

4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

CORLEY FARMS UNIT 1

WATER LINE A - PLAN & PROFILE

DATE

02/13/2023

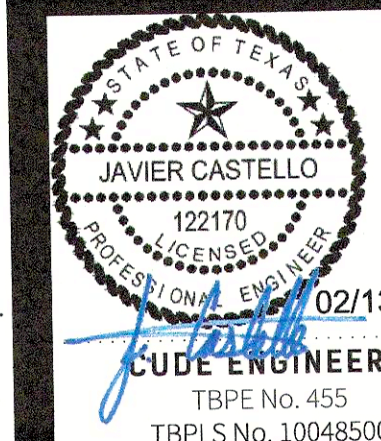
PROJECT NO.
03481.004

DRAWN BY
C3

CHECKED BY
XV/JC/DDC

REVISIONS

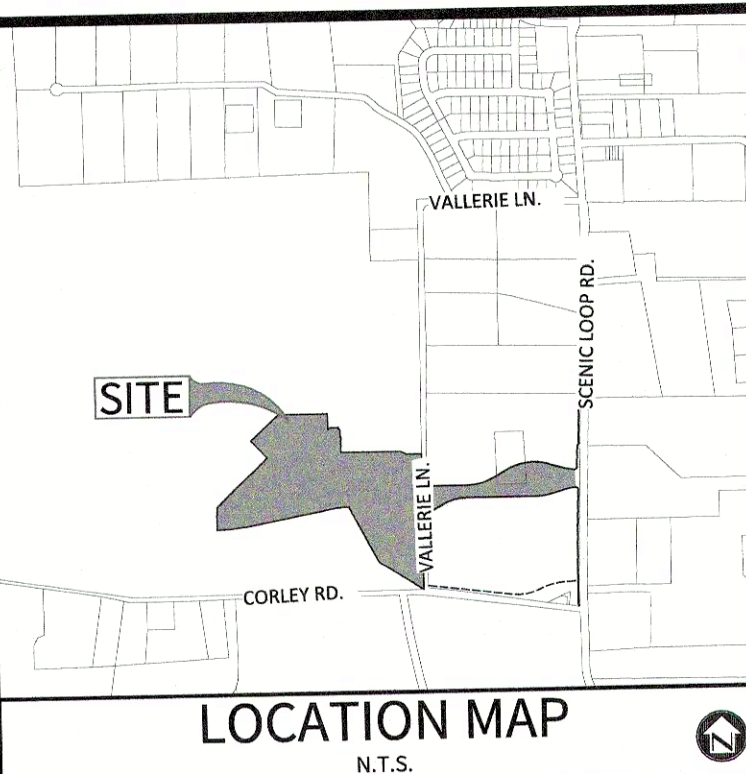
- 2021-05-13 - SANS COMMENTS
- 2021-11-12 - ADDED STREET NAMES
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- 2022-01-14 - EASEMENT UPDATES
- 2022-03-31 - WATERLINE UPDATE
- 2022-10-05 - REVISED 8" WATER MAIN LAYOUT & ADDED 16" WATER EASEMENT
- 2023-01-23 - REVISED PIPE DIAMETER
- 2023-02-13 - LOOPED 8" 12" WATER MAIN EXTENSION



CUDE ENGINEERS
TBP# No. 455
TBP# No. 10048500

C51

1 OF 5



OWNER/DEVELOPER:

PULTE HOMES OF TEXAS, L.P.
CONTACT PERSON: FELIPE GONZALEZ
1718 DRY CREEK WAY, SUITE 120
SAN ANTONIO, TX 78259
TEL: (210) 818-7104
FAX: (210) 496-0449

CIVIL ENGINEER:

M.W. CUDE ENGINEERS, L.L.C.
CONTACT PERSON: DAVID D. CUPIT II, P.E.
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TX 78231
TEL: (210) 681-2951
FAX: (210) 523-7112

SHEET NOTES:

- ALL 16" PVC SHALL BE C900, DR 18.
ALL 12" PVC SHALL BE C900, DR 18.
ALL 8" PVC SHALL BE C900, DR 18.
- CONTRACTOR SHALL MAINTAIN A MINIMUM DEPTH OF 5 FEET ON ALL 16" MAIN AND 4 FEET DEPTH ON ALL 8" MAIN.

BENCHMARK

BM-1

BENCHMARK TO BE SET BY ENGINEER PRIOR TO CONSTRUCTION.

TRENCH EXCAVATION PROTECTION

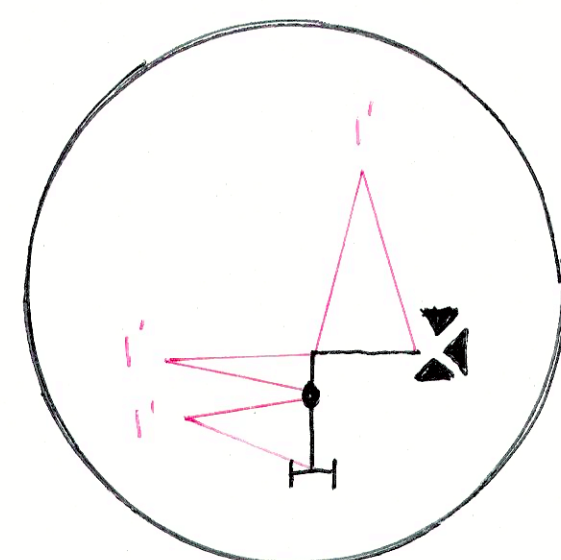
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS, SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!

EXISTING UTILITIES ARE WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTORS SHALL EXERCISE EXTRA CARE IN DIGGING ANY TRENCH FOR PROPOSED UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE, VERIFY THE EXACT LOCATION & IDENTIFY AREA OF CONFLICTS WITH EXISTING UTILITIES AND SHALL NOTIFY THE ENGINEER IF CONFLICT IS FOUND.

CAUTION!!

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Fire Hydrant Detail - TYP

KEYNOTE 1

STA. 3+12.40

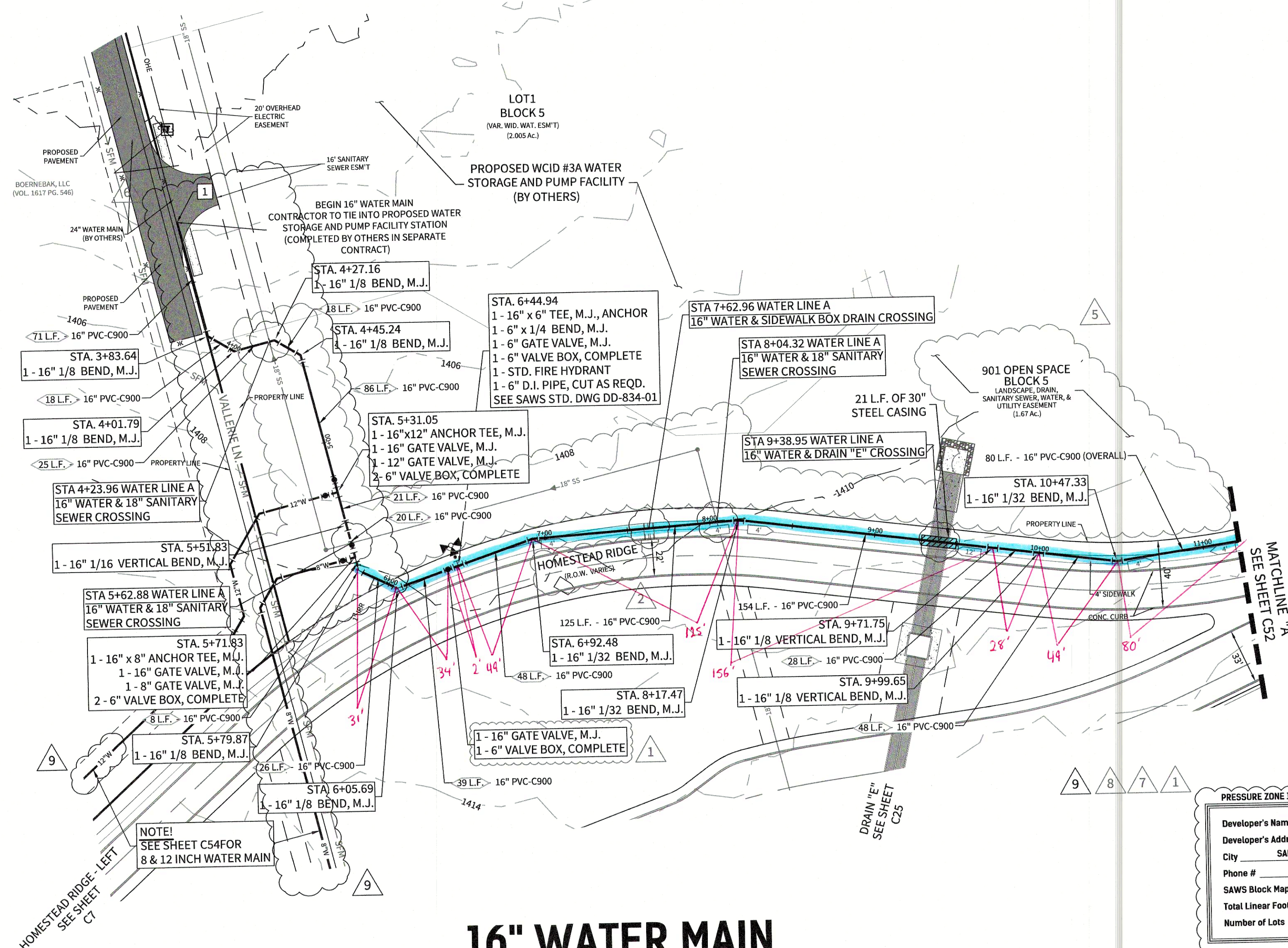
AFTER RELEASE FOR SERVICE, CONTRACTOR TO TIE THE NEW 16" MAIN INTO EXIST. 16" WATER MAIN STUB-OUT WITH ±5 L.F. OF 16" WATER MAIN, CUT AS REQUIRED.

