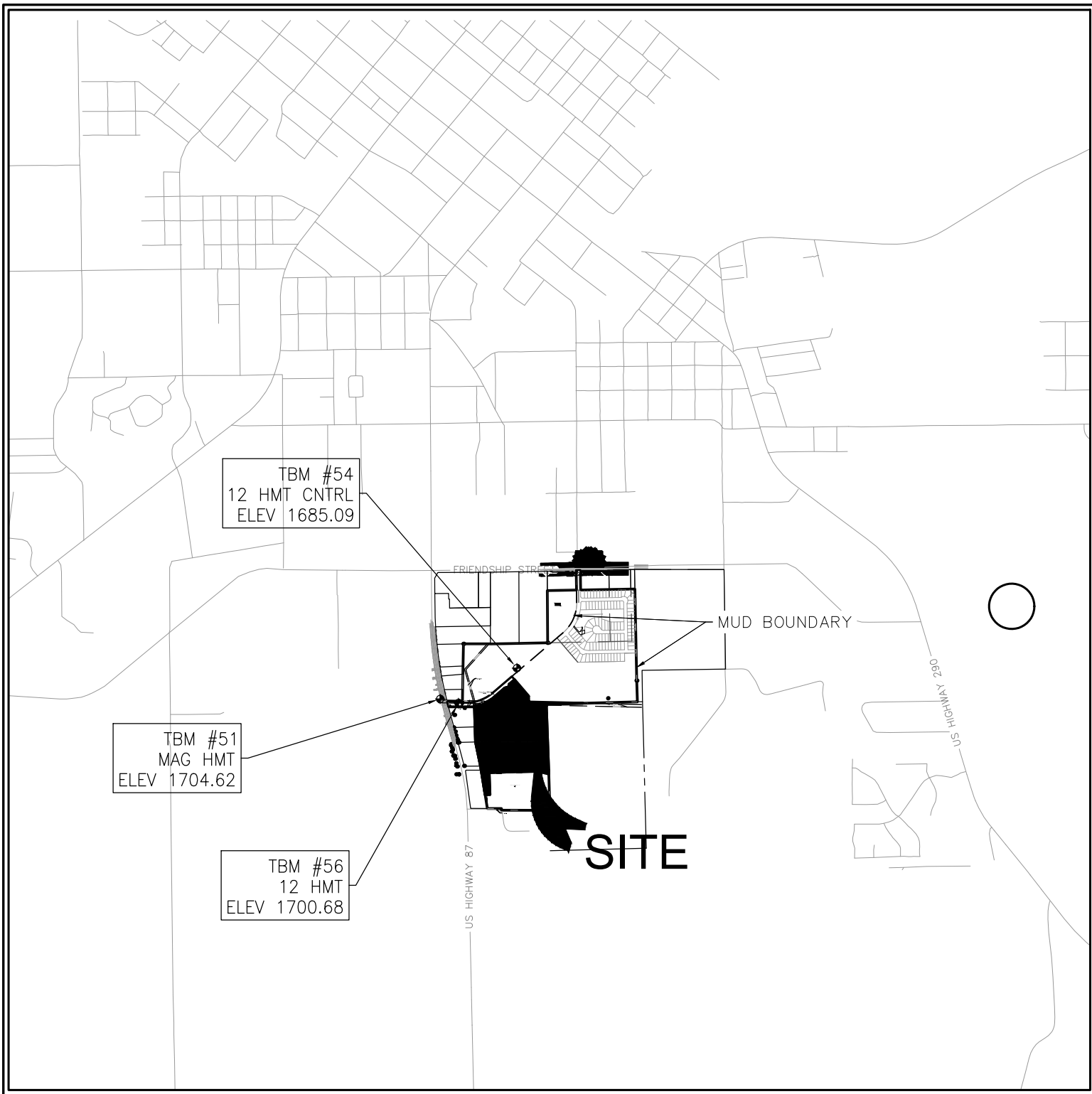


Drawing Name: N:_Projects\337 - Friendship Oaks Unit 3\Draw\337.065_COVER.dwg User: jpathack Nov 06, 2024 - 3:12pm



PROJECT LOCATION MAP

SCALE: N.T.S.

PROJECT BENCHMARK

SITE TBM #51
SET HMT MAG
N: 10058002.712
E: 2758189.998
ELEV: 1704.62

SITE TBM #56
SET HMT 12
N: 10057943.811
E: 2758458.655
ELEV: 1700.68

SITE TBM #54
SET HMT 12 CONTROL
N: 10058455.245
E: 2759244.727
ELEV: 1685.09

LEGAL DESCRIPTION

BEING A TOTAL OF 26.83 ACRES OF LAND LOCATED IN THE JOSE ESTEBAN BARGAS, SURVEY, A-53, GILLESPIE COUNTY, TEXAS, BEING PART OF A CALLED 111.44 ACRE TRACT, RECORDED IN DOCUMENT NO. 20193419 OF THE OFFICIAL PUBLIC RECORDS OF GILLESPIE COUNTY, TEXAS

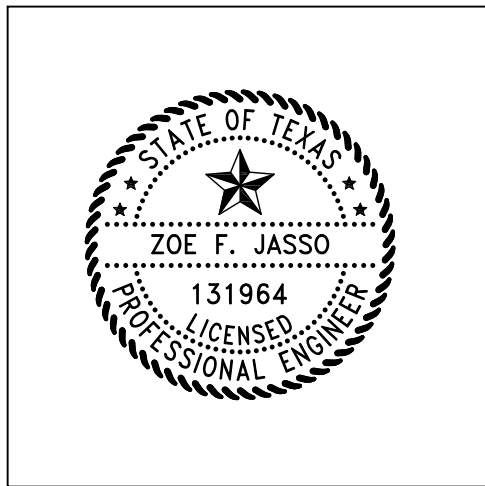
DISTRICT ENGINEER _____ DATE _____

DISCLAIMER:

THE DISTRICT'S REVIEW OF THE PLANS IS LIMITED TO ASPECTS CONCERNING WATER, WASTEWATER, DRAINAGE, AND ROADS. THIS REVIEW DOES NOT ENCOMPASS AN ASSESSMENT OF THE OVERALL ADEQUACY OF THE DESIGN FOR THE FACILITIES. IN APPROVING THESE PLANS, THE DISTRICT RELIES SOLELY ON THE ADEQUACY OF THE WORK PERFORMED BY THE DESIGN ENGINEER.

GENERAL NOTES:

- IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
- 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 FREDERICKSBURG STANDARD DETAILS.
- ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF FREDERICKSBURG MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER IN RECORD.
- PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE CITY OF FREDERICKSBURG TO SET A PRE-CONSTRUCTION MEETING. A 48-HOUR ADVANCED NOTIFICATION IS REQUIRED FOR ALL INSPECTION AND MEETING REQUESTS.
 - ALL INSPECTIONS ARE TO BE CALLED IN AT 830-990-2009 OR,
 - 4.2 4.3 E-MAILED AT E.WILLIAMSON@FBGTX.ORG.
- 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 THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
- DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE OFFSITE IMPACT OF CONSTRUCTION MUST BE COMPLETED AND IN PLACE PRIOR TO ADDING IMPERVIOUS COVER TO THE SITE.
- NO PORTION OF THE SUBDIVISION IS LOCATED WITHIN ANY SPECIAL FLOOD HAZARD AREA (100 YR. FLOOD), AS DEFINED BY THE GILLESPIE COUNTY, TEXAS, FIRM PANEL NUMBER 48171C0288C EFFECTIVE DATE OCTOBER, 19, 2001, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
- THIS PROJECT IS NOT LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE, TRANSITION OR CONTRIBUTING ZONE.
- GAS UTILITIES ARE NOT INCLUDED IN THE CIVIL CONSTRUCTION PLANS. FINAL GAS UTILITY DESIGN SHALL BE APPROVED BY THE CITY FOR ANY WORK WITHIN PUBLIC RIGHT-OF-WAY, IF APPLICABLE.
- THE ENGINEER OF RECORD ACKNOWLEDGES THAT ALL PROPOSED WATER AND WASTEWATER IMPROVEMENTS MUST COMPLY WITH TCEQ AND THE CITY OF FREDERICKSBURG WATER CONNECTION POLICY, SOUND ENGINEERING JUDGEMENT AND ANY OTHER GOVERNING ENTITY ORDINANCES OR CODES.



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.

Zoe F. Jasso 11/07/24
Zoe F. Jasso
P.E. Registration No. 131964

PREPARED BY:



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NEW BRAUNFELS, TX 78130
HMTNB.COM
P(830)625-8555*F(830)625-8556
TBPELS FIRM F-10961
TBPELS FIRM 1053600

NOTE TO CONTRACTOR:

BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.

THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT EACH OF THE INDIVIDUAL UTILITIES FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL UTILITY CROSSINGS PRIOR TO BEGINNING ANY CONSTRUCTION.

ANY QUANTITIES PROVIDED BY HMT OR OWNER ON THE PLANS, OPINION OF PROBABLE COST, BID SUMMARIES, ETC. ARE FOR CURSORY USE ONLY. CONTRACTOR IS RESPONSIBLE FOR BIDDING SIGNED AND SEALED CONSTRUCTION PLANS. IF A DISCREPANCY EXISTS, CONTRACTOR SHALL CONTACT ENGINEER IMMEDIATELY.

CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE LOCATION AND ELEVATION OF ALL DOWNSTREAM CONNECTION POINTS PRIOR TO CONSTRUCTION. IF A DISCREPANCY EXISTS, CONTRACTOR SHALL CONTACT ENGINEER IMMEDIATELY.

CONTRACTOR SHALL INSTALL ALL GRAVITY SEWER, GRAVITY STORM SEWER, CURBS AND PAVEMENT FROM THE MOST DOWNSTREAM POINT OF CONNECTION. IF IMPROVEMENTS ARE CONSTRUCTED FROM UPSTREAM TO DOWNSTREAM, THEN THE CONTRACTOR WILL TAKE FULL RISK AND LIABILITY OF ANY ISSUES THAT MIGHT ARISE FROM FLOWLINE ELEVATION DISCREPANCIES, UTILITY CONFLICTS, ETC.

CONTRACTOR IS RESPONSIBLE FOR THE STOCKPILING OF ANY EXCESS DIRT. ALL BIDS FROM CONTRACTOR SHOULD ACCOUNT FOR THE REMOVAL AND PLACEMENT OF ALL EARTHWORK TO INCLUDE STOCKPILING, EXPORT, IMPORT, ETC. IF A LOCATION OF PLACEMENT OF EXCESS DIRT IS NOT SHOWN ON THE PLANS, THEN CONTRACTOR SHALL CONTACT ENGINEER IMMEDIATELY TO DETERMINE THE MOST SUITABLE STOCKPILE LOCATION.

FRIENDSHIP OAKS UNIT 3 FREDERICKSBURG, TEXAS CIVIL SITE CONSTRUCTION PLANS GILLESPIE COUNTY MUD 1 LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD 100 NE LOOP, SUITE 1155 SAN ANTONIO, TEXAS 78216

REQUIRED PERMITS	NUMBER
1. CITY OF FREDERICKSBURG	#
2. CENTRAL TEXAS ELECTRIC COOPERATIVE	#

Sheet List Table	
Sheet Number	Sheet Title
C0.01	COVER SHEET
C0.02	GENERAL NOTES
C0.03	PLAT (1 OF 2)
C0.04	PLAT (2 OF 2)
C1.01	EROSION & SEDIMENT CONTROL & DEMOLITION PLAN
C1.02	EROSION DETAILS (1 OF 2)
C1.03	EROSION DETAILS (2 OF 2)
C2.01	EXISTING DRAINAGE AREA MAP
C2.02	PROPOSED DRAINAGE AREA MAP
C2.03	ULTIMATE DRAINAGE AREA MAP
C3.01	GRADING PLAN
C3.02	GRADING DETAILS
C4.01	HADLEYS STREET PLAN & PROFILE
C4.02	JOSHUA COVE PLAN & PROFILE
C4.03	GABRIELS RUN PLAN & PROFILE
C4.04	IVERSON WAY PLAN & PROFILE
C4.05	KELSEY CROSSING PLAN & PROFILE
C4.06	FRIENDSHIP LANE PLAN & PROFILE (1 OF 2)
C4.07	FRIENDSHIP LANE PLAN & PROFILE (2 OF 2)
C4.08	SIGNAGE & LIGHTING PLAN
C4.09	FRIENDSHIP LANE STRIPING PLAN (1 OF 2)
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C4.11	STREET DETAILS (1 OF 3)
C4.12	STREET DETAILS (2 OF 3)
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C5.01	OVERALL STORM PLAN
C5.02	STORM DETENTION POND B
C5.03	STORM CHANNEL 1 PLAN & PROFILE
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C7.04	WASTEWATER LN C PLAN & PROFILE
C7.05	WASTEWATER LN D PLAN & PROFILE
C7.06	WASTEWATER LN E PLAN & PROFILE
C7.07	WASTEWATER LN I PLAN & PROFILE
C7.08	WASTEWATER LN F & G PLAN AND PROFILE
C7.09	WASTEWATER DETAILS (1 OF 2)
C7.10	WASTEWATER DETAILS (2 OF 2)
C8.0	OVERALL UTILITY PLAN

FRIENDSHIP OAKS, UNIT 3
CIVIL SITE CONSTRUCTION PLANS

HMT # 337.065

TCEQ WATER DISTRIBUTION SYSTEM
GENERAL CONSTRUCTION NOTES

1.

This water distribution system must be constructed in accordance with the current Texas Commission on Environmental Quality (TCEQ) Rules and Regulations for Public Water Systems 30 Texas Administrative Code (TAC) Chapter 290 Subchapter D. When conflicts are noted with local standards, the more stringent requirement shall be applied. At a minimum, construction for public water systems must always meet TCEQ's "Rules and Regulations for Public Water Systems."
2.

All newly installed pipes and related products must conform to American National Standards Institute (ANSI)/NSF International Standard 61 and must be certified by an organization accredited by ANSI [§290.44(a)(1)].
3.

Plastic pipe for use in public water systems must bear the NSF International Seal of Approval (NSF-pw) and have an ASTM design pressure rating of at least 150 psi or a standard dimension ratio of 26 or less [§290.44(a)(2)].
4.

No pipe which has been used for any purpose other than the conveyance of drinking water shall be accepted or relocated for use in any public drinking water supply [§290.44(a)(3)].
5.

All water line crossings of wastewater mains shall be perpendicular [§290.44(e)(4)(B)].
6.

Water transmission and distribution lines shall be installed in accordance with the manufacturer's instructions. However, the top of the 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)].
7.

The maximum allowable lead content of pipes, pipe fittings, plumbing fittings, and fixtures is 0.25 percent [§290.44(b)].
8.

The contractor shall install appropriate air release devices with vent openings to the atmosphere covered with 16-mesh or finer, corrosion resistant screening material or an acceptable equivalent [§290.44(d)(1)].
9.

The contractor shall not place the pipe in water or where it can be flooded with water or sewage during its storage or installation [§290.44(f)(1)].
10.

When waterlines are laid under any flowing or intermittent stream or semi-permanent body of water the waterline shall be installed in a separate watertight pipe encasement. Valves must be provided on each side of the crossing with facilities to allow the underwater portion of the system to be isolated and tested [§290.44(f)(2)].

11.

Pursuant to 30 TAC §290.44(a)(5), the hydrostatic leakage rate shall not exceed the amount allowed or recommended by the most current AWWA formulas for PVC pipe, cast iron and ductile iron pipe. Include the formulas in the notes on the plans.

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

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

Where:

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

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

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

Where:

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

12.

The contractor shall maintain a minimum separation distance in all directions of nine feet between the proposed waterline and wastewater collection facilities including manholes. If this distance cannot be maintained, the contractor must immediately notify the project engineer for further direction. Separation distances, installation methods, and materials utilized must meet §290.44(e)(1)-(4).
13.

The separation distance from a potable waterline to a wastewater main or lateral manhole or cleanout shall be a minimum of nine feet. Where the nine-foot separation distance cannot be achieved, the potable waterline shall be encased in a joint of at least 150 psi pressure class pipe at least 18 feet long and two nominal sizes larger than the new conveyance. The space around the carrier pipe shall be supported at five-foot intervals with spacers or be filled to the springline with washed sand. The encasement pipe shall be centered on the crossing and both ends sealed with cement grout or manufactured sealant [§290.44(e)(5)].
14.

Fire hydrants shall not be installed within nine feet vertically or horizontally of any wastewater line, wastewater lateral, or wastewater service line regardless of construction [§290.44(e)(6)].
15.

Suction mains to pumping equipment shall not cross wastewater mains, wastewater laterals, or wastewater service lines. Raw water supply lines shall not be installed within five feet of any tile or concrete wastewater main, wastewater lateral, or wastewater service line [§290.44(e)(7)].
16.

Waterlines shall not be installed closer than ten feet to septic tank drainfields [§290.44(e)(8)].
17.

The contractor shall disinfect the new waterlines in accordance with AWWA Standard C-651-14 or most recent, then flush and sample the lines before being placed into service. Samples shall be collected for microbiological analysis to check the effectiveness of the disinfection procedure which shall be repeated if contamination persists. A minimum of one sample for each 1,000 feet of completed waterline will be required or at the next available sampling point beyond 1,000 feet as designated by the design engineer [§290.44(f)(3)].
18.

Dechlorination of disinfecting water shall be in strict accordance with current AWWA Standard C655-09 or most recent.
- GENERAL NOTES
- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL COMPLY WITH:
- A.

CURRENT CITY OF FREDERICKSBURG CONSTRUCTION SPECIFICATIONS AND STANDARDS AS OF THE DATE OF THIS CONTRACT

B.

THE MOST CURRENT EDITION OF TEXAS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES".
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MOST CURRENT TEXAS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES." ALONG WITH CURRENT CITY OF FREDERICKSBURG AND GILLESPIE COUNTY SPECIFICATIONS. ANY DISCREPANCIES BETWEEN SPECIFICATIONS SHALL BE RESOLVED BY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- CONTRACTOR SHALL PROCURE ALL PERMITS AND LICENSES, PAY ALL CHARGES, FEES, AND TAXES AREA AND GIVE ALL NOTICES NECESSARY AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.
- ANY EXISTING OFF-SITE IMPROVEMENTS THAT ARE DAMAGED OR UNDERCUT BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE OWNER OF THE EXISTING IMPROVEMENT AT THE CONTRACTOR'S EXPENSE. (NO SEPARATE PAY ITEM)
- WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR CONSENT OF THE OWNER OR ENGINEER WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100YR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.
- BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE "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.
- CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. THE TERM "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH HORIZONTAL AND VERTICAL ALIGNMENT.
- WHEN MATCHING EXISTING PAVEMENTS, CURBS, DRIVES, AND WALKS, THEY SHALL BE SAW CUT FULL DEPTH AND REMOVED TO ALLOW FOR PROPOSED CONSTRUCTION. IF ANY EXISTING JOINT IS ENCOUNTERED, PRECAUTION SHALL BE TAKEN DURING REMOVAL OF CONCRETE SO AS NOT TO DAMAGE EXISTING DOWELS. ALL EXISTING DOWELS SHALL BE EXPOSED AND CLEANED.
- ITEM OF WORK DESIGNATED "BY OTHERS" SHALL NOT BE CONSIDERED PART OF THIS CONTRACT.
- ALL "COMPACTED SUBGRADE" SHALL CONSIST OF NATIVE MATERIAL SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES AND COMPACTED TO 95% DENSITY ACCORDING TO DENSITY TEST METHOD TEX-115E OR ACCORDING TO ASTM D-698 AND TESTED BY ASTM D-2922.
- ALL "FLEXIBLE BASE" SHALL BE TYPE "A", GRADE 4, ACCORDING TO TxDOT ITEM 247, COMPACTED TO 95% MODIFIED DENSITY AT A MOISTURE CONTENT BETWEEN -2 AND +3 OF OPTIMUM PERCENT MOISTURE ACCORDING TO ASTM D-1557 (MODIFIED PROCTOR) AND TESTED BY ASTM D-2922.
- ASPHALT PAVEMENT SHALL BE THE TYPE SPECIFIED ON THE PLANS AND ACCORDING TO TxDOT ITEM 340 "HOT MIX ASPHALT CONCRETE PAVEMENT".
- PRIME COAT USING MC-30 AT A RATE OF 0.2 GALLONS PER SQUARE YARD SHALL BE PLACED OVER PREPARED BASE AT LEAST ONE DAY PRIOR TO LAYING ASPHALTIC CONCRETE PAVEMENT. ANY NECESSARY TACK COAT SHALL BE MC-30 AT 0.05 GALLONS PER SQUARE YARD. IT IS REQUIRED THAT BOTH THE PRIME COAT AND THE TACK COAT BE APPLIED AT THE TEMPERATURE SPECIFIED UNDER TxDOT ITEM 300.3.
- CONCRETE SHALL BE CLASS "A" ACCORDING TO TxDOT ITEM 421 UNLESS OTHERWISE ON PLANS.
- REINFORCING STEEL SHALL BE FROM NEW BILLET AND SHALL CONFORM TO TxDOT ITEM 440. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS EXCEPT WHEN REFERRING TO CLEARANCE.
- ALL SAWED JOINTS SHALL BE SAWED WITHIN 24 HOURS OF POURING,
- ABSOLUTELY NO WELDING OF REINFORCING BARS OR TORCHING TO BEND REINFORCING BARS SHALL BE ALLOWED WITHOUT THE SPECIFIC APPROVAL OF THE ENGINEER.
- ORDINARY COMPACTION CONTROL IS REQUIRED ON THIS PROJECT.
- ALL ROLLING FOR COMPACTION OF ASPHALTIC CONCRETE PAVEMENT SHALL BE COMPLETED BEFORE THE MIXTURE TEMPERATURE DROPS BELOW 175 DEG. (F).
- ALL FILL MATERIAL SHALL BE SUBJECT TO THE ENGINEER'S APPROVAL.
- CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO THE NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER AND HIS EMPLOYEES, PARTNERS, OFFICES, DIRECTORS, OR CONSULTANTS, HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER, ENGINEER'S DIRECTORS, OFFICERS, EMPLOYEES, OR CONSULTANTS.
- ALL CMP (CORRUGATED METAL PIPE) USED ON THIS PROJECT SHALL HAVE A MANNING'S "N" VALUE OF 0.024., UNLESS OTHERWISE SHOWN ON PLANS.
- CONTRACTOR WILL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTING PER CURRENT CITY OF FREDERICKSBURG REQUIREMENTS. ALL TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. ENGINEER AND OWNER RESERVE THE RIGHT TO HAVE THE CONTRACTOR REMOVE AND REPLACE ANY MATERIAL THAT WAS NOT TESTED OR FAILED TESTING. ALL COST ASSOCIATED WITH THE REMOVAL, REPLACEMENT AND TESTING SHALL BE PAID BY THE CONTRACTOR.
- ALL PVC SLEEVES SHALL BE INSTALLED 3 FEET BELOW FINISHED GRADE AND ENDS SHALL BE MARKED SO THAT LOCATIONS OF SLEEVES CAN BE EASILY IDENTIFIED.
- PRE-CONSTRUCTION CONFERENCE IS REQUIRED, ENGINEER WILL ARRANGE SUCH CONFERENCE IN COORDINATION WITH CITY OF FREDERICKSBURG STREET INSPECTOR & FREDERICKSBURG UTILITIES INSPECTOR. NO CONSTRUCTION MAY BEGIN PRIOR TO THE PRE-CONSTRUCTION CONFERENCE.
- CONTRACTOR SHALL COORDINATE WITH DRY UTILITY INSTALLERS AND SHARED TRENCHING SHALL BE UTILIZED. CUTTING THE STREETS AFTER COMPLETION BY DRY UTILITIES SHALL NOT BE ACCEPTABLE.
- AS PER PLATTING ORDINANCE SECTION 118-38M.: WHEN ALL 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 DRAWINGS" PLANS, AND A DIGITAL COPY OF ALL PLANS (AUTOCAD 2000 MINIMUM) THE CITY ENGINEER SHALL ACCEPT SUCH IMPROVEMENTS FOR THE CITY OF FREDERICKSBURG, SUBJECT TO THE GUARANTY OF MATERIAL AND WORKMANSHIP PROVISIONS IN THIS SECTION.
- EROSION / SEDIMENTATION CONTROL
- AT A MINIMUM, THESE CONTROLS SHALL CONSIST OF ROCK BERMS AND/OR SILT FENCES CONSTRUCTED PARALLEL TO AND DOWN GRADIENT FROM THE TRENCHES. THE ROCK BERM OR SILT FENCES SHALL BE INSTALLED IN A MANNER SUCH THAT ANY RAINFALL RUNOFF SHALL BE FILTERED. HAY BALES SHALL NOT BE USED FOR TEMPORARY EROSION AND SEDIMENTATION CONTROL.
- ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE MAINTAINED DURING CONSTRUCTION BY THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CONTROLS WHEN VEGETATION IS ESTABLISHED AND THE CONSTRUCTION AREA IS STABILIZED {31 TAC 313.5 (C)(12)}. ADDITIONAL PROTECTION MAY BE REQUIRED IF EXCESSIVE SOLIDS ARE BEING DISCHARGED FROM THE SITE.
- ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE OWNER/ENGINEER.
- PLACEMENT OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION PLANS. ACTUAL LOCATIONS MAY VARY SLIGHTLY FROM THE PLANS, BUT WILL BE VERIFIED BY THE ENGINEER/INSPECTOR IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY SIGNIFICANT RAINFALL TO INSURE DISTURBANCE OF THE STRUCTURES HAS NOT OCCURRED. SEDIMENT DEPOSITED AFTER A RAINFALL SHALL BE REMOVED FROM THE SITE OR PLACED IN AN ENGINEER APPROVED DESIGNATED DISPOSAL AREA.
- CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT NO EROSION CONTROL MEASURES BLOCK THE DRAINAGE SYSTEM FROM WORKING AS DESIGNED.
- CITY OF FREDERICKSBURG GENERAL NOTES
010. DEFINITIONS
- AGREEMENT- THE WRITTEN INSTRUMENT, EXECUTED BY OWNER AND CONTRACTOR, THAT SETS FORTH THE CONTRACT PRICE AND CONTRACT TIME, IDENTIFIES THE PARTIES AND THE ENGINEER, AND DESIGNATES THE SPECIFIC ITEMS THAT ARE CONTRACTS DOCUMENTS.
- AUTHORITY- THE CITY, COUNTY, AND/ OR UTILITY OPERATOR HAVING AUTHORITY TO REVIEW AND APPROVE, OR RELEASE, PLANS OR PERMITS RELATED TO WORK.
- CONTRACT - THE ENTIRE AND INTEGRATED WRITTEN CONTRACT BETWEEN OWNER AND CONTRACTOR CONCERNING THE WORK.
- CONTRACTOR- THE INDIVIDUAL, PARTNERSHIP, CORPORATION, JOINT VENTURE, OR OTHER LEGAL ENTITY HAVING A CONTRACT WITH THE OWNER TO PERFORM THE WORK. IN THE CASE OF WORK BEING DONE UNDER PERMIT ISSUED BY THE OWNER, THE PERMITTEE SHALL BE CONSTRUED TO BE THE CONTRACTOR. THE TERM "PRIME CONTRACTOR" SHALL MEAN CONTRACTOR.
- CONTRACT DOCUMENTS- INCLUDES BUT IS NOT LIMITED TO CONTRACT ADDENDA (WHICH PERTAIN TO THE CONTRACT DOCUMENTS), SOLICITATION, ADVERTISEMENT OR INVITATION FOR BIDS OR REQUEST FOR PROPOSALS; INSTRUCTION TO BIDDERS; SUBMITTED BID/PROPOSAL INCLUDING DOCUMENTATION ACCOMPANYING THE BID/PROPOSAL AND ANY POST-BID DOCUMENTATION WHEN ATTACHED AS AN EXHIBIT TO THE CONTRACT; BONDS; GENERAL AND SUPPLEMENTAL CONDITIONS; PERMITS FROM OTHER AGENCIES; SPECIAL PROVISIONS; PLANS; CHANGE DIRECTIVES AND CHANGE ORDERS; AND ALL MODIFICATIONS ISSUED AFTER THE EXECUTION OF THE CONTRACT.
- CONTRACTOR- THE INDIVIDUAL OR ENTITY WITH WHICH OWNER HAS CONTRACTED FOR PERFORMANCE OF THE WORK.
- CITY- THE CITY POSSESSING JURISDICTIONAL AUTHORITY FOR DEVELOPMENT AND / CONSTRUCTION PERMITTING.
- COUNTY- THE COUNTY POSSESSING JURISDICTIONAL AUTHORITY FOR DEVELOPMENT AND/ CONSTRUCTION PERMITTING. DRAWINGS- THOSE PORTIONS OF THE CONTRACT DOCUMENTS WHICH ARE GRAPHIC REPRESENTATIONS OF THE SCOPE, EXTENT AND CHARACTER OF THE WORK TO BE FURNISHED AND PERFORMED BY CONTRACTOR AND WHICH HAVE BEEN APPROVED BY OWNER. DRAWINGS MAY INCLUDE STANDARD PLANS, ELEVATIONS, SECTIONS, DETAILS, SCHEDULES AND DIAGRAM. SHOP DRAWINGS ARE NOT DRAWINGS AS SO DEFINED.
- ENGINEER- THE ENGINEER OF RECORD OR HIS DULY AUTHORIZED REPRESENTATIVE.
- OWNER- THE INDIVIDUAL OR ENTITY WITH WHICH CONTRACTOR HAS CONTRACTED REGARDING THE WORK, AND WHICH HAS AGREED TO PAY CONTRACTOR FOR THE PERFORMANCE OF THE WORK, PURSUANT TO THE TERMS OF THE CONTRACT.
- PLANS- THE DRAWINGS, PROFILES, CROSS SECTIONS, WORKING DRAWINGS, AND SUPPLEMENTAL DRAWINGS, OR REPRODUCTIONS THEREOF, APPROVED BY THE ENGINEER, WHICH SHOW THE LOCATION; CHARACTER, DIMENSIONS OR DETAILS OF THE WORK.
- PROJECT- THE TOTAL UNDERTAKING TO BE ACCOMPLISHED FOR OWNER BY ENGINEERS, CONTRACTORS, AND OTHERS, INCLUDING PLANNING, STUDY, DESIGN, CONSTRUCTION, TESTING, COMMISSIONING, AND START-UP, AND OF WHICH THE WORK TO BE PERFORMED UNDER THE CONTRACT DOCUMENTS IS A PART.
- SHOP DRAWINGS- ALL DRAWINGS, DIAGRAMS, ILLUSTRATIONS, SCHEDULES AND OTHER DATA OR INFORMATION WHICH ARE SPECIFICALLY PREPARED OR ASSEMBLED BY OR FOR CONTRACTOR AND SUBMITTED BY CONTRACTOR AS REQUIRED BY THE CONTRACT DOCUMENTS.
- SPECIFICATIONS- THE PART OF THE CONTRACT THAT CONSISTS OF WRITTEN REQUIREMENTS FOR MATERIALS, EQUIPMENT, SYSTEMS, STANDARDS, AND WORKMANSHIP AS APPLIED TO THE WORK, AND CERTAIN ADMINISTRATIVE REQUIREMENTS AND PROCEDURAL MATTERS APPLICABLE TO THE WORK.
- PLANS- INSTRUCTIONS, DRAWINGS, DETAILS, AND SPECIFICATIONS.
- SITE- LANDS OR AREAS INDICATED IN THE CONTRACT DOCUMENTS AS BEING FURNISHED BY OWNER UPON WHICH THE WORK IS TO BE PERFORMED, INCLUDING RIGHTS-OF-WAY AND EASEMENTS, AND SUCH OTHER LANDS OR AREAS FURNISHED BY OWNER WHICH ARE DESIGNATED FOR THE USE OF CONTRACTOR.
- SUBCONTRACTOR- AN INDIVIDUAL OR ENTITY HAVING A DIRECT CONTRACT WITH CONTRACTOR OR WITH ANY OTHER SUBCONTRACTOR FOR THE PERFORMANCE OF A PART OF THE WORK.
- SUBMITTAL - A WRITTEN OR GRAPHIC DOCUMENT, PREPARED BY OR FOR CONTRACTOR, WHICH THE CONTRACT DOCUMENTS REQUIRE CONTRACTOR TO SUBMIT TO ENGINEER, OR THAT IS INDICATED AS A SUBMITTAL IN THE SCHEDULE OF SUBMITTALS ACCEPTED BY ENGINEER. SUBMITTALS MAY INCLUDE SHOP DRAWINGS AND SAMPLES; SCHEDULES; PRODUCT DATA; OWNER-DELEGATED DESIGNS; SUSTAINABLE DESIGN INFORMATION; INFORMATION ON SPECIAL PROCEDURES; TESTING PLANS; RESULTS OF TESTS AND EVALUATIONS, SOURCE QUALITY-CONTROL TESTING AND INSPECTIONS, AND FIELD OR SITE QUALITY-CONTROL TESTING AND INSPECTIONS; WARRANTIES AND CERTIFICATIONS; SUPPLIERS' INSTRUCTIONS AND REPORTS; RECORDS OF DELIVERY OF SPARE PARTS AND TOOLS; OPERATIONS AND MAINTENANCE DATA; PROJECT PHOTOGRAPHIC DOCUMENTATION; RECORD DOCUMENTS; AND OTHER SUCH DOCUMENTS REQUIRED BY THE CONTRACT DOCUMENTS. SUBMITTALS, WHETHER OR NOT APPROVED OR ACCEPTED BY ENGINEER, ARE NOT CONTRACT DOCUMENTS. CHANGE PROPOSALS, CHANGE ORDERS, CLAIMS, NOTICES, APPLICATIONS FOR PAYMENT, AND REQUESTS FOR INTERPRETATION OR CLARIFICATION ARE NOT SUBMITTALS.
- UNDERGROUND FACILITIES- ALL ACTIVE OR NOT-IN-SERVICE UNDERGROUND LINES, PIPELINES, CONDUITS, DUCTS, ENCASEMENTS, CABLES, WIRES, MANHOLES, VAULTS, TANKS, TUNNELS, OR OTHER SUCH FACILITIES OR SYSTEMS AT THE SITE, INCLUDING BUT NOT LIMITED TO THOSE FACILITIES OR SYSTEMS THAT PRODUCE, TRANSMIT, DISTRIBUTE, OR CONVEY TELEPHONE OR OTHER COMMUNICATIONS, CABLE TELEVISION, FIBER OPTIC TRANSMISSIONS, POWER, ELECTRICITY, LIGHT, HEAT, GASES, OIL, CRUDE OIL PRODUCTS, LIQUID PETROLEUM PRODUCTS, WATER, STEAM, WASTE, WASTEWATER, STORM WATER, OTHER LIQUIDS IDS OR CHEMICALS, OR TRAFFIC OR OTHER CONTROL SYSTEMS. AN ABANDONED FACILITY OR SYSTEM IS NOT AN UNDERGROUND FACILITY.
- UTILITY OPERATOR- THE WATER, WASTEWATER, OR DRY-UTILITY OPERATOR PROVIDING UTILITY SERVICE TO THE PROJECT.
- WORK- THE ENTIRE CONSTRUCTION OR THE VARIOUS SEPARATELY IDENTIFIABLE PARTS THEREOF REQUIRED TO BE PROVIDED UNDER THE CONTRACT DOCUMENTS. WORK INCLUDES AND IS THE RESULT OF PERFORMING OR PROVIDING ALL LABOR, SERVICES, AND DOCUMENTATION NECESSARY TO PRODUCE SUCH CONSTRUCTION; FURNISHING, INSTALLING, AND INCORPORATING ALL MATERIALS AND EQUIPMENT INTO SUCH CONSTRUCTION, AND MAY INCLUDE RELATED SERVICES SUCH AS TESTING, START-UP, AND COMMISSIONING, ALL AS REQUIRED BY THE CONTRACT DOCUMENTS.
015. GENERAL
- 015.01 THE BIDDER/PROPOSER OR CONTRACTOR SHALL NOT TAKE ADVANTAGE OF ANY ERROR IN THE BIDDING OR CONTRACT DOCUMENTS. ANYTHING MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, SHALL BE LIKE EFFECT AS IF SHOWN ON OR MENTIONED IN BOTH. IN CASE OF ANY APPARENT DIFFERENCE BETWEEN THE DRAWINGS AND SPECIFICATIONS, OR ANY OTHER APPARENT ERROR WHICH THE BIDDER OR CONTRACTOR MAY DISCOVER, SAID BIDDER/PROPOSER OR CONTRACTOR SHALL REFER THE MATTER AT ONCE TO THE OWNER AS TO WHICH, IN ACCORDANCE WITH THE INTENT OF THE CONTRACT DOCUMENTS, SHALL GOVERN. THE OWNER SHALL HAVE THE RIGHT TO CORRECT THE ERROR. DISCOVERED THROUGH AN ADDENDUM TO THE SOLICITATION (IF THE BIDS/PROPOSALS HAVE NOT YET BEEN OPENED) 015.02 ANYTHING IN THE SPECIFICATIONS AND NOT ON THE DRAWINGS, OR ON THE DRAWINGS AND NOT IN THE SPECIFICATIONS, SHALL BE AS THOUGH SHOWN OR MENTIONED IN BOTH. WHILE IT IS BELIEVED THAT MUCH OF THE INFORMATION PERTAINING TO CONDITIONS WHICH MAY AFFECT THE COST OF THE WORK WILL BE SHOWN ON THE DRAWINGS OR INDICATED IN THE SPECIFICATIONS, THE OWNER DOES NOT WARRANT THE COMPLETENESS OR ACCURACY OF SUCH INFORMATION. THE CONTRACTOR SHALL ASCERTAIN THE EXISTENCE OF ANY CONDITIONS AFFECTING THE COST OF THE WORK, WHICH WOULD HAVE BEEN DISCLOSED BY REASONABLE EXAMINATION OF THE SITE. EXISTING IMPROVEMENTS VISIBLE AT THE JOB SITE, FOR WHICH NO SPECIFIC DISPOSITION IS MADE ON THE DRAWINGS, BUT WHICH COULD REASONABLY BE ASSUMED TO INTERFERE WITH THE SATISFACTORY COMPLETION OF THE IMPROVEMENTS COMTEMPLATED BY THE PLANS, SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL, UPON DISCOVERING ANY ERROR OR OMISSION IN THE PLANS AND SPECIFICATIONS, IMMEDIATELY CALL IT TO THE ATTENTION OF THE ENGINEER.
- 020.03 IF THERE IS A CONFLICT BETWEEN CONTRACT DOCUMENTS, THE DOCUMENT HIGHEST IN PRECEDENCE SHALL CONTROL. THE PRECEDENCE SHALL BE:
- (1) THE EXECUTED CONTRACT BETWEEN THE CITY AND OWNER ALONG WITH ANY PROPERLY EXECUTED CHANGE ORDERS

