

# CONSTRUCTION PLANS FOR NEW BRAUNFELS UTILITIES GOODWIN-CONRADS WATER AND SEWER CONFLICT RELOCATION PROJECT

## BID SET



### CHIEF EXECUTIVE OFFICER

RYAN KELSO

### BOARD OF TRUSTEES

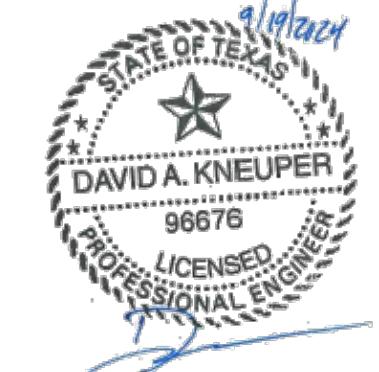
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191 N. Union Ave NEW BRAUNFELS, TEXAS 78130 PH: (830) 214-0521

Texas Engineering Firm F-18712

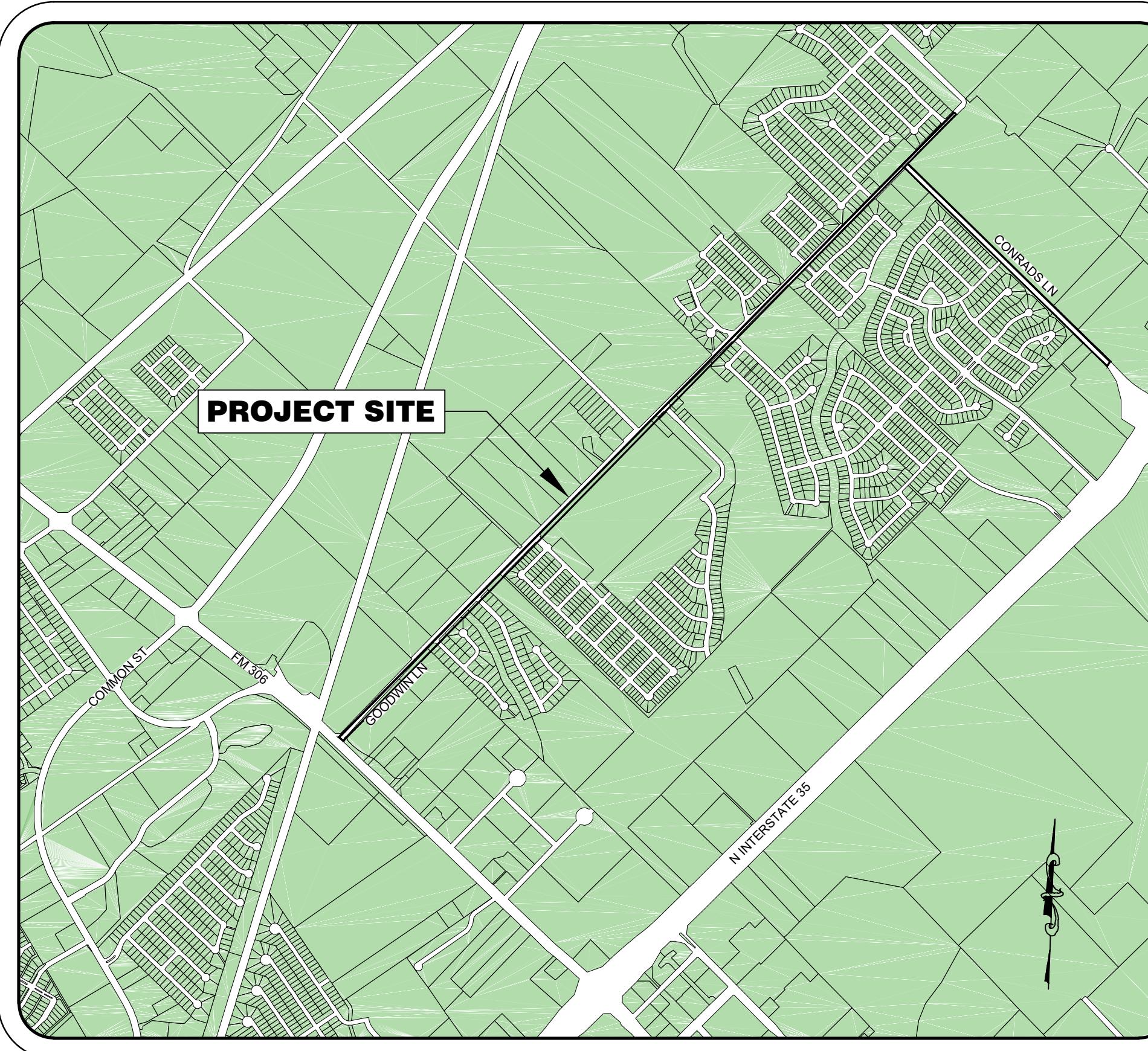
DAVID A KNEUPER P.E.  
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### NOTES:

- ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
- IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
- PROJECT IS A TYPE 1 DEVELOPMENT
- ACCORDING TO FLOOD INSURANCE RATE MAP FOR COMAL COUNTY, PANEL 455 COMMUNITY MAP NO. 48091C0455F EFFECTIVE 9/2/2009, A PORTION OF THIS PROJECT LIES WITHIN THE 100-YEAR FLOODPLAIN.
- THE PROJECT IS NOT LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
- WATER IS A PRECIOUS COMMODITY IN THE STATE OF TEXAS AND NEW BRAUNFELS UTILITIES (NBU) IS PASSIONATE ABOUT PROTECTING THE LOCAL RESOURCE. NBU'S CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ACQUIRING A FIRE HYDRANT METER SO THAT ALL WATER USED FOR CONSTRUCTION OR TESTING PURPOSES ARE PROPERLY ACCOUNTED FOR. NBU WILL NOT TOLERATE ANY WATER THEFT, REGARDLESS OF THE AMOUNT. IF WATER THEFT IS DISCOVERED NBU'S CONTRACTOR SHALL BE SUBJECT TO MONETARY PENALTIES, CRIMINAL CHARGES, AND STOPPAGE OF ALL CONSTRUCTION ACTIVITIES RELATED TO THE PROJECT. COSTS ASSOCIATED WITH ANY WORK STOPPAGE RESULTING FROM WATER THEFT SHALL BE AT THE FULL EXPENSE OF THE CONTRACTOR



LOCATION MAP  
N.T.S.

OWNER:  
NEW BRAUNFELS UTILITIES  
263 Main Plaza, New Braunfels, TX 78130  
Phone: 830-629-8400  
Fax: 830-629-2119



Know what's below.  
Call before you dig.

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PLEASE NOTE: NBU REQUIRES GPS POINTS FOR CERTAIN ELECTRICAL, WATER AND WASTEWATER ATTRIBUTES, SOME OF WHICH MUST BE TAKEN PRIOR TO BACKFILL DURING CONSTRUCTION. REFERENCE NBU'S WATER WASTEWATER CAD DELIVERABLES SUBMISSION STANDARDS.

GPS POINTS SHALL BE REQUIRED FROM THE DEVELOPER CONTRACTOR'S OR ENGINEER. A MINIMUM OF THREE COORDINATE POINTS FOR GEOREFERENCING SHALL BE REQUIRED. THE WATER AND WASTEWATER GPS POINTS SHALL BE TO SURVEY GRADE. THE ELECTRICAL GPS POINTS SHALL BE TO MAP GRADE.

WATER  
VERTICAL BENDS AND EDGE OF STEEL CASING (IF APPLICABLE) PRIOR TO BACKFILL  
HORIZONTAL BENDS PRIOR TO BACKFILL  
TEES PRIOR TO BACKFILL  
FITTINGS (REDUCERS AND COUPLINGS) PRIOR TO BACKFILL  
FIRE HYDRANTS (TOP OF FLANGE)  
VALVES  
METERS (TOP CENTER OF BOX)  
BLOW OFF ASSEMBLY  
CORNER SLAB OF WATER TANK & GATE VALVE ON WATER TANK

WASTEWATER  
MANHOLES  
CLEANOUTS CORNER  
SLAB OF LIFT STATION

ELECTRIC  
POLES TRANSFORMERS, BOTH ABOVE AND UNDERGROUND (FRONT LOCK)  
STREET LIGHTS

COORDINATE GPS REQUIREMENTS WITH NBU INSPECTOR

GENERAL NOTES 1 OF 2		GENERAL NOTES 2 OF 2	
NEW BRAUNFELS UTILITIES GOODWIN-CONRAD'S WATER AND SEWER CONFLICT RELOCATION		NEW BRAUNFELS UTILITIES GOODWIN-CONRAD'S WATER AND SEWER CONFLICT RELOCATION	
REVISIONS	APPD. DATE	REVISIONS	APPD. DATE
<p><b>UTILITY COMPANY NOTIFICATION</b></p> <p>THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.</p> <p>NEW BRAUNFELS UTILITIES (WATER &amp; SEWER) (830) 608-8971 NEW BRAUNFELS UTILITIES (ELECTRIC) (830) 608-8951 TEXAS STATE WIDE ONE CALL LOCATOR 811 RELIANT ENERGY ENTEX (830) 643-6434 AT&amp;T (830) 303-1333 TIME WARNER CABLE (830) 625-3408</p>			
<p><b>THE CITY OF NEW BRAUNFELS GENERAL CONSTRUCTION NOTES</b></p> <p>THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.</p> <p>ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.</p> <p>PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS TO SCHEDULE A PRECONSTRUCTION MEETING.</p> <p>FOR PUBLIC INFRASTRUCTURE PERMIT (SC) OR SITE PREP PERMIT (SD) PROJECTS:</p> <ul style="list-style-type: none"> <li>• FOR INSPECTIONS, YOU MUST CALL BEFORE 12:00 P.M., 48 HOURS PRIOR TO YOUR INSPECTION REQUEST.</li> <li>• EACH INSPECTION WILL BE ALLOWED 1 HOUR UNLESS YOU REQUEST FOR MORE TIME.</li> <li>• ONCE YOUR REQUEST HAS BEEN ACCEPTED, YOU WILL RECEIVE A CALL FROM THE CITY OF NEW BRAUNFELS INSPECTOR.</li> </ul> <p>FOR COMMERCIAL PERMIT (CP) PROJECTS:</p> <ul style="list-style-type: none"> <li>• ALL INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 OR,</li> <li>• FAXED IN AT 830-608-2117 OR,</li> <li>• E-MAILED AT INSPECTIONS@NBTEXAS.ORG.</li> </ul> <p>IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS AND LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IF, IN THE OPINION OF THE ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONSTRUCTION INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED. IF THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.</p> <p>A TXDOT TYPE II B-B BLUE REFLECTIVE RAISED PAVEMENT MARKER SHALL BE INSTALLED IN THE CENTER OF THE ROADWAY ADJACENT TO ALL FIRE HYDRANTS. IN LOCATIONS WHERE HYDRANTS ARE SITUATED ON CORNERS, BLUE REFLECTIVE RAISED PAVEMENT MARKERS SHALL BE INSTALLED ON BOTH APPROACHES WHICH FRONT THE HYDRANT. THE RAISED PAVEMENT MARKER SHALL MEET TXDOT MATERIAL, EPOXY AND ADHESIVE SPECIFICATIONS.</p> <p><b>GROUNDWATER</b></p> <p>IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, SUBCONTRACTORS, BUILDERS, GEO-TECHNICAL ENGINEER, AND PROJECT ENGINEER TO IMMEDIATELY NOTIFY THE OFFICE OF THE CITY ENGINEER AND PROJECT ENGINEER IF THE PRESENCE OF GROUNDWATER WITHIN THE SITE IS EVIDENT. UPON NOTIFICATION THE PROJECT ENGINEER SHALL RESPOND WITH PLAN REVISIONS FOR THE MITIGATION OF THE GROUNDWATER ISSUE. THE CITY ENGINEER SHALL RESPOND WITHIN TWO (2) BUSINESS DAYS UPON RECEIPT OF THE MITIGATION PLAN. ALL CONSTRUCTION ACTIVITY, IMPACTED BY THE DISCOVERY OF GROUNDWATER, SHALL BE SUSPENDED UNTIL THE CITY ENGINEER GRANTS A WRITTEN APPROVAL OF THE GROUNDWATER MITIGATION PLAN.</p> <p><b>RECORD DRAWINGS</b></p> <p>AS PER PLATTING ORDINANCE SECTION 118-38M: WHEN ALL OF THE IMPROVEMENTS ARE FOUND TO BE CONSTRUCTED AND COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND WITH THE CITY'S STANDARDS, AND UPON RECEIPT OF ONE SET OF "RECORD DRAWING" PLANS, AND A DIGITAL COPY OF ALL PLANS (PDF COPY) THE CITY ENGINEER SHALL ACCEPT SUCH IMPROVEMENTS FOR THE CITY OF NEW BRAUNFELS, SUBJECT TO THE GUARANTY OF MATERIAL AND WORKMANSHIP PROVISIONS IN THIS SECTION.</p> <p><b>CONSTRUCTION NOTE</b></p> <p>ENGINEER OF RECORD IS RESPONSIBLE TO ENSURE THAT EROSION CONTROL MEASURES AND STORMWATER CONTROL SUFFICIENT TO MITIGATE OFF SITE IMPACTS ARE IN PLACE AT ALL STAGES OF CONSTRUCTION.</p> <p><b>DRAINAGE NOTE</b></p> <p>DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE THE IMPACT OF CONSTRUCTION SHALL BE INSTALLED PRIOR TO ADDING IMPERVIOUS COVER.</p> <p><b>FINISHED FLOOR ELEVATIONS</b></p> <p>THE ELEVATION OF THE LOWEST FLOOR SHALL BE AT LEAST 10 INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND, WHICH SHALL BE SLOPED IN A FASHION SO AS TO DIRECT STORMWATER AWAY FROM THE STRUCTURE. PROPERTIES ADJACENT TO STORMWATER CONVEYANCE STRUCTURES MUST HAVE FLOOR SLAB ELEVATION OR BOTTOM OF FLOOR JOISTS A MINIMUM OF ONE FOOT ABOVE THE 100-YEAR WATER FLOW ELEVATION IN THE STRUCTURE. DRIVEWAYS SERVING HOUSES ON THE DOWNSHILL SIDE OF THE STREET SHALL HAVE A PROPERLY SIZED CROSS SWALE PREVENTING RUNOFF FROM ENTERING THE GARAGE.</p> <p><b>SOILS TESTING</b></p> <p>PROCTORS SHALL BE SAMPLED FROM ON-SITE MATERIAL (ON-SITE IS DEFINED AS LIMITS OF CONSTRUCTION FOR THIS PLAN SET) AND A COPY OF THE PROCTOR RESULTS SHALL BE DELIVERED TO THE CITY OF NEW BRAUNFELS STREET INSPECTOR PRIOR TO ANY DENSITY TESTS.</p> <p><b>ROADWAY</b></p> <p>ALL ROADWAY COMPACTION TESTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR'S GEOTECHNICAL ENGINEER. FLEXIBLE BASE OR FILL/EMBANKMENT MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED EIGHT INCHES (8") LOOSE. THE REQUIRED DENSITY FOR THE FILL/EMBANKMENT MATERIAL SHALL MEET THE REQUIREMENTS OF TXDOT'S SPECIFICATION ITEM 132. THE REQUIRED DENSITY FOR THE FLEXIBLE BASE MATERIAL SHALL MEET THE REQUIREMENTS OF TXDOT'S SPECIFICATION ITEM 247. EACH LAYER OF MATERIAL, INCLUSIVE OF SUBGRADE, SHALL BE COMPACTION AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT. UPON COMPLETION OF TESTING, THE GEOTECHNICAL ENGINEER WILL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FLEXIBLE BASE, AND FILL MATERIAL, AND SUBGRADE, HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.</p> <p><b>ITEM 340</b></p> <p>ASPHALTIC CONCRETE PAVEMENT SHALL BE THE TYPE OF HOT MIX ASPHALT AS DEFINED IN TXDOT'S STANDARD SPECIFICATIONS FOR CURRENT TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREET AND BRIDGES.</p> <p>THE CITY OF NEW BRAUNFELS WILL NOT ACCEPT THE USE OF RECYCLED ASPHALT PAVEMENT (RAP) OR RECYCLED ASPHALT</p>			
<p>SHINGLES (RAS) IN ASPHALT MIXTURES FOR NEW ROADWAYS. ANY DEBRIS INCLUSIONS WITHIN NEW ASPHALT PAVEMENTS WILL RESULT IN ASPHALT REMOVAL AND REPLACEMENT FROM CURB TO CURB FOR LIMITS TO BE DETERMINED BY THE CITY OF NEW BRAUNFELS.</p> <p>THE ASPHALTIC CONCRETE PAVEMENT SURFACE COURSE SHALL BE PLANT MIXED, HOT LAID TYPE "D" MEETING THE SPECIFICATION REQUIREMENTS OF TXDOT ITEM 340. THE ASPHALTIC CONCRETE PAVEMENT SUB-SURFACE COURSES SHALL BE PLANT MIXED, HOT LAID TYPE "B" MEETING THE SPECIFICATION REQUIREMENTS OF TXDOT ITEM 340. THE MIXTURE SHALL BE DESIGNED PER THE DESIGN REQUIREMENTS SPECIFIED IN TXDOT ITEM 340 AND SHALL BE COMPACTION TO BETWEEN 91 AND 95 PERCENT OF THE MAXIMUM THEORETICAL DENSITY AS DETERMINED BY TXDOT TEST METHOD TEX-227-F. PLACE THE MIXTURE WHEN THE ROADWAY SURFACE TEMPERATURE IS AT OR ABOVE 60°F. COMPLETE ALL COMPACTION OPERATIONS BEFORE THE PAVEMENT TEMPERATURE DROPS BELOW 160°F. THE ASPHALT CEMENT CONTENT BY PERCENT OF TOTAL MIXTURE WEIGHT SHALL FALL WITHIN A TOLERANCE OF +0.5 PERCENT FROM A SPECIFIC MIX DESIGN.</p> <p><b>CURB CUT DUE TO CONSTRUCTION OF NEW RIGHT-OF-WAY CONSTRUCTION</b> (INDICATE THE 2 OPTIONS ON THE CONSTRUCTION PLANS).</p> <p>1. SAWCUT EXISTING STREET AND MATCH TO NEW CONSTRUCTION. 2. SAWCUT EXISTING CURB TO TIE INTO EXISTING CONSTRUCTION.</p> <p><b>CONSTRUCTION STABILIZED ENTRANCE</b> SAWCUT CURB FOR CONSTRUCTION ENTRANCE.</p> <p>STABILIZED CONSTRUCTION AREA SHALL BE CONSTRUCTED OF 3"X5" ROCK TO BE PLACED A MINIMUM LENGTH OF 25-FT. AND MAINTAINED SO THAT CONSTRUCTION DEBRIS DOES NOT FALL WITHIN THE CITY RIGHT-OF-WAY. RIGHTOF-WAY MUST BE CLEARED FROM MUD, ROCKS, ETC. AT ALL TIMES.</p> <p><b>SIGNING AND PAVEMENT MARKING PLAN NOTES</b></p> <p>THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY AND WARNING SIGNS, STREETS NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS. THE CITY WILL INSPECT ALL SIGNS AT FINAL INSPECTION.</p> <p>THE CONTRACTOR SHALL INSTALL ALL PAVEMENT MARKINGS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS. THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL MARKINGS. THE CITY WILL INSPECT ALL MARKINGS AT FINAL APPLICATION.</p> <p><b>SEEDING AND ESTABLISHMENT OF VEGETATION WITHIN EARTHEN CHANNELS, STORMWATER BASINS AND DISTURBED AREAS</b></p> <p>SEEDING FOR THE PURPOSE OF ESTABLISHING VEGETATION WITHIN CONSTRUCTED EARTHEN CHANNELS, BASINS AND DISTURBED AREAS SHALL BE CONDUCTED IN ACCORDANCE WITH ITEM 164 (SEEDING FOR EROSION CONTROL) OF TXDOT'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS AND BRIDGES MANUAL. ONLY SEED TYPES AND MIXES SPECIFIED FOR THE SAN ANTONIO DISTRICT (DISTRICT 15) IN TABLES 1 AND 2 UNDER ITEM 164 SHALL BE UTILIZED. DURING THE COOL SEASON (SEPT 1-NOV 30), CEREAL RYE AND SEED SPECIES SPECIFIED FOR THE SAN ANTONIO DISTRICT IN TABLE 3 MAY BE USED. FOR COOL SEASON SEEDING APPLICATIONS, COOL SEASON SEED MIXES SHALL BE USED IN CONJUNCTION WITH SEED MIXES FOR THE SAN ANTONIO DISTRICT AS SPECIFIED IN TABLE 1 AND 2 UNDER ITEM 164.</p> <p>IT MAY BE DEEMED NECESSARY TO INCORPORATE TOPSOIL AND SOIL AMENDMENTS (I.E. COMPOST/ FERTILIZER) INTO EXISTING SOIL IN ORDER TO FACILITATE VEGETATION GROWTH. TOPSOIL, COMPOST AND FERTILIZER ADDITIONS SHALL BE CONDUCTED ACCORDING TO ITEMS 160, 161 AND 166 OF TXDOT'S STANDARD SPECIFICATIONS MANUAL, RESPECTIVELY.</p> <p>WATERING MAY ALSO BE NECESSARY TO FACILITATE AND EXPEDITE THE SPROUTING AND GROWTH OF VEGETATION. ITEM 168 OF TXDOT'S STANDARD SPECIFICATIONS MANUAL SHALL BE ADHERED TO FOR VEGETATIVE WATERING.</p> <p>IF EXTENDED DROUGHT CONDITIONS EXIST THAT HINDER OR PROHIBIT THE GROWTH AND ESTABLISHMENT OF VEGETATION, THE CONTRACT/ DEVELOPER SHALL PROVIDE A PLAN TO THE CITY OF NEW BRAUNFELS DESCRIBING THE MEASURES THAT WILL BE TAKEN TO STABILIZE EARTHEN DRAINAGE INFRASTRUCTURE UNTIL A TIME WHEN GROWING CONDITIONS BECOME MORE FAVORABLE.</p>			



GENERAL NOTES 1 OF 2

NEW BRAUNFELS UTILITIES  
GOODWIN-CONRAD'S WATER AND SEWER  
CONFLICT RELOCATION

SCALE:  
DATE:  
PROJECT NO: 8029-03  
DESIGNED BY: AR  
DRAWN BY: AR  
CHECKED BY: DK  
SHEET NO. 2  
OF 28 SHEETS



- THIS ORGANIZED SEWAGE COLLECTION SYSTEM (SCS) MUST BE CONSTRUCTED IN ACCORDANCE WITH 30 TEXAS ADMINISTRATIVE CODE (TAC) §213.5(C), THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S (TCEQ) EDWARDS AQUIFER RULES AND ANY LOCAL GOVERNMENT STANDARD SPECIFICATIONS.
  - ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROPOSED REGULATED PROJECT MUST BE PROVIDED WITH COPIES OF THE SEWAGE COLLECTION SYSTEM PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS MUST BE REQUIRED TO KEEP ON-SITE COPIES OF THE PLAN AND THE APPROVAL LETTER.
  - A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE PRESIDING TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:
    - THE NAME OF THE APPROVED PROJECT;
    - THE ACTIVITY START DATE; AND
    - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
  - ANY MODIFICATION TO THE ACTIVITIES DESCRIBED IN THE REFERENCED SCS APPLICATION FOLLOWING THE DATE OF APPROVAL MAY REQUIRE THE SUBMITTAL OF AN SCS APPLICATION TO MODIFY THIS APPROVAL, INCLUDING THE PAYMENT OF APPROPRIATE FEES AND ALL INFORMATION NECESSARY FOR ITS REVIEW AND APPROVAL.
  - PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENT (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
  - ANY SENSITIVE FEATURES ARE DISCOVERED DURING THE WASTEWATER LINE TRENCHING ACTIVITIES, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPLICANT MUST IMMEDIATELY NOTIFY THE APPROPRIATE REGIONAL OFFICE OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY OF THE FEATURE DISCOVERED. A GEOLOGIST'S ASSESSMENT OF THE LOCATION AND EXTENT OF THE FEATURE DISCOVERED MUST BE REPORTED TO THAT REGIONAL OFFICE IN WRITING WITHIN TWO WORKING DAYS. THE APPLICANT MUST SUBMIT A PLAN FOR ENSURING THE STRUCTURAL INTEGRITY OF THE SEWER LINE OR FOR MODIFYING THE PROPOSED COLLECTION SYSTEM ALIGNMENT AROUND THE FEATURE. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE EXECUTIVE DIRECTOR HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY WHILE MAINTAINING THE STRUCTURAL INTEGRITY OF THE LINE.
  - SEWER LINES LOCATED WITHIN OR CROSSING THE 5-YEAR FLOODPLAIN OF A DRAINAGE WAY WILL BE PROTECTED FROM INUNDATION AND STREAM VELOCITIES WHICH COULD CAUSE EROSION AND SCOURING OF BACKFILL. THE TRENCH MUST BE CAPPED WITH CONCRETE TO PREVENT SCOURING OF BACKFILL, OR THE SEWER LINES MUST BE ENCASED IN CONCRETE. ALL CONCRETE SHALL HAVE A MINIMUM THICKNESS OF SIX (6) INCHES.
  - BLASTING PROCEDURES FOR PROTECTION OF EXISTING SEWER LINES AND OTHER UTILITIES WILL BE IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION CRITERIA. SAND IS NOT ALLOWED AS BEDDING OR BACKFILL IN TRENCHES THAT HAVE BEEN BLASTED. IF ANY EXISTING SEWER LINES ARE DAMAGED, THE LINES MUST BE REPAIRED AND RETESTED.
  - ALL MANHOLES CONSTRUCTED OR REHABILITATED ON THIS PROJECT MUST HAVE WATERTIGHT SIZE ON SIZE RESILIENT CONNECTORS ALLOWING FOR DIFFERENTIAL SETTLEMENT. IF MANHOLES ARE CONSTRUCTED WITHIN THE 100-YEAR FLOODPLAIN, THE COVER MUST HAVE A GASKET AND BE BOLTED TO THE RING. WHERE GASKETED MANHOLE COVERS ARE REQUIRED FOR MORE THAN THREE MANHOLES IN SEQUENCE OR FOR MORE THAN 1500 FEET, ALTERNATE MEANS OF VENTING WILL BE PROVIDED. BRICKS ARE NOT AN ACCEPTABLE CONSTRUCTION MATERIAL FOR ANY PORTION OF THE MANHOLE.
- THE DIAMETER OF THE MANHOLES MUST BE A MINIMUM OF FOUR FEET AND THE MANHOLE FOR ENTRY MUST HAVE A MINIMUM CLEAR OPENING DIAMETER OF 30 INCHES. THESE DIMENSIONS AND OTHER DETAILS SHOWING COMPLIANCE WITH THE COMMISSION'S RULES CONCERNING MANHOLES AND SEWER LINES/MANHOLE INVERTS DESCRIBED IN 30 TAC §217.55.
- IT IS SUGGESTED THAT ENTRANCE INTO MANHOLES IN EXCESS OF FOUR FEET DEEP BE ACCOMPLISHED BY MEANS OF A PORTABLE LADDER. THE INCLUSION OF STEPS IN A MANHOLE IS PROHIBITED.
- WHERE WATER LINES AND NEW SEWER LINE ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
  - WHERE SEWERS LINES DEVIATE FROM STRAIGHT ALIGNMENT AND UNIFORM GRADE ALL CURVATURE OF SEWER PIPE MUST BE ACHIEVED BY THE FOLLOWING PROCEDURE WHICH IS RECOMMENDED BY THE PIPE MANUFACTURER: NOT ALLOWED.
- IF PIPE FLEXURE IS PROPOSED, THE FOLLOWING METHOD OF PREVENTING DEFLECTION OF THE JOINT MUST BE USED: NOT ALLOWED.
- SPECIFIC CARE MUST BE TAKEN TO ENSURE THAT THE JOINT IS PLACED IN THE CENTER OF THE TRENCH AND PROPERLY BEDDED IN ACCORDANCE WITH 30 TAC §217.54.
- NEW SEWAGE COLLECTION SYSTEM LINES MUST BE CONSTRUCTED WITH STUB OUTS FOR THE CONNECTION OF ANTICIPATED EXTENSIONS. THE LOCATION OF SUCH STUB OUTS MUST BE MARKED ON THE GROUND SUCH THAT THEIR LOCATION CAN BE EASILY DETERMINED AT THE TIME OF CONNECTION OF THE EXTENSIONS. SUCH STUB OUTS MUST BE MANUFACTURED WYES OR TEES THAT ARE COMPATIBLE IN SIZE AND MATERIAL WITH BOTH THE SEWER LINE AND THE EXTENSION. AT THE TIME OF ORIGINAL CONSTRUCTION, NEW STUB-OUTS MUST BE CONSTRUCTED SUFFICIENTLY TO EXTEND BEYOND THE END OF THE STREET PAVEMENT. ALL STUB-OUTS MUST BE SEALED WITH A MANUFACTURED CAP TO PREVENT LEAKAGE. EXTENSIONS THAT WERE NOT ANTICIPATED AT THE TIME OF ORIGINAL CONSTRUCTION OR THAT ARE TO BE CONNECTED TO AN EXISTING SEWER LINE NOT FURNISHED WITH STUB OUTS MUST BE CONNECTED USING A MANUFACTURED SADDLE AND IN ACCORDANCE WITH ACCEPTED PLUMBING TECHNIQUES.
- THE PRIVATE SERVICE LATERAL STUB-OUTS MUST BE INSTALLED AS SHOWN ON THE PLAN AND PROFILE SHEETS AND MARKED AFTER BACKFILLING.
- TRENCHING, BEDDING AND BACKFILL MUST CONFORM WITH 30 TAC §217.54. THE BEDDING AND BACKFILL FOR FLEXIBLE PIPE MUST COMPLY WITH THE STANDARDS OF ASTM D-2321, CLASSES IA, IB, II OR III. RIGID PIPE BEDDING MUST COMPLY WITH THE REQUIREMENTS OF ASTM C 12 (ANSI A 106.2) CLASSES A, B OR C.
  - SEWER LINES MUST BE TESTED FROM MANHOLE TO MANHOLE. WHEN A NEW SEWER LINE IS CONNECTED TO AN EXISTING STUB OR CLEAN-OUT, IT MUST BE TESTED FROM EXISTING MANHOLE TO NEW MANHOLE. IF A STUB OR CLEAN-OUT IS USED AT THE END OF THE PROPOSED SEWER LINE, NO PRIVATE SERVICE ATTACHMENTS MAY BE CONNECTED BETWEEN THE LAST MANHOLE AND THE CLEANOUT UNLESS IT CAN BE CERTIFIED AS CONFORMING WITH THE PROVISIONS OF 30 TAC §213.5(C)(3)(E).
  - ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH 30 TAC §217.57. THE ENGINEER MUST RETAIN COPIES OF ALL TEST RESULTS WHICH MUST BE MADE AVAILABLE TO THE EXECUTIVE DIRECTOR UPON REQUEST. THE ENGINEER MUST CERTIFY IN WRITING THAT ALL WASTEWATER LINES HAVE PASSED ALL REQUIRED TESTING TO THE APPROPRIATE REGIONAL OFFICE WITHIN 30 DAYS OF TEST COMPLETION AND PRIOR TO USE OF THE NEW COLLECTION SYSTEM. TESTING METHOD WILL BE:
    - FOR A COLLECTION SYSTEM PIPE THAT WILL TRANSPORT WASTEWATER BY GRAVITY FLOW, THE DESIGN MUST SPECIFY AN INFILTRATION AND EXFILTRATION TEST OR A LOW-PRESSURE AIR TEST. A TEST MUST CONFORM TO THE FOLLOWING REQUIREMENTS:
      - LOW PRESSURE AIR TEST.
      - A LOW PRESSURE AIR TEST MUST FOLLOW THE PROCEDURES DESCRIBED IN AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) C-828, ASTM C-924, OR ASTM F-1417 OR OTHER PROCEDURE APPROVED BY THE EXECUTIVE DIRECTOR, EXCEPT AS TO TESTING TIMES AS REQUIRED IN TABLE C.3 IN SUBPARAGRAPH (C) OF THIS PARAGRAPH OR EQUATION C.3 IN SUBPARAGRAPH (B)(II) OF THIS PARAGRAPH.
      - FOR SECTIONS OF COLLECTION SYSTEM PIPE LESS THAN 36 INCH AVERAGE INSIDE DIAMETER, THE FOLLOWING PROCEDURE MUST APPLY, UNLESS A PIPE IS TO BE TESTED AS REQUIRED BY PARAGRAPH (2) OF THIS SUBSECTION.
        - A PIPE MUST BE PRESSURIZED TO 3.5 POUNDS PER SQUARE INCH (PSI) GREATER THAN THE PRESSURE EXERTED BY GROUNDWATER ABOVE THE PIPE.
        - ONCE THE PRESSURE IS STABILIZED, THE MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 PSI GAUGE TO 2.5 PSI GAUGE IS COMPUTED FROM THE FOLLOWING EQUATION:
- EQUATION C.3
- $$T = 0.085 \times D \times K$$
- WHERE:
- T = TIME FOR PRESSURE TO DROP 1.0 POUND PER SQUARE INCH GAUGE IN SECONDS  
K = 0.000419 X D X L, BUT NOT LESS THAN 1  
D = AVERAGE INSIDE PIPE DIAMETER IN INCHES  
L = LENGTH OF LINE OF SAME SIZE BEING TESTED, IN FEET  
Q = RATE OF LOSS, 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE
- (C) SINCE A K VALUE OF LESS THAN 1.0 MAY NOT BE USED, THE MINIMUM TESTING TIME FOR EACH PIPE DIAMETER IS SHOWN IN THE FOLLOWING TABLE C.3:

Pipe Diameter (inches)	Minimum Time (seconds)	Maximum Length for Minimum Time (feet)	Time for Longer Length (seconds/foot)
6	340	398	0.655
8	454	298	1.520
10	567	239	2.374
12	680	199	3.419
15	850	159	5.342
18	1020	133	7.693
21	1190	114	10.471
24	1360	100	13.676
27	1530	88	17.309
30	1700	80	21.369
33	1870	72	25.856

- 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."
- 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)].
- 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)].
- 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)].
- All water line crossings of wastewater mains shall be perpendicular [§290.44(e)(4)(B)].
- Water transmission and distribution lines shall be installed in accordance with the manufacturer's instructions. However, the top of the water line 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)].
- The maximum allowable lead content of pipes, pipe fittings, plumbing fixtures, and fixtures is 0.25 percent [§290.44(b)].
- 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)].
- 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)].
- 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 enclosure. 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)].
- 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;

$$Q = \frac{LDV}{P}$$

Where:

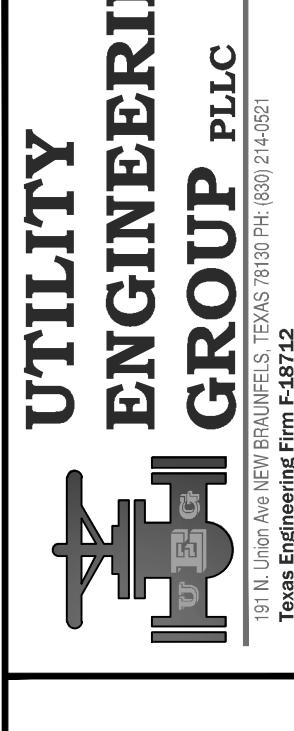
- Q = the quantity of makeup water in gallons per hour,
- L = the length of the pipe section being tested, in feet,
- D = the nominal diameter of the pipe in inches, and
- P = the average test pressure during the hydrostatic test in pounds per square inch (psi).

$$L = \frac{SDV}{P}$$

Where:

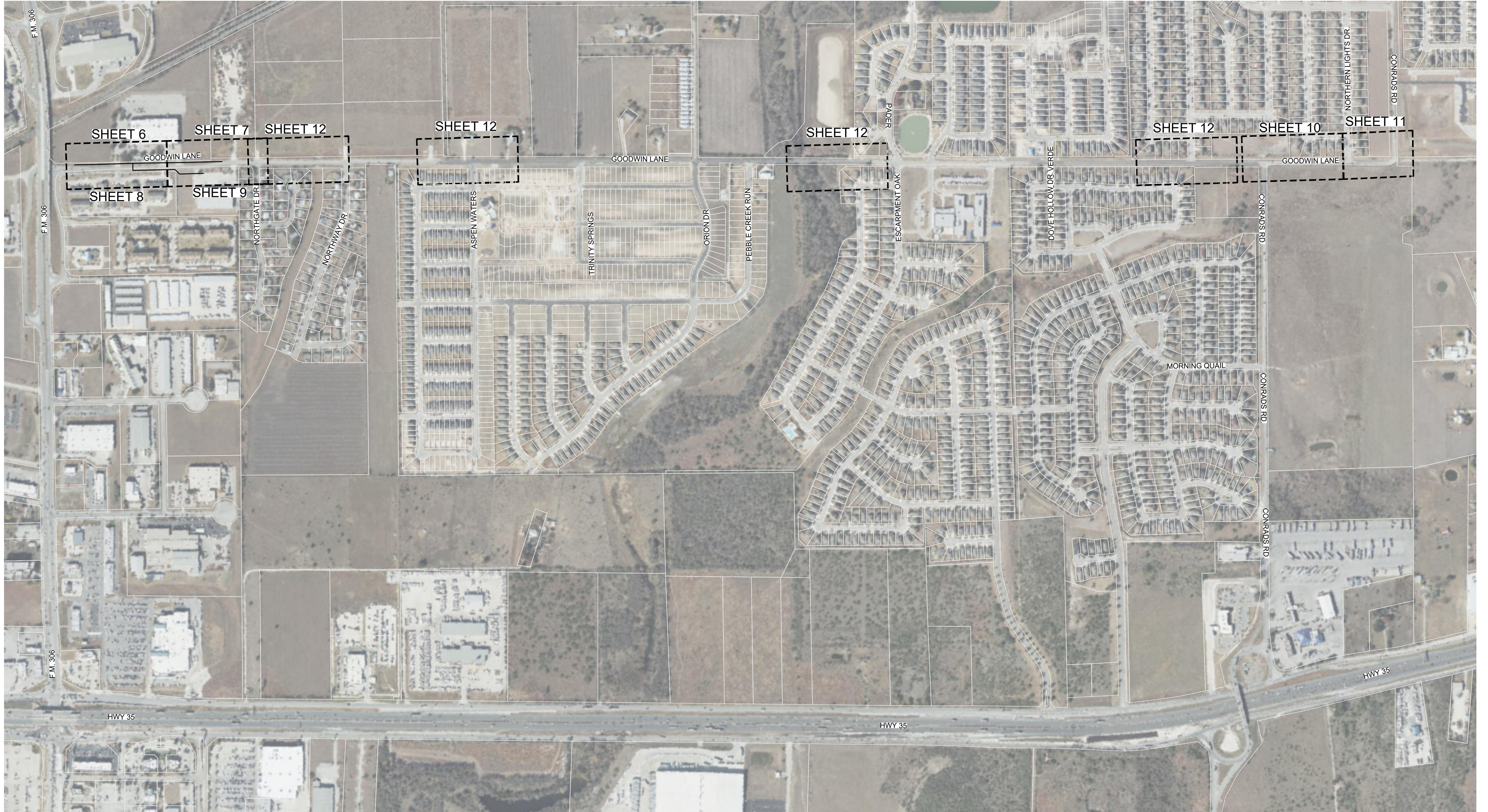
- L = the quantity of makeup water in gallons per hour,
- S = the length of the pipe section being tested, in feet,
- D = the nominal diameter of the pipe in inches, and
- P = the average test pressure during the hydrostatic test in pounds per square inch (psi).

- 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)(4).
- The separation distance from a portable 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 portable 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)].
- 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)].
- 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)].
- Waterlines shall not be installed closer than ten feet to septic tank drainfields [§290.44(e)(8)].
- The contractor shall disinfect the new waterlines in accordance with AWWA Standard C651-14 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)].
- Dechlorination of disinfecting water shall be in strict accordance with current AWWA Standard C655-09 or most recent.



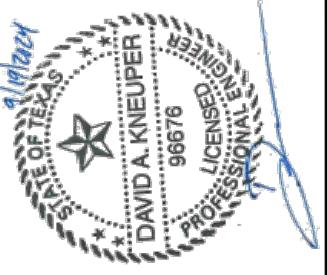
Austin Regional Office  
12100 Park 35 Circle, Building A  
Austin, Texas 78753-1808  
Phone (512) 339-2929  
Fax (512) 339-3795

San Antonio Regional Office  
14250 Auditorium Road  
San Antonio, Texas 78233-4480  
Phone (210) 490-3096  
Fax (210) 545-4329



SCALE: 1" = 400'  
0 400 800

UTILITY  
GROUP PLC  
Texas Engineering Firm #24732



10 N. Main Ave., New Braunfels, TX 78130-3800, (800) 247-3732

NEW BRAUNFELS UTILITIES  
GOODWIN-CONRAD'S WATER AND SEWER CONFLICT  
RELOCATION PROJECT

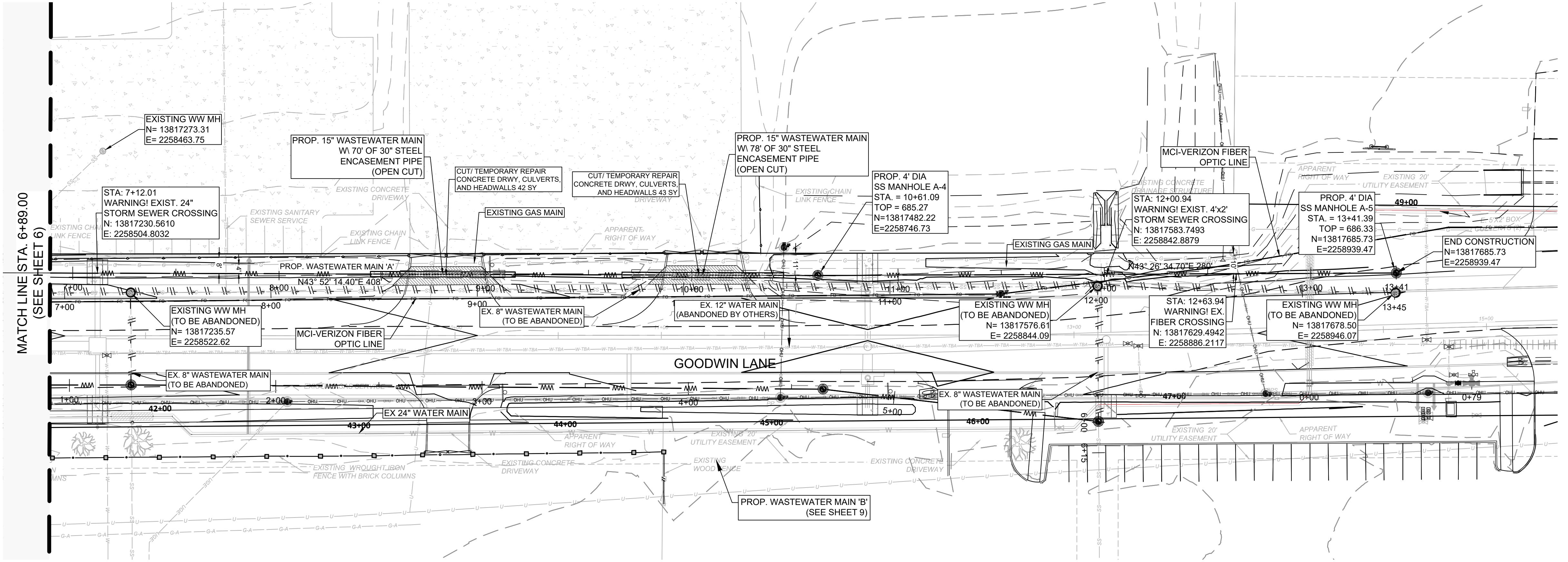
WASTEWATER INDEX

NO.	REVISIONS	APPD. DATE

SCALE:  
DATE: 20 September, 2024  
PROJECT NO: 029-03  
DESIGNED BY: AR  
DRAWN BY: AR  
CHECKED BY: DK  
SHEET NO. 5

OF 28 SHEETS





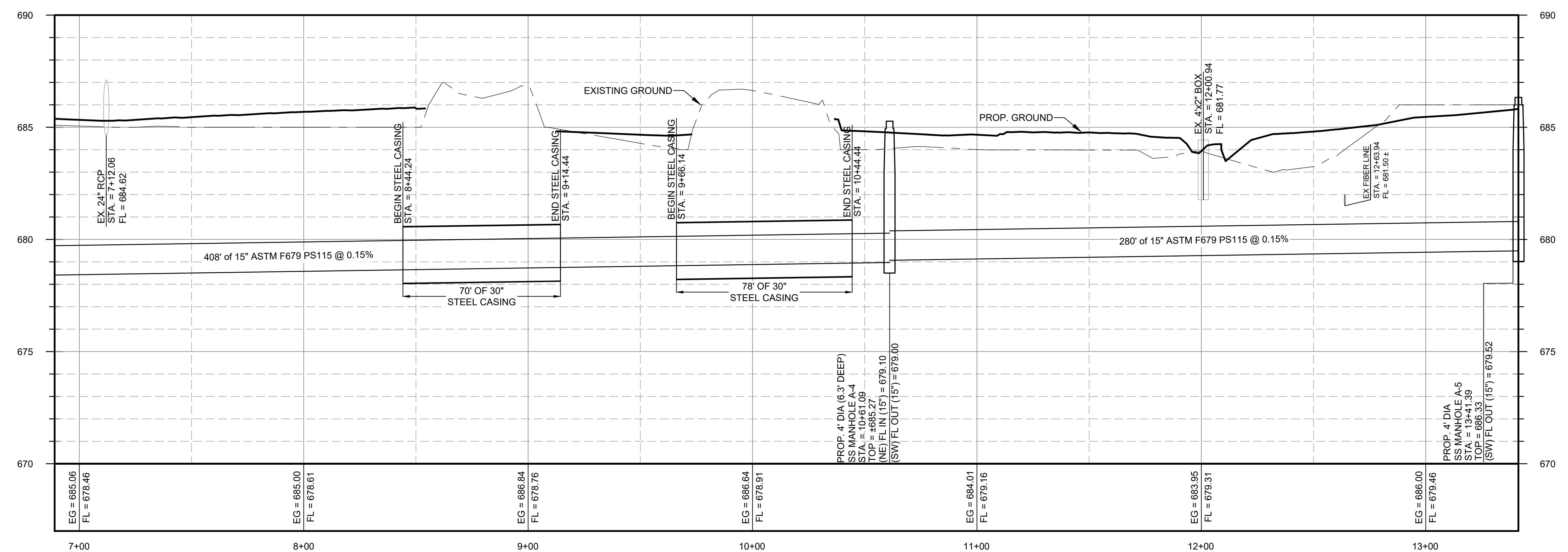
LEGEND	
PROPOSED GATE VALVE	●
EXISTING GATE VALVE	○
EXISTING WATER METER	W
TELEPHONE PEDESTAL	■
GUY WIRE	—
SIGN	○
UTILITY POLE	○
EXISTING WASTEWATER LINE	WW
PROP. WATER LINE	W
EX. WATER MAIN	—
PERMANENT EASEMENT	—
TEMPORARY EASEMENT	- - -
SILT FENCE	SF
FIBER OPTIC	FO
OVERHEAD ELECTRIC	OHE
EXISTING RIGHT-OF-WAY	ROW
EXISTING WIRE FENCE	X
EXISTING CHAINLINK FENCE	—
EXISTING WOOD FENCE	□
EXISTING CONTOUR	—
PROPOSED ABANDONMENT	
EXISTING ABANDONMENT	
FEMA FLOODPLAIN	■
ASPHALT PAVEMENT REPAIR	

- NOTES:
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  - CONTRACTOR TO FIELD VERIFY DEPTH, LOCATION, MATERIAL TYPE, AND SIZE OF ALL EXISTING UTILITIES IN THE PROJECT AREA.
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  - CONTRACTOR TO PREPARE PROPOSED A BYPASS PUMPING PLAN TO BE APPROVED BY ENGINEER AND NBU PRIOR TO CONSTRUCTION.
  - TRAFFIC CONTROL NOTE: THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE TRAFFIC CONTROL, AND WILL BE RESPONSIBLE FOR FURNISHING ALL TRAFFIC CONTROL DEVICES, AND FLAGGER, BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE CURRENT "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND SHALL BE LOCATED TO PROVIDE MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT WHILE PROVIDING CONTINUOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.
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  - ALL EXISTING WATER LINES TO REMAIN IN SERVICE DURING CONSTRUCTION UNTIL FINAL ACCEPTANCE BY OWNER. EXISTING WATER LINE TO BE ABANDONED IN PLACE AFTER ALL CONNECTIONS ARE MADE. ABANDON VALVES AND FIRE HYDRANTS PER OWNER'S INSTRUCTION.
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  - ALL WATER SERVICES BENEATH ROADWAYS SHALL BE CASED, FROM CURB TO BACK OF CURB, WITH 2" SCH 40 PVC CASING.

NEW BRAUNFELS UTILITIES  
GOODWIN-CONRAD'S WATER AND SEWER CONFLICT  
WASTEWATER MAIN A STA: 6+89.00 - 13+41.99



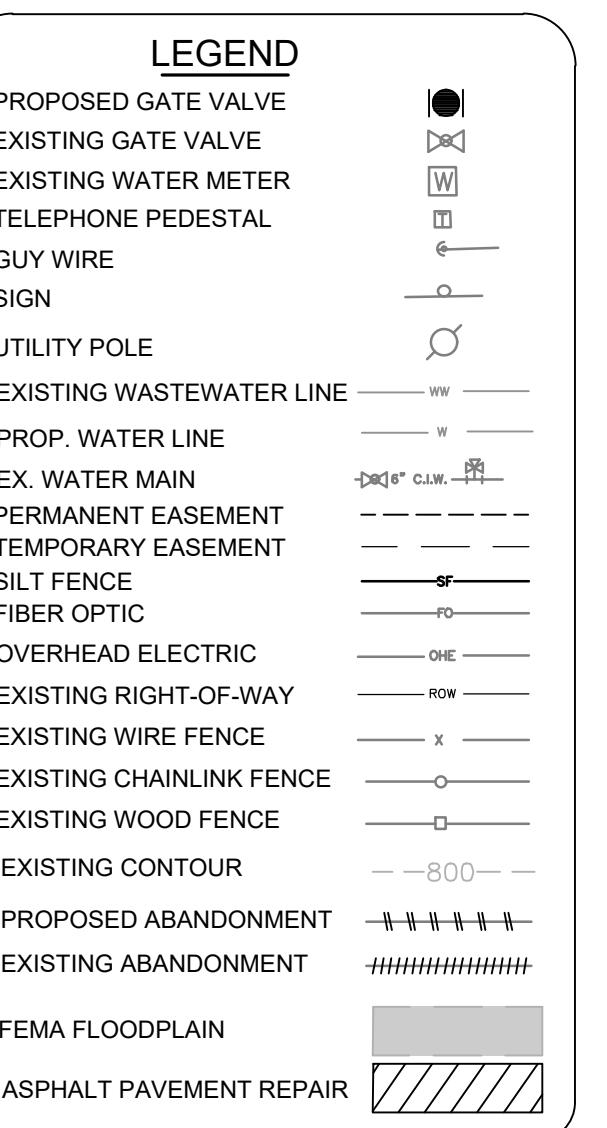
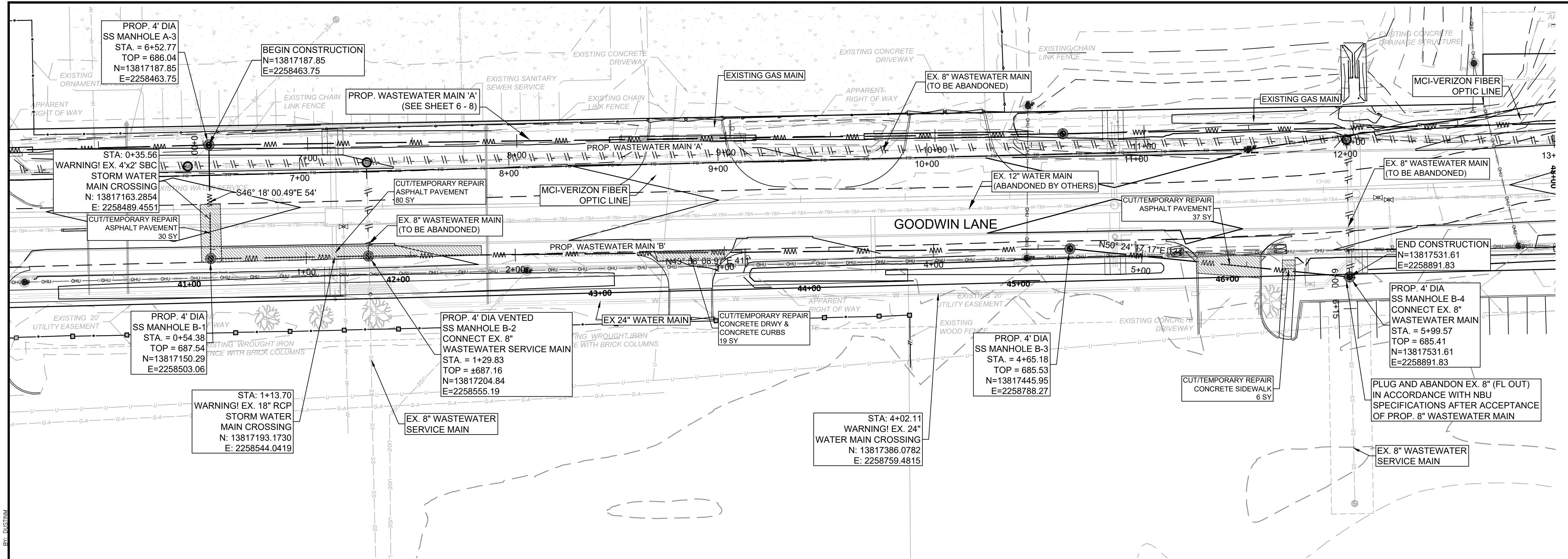
GOODWIN LANE  
WASTEWATER MAIN A PROFILE VIEW



WASTEWATER MAIN A PROFILE VIEW

SCALE:
DATE:
PROJECT NO: 08029-03
DESIGNED BY: AR
DRAWN BY: AR
CHECKED BY: DK
SHEET NO. 7



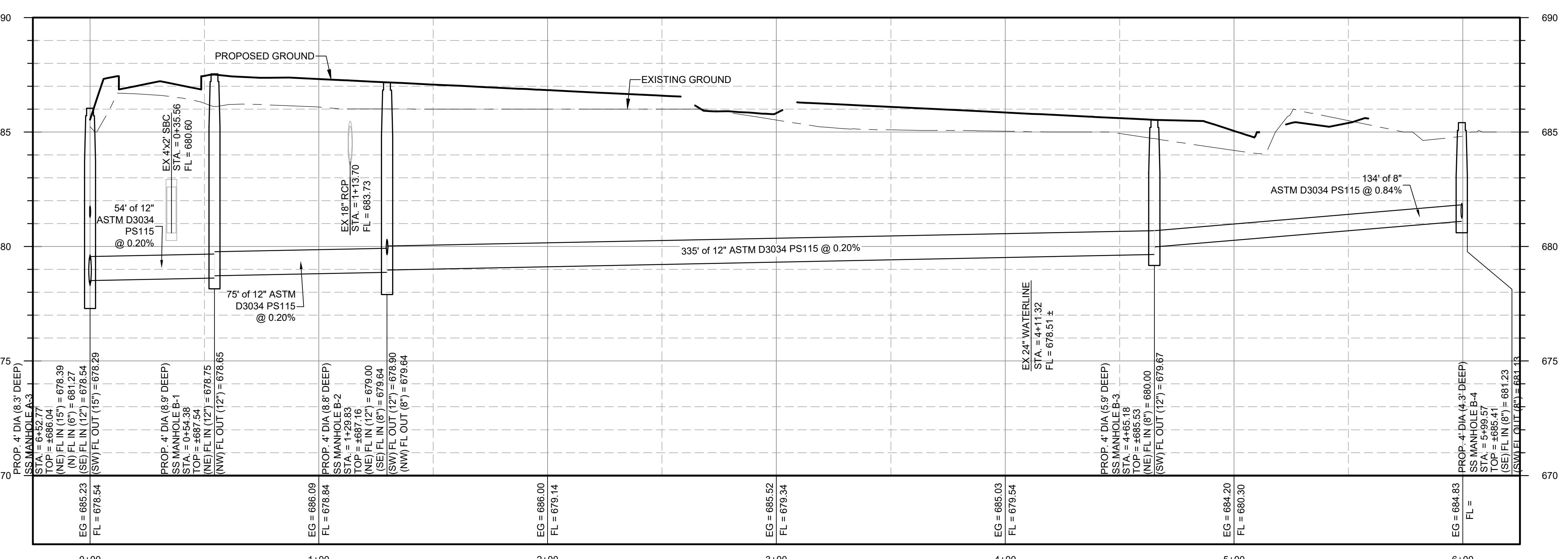


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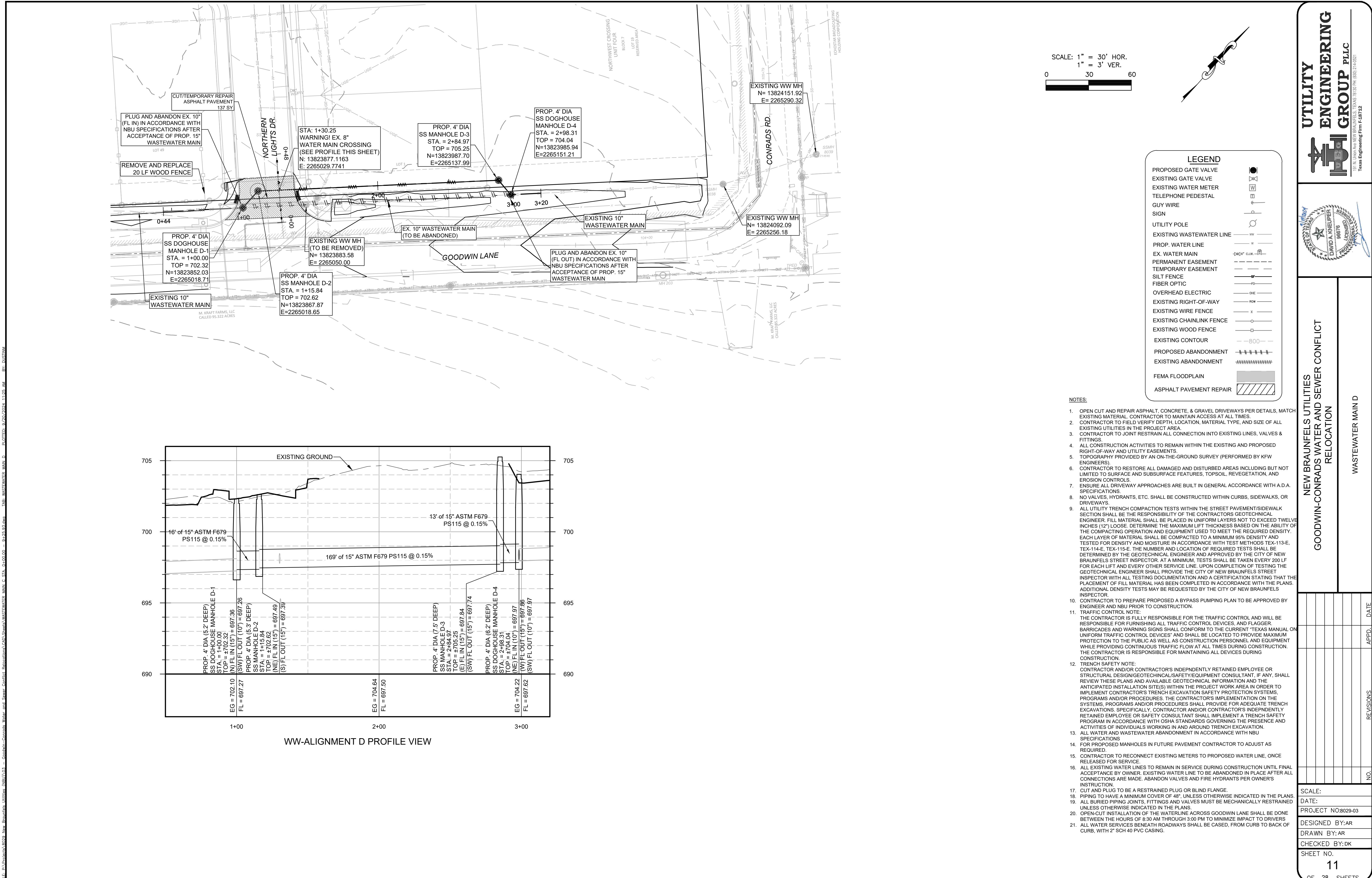
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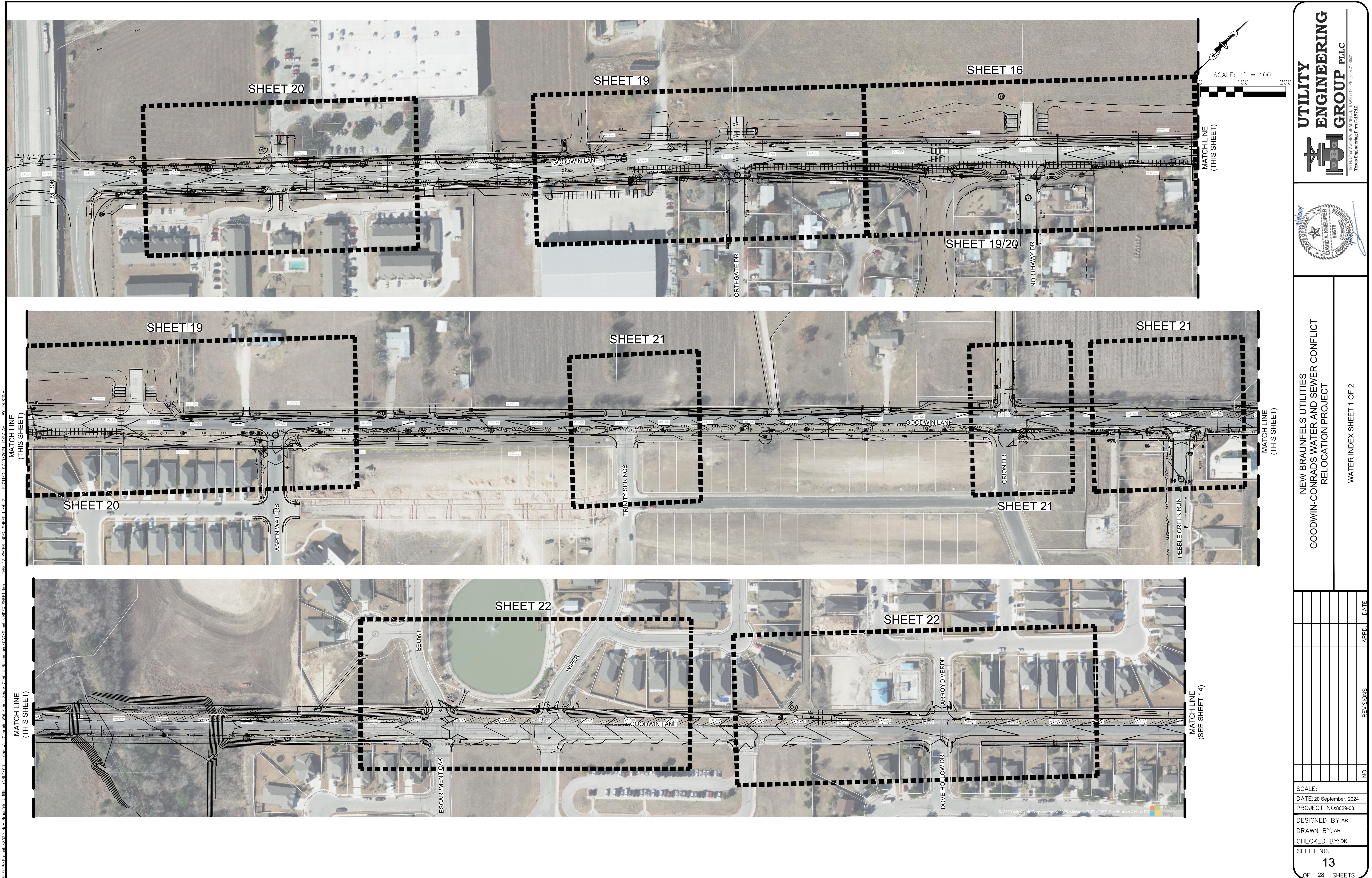
WASTEWATER MAIN B PROFILE VIEW