16" VALVE TO REMAIN CLOSED UNTIL AFTER DISINFECTION & ACCEPTANCE BY SAWS

FOR CHLORINATION INJECTION
2 - 1" CORPORATION STOP C.C. X I.P.
2 - 1" COPPER TUBING, CUT AS REQ'D
2 - 1 1/4" THD. SOLID CAPS, THR.
2 - 1" COMP. X 1 1/4" COUPLING, CURB STOP

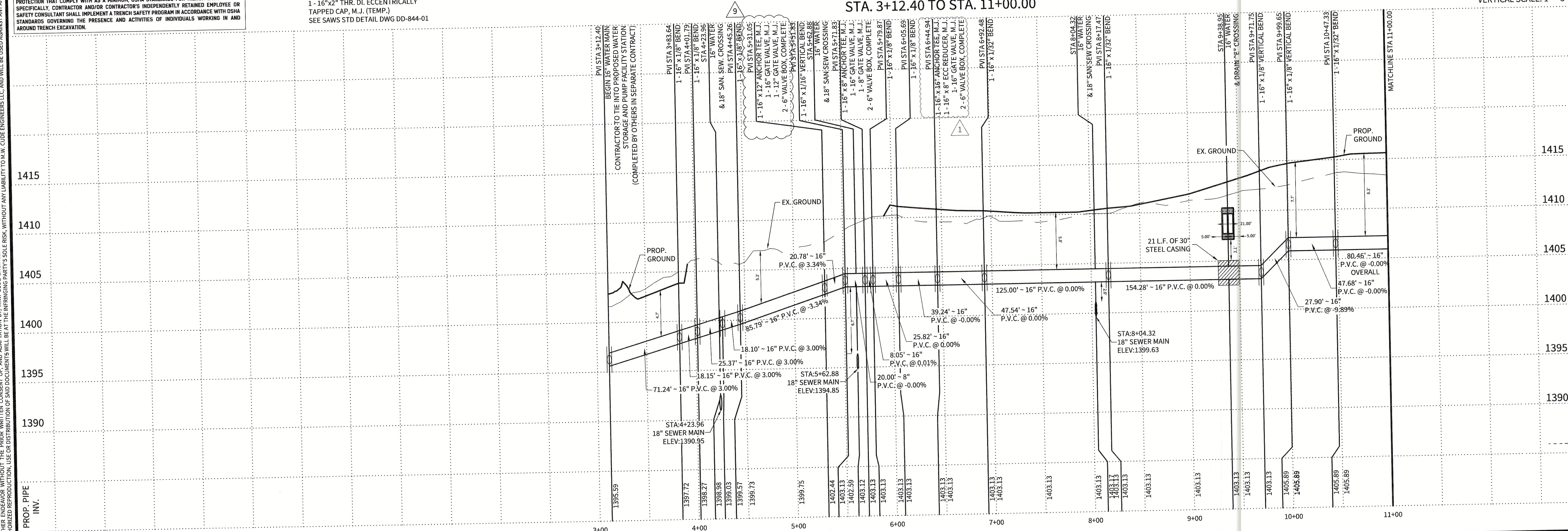
CONTRACTOR SHALL PROVIDE A 2" JUMPER CONNECTION TO LOAD NEW MAIN

1 - 16" SOLID SLEEVE, M.J.
1 - 2" BLOWOFF ASSEMBLY (TEMP.)
1 - 16"x2" THR. DR. ECCENTRICALLY TAPPED CAP, M.J. (TEMP.)
SEE SAWS STD DETAIL DWG DD-844-01



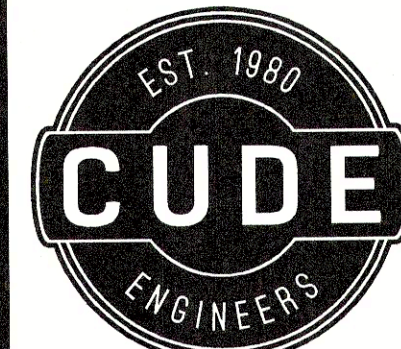
16" WATER MAIN

STA. 3+12.40 TO STA. 11+00.00



Developer's Name	PULTE HOMES OF TEXAS, L.P.
Developer's Address	1718 DRY CREEKWAY, SUITE 120
City	SAN ANTONIO
State	TEXAS
Zip	78259
Phone #	(210) 496-1985
Fax #	(210) 496-0449
SAWS Block Map #	N/A
Total ECU's	23
Total Acreage	64.74
SAWS Block Map #	N/A
Total Linear Footage of Pipe	19
SAWS Job No.	21-1061

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



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CORLEY FARMS

UNIT 1

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03/30/2022

PROJECT NO.
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REVISIONS

- 2021-05-13 - SAWS COMMENTS
-
- 2021-10-07 - CITY OF BODENNE COMMENTS
- 2021-11-12 - ADDED STREET NAMES
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CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

C52



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BM-1

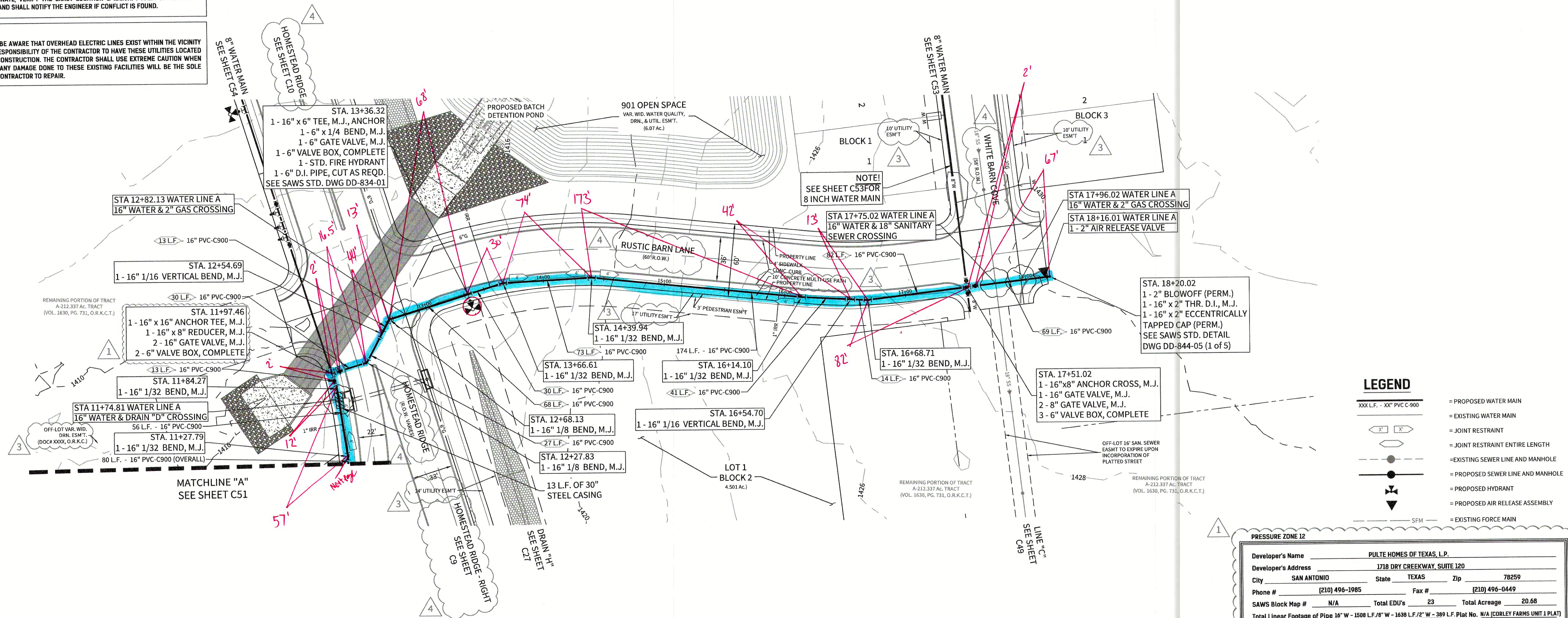
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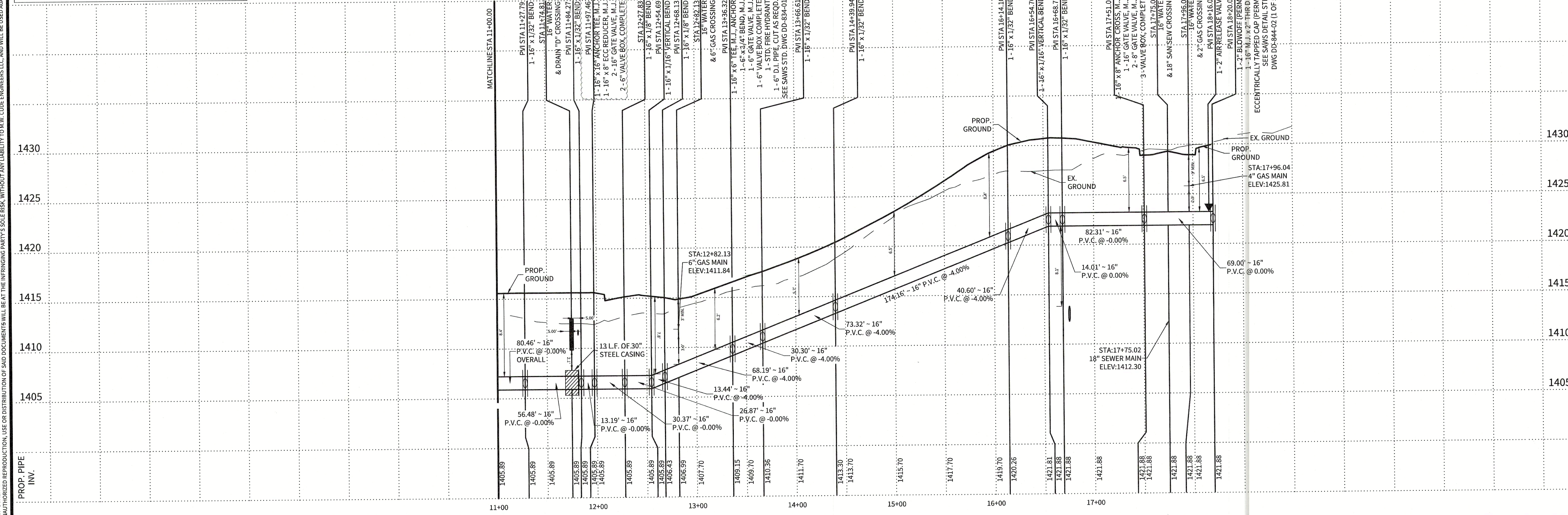
LEGEND

- XXX L.F. - XX" PVC C-900
- PROPOSED WATER MAIN
- EXISTING WATER MAIN
- JOINT RESTRAINT
- JOINT RESTRAINT ENTIRE LENGTH
- EXISTING SEWER LINE AND MANHOLE
- PROPOSED SEWER LINE AND MANHOLE
- PROPOSED HYDRANT
- PROPOSED AIR RELEASE ASSEMBLY
- EXISTING FORCE MAIN

