PLANS FOR
ROCHELLE WSC ON BEHALF OF McCULLOCH COUNTY
VALVE REPLACEMENT
FUNDED BY TDA CDV21-0347
FEBRUARY 2025

RECORD DRAWING
APRIL, 2025
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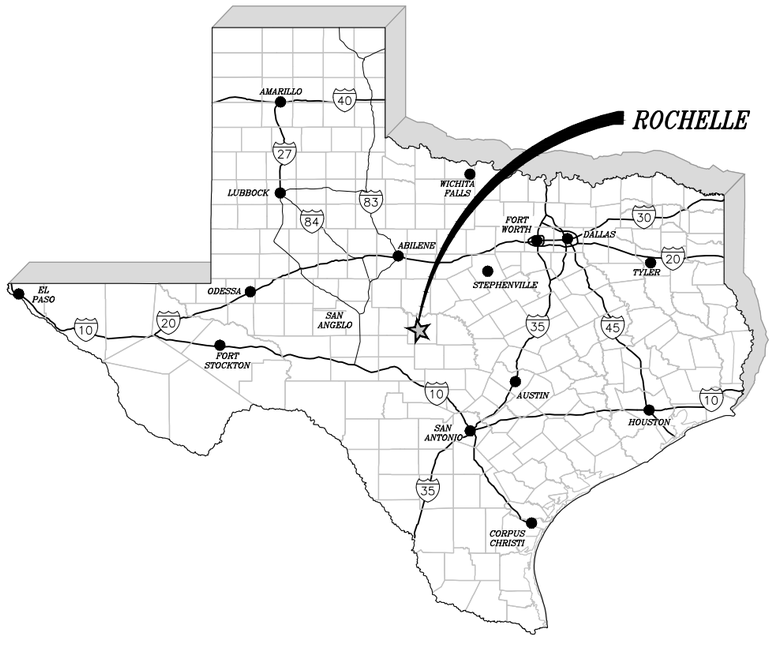


McCULLOCH COUNTY

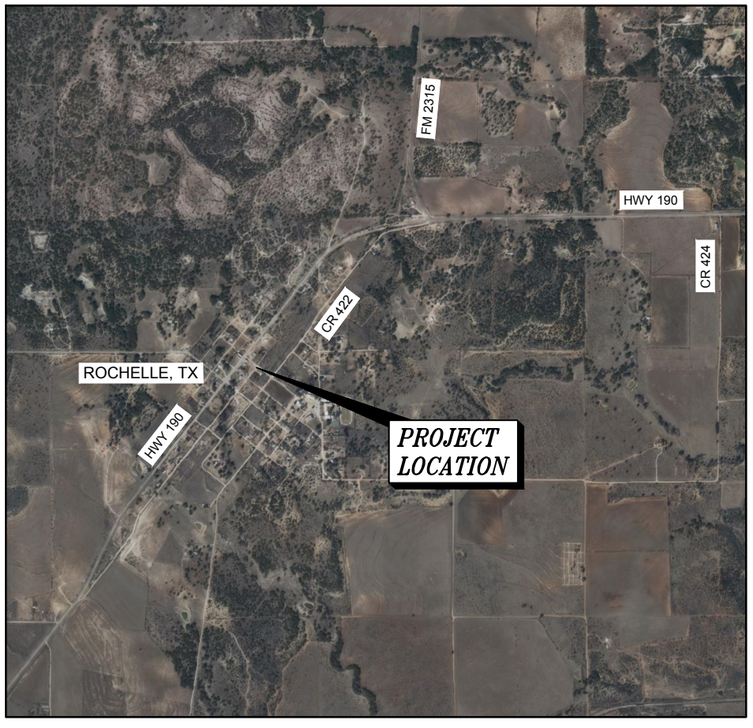
FRANK TRULL, COUNTY JUDGE

CAROL ANDERSON, COMMISIONER PCT. 1

RANDY DEANS, COMMISSIONER PCT. 2

JASON BEHRENS, COMMISIONER PCT. 3

DAN BRATTON, COMMISSIONER PCT. 4



PROJECT VICINITY MAP
NTS

NORTH

JACOB MARTIN
3465 CURRY LANE
ABILENE, TEXAS 79606
325.695.1070

TBPE FIRM # 2448 | TBAE FIRM # BR 2261 | TBPELS FIRM # 10194493

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PROJECT LOCATION MAP
SCALE: 1"=3,000'

NORTH

X:\CO_McCulloch\21253 - 2021-22 CDBG-TDA Infrastructure Improvements\Drafting_Record Drawings\VALVE REPLACEMENT RECORD\1 COVER.dwg

SHEET LIST TABLE

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5	WATER LINE DETAILS (1)
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SHEET INDEX

SCALE: 1"=1,200'