(2) PERMITS AND LICENSES FROM OTHER AGENCIES AS MAY BE REQUIRED BY LAW

(3) SPECIAL PROJECT PROVISIONS

(4) DRAWINGS

(5) DETAILS

(6) SPECIFICATIONS
- 020.04 CONTRACTOR AND SUBCONTRACTOR SHALL LOCATE ACTUAL LOCATION OF ALL EXISTING FACILITIES AND NOTIFY ENGINEER IF LOCATION OF EXISTING FACILITIES DIFFERS FROM LOCATION SHOWN IN PLANS. CONTRACTOR AND SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL FACILITY LOCATES AND COORDINATING CONSTRUCTION ACTIVITIES WITH EXISTING FACILITY OWNERS AND / OR OPERATORS.
- 020 PRIVATE, DEVELOPMENT, OR CITY PROJECTS
- 020.01 PROJECTS MUST BE APPROVED BY THE AUTHORITY.
- 020.02 THESE STANDARD SPECIFICATIONS FOR CONSTRUCTION GENERAL PROVISIONS ARE PART OF THE CONTRACT BY WHICH THE CONTRACTOR HAS COMMITTED TO COMPLETE A SPECIFIC SCOPE OF WORK, IN COMPLIANCE WITH THE DRAWING DETAILS, SPECIFICATIONS, AND ALL APPLICABLE LAWS, RULES AND REGULATIONS. COMPENSATION FOR SAID WORK SHALL BE MADE AS DESCRIBED IN THE AGREED UPON PROPOSAL.
- 020.03 ALL WORK MUST COMPLY WITH APPLICABLE STANDARD SPECIFICATIONS FOR CONSTRUCTION AND THE MANUAL OF STANDARD DETAILS. ANY REQUEST FOR CHANGE TO THE DESIGN FOR THIS PORTION OF PRIVATE PROJECTS MUST BE APPROVED BY THE DESIGN ENGINEER OF RECORD, AND APPROVED PRIOR TO IMPLEMENTATION. SUBMITTALS FOR THIS PORTION OF THE WORK SHALL BE FORWARDED TO, AND APPROVED BY, THE DESIGN ENGINEER OF RECORD, AND FORWARDED TO THE AUTHORITY.
- 025 SUBMITTALS
- 025.01 FOR DEVELOPMENT PROJECTS; ALL INFORMATION ASSOCIATED WITH THE COMPLETION OF THE WORK SHALL BE SUBMITTED TO NECESSARY ENTITIES FOR REVIEW.
- 030 COMPLETION OF THE WORK
- 030.01 THE CONTRACTOR SHALL MAINTAIN A WORK FORCE ADEQUATE TO ACCOMPLISH THE WORK WITHIN THE CONTRACT TIME. THE CONTRACTOR AGREES TO EMPLOY ONLY ORDERLY, COMPETENT, AND KNOWLEDGEABLE WORKERS, SKILLFUL IN PERFORMANCE OF THE TYPE OF WORK REQUIRED UNDER THIS CONTRACT.
- 035 CHANGE MANAGEMENT - CITY & DEVELOPMENT PROJECTS
- 035.01 CHANGES TO ANY ASPECT OF THE PROJECT (MATERIALS, DESIGN, CONSTRUCTION METHODS, ETC.) SHALL BE REVIEWED AND EXECUTED BY THE OWNER/AUTHORITY AND/OR DESIGN ENGINEER OF RECORD.

035.02 THE CONTRACTOR MAY REQUEST, IN WRITING, A CHANGE IN MATERIALS SPECIFIED IN CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT THE NECESSARY INFORMATION IN SUCH A TIMELY MANNER AS TO AVOID ANY ADVERSE IMPACTS TO THE CONTRACT SCHEDULE. THE CONTRACTOR MAY REQUEST, IN WRITING, A DEVIATION FROM THE SPECIFIED MATERIALS USING THE SAME PROCEDURE OUTLINED ABOVE.
- 035.03 THE CONTRACTOR MAY REQUEST A DEVIATION FROM THE DESIGN OF THE WORK. THE CONTRACTOR SHALL SUBMIT, IN WRITING, THE NECESSARY INFORMATION IN SUCH A TIMELY MANNER AS TO AVOID ANY ADVERSE IMPACTS TO THE CONTRACT SCHEDULE. THE MODIFICATION TO THE DESIGN MAY BE UTILIZED UPON RECEIPT OF WRITTEN APPROVAL BY THE OWNER OR ENGINEER.
- 035.04 IF A SPECIFIC MEANS, METHOD, TECHNIQUE, SEQUENCE, OR PROCEDURE OF CONSTRUCTION IS REQUIRED BY THE CONTRACT DOCUMENTS, THE CONTRACTOR MAY REQUEST A SUBSTITUTE. THE CONTRACTOR SHALL SUBMIT, IN WRITING, THE NECESSARY INFORMATION IN SUCH A TIMELY MANNER AS TO AVOID ANY ADVERSE IMPACTS TO THE CONTRACT SCHEDULE. THE SUBSTITUTE MEANS OR METHODS MAY BE UTILIZED UPON RECEIPT OF WRITTEN APPROVAL BY THE OWNER OR ENGINEER.
- 040 ENVIRONMENTAL AND SAFETY PLANS
- 040.01 THE CONTRACTOR SHALL SUBMIT FOR APPROVAL ALL REQUIRED ENVIRONMENTAL AND SAFETY PLANS FOR THE COMPLETION OF THE WORK. THE WORK WILL NOT BE PERMITTED TO BEGIN UNTIL ALL RELATED PLANS HAVE BEEN REVIEWED AND RELEASED.
- 045 TRENCH SAFETY PLAN (TSP)
- 045.01 WHEN REQUIRED BY THE WORK, THE CONTRACTOR SHALL SUBMIT A TRENCH SAFETY PLAN FOR REVIEW. THE PLAN SHALL INCLUDE THE RECOMMENDED SAFETY PROTECTION MEASURES WITH THE APPROPRIATE LOADING REQUIREMENTS.
- 045.02 THE CONTRACTOR SHALL ENSURE THAT ALL PROTECTIVE MEASURES LOCATED ON SITE AND ALL PROCEDURES ON THE PROJECT ARE IN COMPLIANCE WITH ALL ASPECTS OF THE PLAN.
- 045.03 THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS. THE CONTRACTOR SHALL PROVIDE COPIES OF ALL RELATED DOCUMENTATION TO THE OWNER AND/OR AUTHORITY UPON REQUEST.
- 045.04 THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER, ENGINEER, UTILITY OPERATOR, AND THE CITY, ITS FEES, COURT COSTS, AND THE COST OF INVESTIGATION), JUDGMENTS OR CLAIMS BY ANYONE FOR INJURY OR DEATH OF PERSONS RESULTING FROM THE COLLAPSE OR FAILURE OF TRENCHES CONSTRUCTED UNDER THIS CONTRACT.
- 050 CONFINED SPACE PLAN (CSP)
- 050.01 WHEN REQUIRED BY THE WORK; THE CONTRACTOR SHALL SUBMIT A CONFINED SPACE PLAN FOR REVIEW.
- 050.02 THE CONTRACTOR SHALL ENSURE THAT ALL PROCEDURES EMPLOYED ON THE PROJECT ARE IN COMPLIANCE WITH PLAN.
- 050.03 THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS. ALL RELATED DOCUMENTATION WILL BE MADE AVAILABLE TO THE INSPECTOR ON A DAILY BASIS. THE CONTRACTOR SHALL PROVIDE COPIES OF ALL RELATED DOCUMENTATION TO THE OWNER UPON REQUEST.
- 055 EROSION CONTROL PLAN (SW3P)
- 055.01 WHEN REQUIRED BY THE WORK, THE CONTRACTOR S. HALL SUBMIT, AN EROSION CONTROL PLAN FOR REVIEW. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING SW3P PERMITS, INSTALLING REQUIRED BMPS, AND MAINTAINING PROJECT SITE TO COMPLY WITH SW3P PERMITS.
- 060 TEMPORARY TRAFFIC CONTROL PLAN (TTCP)
- 060.01 WHEN REQUIRED BY THE WORK, THE CONTRACTOR SHALL SUBMIT A TEMPORARY TRAFFIC CONTROL PLAN FOR REVIEW. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY TRAFFIC CONTROL PLANS AND SHALL SUBMIT AND COORDINATE TEMPORARY TRAFFIC CONTROL PLANS WITH CITY, COUNTY, AND/ OR TxDOT. THE PLAN SHALL BE BASED UPON APPLICABLE CITY, STATE, AND MUTCD REQUIREMENTS AND ESTABLISHED STANDARDS.
- a) IN THE EVENT A TTCP HAS BEEN INCLUDED WITH THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL COMPLY WITH THE TTCP. THE CONTRACTOR IS RESPONSIBLE TO MONITOR THE PLAN AS THE WORK PROGRESSES AND SUBMIT MODIFICATIONS FOR APPROVAL AS NEEDED.
- b) THE CONTRACTOR IS ALSO RESPONSIBLE TO PROVIDE THE INSPECT COPY OF THE SIGNED PLAN PRIOR TO BEGINNING WORK. THE CONTRACTOR IS RESPONSIBLE TO MONITOR THE PLAN AS THE WORK PROGRESSES AND SUBMIT MODIFICATIONS FOR APPROVAL AS NEEDED. THE CONTRACTOR IS ALSO RESPONSIBLE TO PROVIDE THE INSPECTOR A COPY OF THE SIGNED PLAN PRIOR TO BEGINNING WORK.
- 090 PROJECT MEETINGS
- 090.01 A PRECONSTRUCTION CONFERENCE SHALL BE HELD AS SOON AFTER THE AWARD AND EXECUTION OF THE CONTRACT AS POSSIBLE AND BEFORE ANY WORK AT THE SITE IS STARTED. THE CITY DEVELOPMENT ENGINEER SHALL PREPARE AND DISTRIBUTE THE MEETING AGENDA, PRESIDE OVER THE CONFERENCE, AND MAY DISTRIBUTE MEETING MINUTES.
- 090.02 PROGRESS MEETINGS SHALL BE HELD AS DEEMED NECESSARY BY THE ENGINEER/ARCHITECT OR OWNER OR AS REQUESTED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT. THE MEETINGS SHALL BE HELD AT A LOCATION SELECTED BY OR APPROVED BY THE OWNER'S REPRESENTATIVE.
- 090.03 WHEN NECESSARY, A MANDATORY PROJECT CLOSE-OUT MEETING FOLLOWING FINAL COMPLETION OF THE WORK, THE CONTRACTOR WILL ENSURE ALL NECESSARY PERSONNEL ATTEND THE CLOSE-OUT MEETING TO SUBMIT AND REVIEW ALL CONTRACT CLOSE-OUT DOCUMENTATION. FOLLOW UP MANDATORY MEETINGS WILL BE SCHEDULED AS NEEDED TO COMPLETE THE CLOSE-OUT PROCESS. APPROVAL OF THE FINAL INVOICE IS DEPENDANT UPON RECEIPT OF CLOSE-OUT DOCUMENTATION.
- MUNICIPAL UTILITY DISTRICT (MUD) NOTES:
1. THE DISTRICT ENGINEER, JONES-HEROY & ASSOCIATES, INC. (KEN HEROY, PH:512-989-2200) SHALL BE CONTACTED 48 HOURS PRIOR TO:
- A. PRE-CONSTRUCTION MEETINGS;

B. BEGINNING EACH PHASE OF CONSTRUCTION;

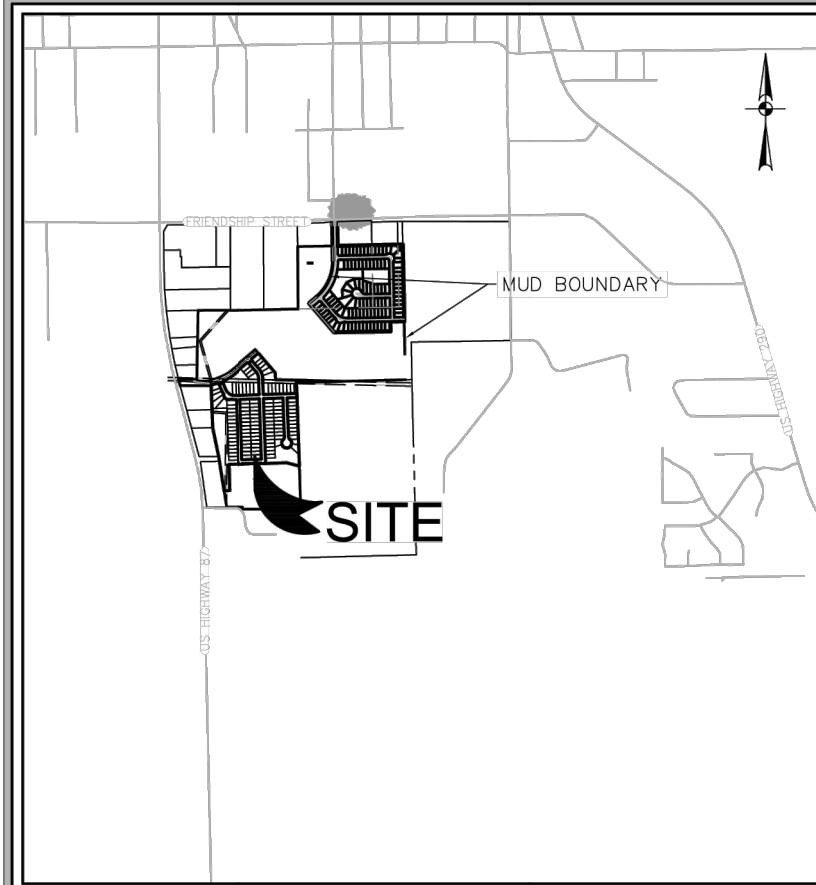
C. TESTING OF WATER AND /OR WASTEWATER LINES; AND,

D. FINAL WALK-THROUGH OF FACILITIES.
2. THE DISTRICT OPERATOR SHALL BE CONTACTED 48 HOURS PRIOR TO:
- A. PRE-CONSTRUCTION MEETINGS;

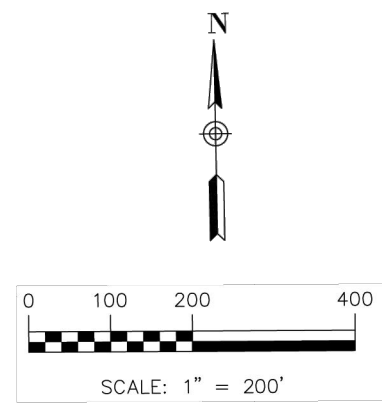
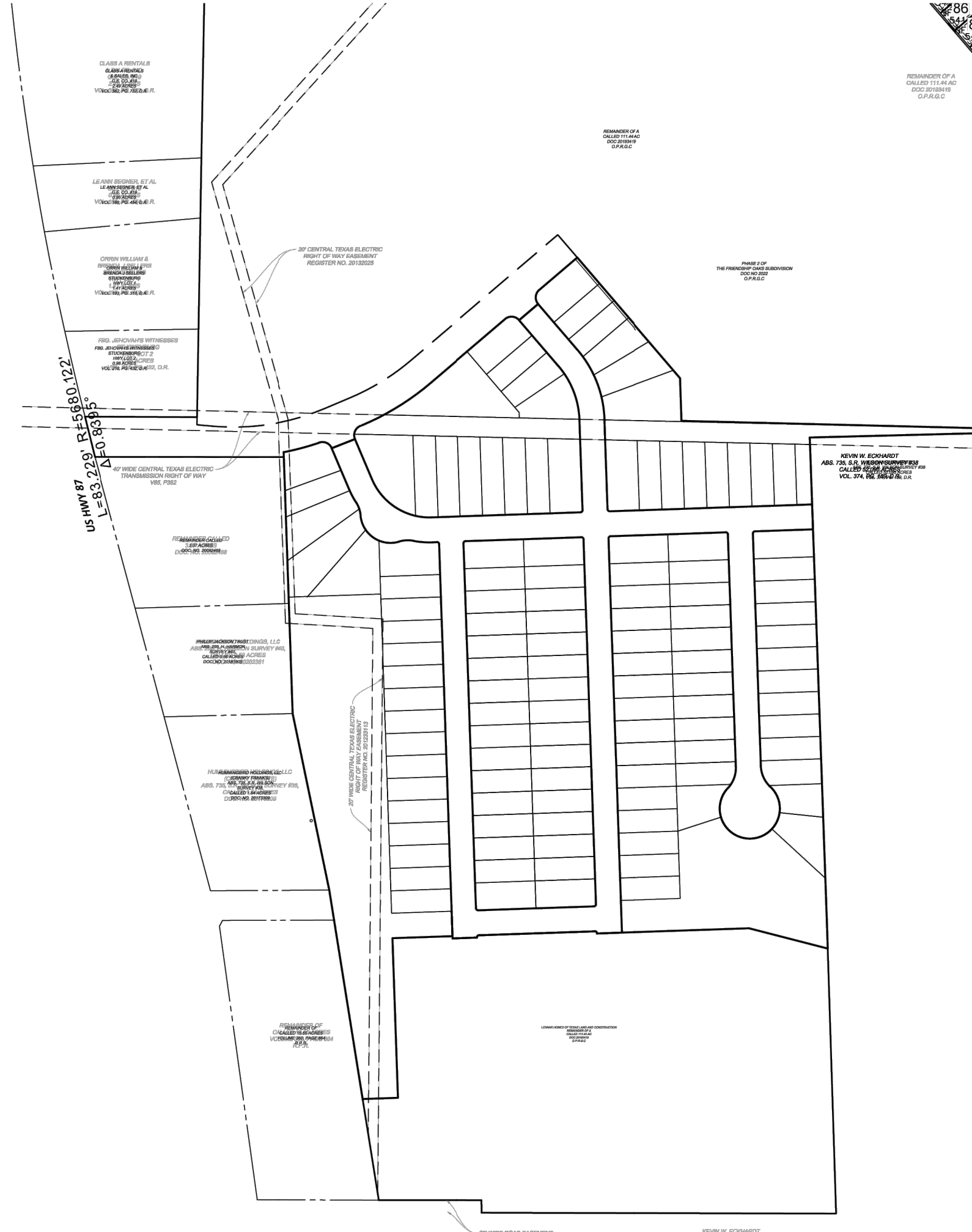
B. BEGINNING EACH PHASE OF CONSTRUCTION;

C. TESTING OF WATER AND/OR WASTEWATER LINES; AND,

D. FINAL WALK-THROUGH OF FACILITIES.
- UTILITIES
- LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION, INCLUDING THOSE NOT SHOWN ON THE DRAWINGS.
- ANY EXISTING UTILITIES, ON OR OFF THE SITE, THAT ARE DAMAGED OR UNDERCUT BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE RESPECTIVE UTILITY COMPANY AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION AT:
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION



LOCATION MAP
NOT-TO-SCALE



- LEGEND:
- = FND 1/2" IRON PIN
 - = SET 1/2" IRON PIN W/ PLASTIC CAP STAMPED "HMT"
 - SF = SQUARE FEET
 - ESMT. = EASEMENT
 - D.E. = DRAINAGE EASEMENT
 - E.G.T.C.A. = ELECTRIC, GAS, TELEPHONE & CABLE TELEVISION
 - ROW = RIGHT-OF-WAY
 - D.P.R. = DEED AND PLAT RECORDS, GILLESPIE COUNTY, TEXAS
 - O.P.R. = OFFICIAL PUBLIC RECORDS, GILLESPIE COUNTY, TEXAS

EASEMENT NOTES:

- 10' UTILITY EASEMENT ALONG ALL RIGHT-OF-WAY LINE AS SHOWN
- 10' UTILITY EASEMENT ALONG PROPERTY LINES AS NOTED
- 5' DRAINAGE EASEMENT ALONG ALL PROPERTY LINES OF EACH LOT AS SHOWN
- 15' FRONT BUILDING SETBACK LINE (20' FOR GARAGE)
- 15' SIDE STREET BUILDING SETBACK LINE AS SHOWN
- 10' REAR BUILDING SETBACK LINE AS SHOWN
- 5' SIDE BUILDING SETBACK LINE
- 30'x30' SIGHT EASEMENT AT ALL RIGHT-OF-WAY INTERSECTIONS AS SHOWN

SITE VISIBILITY RESTRICTION:

NO STRUCTURE, OBJECT OR PLANT OF ANY TYPE SHALL OBSTRUCT VISION FROM A HEIGHT OF TWENTY-FOUR (24) INCHES TO A HEIGHT OF TEN (10) FEET ABOVE THE TOP OF THE CURB, INCLUDING, BUT NOT LIMITED TO, BUILDINGS, FENCES, WALKS, SIGNS, TREES, SHRUBS, CARS, TRUCKS ETC., IN THE SIGHT VISIBILITY EASEMENT AS SHOWN ON THE PLAT. THESE SIGHT VISIBILITY EASEMENTS WILL REMAIN IN EFFECT UNTIL VACATED BY ORDINANCE ADOPTED BY THE CITY COUNCIL AND THE PROPERTY REPLATED.

NOTES:

1. THE DEVELOPER DEDICATES THE SANITARY SEWER AND WATER MAINS UPON COMPLETION BY THE DEVELOPER AND ACCEPTANCE BY THE CITY OF FREDERICKSBURG. THE CITY FREDERICKSBURG WILL OWN AND MAINTAIN WITHIN TWO (2) YEARS OF THE ACCEPTANCE OF SAID SEWER AND WATER MAINS LOCATED WITHIN THE SUBDIVISION PLAT.
2. DAMAGE BY ANY UTILITY COMPANY TO ANY STRUCTURES, FENCES, WALLS OR LANDSCAPING OF ANY KIND PLACED WITHIN THE LIMITS OF THE EASEMENTS SHOWN ON THIS PLAT WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. NO LANDSCAPING OR OTHER MODIFICATIONS ALTERING THE CROSS-SECTION OF DRAINAGE EASEMENTS ARE ALLOWED WITHOUT APPROVAL BY THE CITY OF FREDERICKSBURG. THE CITY OF FREDERICKSBURG SHALL HAVE THE RIGHT TO REQUIRE THE PROPERTY OWNERS TO REMOVE ANY OBSTRUCTIONS PLACED WITHIN THE PRIVATE DRAINAGE EASEMENTS AND THE RIGHT TO REQUIRE THE PROPERTY OWNERS TO MAKE MODIFICATIONS OR IMPROVEMENTS WITHIN THE EASEMENTS FOR PUBLIC WELFARE.
3. DRAINAGE EASEMENTS ARE TO BE MAINTAINED BY PROPERTY OWNER AND ACCESS TO BE GIVEN TO DEVELOPER OR AUTHORIZED PERSON FOR ANY ADDITIONAL CONSTRUCTION, MAINTENANCE, OR REPAIR OF ANY STRUCTURE WITHIN ANY DRAINAGE EASEMENT.
4. NO ONE SHALL INTERFERE WITH ANY NATURAL DRAINAGE PATTERN OR CONSTRUCTED DRAINAGE SYSTEM ESTABLISHED BY THE DEVELOPMENT BY ALTERING ANY SLOPES, CONTOUR OF ANY CHANNEL, SWALE OR EMBANKMENT OR TAKING OF ANY OTHER ACTION WHICH WILL OR LIKELY TO RETARD, CHANGE OR INTERFERE WITH DRAINAGE OR CREATE EROSION WITHIN THIS AREA.
5. ALL TOPOGRAPHIC INFORMATION, BENCHMARKS, AND DRAINAGE DESIGNS WERE COMPUTED AND STAKED ON THE GROUND BY AUSTIN SPATIAL TECHNOLOGIES, LLC.

CERTIFICATE OF COMPLETION, ACCEPTANCE, AND AUTHORIZATION TO FILE

APPROVED

CHAIRMAN, PLANNING AND ZONING COMMISSION DATE
CITY OF FREDERICKSBURG, TEXAS

THE UNDERSIGNED, THE CITY SECRETARY OF THE CITY OF FREDERICKSBURG, TEXAS, HEREBY CERTIFIES THAT THE FOREGOING FINAL PLAT OF THE SUBDIVISION OR ADDITION TO THE CITY OF FREDERICKSBURG WAS SUBMITTED TO THE PLANNING AND ZONING COMMISSION ON THE DAY OF AND THE COMMISSION, BY FORMAL ACTION, THEN AND THERE ACCEPTED THE DEDICATIONS, CONVEYANCES OF LAND, IMPROVEMENTS AND ANY OTHER PROPERTY NECESSARY TO SERVE THE PLAT AND TO IMPLEMENT THE REQUIREMENTS OF THE PLATTING ORDINANCES, RULES, AND REGULATIONS AS SHOWN AND SET FORTH IN AND UPON SAID PLAT, THAT THE PUBLIC WORKS AND INFRASTRUCTURE IMPROVEMENTS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE CONSTRUCTION PLANS, HAVE BEEN TESTED AND HAVE BEEN ACCEPTED BY THE CITY, THAT THE FINAL PLAT IS NOW ACCEPTED FOR FILING WITH GILLESPIE COUNTY AND SAID COMMISSION FURTHER AUTHORIZED THE CHAIRMAN OF THE PLANNING AND ZONING COMMISSION TO NOTE THE ACCEPTANCE ON BEHALF OF THE CITY THEREOF BY SIGNING HIS/HER NAME AS HEREINAbove SUBSCRIBED.

WITNESS BY HAND ON THIS DAY OF , 20.

CITY SECRETARY
CITY OF FREDERICKSBURG, TEXAS

A FINAL PLAT
ESTABLISHING
PHASE 3 OF THE FRIENDSHIP
OAKS SUBDIVISION

BEING A TOTAL OF 26.83 ACRES OF LAND LOCATED IN THE
JOSE ESTEBAN BARGAS, SURVEY, A-53, GILLESPIE COUNTY,
TEXAS, BEING PART OF A CALLED 111.44 ACRE TRACT,
RECORDED IN DOCUMENT NO. 20193419 OF THE OFFICIAL
PUBLIC RECORDS OF GILLESPIE COUNTY, TEXAS

PROJECT NUMBER P- 1 OF 2

CERTIFICATE OF FINAL PLAT APPROVAL
(FOR FINAL PLATS WITH REQUIRED PUBLIC IMPROVEMENTS INSTALLED AFTER APPROVAL)

APPROVED

CHAIRMAN, PLANNING AND ZONING COMMISSION DATE
CITY OF FREDERICKSBURG, TEXAS

THE UNDERSIGNED, THE CITY SECRETARY OF THE CITY OF FREDERICKSBURG, TEXAS, HEREBY CERTIFIES THAT THE FOREGOING FINAL PLAT OF THE PHASE 3 OF THE FRIENDSHIP OAKS SUBDIVISION OR ADDITION TO THE CITY OF FREDERICKSBURG WAS SUBMITTED TO THE PLANNING AND ZONING COMMISSION ON THE DAY OF AND THE COMMISSION, BY FORMAL ACTION, THEN AND THERE ACCEPTED THE FINAL PLAT AND HEREBY AUTHORIZES THE DEVELOPER TO PROCEED WITH THE CONSTRUCTION OF PUBLIC WORKS IMPROVEMENTS AND INFRASTRUCTURE AS INDICATED ON THE ACCOMPANYING CONSTRUCTION PLANS, AND SAID COMMISSION FURTHER AUTHORIZES THE CHAIRMAN OF THE PLANNING AND ZONING COMMISSION TO NOTE THE ACCEPTANCE THEREOF BY SIGNING HIS/HER NAME AS HEREINAbove SUBSCRIBED.

WITNESS BY HAND THIS DAY OF , 20.

CITY SECRETARY
CITY OF FREDERICKSBURG, TEXAS

OWNER'S ACKNOWLEDGEMENT AND DEDICATION

STATE OF TEXAS §
COUNTY OF GILLESPIE §

I, (WE), THE UNDERSIGNED, OWNER(S) OF THE LAND SHOWN ON THIS PLAT WITHIN THE AREA DESCRIBED BY DOC #20193419 OFFICIAL PUBLIC RECORDS OF GILLESPIE COUNTY.

