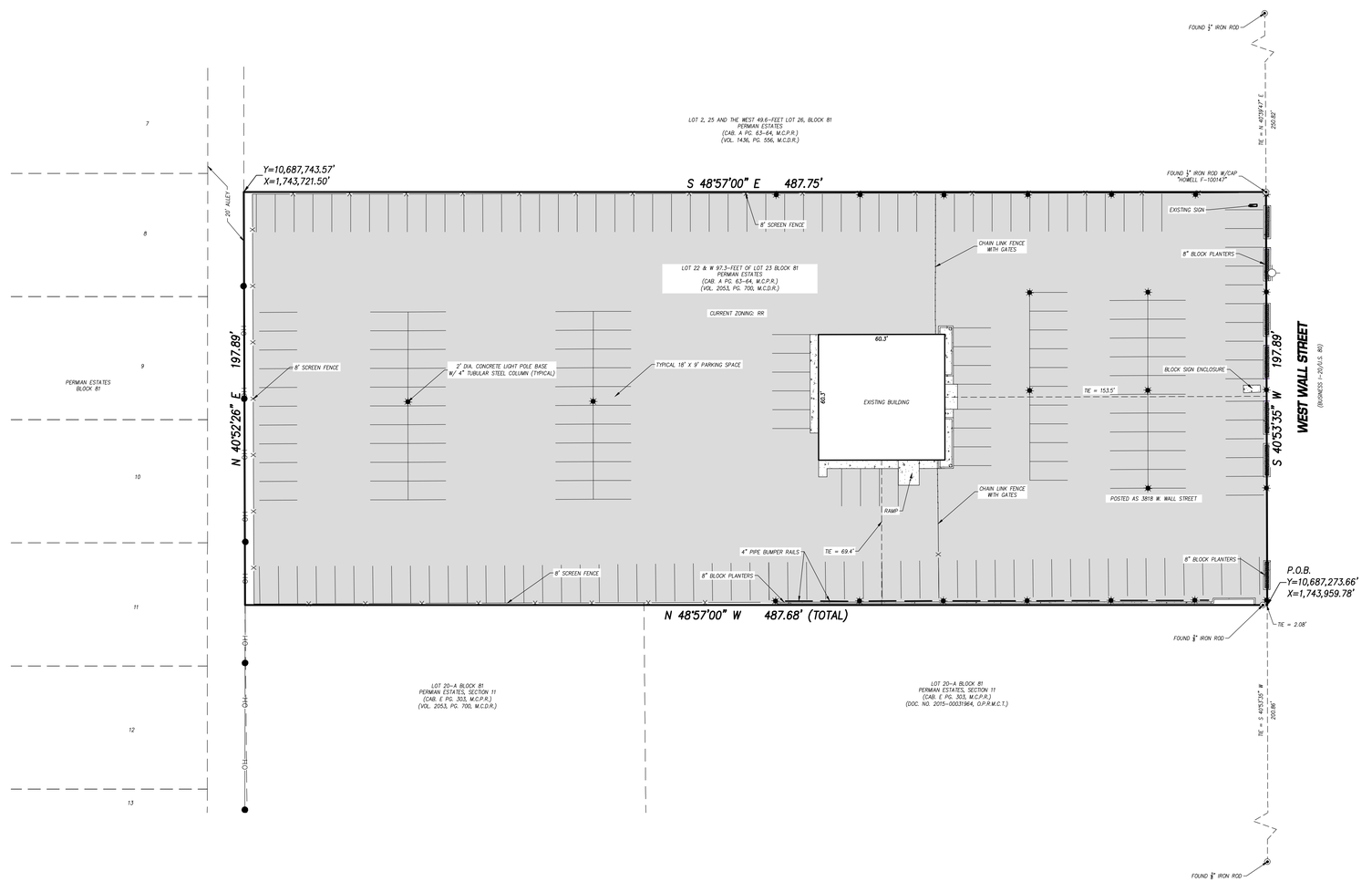
_____
John Ohnemiller, City Attorney

EXHIBIT "A"

EXISTING CONDITIONS & SITE PLAN SURVEY

LOT 22 & THE WEST 97.3-FEET OF LOT 23, BLOCK 81
PERMIAN ESTATES

CABINET A, PAGES 63-64
PLAT RECORDS OF MIDLAND COUNTY, TEXAS



30' 0 30'
SCALE : 1" = 30'