NORTH

LEGEND

	PROPOSED WATER LINE
	PROPOSED REDUCER
	PROPOSED COUPLING
	PROPOSED GATE VALVE
	PROPOSED TEE
	PROPOSED WYE
	PROPOSED CROSS
	PROPOSED 11.25° BEND
	PROPOSED 22.50° BEND
	PROPOSED 45° BEND
	PROPOSED 90° ELL
	PROPOSED CAP
	PROPOSED HYDRANT
	PROPOSED FLUSH VALVE
	PROPOSED AIR VALVE
	PROPOSED VALVE AND ROW MARKERS
	PROPOSED FLUSH VALVE (PROFILE VIEW)
	PROPOSED AIR VALVE (PROFILE VIEW)
	PROPOSED GATE VALVE (PROFILE VIEW)
	PROPOSED BORE AND ENCASEMENT
	EXISTING CONCRETE PAVEMENT
	EXISTING ASPHALT PAVEMENT
	EXISTING GRAVEL
GAS GAS GAS	EXISTING GAS LINE
	EXISTING GRAVEL
X X X X X	EXISTING FENCE
UT UT UT UT	EXISTING BURIED PHONE LINE
UCTV UCTV UCTV	EXISTING BURIED TV CABLE
OE OE OE OE	EXISTING OVERHEAD ELECTRIC
UE UE UE UE	EXISTING UNDERGROUND ELECTRIC
UFO UFO UFO	EXISTING FIBER OPTIC CABLE
W W W W W	EXISTING WATER LINE
S S S S S	EXISTING SEWER LINE
	PROPOSED UTILITY EASEMENT LINE
	EXISTING BNDY LINE
JOHN DOE	PROPERTY OWNER
WM	EXISTING WATER METER
	EXISTING WATER VALVE
	EXISTING IRRIGATION VALVE
	EXISTING FLUSH VALVE
T	EXISTING PHONE PEDESTAL
	EXISTING UTILITY POLE
	EXISTING SIGN
	EXISTING LIGHT POLE
EM	EXISTING ELECTRIC METER
GM	EXISTING GAS METER
GTS	EXISTING GAS TEST STATION
MB	EXISTING MAILBOX
	EXISTING TREE

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RECORD DRAWINGS

JACOB MARTIN
TBPELS FIRM # 10194493
TBAE FIRM # BR 2261
TBPE FIRM # 2448

ROCHELLE, TEXAS
VALVE REPLACEMENT
LEGEND SHEET INDEX AND SHEET LIST

NO.	REVISION	DATE

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PROJECT # 21253 | SCALE NOTED

SEQ. 2/7 | SHEET 2

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GENERAL CONSTRUCTION NOTES:

1. CONTRACTOR TO FIELD VERIFY SIZE AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. (TEXAS ONE CALL SYSTEM (1-800-545-6005). CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES WHICH ARE TO REMAIN. BURIED UTILITIES SHOWN ON THE PLANS HAVE BEEN ESTABLISHED BY ON GROUND INFORMATION AS WELL AS COORDINATION WITH UTILITY COMPANIES. LOCATIONS MAY NOT BE EXACT AND OTHER UTILITIES MAY EXIST.
2. PRIOR TO COMMENCEMENT OF CONSTRUCTION, ALL PARTIES THAT MEET THE DEFINITION OF OPERATOR AS DEFINED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) TPDES CONSTRUCTION GENERAL PERMIT TXR150000 SHALL SUBMIT REQUIRED NOTIFICATION WHICH MAY INCLUDE A COPY OF THE NOTICE OF INTENT (NOI) FILED WITH THE TCEQ AND/OR A CONSTRUCTION SITE NOTICE (CSN). A COPY OF THE NOI OR THE CSN SHALL BE PROVIDED TO THE CITY. THE NOI/CSN FORMS AND PERMIT REQUIREMENTS MAY BE OBTAINED FROM TCEQ AT www.TCEQ.state.tx.us/nav/permits/wq_construction.html. A STORM WATER POLLUTION PREVENTION PLAN (SWP3) SHALL BE DEVELOPED AND IMPLEMENTED PRIOR TO COMMENCEMENT OF CONSTRUCTION. QUESTIONS CONCERNING THESE REQUIREMENTS MAY BE ADDRESSED TO TCEQ SMALL BUSINESS LOCAL GOVERNMENT ASSISTANCE PROGRAM AT 800-447-2827.
3. ALL EXCAVATION GREATER THAN 5 FEET DEEP SHALL COMPLY WITH O.S.H.A. TRENCH SAFETY STANDARDS.
4. ALL MATERIAL FOR THIS PROJECT SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
5. CONTRACTOR SHALL CONTACT A REPRESENTATIVE FROM THE GAS COMPANY A MINIMUM OF 48 HOURS BEFORE COMPLETING GAS LINE CROSSINGS.
6. NO CHANGE IN THE WORK PERFORMED SHALL BE AUTHORIZED WITHOUT APPROVAL OF THE ENGINEER.
7. THE CONTRACTOR SHALL CONTROL EROSION AND SEDIMENTATION PER THE APPLICABLE PERMITS, LAWS, AND REGULATIONS.
8. CONTRACTOR SHALL MINIMIZE DAMAGE TO EXISTING LANDSCAPING ON PRIVATE PROPERTY. EXISTING LANDSCAPING SHALL BE REPAIRED TO ITS ORIGINAL CONDITION INCLUDING THE REPLACEMENT OF EXISTING LAWN AREAS WITH THE SAME TYPE OF LAWN AS WAS REMOVED.
9. ALL ABOVE GROUND STRUCTURES SHALL BE PROTECTED BY THE CONTRACTOR FROM DAMAGE DURING THE CONSTRUCTION PROCESS. ANY DAMAGE DONE ON PRIVATE PROPERTY SHALL BE REPLACED OR REPAIRED TO ORIGINAL OR BETTER CONDITIONS.
10. CONTRACTOR SHALL KEEP THE JOB SITE CLEAN AND FREE OF DEBRIS DURING CONSTRUCTION.
11. THE CITY RESERVES THE RIGHT TO WITHHOLD PAYMENT IF THE CONTRACTOR FAILS TO FOLLOW THE ABOVE GENERAL CONSTRUCTION GUIDELINES.