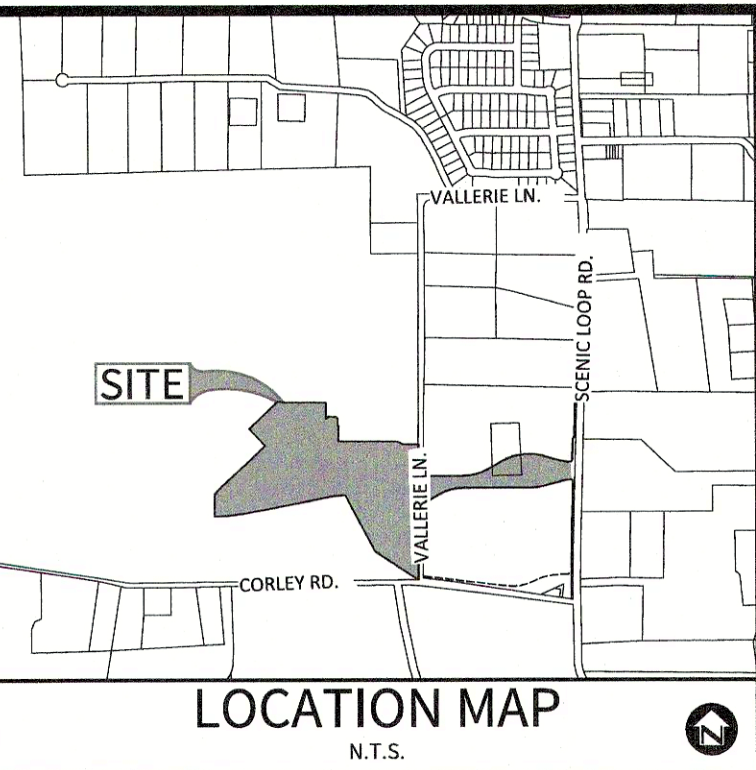
PRESSURE ZONE 12

Developer's Name	PULTE HOMES OF TEXAS, L.P.		
Developer's Address	1718 DRY CREEKWAY, SUITE 120		
City	SAN ANTONIO	State	TEXAS
Zip	78259		
Phone #	(210) 496-1985	Fax #	(210) 496-0449
SAWS Block Map #	N/A	Total EDU's	23
Total Linear Footage of Pipe 16" W - 1508 L.F./12" W - 389 L.F.	Total Acreage 20.68		
Number of Lots	15	SAWS Job No.	21-1061

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



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SAWS CONSTRUCTION NOTES

COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT REVISED JULY 2017

GENERAL SECTION

- All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:
 - Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.
 - Current TxDOT "Standard Specifications for Construction of Highways, Streets and Drainage".
 - Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".
 - Current City of San Antonio "Standard Specifications for Public Works Construction".
 - Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
- The contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and has been notified by SAWS Construction Inspection Division to proceed with the work and has arranged a meeting with the inspector and consultant for the work requirements. Work completed by the contractor without an approved Counter Permit and/or a GCP will be subject to removal and replacement at the expense of the contractors and/or the developer.
- The Contractor shall obtain the SAWS Standard Details from the SAWS website, http://www.saws.org/business_center/specs. Unless otherwise noted within the design plans.
- The Contractor is to make arrangements with the SAWS Construction Inspection Division at 233-2973, on notification procedures that will be used to notify affected home residents and/or property owners 48 hours prior to beginning any work.
- Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor at least 1 week prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.
- The Contractor shall verify the exact location of underground utilities and drainage structures at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for locations requesting pipe location markers on SAWS facilities. The following contact information are supplied for verification purposes:
 - SAWS Utility Locates: <http://www.saws.org/Service/Locates>
 - COSA Drainage (210) 207-0724 or (210) 207-6026
 - COSA Traffic Signal Operations (210) 206-8480
 - COSA Traffic Signal Damages (210) 207-3951
- Texas State Wide One Call Locator 1-800-545-6005 or 811
- The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if damages are made as a result of the project's construction.
- All work in Texas Department of Transportation (TxDOT) and/or Bexar County right-of-way shall be done in accordance with respective construction specifications and permit requirements.
- The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating near trees.
- The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.
- Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be sent to costworkreq@saws.org.
- Weekend Work: Contractors are required to notify the SAWS Inspection Construction Department 48 hours in advance to request weekend work. Request should be sent to costworkreq@saws.org.
- Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for proper inspection.
- Compaction note (Item 804): The contractor shall be responsible for meeting the compaction requirements on all trench backfill and for paying for the tests performed by a third party. Compaction tests will be done at one location point randomly selected, or as indicated by the SAWS Inspector and/or the test administrator, per each 12-inch loose lift per 400 linear feet at a minimum. This project will not be accepted and finalized by SAWS without this requirement being met and verified by providing all necessary documented test results.
- A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division. Water Section

WATER SECTION

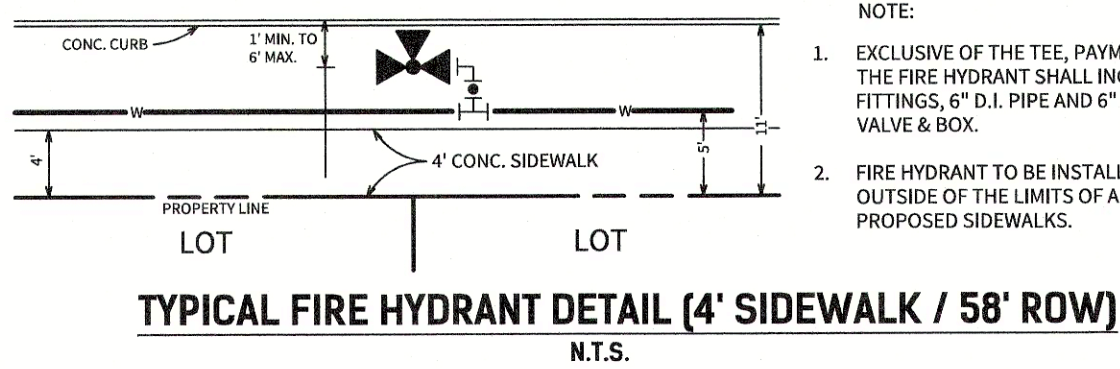
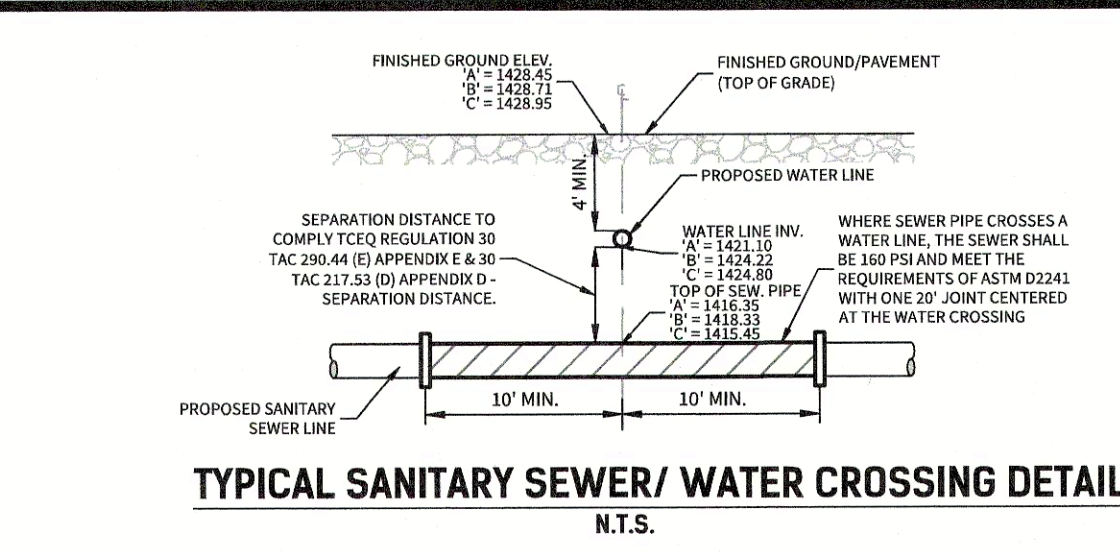
- Prior to tie-ins, any shutdowns of existing mains of any size must be coordinated with the SAWS Construction Inspection Division at least one week in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly. For water mains 12" or higher: SAWS Emergency Operations Center (210) 233-2014.
- Asbestos Cement (AC) pipe, also known as transite pipe which is known to contain asbestos-containing material (ACM), may be located within the project limits. Special waste management procedures and health and safety requirements will be applicable when removal and/or disturbance of this pipe occurs. Such work is to be made under Special Specification Item No. 3000, "Special Specification for Handling Asbestos Cement Pipes".
- Valve removal: Where the contractor is to abandon a water main, the control valve located on the abandoning branch will be removed and replaced with a cap/plug (NSPI).
- Suitable anchorage/thrust blocking or joint restraint shall be provided at all of the following main locations: dead ends, plugs, caps, tees, crosses, valves, and bends, in accordance with the Standard Drawings DD-839 Series and Item No. 839, in the SAWS Standard Specifications for Construction.
- All valves shall read "open right".
- PRVs Required: Contractor to verify that no portion of the tract is below ground elevation of 1425 feet where the static pressure will normally exceed 80 PSI. At all such locations where the ground level is below 1425 feet, the Developer or Builder shall install at each lot, on the customer's side of the meter, an approved type pressure regulator in conformance with the Plumbing Code of the City of San Antonio. No dual services allowed for any lot(s) if PRV is required for such lot(s), only single service connections shall be allowed. *Note: A pressure regulator is also known as a pressure reducing valve (PRV).
- Pipe Disinfection with Dry HTH for Projects less than 800 linear feet. (Item No. 847.3): Mains shall be disinfected with dry HTH where shown in the contract documents or as directed by the Inspector, and shall not exceed a total length of 800 feet. This method of disinfection will also be followed for main repairs. The Contractor shall utilize all appropriate safety measure to protect his personnel during disinfection operations.
- Backflow Prevention Devices:
 - All irrigation services within residential areas are required to have backflow prevention devices.
 - All commercial backflow prevention devices must be approved by SAWS prior to installation.
- Final connection to the existing water main shall not be made until the water main has been pressure tested, chlorinated, and SAWS has released the main for tie-in and use.
- All pipes shall be 5/8", unless otherwise noted.
- All pipes shall be C-900, CLASS 235 DR 18, unless otherwise noted.