LEGEND

	EXISTING FIRE HYDRANT
	EXISTING POWER POLE
	EXISTING STREET LIGHT
	FOUND 1/2" I.R. W/CAP UNLESS OTHERWISE NOTED
	SET 1/2" I.R. W/CAP UNLESS OTHERWISE NOTED
	EXISTING CONCRETE
	EXISTING PAVEMENT
-X-	*EXISTING FENCE*
-OH-	*EXISTING OVERHEAD ELECTRIC*
	PARKING STRIPE
M.C.D.R.	*MIDLAND COUNTY DEED RECORDS*
M.C.P.R.	*MIDLAND COUNTY PLAT RECORDS*
O.P.R.M.C.T.	*OFFICIAL PUBLIC RECORDS OF MIDLAND COUNTY, TEXAS*

NOTES:

1. COORDINATES ARE RELATIVE TO THE TEXAS COORDINATE SYSTEM, 1983 NAD, CENTRAL ZONE AND NAVD '88, AND BASED UPON WESTERN DATA SYSTEMS VRS NETWORK, MIDLAND STATION (WTLS1012).
2. THE REFERENCE SUBDIVION PLATS ARE SHOWN ON THE SITE PLAN SURVEY.
3. THIS PROPERTY WAS POSTED WITH AN ADDRESS OF 3818 W. WALL STREET, MIDLAND TEXAS.
4. THE SUBJECT PROPERTY IS ZONED: RR

ENG._____ E.T. _____
SVY._____ DFT. _____
LCA JOB No. 20220432

ENVIRONMENTAL • CIVIL ENGINEERING • LAND SURVEYING
321 North Texas, Odessa Tx. 79761 F-001363 F-10034300
Phone # (432) 332-3058 E-Mail : lca@lcaodessa.com
Personal Service, Today and Tomorrow

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LCA Job No.: 22-052.1

MIDLAND Planning Division

Specific Use Designation Application (Non-Alcohol)

Case Number: SUDno-22-0030

Ord. Number: _____

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: LCA, Inc. (Agent)		Phone (432) 332-5058 Email mbo@lcaodessa.com	
Address 521 N. Texas Ave.	City Odessa	State TX	Zip 79761

Property Owner Printed Name: DJK Inc.		Phone (432) 334-8881 Email tomg@icaproperties.com	
Address 700 N. Grant Suite 600	City Odessa	State TX	Zip 79761

Representative *(if different from Applicant or Property Owner)* Firm: LCA, Inc (Agent) Printed Name: LCA, Inc. (Agent)		Phone (432) 332-5058 Email mbo@lcaodessa.com	
Address 521 N. Texas Ave	City Odessa	State TX	Zip 79761

Type of Permit: Non-Alcohol SUD

For Office Use Only
☐ with Term ☐without Term

Is there any Code Enforcement action pending on property? ☐ Yes ■ No

Street Address: 3818 W. Wall

Legal Description
Lot: Block: 81 Subdivision: Lot 22 & the West 97.3 feet of Lot 23, Block 81 Permian Estates (Cab. A, Pgs 63-64 M.C.P.R.)

Current Zoning: RR

Maximum Floor Area: 3,600 S.F.

Maximum Occupancy: 25 Employees

Proposed hours and days of use or operation: 8am -7pm

Reason for request: To operate a car dealership

Applicant's opinion as to why the request will not adversely affect the public safety, health, morals, general welfare, and convenience: This use is very similar to other uses within 1/4 mile of the subject property. Previous use of this property.

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): See attachment	Date:
Applicant (printed):	
Property Owner (signature):	Date:
Property Owner (printed) :	

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 George E. Thornley who, being by me duly sworn, upon oath says: That (s)he is authorized by DJK, Inc. Attn: Tom Glasman, 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.

George E. Thornley
Authorized Agent (*signature*)

Subscribed and sworn to before me, this 24th day of August, 20 22 to certify which witness my hand and seal of office.