WATER LINE CONSTRUCTION NOTES:

1. ALL MATERIAL INSTALLATION SHALL FULLY COMPLY WITH TAC TCEQ CHAPTER 290 FOR NO EXTRA PAYMENT. CHAPTER 290 REQUIREMENTS SHALL TAKE PRIORITY OVER ALL OTHER SPECIFICATIONS, PLANS AND CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL FULLY COMPLY WITH ALL TCEQ REGULATIONS PERTAINING TO SEPARATION DISTANCES AS DESCRIBED IN SECTION 290.44 OF THE TAC.
3. NO EXTRA PAYMENT WILL BE MADE FOR SPECIAL PROVISIONS REQUIRED TO MEET TCEQ REGULATIONS WHEN WATER & SEWER LINES CROSS OR WHEN THEY ARE LAID PARALLEL PER DETAILS & PER TCEQ REGS.
4. ALL PIPE AND ACCESSORIES SHALL BE LAID, JOINTED TESTED FOR DEFECTS AND LEAKAGE WITH PRESSURE AND DISINFECTED ACCORDING TO AWWA CM651-05. CONTRACTOR SHALL MAINTAIN APPROPRIATE BACK FLOW PREVENTION ACCORDING TO AWWA C651-05 SECTION 4.3.9.
10. ALL ABANDONED FIRE HYDRANTS SHALL BE REMOVED & DISPOSED OF BY THE CONTRACTOR.
11. FOR ALL ABANDONED VALVES REMOVE VALVE BOXES, FILL VALVE BOX WITH BEDDING MATERIAL AND REPAIR PAVEMENT.
12. WATER SERVICE WATER LINES SHALL BE SDR 9 HDPE UNLESS NOTED OTHERWISE.
13. CONTRACTOR SHALL SPRAY ALL FITTINGS, SADDLES, CORP STOP, ETC WITH BLEACH SOLUTION AS FOLLOWS: 1 GAL BLEACH / 4 GALLON POTABLE WATER.
14. TO BE ELIGIBLE TO BID, THE BIDDER MUST HAVE BEEN A UTILITY CONTRACTOR FOR AT LEAST 5 YEARS AND BE A TEXAS LICENSED UTILITY CONTRACTOR.
15. A TEXAS LICENSED WATER OPERATOR (WITH A MINIMUM OF A "C" LICENSE) HAS TO BE IN CHARGE OF FLUSHING AND SERVICE CONNECTIONS.
16. PROPOSED WATER LINE SHALL BE INSTALLED BELOW EXISTING WATER LINES AT ALL WATER LINE CROSSINGS WITH A MINIMUM OF 1' CLEARANCE.
17. DEPTH OF EXISTING BURIED UTILITIES IS UNKNOWN. CONTRACTOR SHALL VERIFY ALL EXISTING BURIED UTILITY DEPTHS.

TCEQ WATER DISTRIBUTION SYSTEM
GENERAL CONSTRUCTION NOTES

1. This water distribution system must be constructed in accordance with the current Texas Commission on Environmental Quality (TCEQ) Rules and Regulations for Public Water Systems 30 Texas Administrative Code (TAC) Chapter 290 Subchapter D. When Conflicts are noted with local standards, the more stringent requirement shall be applied. At a minimum, construction for public water systems must always meet TCEQ's "Rules and Regulations for Public Water Systems."
2. All newly installed pipes and related products must conform to American National Standards Institute (ANSI)/NSF International Standard 61 and must be certified by an organization accredited by ANSI [§290.44(a)(1)].
3. Plastic pipe for use in public water systems must bear the NSF International Seal of Approval (NSF-pw) and have an ASTM design pressure rating of at least 150 psi or a standard dimension ratio of 26 or less [§290.44(a)(2)].
4. No pipe which has been used for any purpose other than the conveyance of drinking water shall be accepted or relocated for use in any public drinking water supply [§290.44(a)(3)].
5. All water line crossings of wastewater mains shall be perpendicular [§290.44(e)(4)(B)].
6. Water transmission and distribution lines shall be installed in accordance with the manufacturer's instructions. However, the top of the waterline must be located below the frost line and in no case shall the top of the water line be less than 24 inches below ground surface [§290.44(a)(4)].
7. The maximum allowable lead content of pipes, pipe fittings, plumbing fittings, and fixtures is 0.25 percent [§290.44(b)].
8. The contractor shall install appropriate air release devices with vent openings to the atmosphere covered with 16-mesh or finer, corrosion resistant screening material or an acceptable equivalent [§290.44(d)(1)].
9. The contractor shall not place the pipe in water or where it can be flooded with water or sewage during its storage or installation [§290.44(f)(1)].
10. When waterlines are laid under any flowing or intermittent stream or semi-permanent body of water the waterline shall be installed in a separate watertight pipe encasement. Valves must be provided on each side of the crossing with facilities to allow the underwater portion of the system to be isolated and tested [§290.44(f)(2)].
11. Pursuant to 30 TAC §290.44(a)(5), the hydrostatic leakage rate shall not exceed the amount allowed or recommended by the most current AWWA formulas for PVC pipe, cast iron and ductile iron pipe. Include the formulas in the notes on the plans.

o The hydrostatic leakage rate for polyvinyl chloride (PVC) pipe and appurtenances shall not exceed the amount allowed or recommended by formulas in America Water Works Association (AWWA) C-605 as required in 30 TAC §290.44(a)(5). Please ensure that the formula for this calculation is correct and most current formula is in use;

$$Q = \frac{LD\sqrt{P}}{148{,}000}$$

Where:

- Q = the quantity of makeup water in gallons per hour,
- L = the length of the pipe section being tested, in feet,
- D = the nominal diameter of the pipe in inches, and
- P = the average test pressure during the hydrostatic test in pounds per square inch (psi)

o The hydrostatic leakage rate for ductile iron (DI) pipe and appurtenances shall not exceed the amount allowed or recommended by formulas in America Water Works Association (AWWA) C-600 as required in 30 TAC §290.44(a)(5). Please ensure that the formula for this calculation is correct and most current formula is in use;

$$L = \frac{SD\sqrt{P}}{148{,}000}$$

Where:

- L = the quantity of makeup water in gallons per hour,
- S = the length of the pipe section being tested, in feet,
- D = the nominal diameter of the pipe in inches, and
- P = the average test pressure during the hydrostatic test in pounds per square inch (psi)