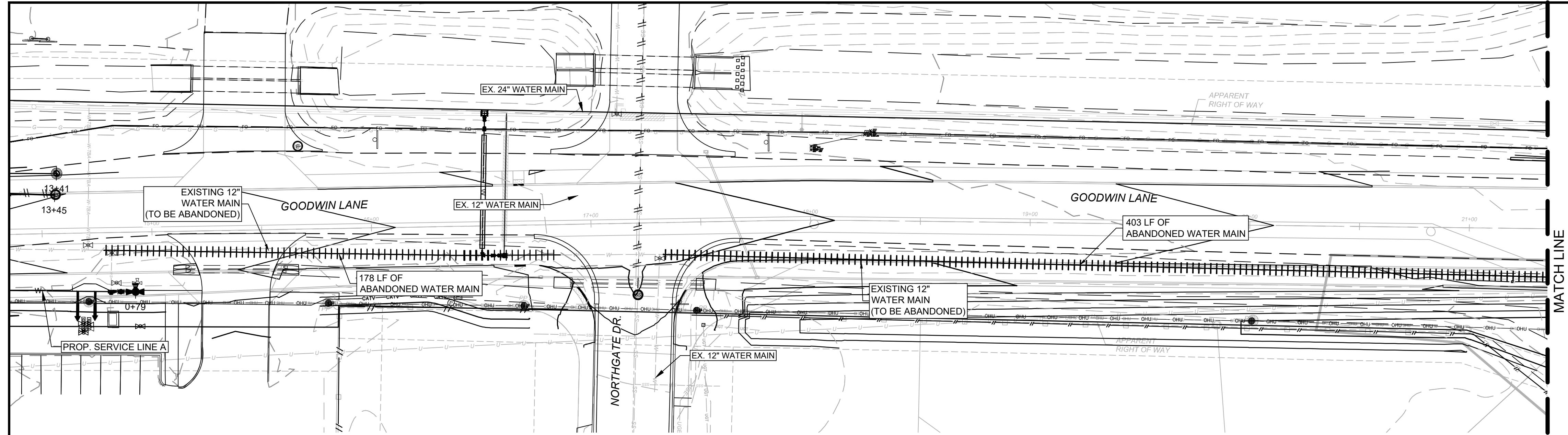




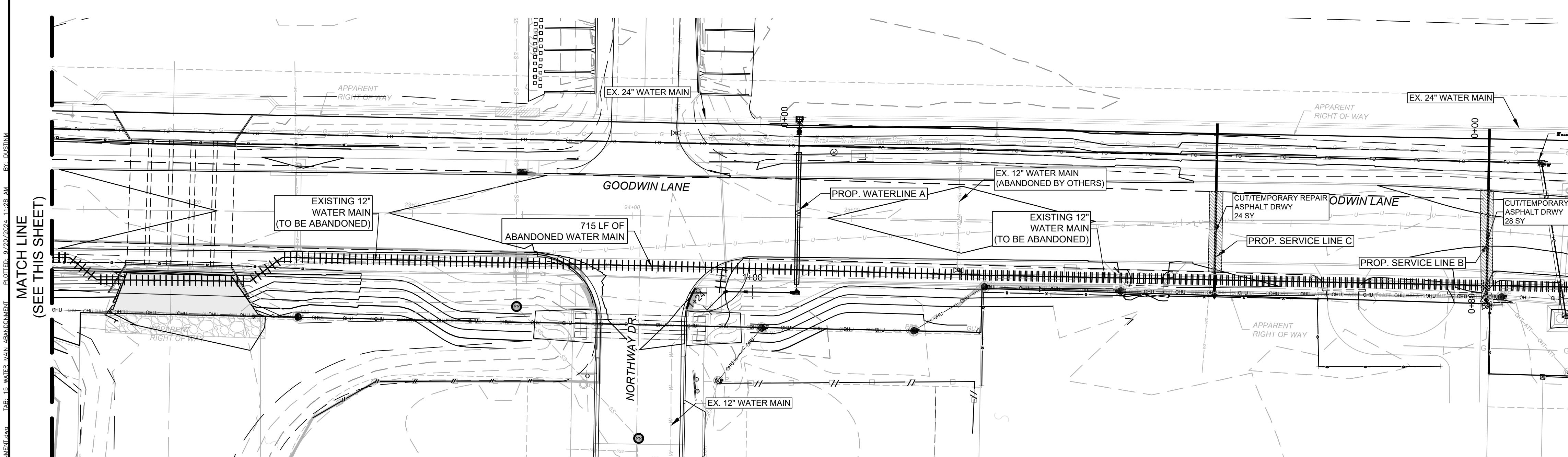
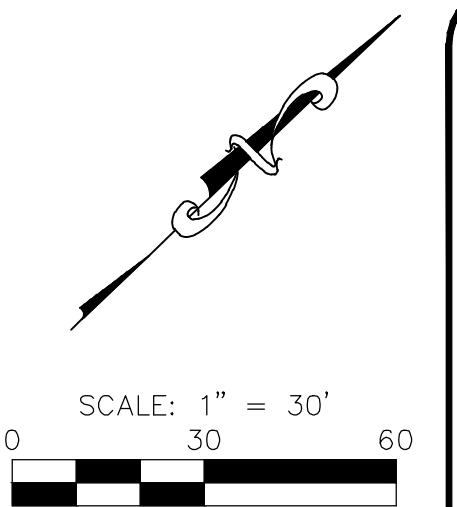




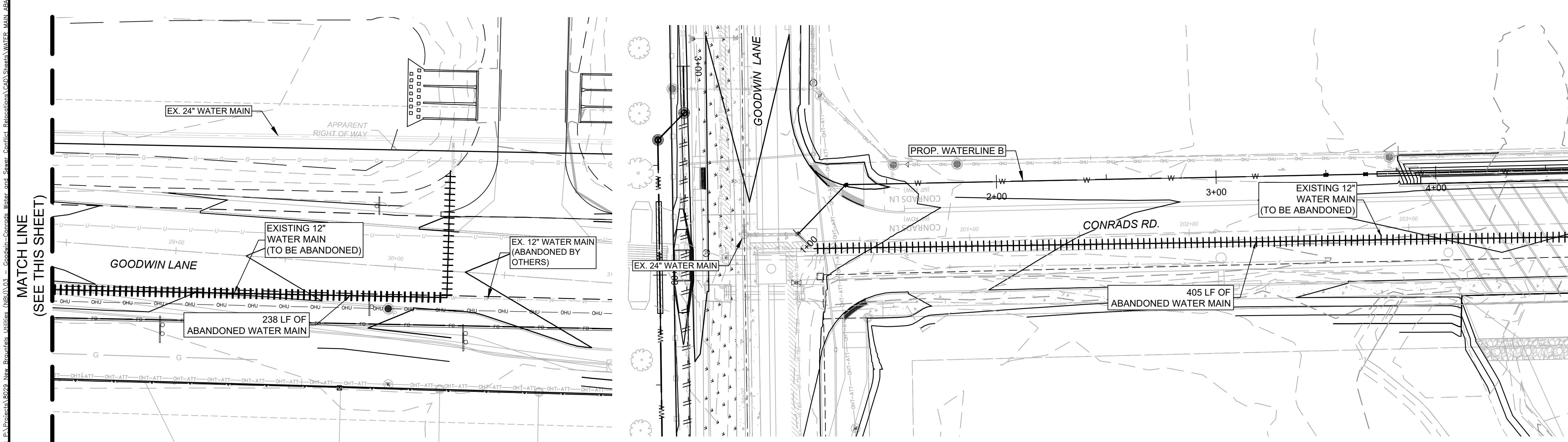




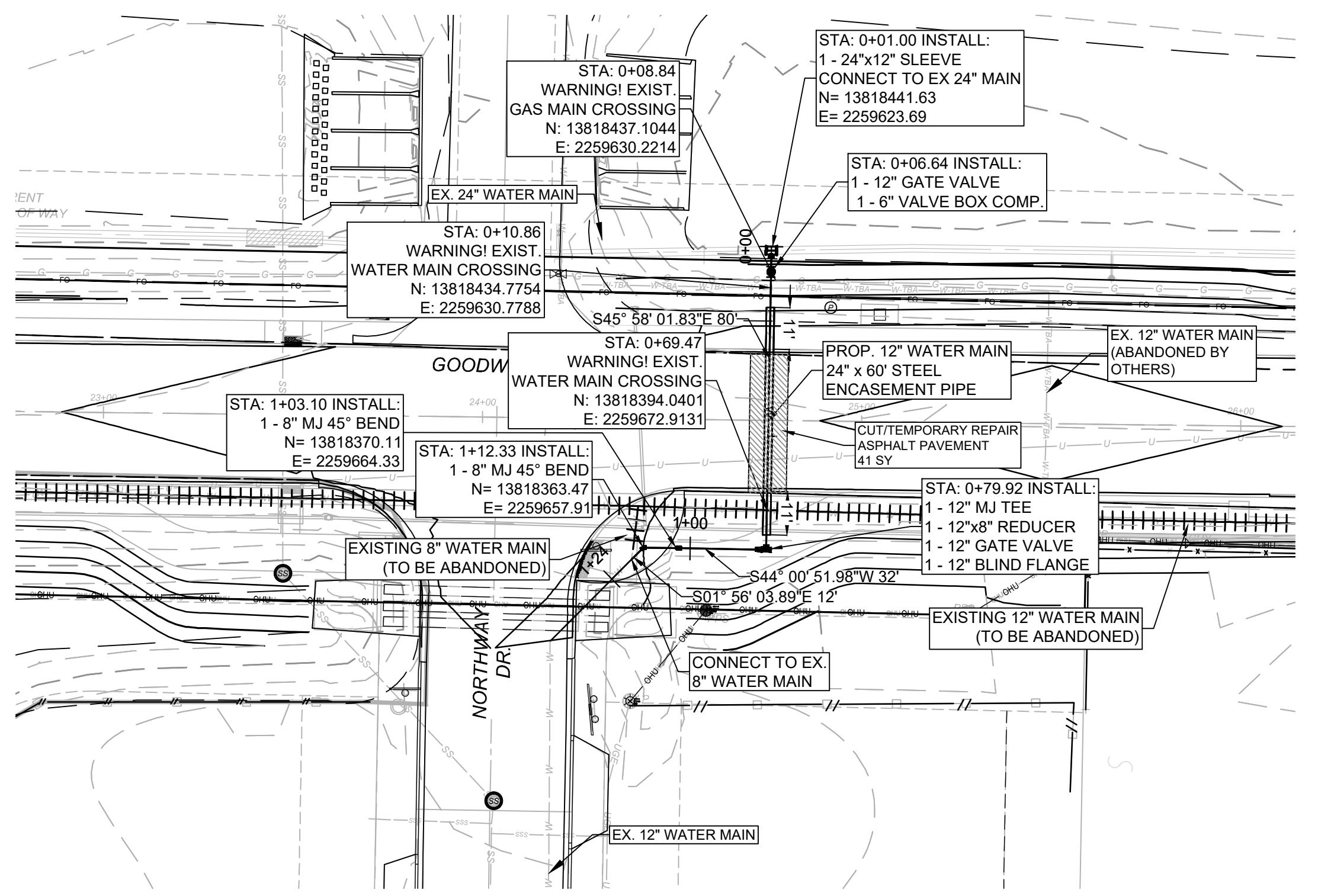
LEGEND	
PROPOSED GATE VALVE	●
EXISTING GATE VALVE	○
EXISTING WATER METER	W
TELEPHONE PEDESTAL	■
GUY WIRE	◆
SIGN	○
UTILITY POLE	○
CABLE BOX	□
EXISTING WASTEWATER LINE	—WW
PR. WATER MAIN	●
EX. WATER MAIN	○
EASEMENT	—
SILT FENCE	—SF
PR. WASTEWATER LINE	—WW
PR. INFLUENT FORCEMAIN	—IF
PR. EFFLUENT MAIN	—EF
PROP. CHAINLINK FENCE	—CLF
OVERHEAD ELECTRIC	—OHE
EXISTING RIGHT-OF-WAY	—ROW
EXISTING WIRE FENCE	—X



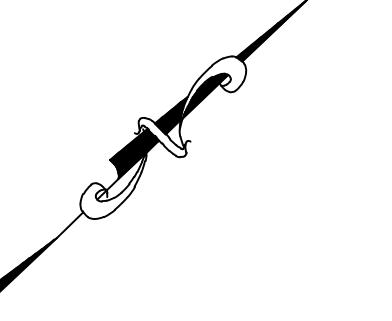
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  - ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A. SPECIFICATIONS.
  - NO HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
  - ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114, AND TEX-115. TESTS SHALL BE CONDUCTED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.
  - CONTRACTOR TO PREPARE PROPOSED A BYPASS PUMPING PLAN TO BE APPROVED BY ENGINEER AND NBU PRIOR TO CONSTRUCTION.
  - TRAFFIC CONTROL NOTE: THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE TRAFFIC CONTROL AND WILL BE RESPONSIBLE FOR FURNISHING ALL TRAFFIC CONTROL DEVICES, AND FLAGGER, BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE CURRENT "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND SHALL BE LOCATED TO PROVIDE MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS THE CONTRACTOR, PERSONNEL, AND EQUIPMENT WHILE PROVIDING CONTINUOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.
  - TRENCH SAFETY NOTE: 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 CONSTRUCTION TRENCH EXCAVATION SAFETY PROCEDURE(S). PROGRAMS AND/OR PROCEDURES THAT 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.
  - ALL WATER AND WASTEWATER ABANDONMENT IN ACCORDANCE WITH NBU SPECIFICATIONS
  - FOR PROPOSED MANHOLES IN FUTURE PAVEMENT CONTRACTOR TO ADJUST AS REQUIRED.
  - CONTRACTOR TO RECONNECT EXISTING METERS TO PROPOSED WATER LINE, ONCE RELEASED FOR SERVICE.
  - ALL EXISTING WATER LINES TO REMAIN IN SERVICE DURING CONSTRUCTION UNTIL FINAL ACCEPTANCE BY OWNER. EXISTING WATER LINE TO BE ABANDONED IN PLACE AFTER ALL CONNECTIONS ARE MADE. ABANDON VALVES AND FIRE HYDRANTS PER OWNER'S INSTRUCTIONS.
  - CUT AND PLUG TO BE A RESTRAINED PLUG OR BLIND FLANGE.
  - PIPE LINE TO HAVE A MINIMUM COVER OF 48" UNLESS OTHERWISE INDICATED IN THE PLANS.
  - ALL BURIED PIPING JOINTS, FITTINGS AND VALVES MUST BE MECHANICALLY RESTRAINED UNLESS OTHERWISE INDICATED IN THE PLANS.
  - OPEN-CUT INSTALLATION OF THE WATERLINE ACROSS GOODWIN LANE SHALL BE DONE BETWEEN THE HOURS OF 8:30 AM THROUGH 3:00 PM TO MINIMIZE IMPACT TO DRIVERS.
  - ALL WATER SERVICES BENEATH ROADWAYS SHALL BE CASED, FROM CURB TO BACK OF CURB, WITH 2" SCH 40 PVC CASING.



NO.	REVISIONS	APPD. DATE
SCALE:		
DATE:		
PROJECT NO.:	08029-03	
DESIGNED BY:	AR	
DRAWN BY:	AR	
CHECKED BY:	DK	
SHEET NO.		

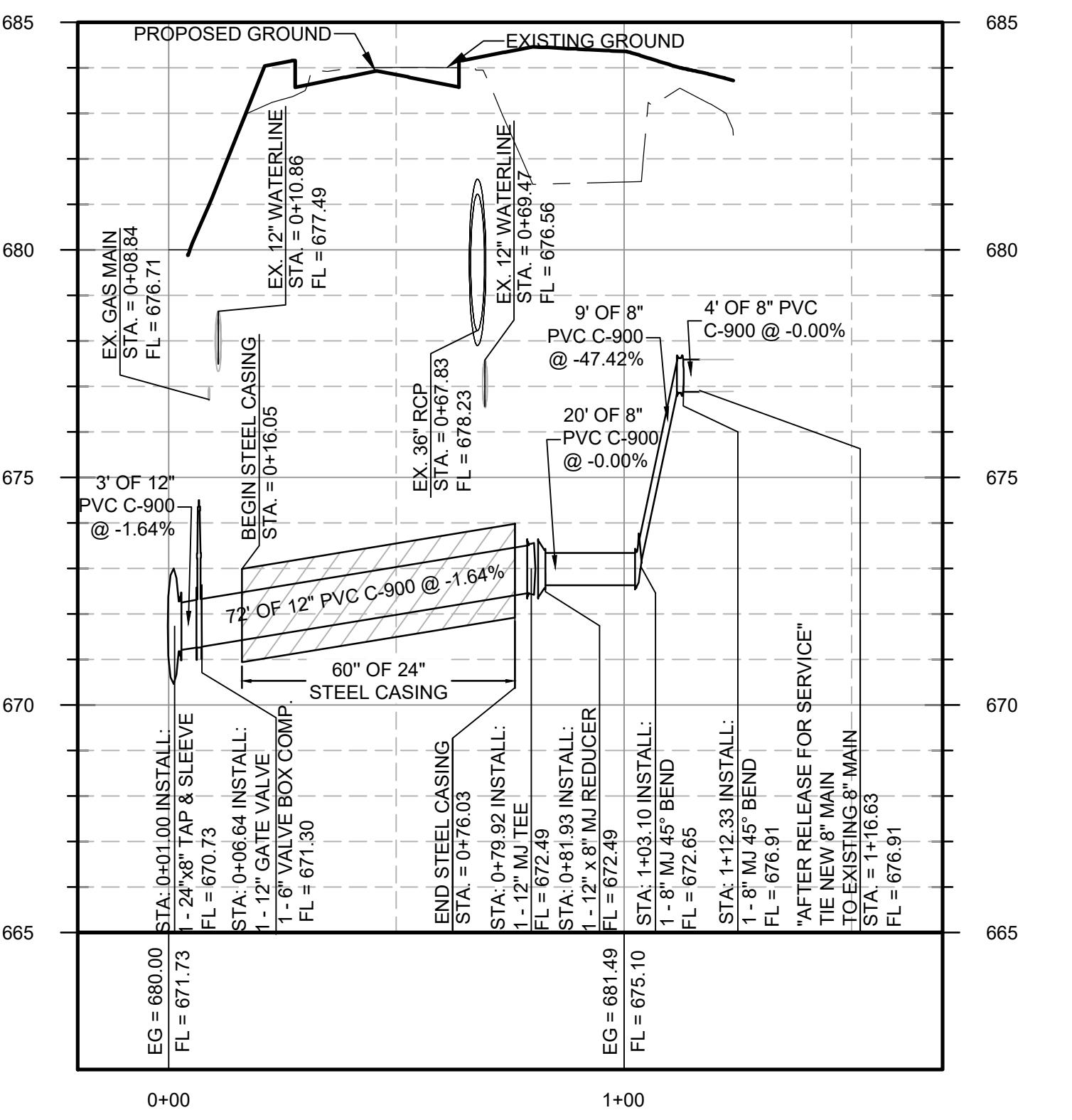


SCALE: 1" = 30' HOR.  
1" = 3' VER.  
0 30 60



LEGEND	
PROPOSED GATE VALVE	●
EXISTING GATE VALVE	○
EXISTING WATER METER	□
TELEPHONE PEDESTAL	■
GUY WIRE	—
SIGN	○
UTILITY POLE	○
CABLE BOX	□
EXISTING WASTEWATER LINE	—
PR. WATER MAIN	●
EX. WATER MAIN	□
EASEMENT	—
SILT FENCE	—
PR. WASTEWATER LINE	—
PR. INFLUENT FOREMAIN	—
PR. EFFLUENT MAIN	—
PROP. CHAINLINK FENCE	○
OVERHEAD ELECTRIC	—
EXISTING RIGHT-OF-WAY	—
EXISTING WIRE FENCE	—
SERVICE RELOCATE	—
100 YEAR FLOODPLAIN	—
EXISTING CONTOUR	—

NOTES:  
 1. OPEN CUT AND REPAIR ASPHALT, CONCRETE, & GRAVEL DRIVEWAYS PER DETAILS.  
 2. MATERIAL OR FIELD VERIFY DEPTH, LOCATION, MATERIAL TYPE, AND SIZE OF ALL EXISTING UTILITIES IN THE PROJECT AREA.  
 3. CONTRACTOR TO JOINT RESTRAIN ALL CONNECTION INTO EXISTING LINES, VALVES & FITTINGS.  
 4. ALL CONSTRUCTION ACTIVITIES TO REMAIN WITHIN THE EXISTING AND PROPOSED RIGHT-OF-WAY AND UTILITY EASEMENTS.  
 5. TOPOGRAPHY PROVIDED BY AN ON-THE-GROUND SURVEY (PERFORMED BY KFW ENGINEERS).  
 6. CONTRACTOR TO RESTORE ALL DAMAGED AND DISTURBED AREAS INCLUDING BUT NOT LIMITED TO SURFACE AND SUBSURFACE FEATURES, TOPSOIL, REVEGETATION, AND EROSION CONTROLS.  
 7. ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A. SPECIFICATIONS.  
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 13. ALL WATER AND WASTEWATER ABANDONMENT IN ACCORDANCE WITH NBU SPECIFICATIONS.  
 14. PROPOSED MANHOLES IN FUTURE PAVEMENT CONTRACTOR TO ADJUST AS REQUIRED.  
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 16. ALL EXISTING WATER LINES TO REMAIN IN SERVICE DURING CONSTRUCTION UNTIL FINAL ACCEPTANCE BY OWNER. EXISTING WATER LINE TO BE ABANDONED IN PLACE AFTER ALL CONNECTIONS ARE MADE. ABANDON VALVES AND FIRE HYDRANTS PER OWNER'S INSTRUCTION.  
 17. PLUG AND PLUG TO BE A RESTRAINED PLUG OR BLIND FLANGE.  
 18. PIPE TO HAVE A MINIMUM COVER OF 48", UNLESS OTHERWISE INDICATED IN THE PLANS.  
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 21. ALL WATER SERVICES BENEATH ROADWAYS SHALL BE CASED, FROM CURB TO BACK OF CURB, WITH 2" SCH 40 PVC CASING.

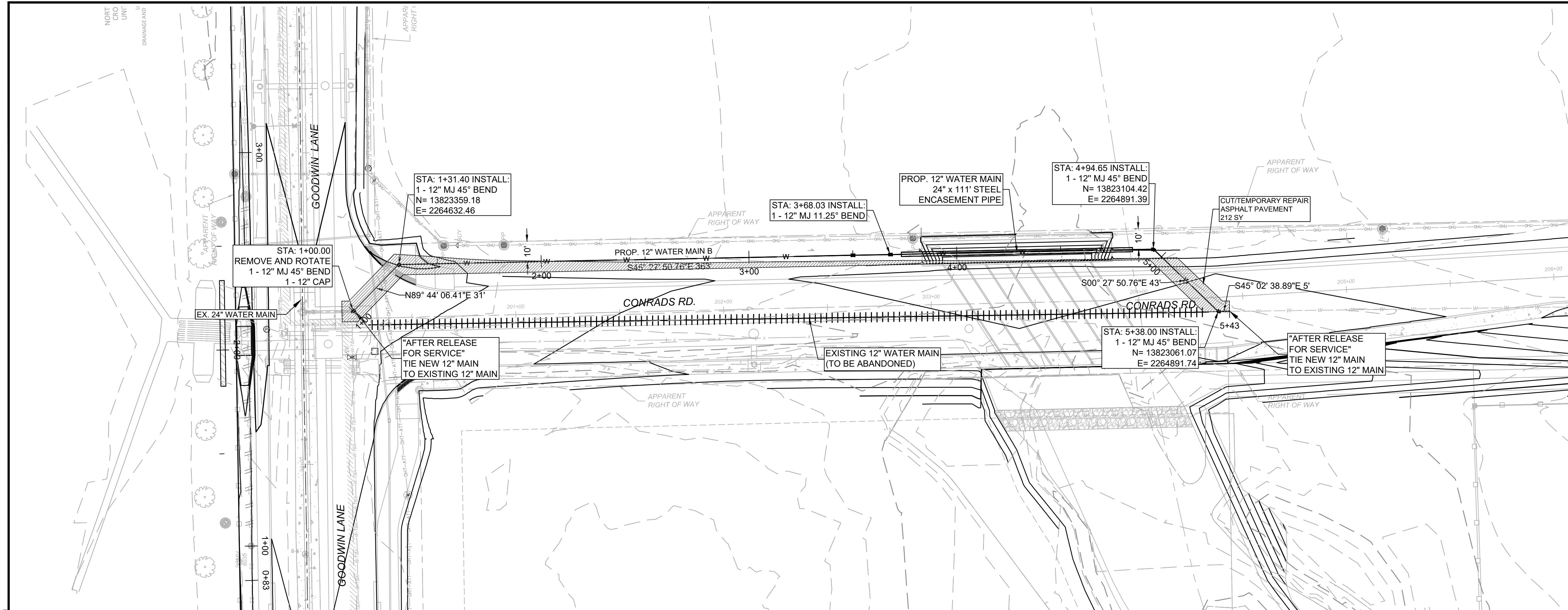


WATER MAIN A PROFILE VIEW



NOTES:  
 1. OPEN CUT AND REPAIR ASPHALT, CONCRETE, & GRAVEL DRIVEWAYS PER DETAILS.  
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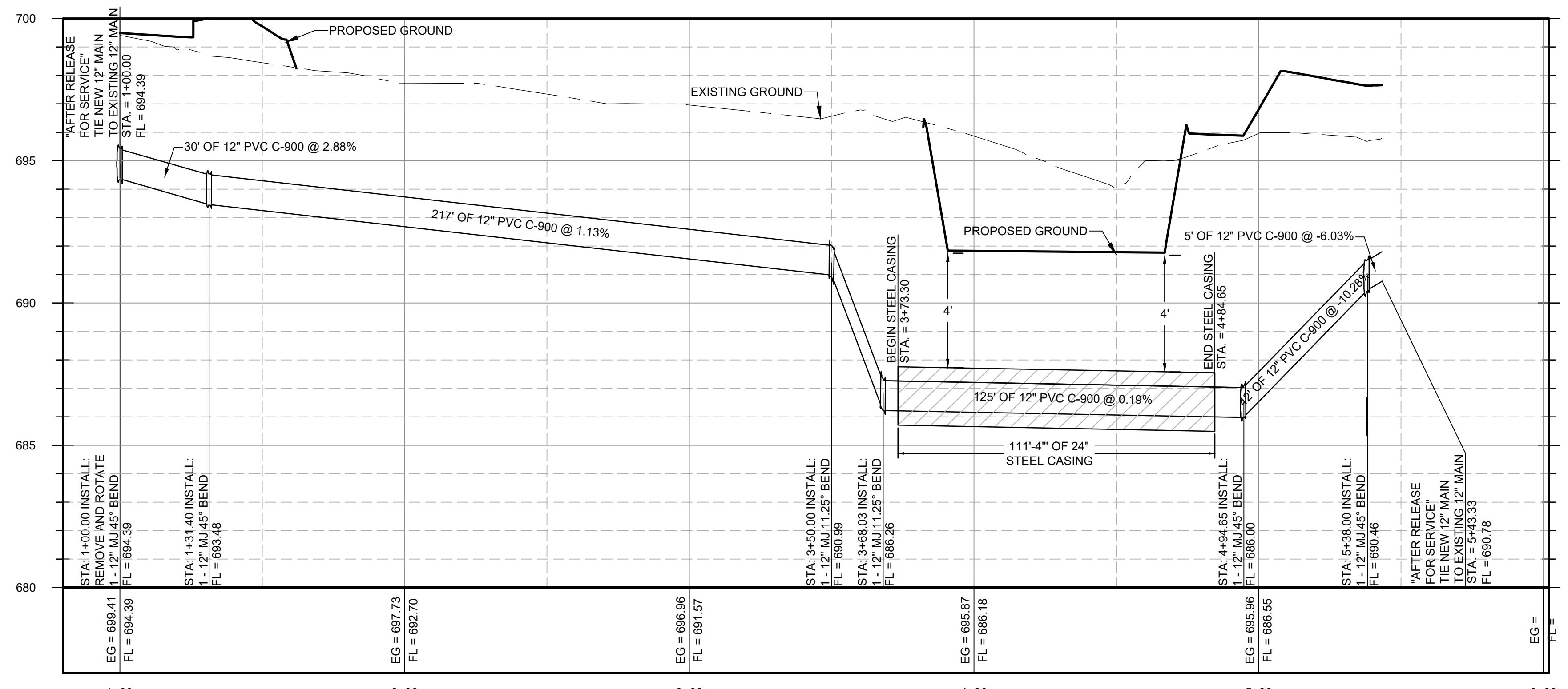
SCALE:	
DATE:	
PROJECT:	NO:8029-03
DESIGNED BY:	AR
DRAWN BY:	AR
CHECKED BY:	DK
SHEET NO.	