LEGEND

- 3/4" PROPOSED WATER SERVICE WITH 5/8" METER
- 3/4" EXISTING WATER SERVICE WITH 5/8" METER
- 3/4" IRRIGATION SERVICE WITH 3/4" METER
- PROPOSED WATER MAIN
- EXISTING WATER MAIN
- EXISTING SANITARY SEWER
- JOINT RESTRAINT
- JOINT RESTRAINT ENTIRE LENGTH
- PROPOSED SEWER LINE AND MANHOLE

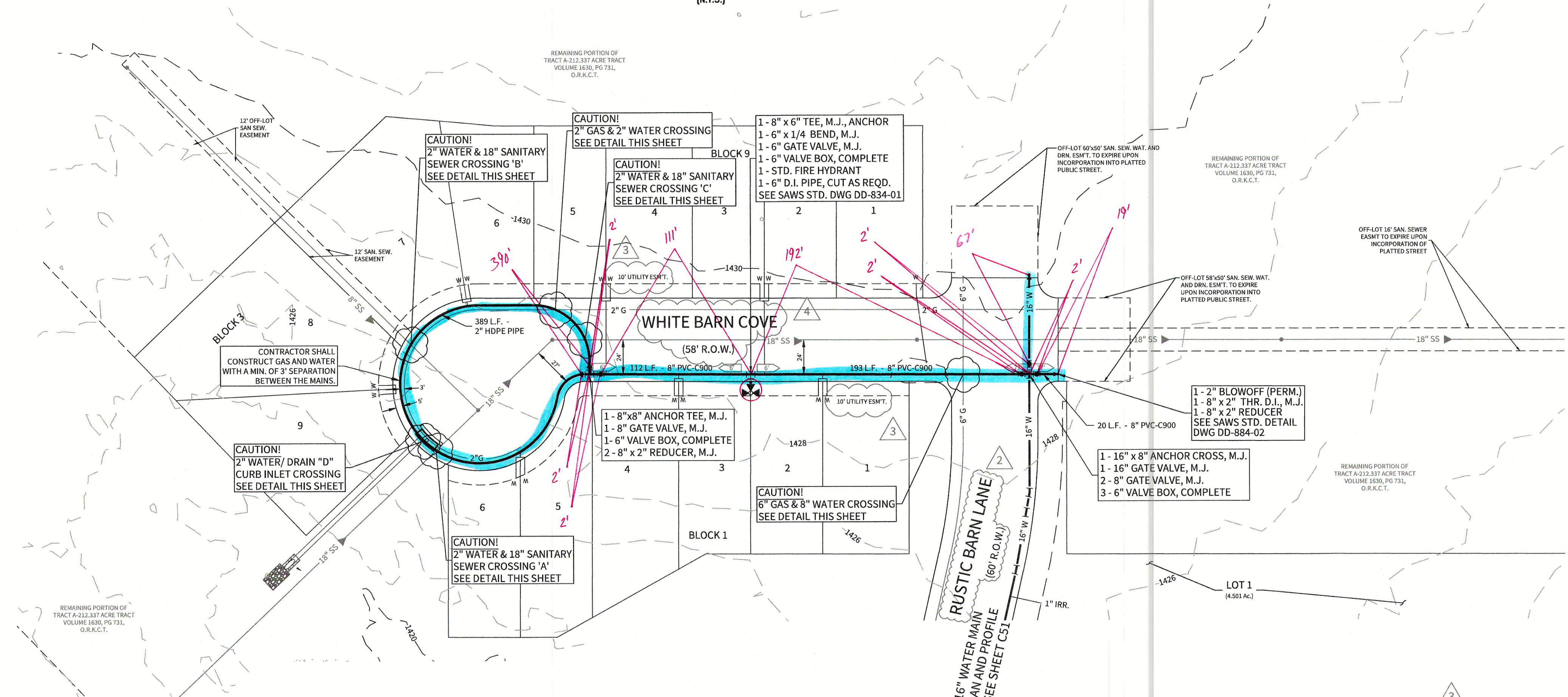
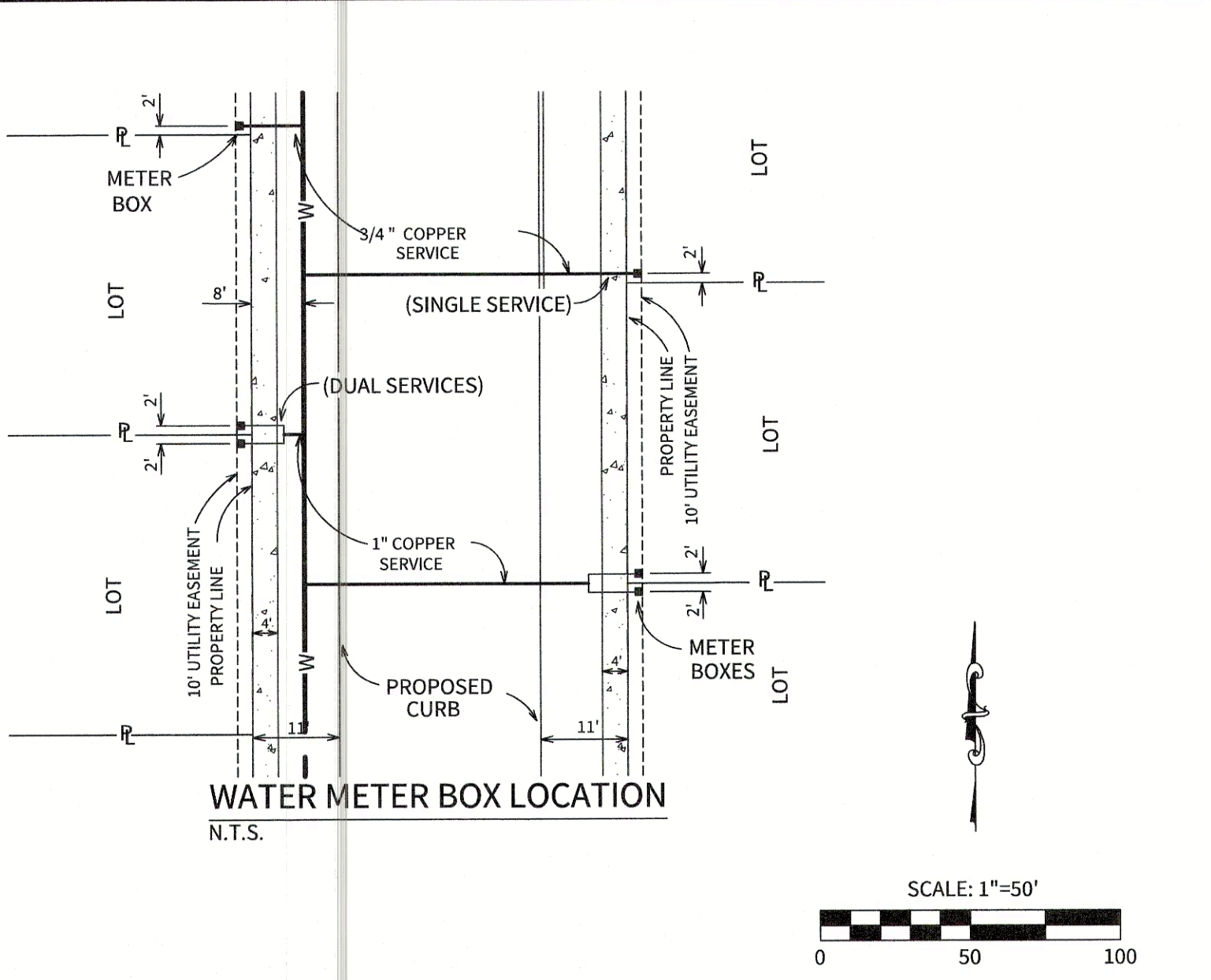
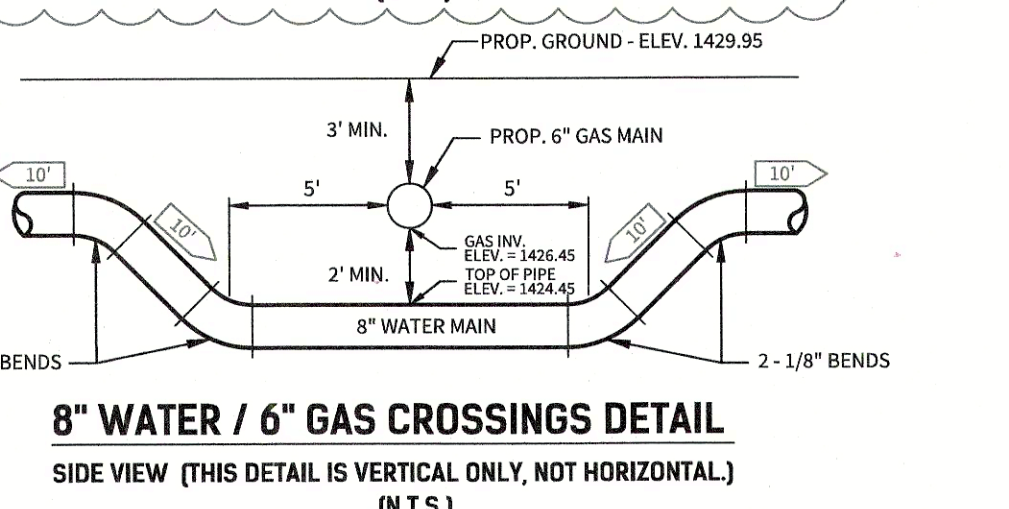
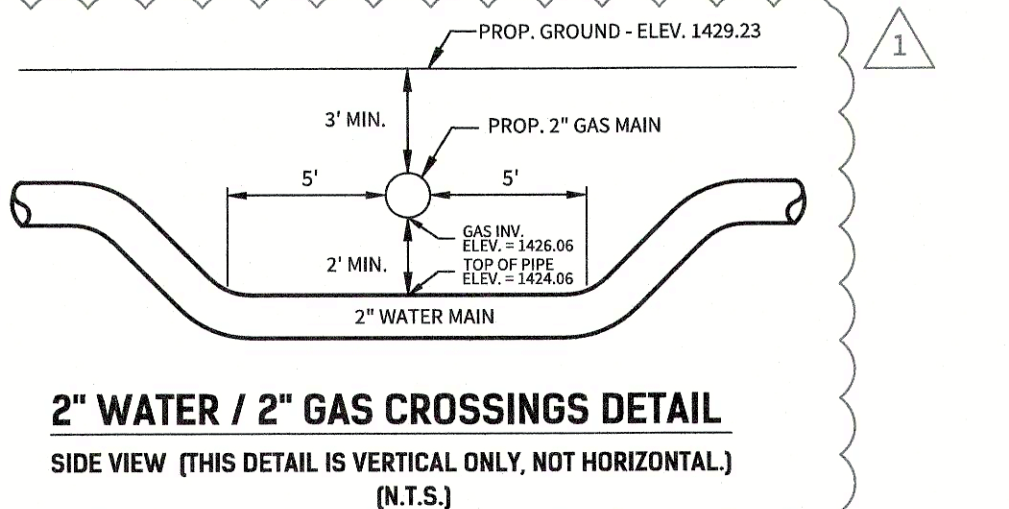
THRUST BLOCKING NOTE

ANCHORAGE/THRUST BLOCKING AND JOINT RESTRAINTS SHALL BE DONE IN ACCORDANCE WITH SAWS STANDARDS AND SPECIFICATIONS FOR CONSTRUCTION (ITEM NO. 839)