AND DESIGNATED HEREIN AS THE FRIENDSHIP OAKS, PHASE 2 SUBDIVISION TO THE CITY OF FREDERICKSBURG, TEXAS, AND WHOSE NAME IS SUBSCRIBED HERETO, HEREBY DEDICATE TO THE PUBLIC USE FOREVER BY FEE SIMPLE TITLE, FREE AND CLEAR OF ALL LIENS AND ENCUMBRANCES, ALL STREETS, THOROUGHFARES, ALLEYS, PARKS, AND TRAILS, AND TO THE PUBLIC USE FOREVER EASEMENTS FOR SIDEWALKS, STORM DRAINAGE FACILITIES, FLOODWAYS, WATER MAINS, WASTEWATER MAINS AND OTHER UTILITIES, AND ANY OTHER PROPERTY NECESSARY TO SERVE THE PLAT AND TO IMPLEMENT THE REQUIREMENTS OF THE PLATTING ORDINANCES, RULES, AND REGULATIONS THEREON SHOWN FOR THE PURPOSE OF CONSIDERATION THEREIN EXPRESSED.

OWNER: _____
DATE: _____

STATE OF TEXAS §
COUNTY OF GILLESPIE §
BEFORE ME, THE UNDERSIGNED AUTHORITY IN AND FOR COUNTY, TEXAS, ON THIS DAY PERSONALLY APPEARED , KNOWN TO ME TO BE THE PERSON AND OFFICER WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE IS AND THAT HE/SHE IS AUTHORIZED TO EXECUTE THE FOREGOING INSTRUMENT FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED, AND IN THE CAPACITY THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE DAY OF , 20.

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

TYPE OR PRINT NOTARY'S NAME

MY COMMISSION EXPIRES: _____

LIENHOLDER'S RATIFICATION OF PLAT DEDICATION

STATE OF TEXAS §
COUNTY OF GILLESPIE §

WHEREAS, ACTING BY AND THROUGH THE UNDERSIGNED, ITS DULY AUTHORIZED AGENT, IS THE LIENHOLDER OF THE PROPERTY DESCRIBED HEREON, DOES HEREBY RATIFY ALL DEDICATIONS AND PROVISIONS OF THIS PLAT AS SHOWN.

LIENHOLDER: _____
DATE: _____

STATE OF TEXAS §
COUNTY OF GILLESPIE §
BEFORE ME, THE UNDERSIGNED AUTHORITY IN AND FOR COUNTY, TEXAS, ON THIS DAY PERSONALLY APPEARED , KNOWN TO ME TO BE THE PERSON AND OFFICER WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE IS AND THAT HE/SHE IS AUTHORIZED TO EXECUTE THE FOREGOING INSTRUMENT FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED, AND IN THE CAPACITY THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE DAY OF , 20.

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

TYPE OR PRINT NOTARY'S NAME

MY COMMISSION EXPIRES: _____

CERTIFICATE OF SURVEYOR

STATE OF TEXAS §
COUNTY OF GILLESPIE §

I, THE UNDERSIGNED, A LICENSED PROFESSIONAL ENGINEER/REGISTERED PROFESSIONAL SURVEYOR IN THE STATE OF TEXAS, HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECT AND WAS PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY MADE UNDER MY SUPERVISION ON THE GROUND.

LICENSED PROFESSIONAL ENGINEER OR
REGISTERED PROFESSIONAL SURVEYOR

Date

STATE OF TEXAS §
COUNTY OF GILLESPIE §

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN STATED. GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS DAY OF .

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

TYPE OR PRINT NOTARY'S NAME

MY COMMISSION EXPIRES: _____

EASEMENT NOTE:

ANY PUBLIC UTILITY, INCLUDING THE CITY, SHALL HAVE THE RIGHT TO MOVE AND KEEP MOVED ALL OR PART OF ANY BUILDING, FENCES, TREES, SHRUBS, OTHER GROWTHS OR IMPROVEMENTS THAT IN ANY WAY ENDANGER OR INTERFERE WITH THE CONSTRUCTION, MAINTENANCE, OR EFFICIENCY OF ITS RESPECTIVE SYSTEMS ON ANY OF THE EASEMENTS OR RIGHT-OF-WAY SHOWN ON THE PLAT (OR FILED BY SEPARATE INSTRUMENT THAT IS ASSOCIATED WITH SAID PROPERTY); AND ANY PUBLIC UTILITY, INCLUDING THE CITY, SHALL HAVE THE RIGHT AT ALL TIMES OF INGRESS AND EGRESS TO AND FROM AND UPON SAID EASEMENTS FOR THE PURPOSE OF CONSTRUCTION, RECONSTRUCTION, INSPECTION, PATROLLING, MAINTAINING AND ADDING TO OR REMOVING ALL OR PART OF ITS RESPECTIVE SYSTEMS WITHOUT THE NECESSITY AT ANY TIME OF PROCURING THE PERMISSION OF ANYONE. EASEMENTS SHALL BE MAINTAINED BY PROPERTY OWNERS. THE CITY CAN MOVE TREES OR ANY OTHER IMPROVEMENTS AND DOES NOT HAVE THE RESPONSIBILITY TO REPLACE THEM.

ENGINEERS CERTIFICATE

I, THE UNDERSIGNED, A LICENSED PROFESSIONAL ENGINEER/REGISTERED PROFESSIONAL SURVEYOR IN THE STATE OF TEXAS, HEREBY CERTIFY THAT PROPER ENGINEERING CONSIDERATION HAS BEEN GIVEN TO THIS PLAT: AND THAT ALL ASPECTS OF IT ARE IN ACCORDANCE TO THE CITY OF FREDERICKSBURG'S SUBDIVISION ORDINANCES. EXCEPT FOR ANY VARIANCES GRANTED BY THE CITY COUNCIL.

PLAT NOTES:

1. BENCHMARK: BRASS DISK "USGS BM 1695" IN SIDEWALK @ SOUTHWEST CORNER HWY 290 & HWY 87. ELEV = 1694.47
2. BEARINGS AND COORDINATES SHOWN HEREON ARE BASED UPON THE TEXAS COORDINATE SYSTEM, CENTRAL ZONE, NORTH AMERICAN DATUM 1983, GRID. DISTANCES SHOWN HEREON ARE BASED UPON SURFACE MEASUREMENTS. TO CONVERT SURFACE DISTANCES TO GRID, APPLY A COMBINED SCALE FACTOR OF 1.00015.
3. MONUMENTS WERE FOUND OR SET AT EACH CORNER OF THE SURVEY BOUNDARY OF THE SUBDIVISION. MONUMENTS AND LOT MARKERS WILL BE SET WITH PLASTIC CAP STAMPED "HMT" IMMEDIATELY AFTER COMPLETION OF UTILITY INSTALLATION AND STREET CONSTRUCTION UNLESS NOTED OTHERWISE.
4. AT DATE OF PLAT APPROVAL, NO PORTION OF THE 100-YEAR FLOOD PLAIN EXISTS ON THIS SITE AS VERIFIED BY FEMA MAP PANEL: 48171C288C & 48171C0451C, EFFECTIVE OCTOBER 19, 2001; THIS INFORMATION IS SUBJECT TO CHANGE AS A RESULT OF FUTURE FEMA MAP REVISIONS AND/OR AMENDMENTS.
5. SETBACKS SHALL CONFORM TO THE CITY'S ADOPTED ZONING CODE AT THE TIME OF PERMITTING.
6. THE RECORDING OF THIS SUBDIVISION PLAT SHALL SUPERSEDE THE PREVIOUS SUBDIVISION PLAT FRIENDSHIP OAKS, RECORDED IN VOLUME 2, PAGE 148 OF THE GILLESPIE COUNTY MAP RECORDS. THE FOLLOWING ITEMS AS SHOWN ON SAID PLAT SHALL BE REMOVED: PART OF THE OUTLOT STREET PART OF TRACT 2 AND THE 75' WELL AND SEPTIC SYSTEM SETBACK LINES WITHIN THE AREA BEING PLATTED.
7. THE CTC EC ELECTRIC EASEMENT RECORDED IN VOL. 361, PG. 67 OF THE GILLESPIE COUNTY MAP RECORDS IS RELEASED PER DOC NO. 20216475 OF THE GILLESPIE COUNTY MAP RECORDS.
8. THE CITY OF FREDERICKSBURG BURIED UTILITY EASEMENT RECORDED IN VOL. 361, PG. 69 OF THE GILLESPIE COUNTY MAP RECORDS SHALL ALSO BE RELEASED.



290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 10153600

DATE OF PREPARATION: 12/22/2022

FOR REFERENCE ONLY

PLAT (1 OF 2)

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION	DESCRIPTION	DATE

DATE: AUGUST 2024

DRAWN BY: JK

DESIGNED BY: RS

REVIEWED BY: ZJ

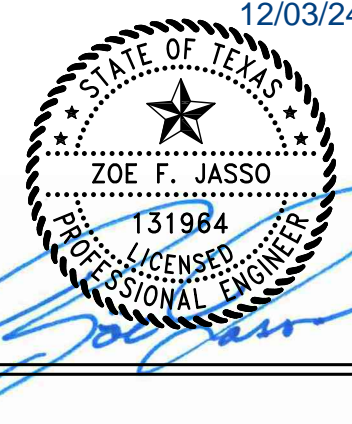
HMT PROJECT NO.:

337.065

SHEET

C0.03

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600



Drawing Name: N:_Projects\337 - Lennar\065 - Friendship Oaks Unit 3\CD\337.065_P3.dwg User: joshua Nov 27, 2024 - 9:12am

EASEMENT NOTE:

ANY PUBLIC UTILITY, INCLUDING THE CITY, SHALL HAVE THE RIGHT TO MOVE AND KEEP MOVED ALL OR PART OF ANY BUILDING, FENCES, TREES, SHRUBS, OTHER GROWTHS OR IMPROVEMENTS THAT IN ANY WAY ENDANGER OR INTERFERE WITH THE CONSTRUCTION, MAINTENANCE, OR EFFICIENCY OF ITS RESPECTIVE SYSTEMS ON ANY OF THE EASEMENTS OR RIGHT-OF-WAY SHOWN ON THE PLAT (OR FILED BY SEPARATE INSTRUMENT THAT IS ASSOCIATED WITH SAID PROPERTY), AND ANY PUBLIC UTILITY, INCLUDING THE CITY, SHALL HAVE THE RIGHT AT ALL TIMES OF INGRESS AND EGRESS TO AND FROM AND UPON SAID EASEMENTS FOR THE PURPOSE OF CONSTRUCTION, RECONSTRUCTION, INSPECTION, PATROLLING, MAINTAINING AND ADDING TO OR REMOVING ALL OR PART OF ITS RESPECTIVE SYSTEMS WITHOUT THE NECESSITY AT ANY TIME OF PROCURING THE PERMISSION OF ANYONE. EASEMENTS SHALL BE MAINTAINED BY PROPERTY OWNERS. THE CITY CAN MOVE TREES OR ANY OTHER IMPROVEMENTS AND DOES NOT HAVE THE RESPONSIBILITY TO REPLACE THEM.

PLAT NOTES:

- BENCHMARK: BRASS DISK "USGS BM 1695" IN SIDEWALK @ SOUTHWEST CORNER HWY 290 & HWY 87. ELEV = 1694.47
- BEARINGS AND COORDINATES SHOWN HEREON ARE BASED UPON THE TEXAS COORDINATE SYSTEM, CENTRAL ZONE, NORTH AMERICAN DATUM 1983. GRID DISTANCES SHOWN HEREON ARE BASED UPON SURFACE MEASUREMENTS. TO CONVERT SURFACE DISTANCES TO GRID, APPLY A COMBINED SCALE FACTOR OF 1.00015.
- MONUMENTS WERE FOUND OR SET AT EACH CORNER OF THE SURVEY BOUNDARY OF THE SUBDIVISION. MONUMENTS AND LOT MARKERS WILL BE SET WITH PLASTIC CAP STAMPED "HMT" IMMEDIATELY AFTER COMPLETION OF UTILITY INSTALLATION AND STREET CONSTRUCTION UNLESS NOTED OTHERWISE.
- AT DATE OF PLAT APPROVAL, NO PORTION OF THE 100-YEAR FLOOD PLAIN EXISTS ON THIS SITE AS VERIFIED BY FEMA MAP PANEL: 48171C289C & 48171C0451C, EFFECTIVE OCTOBER 19, 2001. THIS INFORMATION IS SUBJECT TO CHANGE AS A RESULT OF FUTURE FEMA MAP REVISIONS AND/OR AMENDMENTS.
- SETBACKS SHALL CONFORM TO THE CITY'S ADOPTED ZONING CODE AT THE TIME OF PERMITTING.
- LOT NUMBERS MARKED WITH AN ASTERISKS (*) HAVE A MINIMUM 45' CORD DISTANCE, MEASURED AT THE 15' BUILDING LINE.



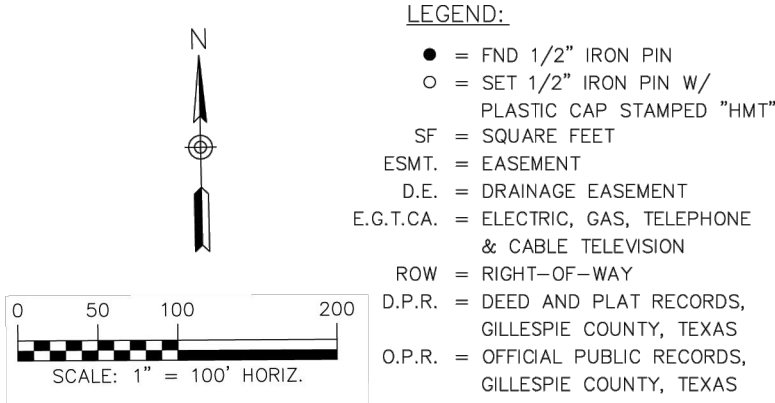
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 10153600

DATE OF PREPARATION: 12/22/2022

A FINAL PLAT
ESTABLISHING
PHASE 3 OF THE FRIENDSHIP
OAKS SUBDIVISION

BEING A TOTAL OF 26.83 ACRES OF LAND LOCATED IN THE
JOSE ESTEBAN BARGAS, SURVEY, A-53, GILLESPIE COUNTY,
TEXAS, BEING PART OF A CALLED 111.44 ACRE TRACT,
RECORDED IN DOCUMENT NO. 20192419 OF THE OFFICIAL
PUBLIC RECORDS OF GILLESPIE COUNTY, TEXAS.

PROJECT NUMBER P- 2 OF 2



EASEMENT NOTES:

- 10' UTILITY EASEMENT ALONG ALL RIGHT-OF-WAY LINE AS SHOWN
- 10' UTILITY EASEMENT ALONG PROPERTY LINES AS NOTED
- 5' DRAINAGE EASEMENT ALONG ALL PROPERTY LINES OF EACH LOT AS SHOWN
- 15' BUILDING SETBACK LINE (20' FOR GARAGE)
- 15' SIDED ROW FRONTAGE BUILDING SETBACK LINE AS SHOWN
- 10' REAR BUILDING SETBACK LINE AS SHOWN
- 5' SIDE BUILDING SETBACK LINE
- 30'30\"/>

SITE VISIBILITY RESTRICTION:

NO STRUCTURE, OBJECT OR PLANT OF ANY TYPE SHALL OBSTRUCT VISION FROM A HEIGHT OF TWENTY-FOUR (24) INCHES TO A HEIGHT OF TEN (10) FEET ABOVE THE TOP OF THE CURB, INCLUDING, BUT NOT LIMITED TO, BUILDINGS, FENCES, WALKS, SIGNS, TREES, SHRUBS, CARS, TRUCKS ETC., IN THE SIGHT VISIBILITY EASEMENT AS SHOWN ON THE PLAT. THESE SIGHT VISIBILITY EASEMENTS WILL REMAIN IN EFFECT UNTIL VACATED BY ORDINANCE ADOPTED BY THE CITY COUNCIL AND THE PROPERTY REPLANTED.

NOTES:

- THE DEVELOPER DEDICATES THE SANITARY SEWER AND WATER MAINS UPON COMPLETION BY THE DEVELOPER AND ACCEPTANCE BY THE CITY OF FREDERICKSBURG. THE CITY FREDERICKSBURG WILL OWN AND MAINTAIN WITHIN TWO (2) YEARS OF THE ACCEPTANCE OF SAID SEWER AND WATER MAINS LOCATED WITHIN THE SUBDIVISION PLAT.
- DAMAGE BY ANY UTILITY COMPANY TO ANY STRUCTURES, FENCES, WALLS OR LANDSCAPING OF ANY KIND PLACED WITHIN THE LIMITS OF THE EASEMENTS SHOWN ON THIS PLAT WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. NO LANDSCAPING OR OTHER MODIFICATIONS ALTERING THE CROSS-SECTION OF DRAINAGE EASEMENTS ARE ALLOWED WITHOUT APPROVAL BY THE CITY OF FREDERICKSBURG, THE CITY OF FREDERICKSBURG SHALL HAVE THE RIGHT TO REQUIRE THE PROPERTY OWNERS TO REMOVE ANY OBSTRUCTIONS PLACED WITHIN THE PRIVATE DRAINAGE EASEMENTS AND THE RIGHT TO REQUIRE THE PROPERTY OWNERS TO MAKE MODIFICATIONS OR IMPROVEMENTS WITHIN THE EASEMENTS FOR PUBLIC WELFARE.
- DRAINAGE EASEMENTS ARE TO BE MAINTAINED BY PROPERTY OWNER AND ACCESS TO BE GIVEN TO DEVELOPER OR AUTHORIZED PERSON FOR ANY ADDITIONAL CONSTRUCTION, MAINTENANCE, OR REPAIR OF ANY STRUCTURE WITHIN ANY DRAINAGE EASEMENT.
- NO ONE SHALL INTERFERE WITH ANY NATURAL DRAINAGE PATTERN OR CONSTRUCTED DRAINAGE SYSTEM ESTABLISHED BY THE DEVELOPER BY ALTERING ANY SLOPES, CONTOUR OF ANY CHANNEL, SWALE OR EMBANKMENT OR TAKING OF ANY OTHER ACTION WHICH WILL OR LIKELY TO RETARD, CHANGE OR INTERFERE WITH DRAINAGE OR CREATE EROSION WITHIN THIS AREA.
- ALL TOPOGRAPHIC INFORMATION, BENCHMARKS, AND DRAINAGE DESIGNS WERE COMPUTED AND STAKED ON THE GROUND BY AUSTIN SPATIAL TECHNOLOGIES, LLC.

CURVE TABLE					
CURVE #	RADIUS	DELTA	CHORD BEARING	CHORD	LENGTH
C1	530.00'	007°56'53"	N74°59'26"E	73.46'	73.52'
C2	20.00'	086°02'47"	S65°57'37"E	27.28'	30.04'
C3	20.00'	080°00'00"	N22°03'46"E	28.28'	31.42'
C4	530.00'	017°34'09"	S89°16'42"E	161.86'	163.52'
C5	20.00'	080°00'00"	S89°30'27"E	28.28'	31.42'
C6	20.00'	080°00'00"	N04°28'37"E	28.28'	31.42'
C7	4.50'	080°00'00"	N46°57'01"W	6.36'	7.07'
C8	4.50'	080°00'00"	S43°02'59"W	6.36'	7.07'
C9	175.00'	009°45'35"	S27°49'01"E	29.77'	28.81'
C10	60.00'	027°30'19"	N18°36'38"W	28.53'	28.80'
C11	60.00'	101°36'07"	S89°00'59"E	83.03'	106.49'
C12	60.00'	027°30'19"	S89°54'47"W	28.53'	28.80'
C13	175.00'	012°36'54"	S89°38'34"E	38.40'	38.53'
C14	4.50'	080°00'00"	N46°57'01"W	6.36'	7.07'
C15	4.50'	080°00'00"	S43°02'59"W	6.36'	7.07'
C16	4.50'	080°00'00"	S46°57'01"E	6.36'	7.07'
C17	4.50'	080°00'00"	N43°02'59"E	6.36'	7.07'
C18	4.50'	080°00'00"	N46°57'01"W	6.36'	7.07'
C19	4.50'	080°00'00"	S43°02'59"W	6.36'	7.07'
C20	4.50'	080°00'00"	N46°57'01"W	6.36'	7.07'
C21	60.00'	044°54'02"	N20°30'00"E	45.83'	47.02'
C22	60.00'	289°48'04"	N89°02'59"E	85.00'	282.54'
C23	60.00'	044°54'02"	S24°24'02"E	45.83'	47.02'
C24	4.50'	080°00'00"	S43°02'59"W	6.36'	7.07'
C25	4.50'	080°00'00"	N46°57'01"W	6.36'	7.07'
C26	225.00'	038°53'22"	N21°13'42"W	148.57'	151.41'
C27	175.00'	038°53'22"	N21°13'42"W	115.50'	117.76'
C28	4.50'	080°00'00"	N43°02'59"E	6.36'	7.07'
C29	125.00'	069°00'47"	S57°28'38"E	141.63'	150.56'
C30	225.00'	038°53'22"	N21°13'42"W	148.57'	151.41'

LINE TABLE		
LINE #	BEARING	LENGTH
11	N89°33'49"E	50.00'
12	N67°03'49"E	3.85'
13	N49°29'37"E	50.00'
14	N49°29'37"E	100.00'
15	S01°59'02"E	85.50'
16	S01°48'50"E	58.51'
17	S88°02'59"W	50.00'
18	N01°57'01"W	4.50'
19	S88°02'59"W	100.00'
110	S88°02'59"W	70.60'

PLAT (2 OF 2)

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: AUGUST 2024

DRAWN BY: JK

DESIGNED BY: RS

REVIEWED BY: ZJ

HMT PROJECT NO.:

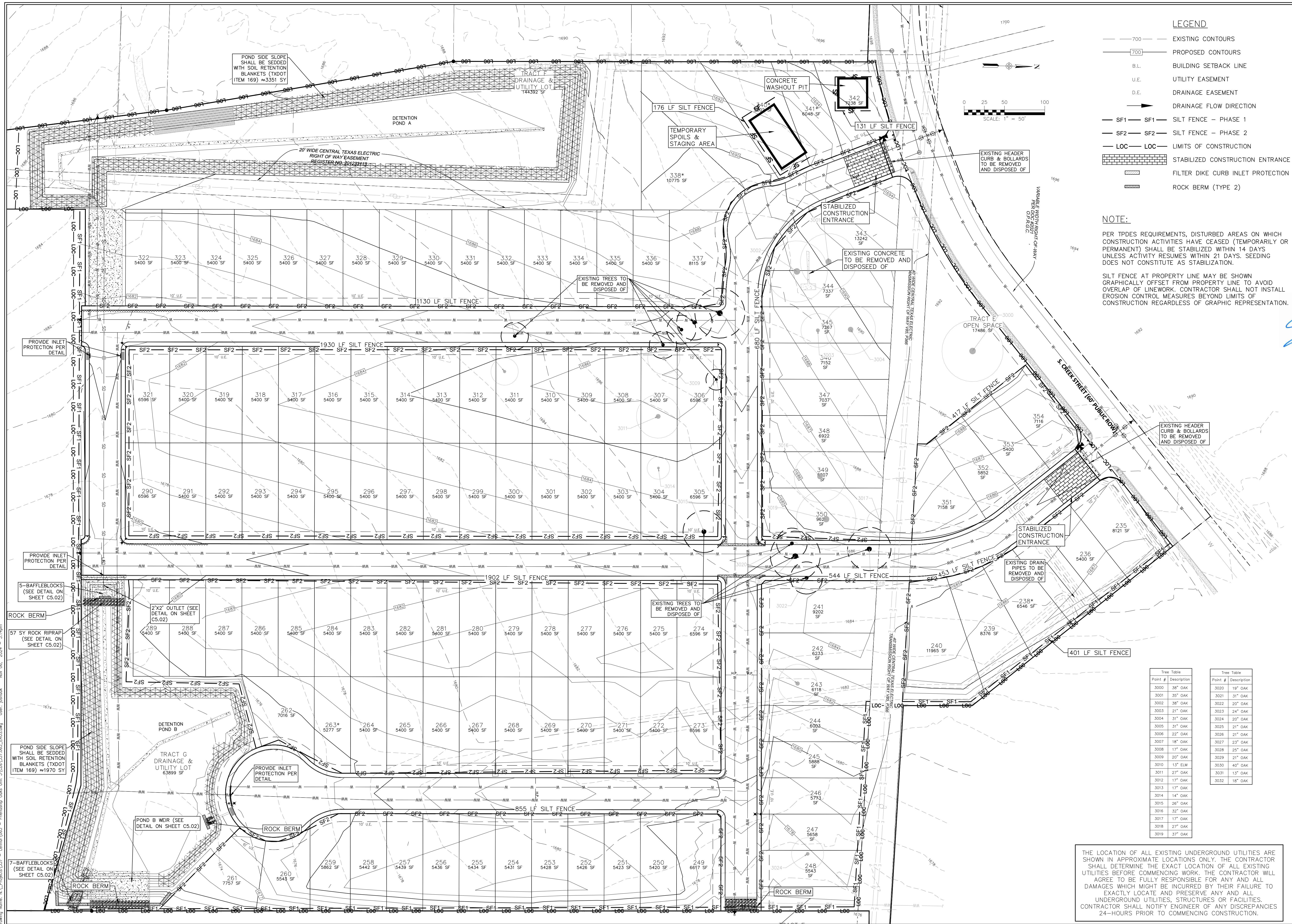
337.065

SHEET

C0.04

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600



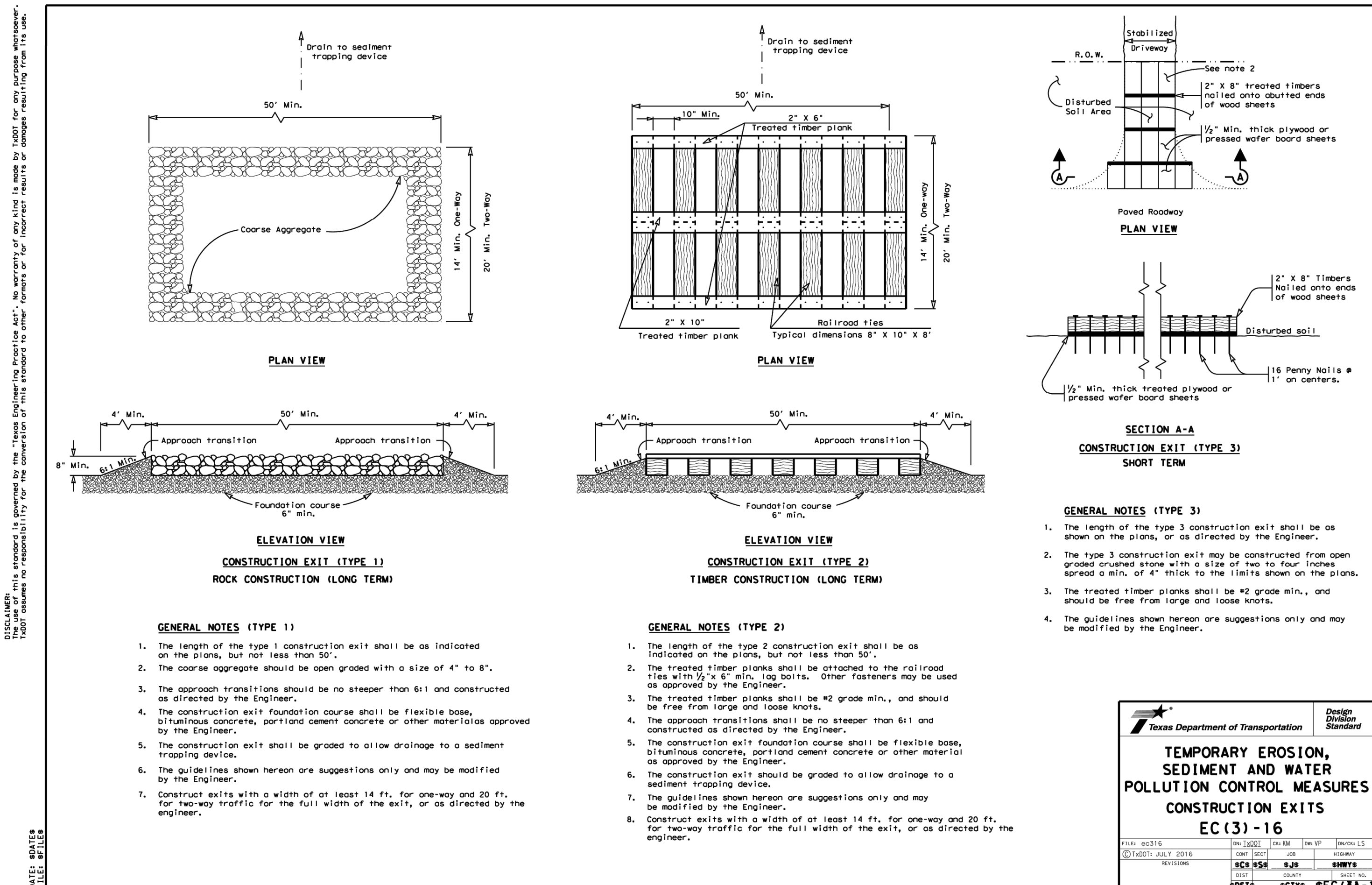
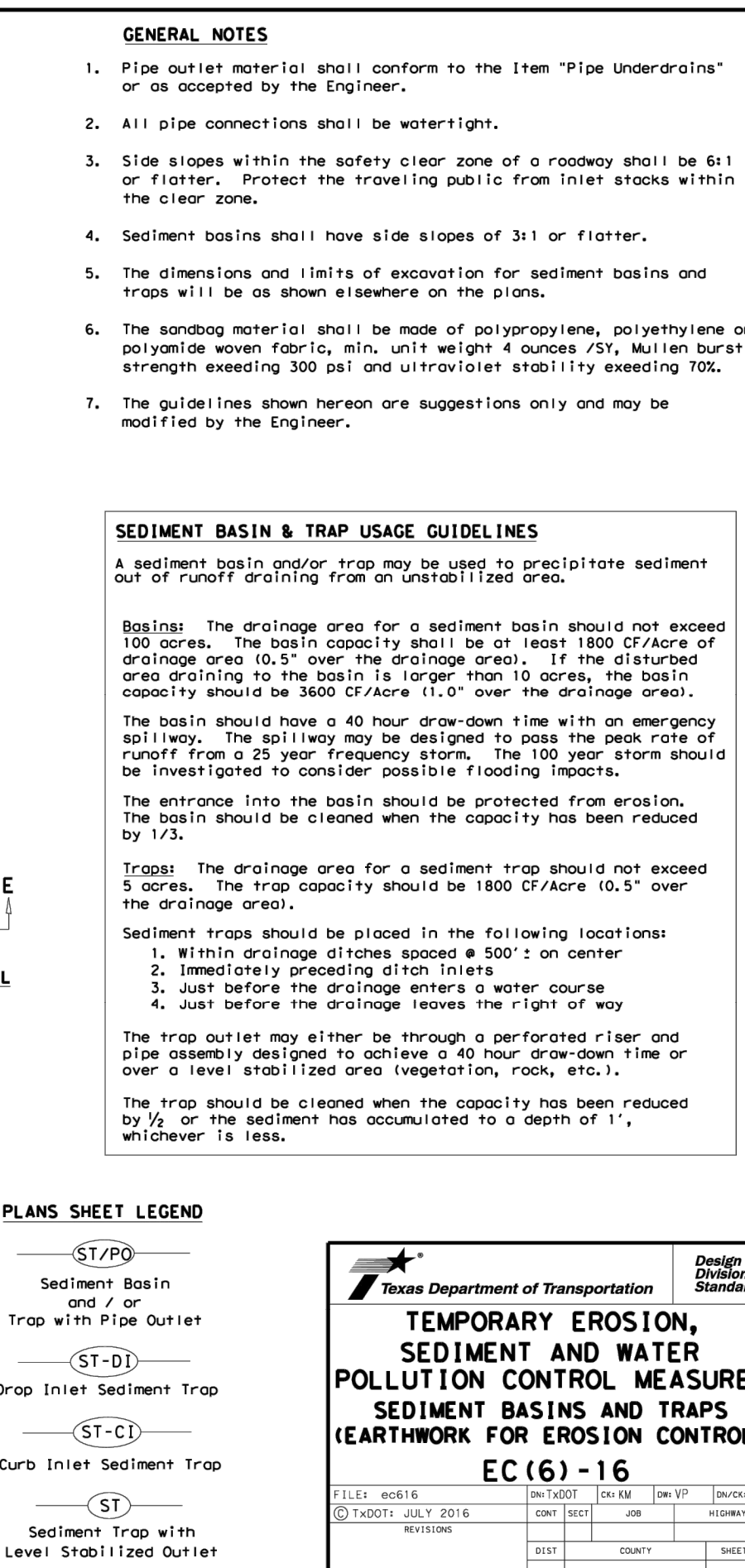
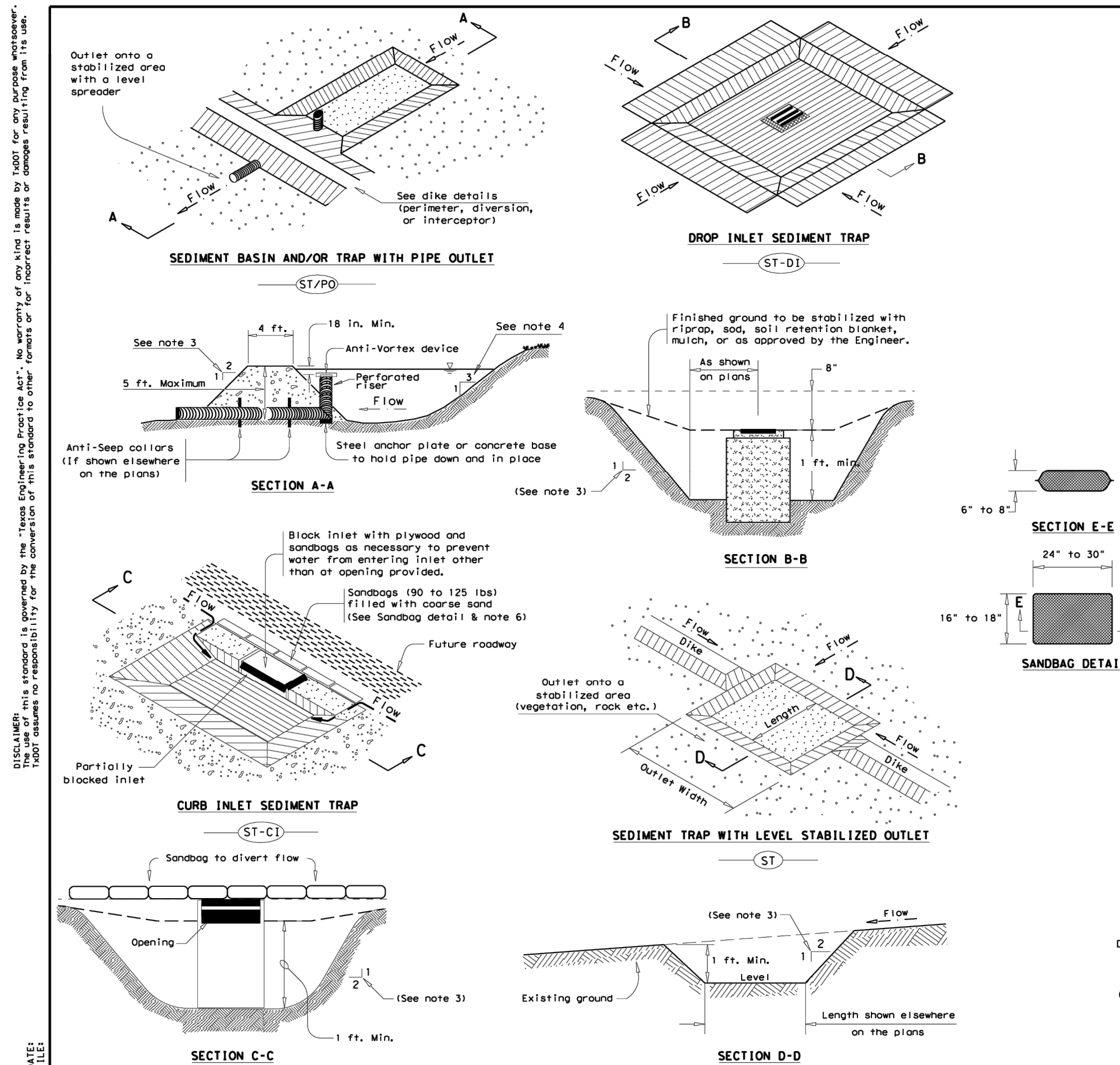
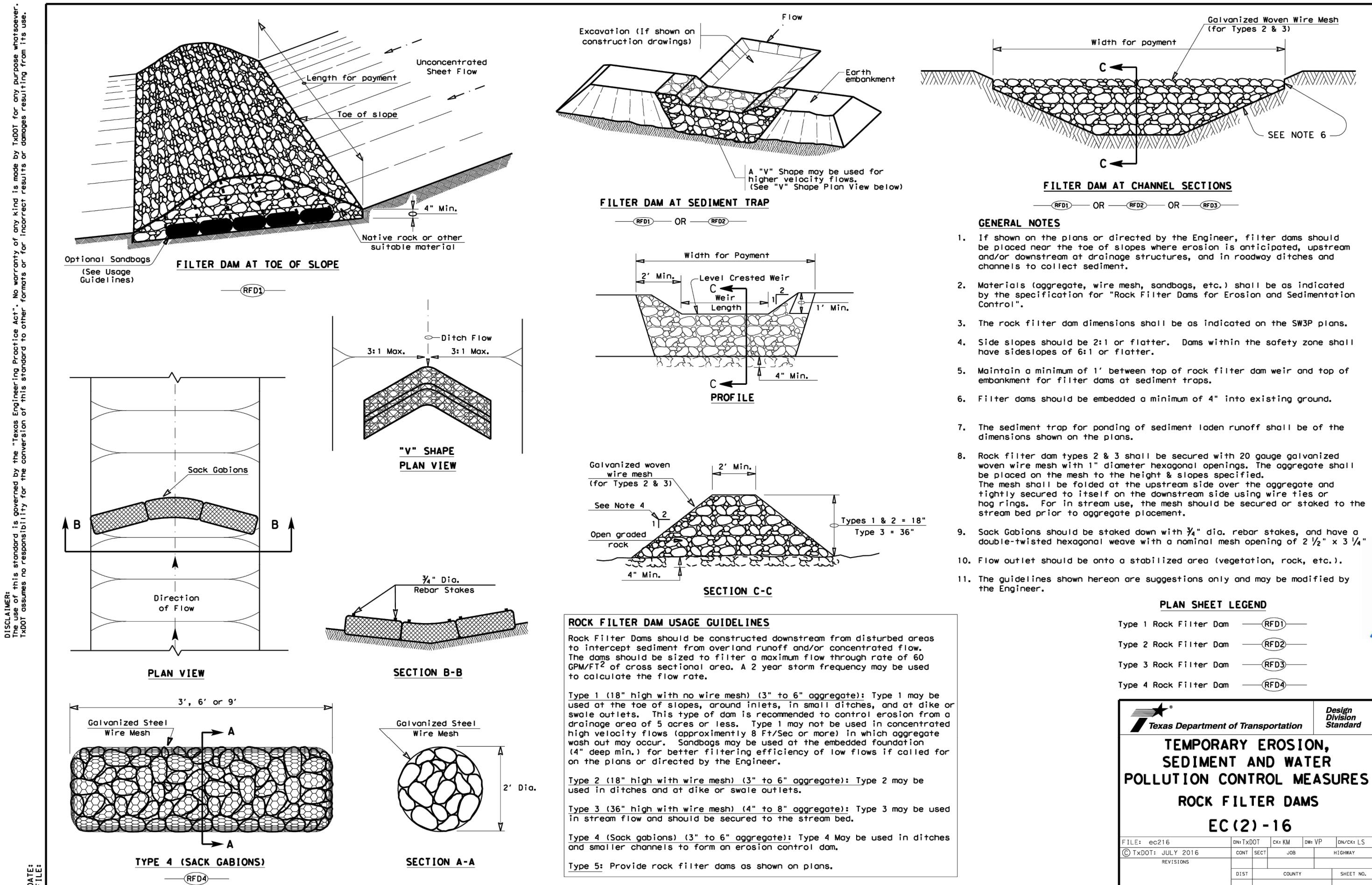
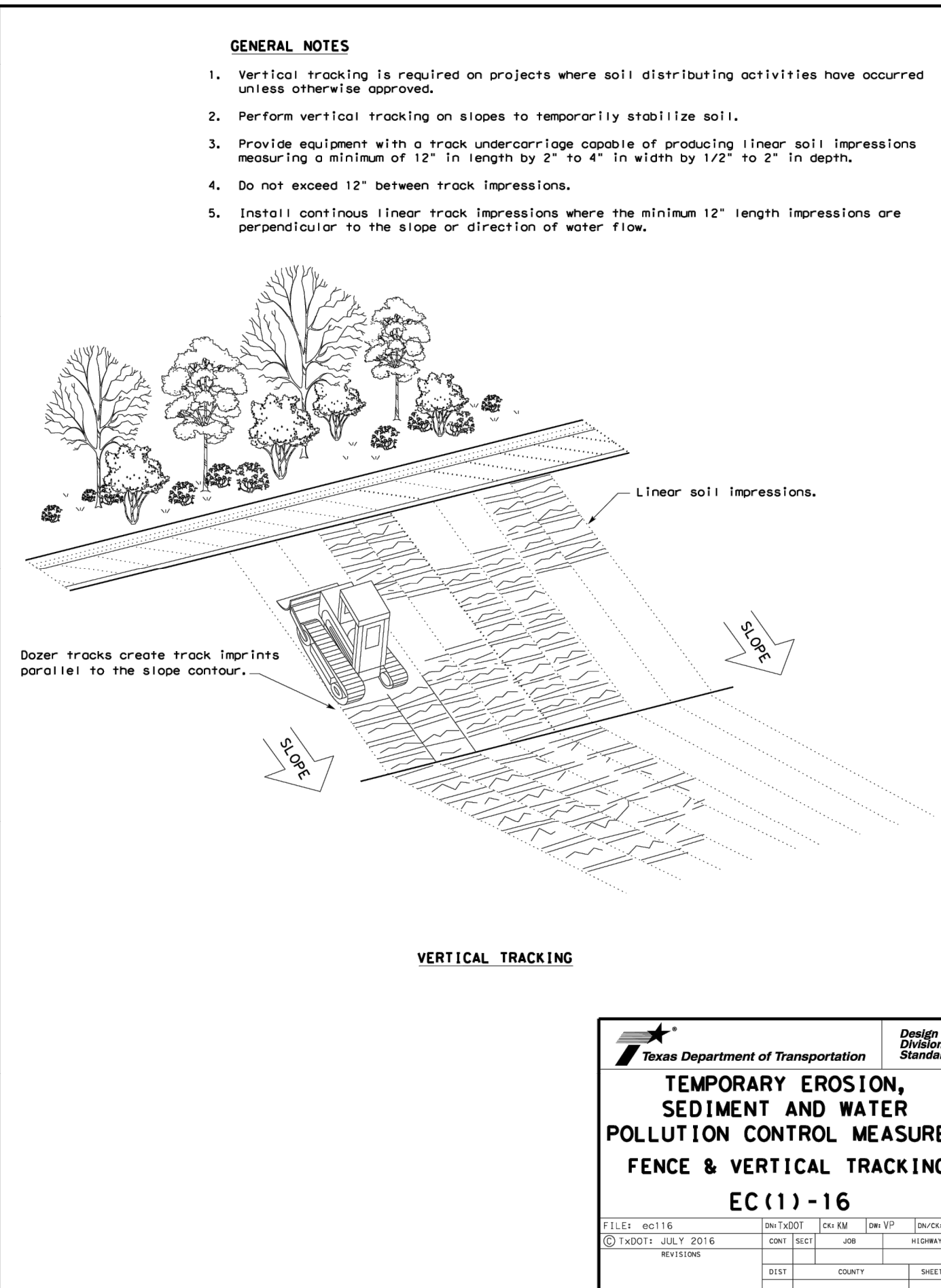
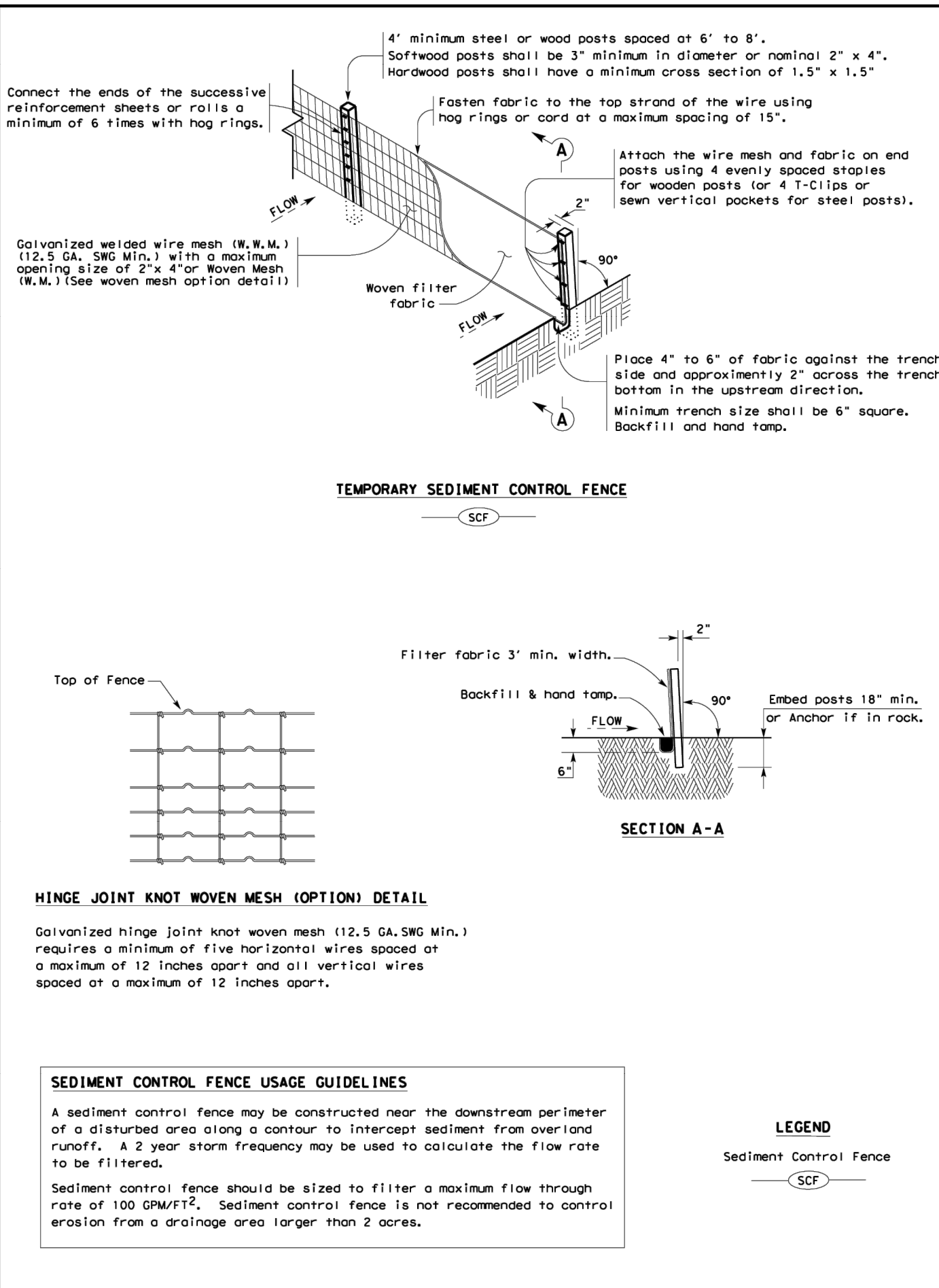


NOTE:

PER TPDES REQUIREMENTS, DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENT) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.

SILT FENCE AT PROPERTY LINE MAY BE SHOWN GRAPHICALLY OFFSET FROM PROPERTY LINE TO AVOID OVERLAP OF LINEWORK. CONTRACTOR SHALL NOT INSTALL EROSION CONTROL MEASURES BEYOND LIMITS OF CONSTRUCTION REGARDLESS OF GRAPHIC REPRESENTATION.

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. The use of this standard does not constitute an endorsement of any product or service, or a recommendation of any particular design or construction method. The use of this standard does not constitute a warranty of any kind for incorrect results or damages resulting from its use.



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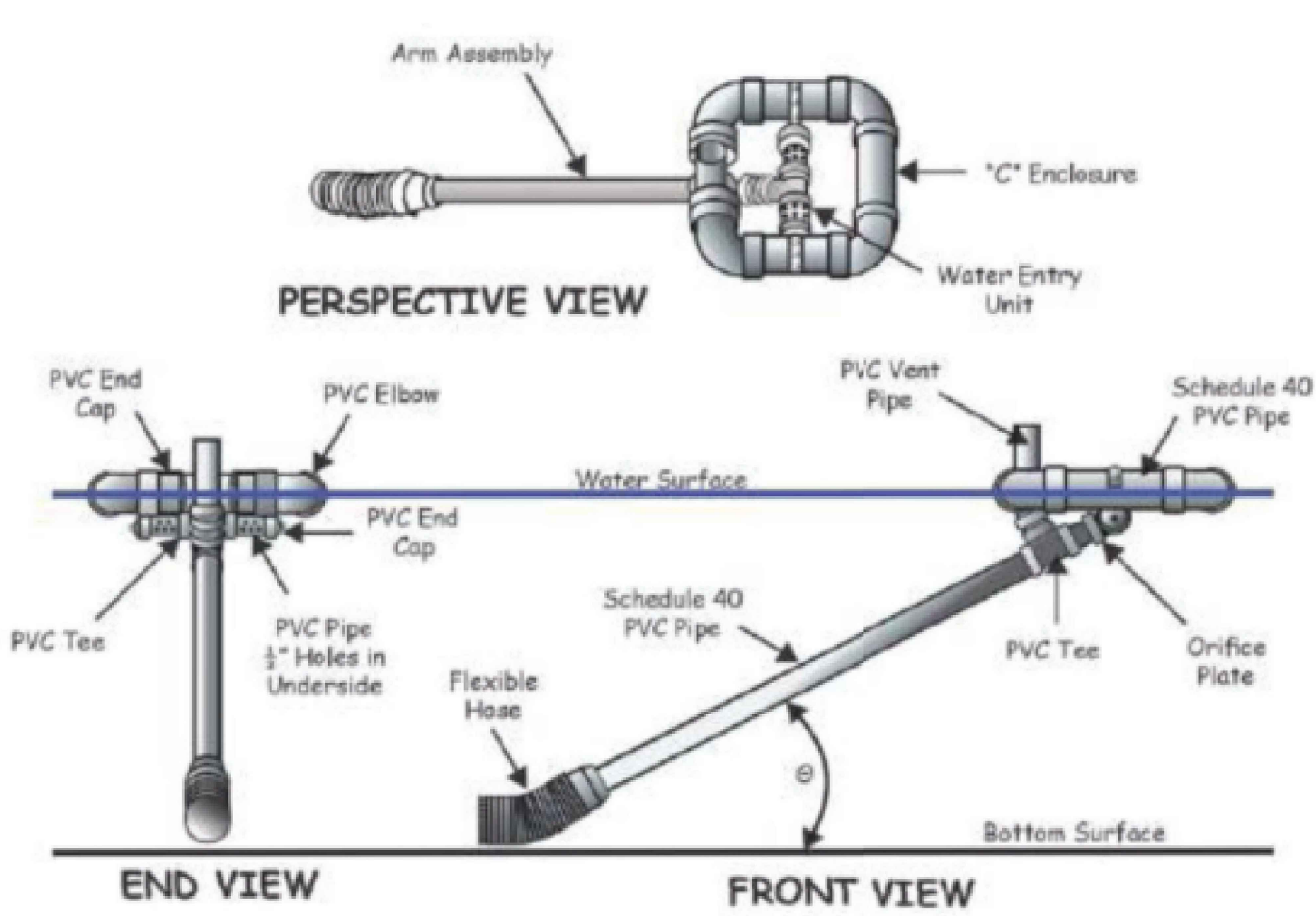
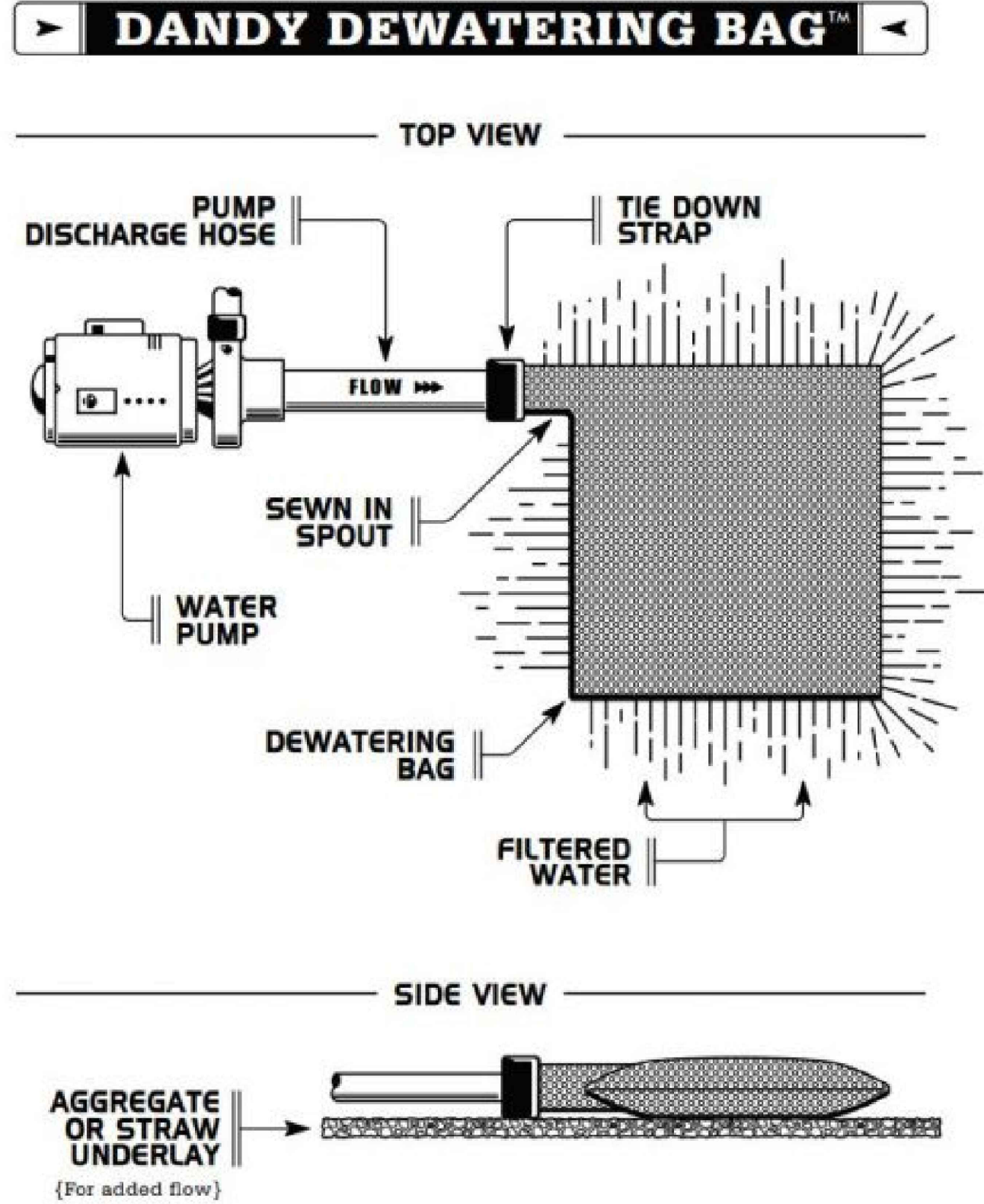


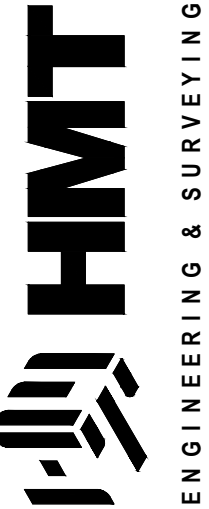
Figure 6.64a Schematic of a skimmer, from Pennsylvania Erosion and Sediment Pollution Control Manual, March, 2000.


NOTE:

CONTRACTOR SHALL USE THIS DEWATERING SKIMMER & SEDIMENT BAG CONFIGURATION FOR ALL DEWATERING.



290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600

**HMT**
ENGINEERING & SURVEYING



EROSION DETAILS (2 OF 2)

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: AUGUST 2024

DRAWN BY: JK

DESIGNED BY: RS

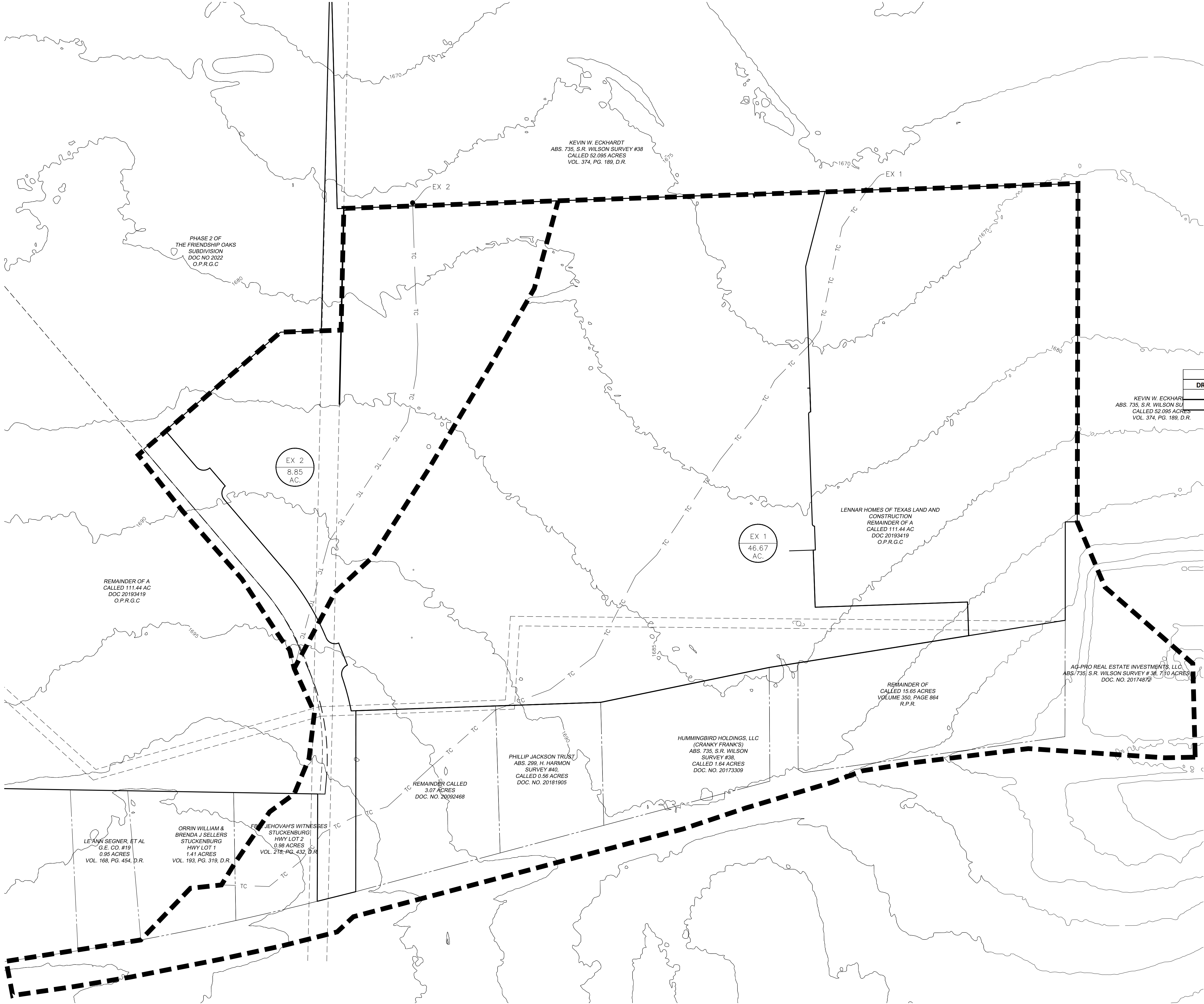
REVIEWED BY: ZJ

HMT PROJECT NO.: 337.065

SHEET

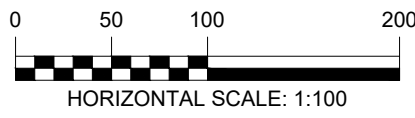
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Drawing Name: N:_Projects\337 - Lennar\065 - Friendship Oaks Unit 3\CDs\337_065_DRNG.dwg User: jashuak Nov 07, 2024 - 9:13am



LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- DRAINAGE AREA
- TC TIME OF CONCENTRATION
- POINT OF CONCENTRATION
- DRAINAGE FLOW DIRECTION
- DRAINAGE AREA LABEL



EXISTING DRAINAGE AREA CALCULATIONS							
DRAINAGE AREA	AREA (Acres)	Tc	CN	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
EX 1	46.67	32	73	31.73	139.87	207.23	337.59
EX 2	8.85	29	69	4.64	24.92	38.1	64.08

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
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11/07/24

EXISTING DRAINAGE
AREA MAP

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: AUGUST 2024

DRAWN BY: JK

DESIGNED BY: RS

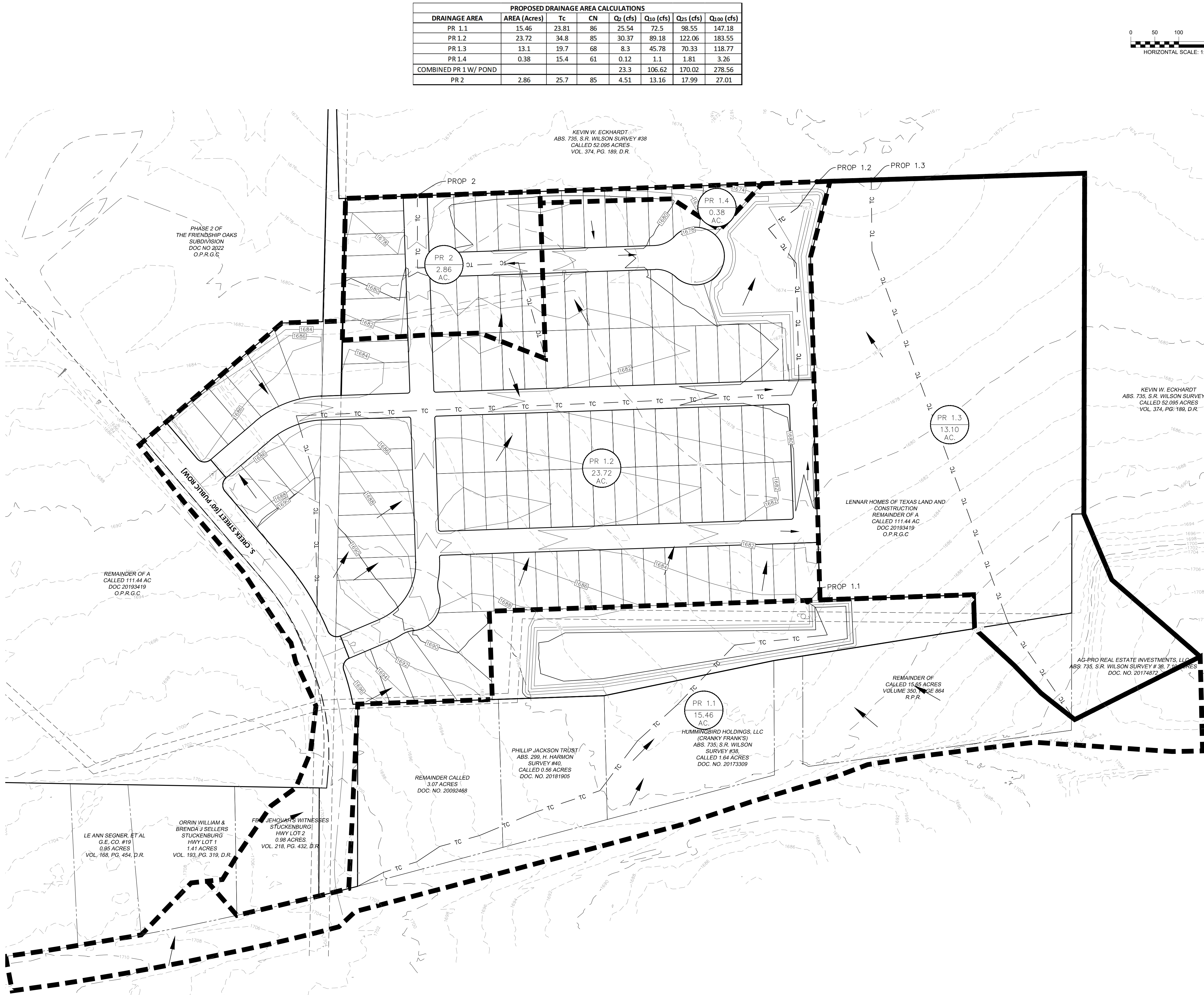
REVIEWED BY: ZJ

HMT PROJECT NO.: 337.065

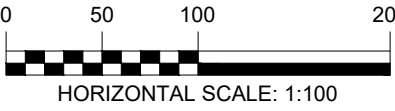
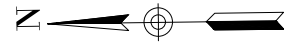
SHEET

C2.01

Drawing Name: N:_Projects\337 - Friendship Oaks Unit 3\Draw\337.065_DRNG.dwg User: joshuak Dec 02, 2024 - 10:43am



PROPOSED DRAINAGE AREA CALCULATIONS							
DRAINAGE AREA	AREA (Acres)	Tc	CN	Q ₂ (cfs)	Q ₁₀ (cfs)	Q ₂₅ (cfs)	Q ₁₀₀ (cfs)
PR 1.1	15.46	23.81	86	25.54	72.5	98.55	147.18
PR 1.2	23.72	34.8	85	30.37	89.18	122.06	183.55
PR 1.3	13.1	19.7	68	8.3	45.78	70.33	118.77
PR 1.4	0.38	15.4	61	0.12	1.1	1.81	3.26
COMBINED PR 1 W/ POND				23.3	106.62	170.02	278.56
PR 2	2.86	25.7	85	4.51	13.16	17.99	27.01



LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- DRAINAGE AREA
- TC TIME OF CONCENTRATION
- POINT OF CONCENTRATION
- DRAINAGE FLOW DIRECTION
- DA ACRES DRAINAGE AREA LABEL