LEGEND	
SCALE: 1" = 30' HOR	1" = 30' HOR
PROPOSED GATE VALVE	3" VER
EXISTING GATE VALVE	30
EXISTING WATERMETER	60
TELEPHONE PEDESTAL	
GUY WIRE	
SIGN	
UTILITY POLE	
CABLE BOX	
EXISTING WASTEWATER LINE	
PR. WATER MAIN	
EX. WATER MAIN	
EASEMENT	
SILT FENCE	
PR. WASTEWATER LINE	
PR. INFLUENT FORCEMAIN	
PR. EFFLUENT MAIN	
PROP. CHAINLINK FENCE	
OVERHEAD ELECTRIC	
EXISTING RIGHT-OF-WAY	
EXISTING WIRE FENCE	
SERVICE RELOCATE	
100 YEAR FLOODPLAIN	
EXISTING CONTOUR	

NOTES:

- OPEN CUT AND REPAIR ASPHALT, CONCRETE, & GRAVEL DRIVEWAYS PER DETAILS, MATCH EXISTING MATERIAL. CONTRACTOR TO MAINTAIN ACCESS AT ALL TIMES.
- CONTRACTOR TO FIELD VERIFY DEPTH, LOCATION, MATERIAL TYPE, AND SIZE OF ALL EXISTING UTILITIES IN THE PROJECT AREA.
- CONTRACTOR TO JOINT RESTRAIN ALL CONNECTION INTO EXISTING LINES, VALVES & FITTINGS.
- ALL CONSTRUCTION ACTIVITIES TO REMAIN WITHIN THE EXISTING AND PROPOSED RIGHT-OF-WAY AND UTILITY EASEMENTS.
- TOPOGRAPHY PROVIDED BY AN ON-THE-GROUND SURVEY (PERFORMED BY KFW ENGINEERS).
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WATER MAIN B - (1) PROFILE VIEW



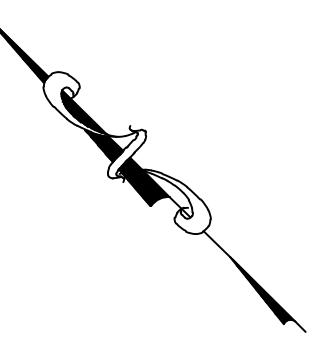
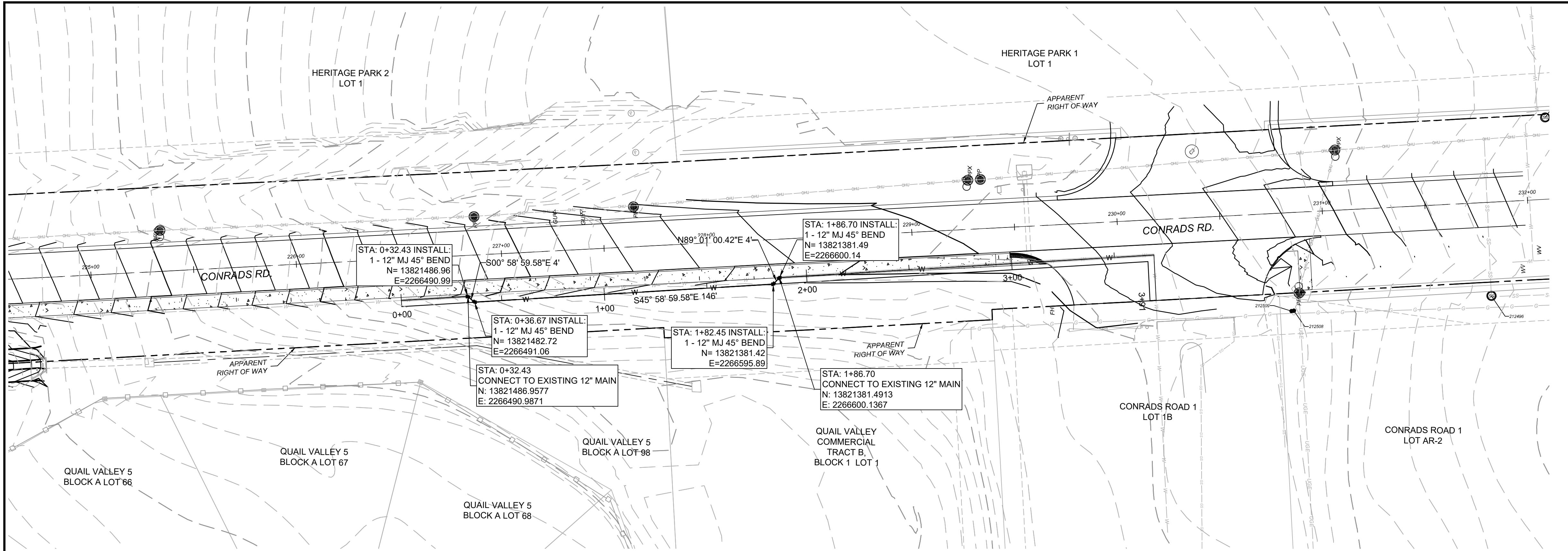
NEW BRAUNFELS UTILITIES  
GOODWIN-CONRAD'S WATER AND SEWER CONFLICT

WATER MAIN B

NO.	REVISIONS	APPD. DATE

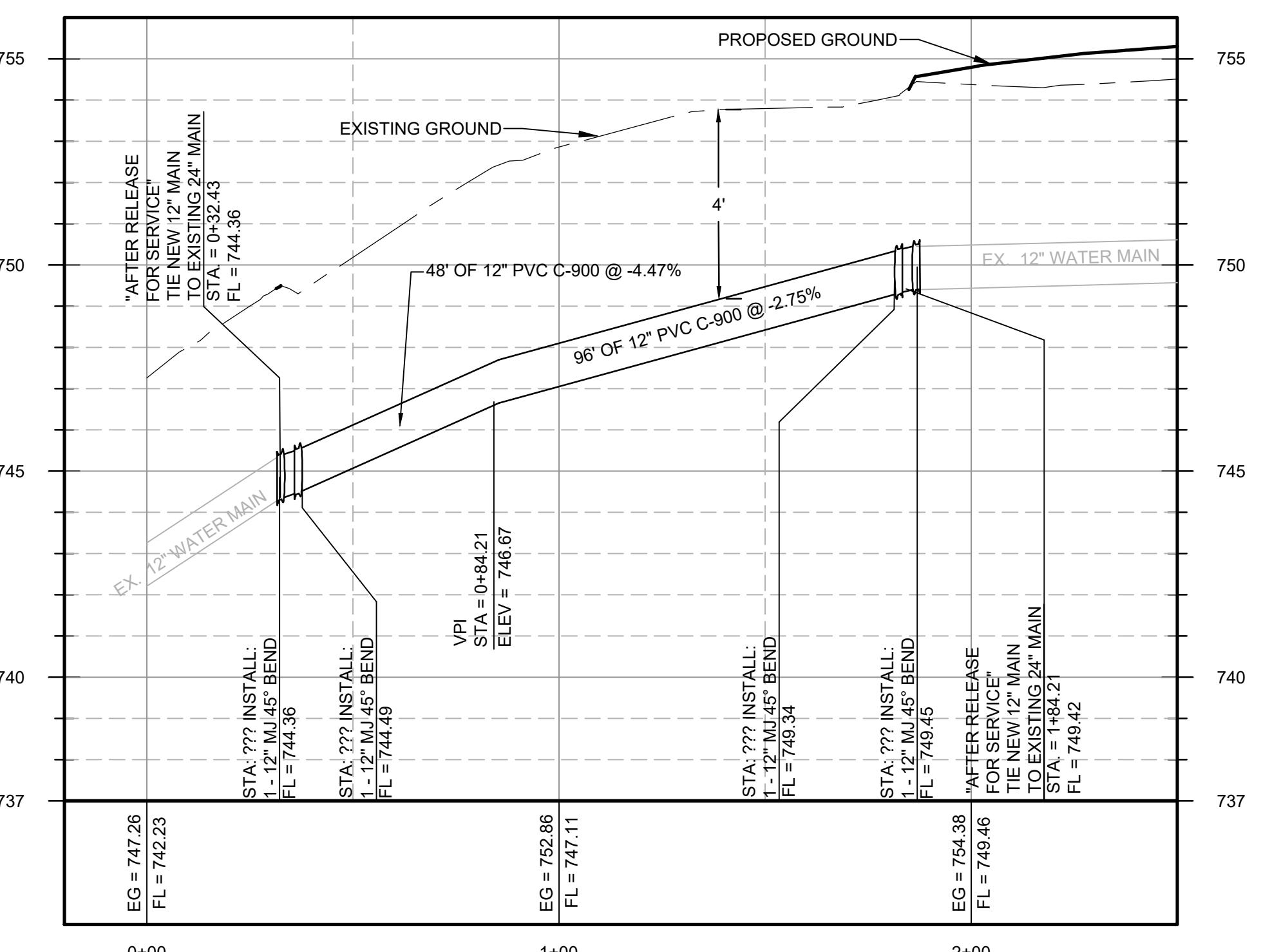
17

OF 28 SHEETS



<u>LEGEND</u>	
PROPOSED GATE VALVE	SCALE: 1" = 30' HOR. " = 3' VER.
EXISTING GATE VALVE	30 60
EXISTING WATER METER	[W]
TELEPHONE PEDESTAL	[P]
GUY WIRE	[G]
SIGN	[S]
UTILITY POLE	[U]
CABLE BOX	[C]
EXISTING WASTEWATER LINE	WW
PR. WATER MAIN	[PW]
EX. WATER MAIN	[EW] 6" C.I.W.
EASEMENT	— — —
SILT FENCE	SF
PR. WASTEWATER LINE	WW
PR. INFLUENT FORCemain	IFF
PR. EFFLUENT MAIN	EFF
PROP. CHAINLINK FENCE	[O]
OVERHEAD ELECTRIC	OHE
EXISTING RIGHT-OF-WAY	ROW
EXISTING WIRE FENCE	X
SERVICE RELOCATE	[←]
100 YEAR FLOODPLAIN	— — — —
EXISTING CONTOUR	— 800 —

S:



## CONRAD'S 12" WATER MAIN PROFILE VIEW

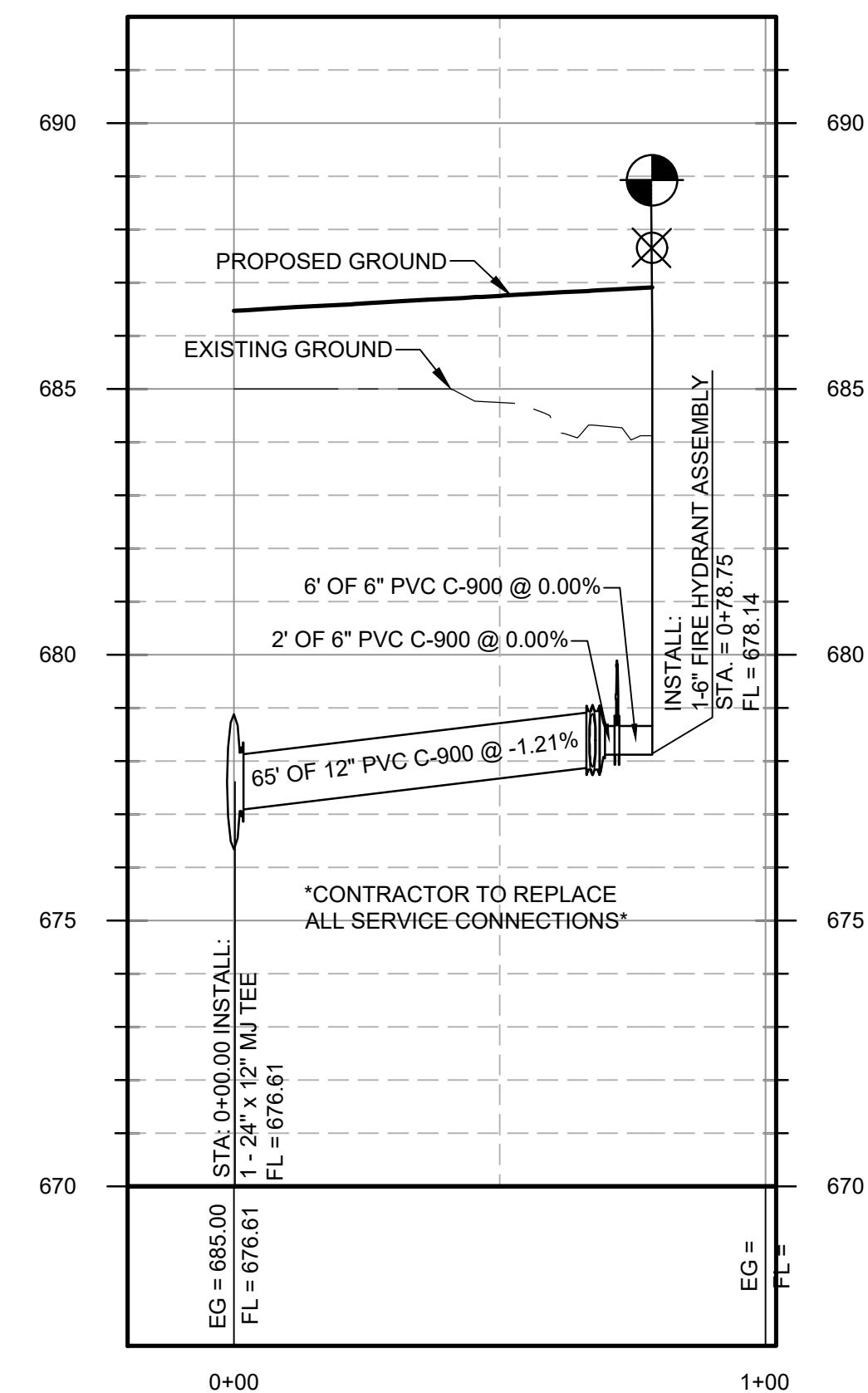
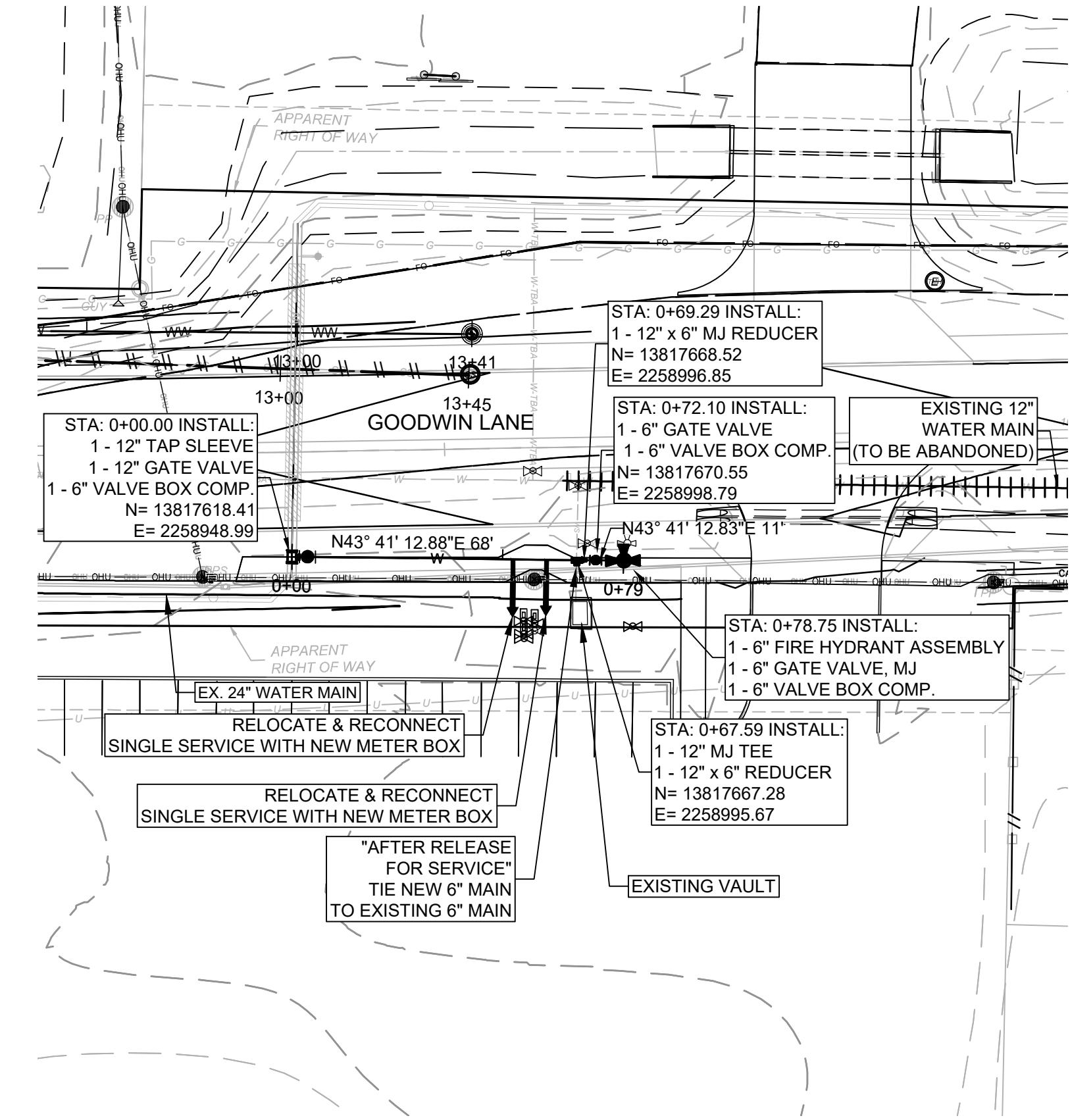


A circular license seal for the State of Texas. The outer ring contains the text "STATE OF TEXAS" at the top and "BOARD OF PROFESSIONAL ENGINEERS" at the bottom. The inner circle contains the name "DAVID A. KNEUPER" in the center, with "96676" to the left. The words "LICENSED PROFESSIONAL ENGINEER" are written in an arc along the bottom of the inner circle. The seal is signed "T. Kneuper" at the bottom right.

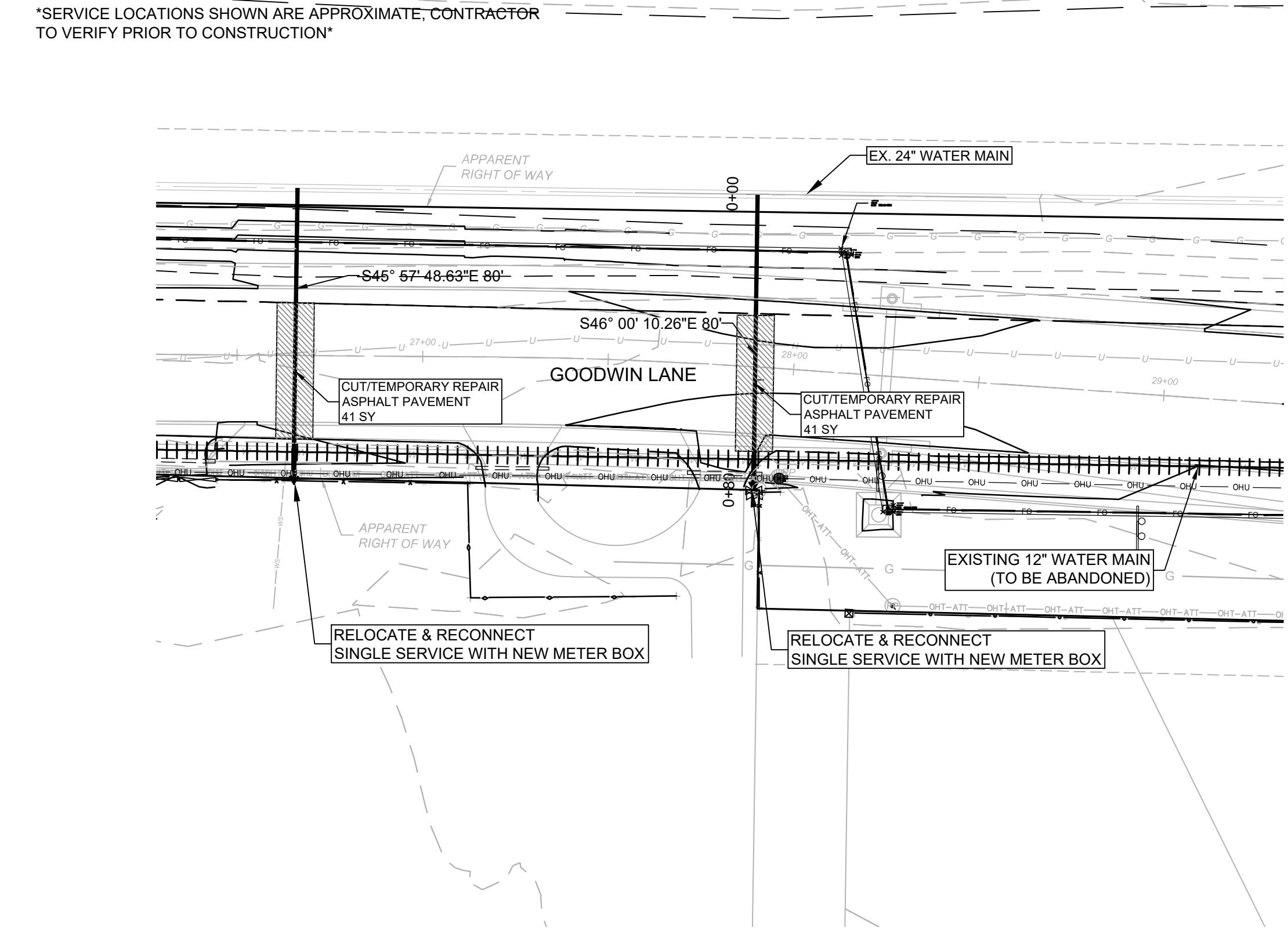
# GOODWIN-CONRADS WATER AND SEWER CONFLICT RELOCATION NEW BRAUNFELS UTILITIES

WATER MAIN C

# NEW BRAUNFELS CITY GOODWIN-CONRADS WATER AND RELOCATION



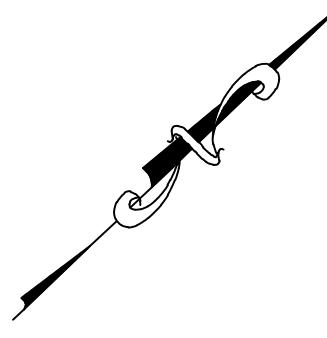
SERVICE LINE A PROFILE VIEW



SERVICE LINE B AND C

SCALE: 1" = 30' HOR.  
1" = 3' VER.

0 30 60



LEGEND

PROPOSED GATE VALVE	
EXISTING GATE VALVE	
EXISTING WATER METER	
TELEPHONE PEDESTAL	
GUY WIRE	
SIGN	
UTILITY POLE	
CABLE BOX	
EXISTING WASTEWATER LINE	
PR. WATER MAIN	
EX. WATER MAIN	
EASEMENT	
SILT FENCE	
PR. WASTEWATER LINE	
PR. INFLUENT FORCemain	
PR. EFFLUENT MAIN	
PROP. CHAINLINK FENCE	
OVERHEAD ELECTRIC	
EXISTING RIGHT-OF-WAY	
EXISTING WIRE FENCE	
SERVICE RELOCATE	
100 YEAR FLOODPLAIN	
EXISTING CONTOUR	

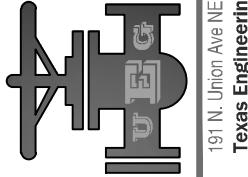
NOTES:

- OPEN CUT AND REPAIR ASPHALT, CONCRETE, & GRAVEL DRIVEWAYS PER DETAILS.
- CONTRACTOR TO FIELD VERIFY DEPTH, LOCATION, MATERIAL TYPE, AND SIZE OF ALL EXISTING UTILITIES IN THE PROJECT AREA.
- CONTRACTOR TO JOINT RESTRAIN ALL CONNECTION INTO EXISTING LINES, VALVES & FITTINGS.
- ALL CONSTRUCTION ACTIVITIES TO REMAIN WITHIN THE EXISTING AND PROPOSED RIGHT-OF-WAY AND UTILITY EASEMENTS.
- TOPOGRAPHY PROVIDED BY AN ON-THE-GROUND SURVEY (PERFORMED BY KFW ENGINEERS).
- TO RESTORE ALL DAMAGED AND DISTURBED AREAS INCLUDING BUT NOT LIMITED TO SURFACE AND SUBSURFACE FEATURES, TOPSOIL, REVEGETATION, AND EROSION CONTROLS.
- ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A. SPECIFICATIONS.
- NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
- ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. GROUT, CONCRETE, OR OTHER FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTION OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPAKTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-13-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS. A SPECIAL TEST FOR A TRENCH TEST SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE UNTIL THE COMPLETION OF TESTING. THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.
- CONTRACTOR TO PREPARE PROPOSED A BYPASS PUMPING PLAN TO BE APPROVED BY ENGINEER AND NBU PRIOR TO CONSTRUCTION.
- TRAFFIC CONTROL NOTES: THE CONTRACTOR IS FULLY RESPONSIBLE FOR TRAFFIC CONTROL AND WILL BE RESPONSIBLE FOR FURNISHING ALL TRAFFIC CONTROL DEVICES, AND FLAGGER, BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE CURRENT "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND SHALL BE LOCATED TO PROVIDE MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT WHILE PROVIDING CONTINUOUS TRAFFIC FLOW AS MANY TIMES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.
- TRENCH SAFETY NOTES: 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 AND PROCEDURES. THE CONTRACTOR'S INDEPENDENTLY RETAINED CONSULTANT SHALL PROVIDE FOR ADEQUATE 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.
- ALL WATER AND WASTEWATER ABANDONMENT IN ACCORDANCE WITH NBU SPECIFICATIONS.
- IF CONTRACTOR PLACES MANHOLES IN FUTURE PAVEMENT CONTRACTOR TO ADJUST AS REQUIRED.
- CONTRACTOR TO RECONNECT EXISTING METERS TO PROPOSED WATER LINE, ONCE RELEASED FOR SERVICE.
- ALL EXISTING WATER LINES TO REMAIN IN SERVICE DURING CONSTRUCTION UNTIL FINAL ACCEPTANCE BY OWNER. EXISTING WATER LINE TO BE ABANDONED IN PLACE AFTER ALL CONNECTIONS ARE MADE. ABANDON VALVES AND FIRE HYDRANTS PER OWNER'S INSTRUCTION.
- PIPE LINE PLUG TO BE A RESTRAINED PLUG OR BLIND FLANGE.
- PIPE LINE TO HAVE A MINIMUM COVER OF 48", UNLESS OTHERWISE INDICATED IN THE PLANS.
- ALL BURIED PIPING JOINTS, FITTINGS AND VALVES MUST BE MECHANICALLY RESTRAINED UNLESS OTHERWISE INDICATED IN THE PLANS.
- OPEN-CUT INSTALLATION OF THE WATERLINE ACROSS GOODWIN LANE SHALL BE DONE BETWEEN THE HOURS OF 8:30 AM THROUGH 3:00 PM TO MINIMIZE IMPACT TO DRIVERS.
- ALL WATER SERVICES BENEATH ROADWAYS SHALL BE CASED, FROM CURB TO BACK OF CURB, WITH 2" SCH 40 PVC CASING.

SCALE:  
DATE:  
PROJECT: NO:0209-03  
DESIGNED BY: AR  
DRAWN BY: AR  
CHECKED BY: DK  
SHEET NO.:

NEW BRAUNFELS UTILITIES  
GOODWIN-CONRAD'S WATER AND SEWER CONFLICT  
RELOCATION

SERVICE LINE A & B  
SERVICE LINE C



NEW BRAUNFELS UTILITIES  
GOODWIN-CONRAD'S WATER AND SEWER CONFLICT  
RELOCATION

WATER ADJUSTMENTS SHEET 1

WATER ADJUSTMENTS SHEET 2

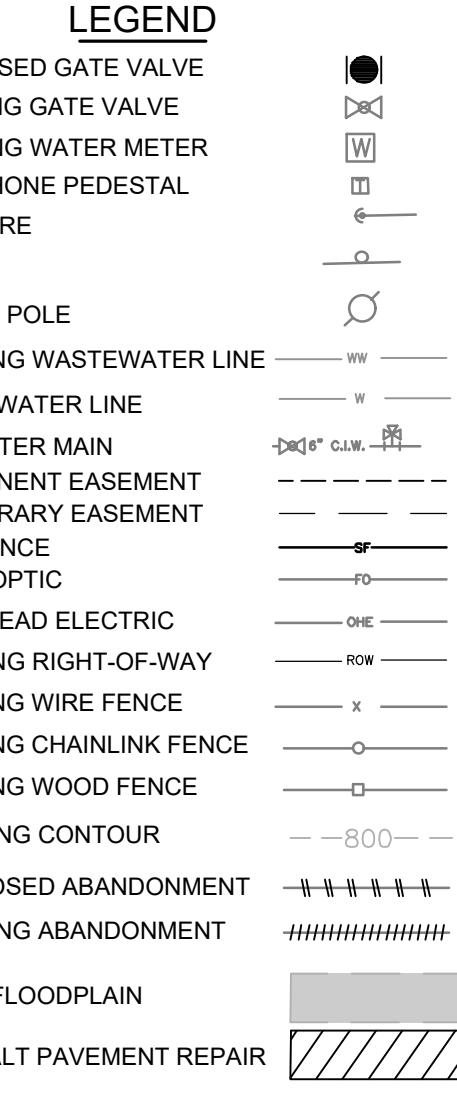
WATER ADJUSTMENTS SHEET 3

WATER ADJUSTMENTS SHEET 4

WATER ADJUSTMENTS SHEET 5

SCALE: 1" = 30' HOR.  
1" = 3' VER.

0 30 60



- NOTES:
- OPEN CUT AND REPAIR ASPHALT, CONCRETE, & GRAVEL DRIVEWAYS PER DETAILS, MATCH EXISTING MATERIAL. CONTRACTOR TO MAINTAIN ACCESS AT ALL TIMES.
  - CONTRACTOR TO FIELD VERIFY DEPTH, LOCATION, MATERIAL TYPE, AND SIZE OF ALL EXISTING UTILITIES IN THE PROJECT AREA.
  - CONTRACTOR TO JOINT RESTRAIN ALL CONNECTION INTO EXISTING LINES, VALVES & FITTINGS.
  - ALL CONSTRUCTION ACTIVITIES TO REMAIN WITHIN THE EXISTING AND PROPOSED RIGHT-OF-WAY AND UTILITY EASEMENTS.
  - TOPOGRAPHY PROVIDED BY AN ON-THE-GROUND SURVEY (PERFORMED BY KFW ENGINEERS).
  - CONTRACTOR TO RESTORE ALL DAMAGED AND DISTURBED AREAS INCLUDING BUT NOT LIMITED TO SURFACE AND SUBSURFACE FEATURES, TOPSOIL, REVEGETATION, AND EROSION CONTROL.
  - ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A. SPECIFICATIONS.
  - NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
  - ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTORS GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE (12) INCHES THICK. THE MAXIMUM ALLOWABLE TESTS SHALL BE BASED ON THE ABILITY OF THE COMPACTION OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTS DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.
  - CONTRACTOR TO PREPARE PROPOSED A BYPASS PUMPING PLAN TO BE APPROVED BY ENGINEER AND NBU PRIOR TO CONSTRUCTION.
  - TRAFFIC CONTROL NOTE:  
THE CONTRACTOR IS THE RESPONSIBLE FOR THE TRAFFIC CONTROL AND WILL BE RESPONSIBLE FOR PURSHING ALL TRAFFIC CONTROL DEVICES, AND PLACER. BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE CURRENT "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND SHALL BE LOCATED TO PROVIDE MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT WHILE PROVIDING CONTINUOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.

12. TRENCH SAFETY NOTE:  
CONTRACTOR TO INDEPENDENTLY RETAINED EMPLOYEE OR STAFF, OR 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. THE CONTRACTOR'S IMPLEMENTATION ON THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE 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.
13. SPECIFICATIONS:  
FOR PROPOSED MANHOLES IN FUTURE PAVEMENT CONTRACTOR TO ADJUST AS REQUIRED.
14. CONTRACTOR TO RECONNECT EXISTING METERS TO PROPOSED WATER LINE, ONCE RELEASED FOR SERVICE.
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16. CUT AND PLUG TO BE A RESTRAINED PLUG OR BLIND FLANGE.
17. PIPING TO HAVE A MINIMUM COVER OF 48", UNLESS OTHERWISE INDICATED IN THE PLANS.
18. ALL BURIED PIPING JOINTS, FITTINGS AND VALVES MUST BE MECHANICALLY RESTRAINED UNLESS OTHERWISE INDICATED IN THE PLANS.
19. OPEN-CUT INSTALLATION OF THE WATERLINE ACROSS GOODWIN LANE SHALL BE DONE BETWEEN THE HOURS OF 8:30 AM THROUGH 3:00 PM TO MINIMIZE IMPACT TO DRIVERS.
20. ALL WATER SERVICES BENEATH ROADWAYS SHALL BE CASED, FROM CURB TO BACK OF CURB, WITH 2" SCH 40 PVC CASING.