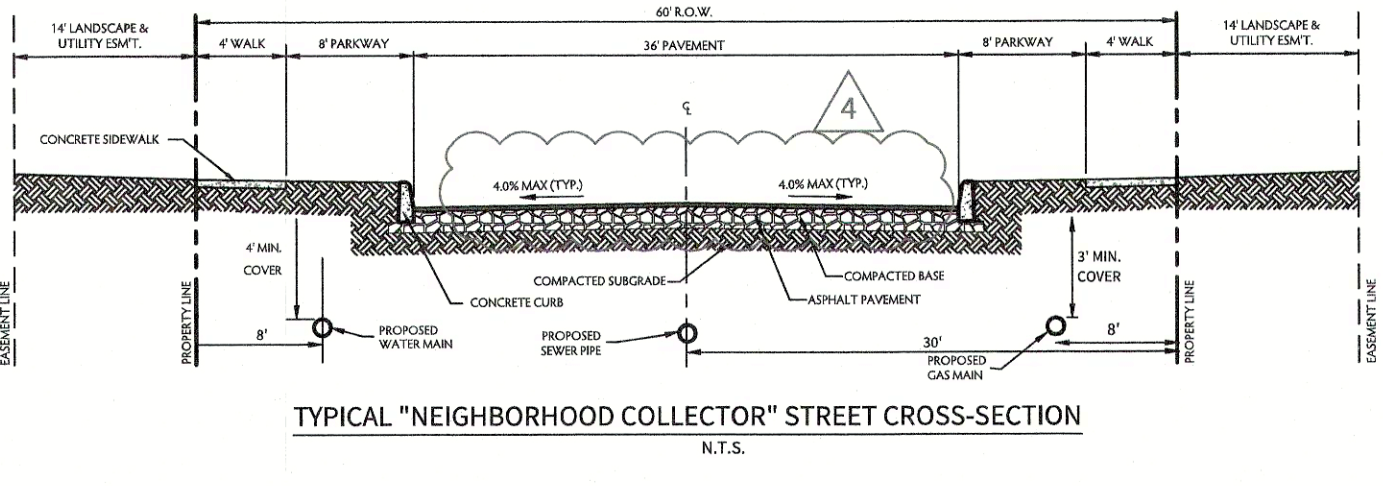
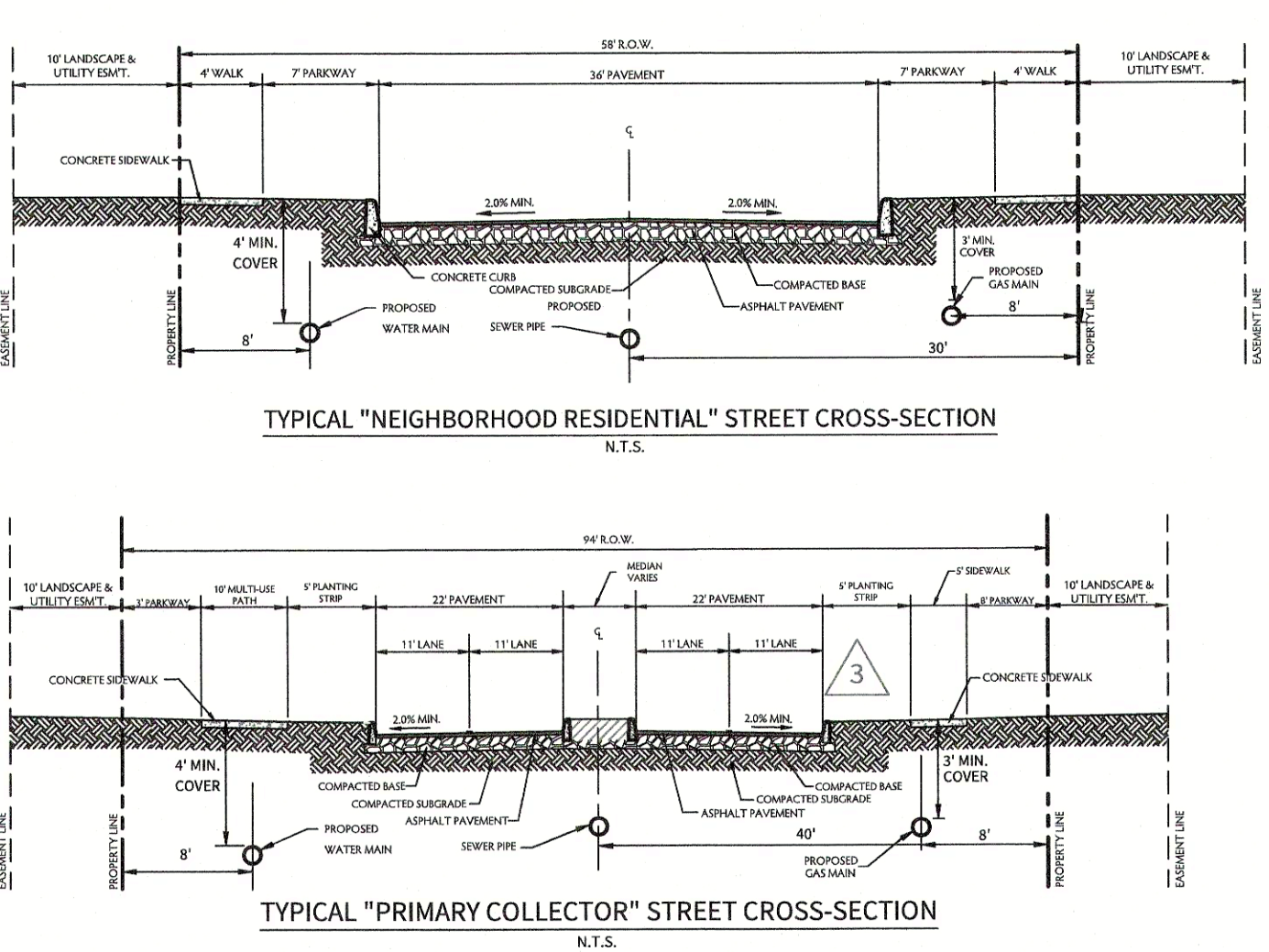
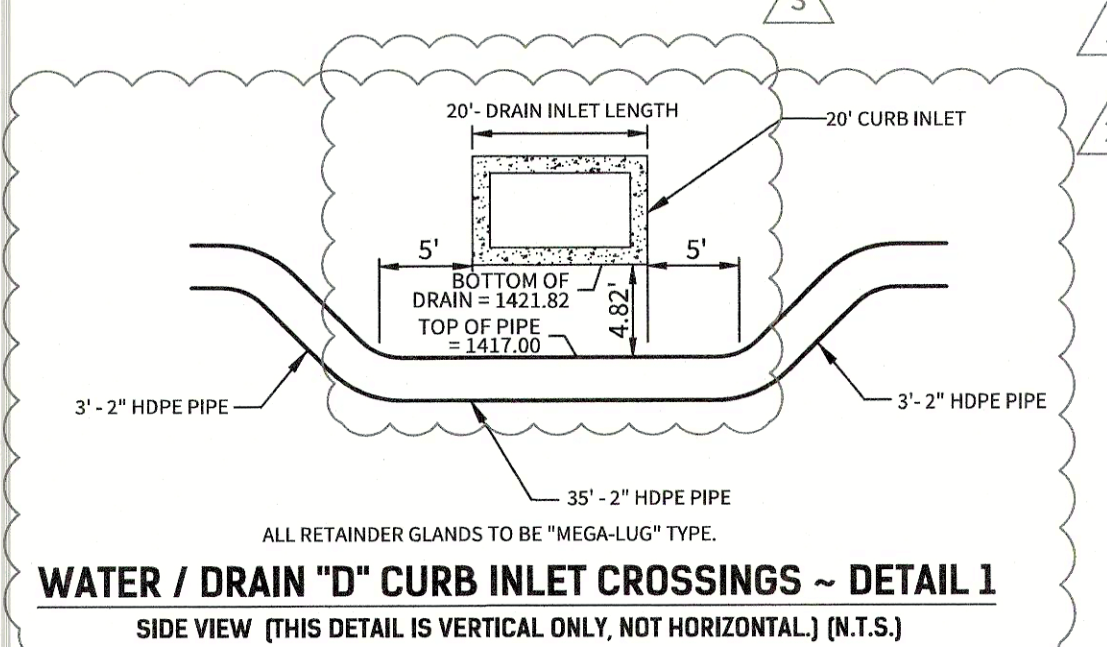
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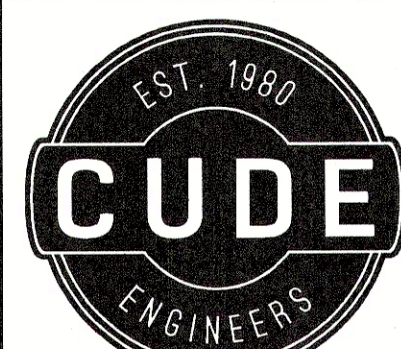


8" WATER MAIN

2" WATER MAIN INLET CROSSINGS	
	LENGTH
A INLET	20'
B STEEL CASING	30'
C CHOKER PIPE	35'
D VERTPIPE	2.0'
INLET INVERT DEPTH	
INLET TOTAL DEPTH	
PIPE BURY	
PIPE DIAMETER	



PRESSURE ZONE 12			
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Zip	78259		
Phone #	(210) 496-1085	Fax #	(210) 496-0449
SAWS Block Map #	N/A	Total EDUs	23
Total Linear Footage of Pipe 16\"/>	15	SAWS Job No.	21-1061



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CORLEY FARMS UNIT 1

WATER DISTRIBUTION PLAN

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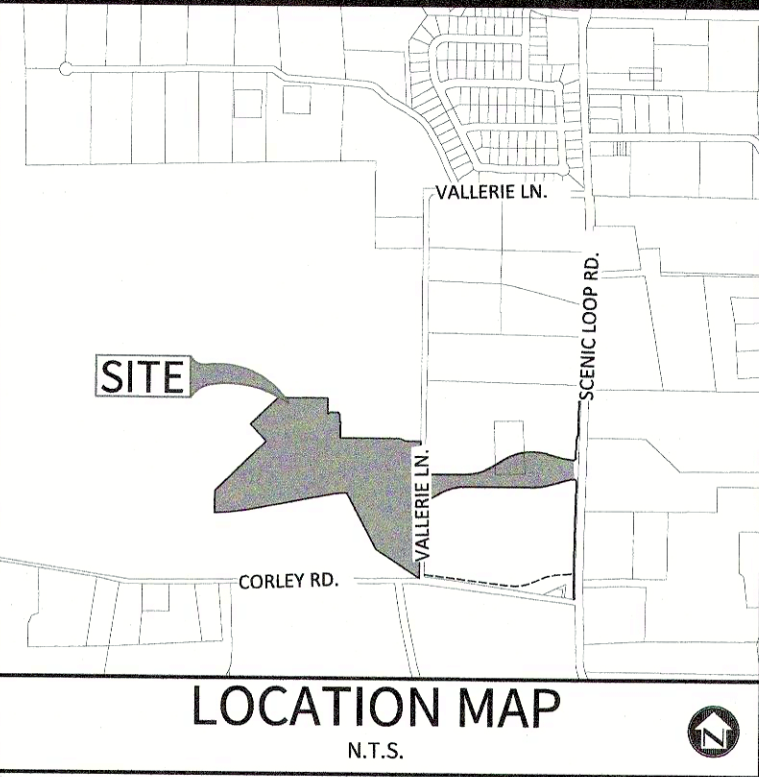
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SAWS CONSTRUCTION NOTES COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT

GENERAL SECTION

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- The Contractor shall obtain the SAWS Standard Details from the SAWS website, http://www.saws.org/business_center/specs. Unless otherwise noted within the design plans.
- The Contractor is to make arrangements with the SAWS Construction Inspection Division at 233-2973, on notification procedures that will be used to notify affected home residents and/or property owners 48 hours prior to beginning any work.
- Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor at least 1 week prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.
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Texas State Wide One Call Locator 1-800-545-6005 or 811
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- A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division. Water Section

WATER SECTION

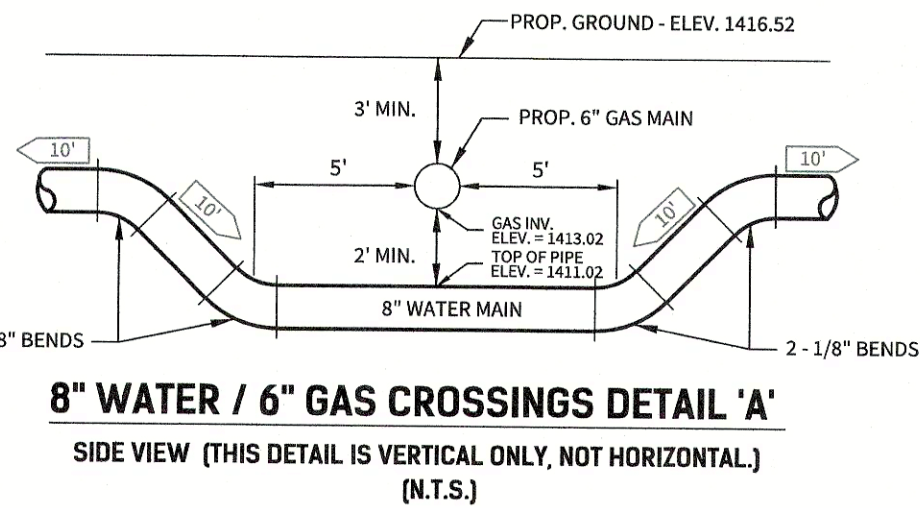
- Prior to tie-ins, any shutdowns of existing mains of any size must be coordinated with the SAWS Construction Inspection Division at least one week in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly. For water mains 12" or higher: SAWS Emergency Operations Center (210) 233-2014
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- Valve removal: Where the contractor is to abandon a water main, the control valve located on the abandoning branch will be removed and replaced with a cap/plug. (NSPI)
- Suitable anchorage/thrust blocking or joint restraint shall be provided at all of the following main locations: dead ends, plugs, caps, tees, crosses, valves, and bends, in accordance with the Standard Drawings DD-839 Series and Item No. 839, in the SAWS Standard Specifications for Construction.
- All valves shall read "open right".
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- Pipe Disinfection with Dry HTH for Projects less than 800 linear feet. (Item No. 847.3): Mains shall be disinfected with dry HTH where shown in the contract documents or as directed by the inspector, and shall not exceed a total length of 800 feet. This method of disinfection will also be followed for main repairs. The Contractor shall utilize all appropriate safety measure to protect his personnel during disinfection operations.
- Backflow Prevention Devices:
 - All irrigation services within residential areas are required to have backflow prevention devices.
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- All meters shall be 5/8", unless otherwise noted.
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LEGEND

- XXX LF. - XX" PVC C-900 = PROPOSED WATER MAIN
X X = JOINT RESTRAINT

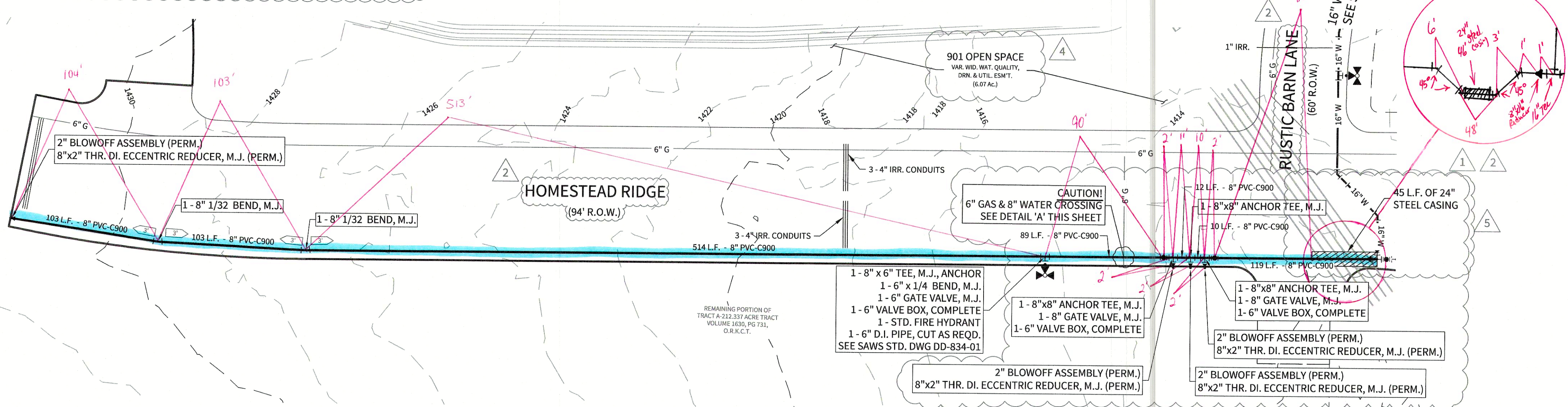
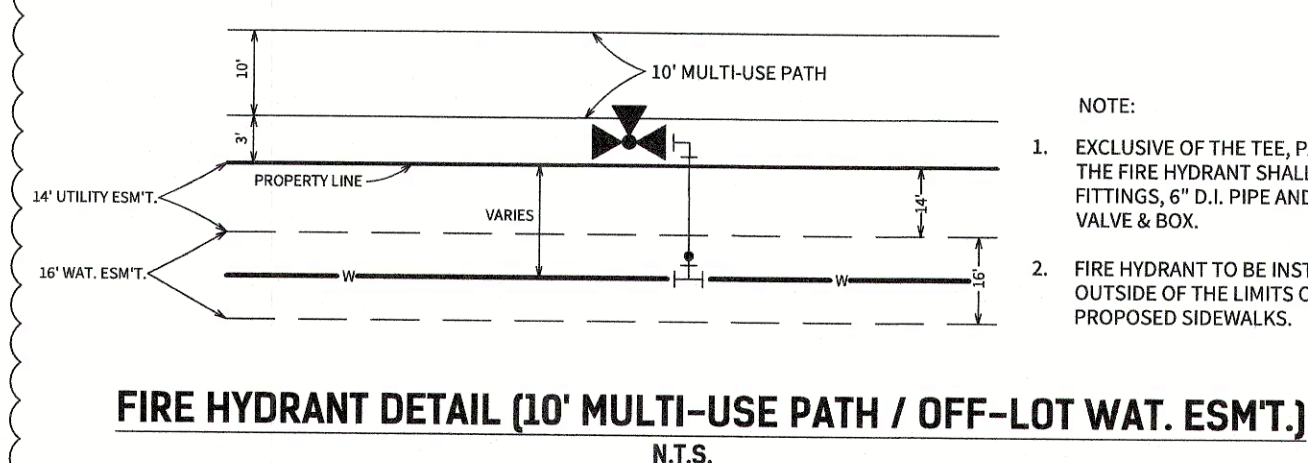
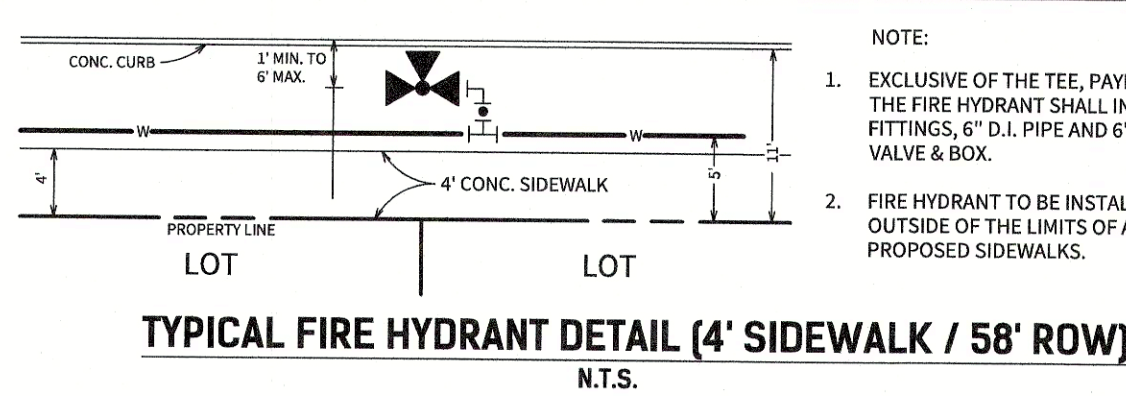
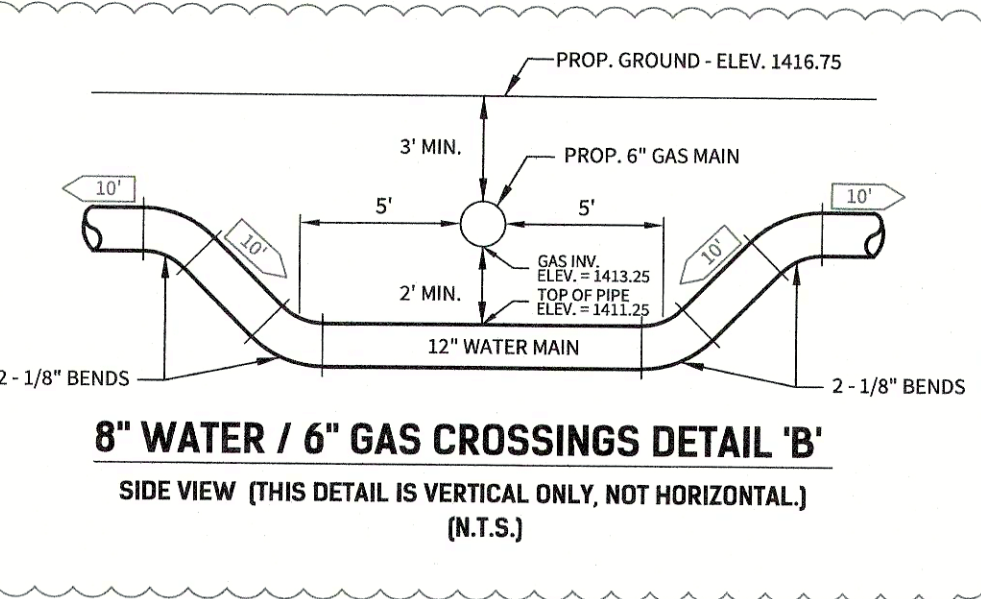
THRUST BLOCKING NOTE