PROPOSED DRAINAGE AREA MAP

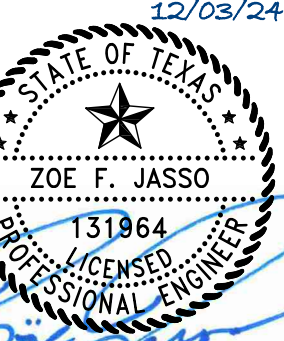
FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION	DESCRIPTION	DATE

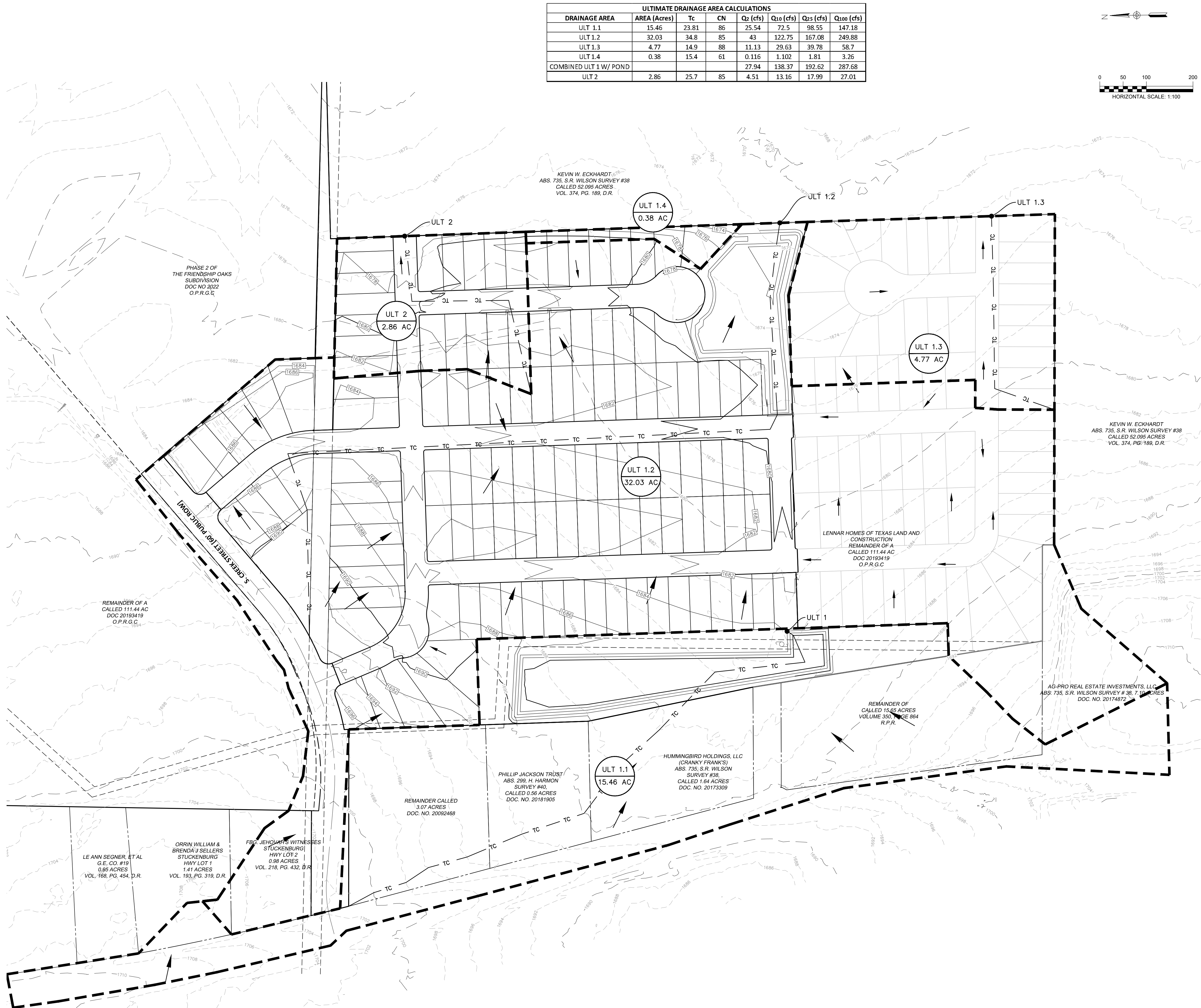
DATE: AUGUST 2024
DRAWN BY: JK
DESIGNED BY: RS
REVIEWED BY: ZJ
HMT PROJECT NO.: 337.065

SHEET
C2.02

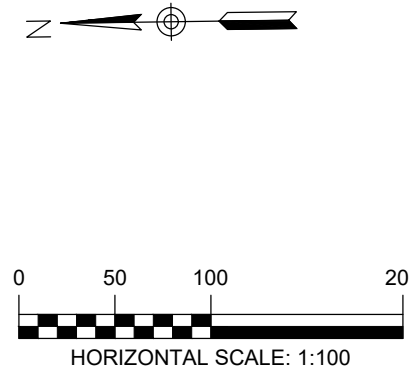
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600



Drawing Name: N:_Projects\337 - Lennar\065 - Friendship Oaks Unit 3\Draw\337.065_DRWG.dwg User: RANDY-RUSSELL Dec 02, 2024 - 10:23am



ULTIMATE DRAINAGE AREA CALCULATIONS							
DRAINAGE AREA	AREA (Acres)	Tc	CN	Q ₂ (cfs)	Q ₁₀ (cfs)	Q ₂₅ (cfs)	Q ₁₀₀ (cfs)
ULT 1.1	15.46	23.81	86	25.54	72.5	98.55	147.18
ULT 1.2	32.03	34.8	85	43	122.75	167.08	249.88
ULT 1.3	4.77	14.9	88	11.13	29.63	39.78	58.7
ULT 1.4	0.38	15.4	61	0.116	1.102	1.81	3.26
COMBINED ULT 1 W/ POND				27.94	138.37	192.62	287.68
ULT 2	2.86	25.7	85	4.51	13.16	17.99	27.01



- LEGEND**
- 700 — EXISTING CONTOURS
 - 700 — PROPOSED CONTOURS
 - B.L. — BUILDING SETBACK LINE
 - U.E. — UTILITY EASEMENT
 - D.E. — DRAINAGE EASEMENT
 - — DRAINAGE AREA
 - TC — TC — TIME OF CONCENTRATION
 - A-1 — POINT OF CONCENTRATION
 - — DRAINAGE FLOW DIRECTION
 - DA ACRES — DRAINAGE AREA LABEL

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600

HMT
ENGINEERING & SURVEYING

12/03/24
STATE OF TEXAS
ZOE F. JASSO
LICENSED PROFESSIONAL ENGINEER
131864

ULTIMATE DRAINAGE
AREA MAP

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: AUGUST 2024

DRAWN BY: JK

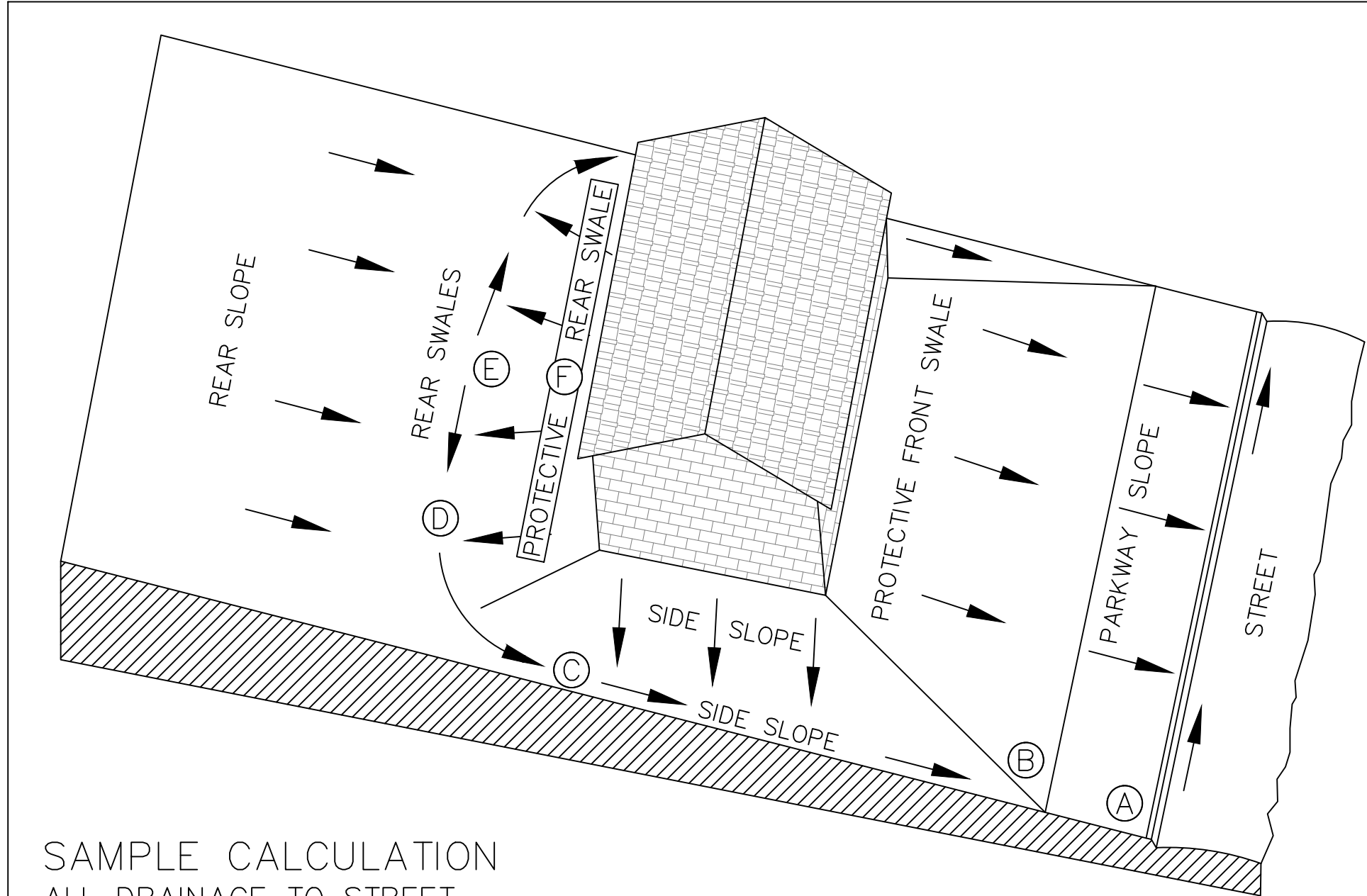
DESIGNED BY: RS

REVIEWED BY: ZJ

HMT PROJECT NO.: 337.065

SHEET

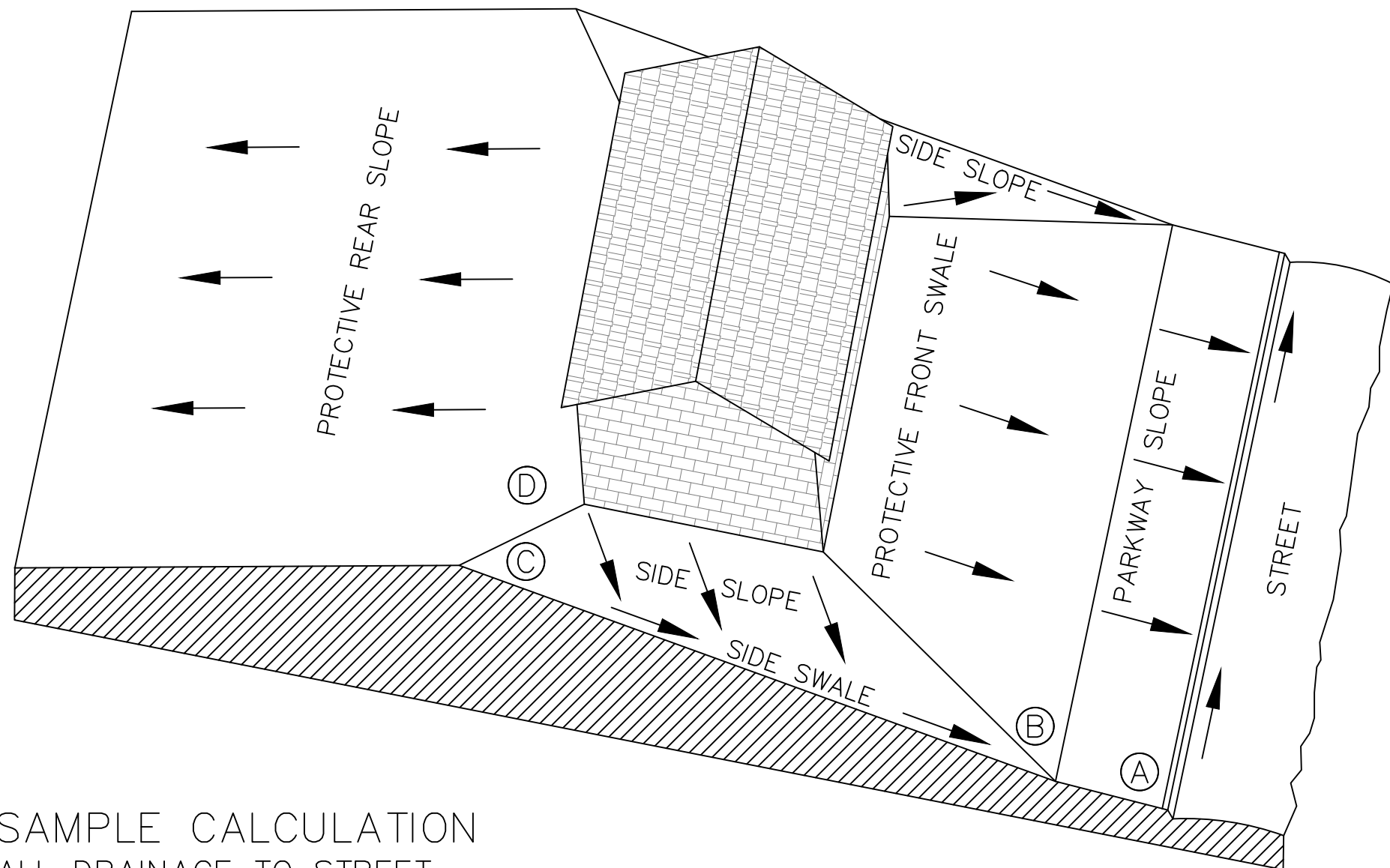
C2.03



SAMPLE CALCULATION
ALL DRAINAGE TO STREET

SAMPLE COMPUTATION OF GRADING CONTROL LINE AF FOR A 60' WIDE LOT WITH A 25' BUILDING LINE, 0.5% STREET, WITH 60' BUILDING DEPTH AND 2% SWALES.				RESULTS OF 1% SWALES	
A	CURB-TOP ON LOT LINE EXTENSION AT HIGH LOT CORNER				
AB	PARKWAY SLOPE: 15' GRASS AND WALK AT 1/4"/FT. (2%)	4" (0.3')	2" (0.2')		
BC	SIDE SWALE: 85' GRASS AT 1/4"/FT. (2%)	21" (1.8')	11" (0.9')		
CD	SWALE TURN WITH 10' RADIUS: 16' GRASS AT 1/4"/FT. (2%)	4" (0.3')	2" (0.2')		
DE**	REAR SWALE: 13' GRASS AT 1/4"/FT. (2%)	3" (0.3')	2" (0.2')		
EF*	PROTECTIVE REAR SLOPE UP FROM HIGH POINT OF SWALES	3" (0.3')	3" (0.3')		
SUB-TOTAL AF FROM CURB TOP TO GROUND AT REAL BLDG WALL		35" (3.0')	20" (1.7')		
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: 35" + 8"		43" (3.6')	28" (2.3')		
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: 35" + 9"		54" (4.5')	39" (3.3')		
* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.					
** LENGTH DE = [1/2(LOT WIDTH - (2x SWALE TURN RADIUS))] - [LOT WIDTH x (STREET GRADIENT x SWALE GRADIENT)]					

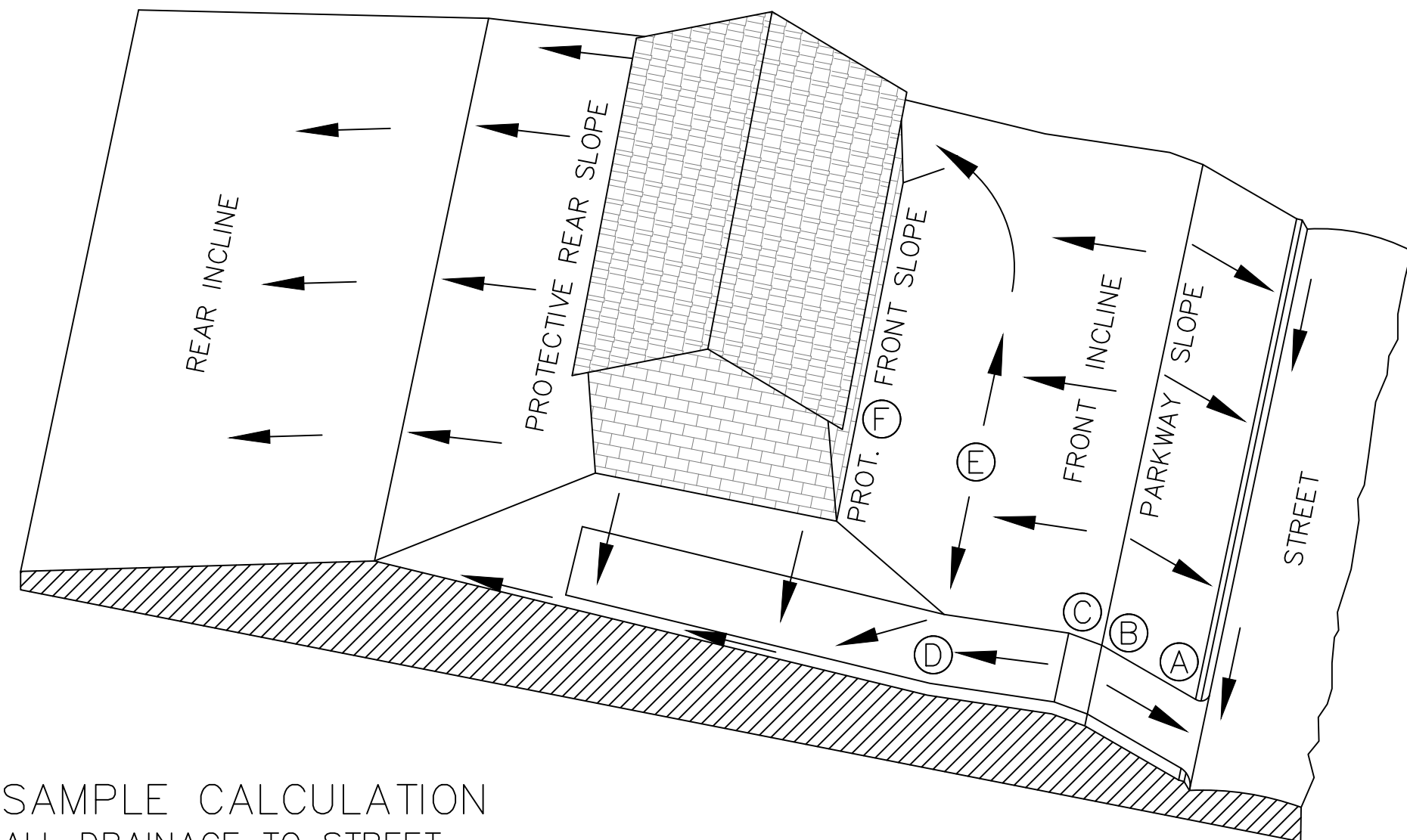
LOT TYPE A



SAMPLE CALCULATION
ALL DRAINAGE TO STREET

SAMPLE COMPUTATION OF GRADING CONTROL LINE AF FOR A 60' WIDE LOT WITH A 25' BUILDING LINE, 0.5% STREET, WITH 60' BUILDING DEPTH AND 2% SWALES.				RESULTS OF 1% SWALES	
A	CURB-TOP ON LOT LINE EXTENSION AT HIGH LOT CORNER				
AB	PARKWAY SLOPE: 15' GRASS AND WALK AT 1/4"/FT. (2%)	4" (0.3')	2" (0.2')		
BC	SIDE SWALE: 85' GRASS AT 1/4"/FT. (2%)	21" (1.8')	11" (0.9')		
CD*	PROTECTIVE SIDE SLOPE @ REAR BLDG. WALL EXTENSION	3" (0.3')	3" (0.3')		
SUB-TOTAL AD FROM CURB TOP TO GROUND AT REAL BLDG WALL		27" (2.4')	16" (1.4')		
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: 27" + 8"		35" (2.9')	24" (2.0')		
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: 35" + 9"		46" (3.8')	35" (2.9')		
* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.					

LOT TYPE B



SAMPLE CALCULATION
ALL DRAINAGE TO STREET

SAMPLE COMPUTATION OF GRADING CONTROL LINE AF FOR A 60' WIDE LOT WITH A 25' BUILDING LINE, 13.5% DRIVEWAY, AND 16' FRONT SWALE DE AT 2.0%.				RESULTS OF 1% SWALES	
A	CURB-TOP HIGH SIDE OF DRIVE NEAR LOW LOT CORNER				
AB	PARKWAY SLOPE: 15' GRASS AND WALK AT 1/4"/FT. (2%)	4" (0.3')	2" (0.2')		
BC	DRIVEWAY GRADE CHANGE: 4' VERTICAL CURVE FROM UP- GRADE DRIVE IN STREET TO DOWN-GRADE DRIVE ON LOT	0" (0.0')	0" (0.0')		
CD	DRIVEWAY DOWN-GRADE TO POINT 10 FEET OUT FROM FRONT OF BUILDING: -11' AT 18"/FT (13.5%)	-18" (-1.5')	-18" (-1.5')		
DE	FRONT SWALE: 16' GRASS AT 1/4"/FT. (2%)	4" (0.3')	2" (0.2')		
EF*	PROT. FRONT SLOPE UP FROM HIGH POINT OF SWALES	3" (0.3')	3" (0.3')		
SUB-TOTAL AF FROM CURB TOP TO GROUND AT FRONT BLDG WALL		-7" (-1.0')	-11" (1.3')		
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: -7" + 8"		1" (-0.3')	-3" (0.7')		
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: -7" + 19"		12" (-0.6')	8" (0.3')		
* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.					

LOT TYPE C

GENERAL SPECIFICATIONS FOR SITE PREPARATION

GENERAL DESCRIPTION

THIS ITEM SHALL CONSIST OF ALL CLEARING AND PREPARATION OF LAND TO BE FILLED, FILLING OF THE LAND, SPREADING, COMPACTION TESTING AND INSPECTION OF THE FILL, AND ALL SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING OF THE CUT AND FILL AREAS TO CONFORM WITH THE LINES, GRADES AND SLOPES AS SHOWN ON THE APPROVED PLANS.

SCARIFYING THE AREA TO BE FILLED

ALL ORGANIC MATTER SHALL BE REMOVED FROM THE SURFACE UPON WHICH THE FILL IS TO BE PLACED, AND SURFACE SHALL BE DISKED OR SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES (6"), ALL SURFACE RUTS OR OTHER UNEVEN FEATURES WILL BE LEVELED PRIOR TO FIELD DENSITY TESTING.

COMPACTION OF THE AREA TO BE FILLED

FOLLOWING THE CLEARING AND DISKING OR SCARIFYING OF THE FILL AREA, IT SHALL BE BLADED UNTIL IT IS UNIFORM AND FREE FROM LARGE CLODS. THE AREA SHALL BE BROUGHT TO ADEQUATE MOISTURE CONTENT AND COMPACTED (TYPICALLY) TO NOT LESS THAN NINETY PERCENT (90%) OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT ASTM D 1557 COMPACTION PROCEDURE, OR 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH THE THD-TEX-113-E COMPACTION PROCEDURE. ALL AREAS EXCEEDING (6") SIX INCHES IN DEPTH, MUST MEET WITH FHWA/HUD HANDBOOK 4140.30 SPECIFICATIONS FOR LAND DEVELOPMENTS ON CONTROLLED EARTHWORK, DATASHEET 79G.

FILL MATERIALS

THE MATERIALS USED SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES, SUCH AS TREES, BRUSH AND RUBBISH.

DEPTH AND MIXING OF FILL LAYERS

THE SELECTED FILL MATERIAL SHALL BE PLACED IN LEVEL, UNIFORM LAYERS WHICH, WHEN COMPACTED, SHALL HAVE A DENSITY CONFORMING TO THE STIPULATED ABOVE. EACH LAYER SHALL BE THOROUGHLY MIXED DURING THE SPREADING TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER. COMPACTED LAYER THICKNESS MAY VARY DEPENDING ON THE COMPACTION EQUIPMENT OF THE DEMONSTRATED CAPABILITY.

ROCK

WHEN FILL MATERIAL INCLUDES ROCK, THE MAXIMUM ROCK SIZE SHALL BE AS APPROVED BY THE GEOTECHNICAL ENGINEER. NO LARGE ROCKS SHALL BE ALLOWED TO NEST AND ALL VOIDS MUST BE FILLED WITH SMALL STONES OR SOIL AND ADEQUATELY COMPACTED.

COMPACTION OF FILL LAYER

COMPACTION EQUIPMENT SHALL BE CAPABLE OF COMPACTING THE FILL TO THE SPECIFIED DENSITY. COMPACTION SHALL BE ACCOMPLISHED WHILE THE FILL MATERIAL IS AT OR NEAR THE APPROPRIATE MOISTURE CONTENT. COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER THE ENTIRE STRUCTURAL AREA (BENEATH PROPOSED STRUCTURES).

COMPACTION OF SLOPES

THE FACES OF FILL SLOPES SHALL BE COMPACTED. COMPACTION OPERATIONS SHALL BE CONTINUED UNTIL THE SLOPE FACES ARE STABLE BUT NOT TO DENSE FOR PLANTING ON THE SLOPES. COMPACTION OF THE SLOPE FACE MAY BE DONE PROGRESSIVELY IN INCREMENTS OF THREE TO FIVE FEET (3' TO 5') IN FILL HEIGHT AS THIS FILL PROGRESSES OR AFTER THE FILL HAS BEEN BROUGHT TO ITS TOTAL HEIGHT.

DENSITY TEST

FIELD DENSITY TESTS SHALL BE PERFORMED ON ALL LAYERS OF FILL WHEN THE FILL IS BEING PLACED AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE MAXIMUM FILL HEIGHT BETWEEN DENSITY TESTING SHALL BE TWELVE INCHES (12"). ALL TESTING SHALL BE REQUESTED BY THE CONTRACTOR TO MEET THE CONTRACTOR'S CONSTRUCTION SCHEDULE. NOTIFICATION BY THE CONTRACTOR TO CONDUCT TESTS SHALL BE AT LEAST THE DAY BEFORE. THIS NOTIFICATION SHALL INCLUDE THE FILL AREA LOCATION (LOT AND BLOCK), THE LIFT OR HEIGHT OF FILL AND APPROXIMATED DESIRED TIME OF TESTING. WHEN THESE TEST INDICATE THAT THE DENSITY OF ANY LAYER OF FILL OR PORTION THEREOF IS BELOW THE REQUIRED DENSITY, THE PARTICULAR LAYER OR PORTION SHALL BE REWORKED AND RETESTED AT THE EXPENSE OF THE CONTRACTOR UNLESS THE CONTRACTOR CAN SHOW EVIDENCE THAT CIRCUMSTANCES BEYOND HIS CONTROL REQUIRED THE RETESTING. GENERALLY, THE SPECIFIC TESTING WILL BE AS FOLLOWS AND CONDUCTED BY A GEO-TECHNICAL ENGINEER OR STAFF.

- THE LAND TO BE FILLED (PREPARED SUBGRADE) SHALL BE PREPARED AND TESTED AT A FREQUENCY AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
- THE FIRST LIFT OF COMPACTED FILL (GENERALLY 8-12 IN.) SHALL BE TESTED AS DETERMINED BY THE GEOTECHNICAL ENGINEER. ANY AREAS SUPPORTING THE PROPOSED STRUCTURES REQUIRING FILL SHALL BE TESTED FOR DENSITY COMPLIANCE.
- FILLS SHALL BE TESTED AT A MAXIMUM OF EACH TWELVE INCHES (12") OF FILL.
- TEST RESULTS WILL BE PROVIDED BY THE FIELD TECHNICIAN TO THE CONTRACTOR WHEN POSSIBLE; HOWEVER, ALL TEST RESULTS ARE TO BE REVIEWED BY THE GEOTECHNICAL ENGINEER FOR COMPLIANCE. THE ENGINEER WILL NOTIFY THE CONTRACTOR OF ALL TEST RESULTS.

CUT/FILL LOTS

AREAS INVOLVING CUT ON THE PORTION AND FILL ON ANOTHER PORTION OF A SPECIFIC LOT SHALL BE PREPARED TO A MINIMUM DEPTH OF 6 IN., AND WILL BE THE SAME MATERIAL CLASSIFICATION AT THE SAME COMPACTION AND MOISTURE CONTENT. FIELD DENSITY TESTS SHALL BE REQUIRED ON EACH CUT/FILL LOT FOR THE PURPOSE OF DETERMINING UNIFORMITY OF THE AREA SUPPORTING THE PROPOSED STRUCTURES.

HUD 79-G

HUD 79-G REQUIREMENT FOR FILL MATERIAL OF 6 INCHES AND MORE WILL BE CONDUCTED. ALL CUT AREAS WILL ALSO MEET THE REQUIREMENTS FOR HUD 79-G COMPACTION TESTING. IN ADDITION, ENGINEERS MUST PROVIDE VERIFICATION OF ALL AREAS WHICH DO NOT REQUIRE HUD 79-G. AFTER SITE GRADING IS COMPLETED, GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CONTRACTOR AND OWNER A 79-G LETTER.

DRAINAGE NOTE

FINISHED FLOOR ELEVATIONS

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 DOWNHILL SIDE OF THE STREET SHALL HAVE A PROPERLY SIZED CROSS SWALE PREVENTING RUNOFF FROM ENTERING THE GARAGE.