SCALE:

DATE:

PROJECT NO: 8029-03

DESIGNED BY: AR

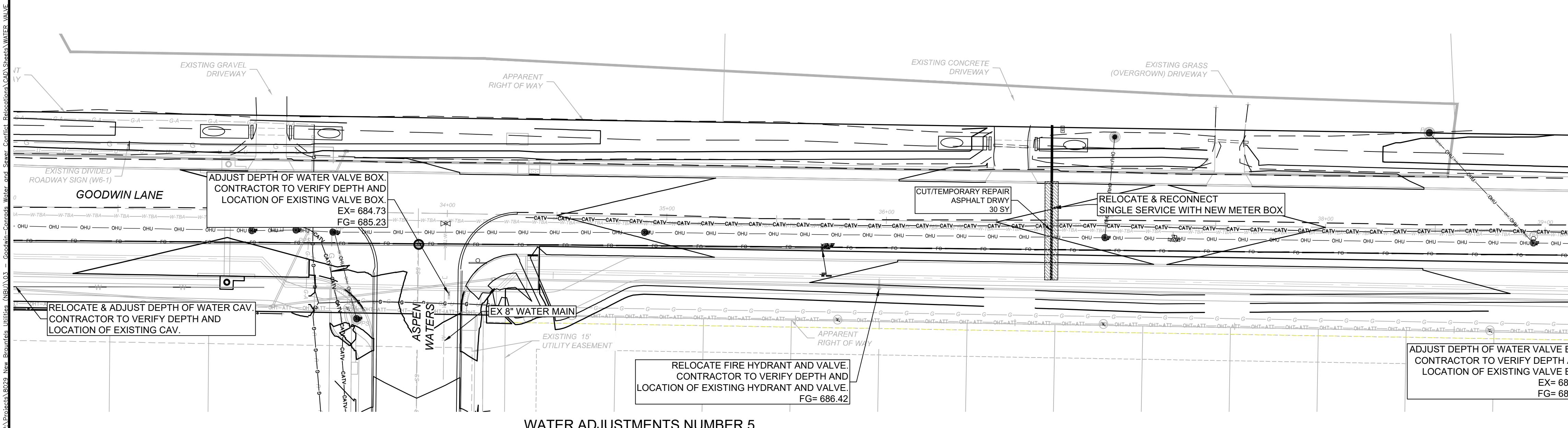
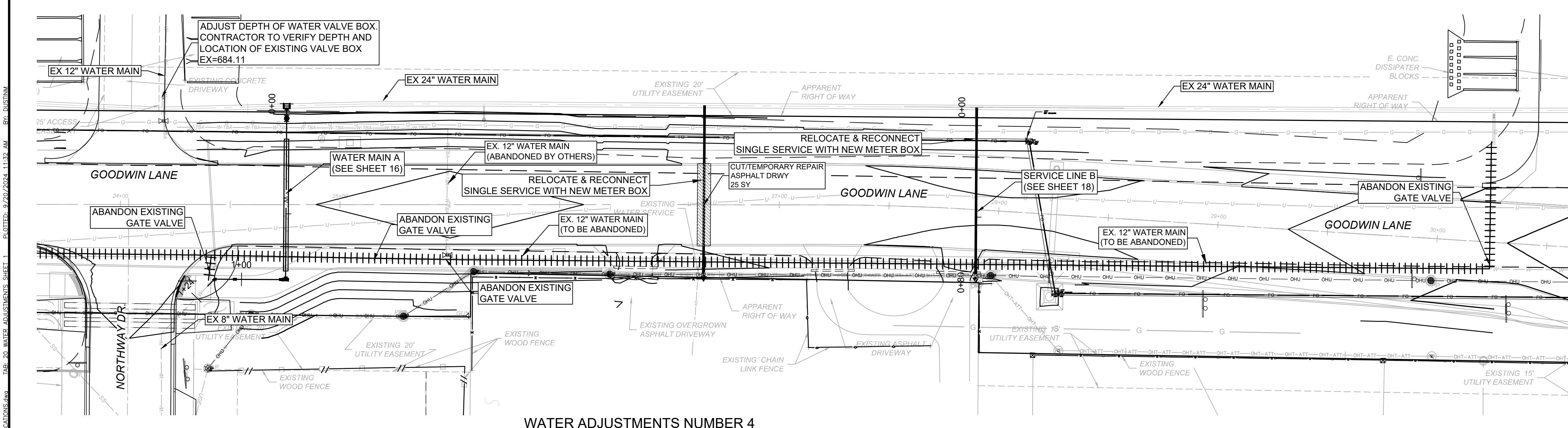
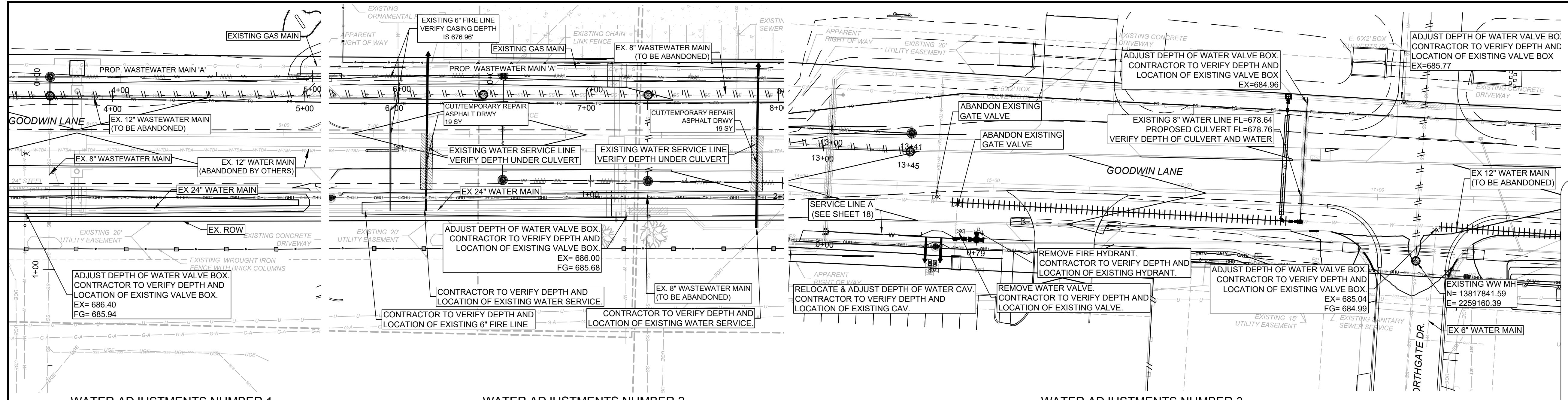
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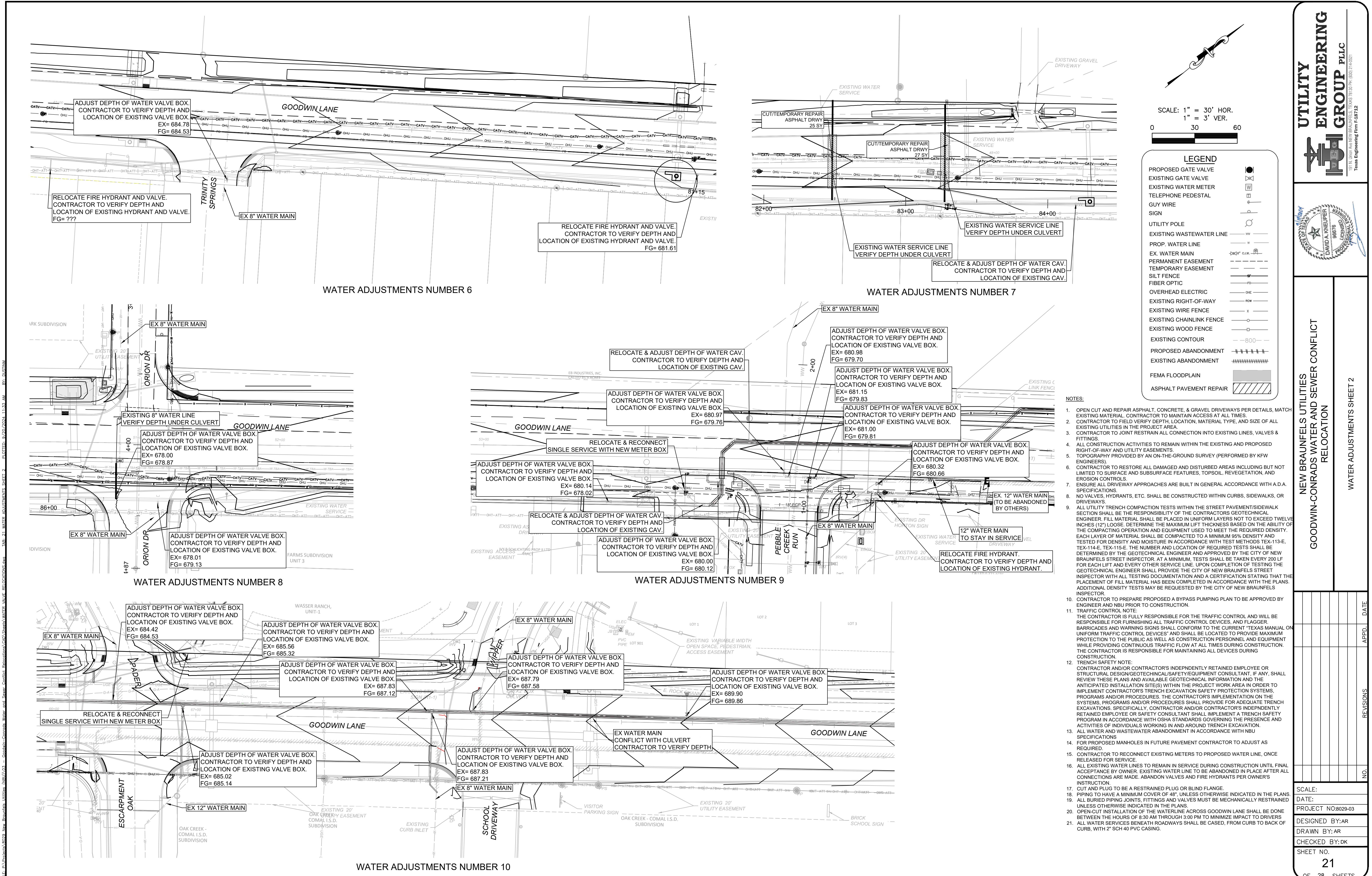
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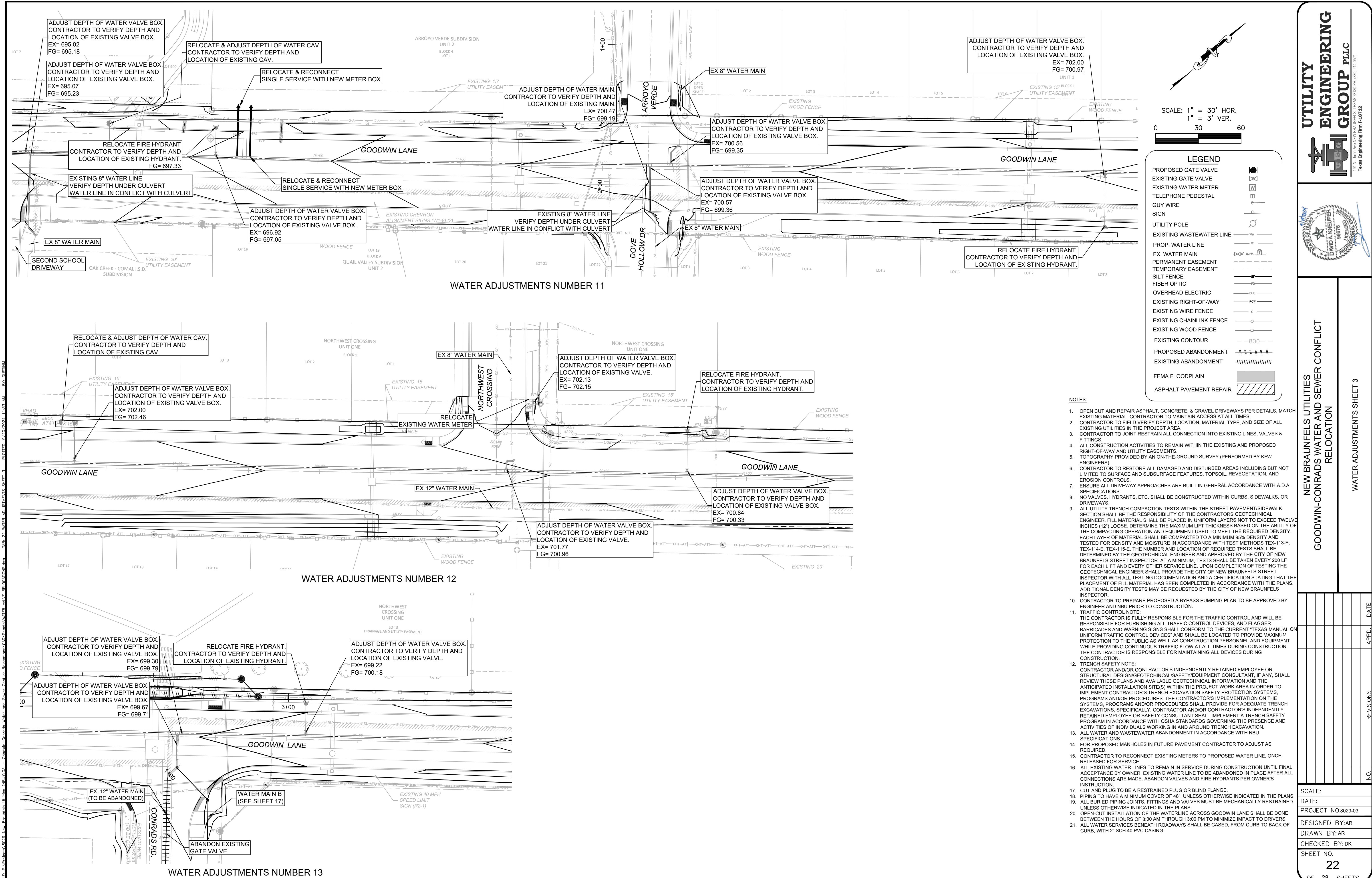
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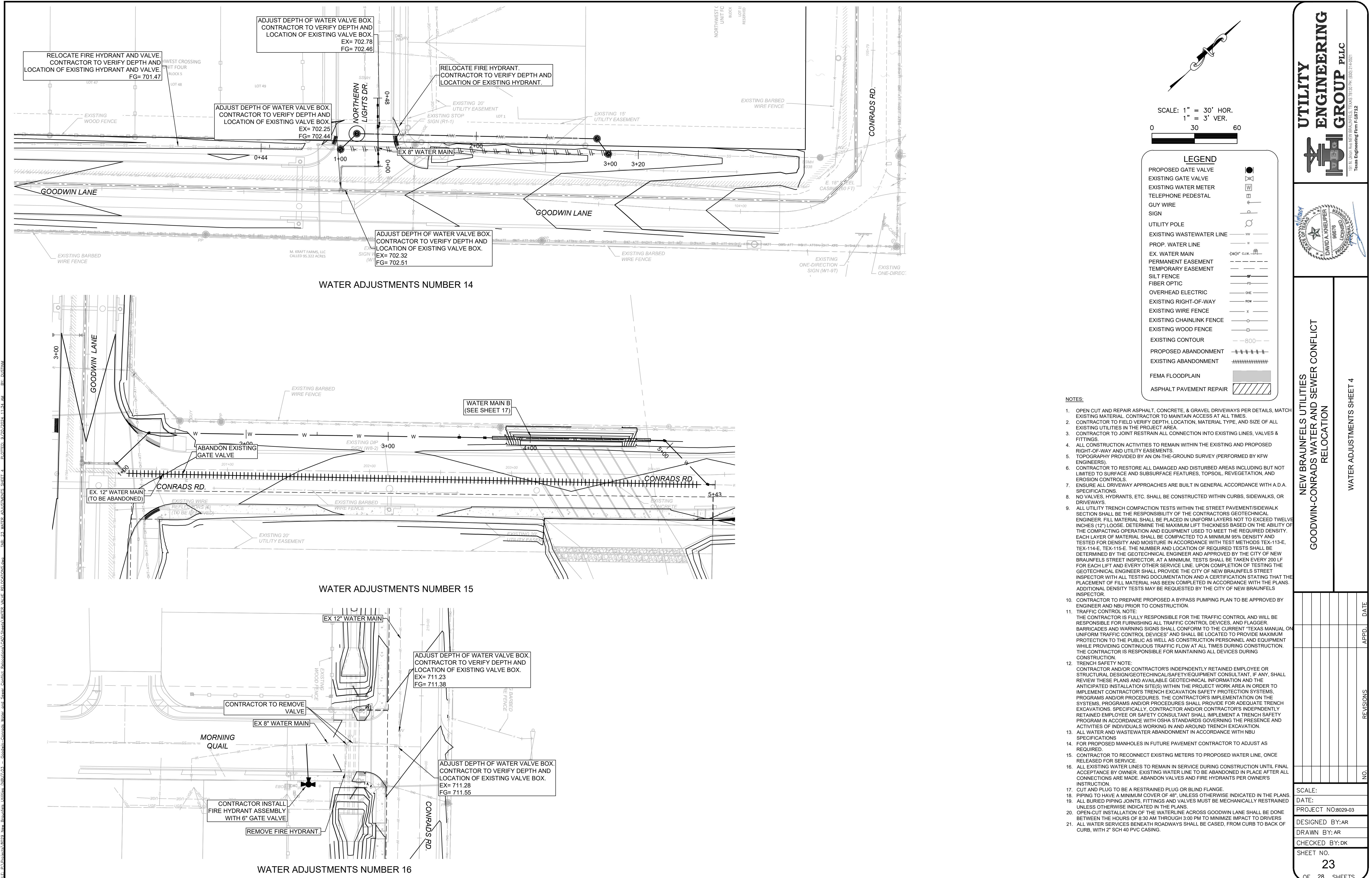
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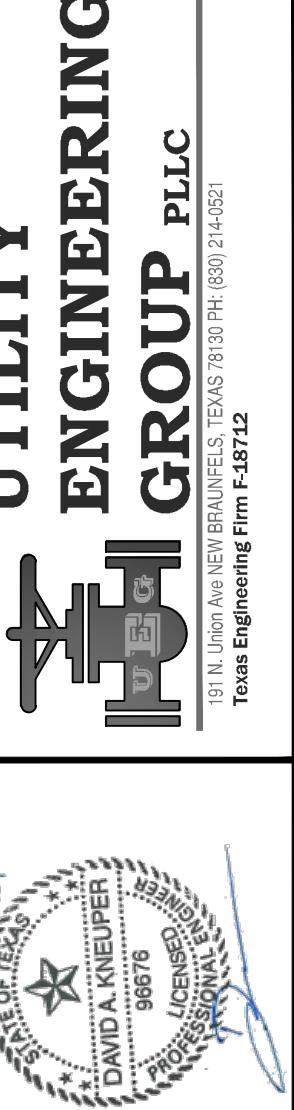
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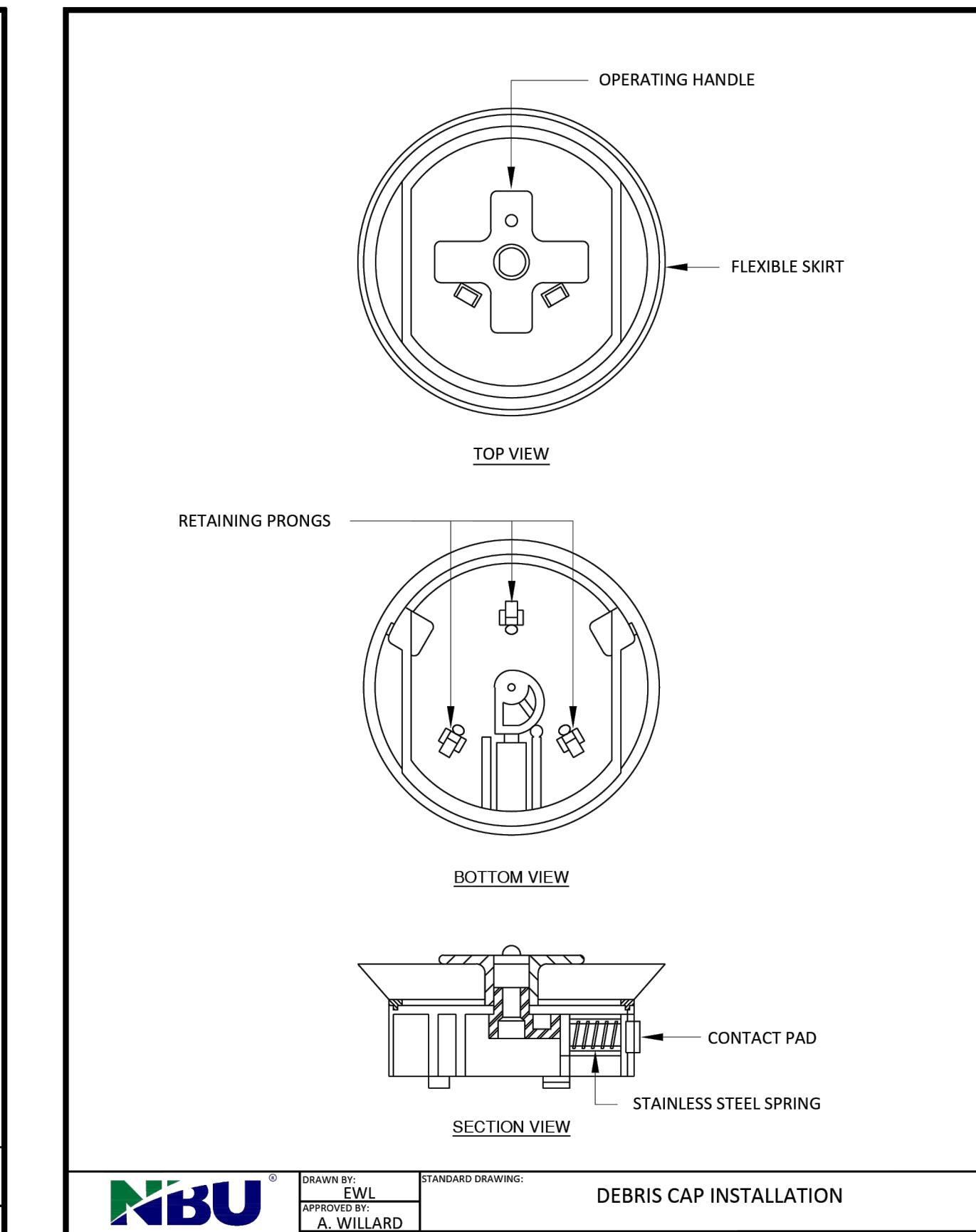
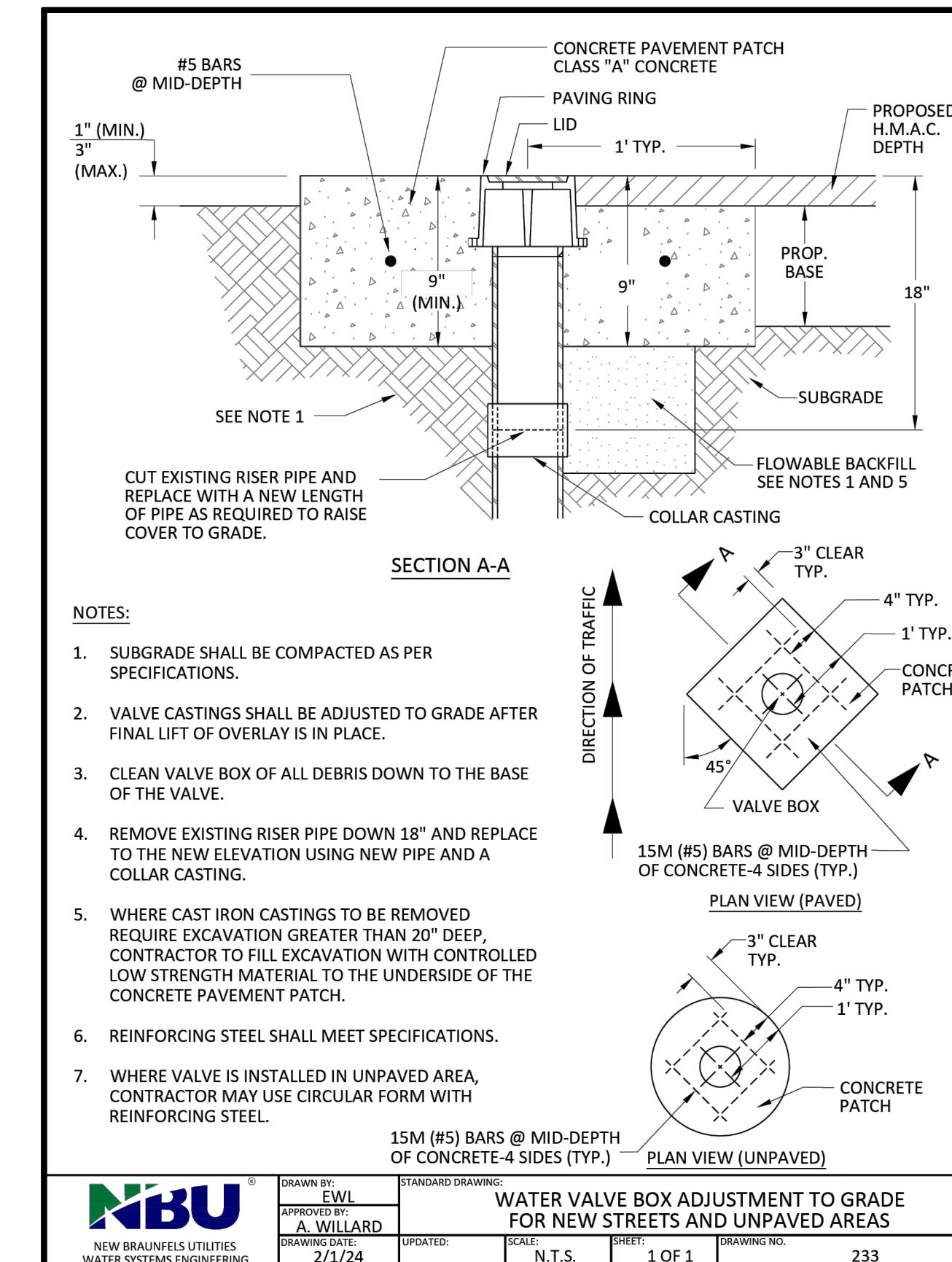
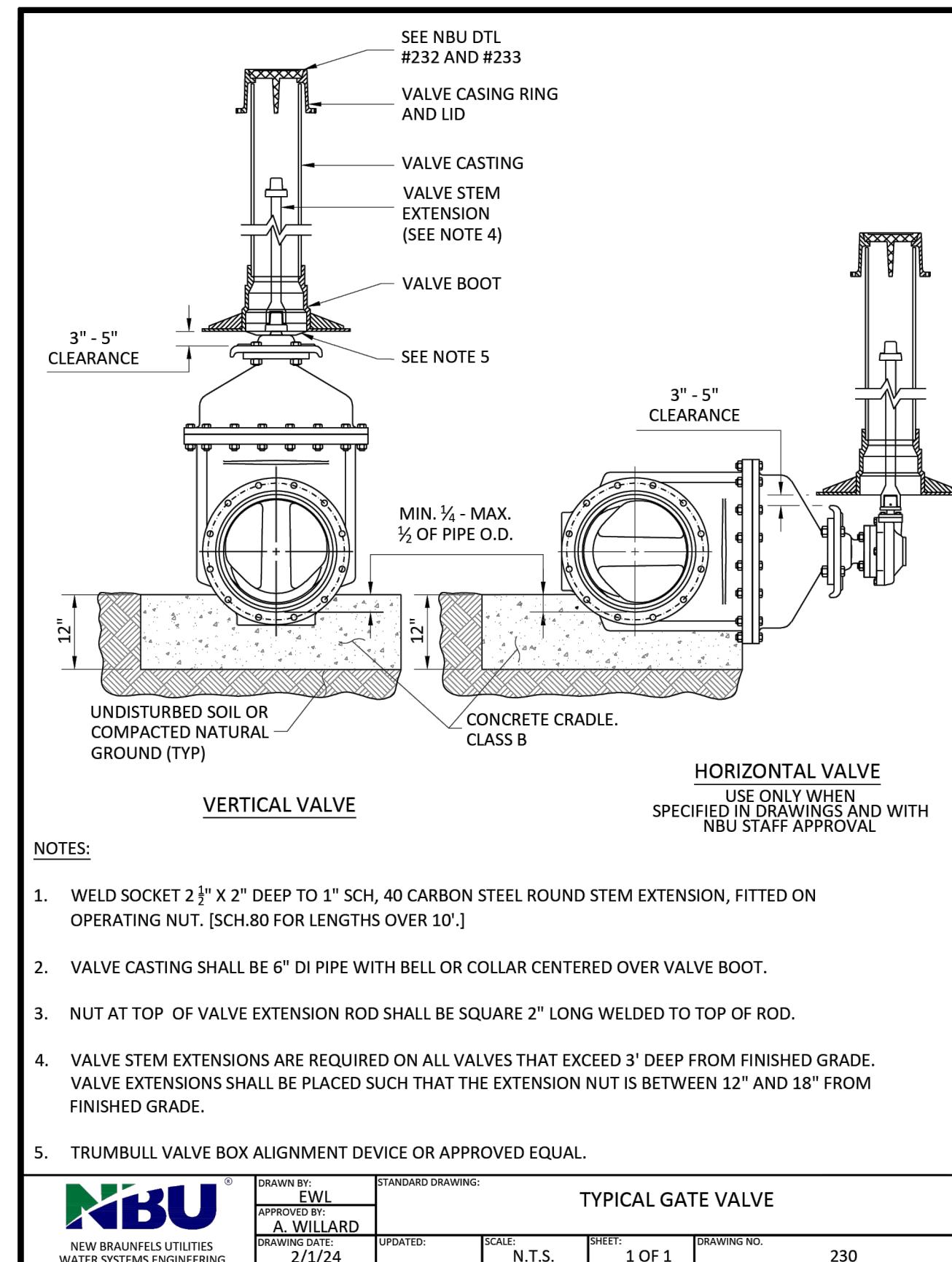
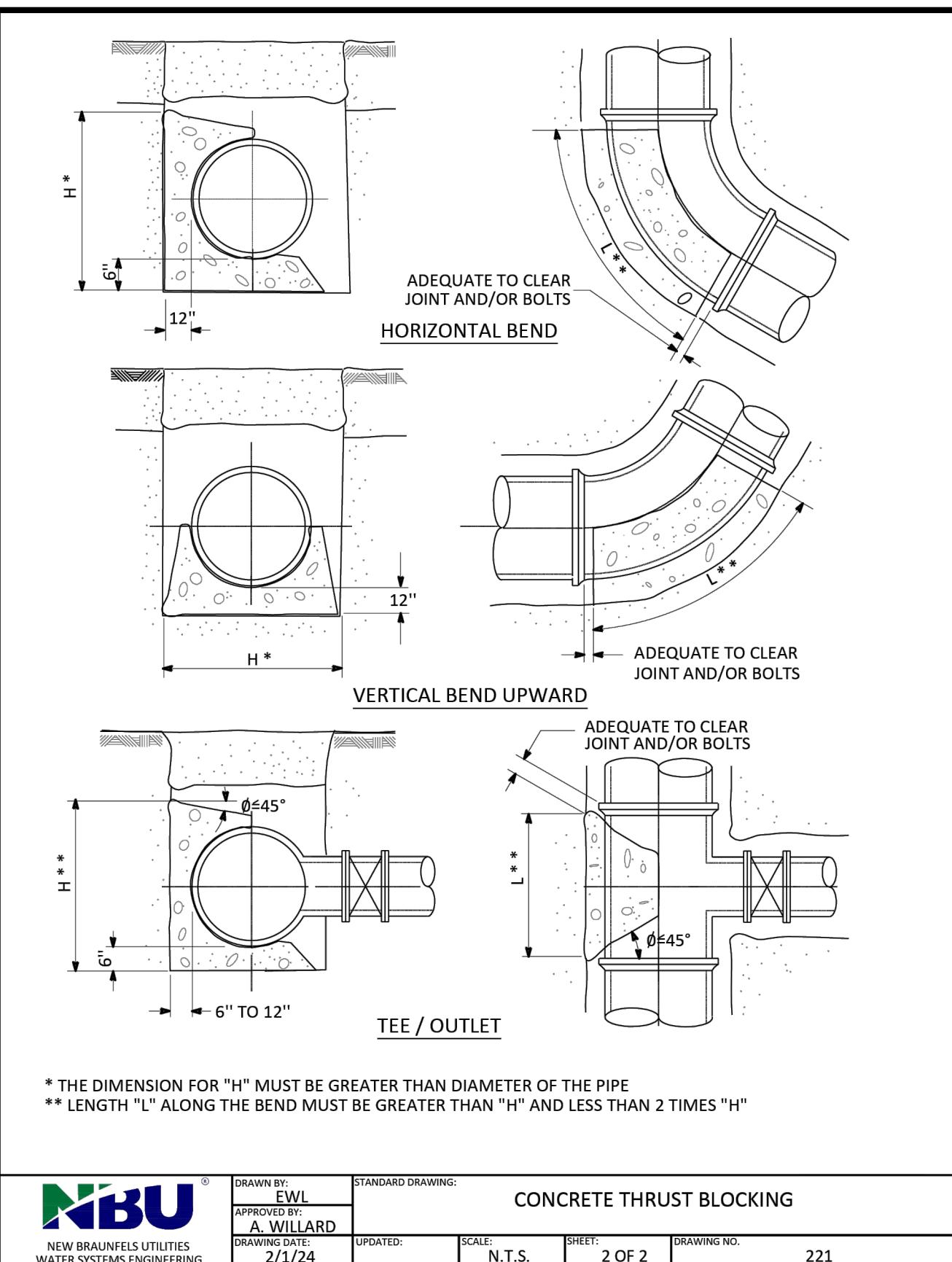
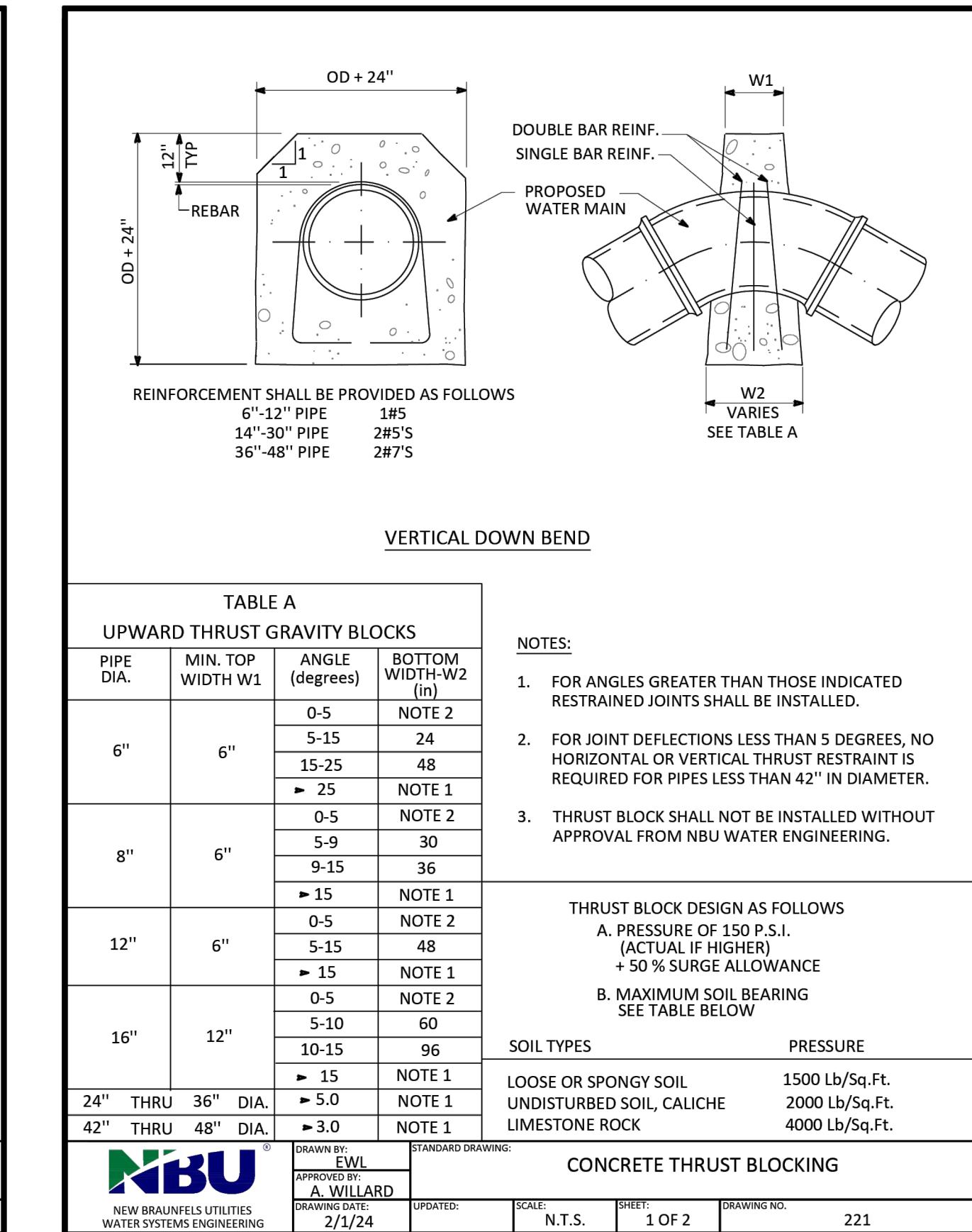
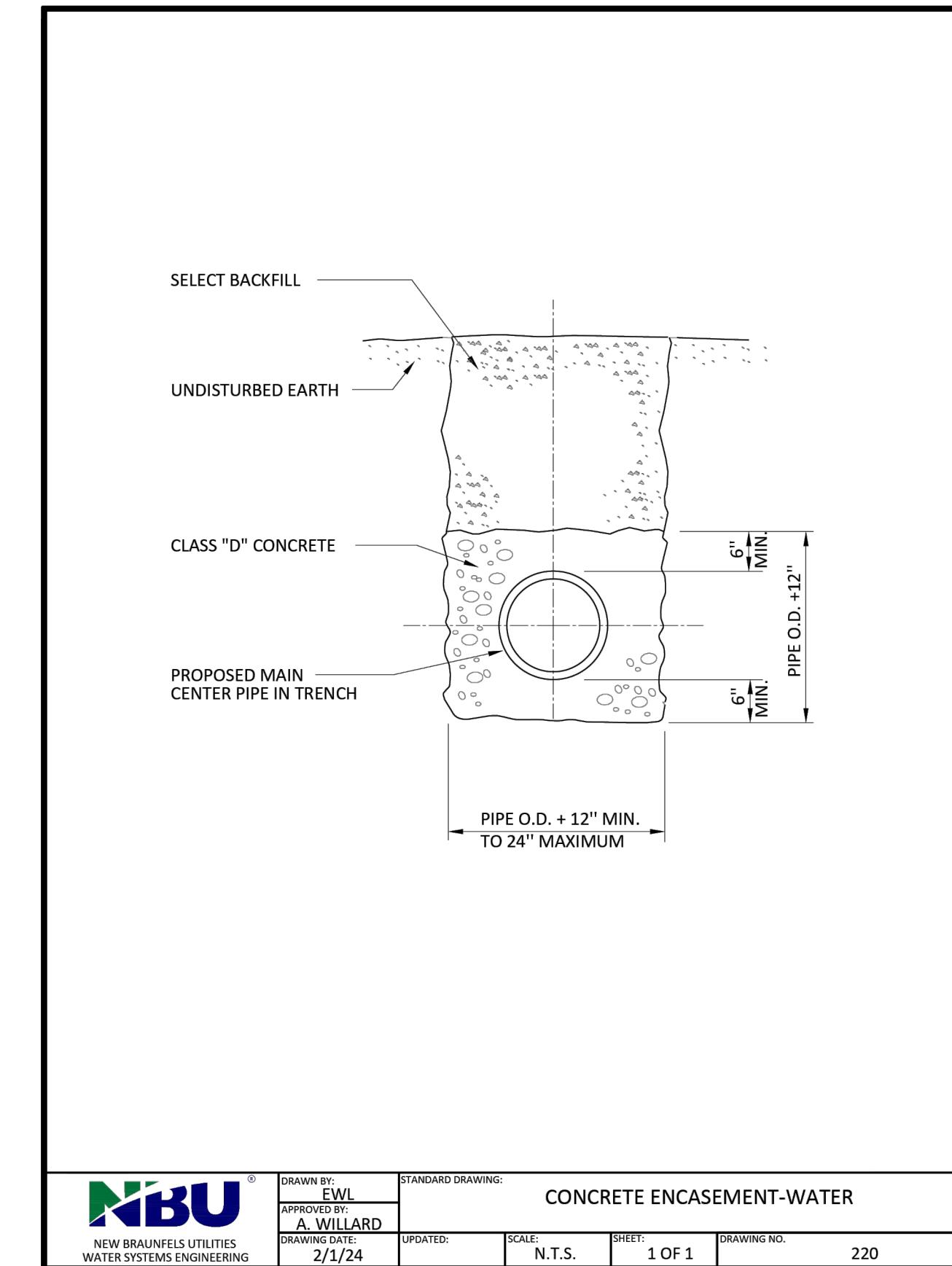
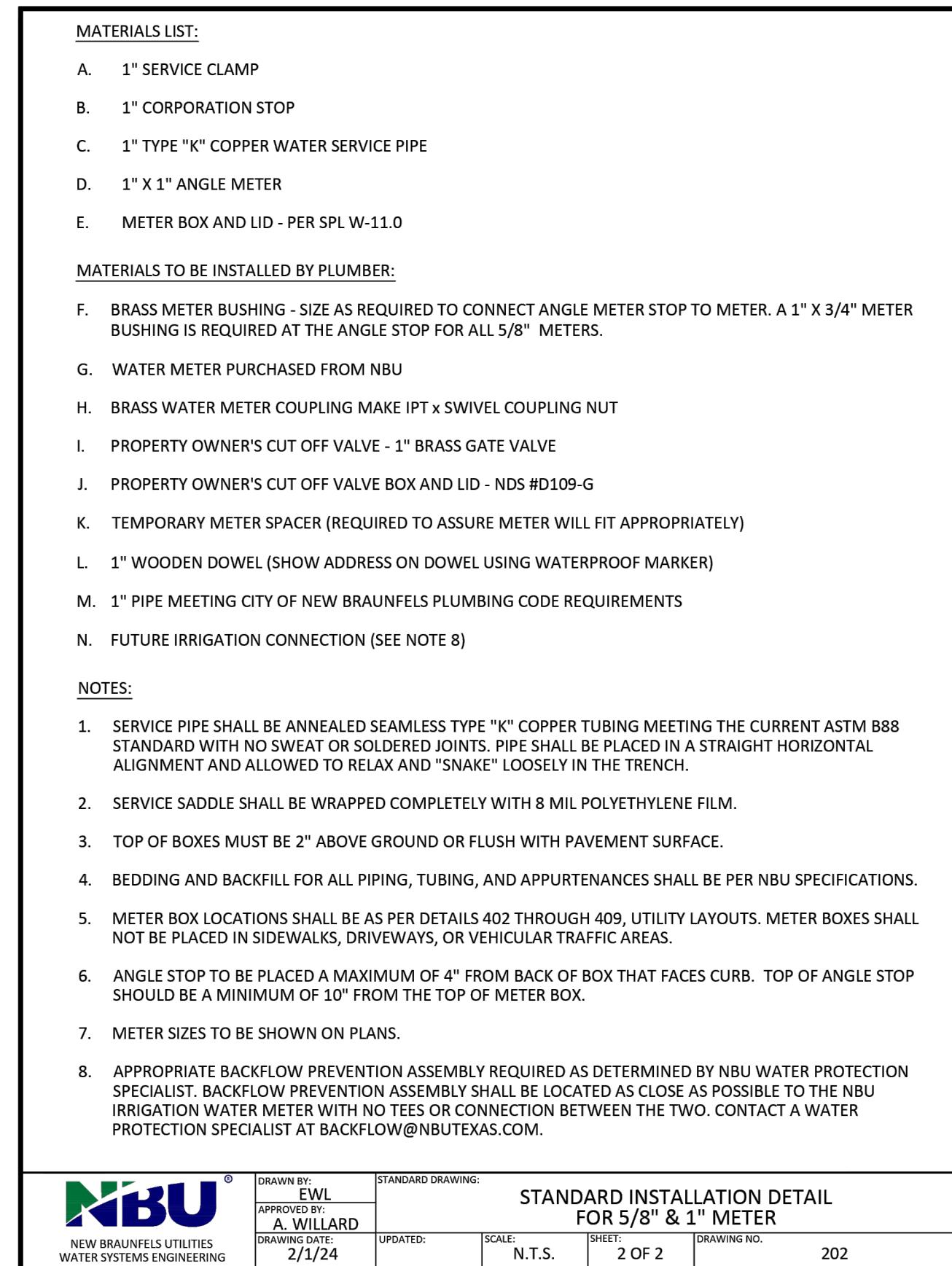
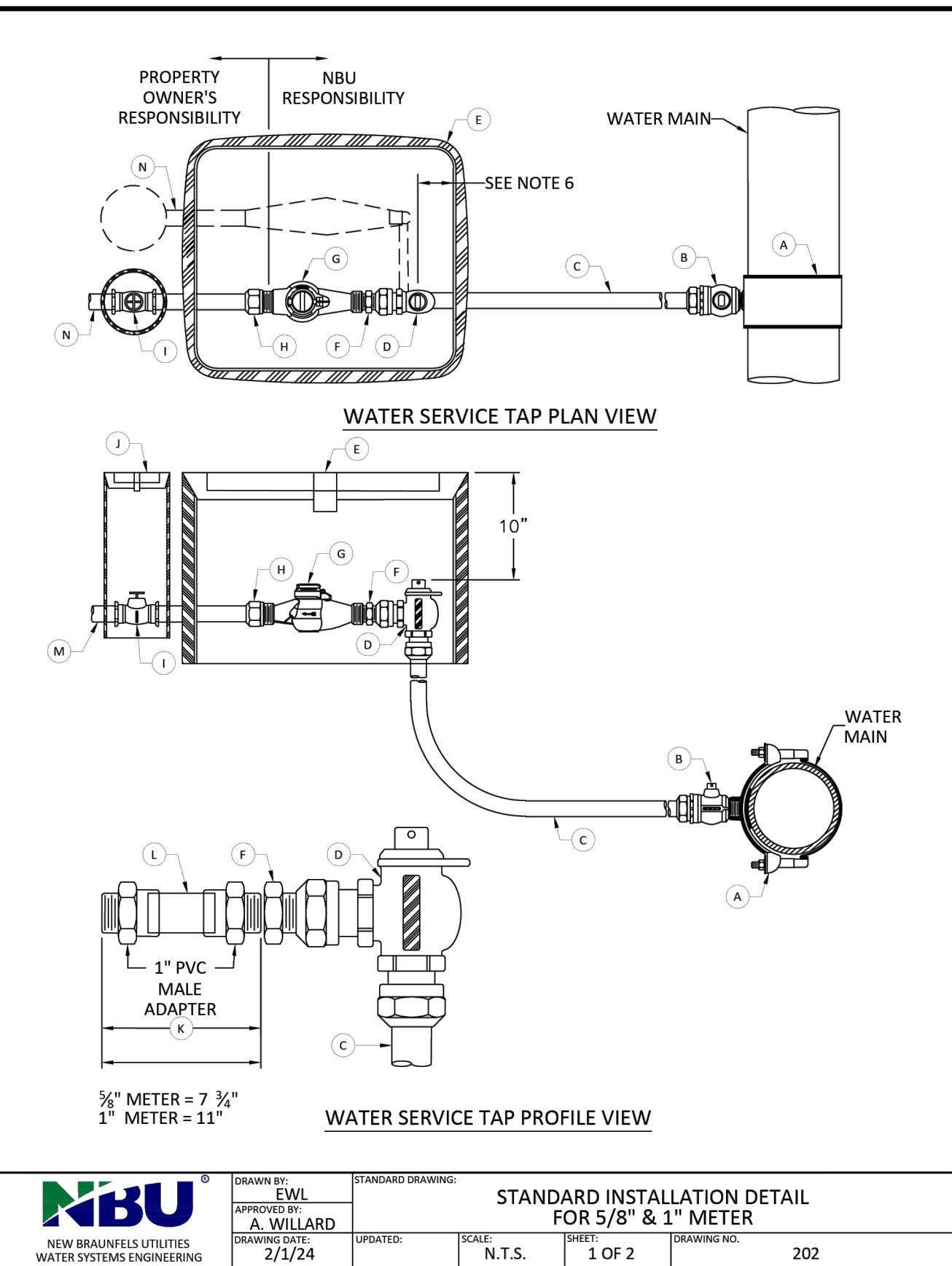