Melanie Martinez
My Commission Expires
12/09/2022
ID No. 130046270

Melanie Martinez
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

RECEIVED
AUG 24 2022

FOR OFFICE USE ONLY

BY: James Reber

- ☑ Property Owner Authorization
- ☑ Application Fee
- Check # 38612
- ☑ Dimensioned Site Plan
- ☑ Site Plan in Digital Format (PDF/JPEG)

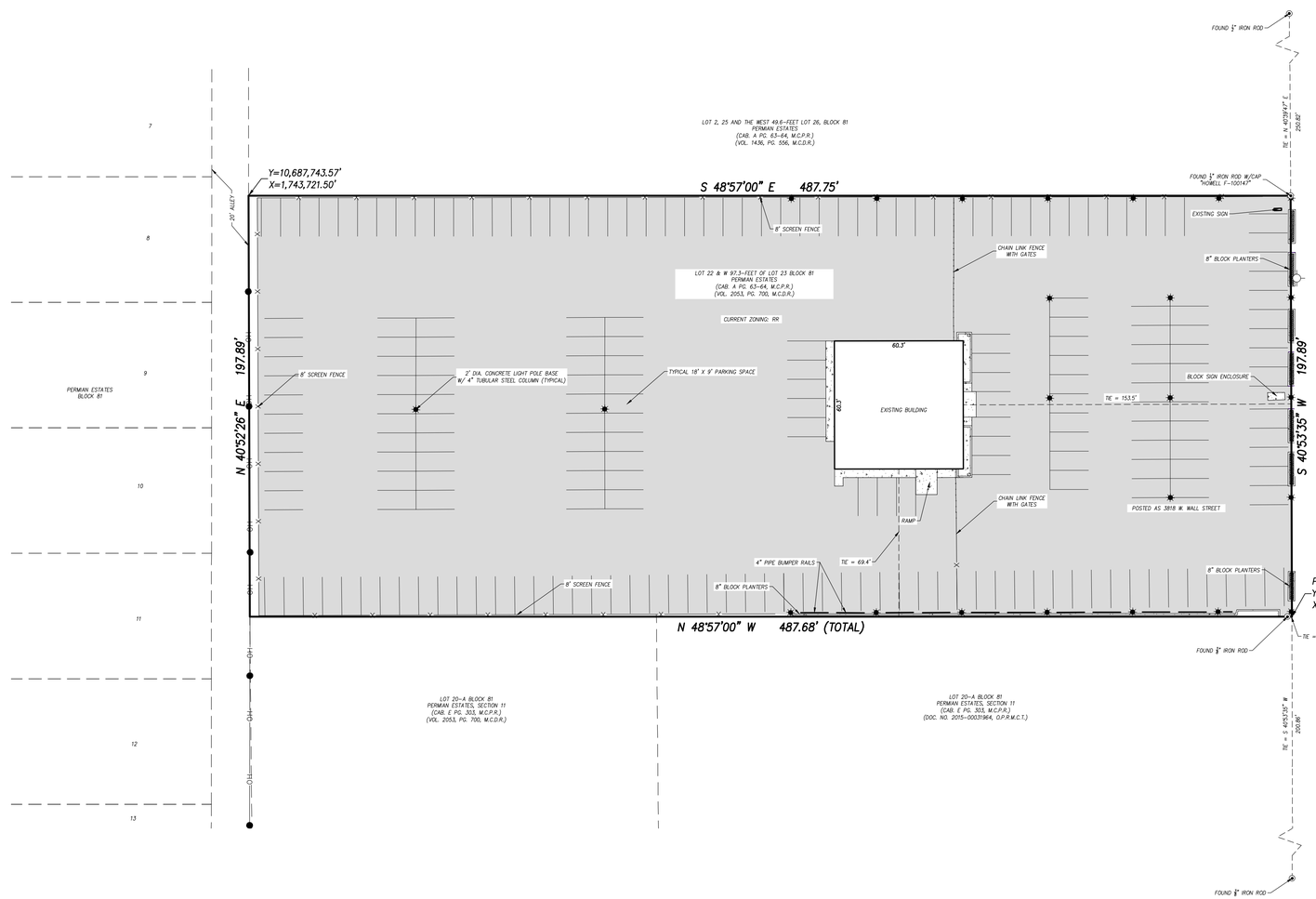
Received By: James Reber Date: 8/24/22

****Application will not be considered for scheduling until reviewed by a planner.****

EXISTING CONDITIONS & SITE PLAN SURVEY

LOT 22 & THE WEST 97.3-FEET OF LOT 23, BLOCK 81 PERMIAN ESTATES

CABINET A, PAGES 63-64
PLAT RECORDS OF MIDLAND COUNTY, TEXAS



30' 0 30'
SCALE : 1" = 30'