12. The contractor shall maintain a minimum separation distance in all directions of nine feet between the proposed waterline and wastewater collection facilities including manholes. If this distance cannot be maintained, the contractor must immediately notify the project engineer for further direction. Separation distances, installation methods, and materials utilized must meet §290.44(e)(1)-(4).
13. The separation distance from a potable waterline to a wastewater main or lateral manhole or cleanout shall be a minimum of nine feet. Where the nine-foot separation distance cannot be achieved, the potable waterline shall be encased in a joint of at least 150 psi pressure class pipe at least 18 feet long and two nominal sizes larger than the new conveyance. The space around the carrier pipe shall be supported at five-foot intervals with spacers or be filled to the springline with washed sand. The encasement pipe shall be centered on the crossing and both ends sealed with cement grout or manufactured sealant [§290.44(e)(5)].
14. Fire hydrants shall not be installed within nine feet vertically or horizontally of any wastewater line, wastewater lateral, or wastewater service line regardless of construction [§290.44(e)(6)].
15. Suction mains to pumping equipment shall not cross wastewater mains, wastewater laterals, or wastewater service lines. Raw water supply lines shall not be installed within five feet of any tile or concrete wastewater main, wastewater lateral, or wastewater service line [§290.44(e)(7)].
16. Waterlines shall not be installed closer than ten feet to septic tank drainfields [§290.44(e)(8)].
17. The contractor shall disinfect the new waterlines in accordance with AWWA Standard C-651-14 or most recent, then flush and sample the lines before being placed into service. Samples shall be collected for microbiological analysis to check the effectiveness of the disinfection procedure which shall be repeated if contamination persists. A minimum of one sample for each 1,000 feet of completed waterline will be required or at the next available sampling point beyond 1,000 feet as designated by the design engineer [§290.44(f)(3)].
18. Dechlorination of disinfecting water shall be in strict accordance with current AWWA Standard C655-09 or most recent.
19. Pursuant to 30 TAC §290.44(f)(1), the contractor shall not place the pipe in water or where it can be flooded with water or sewage during its storage or installation.
20. Pursuant to 30 TAC §290.44(f)(2), when waterlines are laid under any flowing or intermittent stream or semi-permanent body of water the water main shall be installed in a separate watertight pipe encasement. Valves must be provided on each side of the crossing with facilities to allow the underwater portion of the system to be isolated and tested.
21. The contractor shall disinfect the new water mains in accordance with AWWA Standard C-651 and then flush and sample the lines before being placed into service. Samples shall be collected for microbiological analysis to check the effectiveness of the disinfection procedure which shall be repeated if contamination persists. A minimum of one sample for each 1,000 feet of completed water line will be required or at the next available sampling point beyond 1,000 feet as designated by the design engineer, in accordance with 30 TAC §290.44(f)(3).

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RECORD DRAWINGS

JACOB MARTIN
TBPELS FIRM # 10194493
TBAE FIRM # BR 2261
TBPE FIRM # 2448

ROCHELLE, TEXAS
VALVE REPLACEMENT

PROJECT NOTES

NO.	REVISION	DATE

BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK SCALE AND ADJUST ACCORDINGLY.

PROJECT # 21253 | SCALE NONE

SEQ. 3/7 | SHEET 3

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NOTE:

1. PLANS SHOWN ARE THE CURRENTLY KNOWN BEST ESTIMATION BY THE ENGINEER AND ROCHELLE WSC.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATING VALVE SITES IN ORDER TO VERIFY EXISTING CONDITIONS AND MATERIALS REQUIRED FOR VALVE REPLACEMENT, INCLUDING SIZES, PRIOR TO ORDERING MATERIALS.

VALVE SET #1 - INTERSECTION OF
5TH ST. AND AND FRONT STREET

VALVE SET # 2 - INTERSECTION OF
5TH ST. AND RAILROAD AVE.

NORTH

GRAPHIC SCALE 1"=40'
20 0 20 40

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TBAE FIRM # BR 2261
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ROCHELLE, TEXAS
VALVE REPLACEMENT

VALVE REPLACEMENT SITE PLANS

NO.	REVISION	DATE

PROJECT # 21253
SCALE 1" = 100'

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SEQ. 4/7
SHEET 4

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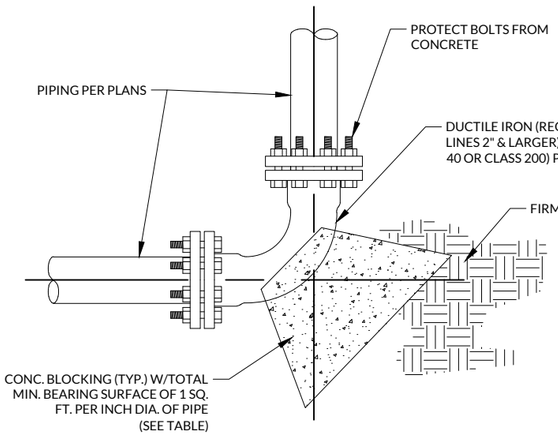
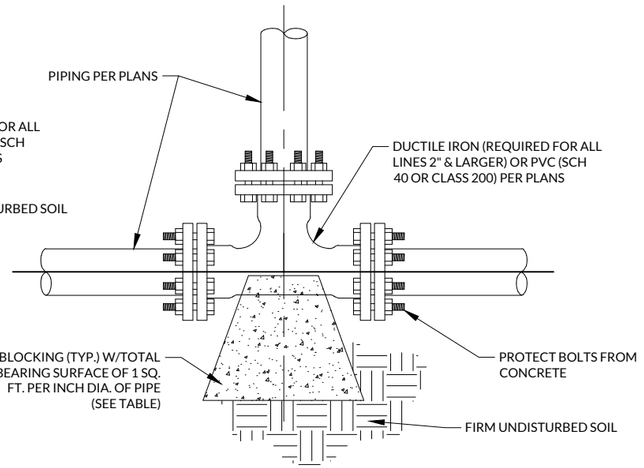
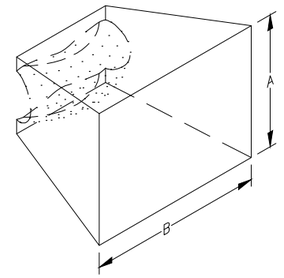




TYPICAL BLOCKING DETAILS
N.T.S.