ANCHORAGE/THRUST BLOCKING AND JOINT RESTRAINTS SHALL BE DONE IN ACCORDANCE WITH SAWS STANDARDS AND SPECIFICATIONS FOR CONSTRUCTION (ITEM NO. 839)



TRENCH EXCAVATION PROTECTION

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OWNER/DEVELOPER:
PULTE HOMES OF TEXAS, L.P.
CONTACT PERSON: FELIPE GONZALEZ
1718 DRY CREEK WAY, SUITE 120
SAN ANTONIO, TX 78259
TEL: (210) 818-7104
FAX: (210) 496-0449

CIVIL ENGINEER:
M.W. CUDE ENGINEERS, L.L.C.
CONTACT PERSON: DAVID D. CUPIT II, P.E.
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TX 78231
TEL: (210) 681-2951
FAX: (210) 523-7112

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LEGEND

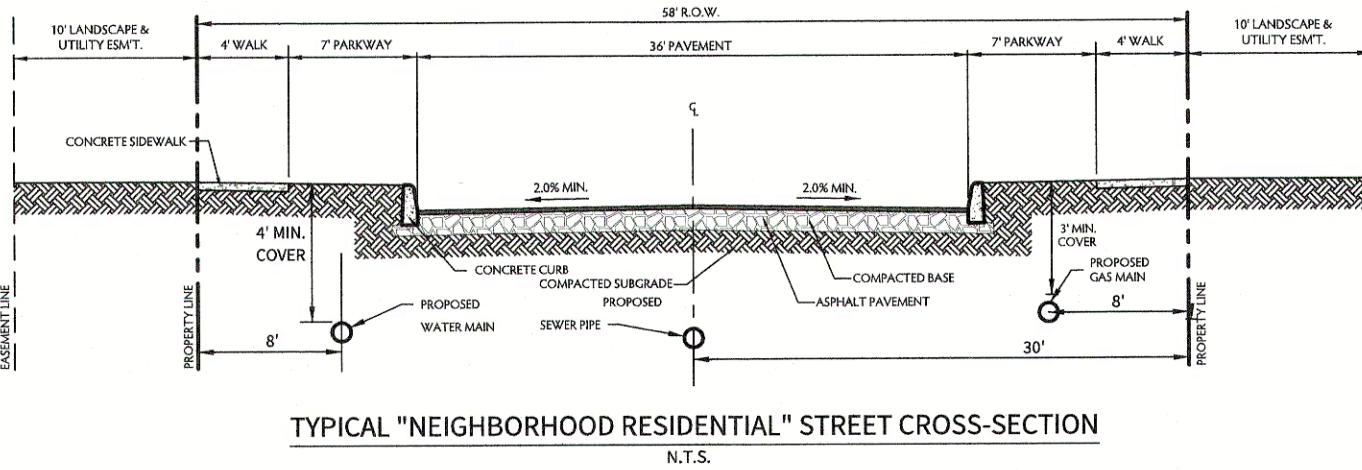
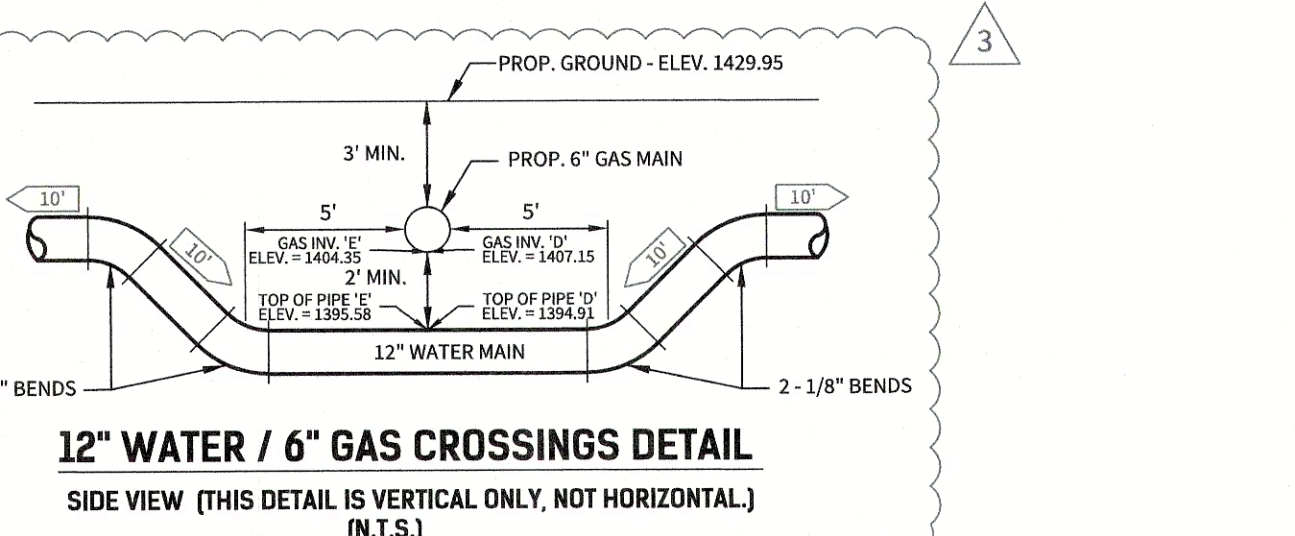
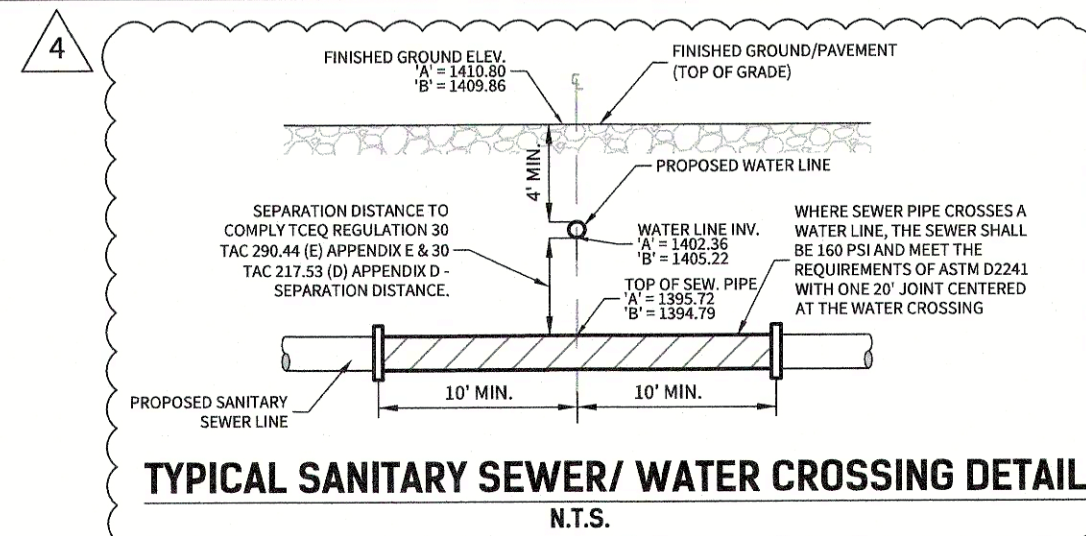
- 3/4" IRRILO
- 3/4" EXISTING WATER SERVICE WITH 5/8" METER
- 3/4" IRRIGATION SERVICE WITH 3/4" METER
- PROPOSED WATER MAIN
- EXISTING WATER MAIN
- EXISTING SANITARY SEWER
- JOINT RESTRAINT
- JOINT RESTRAINT ENTIRE LENGTH
- PROPOSED SEWER LINE AND MANHOLE
- EXISTING TREE TO BE PRESERVED