LEGEND

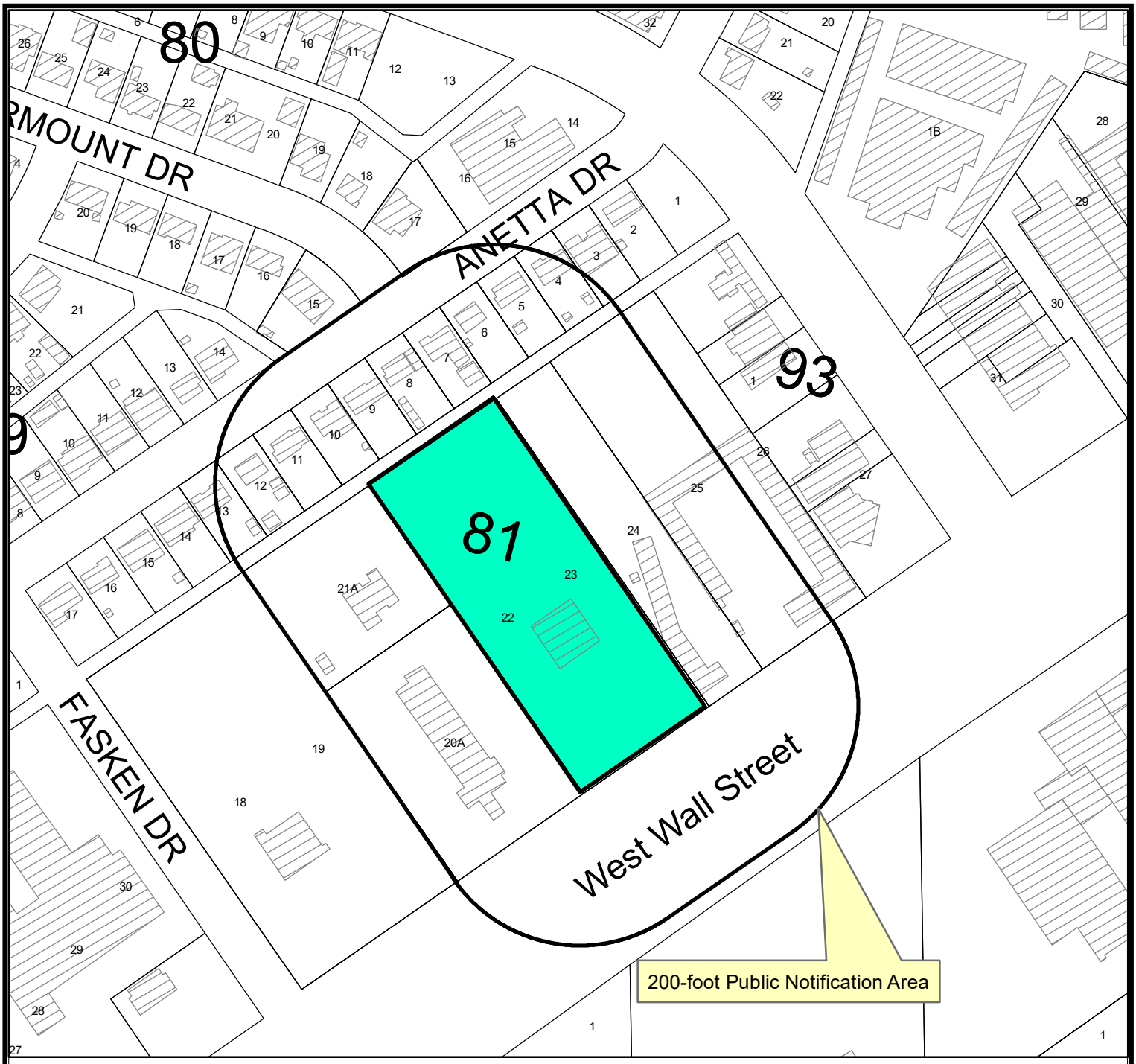
	EXISTING FIRE HYDRANT
	EXISTING POWER POLE
	EXISTING STREET LIGHT
	FOUND 1/2" I.R. W/CAP UNLESS OTHERWISE NOTED
	SET 1/2" I.R. W/CAP UNLESS OTHERWISE NOTED
	EXISTING CONCRETE
	EXISTING PAVEMENT
X	*EXISTING FENCE*
OH	*EXISTING OVERHEAD ELECTRIC*
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M.C.D.R.	*MIDLAND COUNTY DEED RECORDS*
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ENG._____ E.T. _____
SVY._____ DFT. _____
LCA JOB No. 20220432

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LOCATION MAP

SUDwo-22-0030 **Scale: 1" = 2,243'**

Consider a request by LCA Inc. for a Specific Use Designation without Term for a car dealershipon a Lot 22 & the west 97.3 feet of lot 23, Block 81, Permian Estates Addition, City and County of Midland, Texas.