NOTES:

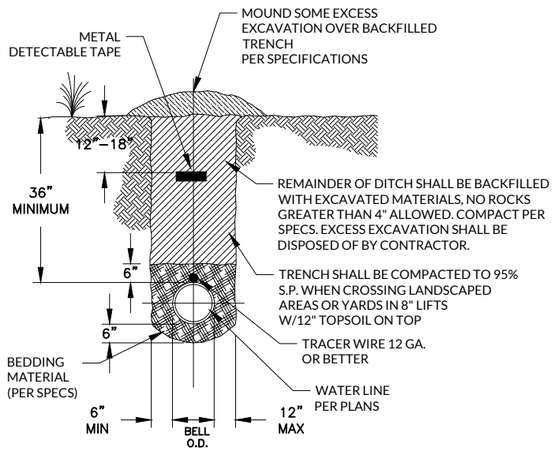
1. BLOCKING REQ'D. ON ALL FITTINGS 2" & LARGER.
2. ALL REQUIRED BENDS & FITTINGS MAY NOT BE LABELLED ON THE PLANS.
3. PIPE MAY BE CURVED UP TO 75% OF MANUFACTURER'S RECOMMENDED MAXIMUM CURVATURE WITHOUT A BEND AS APPROVED BY OWNER & ENGINEER.
4. ALL DUCTILE IRON FITTINGS AND VALVES TO BE PROTECTED FROM CONCRETE WITH A WRAPPING OF 8 MIL POLYETHYLENE PER SPECS.
5. CONTRACTOR SHALL USE MEGA LUG RESTRAINTS FOR ALL FITTINGS.



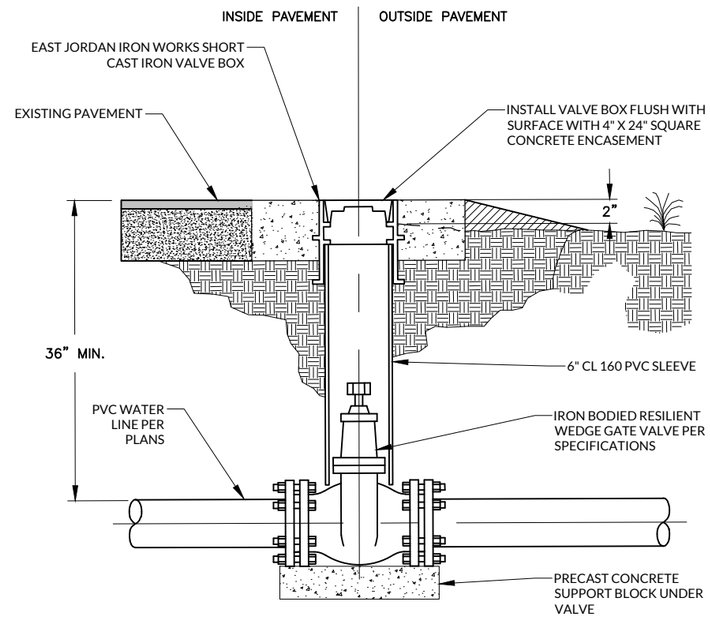
DIMENSIONS FOR CONCRETE THRUST BLOCKS

PIPE DIA. SIZE (INCHES)	MINIMUM SOIL BEARING AREA REQUIRED (SQUARE FEET)	TYPICAL DIMENSIONS OF BEARING AREA IN INCHES (A X B)	TYPICAL VOLUME OF CONC. REQUIRED (CUBIC FEET) *
2	2.0	12" x 24"	3.0
2 1/2	2.5	15" x 24"	4.0
3	3.0	16" x 27"	4.5
4	4.0	18" x 32"	6.0
6	6.0	24" x 36"	9.0
8	8.0	29" x 40"	12.0
10	10.0	30" x 48"	15.0
12	12.0	36" x 48"	18.0
14	14.0	36" x 56"	21.0
16	16.0	39" x 59"	24.0
18	18.0	42" x 62"	27.0

* VARIES CONSIDERABLY W/DISTANCE BETWEEN PIPE AND BEARING POINT



TRENCH OUTSIDE OF PAVED AREAS



GATE VALVE & BOXES
N.T.S.

JACOB MARTIN
TBPELS FIRM # 10194493
TBAE FIRM # BR 2261
TBPE FIRM # 2448

ROCHELLE, TEXAS
VALVE REPLACEMENT

WATER LINE DETAILS (1)

DATE
NO. REVISION

BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET ADJUST SCALE AND ADJUST ACCORDINGLY.