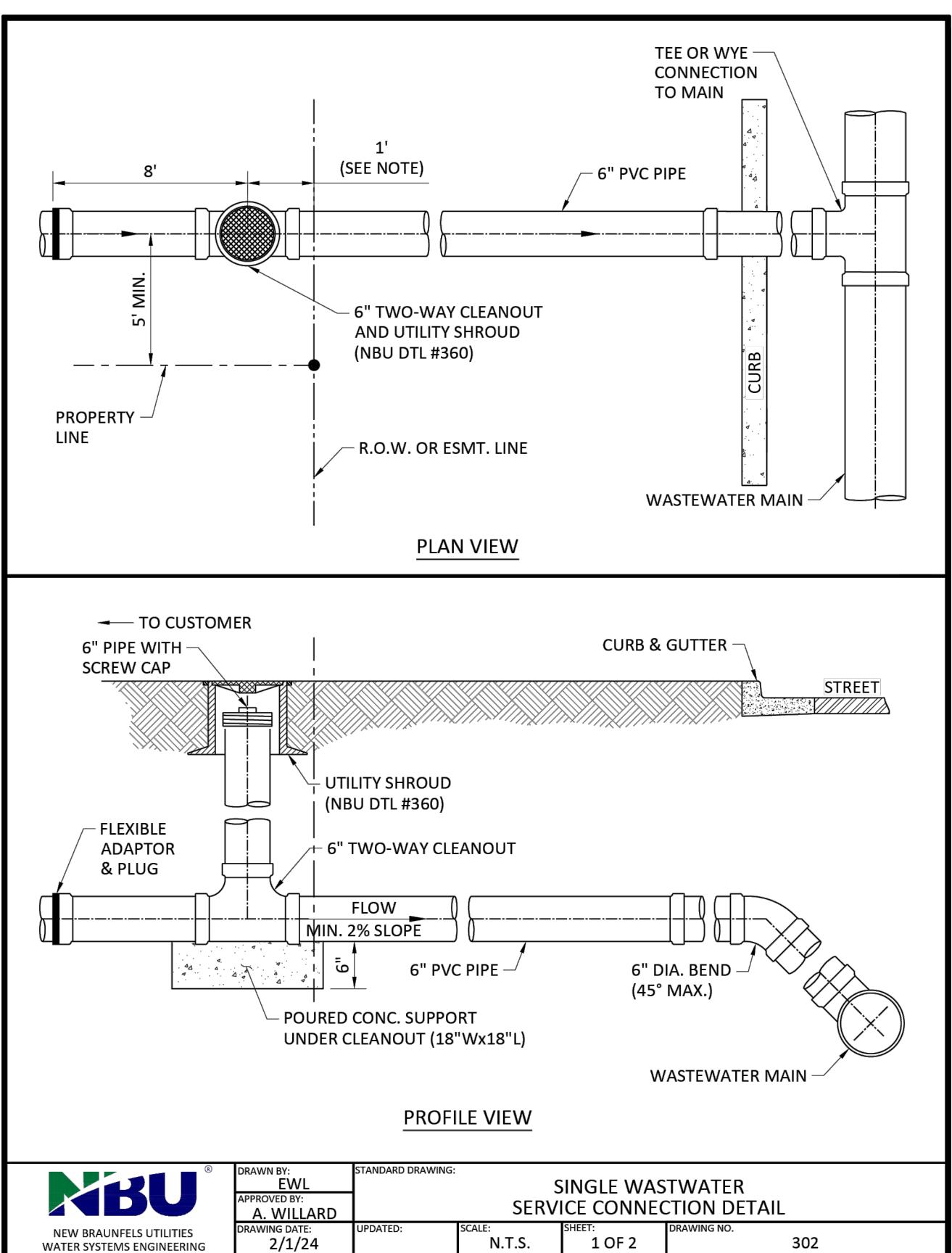
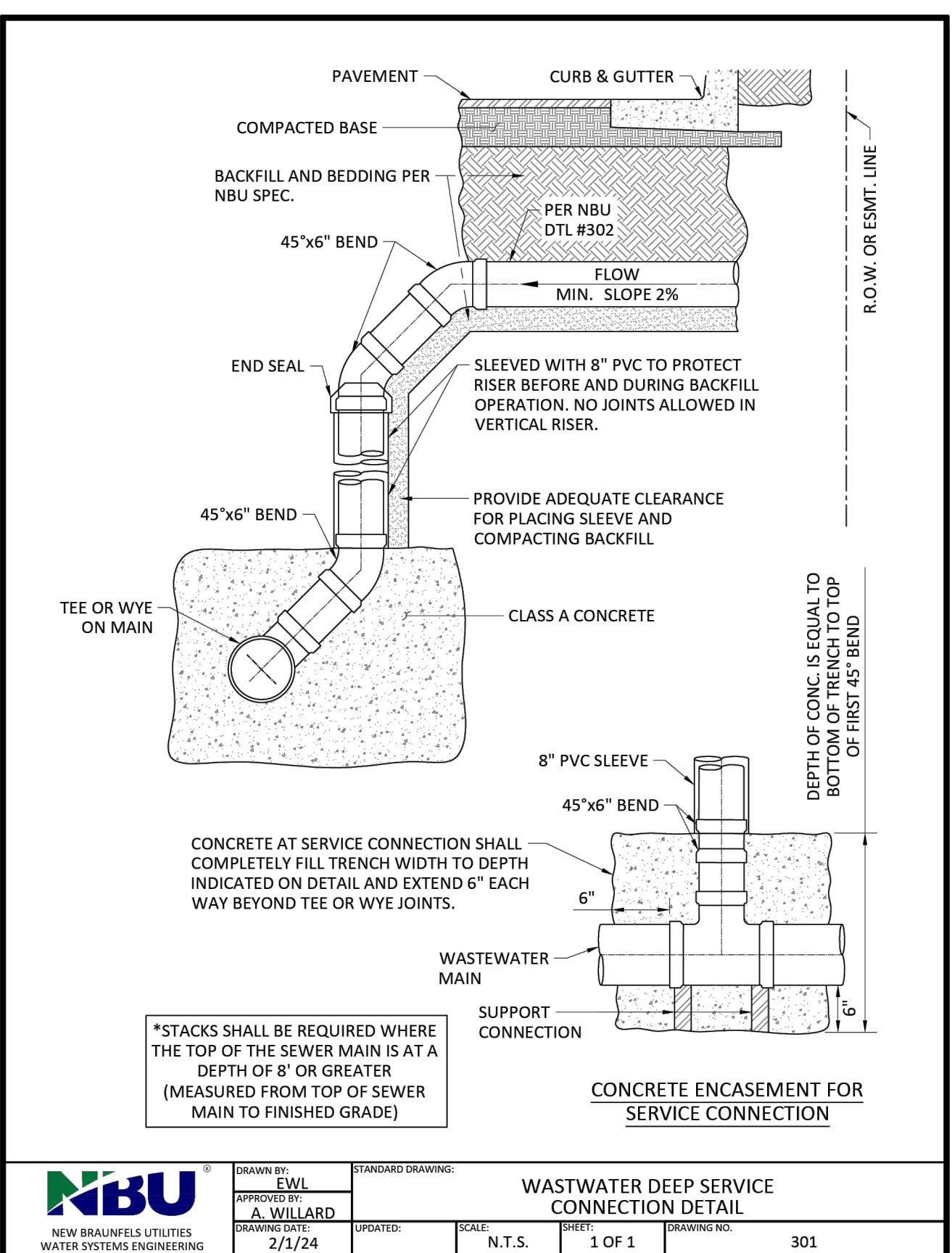
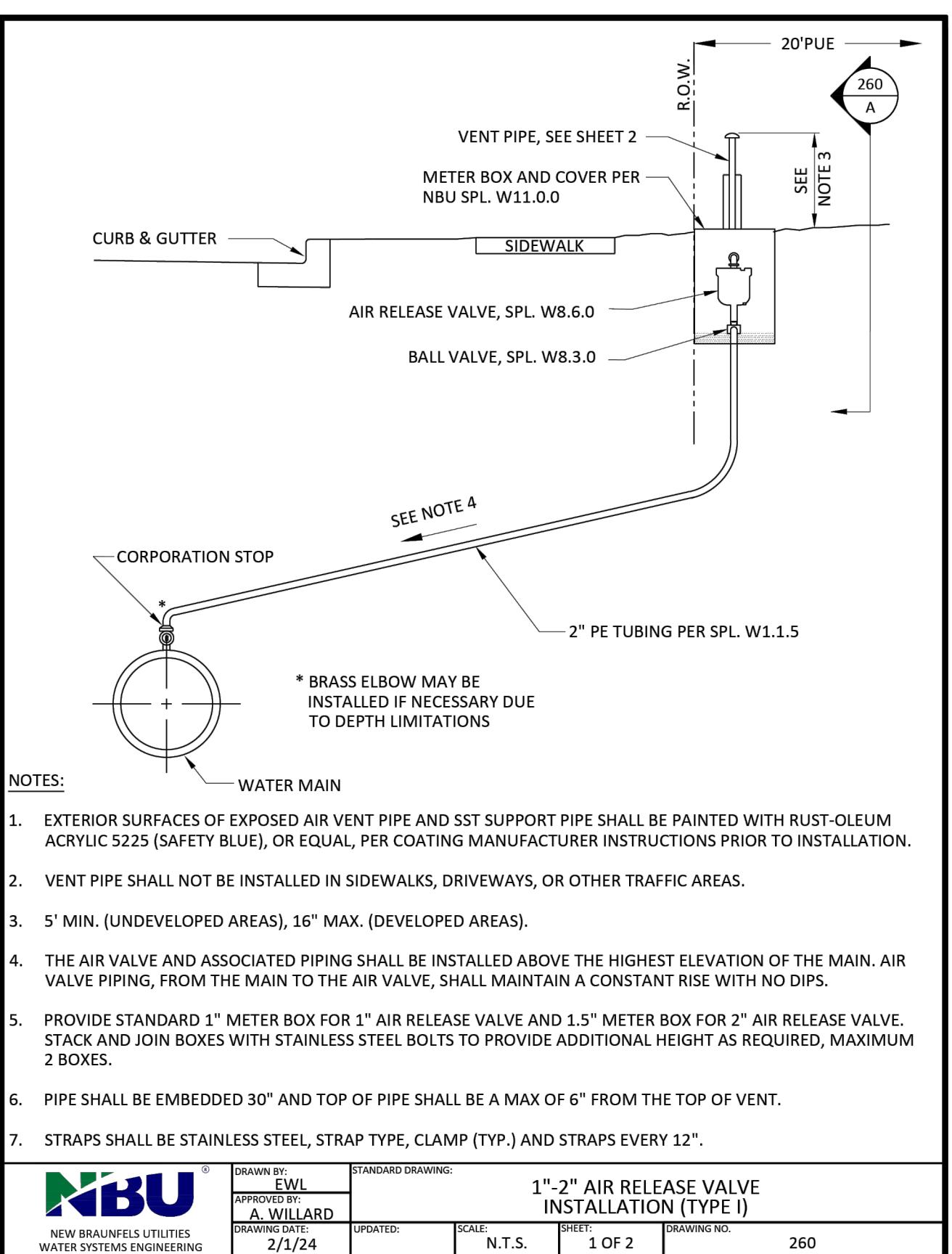
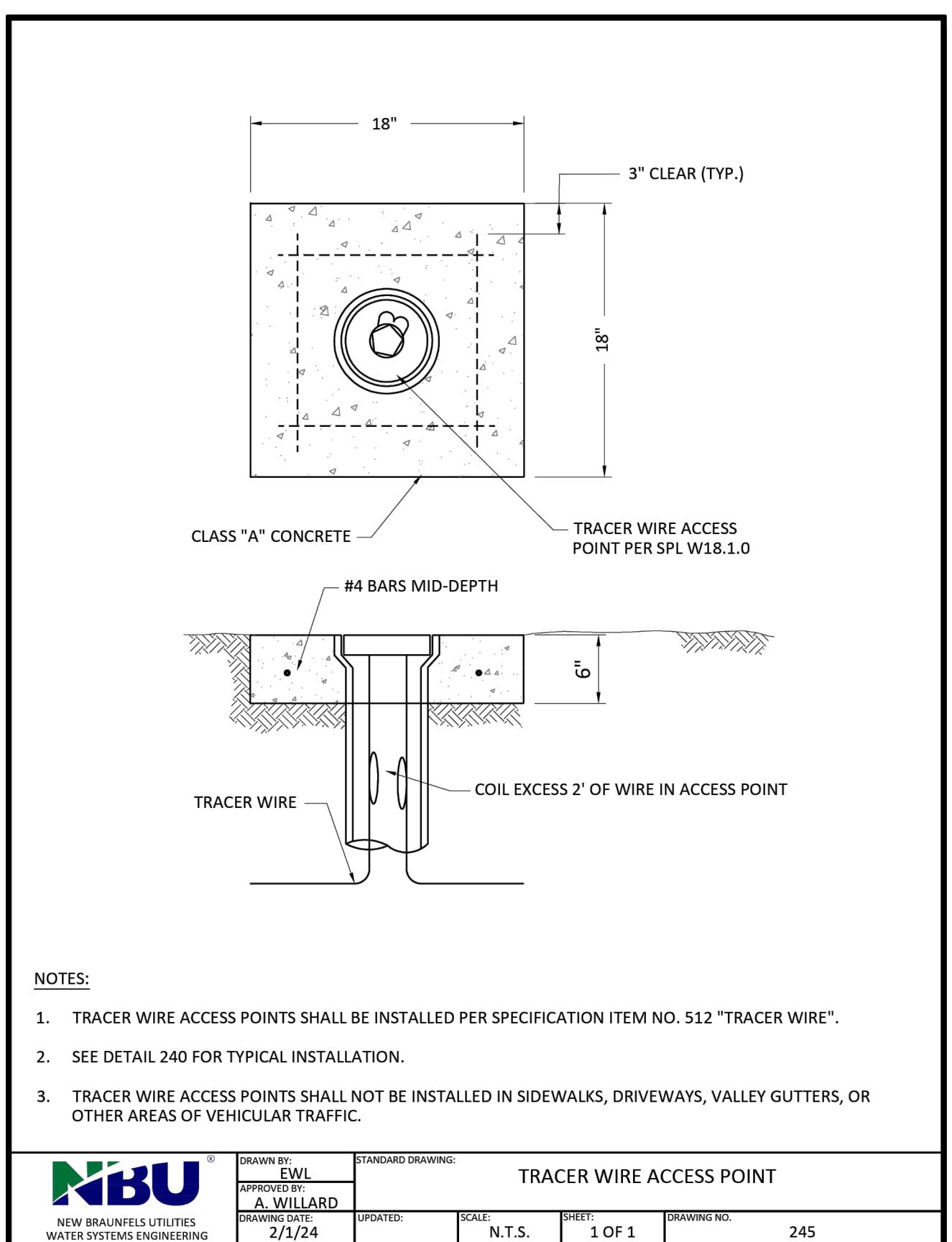
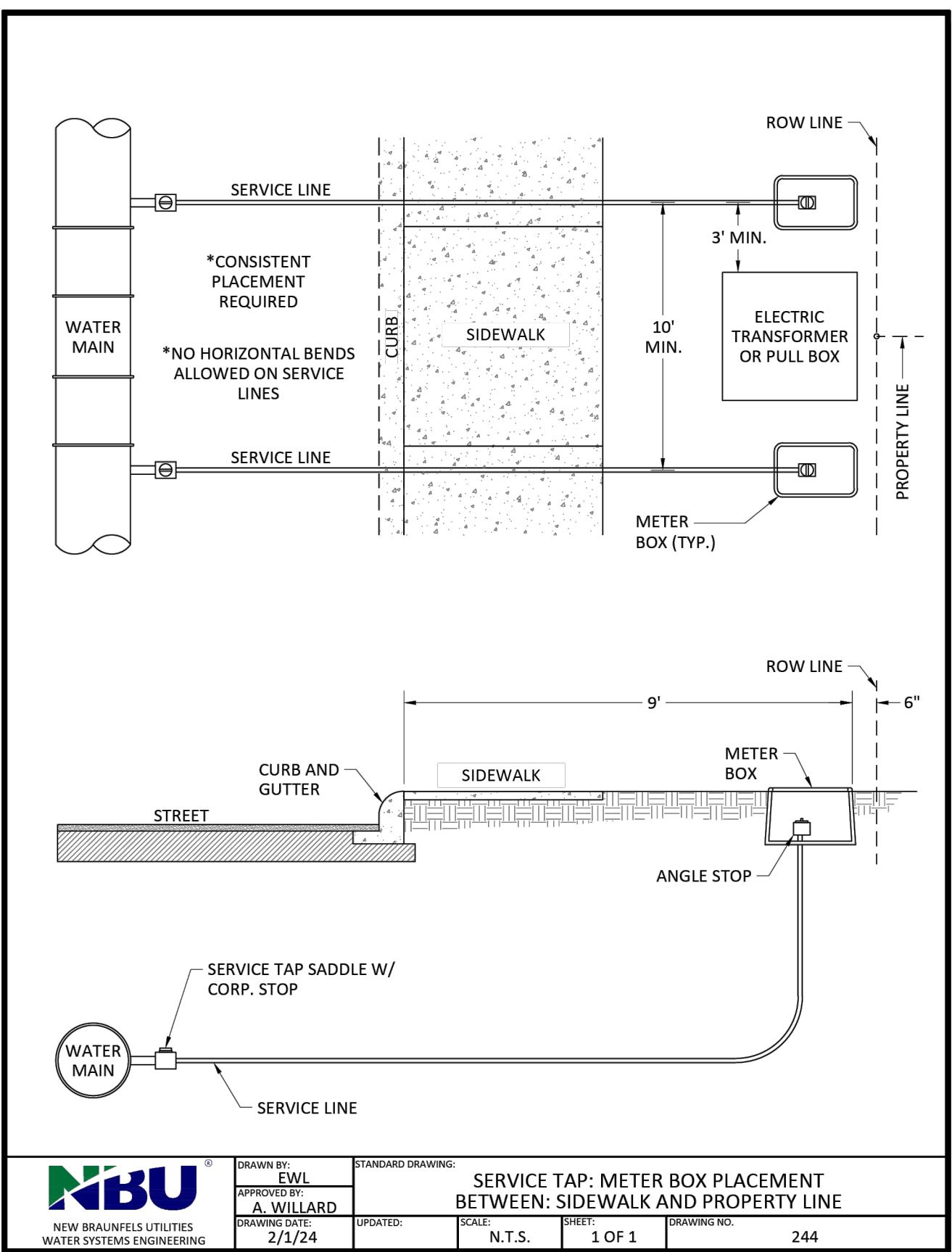
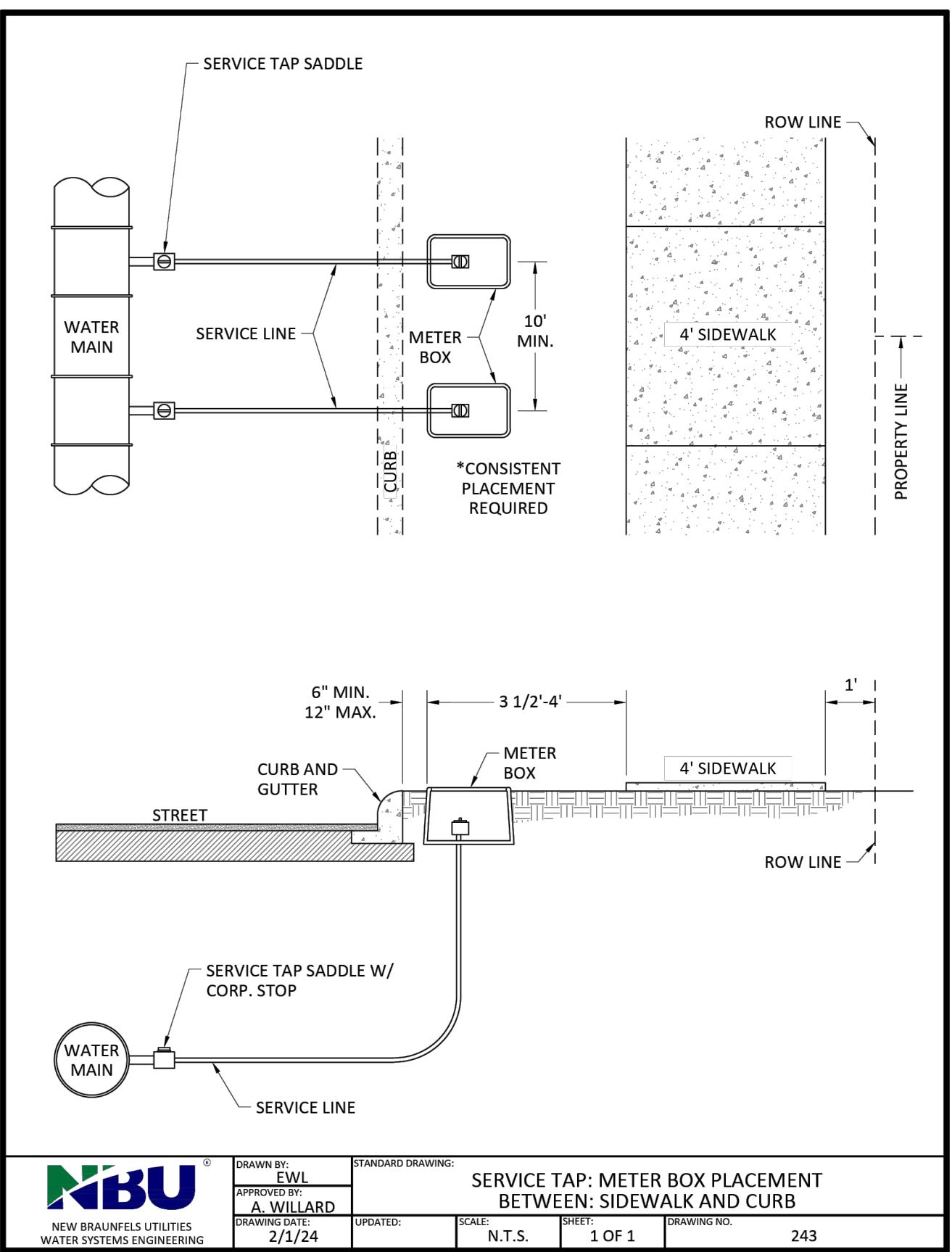
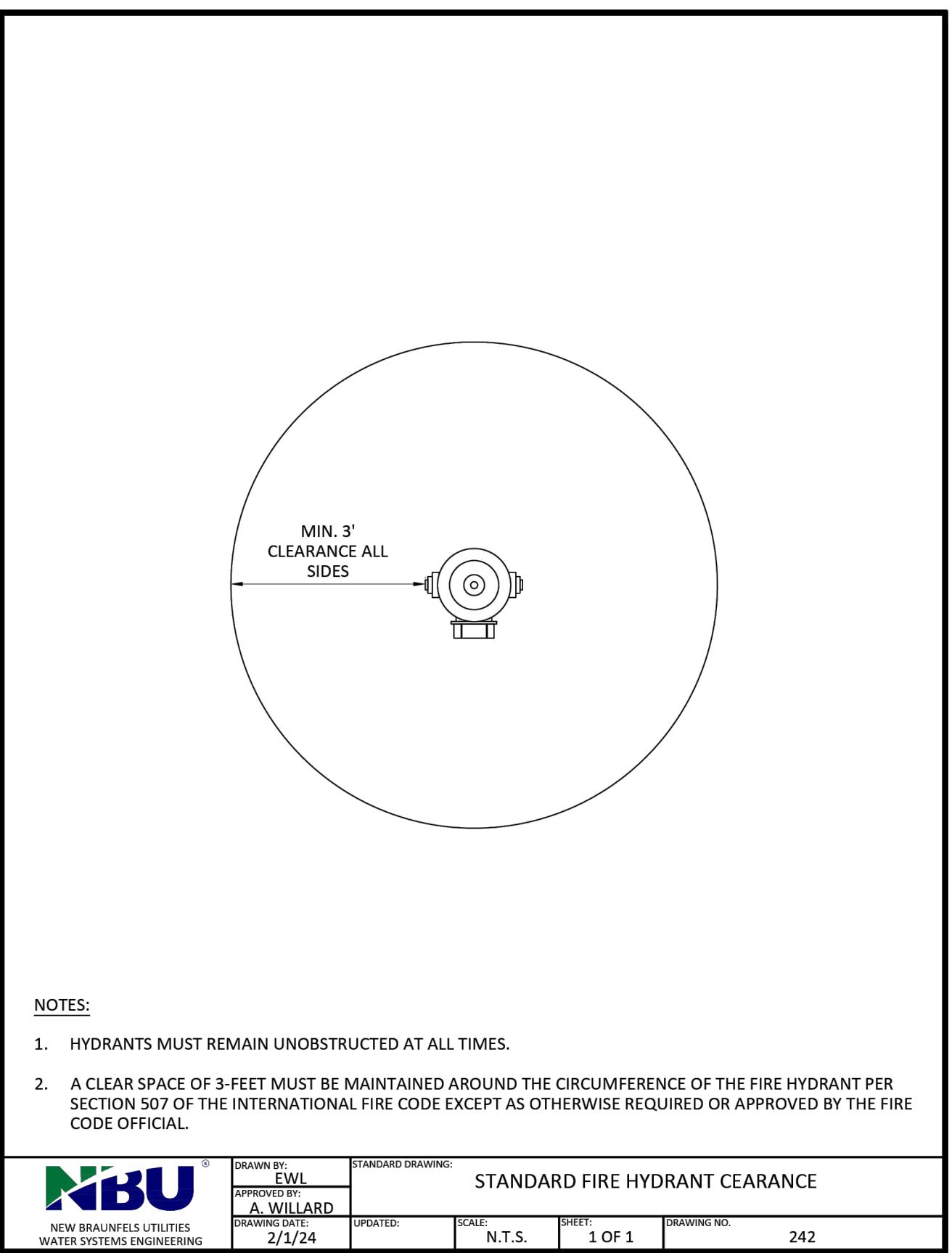
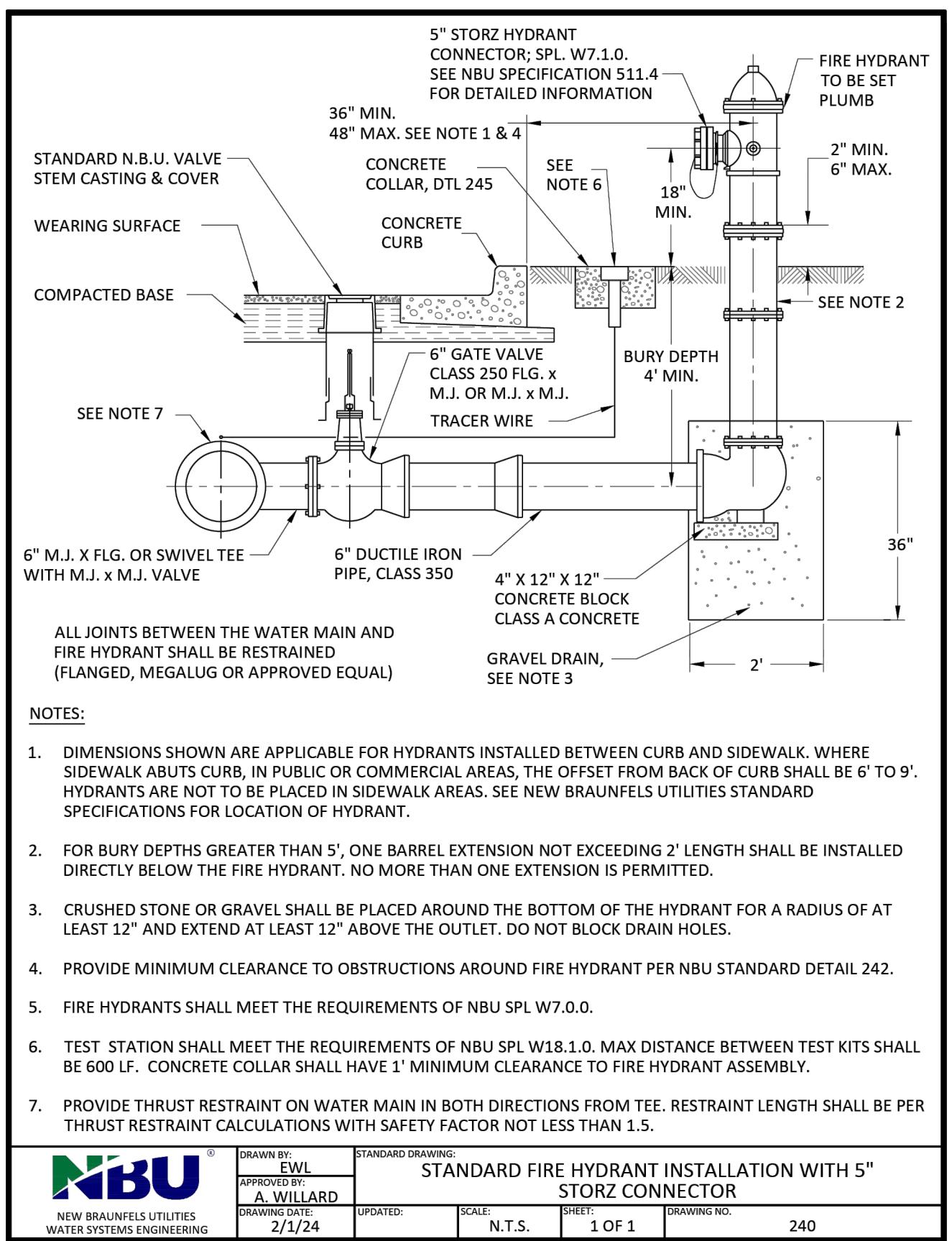