Generally located on the north side of West Wall Street, approximately 438-feet west of Thomason Drive. (Council District 2)

PARCEL 1 ACRE 30.13

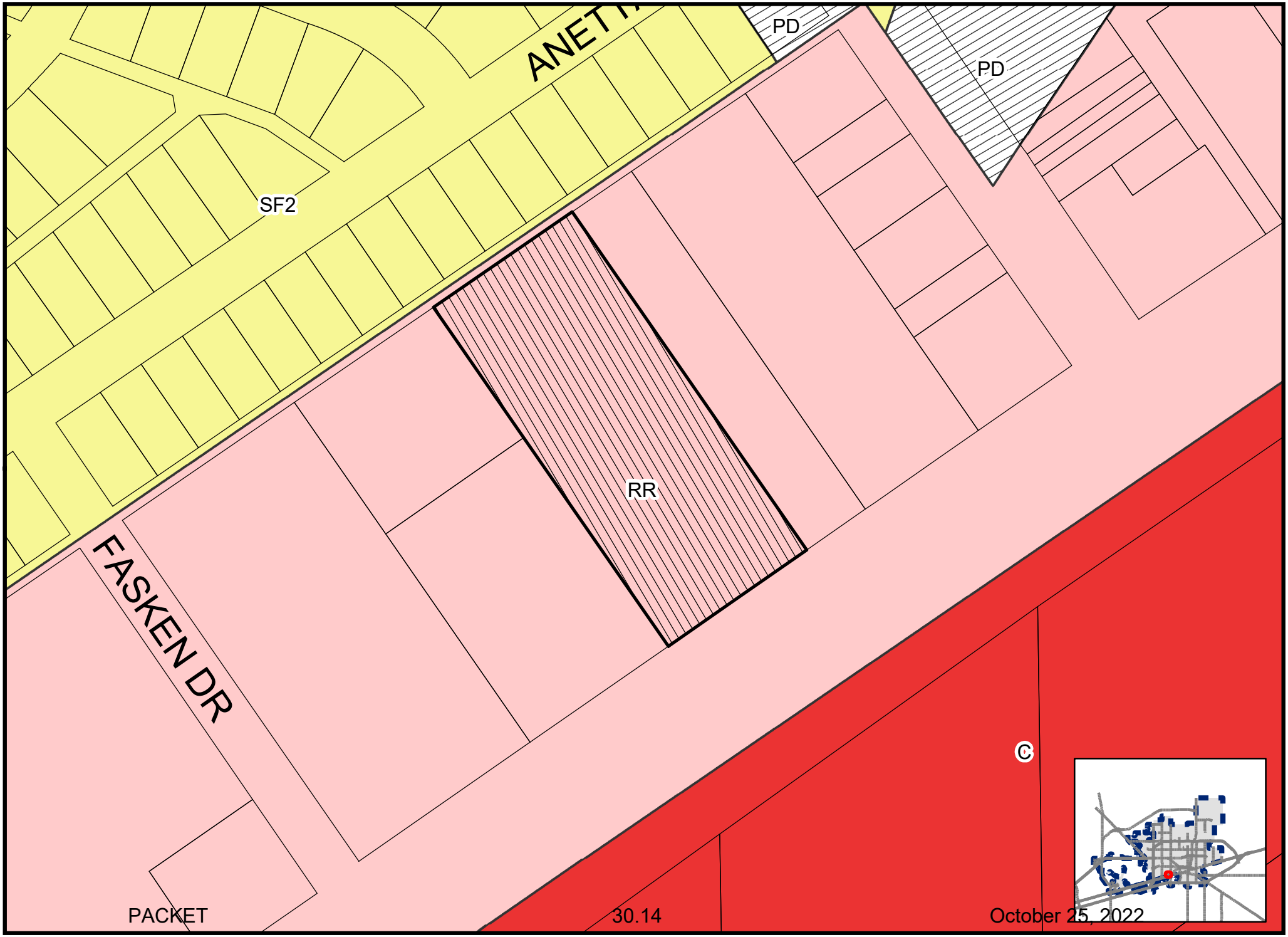
LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



October 25, 2022

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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, 8/31/2022

SUDwo-22-0030

Scale: 1" = 1,715'

ZONING MAP

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All American
DODGE
Jeep
RAM


Super 8
Super 8