PROJECT # 21253
SCALE NONE

SEQ. 5/7
SHEET 5

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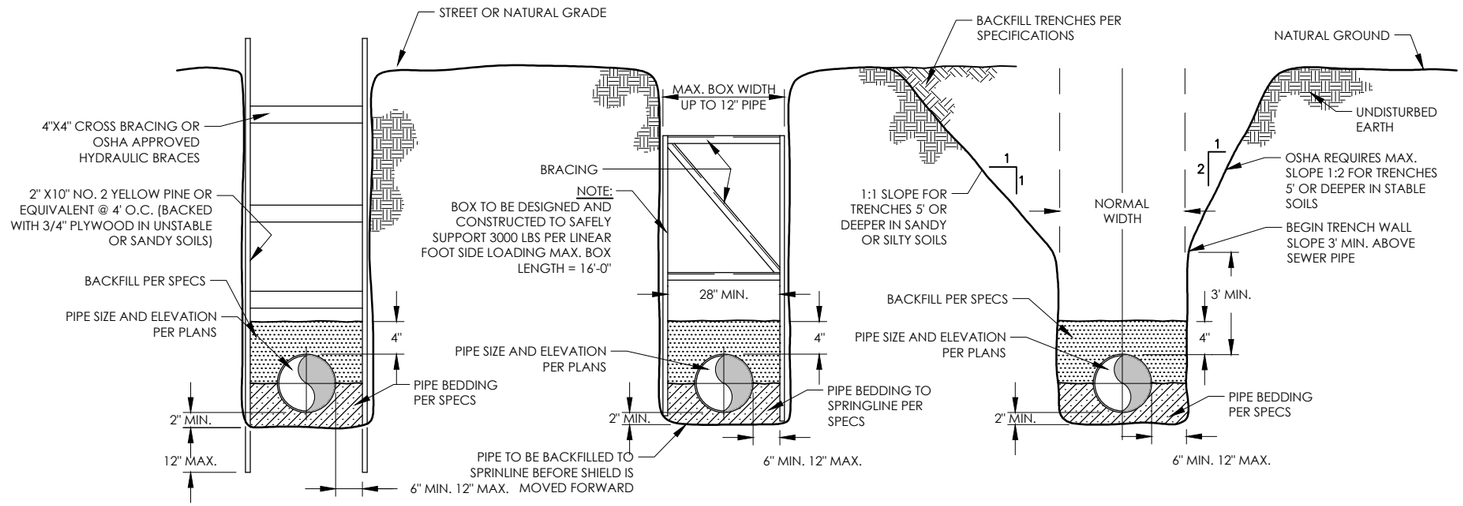

WALL BRACING DETAIL | MOVABLE SHIELD | TRENCH WALL SLOPING

TRENCH WALL PROTECTION

N.T.S.

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RECORD DRAWINGS

JACOB MARTIN
TBPELS FIRM # 10194493
TBAE FIRM # BR 22261
TBPE FIRM # 2448

ROCHELLE, TEXAS
VALVE REPLACEMENT

WATER LINE DETAILS (2)

NO.	REVISION	DATE

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SEQ. 6/7
SHEET 6

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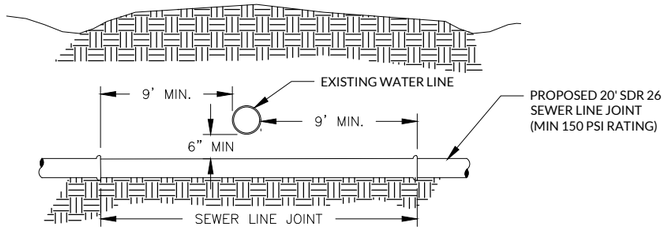
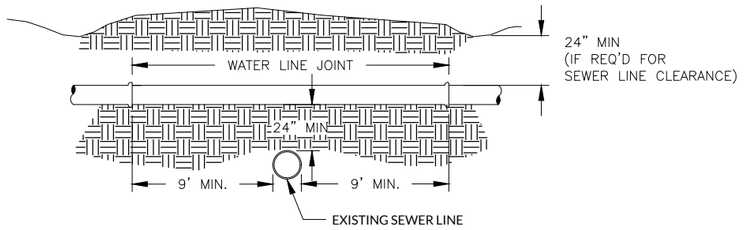


PROPOSED SEWER LINE CROSSING UNDER EXISTING WATER LINE

(PER TCEQ SEE SPECIFICATIONS) NTS



PROPOSED WATER LINE CROSSING OVER EXISTING SEWER LINE

(PER TCEQ SEE SPECIFICATIONS) NTS

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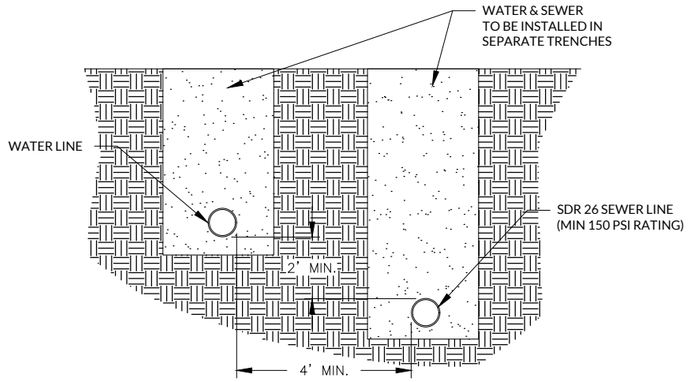
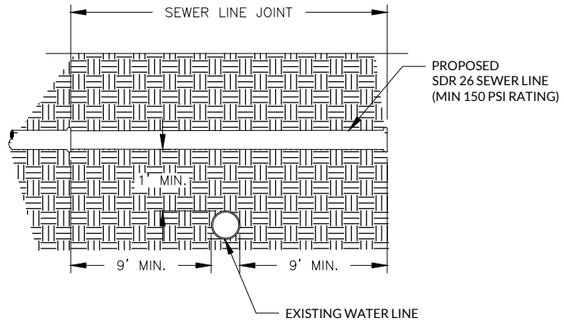