NEW BRAUNFELS UTILITIES  
GOODWIN-CONRAD'S WATER AND SEWER  
CONFLICT RELOCATION

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DAVID A. KUEPPEL  
9876  
LICENSED PROFESSIONAL

NEW BRAUNFELS UTILITIES  
GOODWIN-CONRAD'S WATER AND SEWER  
CONFLICT RELOCATION

DETAILS SHEET 3 OF 5

REVISIONS

NO. APPD. DATE

SCALE:

DATE:

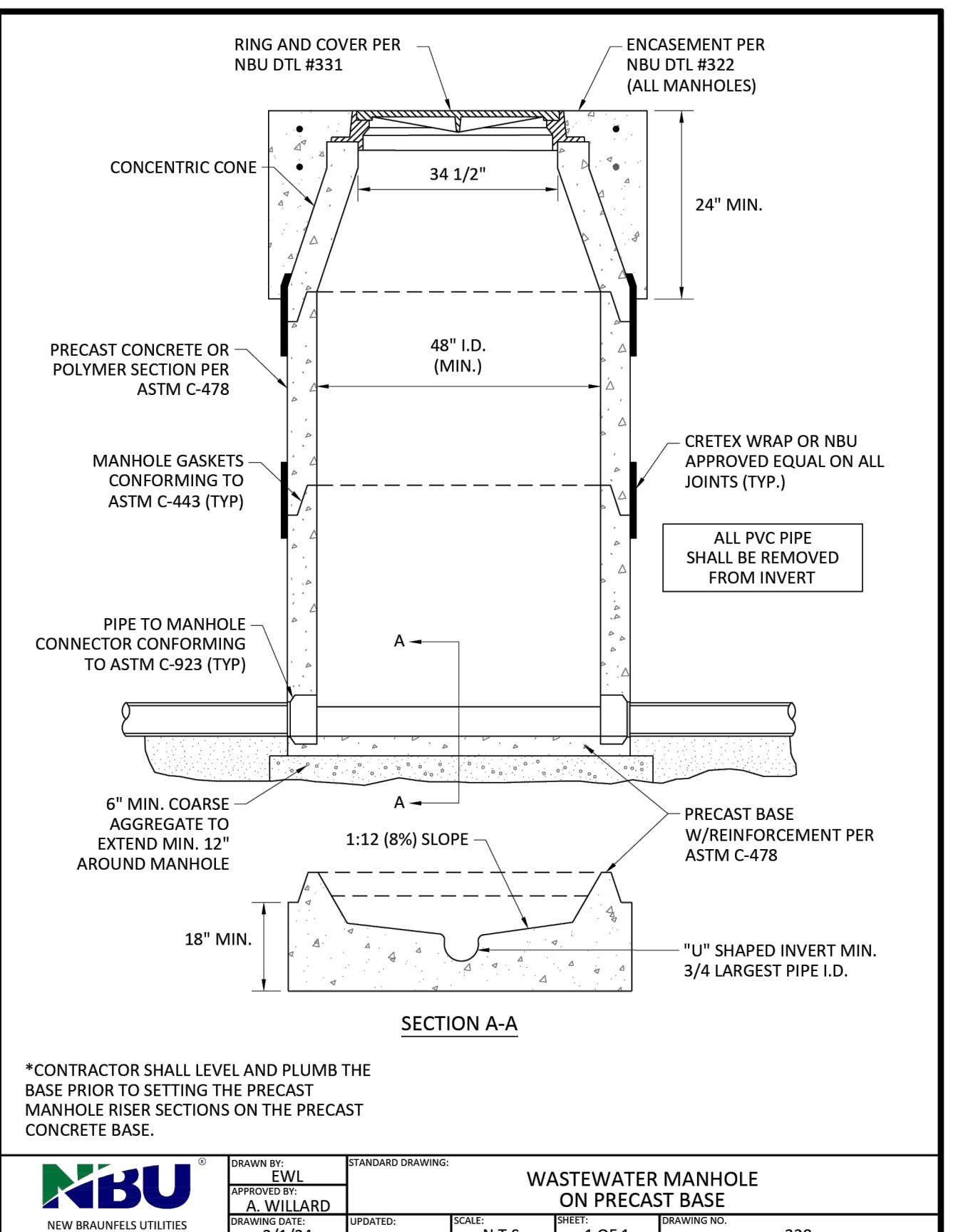
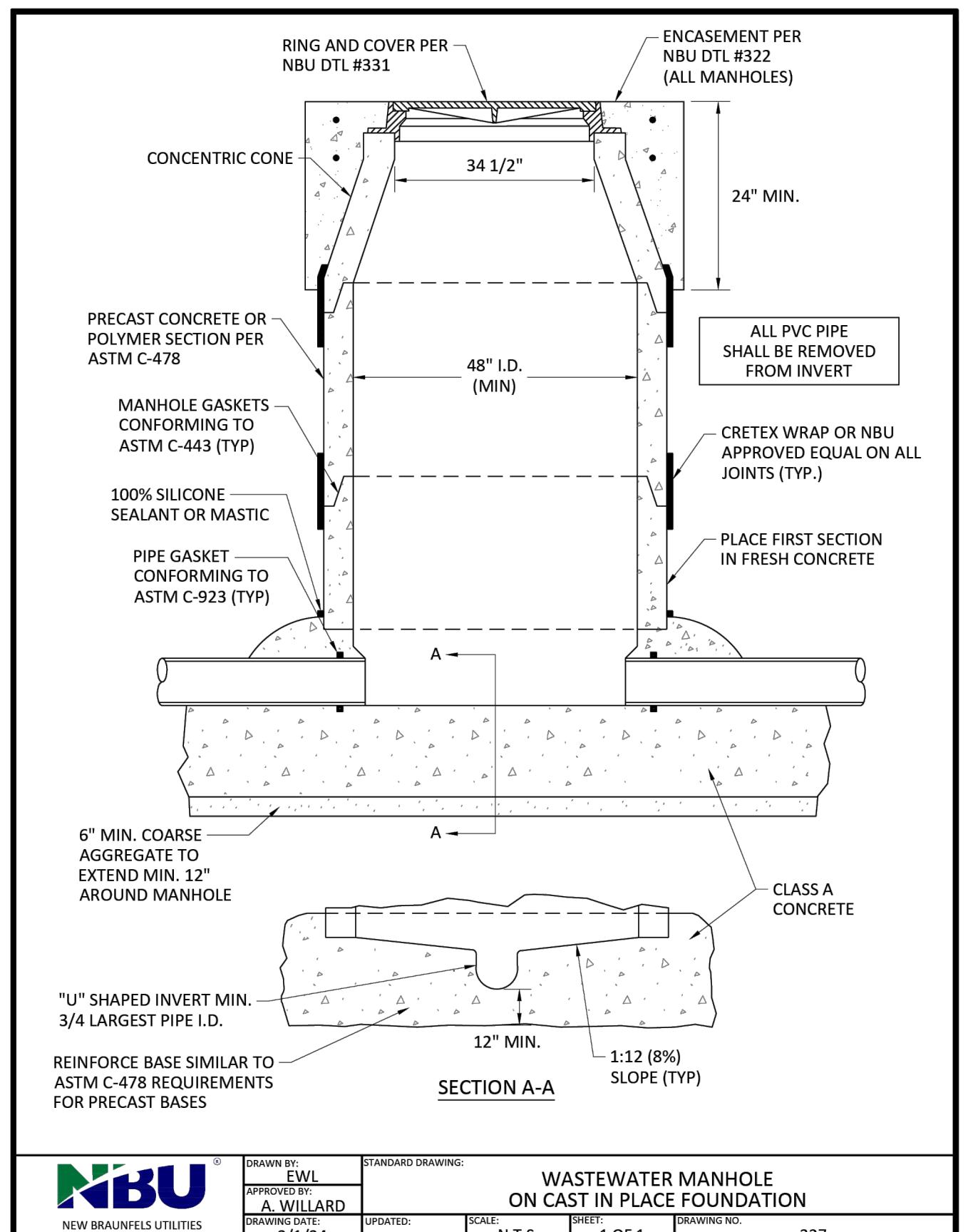
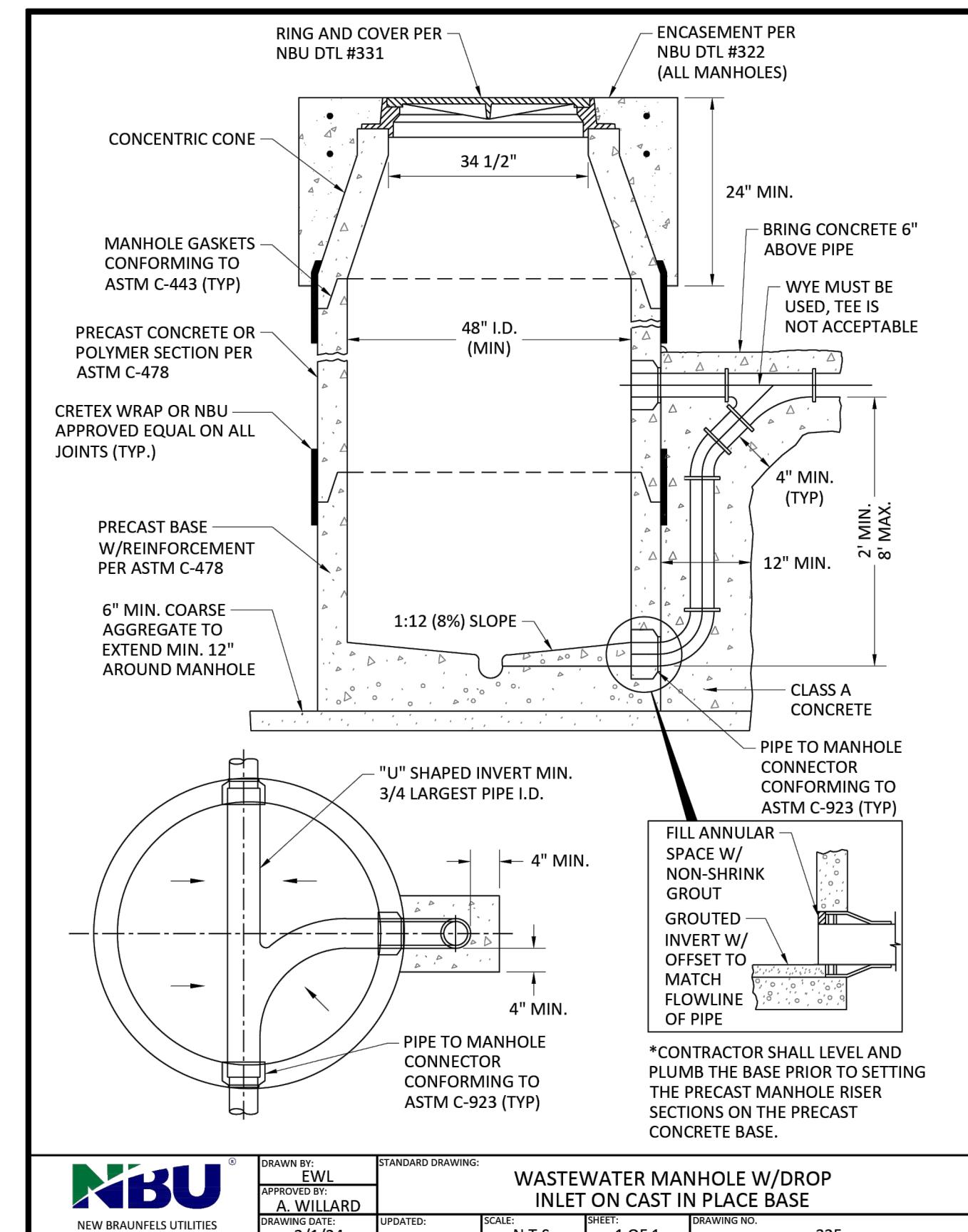
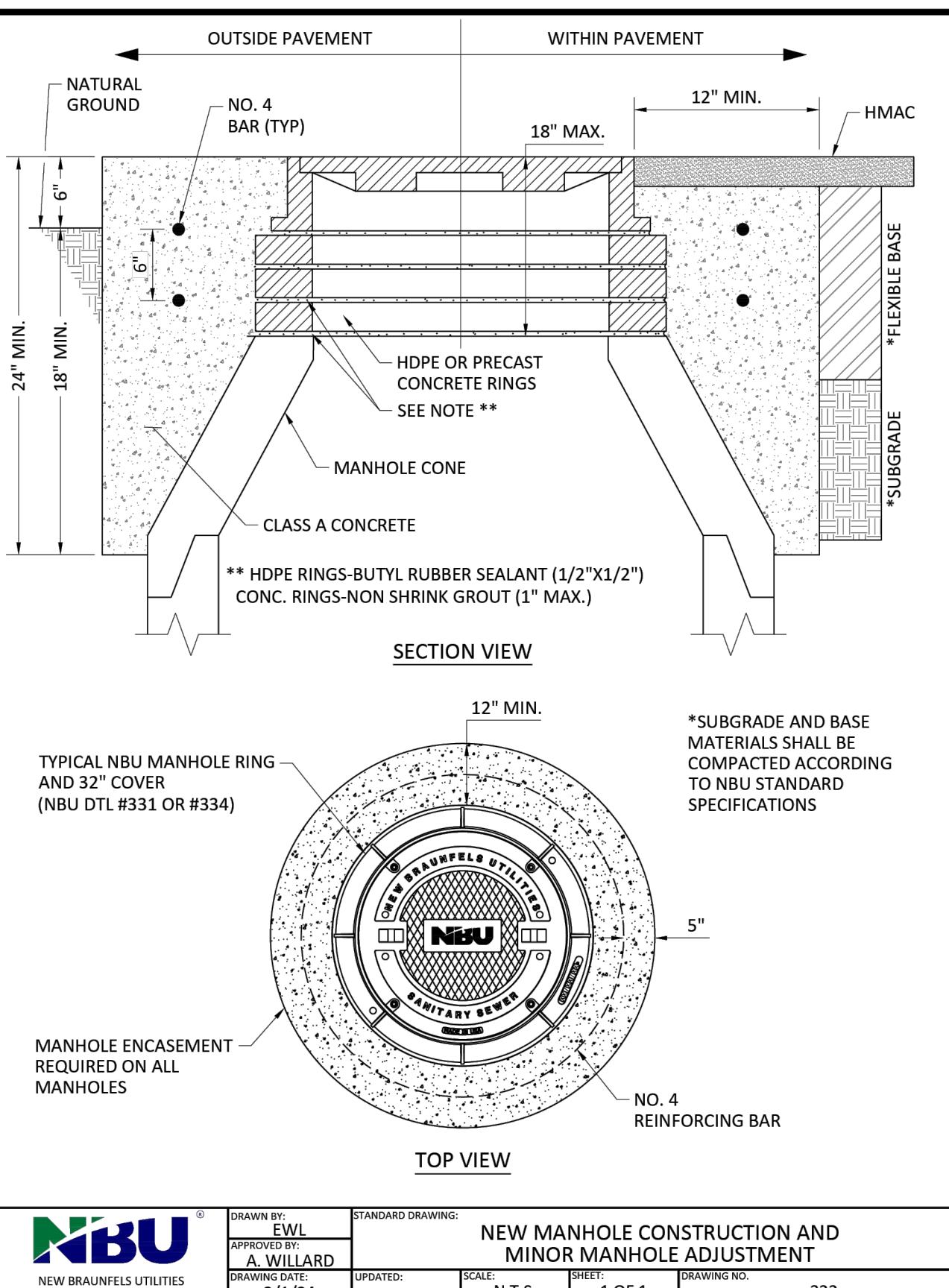
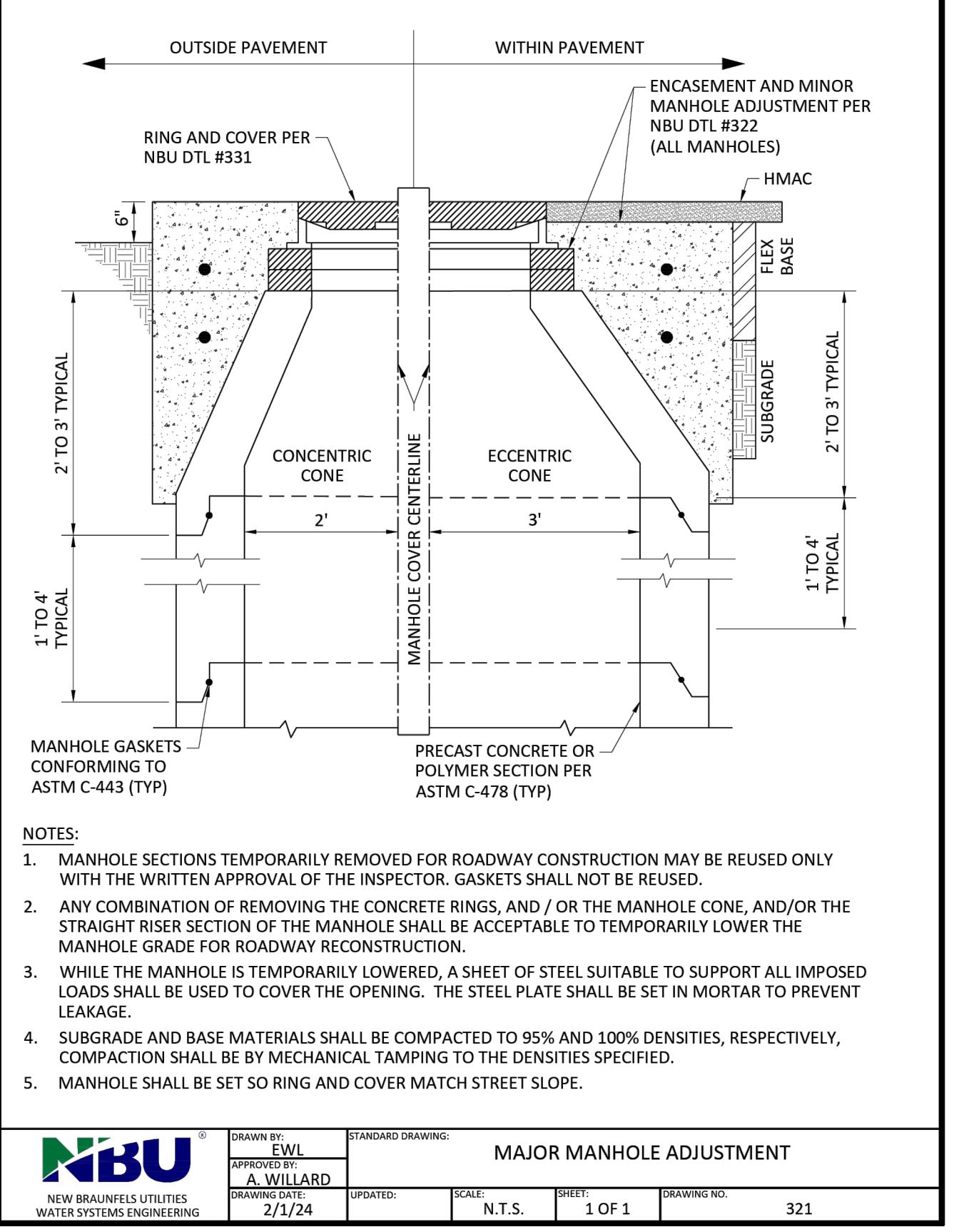
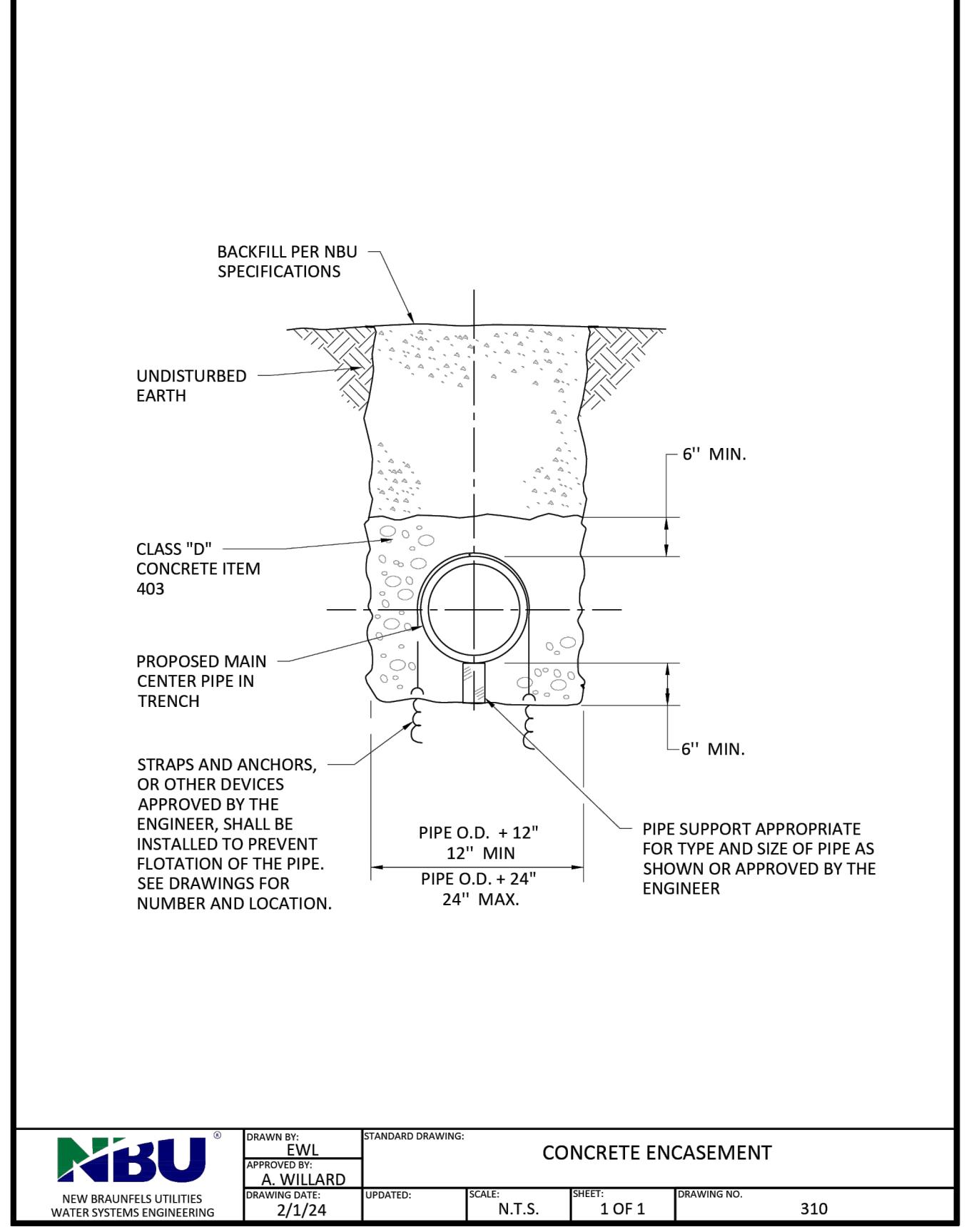
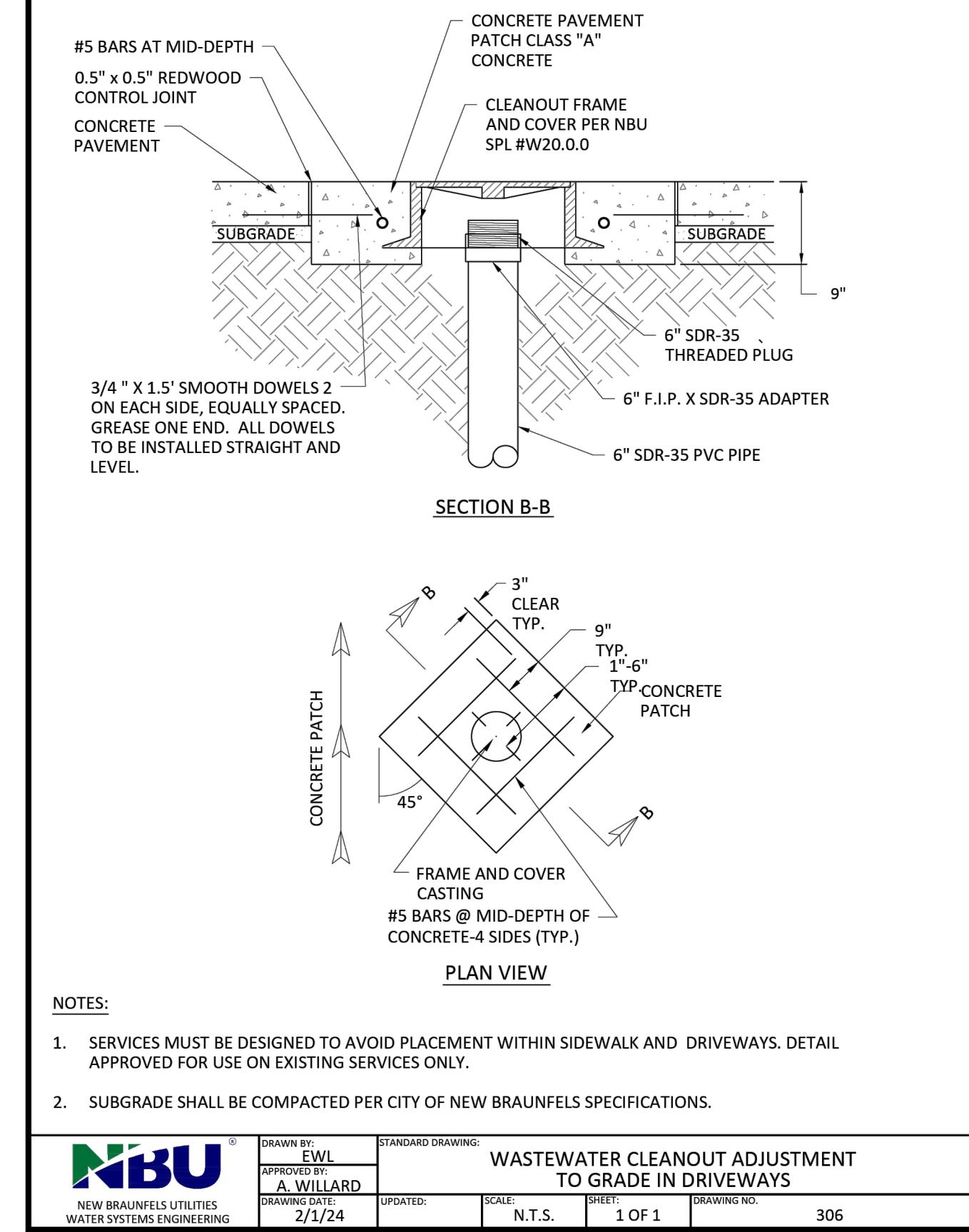
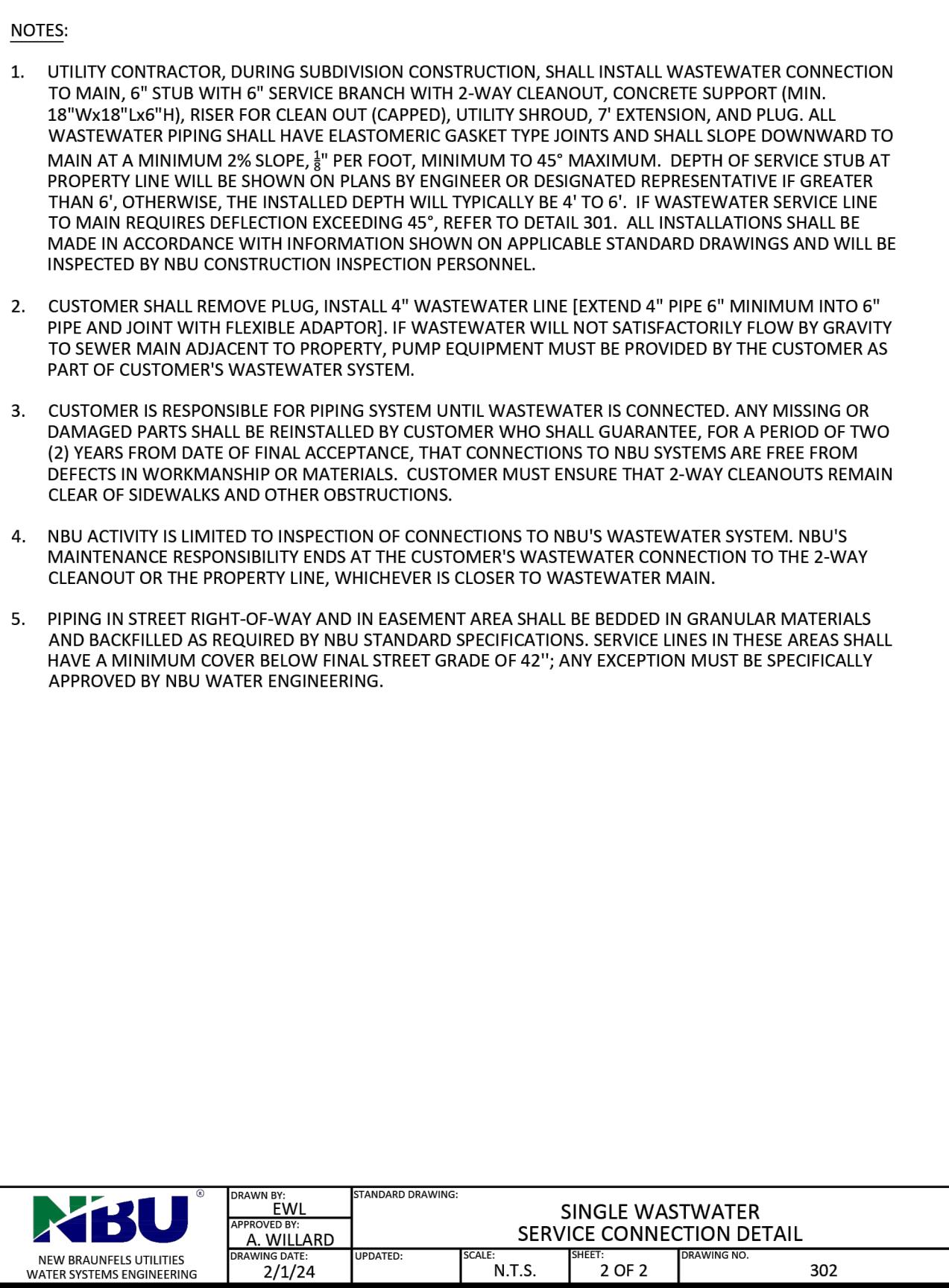
PROJECT NO: 8029-03