290 S. CASTELL AVE., STE. 100
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TBPE FIRM F-10961
TBPLS FIRM 1053600



GRADING DETAILS

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

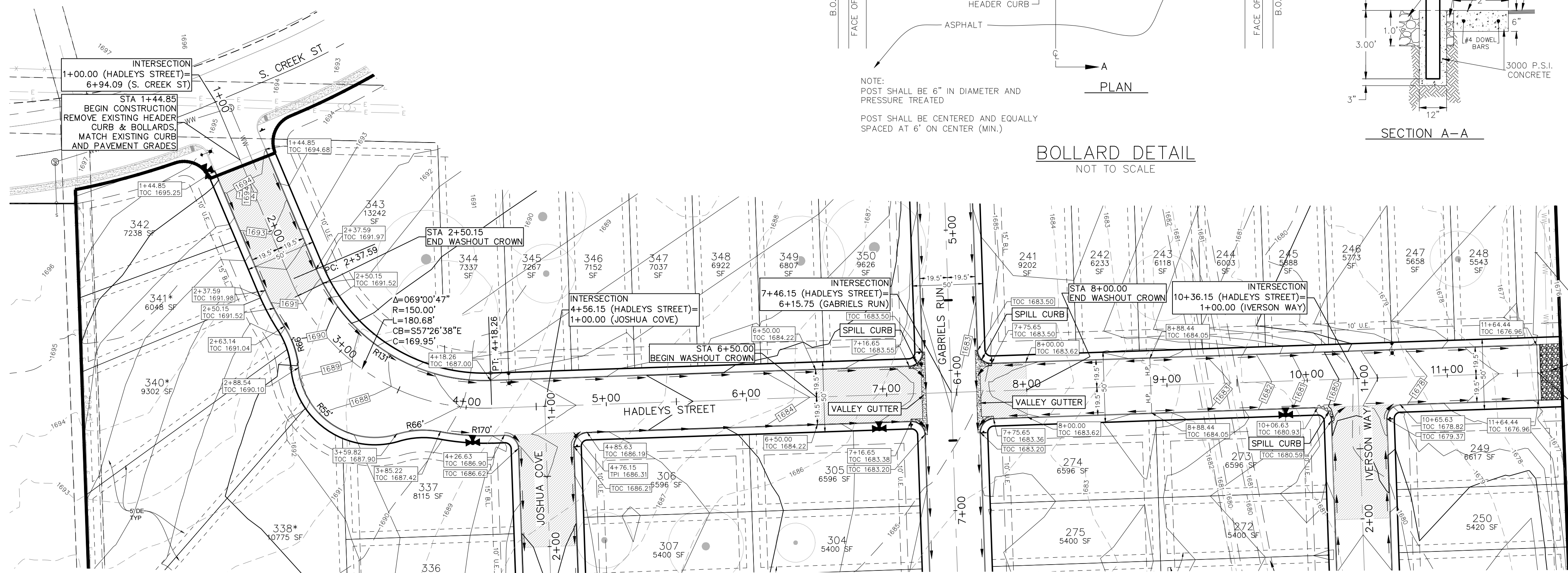
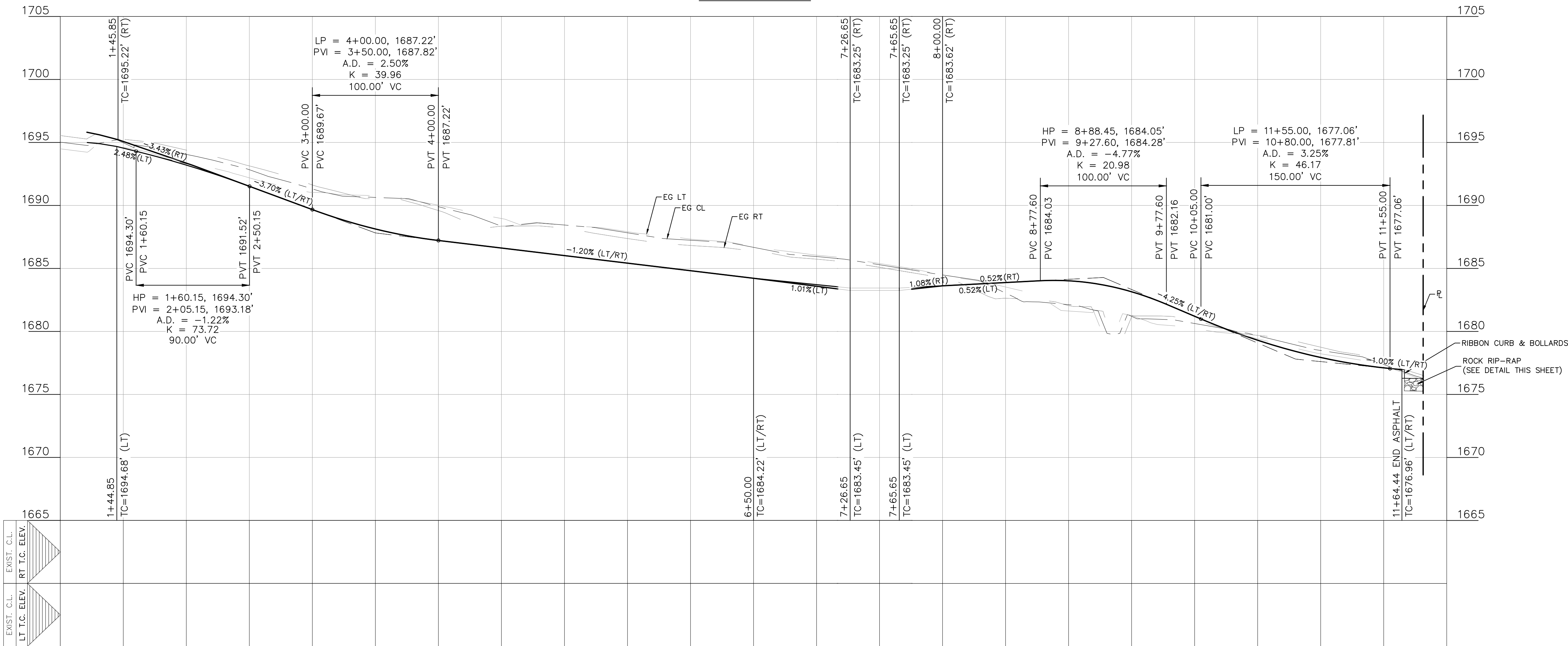
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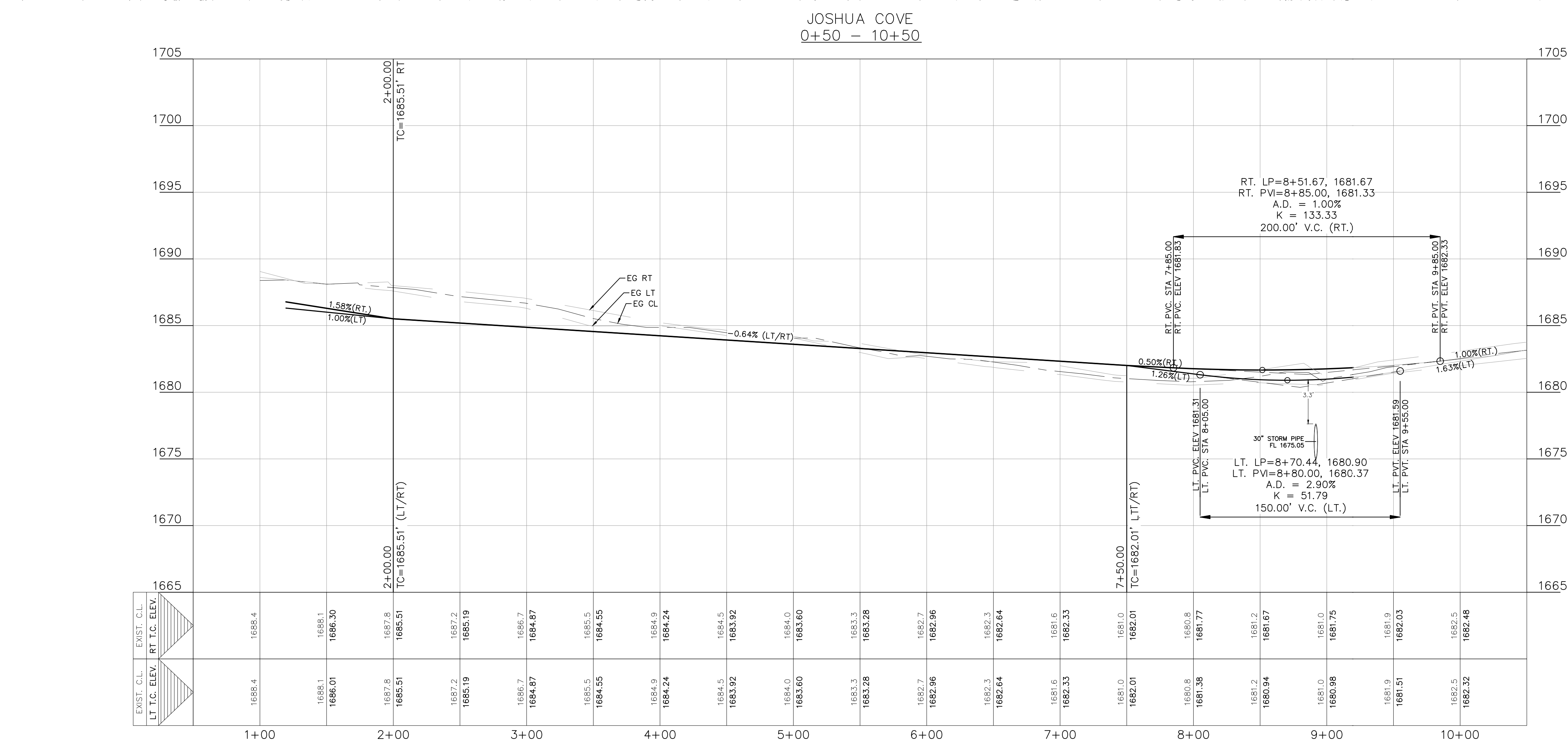
NO.	REVISION	DESCRIPTION	DATE

DATE:	October 2022
DRAWN BY:	MK
DESIGNED BY:	RS
REVIEWED BY:	WBB
HMT PROJECT NO.:	337.065

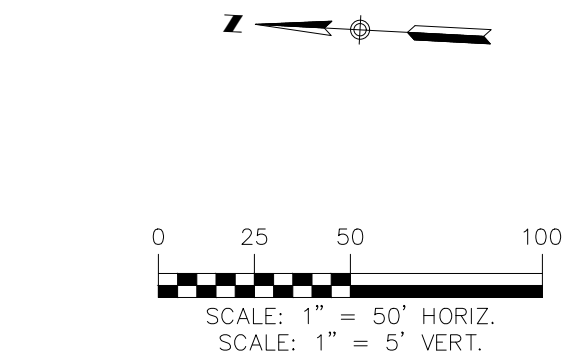
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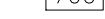

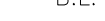



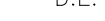










C3.02





THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.



- | | |
|---|--|
|  | EXISTING CONTOURS |
|  | PROPOSED CONTOURS |
|  | BUILDING SETBACK LINE |
|  | UTILITY EASEMENT |
|  | DRAINAGE EASEMENT |
|  | A.D.A. RAMP |
|  | FLOW ARROW |
|  | WASHOUT CROWN AREAS |
|  | SPILL CURB |
|  | EXISTING GROUND LEFT (EG LT) |
|  | EXISTING GROUND RIGHT (EG RT) |
|  | EXISTING GROUND CENTER (EG CTR) |
|  | PROPOSED TOP OF CURB (PR TC) |
|  | ACCESSIBLE CROSSING AREA |
|  | PROPOSED TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS |
|  | SIDEWALK RAMP TYPE |
|  | TO BE CONSTRUCTED AT TIME OF STREET CONSTRUCTION
(SEE DETAIL SHEET C4-11 & C4-12) |
|  | SIDEWALK TO BE CONSTRUCTED
BY SITE DEVELOPMENT CONTRACTOR |

- ## NOTES
1. LOCAL STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 30 MPH.
 2. IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
 3. CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
 4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
 5. RADIUS ON CURB RETURN IS 10 FT UNLESS OTHERWISE STATED

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600



**JOSHUA COVE
PLAN & PROFILE**

[illegible]

DATE: AUGUST 202

DRAWN BY: JK

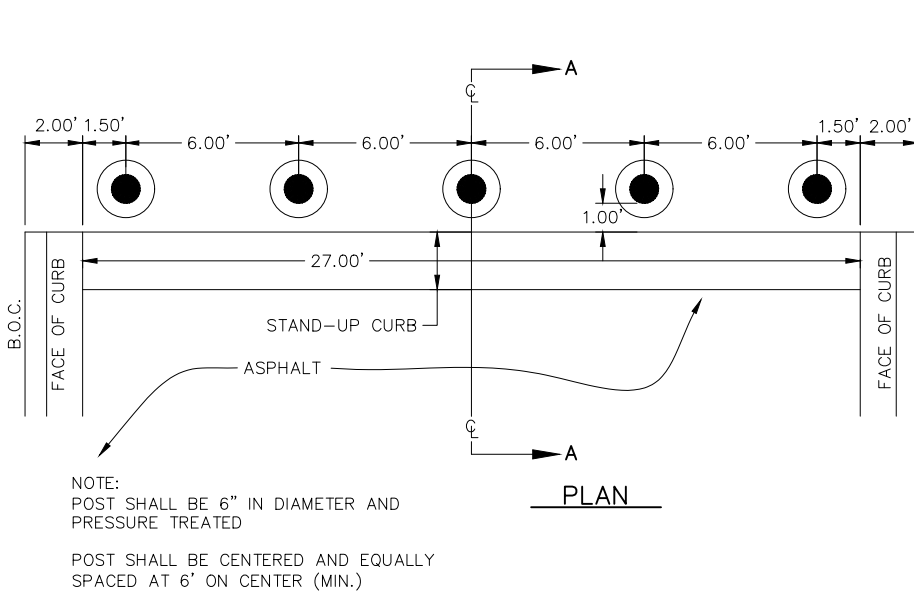
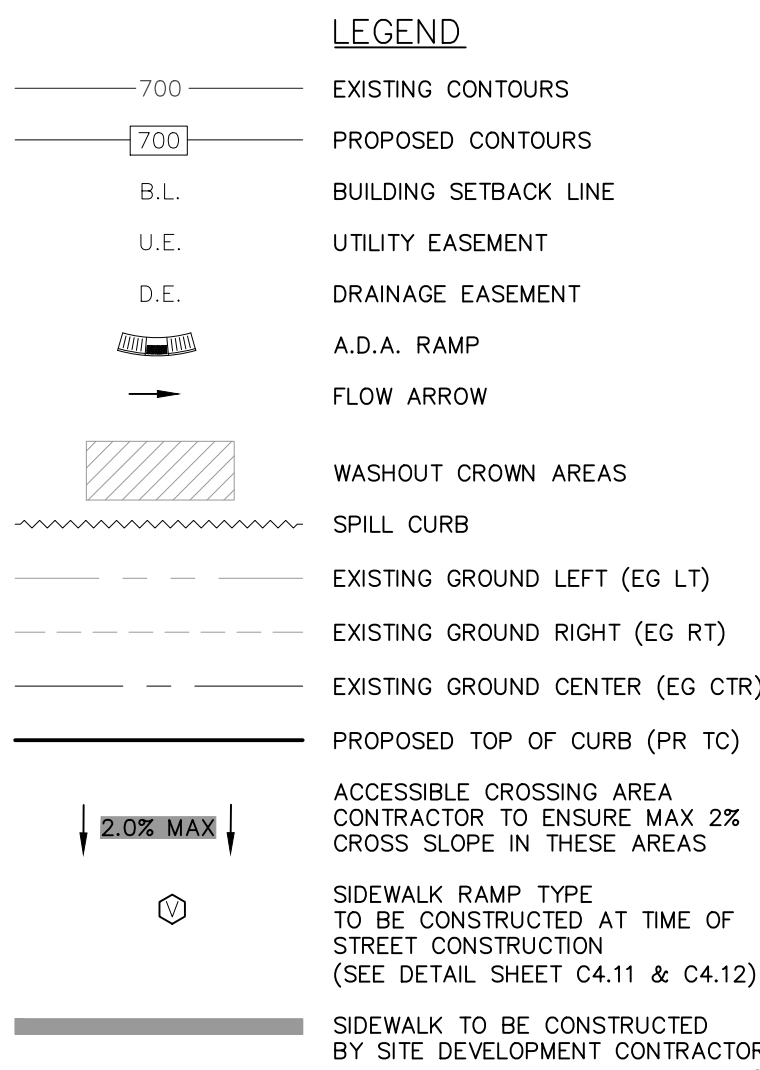
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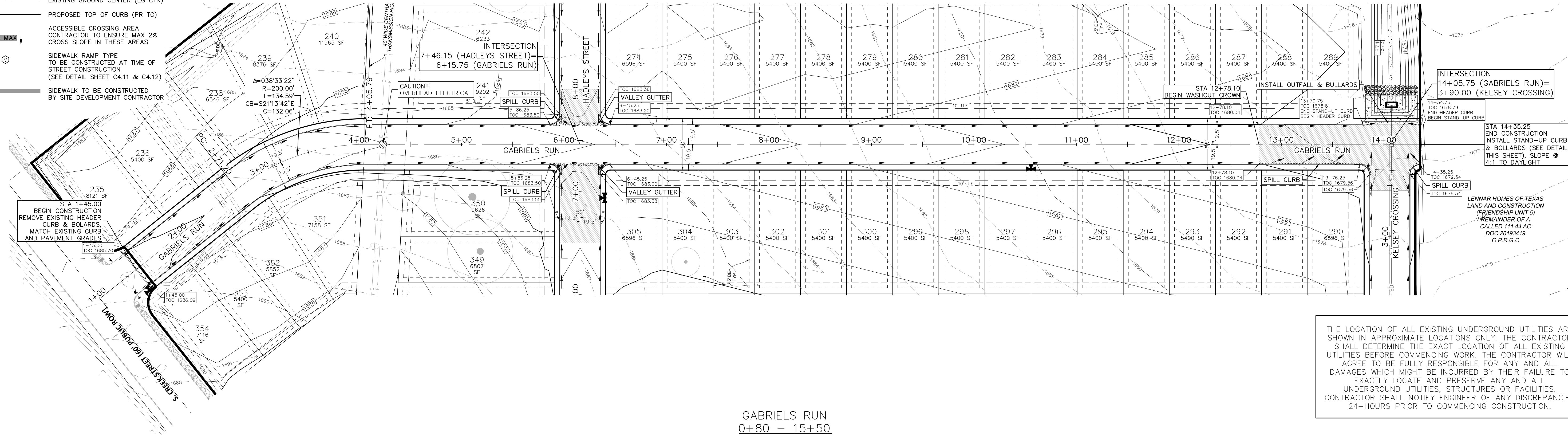
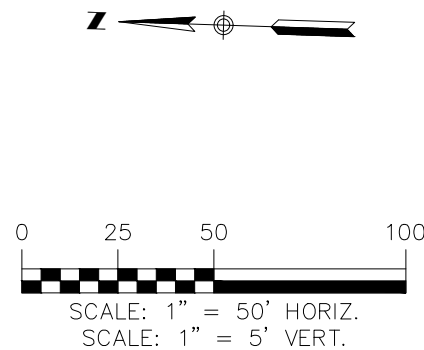
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C4.02

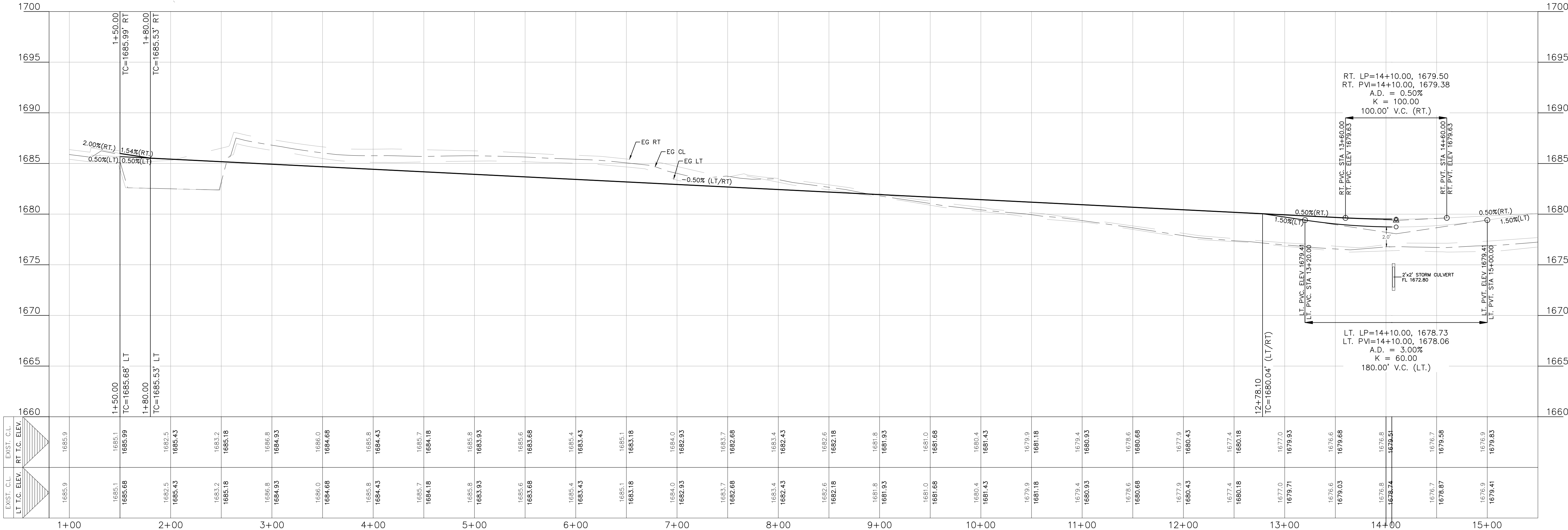
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HMT
ENGINEERING & SURVEYING

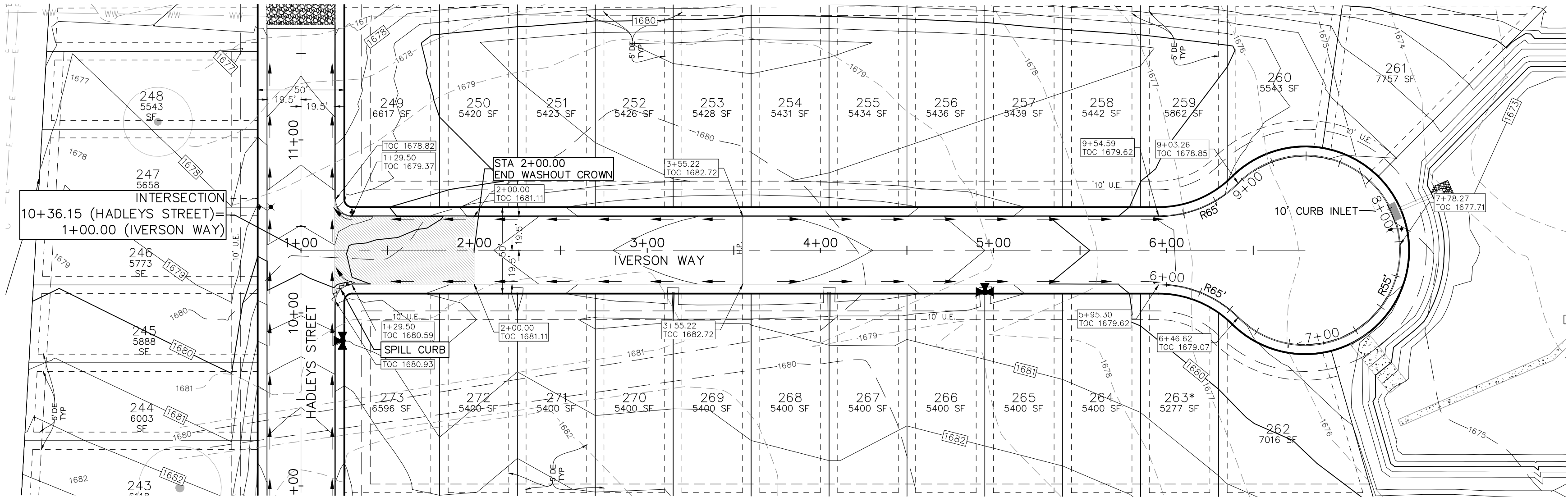
11/07/84
STATE OF TEXAS
ZOE F. JASSO
131984
PROFESSIONAL ENGINEER

GABRIELS RUN
PLAN & PROFILE
FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

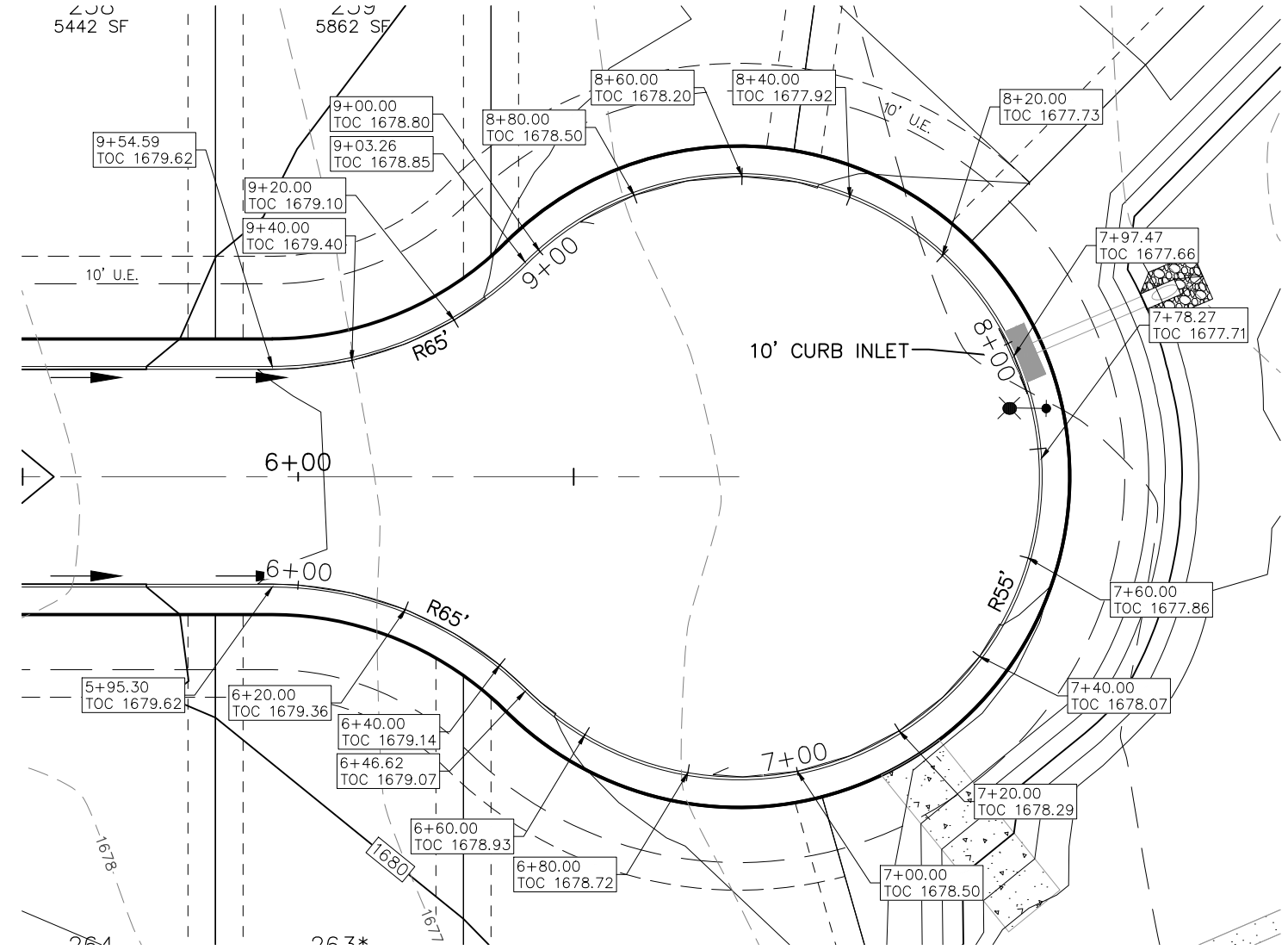
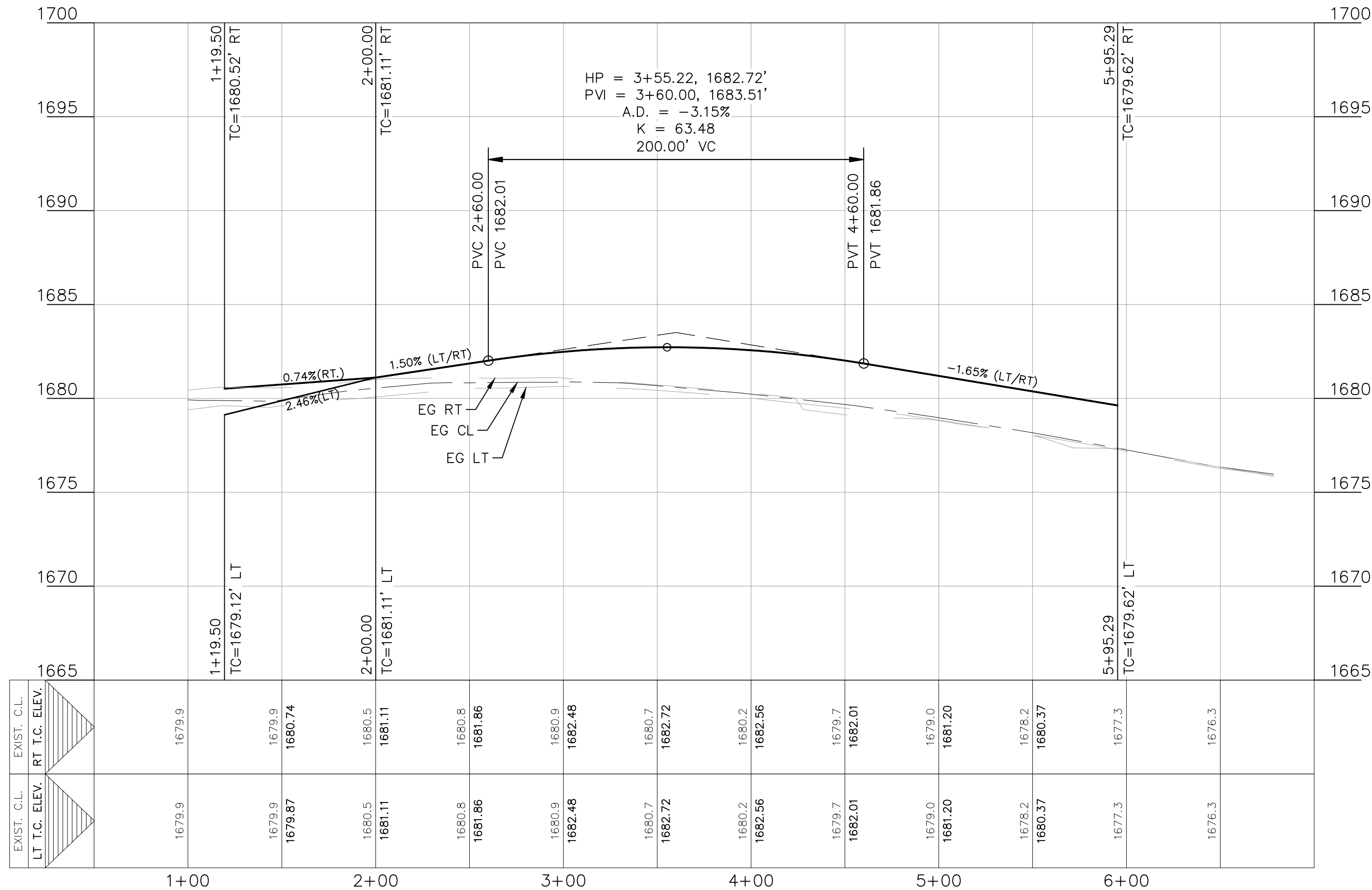
NO.	REVISION	DESCRIPTION	DATE

DATE: **AUGUST 2024**
DRAWN BY: **JK**
DESIGNED BY: **RS**
REVIEWED BY: **ZJ**
HMT PROJECT NO.: **337.065**

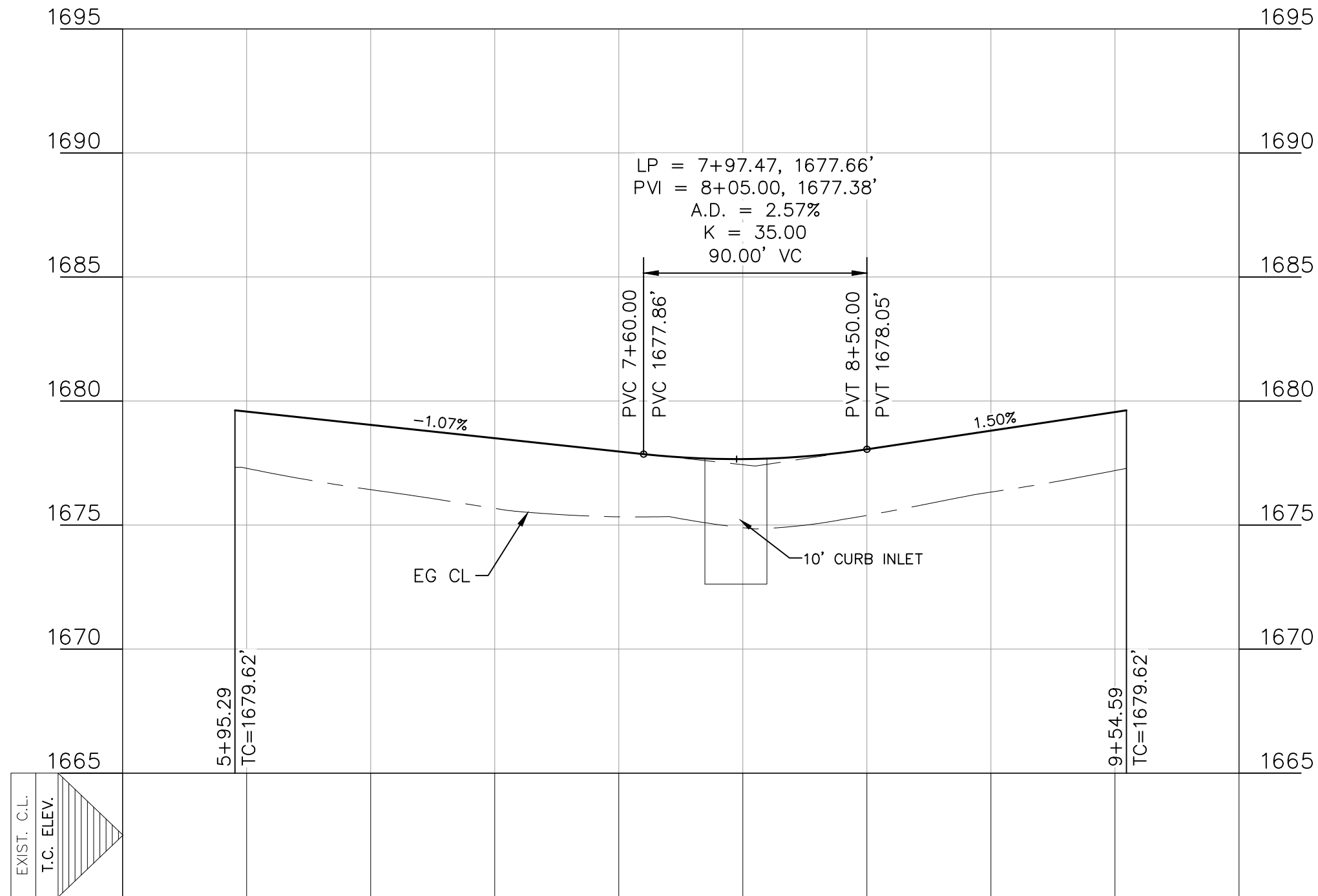
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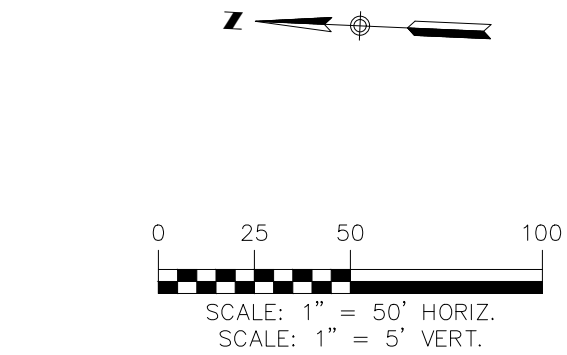
IVERSON WAY
0+50 - 7+00