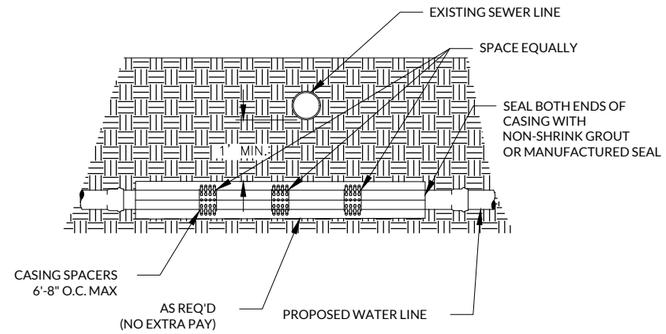
PARALLEL WATER AND SEWER LINES

(WHEN 9' SEPARATION IS NOT POSSIBLE) NTS



PROPOSED SEWER LINE CROSSING OVER EXISTING WATER LINE

NTS



PROPOSED WATER LINE CROSSING UNDER EXISTING SEWER LINE

NTS

TCEQ TAC CHAPTER 290.44(e) WATER & SEWER SEPARATION NOTES:

(e) LOCATION OF WATERLINES. THE FOLLOWING RULES APPLY TO INSTALLATIONS OF WATERLINES, WASTEWATER MAINS OR LATERALS, AND OTHER CONVEYANCES/APPURTENANCES IDENTIFIED AS POTENTIAL SOURCES OF CONTAMINATION. FURTHERMORE, ALL RATINGS SPECIFIED SHALL BE DEFINED BY ASTM OR AWWA STANDARDS UNLESS STATED OTHERWISE. NEW MAINS, SERVICE LINES, OR LATERALS ARE THOSE THAT ARE INSTALLED WHERE NO MAIN, SERVICE LINE, OR LATERAL PREVIOUSLY EXISTED, OR WHERE EXISTING MAINS, SERVICE LINES, OR LATERALS ARE REPLACED WITH PIPES OF DIFFERENT SIZE OR MATERIAL.

(1) WHEN NEW POTABLE WATER DISTRIBUTION LINES ARE CONSTRUCTED, THEY SHALL BE INSTALLED NO CLOSER THAN NINE FEET IN ALL DIRECTIONS TO WASTEWATER COLLECTION FACILITIES. ALL SEPARATION DISTANCES SHALL BE MEASURED FROM THE OUTSIDE SURFACE OF EACH OF THE RESPECTIVE PIECES.

(2) POTABLE WATER DISTRIBUTION LINES AND WASTEWATER MAINS OR LATERALS THAT FORM PARALLEL UTILITY LINES SHALL BE INSTALLED IN SEPARATE TRENCHES.

(3) NO PHYSICAL CONNECTION SHALL BE MADE BETWEEN A DRINKING WATER SUPPLY AND A SEWER LINE. ANY APPURTENANCE SHALL BE DESIGNED AND CONSTRUCTED SO AS TO PREVENT ANY POSSIBILITY OF SEWAGE ENTERING THE DRINKING WATER SYSTEM.

(4) WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE FOLLOWING CRITERIA SHALL APPLY.

(A) NEW WATERLINE INSTALLATION - PARALLEL LINES.

(i) WHERE A NEW POTABLE WATERLINE PARALLELS AN EXISTING, NON-PRESSURE OR PRESSURE RATED WASTEWATER MAIN OR LATERAL AND THE LICENSED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS IS ABLE TO DETERMINE THAT THE EXISTING WASTEWATER MAIN OR LATERAL IS NOT LEAKING, THE NEW POTABLE WATERLINE SHALL BE LOCATED AT LEAST TWO FEET ABOVE THE EXISTING WASTEWATER MAIN OR LATERAL, MEASURED VERTICALLY, AND AT LEAST FOUR FEET AWAY, MEASURED HORIZONTALLY, FROM THE EXISTING WASTEWATER MAIN OR LATERAL. EVERY EFFORT SHALL BE EXERTED NOT TO DISTURB THE BEDDING AND BACKFILL OF THE EXISTING WASTEWATER MAIN OR LATERAL.

(ii) WHERE A NEW POTABLE WATERLINE PARALLELS AN EXISTING PRESSURE-RATED WASTEWATER MAIN OR LATERAL AND IT CANNOT BE DETERMINED BY THE LICENSED PROFESSIONAL ENGINEER IF THE EXISTING LINE IS LEAKING, THE EXISTING WASTEWATER MAIN OR LATERAL SHALL BE REPLACED WITH AT LEAST 150 PSI PRESSURE-RATED PIPE. THE NEW POTABLE WATERLINE SHALL BE LOCATED AT LEAST TWO FEET ABOVE THE NEW WASTEWATER LINE, MEASURED VERTICALLY, AND AT LEAST FOUR FEET AWAY, MEASURED HORIZONTALLY, FROM THE REPLACED WASTEWATER MAIN OR LATERAL.

(iii) WHERE A NEW POTABLE WATERLINE PARALLELS A NEW WASTEWATER MAIN, THE WASTEWATER MAIN OR LATERAL SHALL BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE-RATED PIPE. THE NEW POTABLE WATERLINE SHALL BE LOCATED AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL, MEASURED VERTICALLY, AND AT LEAST FOUR FEET AWAY, MEASURED HORIZONTALLY, FROM THE WASTEWATER MAIN OR LATERAL.

(B) NEW WATERLINE INSTALLATION - CROSSING LINES.

(i) WHERE A NEW POTABLE WATERLINE CROSSES ABOVE A WASTEWATER MAIN OR LATERAL, THE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND MUST BE PERPENDICULAR TO THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. WHEN CROSSING AN EXISTING WASTEWATER MAIN OR LATERAL AND IT IS DISTURBED OR SHOWS SIGNS OF LEAKING, THE WASTEWATER MAIN OR LATERAL SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE-RATED PIPE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (V) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.

(I) THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE AN EXISTING, NON-PRESSURE RATED WASTEWATER MAIN OR LATERAL.
(II) THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE AN EXISTING, PRESSURE-RATED WASTEWATER MAIN OR LATERAL.