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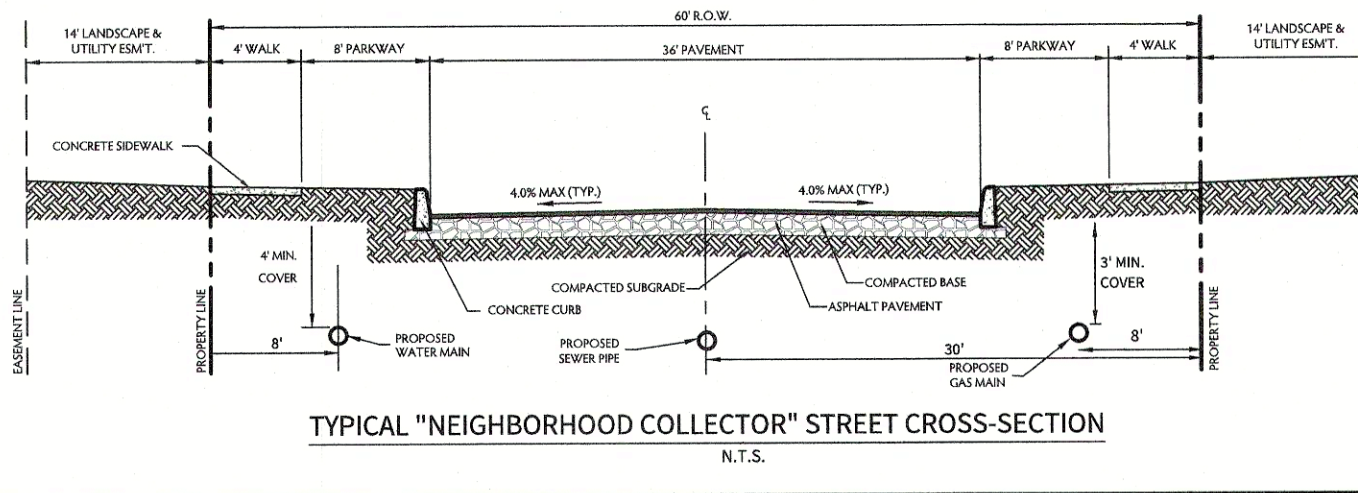
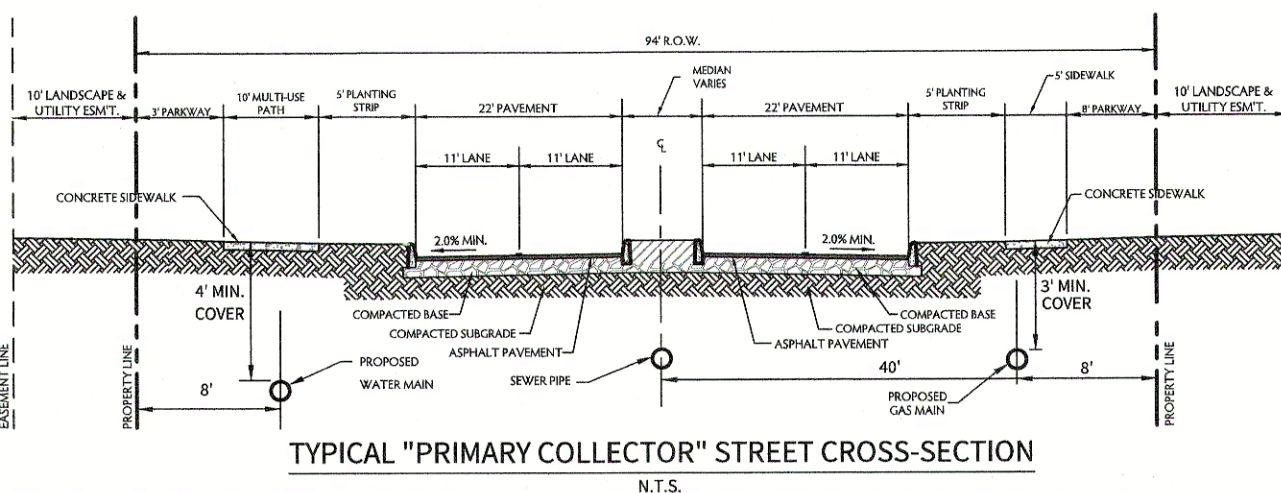
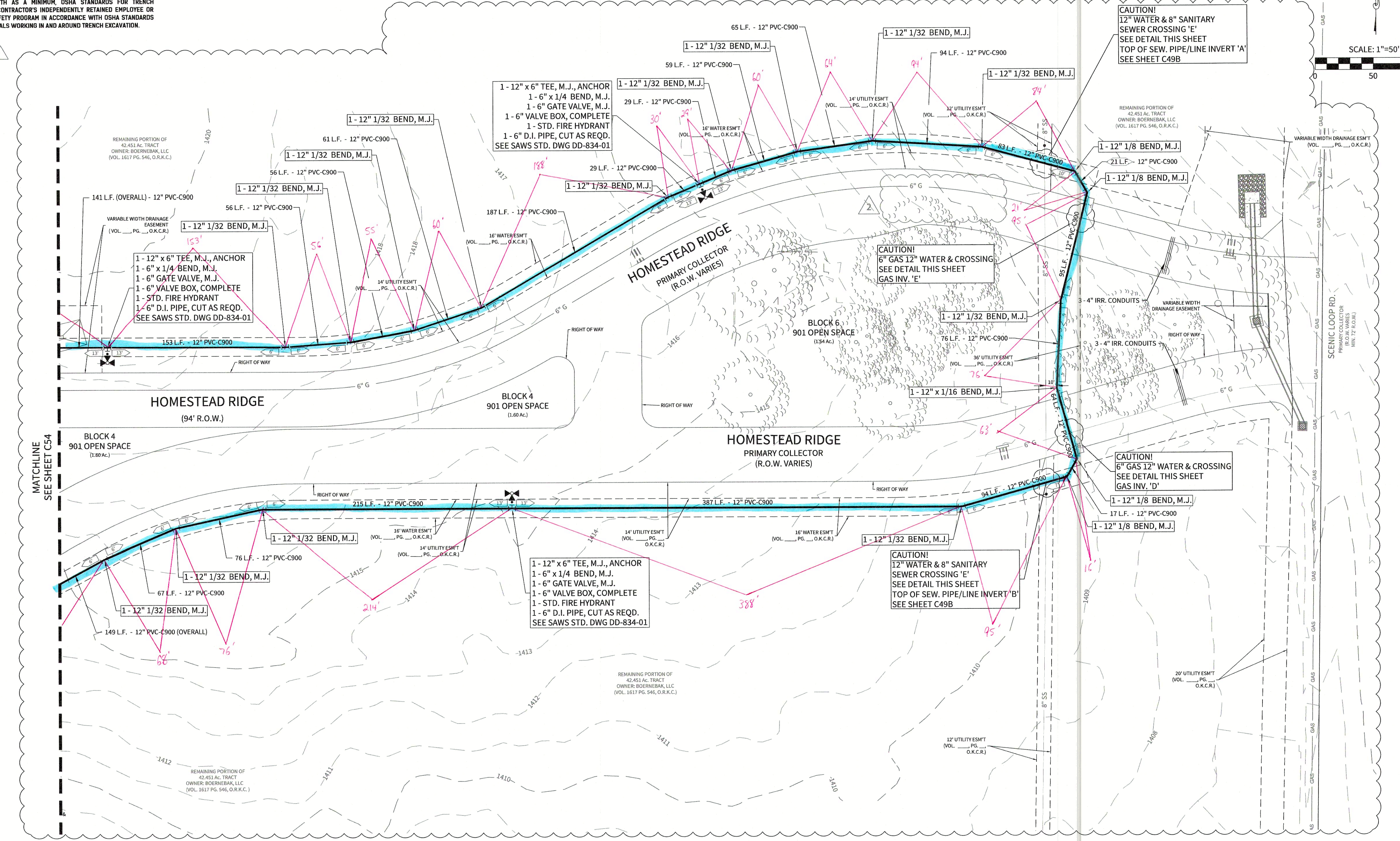
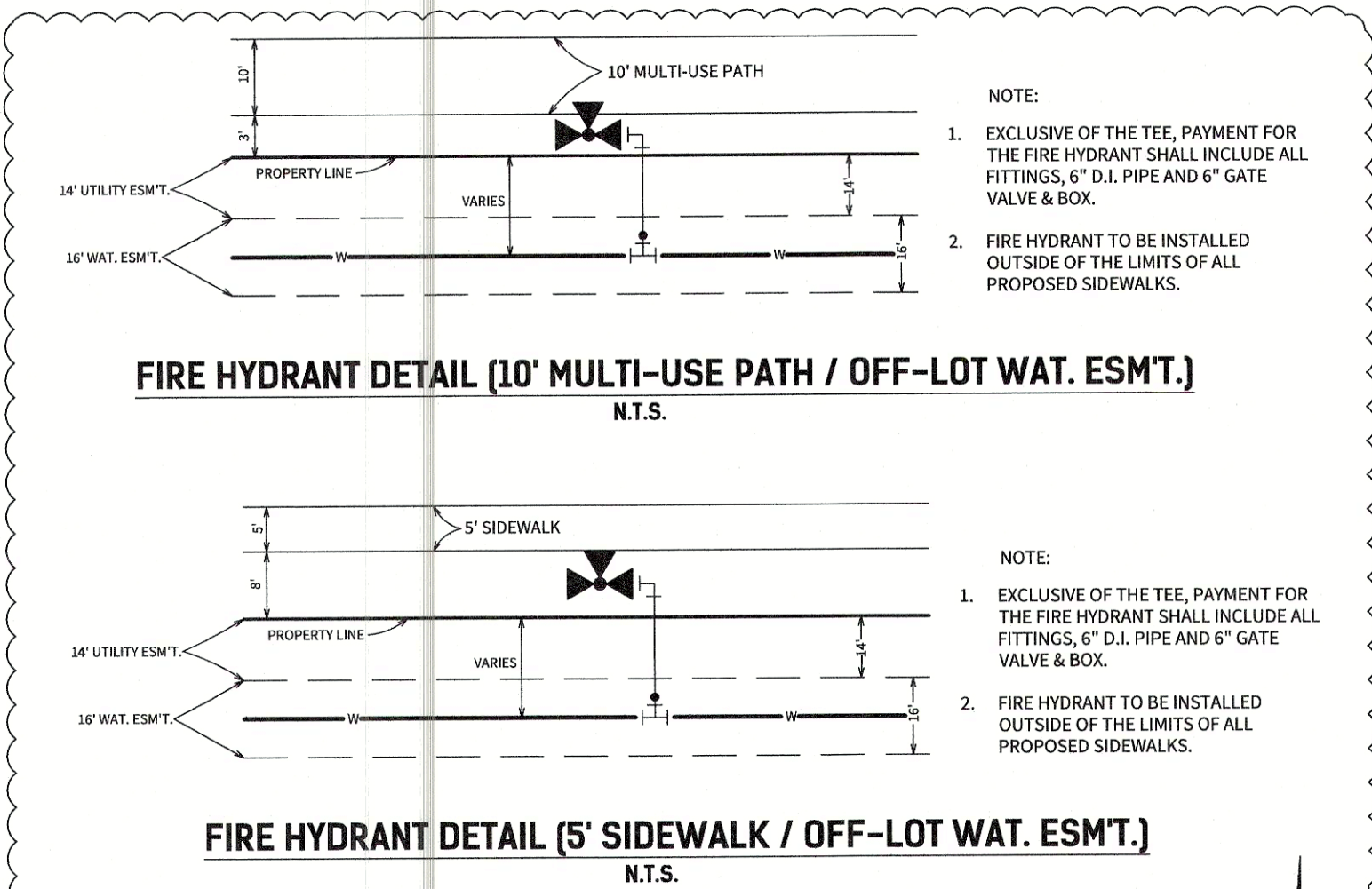
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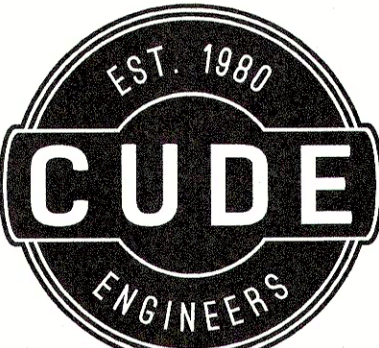
WATER / DRAIN "D" CURB INLET CROSSINGS ~ DETAIL 1

SIDE VIEW (THIS DETAIL IS VERTICAL ONLY, NOT HORIZONTAL). N.T.S.



PRESSURE ZONE 12

Developer's Name	PULTE HOMES OF TEXAS, L.P.
Developer's Address	1718 DRY CREEK WAY, SUITE 120
City	SAN ANTONIO
State	TEXAS
Zip	78259
Phone #	(210) 496-1985
Fax #	(210) 496-0449
SAWS Block Map #	N/A
Total EDUs	23
Total Linear Footage of Pipe	10" W - 1508 L.F. / 12" W - 382 L.F.
Number of Lots	19
SAWS Job No.	21-1061



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681-2951 F:(210) 523-7112

CORLEY FARMS UNIT 1

WATER DISTRIBUTION PLAN

DATE
02/13/2023

PROJECT NO.
03481.004

DRAWN BY
C3

CHECKED BY
XV/JC/DDC

REVISIONS

- 2022-10-05 - REVISED 8" WATER MAIN LAYOUT - ADDED 16" WATER EASEMENT
- 2023-01-19 - REVISED NUMBER OF 8" GATE VALVES AND DISPLAYED EASEMENT.
- 2023-01-23 - REVISED PIPE DIAMETER SIZE
- 2023-02-09 - LOOPED 6" & 12" WATER MAIN EXTENSION
-
-
-
-
-
-



02/13/2023
CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

C54A