IVERSON CDS
5+50 - 10+00



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CONTRACTOR TO ENSURE MAX 2%
CROSS SLOPE IN THESE AREAS
 - SIDEWALK RAMP TYPE
TO BE CONSTRUCTED AT TIME OF
STREET CONSTRUCTION
(SEE DETAIL SHEET C4.11 & C4.12)
 - SIDEWALK TO BE CONSTRUCTED
BY SITE DEVELOPMENT CONTRACTOR
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**IVERSON WAY
PLAN & PROFILE**

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **AUGUST 2024**

DRAWN BY: **JK**

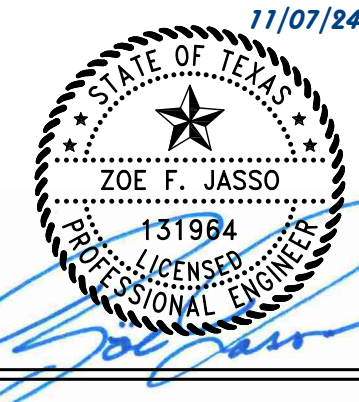
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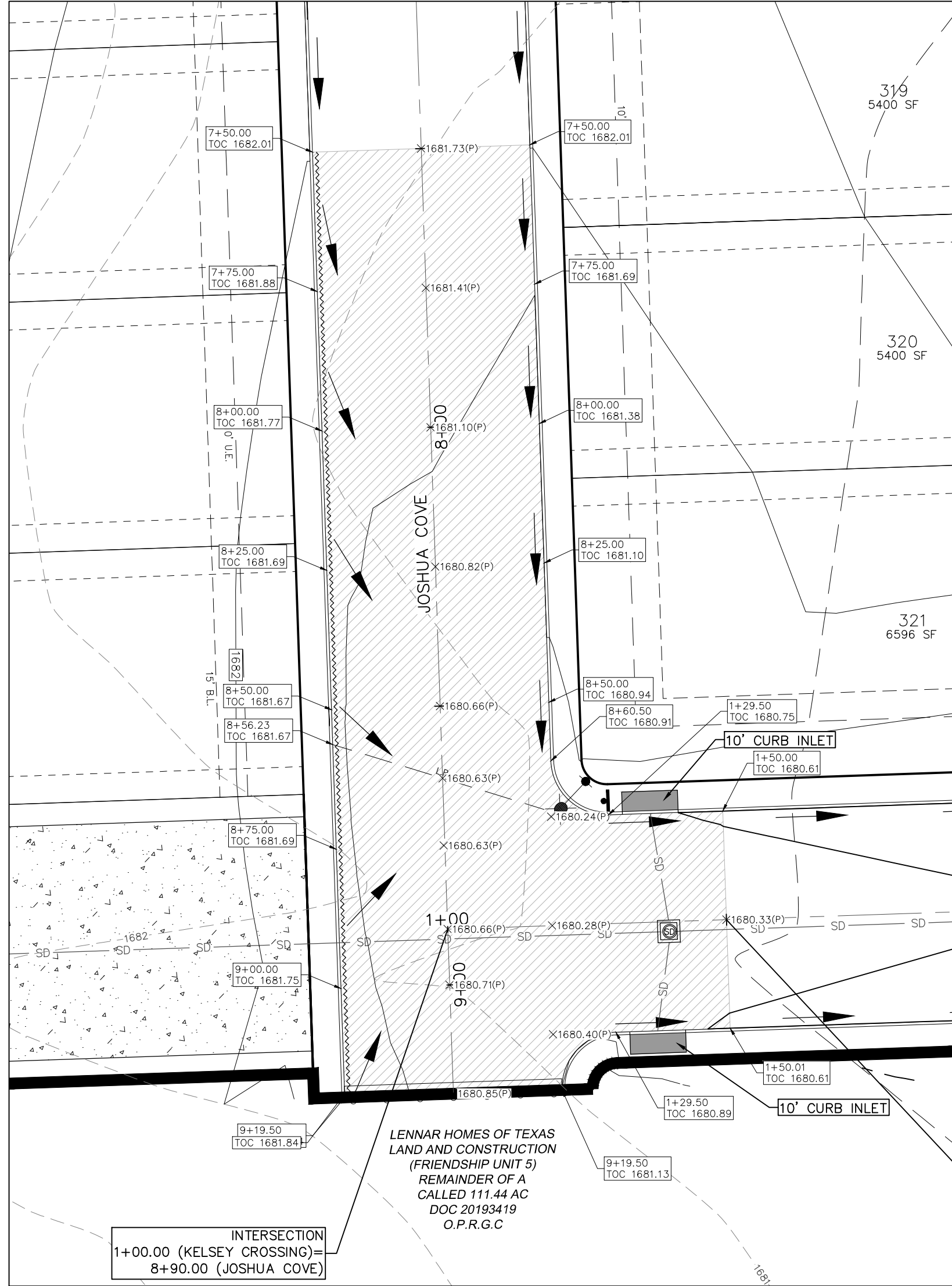
REVIEWED BY: **ZJ**

HMT PROJECT NO.:
337.065

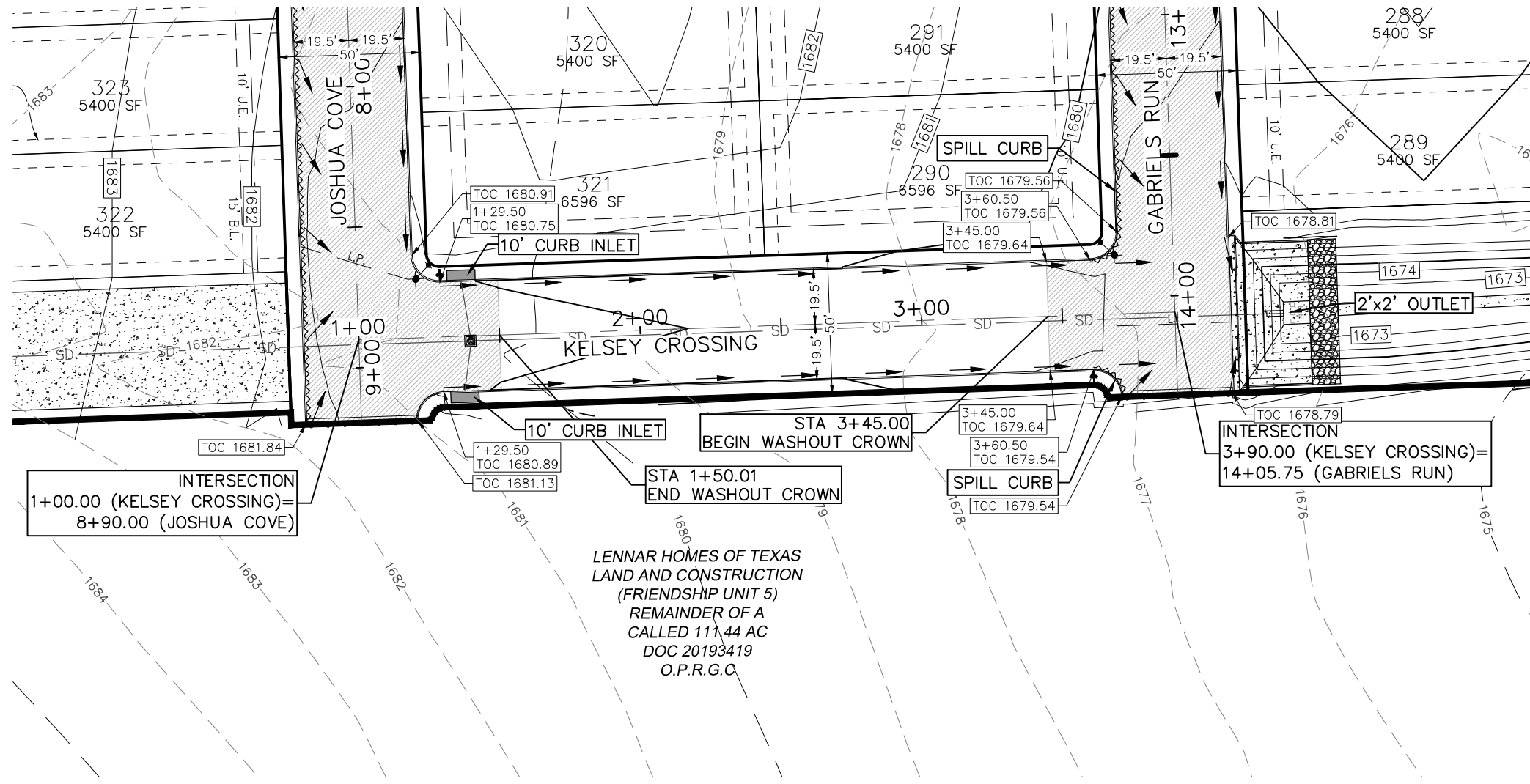
SHEET
C4.04

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600

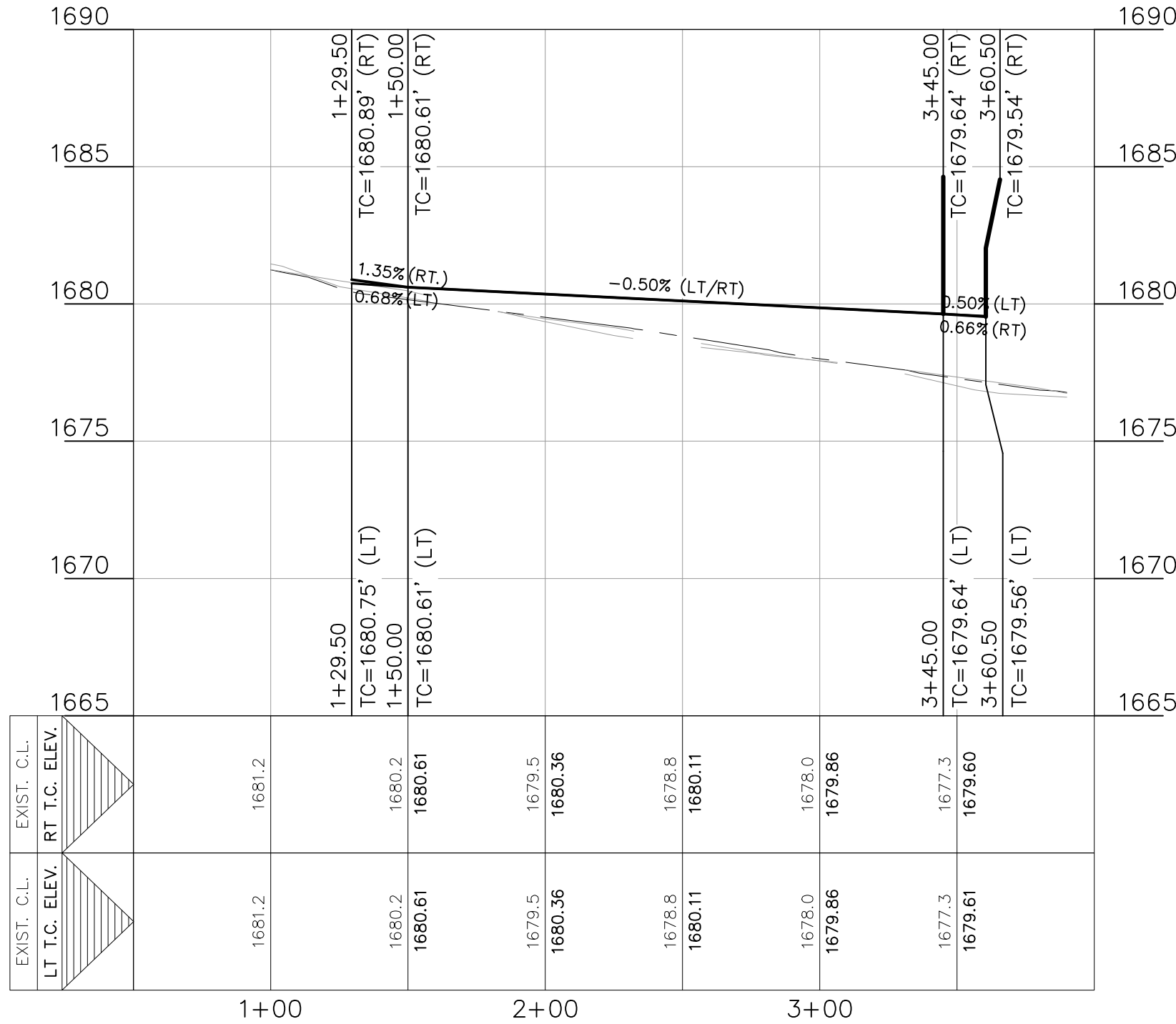




INTERSECTION DETAIL
SCALE: 1"=20'

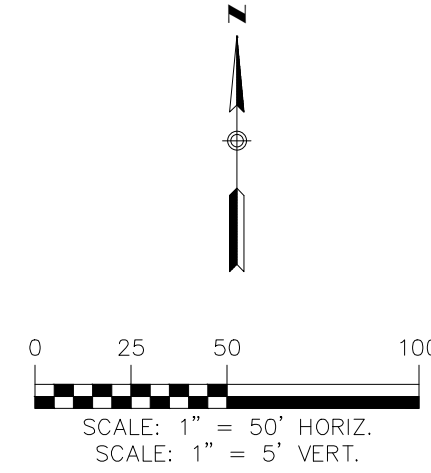


KELSEY CROSSING
0+50 - 4+00



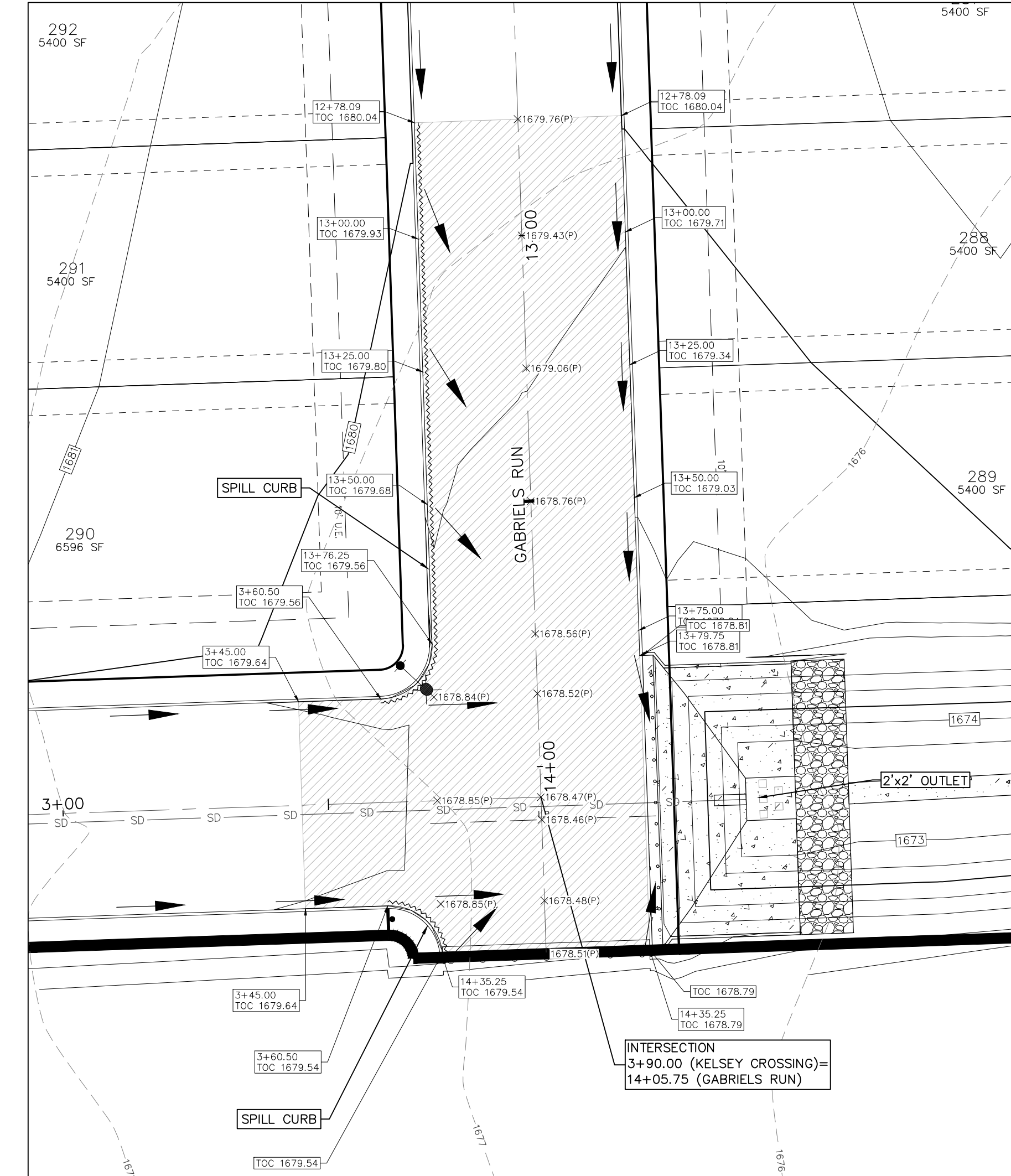
NOTES

1. LOCAL STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 30 MPH.
2. IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
3. CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
5. RADIUS ON CURB RETURN IS 10 FT UNLESS OTHERWISE STATED



LEGEND

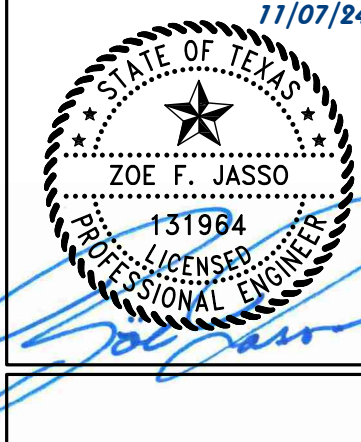
- 700 EXISTING CONTOURS
- 700 PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- A.D.A. RAMP
- FLOW ARROW
- WASHOUT CROWN AREAS
- SPILL CURB
- EXISTING GROUND LEFT (EG LT)
- EXISTING GROUND RIGHT (EG RT)
- EXISTING GROUND CENTER (EG CTR)
- PROPOSED TOP OF CURB (PR TC)



INTERSECTION DETAIL
SCALE: 1"=20'

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600



KELSEY CROSSING
PLAN & PROFILE

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION	DESCRIPTION	DATE

DATE: AUGUST 2024

DRAWN BY: JK

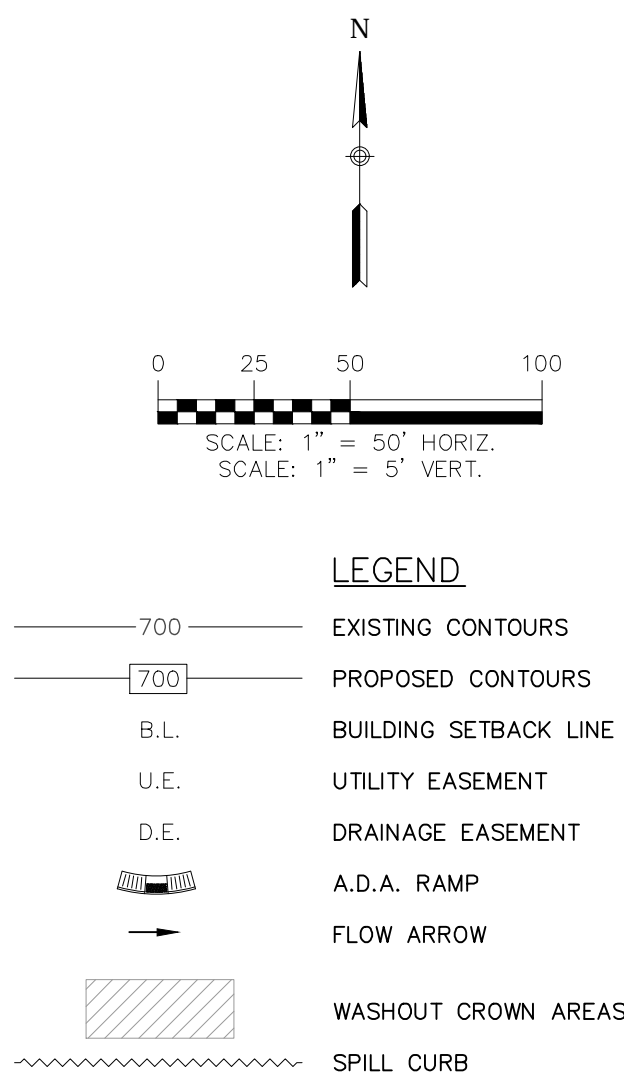
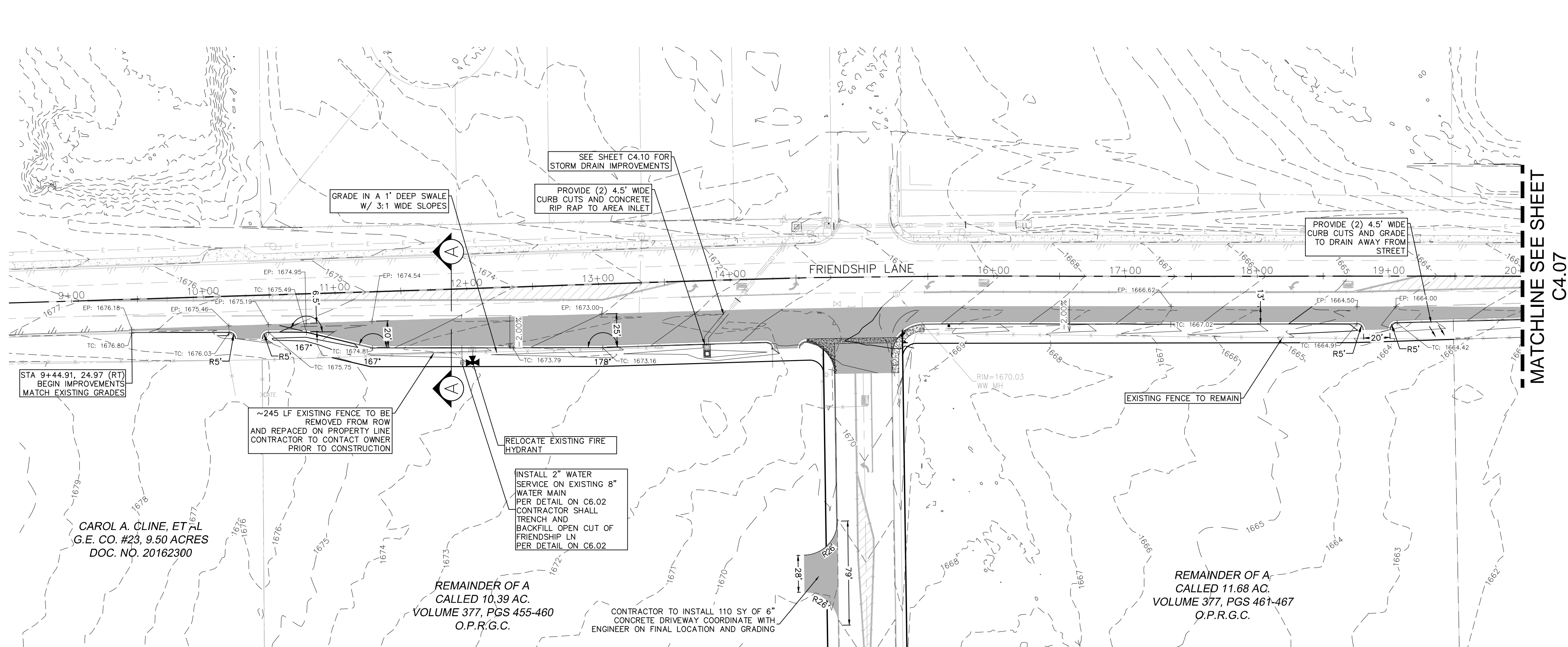
DESIGNED BY: RS

REVIEWED BY: ZJ

HMT PROJECT NO.:
337.065

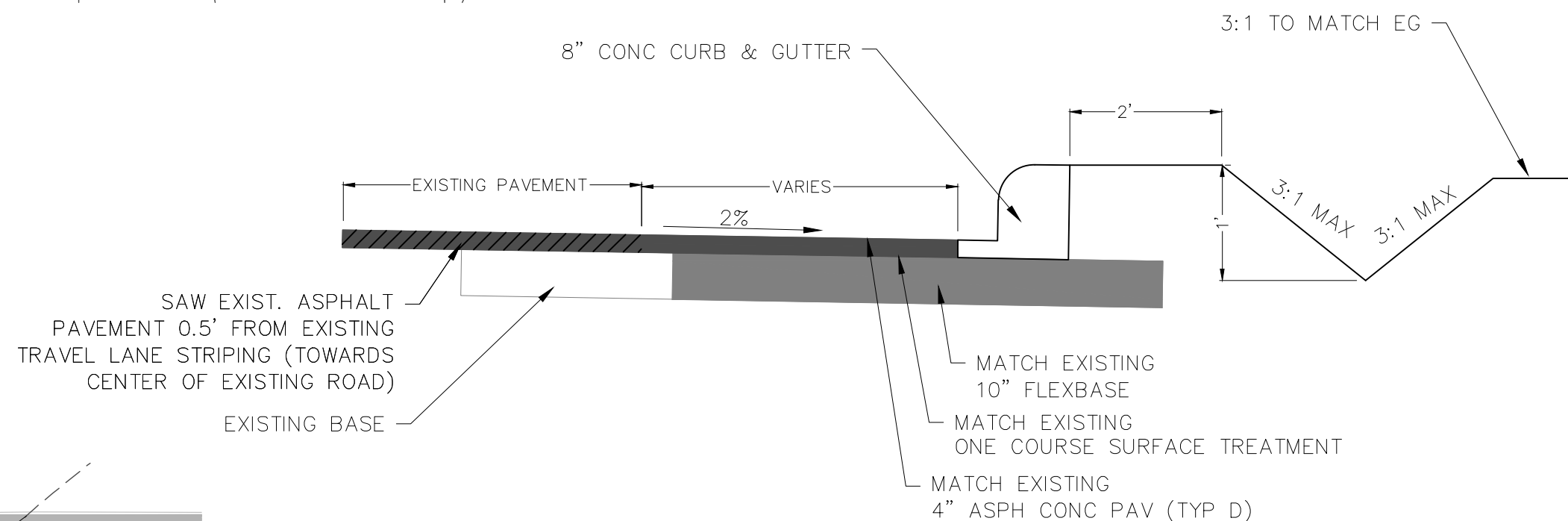
SHEET
C4.05

Drawing Name: N:_Projects\337 - Lerner\065 - Friendship Oaks Unit 3\Draw\337.065_STREET PP FRIENDSHIP.dwg User: joshuad Nov 07, 2024 - 8:01 am



NOTES

- LOCAL STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 30 MPH.
- IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
- CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.



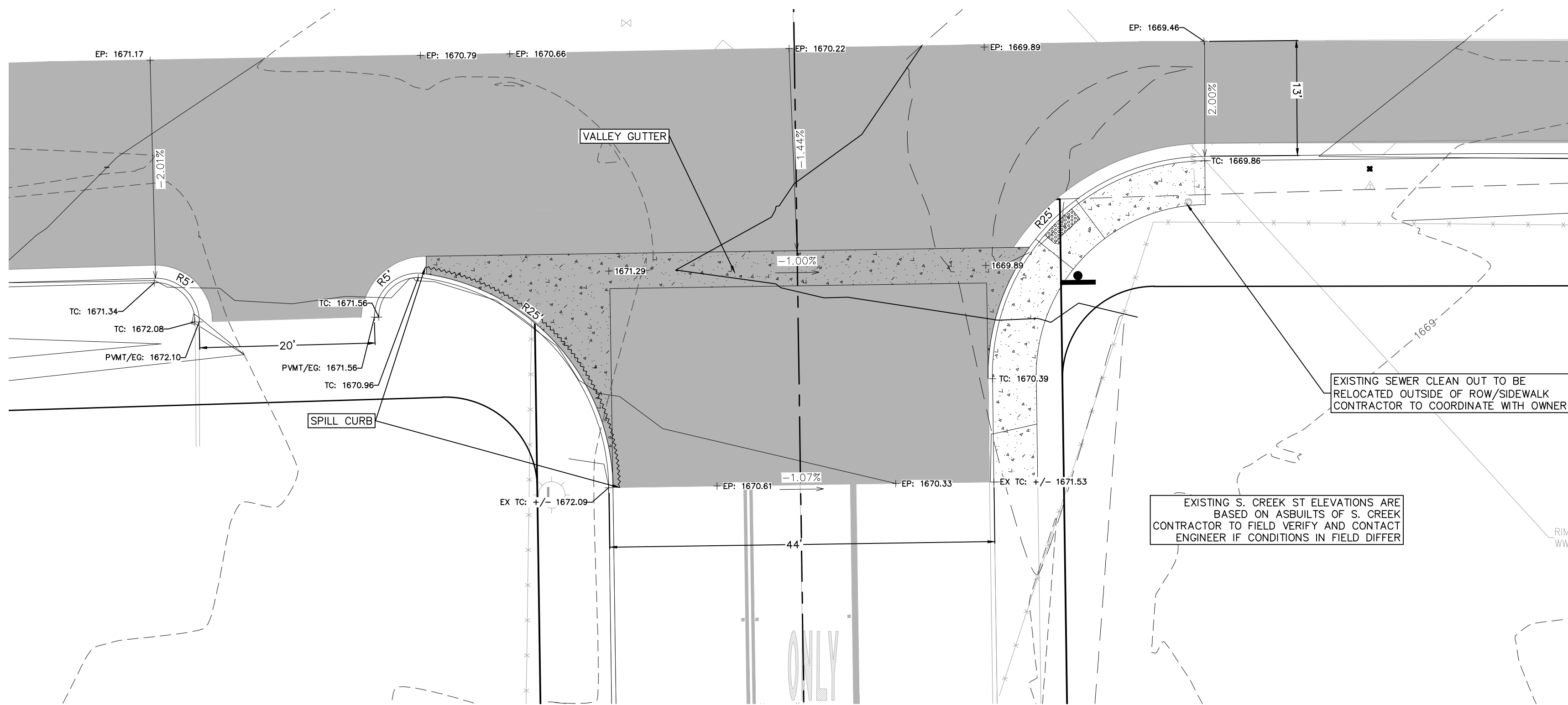
NOTES:

- REMOVE EXISTING ASPHALT AND CONC. CURB & GUTTER. REBUILD AS PAVEMENT WIDENING IS DONE.
- ALL DISTURBED AREAS TO BE TREATED WITH TOPSOIL.
- PAVEMENT WIDENING CROSS SLOPE SHALL MEET EXISTING PAVEMENT CROSS SLOPE.
- LIMITS OF ASPHALT & BASE REMOVAL SHOWN ARE MINIMUMS. REMOVAL LIMITS MAY BE MORE BASED ON CONTRACTOR NEW BASE INSTALLATION PROCEDURES.