(ii) WHERE A NEW POTABLE WATERLINE CROSSES A NEW, NON-PRESSURE RATED WASTEWATER MAIN OR LATERAL, THE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND SHALL BE PERPENDICULAR TO THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (V) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END. THE MATERIALS AND METHOD OF INSTALLATION SHALL CONFORM TO ONE OF THE FOLLOWING OPTIONS:

(I) WITHIN NINE FEET HORIZONTALLY OF EITHER SIDE OF THE WATERLINE, THE WASTEWATER PIPE AND JOINTS SHALL BE CONSTRUCTED WITH PIPE MATERIAL HAVING A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI. AN ABSOLUTE MINIMUM VERTICAL SEPARATION DISTANCE OF TWO FEET SHALL BE PROVIDED. THE WASTEWATER MAIN OR LATERAL SHALL BE LOCATED BELOW THE WATERLINE.

(II) ALL SECTIONS OF WASTEWATER MAIN OR LATERAL WITHIN NINE FEET HORIZONTALLY OF THE WATERLINE SHALL BE ENCASED IN AN 18-FOOT (OR LONGER) SECTION OF PIPE. FLEXIBLE ENCASING PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE ENCASING PIPE SHALL BE CENTERED ON THE WATERLINE AND SHALL BE AT LEAST TWO NOMINAL PIPE DIAMETERS LARGER THAN THE WASTEWATER MAIN OR LATERAL. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE-FOOT (OR LESS) INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. EACH END OF THE CASING SHALL BE SEALED WITH WATERTIGHT NON-SHRINK CEMENT GROUT OR A MANUFACTURED WATERTIGHT SEAL. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF SIX INCHES BETWEEN THE ENCASEMENT PIPE AND THE WATERLINE SHALL BE PROVIDED. THE WASTEWATER LINE SHALL BE LOCATED BELOW THE WATERLINE.

(iii) WHEN A NEW WATERLINE CROSSES UNDER A WASTEWATER MAIN OR LATERAL, THE WATERLINE SHALL BE ENCASED AS DESCRIBED FOR WASTEWATER MAINS OR LATERALS IN CLAUSE (II) OF THIS SUBPARAGRAPH OR CONSTRUCTED OF DUCTILE IRON OR STEEL PIPE WITH MECHANICAL OR WELDED JOINTS AS APPROPRIATE. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF ONE FOOT BETWEEN THE WATERLINE AND THE WASTEWATER MAIN OR LATERAL SHALL BE PROVIDED. WHEN A NEW WATERLINE CROSSES UNDER A WASTEWATER MAIN, THE PROCEDURES IN §217.53(D) OF THIS TITLE (RELATING TO PIPE DESIGN) MUST BE FOLLOWED.

(iv) WHERE A NEW POTABLE WATERLINE CROSSES A NEW, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND SHALL BE PERPENDICULAR TO THE WASTEWATER LINE SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTER LINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (V) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.

(v) WHERE CEMENT STABILIZED SAND BEDDING IS REQUIRED, THE CEMENT STABILIZED SAND SHALL HAVE A MINIMUM OF 10% CEMENT PER CUBIC YARD OF CEMENT STABILIZED SAND MIXTURE, BASED ON LOOSE DRY WEIGHT VOLUME (AT LEAST 2.5 BAGS OF CEMENT PER CUBIC YARD OF MIXTURE). THE CEMENT STABILIZED SAND BEDDING SHALL BE A MINIMUM OF SIX INCHES ABOVE AND FOUR INCHES BELOW THE WASTEWATER MAIN OR LATERAL. THE USE OF BROWN COLORING IN CEMENT STABILIZED SAND FOR WASTEWATER MAIN OR LATERAL BEDDING IS RECOMMENDED FOR THE IDENTIFICATION OF PRESSURE RATED WASTEWATER MAINS DURING FUTURE CONSTRUCTION.

(5) WATERLINE AND WASTEWATER MAIN MANHOLE OR LATERAL MANHOLE OR CLEANOUT SEPARATION. THE SEPARATION DISTANCE FROM A POTABLE WATERLINE TO A WASTEWATER MAIN MANHOLE OR LATERAL MANHOLE OR CLEANOUT SHALL BE A MINIMUM OF NINE FEET. WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE POTABLE WATERLINE SHALL BE ENCASED IN A JOINT OF AT LEAST 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE-FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHALL BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEALANT.

(6) LOCATION OF FIRE HYDRANTS. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.

(7) LOCATION OF POTABLE OR RAW WATER SUPPLY OR SUCTION LINES. SUCTION MAINS TO PUMPING EQUIPMENT SHALL NOT CROSS WASTEWATER MAINS, WASTEWATER LATERALS, OR WASTEWATER SERVICE LINES. RAW WATER SUPPLY LINES SHALL NOT BE INSTALLED WITHIN FIVE FEET OF ANY TILE OR CONCRETE WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE.

(8) PROXIMITY OF SEPTIC TANK DRAINFIELDS. WATERLINES SHALL NOT BE INSTALLED CLOSER THAN TEN FEET TO SEPTIC TANK DRAINFIELDS.

RECORD DRAWINGS ARE RELEASED FOR INFORMATIONAL PURPOSES ONLY UNDER THE AUTHORIZATION OF LUKE VAN DIEST, P.E. #136308

RECORD DRAWINGS

JACOB MARTIN
TBPELS FIRM # 10194493
TBAE FIRM # BR 2261
TBPE FIRM # 2448

ROCHELLE, TEXAS
VALVE REPLACEMENT
WATER LINE DETAILS (3)

NO.	REVISION	DATE

PROJECT # 21253 | SCALE NONE

BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK SCALE AND ADJUST ACCORDINGLY.

SEQ. 7/7 | SHEET 7

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