DESIGNED BY: AR

DRAWN BY: AR

CHECKED BY: DK

SHEET NO. 26 OF 28 SHEETS





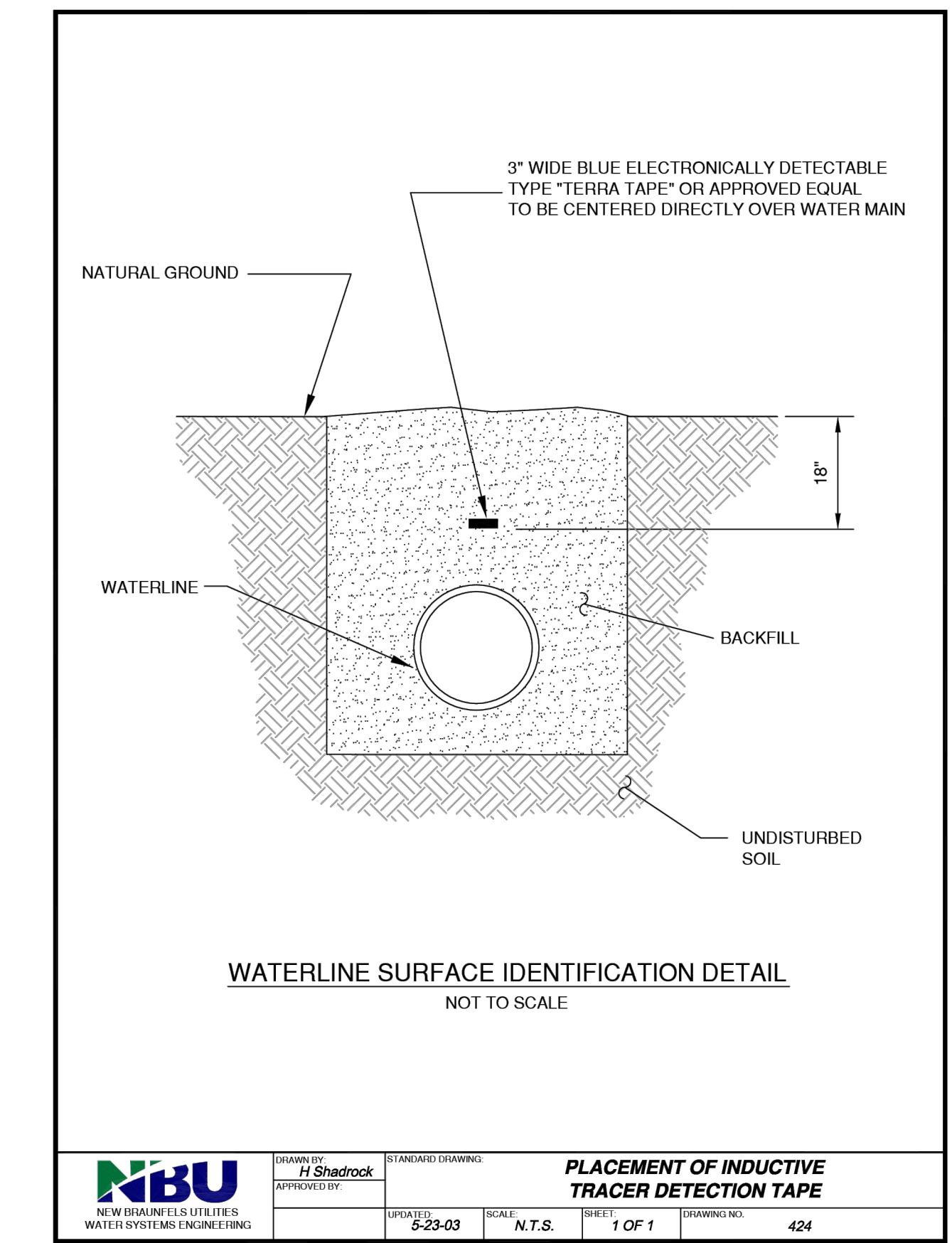
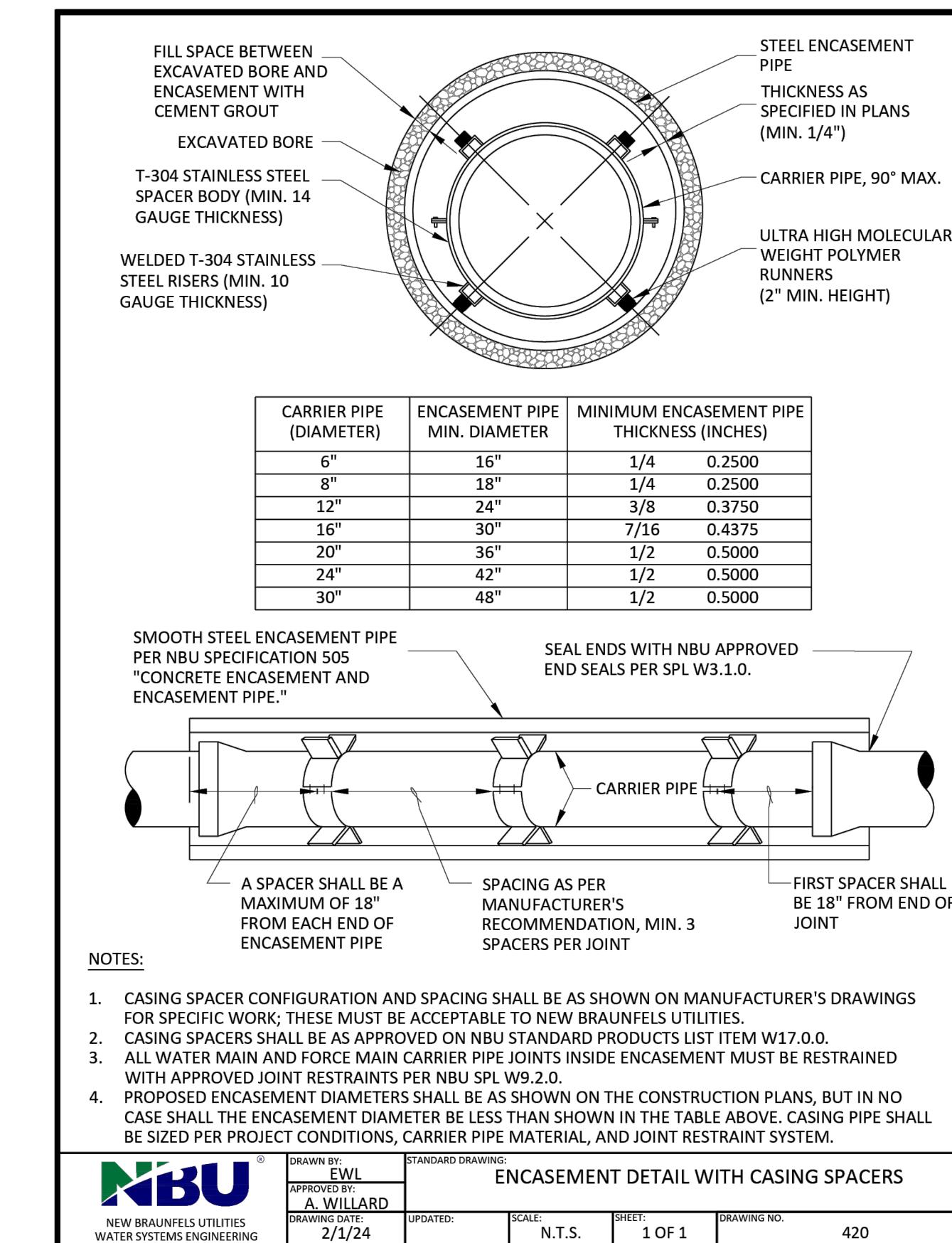
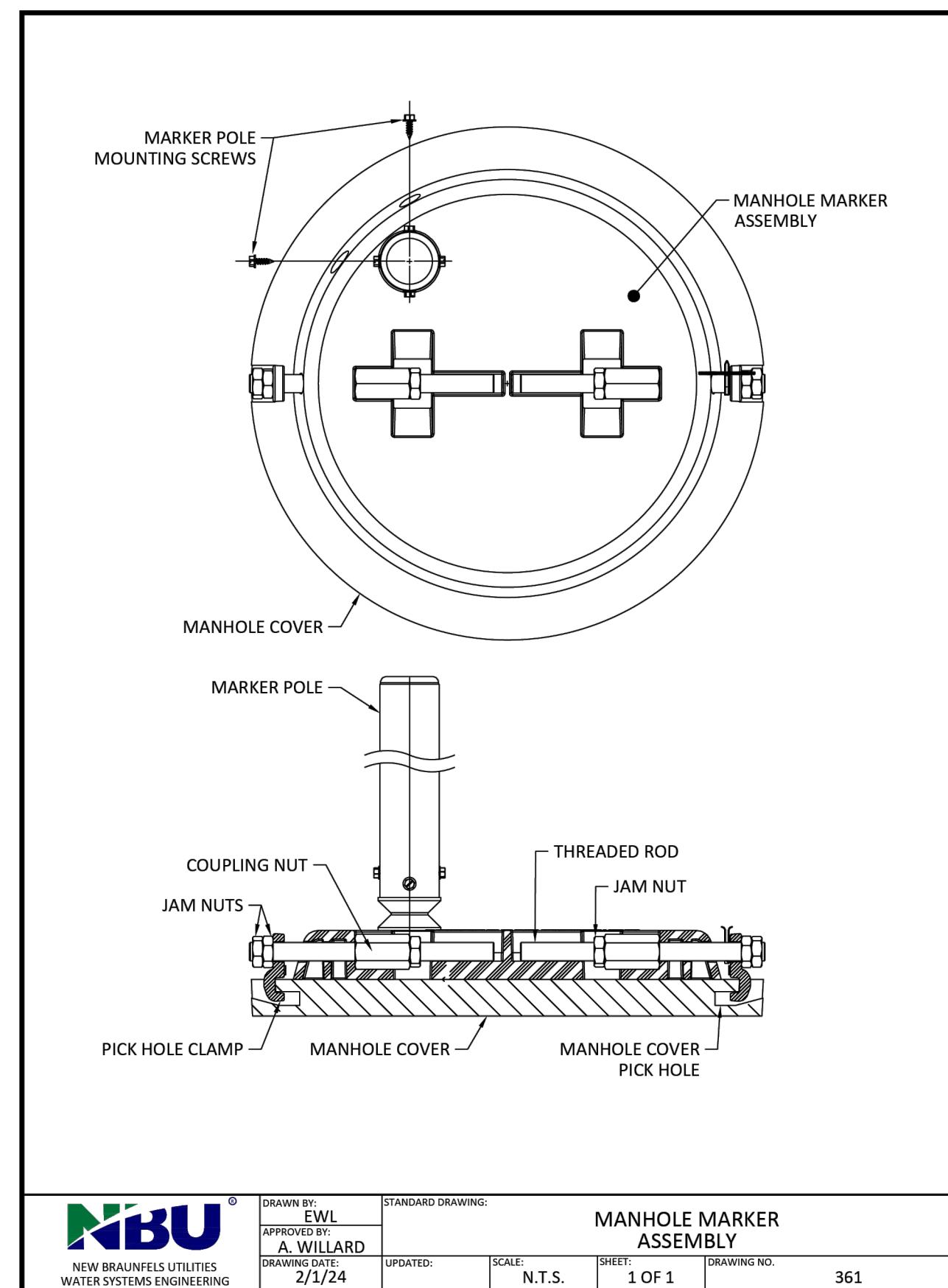
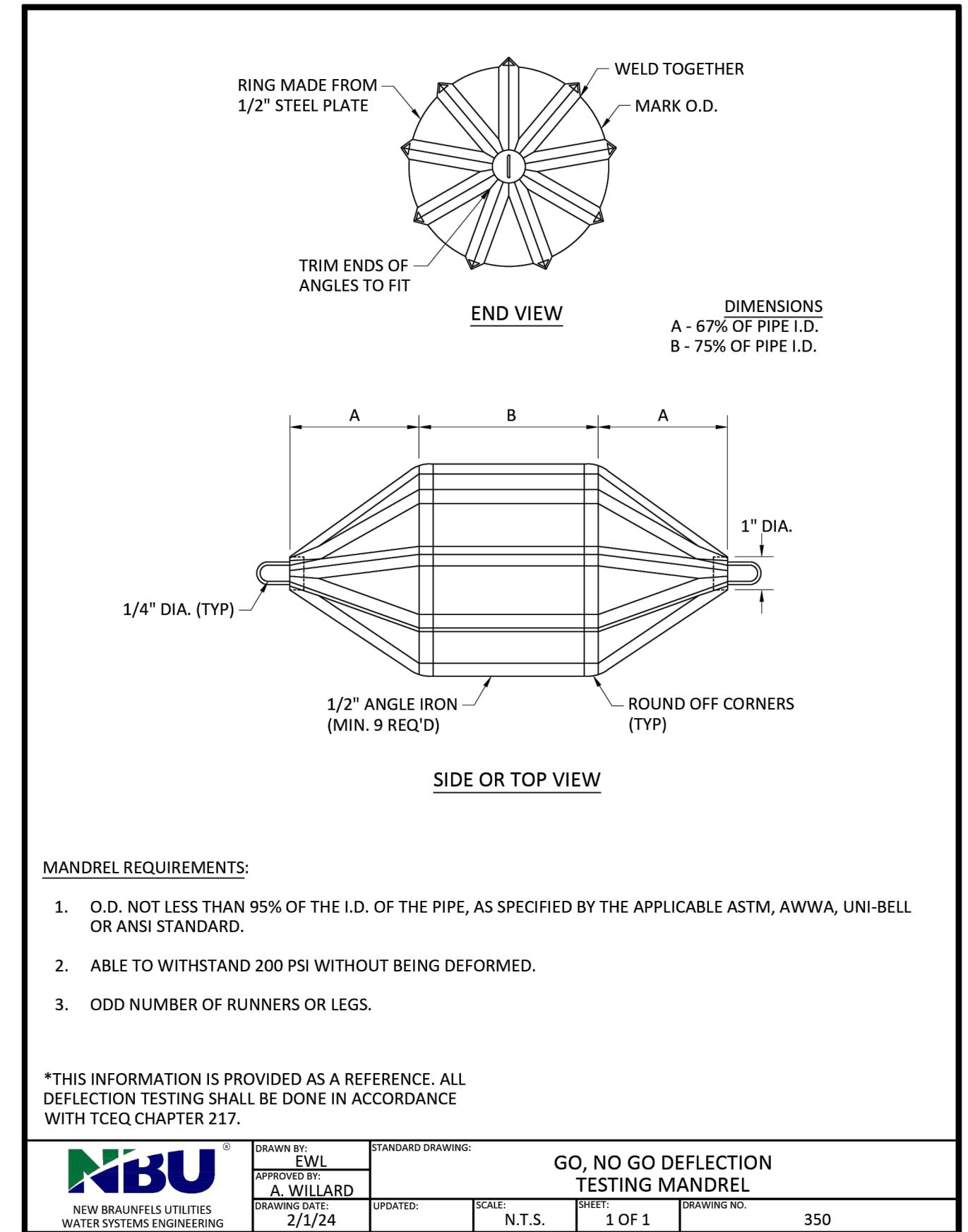
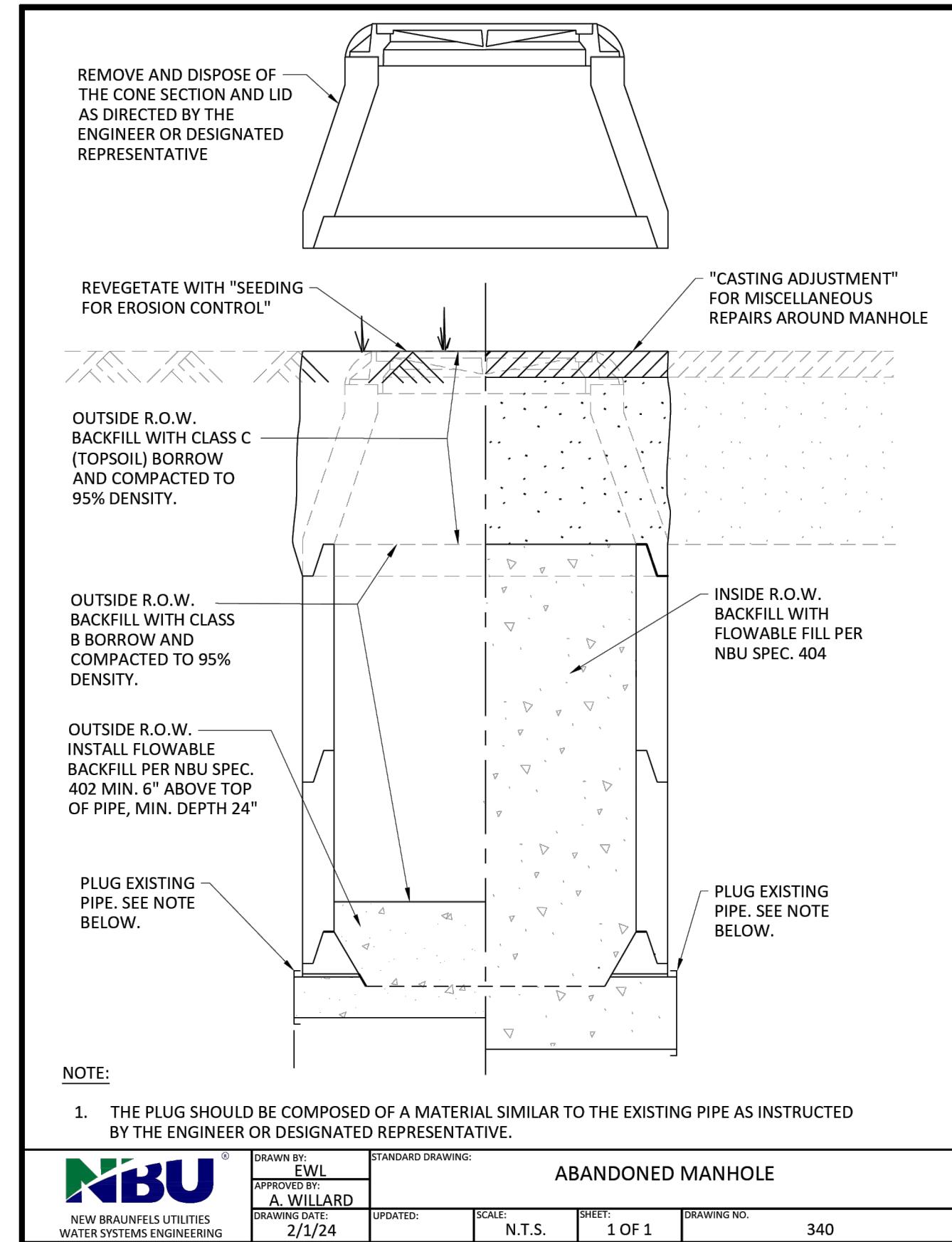
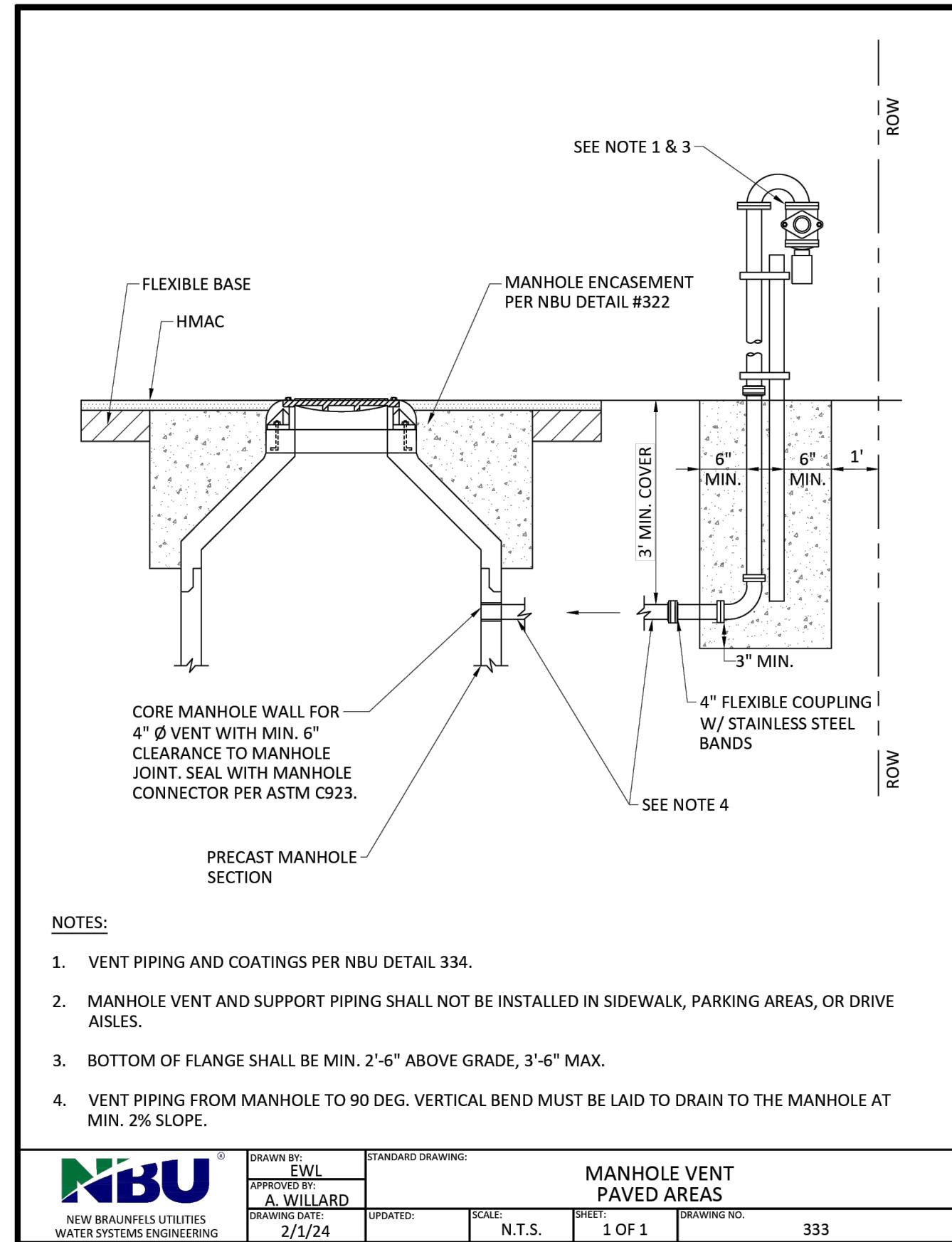
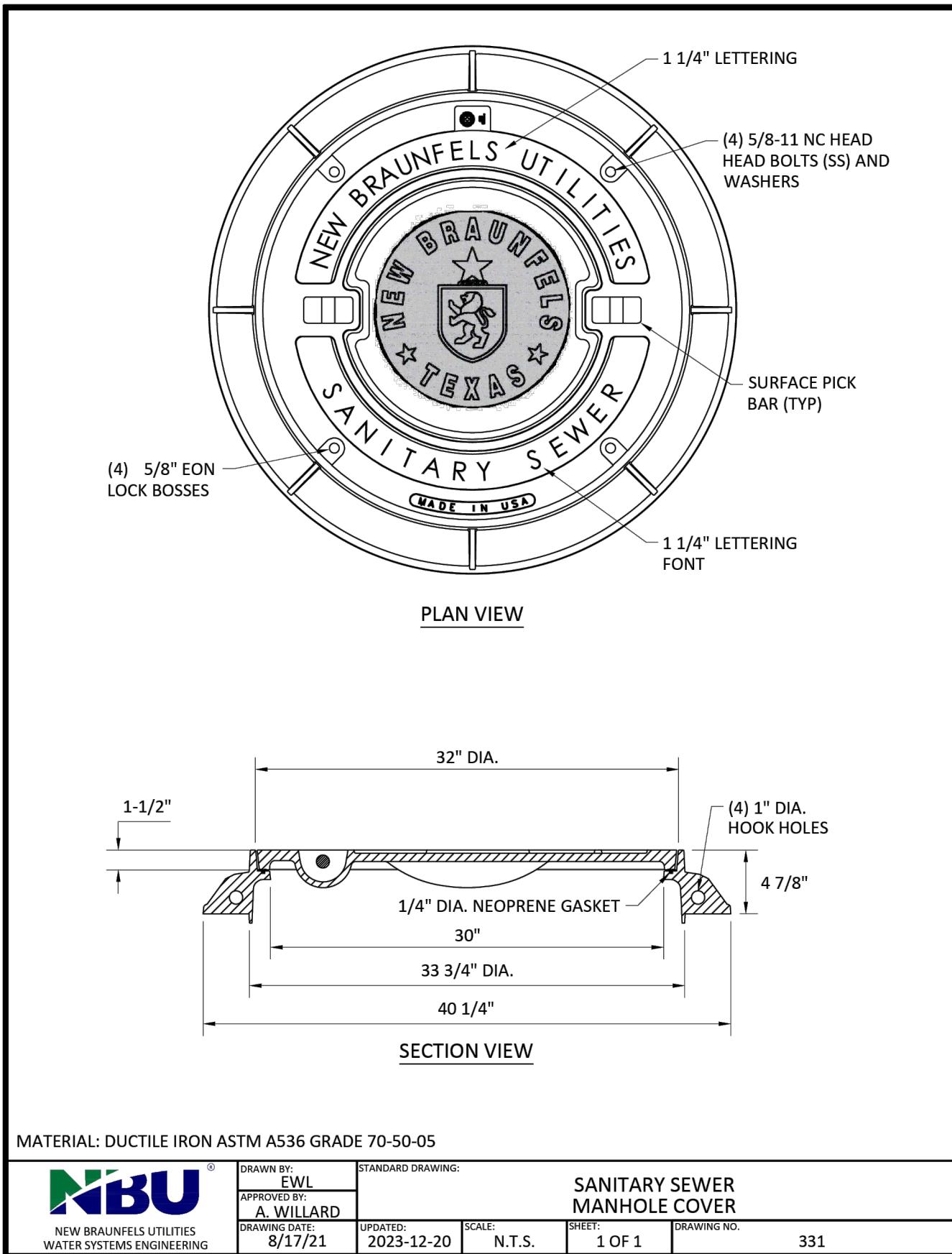
Texas Engineering Firm F-18712



GOODWIN-CUNRADS WATER AND SEWER  
CONFLICT RELOCATION

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BY: DUSTIN TAB; 27 DETAILS SHEET 4 OF 5 PLOTTED: 9/20/2024 11:34 AM