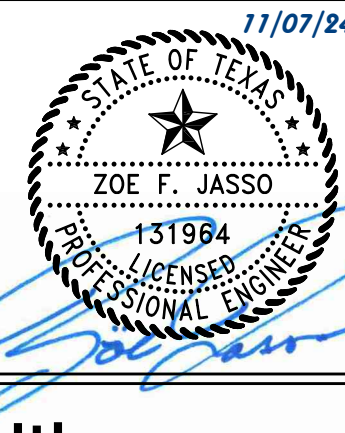
SECTION A-A

PROPOSED PAVEMENT WIDENING DETAIL W/ SIDE DITCH

NOT TO SCALE



290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600



FRIENDSHIP LANE PLAN & PROFILE (1 OF 2)

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION	DESCRIPTION	DATE

DATE: AUGUST 2024

DRAWN BY: JK

DESIGNED BY: RS

REVIEWED BY: ZJ

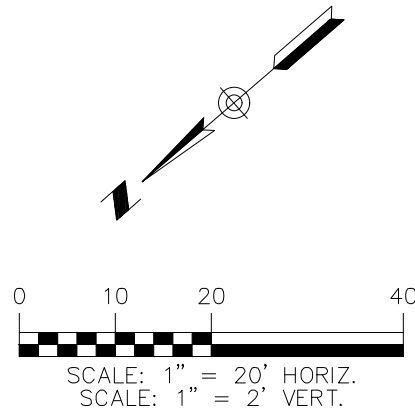
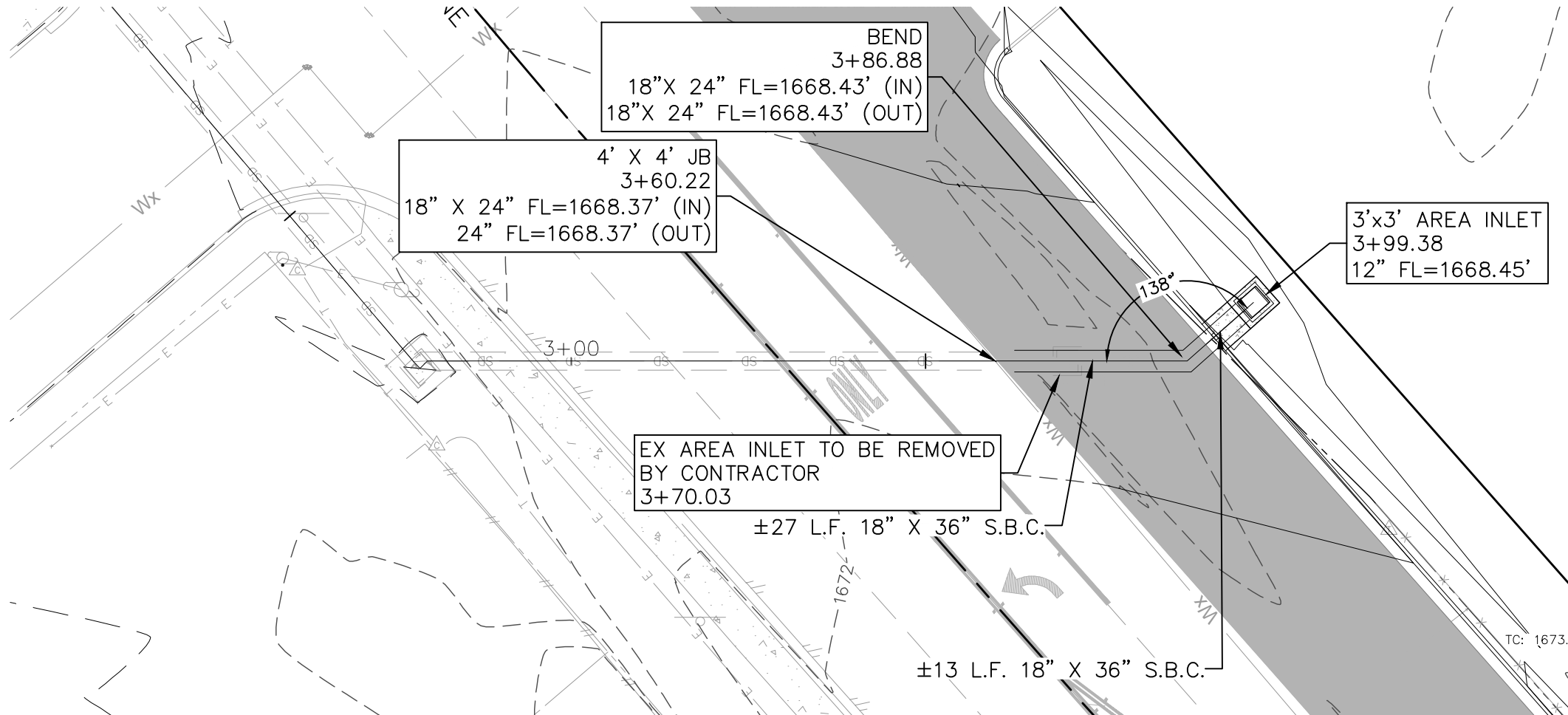
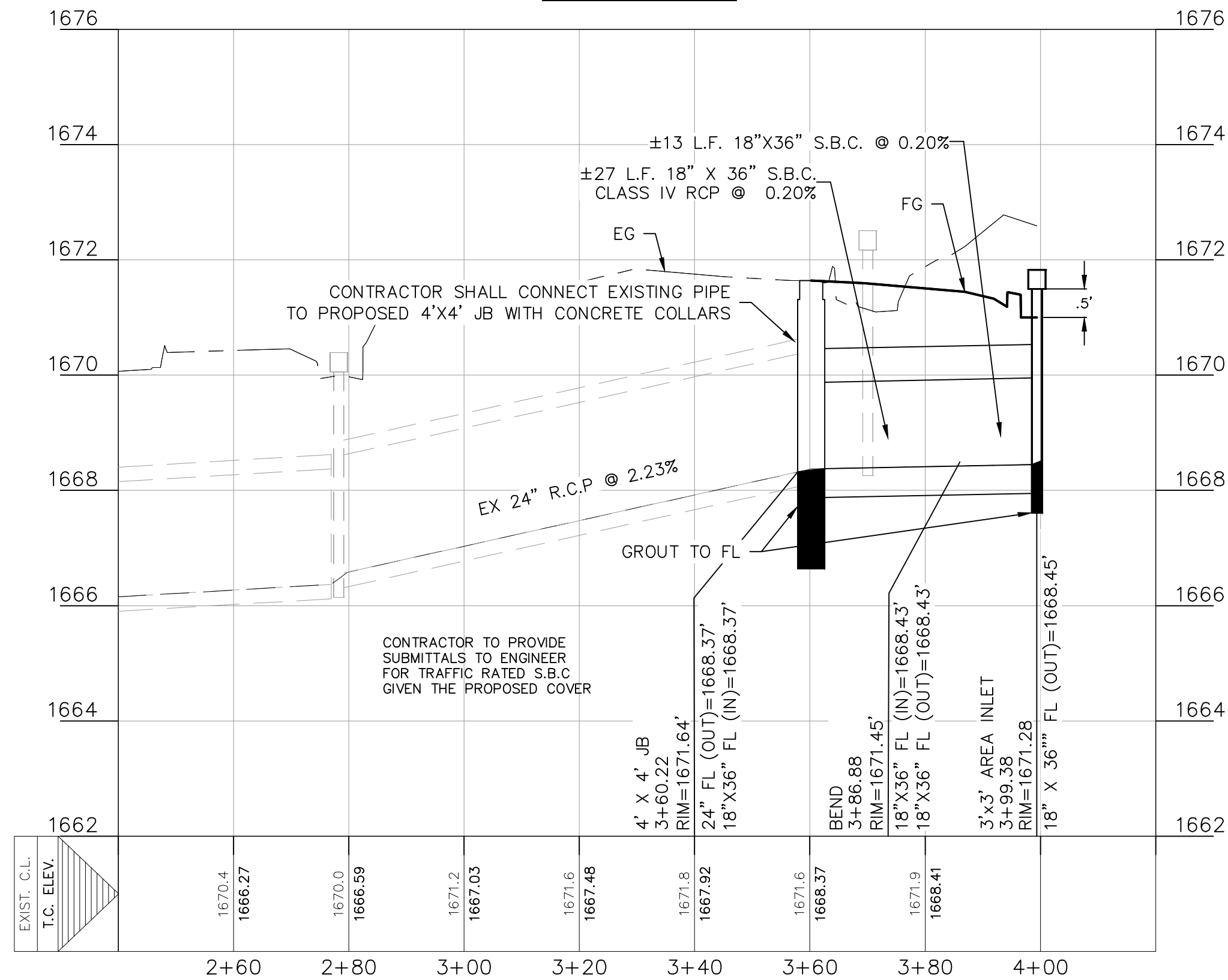
HMT PROJECT NO.:
337.065

SHEET

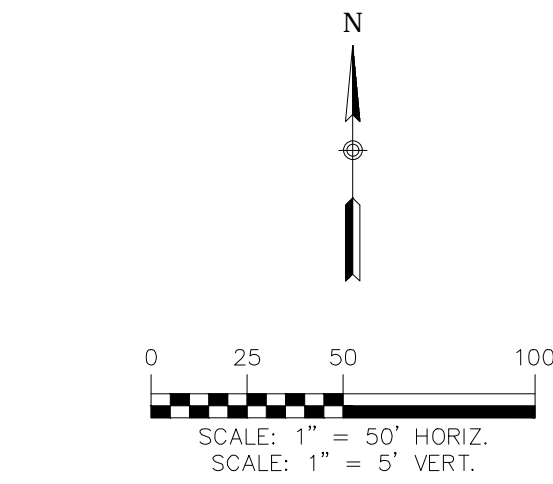
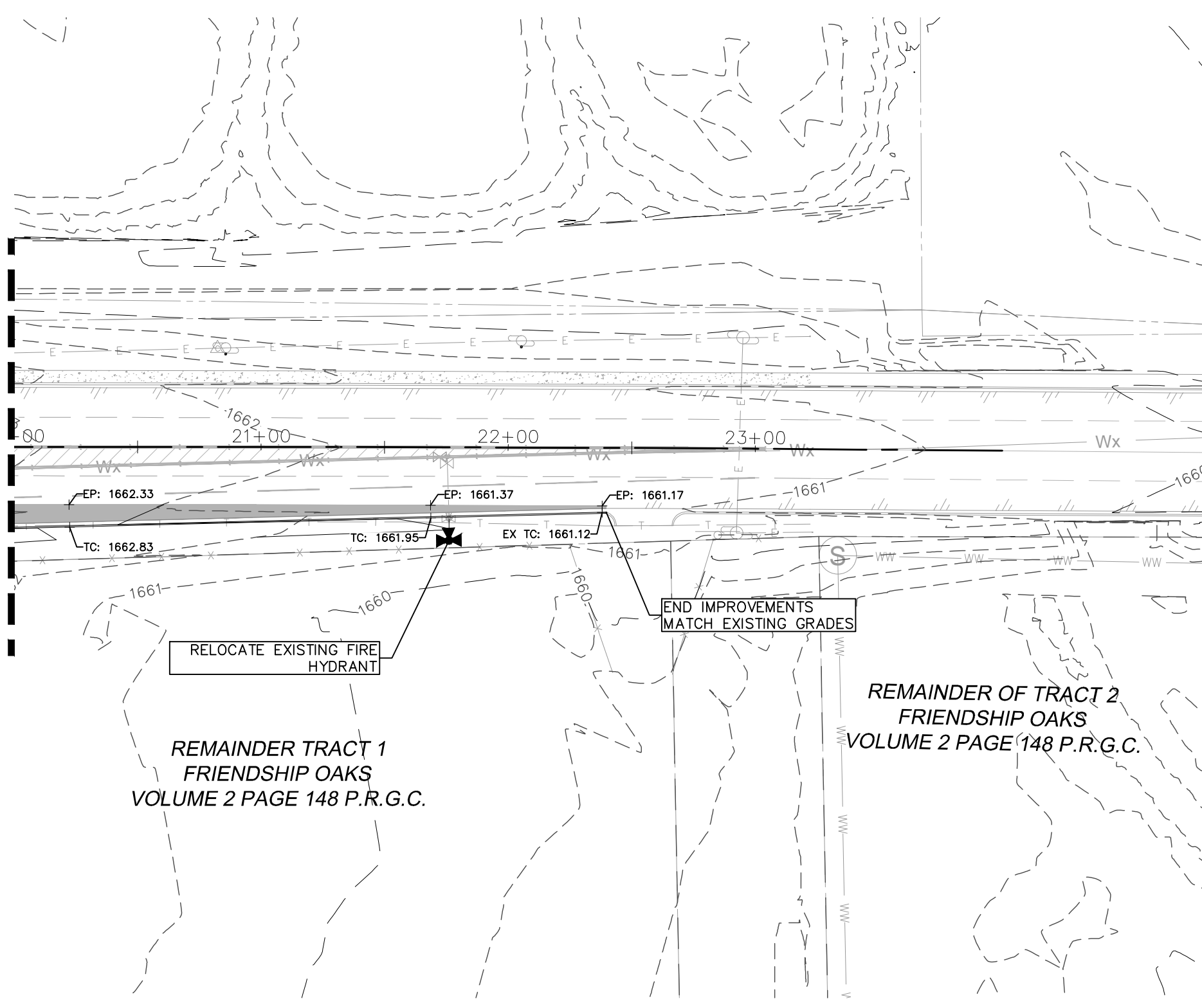
C4.06

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

Drawing Name: N:_Projects\337 - Lerner\065 - Friendship Oaks Unit_3\CDs\337.065_STREET PP FRIENDSHIP.dwg User: jashuak Nov 07, 2024 - 1:23pm



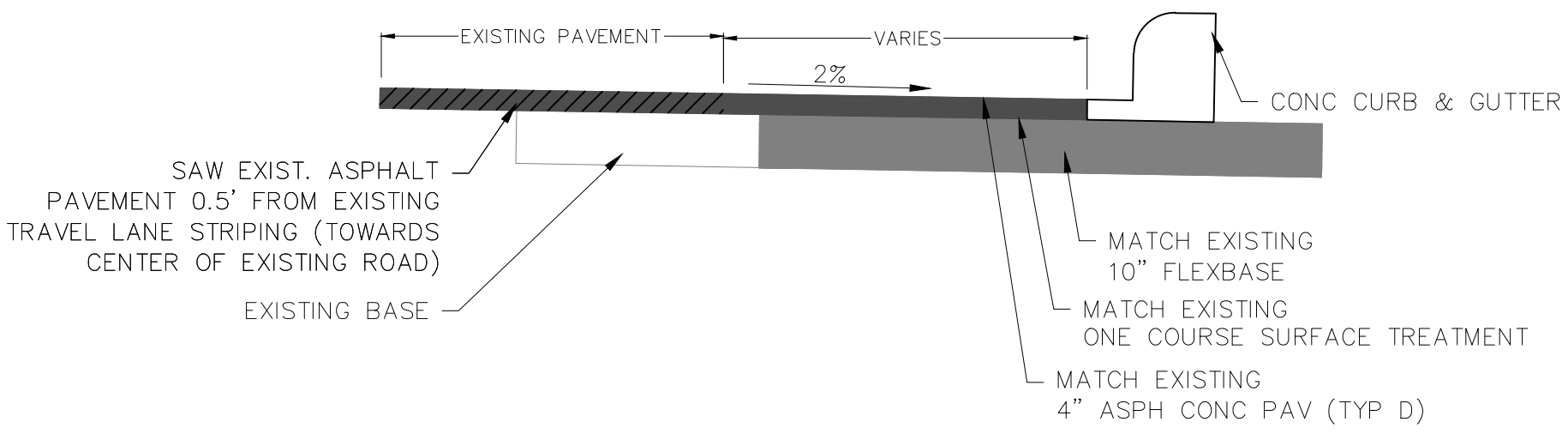
MATCHLINE SEE SHEET
C4.06



- LEGEND**
- 700 EXISTING CONTOURS
 - 700 PROPOSED CONTOURS
 - B.L. BUILDING SETBACK LINE
 - U.E. UTILITY EASEMENT
 - D.E. DRAINAGE EASEMENT
 - A.D.A. RAMP
 - FLOW ARROW
 - WASHOUT CROWN AREAS
 - SPILL CURB

NOTES

- LOCAL STREETS WERE DESIGNED TO POSTED SPEED LIM OF 30 MPH.
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- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.

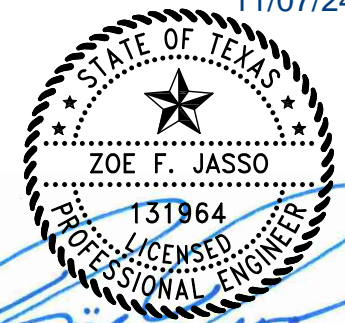


NOTES:

- REMOVE EXISTING ASPHALT AND CONC. CURB & GUTTER. REBUILD AS PAVEMENT WIDENING IS DONE.
- ALL DISTURBED AREAS TO BE TREATED WITH TOPSOIL.
- PAVEMENT WIDENING CROSS SLOPE SHALL MEET EXISTING PAVEMENT CROSS SLOPE.
- LIMITS OF ASPHALT & BASE REMOVAL SHOWN ARE MINIMUMS. REMOVAL LIMITS MAY BE MORE BASED ON CONTRACTOR NEW BASE INSTALLATION PROCEDURES.

PROPOSED PAVEMENT WIDENING DETAIL
NOT TO SCALE

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.



FRIENDSHIP LANE PLAN & PROFILE
(2 OF 2)

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE:	AUGUST 2024
DRAWN BY:	JK
DESIGNED BY:	RS
REVIEWED BY:	ZJ
HMT PROJECT NO.:	337.065

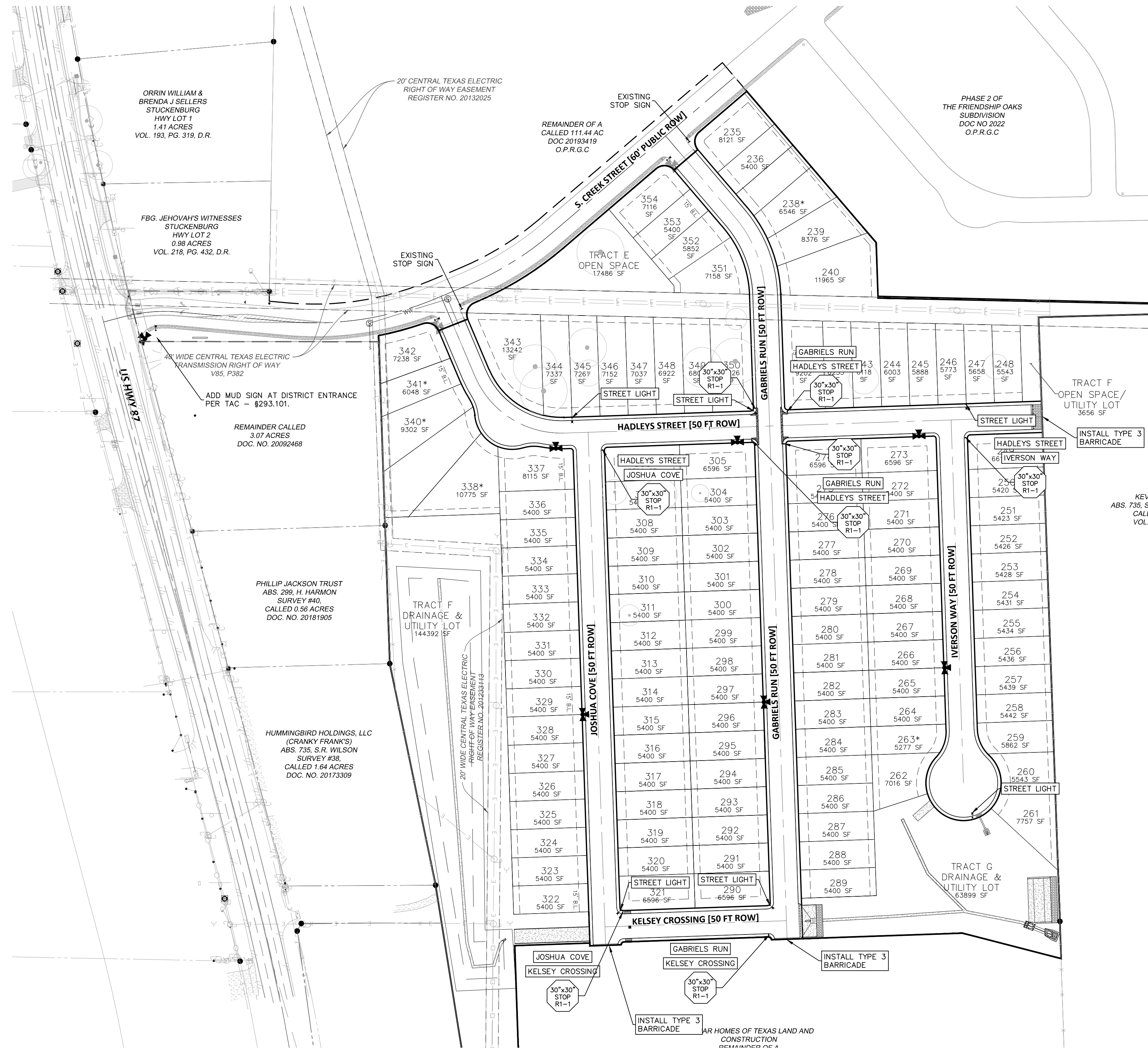
SHEET
C4.07

Drawing Name: N:_Projects\337 - Friendship Oaks Unit 3\CDs\337.065_STREET_SIGNAGE.dwg User: joshuak Dec 09, 2024 - 11:34am

GILLESPIE COUNTY MUNICIPAL UTILITY DISTRICT NO 1

A POLITICAL SUBDIVISION OF
THE STATE OF TEXAS

TX5-2T



NOTES

- LOCAL STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 30 MPH.
- IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
- CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
- ALL SIGNAGE MUST COMPLY WITH T&MUTCD

SIGNAGE NOTES INSTALLATION

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY, WARNING AND STREET NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS.

STREET NAME SIGN

- STREET NAME SIGNS ARE FLAT, GREEN BLANKS WITH 9" CROSS BLADES AND 9" X 1 3/4" SQUARE POST CAP
- FONT - ROADGEEK 2005 SERIES 1B
- LETTERS - 4.5" HIGH, ONLY THE FIRST LETTER IN EACH NAME IS CAPITALIZED
- BLOCK RANGE NUMBERS IN THE BOTTOM LEFT AND RIGHT CORNERS
- VEREINS KIRCHE STICKER IS 5'X7"
- ONLY REQUIRED TO BE CONSISTENT WITH EXISTING SIGNS IN THE SUBDIVISION.

POLE

- 12' X 1 3/4" TELESAR POST
- 3' X 2" TELESAR ANCHOR
- 18" X 2 1/4" TELESAR SLEEVE

BRACKETS

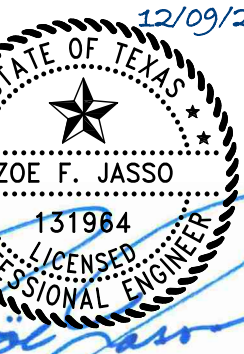
- SQUARE CAP SIGN BRACKETS

STOP SIGN

- 30" STOP SIGN (HIP GRADE) OR 30" YIELD SIGN (HIP GRADE)
- BOTTOM OF SIGN 7 FEET FROM THE GROUND

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600



SIGNAGE & LIGHTING PLAN

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: AUGUST 2024

DRAWN BY: JK

DESIGNED BY: RS

REVIEWED BY: ZJ

HMT PROJECT NO.:
337.065

SHEET
C4.08

Drawing Name: N:_Project\337 - Friendship Oaks Link\337.065 STREET STRIPING.dwg User: mshb Aug 28, 2023 - 2:11pm

PAVEMENT MARKING REQUIREMENTS:

PAVEMENT MARKINGS SHALL BE USED IN ACCORDANCE WITH THE LATEST REVISION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND WHERE JUSTIFIED BY ENGINEERING JUDGMENT OR STUDY.

ALL PAVEMENT MARKINGS SHALL BE SHOWN IN THE ENGINEERING PLANS FOR REVIEW AND APPROVAL AS PART OF THE PLAN & PROFILE SHEET OR SEPARATE SIGNING & PAVEMENT MARKING LAYOUT SHEET. DESIGN, MATERIALS AND INSTALLATION SHOULD FOLLOW TXDOT TRAFFIC STANDARDS PM (1-4) - 12. CITY OF SAN ANTONIO TRAFFIC ENGINEERING STANDARDS FOR PAVEMENT MARKINGS DESIGNATING TRAFFIC LANES, LANE USAGE & LANE REGULATIONS AND PEDESTRIAN/BICYCLIST ACCOMMODATIONS MAY BE USED FOR ADDITIONAL STANDARD DESIGN DETAILS. MARKING STANDARDS SHALL BE INCLUDED IN THE ENGINEERING PLANS.

ALL PAVEMENT MARKINGS SHALL BE TYPE I HOT APPLIED THERMOPLASTIC AND MEET TXDOT DEPARTMENTAL MATERIAL SPECIFICATIONS DMS-8220. TYPE II TRAFFIC PAINT MARKINGS SHALL ONLY BE USED AS SEALER AND MEET TXDOT DEPARTMENTAL MATERIAL SPECIFICATIONS DMS-8200.

THE CONTRACTOR SHALL NOTIFY THE CITY OF NEW BRAUNFELS AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL MARKINGS. THE CONTRACTOR MAY BE RESPONSIBLE FOR PLACING SPOT TABS BEFORE MARKING APPLICATION. THE CITY WILL INSPECT ALL MARKINGS AT FINAL APPLICATION.

NOTES:

- PAVEMENT MARKINGS ARE 100 MIL THICK. RAISED REFLECTIVE PAVEMENT MARKINGS WOULD BE TYPE 1-C OR AS APPROVED BY TXDOT.
- EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS WILL BE LIGHTLY GROUND IN A MANNER THAT DOES NOT DAMAGE THE PAVEMENT SURFACE, TO REMOVE ANY PAVEMENT MARKING ACCUMULATION, AND WILL BE COVERED WITH A STRIP SEAL OF 18" MINIMUM WIDTH, CONSISTING OF PRECOATED GRADE 5, FRICTION CLASS B AGGREGATE.
- SEE STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS, SECTION 12 FOR TRAFFIC ARROWS AND MARKING TEXT.

SIGNAGE NOTES

INSTALLATION

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY, WARNING AND STREET NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS.

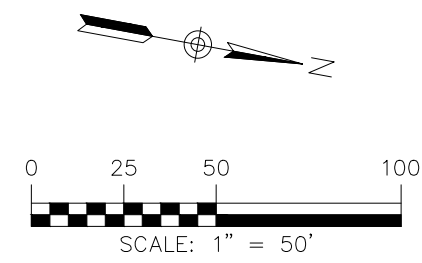
MOUNTING

THE WEDGE ANCHOR STEEL SYSTEM AND THIN-WALLED TUBING POST SHALL BE USED FOR SIGNS WITH UP TO 10 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) TRAFFIC STANDARDS SMD (GEN) - 08 AND SMD (TWT) - 08.

THE TRIANGULAR SLIP BASE SYSTEM AND 10 BWG TUBING POST SHALL BE USED FOR SIGNS THAT HAVE 10 TO 16 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS SMD (GEN) - 08 AND SMD (SLIP-1-3) - 08.

OBJECT MARKERS MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS D & OM (1-4)-20.

PAVEMENT MARKING LEGEND	
ITEM	NOTE
(A)	THERMOPLASTIC 24" SINGLE WHITE SOLID LINE
(B)	THERMOPLASTIC 4" SINGLE YELLOW SOLID LINE AND 4" SINGLE YELLOW DASHED LINE W/ TYPE II A-A RAISED REFLECTIVE PAVEMENT MARKINGS 20' ON CENTERS
(C)	THERMOPLASTIC 4" SINGLE WHITE SOLID LINE (SHOULDER STRIPING)
(D)	THERMOPLASTIC 4" SINGLE WHITE DASHED LINE
(E)	THERMOPLASTIC TRAFFIC ARROW TYPE 1 & II
(F)	THERMOPLASTIC TRAFFIC MARKING TEXT (ONLY) TYPE 1 & II
(G)	THERMOPLASTIC 8" SINGLE WHITE SOLID LINE WITH TYPE I-C RAISED REFLECTIVE PAVEMENT MARKING ON 20' ON CENTERS
(H)	THERMOPLASTIC 4" DOUBLE YELLOW SOLID LINE W/ TYPE II A-A RAISED REFLECTIVE PAVEMENT MARKINGS 20' ON CENTERS

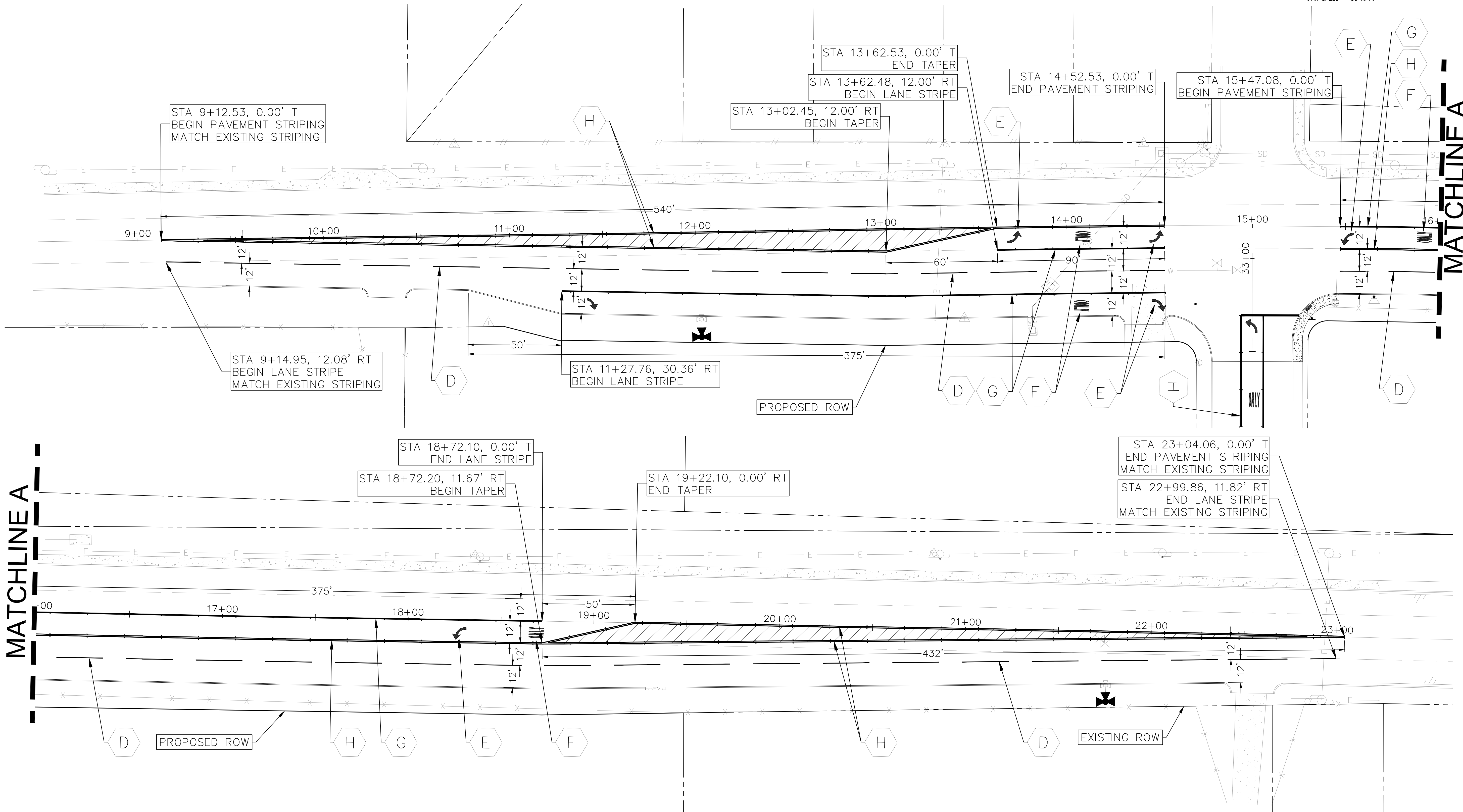


LEGEND

B.L. BUILDING SETBACK LINE
U.E. UTILITY EASEMENT
D.E. DRAINAGE EASEMENT

NOTES

- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
- PER TXDOT STATEWIDE PLANNING MAP, MAX SPEED = 55 MPH.



290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

HMT
ENGINEERING & SURVEYING

RYAN P. SHAW
144658
LICENSED PROFESSIONAL ENGINEER

8/2/2023

FRIENDSHIP LANE
STRIPING PLAN (1 OF 2)

TXDOT TURN LANE - FRIENDSHIP OAKS
FREDERICKSBURG, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: July 23

DRAWN BY: MK

DESIGNED BY: RS

REVIEWED BY: WBB

HMT PROJECT NO.: 337.065

SHEET

C4.09

PAVEMENT MARKING REQUIREMENTS:

PAVEMENT MARKINGS SHALL BE USED IN ACCORDANCE WITH THE LATEST REVISION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND WHERE JUSTIFIED BY ENGINEERING JUDGMENT OR STUDY.

ALL PAVEMENT MARKINGS SHALL BE SHOWN IN THE ENGINEERING PLANS FOR REVIEW AND APPROVAL AS PART OF THE PLAN & PROFILE SHEET OR SEPARATE SIGNING & PAVEMENT MARKING LAYOUT SHEET. DESIGN, MATERIALS AND INSTALLATION SHOULD FOLLOW TXDOT TRAFFIC STANDARDS PM (1-4) - 12. CITY OF SAN ANTONIO TRAFFIC ENGINEERING STANDARDS FOR PAVEMENT MARKINGS DESIGNATING TRAFFIC LANES, LANE USAGE & LANE REGULATIONS AND PEDESTRIAN/BICYCLIST ACCOMMODATIONS MAY BE USED FOR ADDITIONAL STANDARD DESIGN DETAILS. MARKING STANDARDS SHALL BE INCLUDED IN THE ENGINEERING PLANS.

ALL PAVEMENT MARKINGS SHALL BE TYPE I HOT APPLIED THERMOPLASTIC AND MEET TXDOT DEPARTMENTAL MATERIAL SPECIFICATIONS DMS-8220. TYPE II TRAFFIC PAINT MARKINGS SHALL ONLY BE USED AS SEALER AND MEET TXDOT DEPARTMENTAL MATERIAL SPECIFICATIONS DMS-8200.

THE CONTRACTOR SHALL NOTIFY THE CITY OF NEW BRAUNFELS AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL MARKINGS. THE CONTRACTOR MAY BE RESPONSIBLE FOR PLACING SPOT TABS BEFORE MARKING APPLICATION. THE CITY WILL INSPECT ALL MARKINGS AT FINAL APPLICATION.

NOTES:

- PAVEMENT MARKINGS ARE 100 MIL THICK, RAISED REFLECTIVE PAVEMENT MARKINGS WOULD BE TYPE 1-C OR AS APPROVED BY TXDOT.
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- SEE STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS, SECTION 12 FOR TRAFFIC ARROWS AND MARKING TEXT.

SIGNAGE NOTES

INSTALLATION

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY, WARNING AND STREET NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS.

MOUNTING

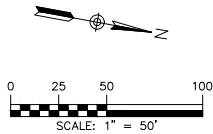
THE WEDGE ANCHOR STEEL SYSTEM AND THIN-WALLED TUBING POST SHALL BE USED FOR SIGNS THAT HAVE 10 TO 16 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) TRAFFIC STANDARDS SMD (GEN) - 08 AND SMD (TWT) - 08.

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OBJECT MARKERS MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS D & OM (1-4)-20.

PAVEMENT MARKING LEGEND

ITEM	NOTE
(A)	THERMOPLASTIC 24" SINGLE WHITE SOLID LINE
(B)	THERMOPLASTIC 4" SINGLE YELLOW SOLID LINE AND 4" SINGLE YELLOW DASHED LINE W/ TYPE II A-A RAISED REFLECTIVE PAVEMENT MARKINGS 20' ON CENTERS
(C)	THERMOPLASTIC 4" SINGLE WHITE SOLID LINE (SHOULDER STRIPING)
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(E)	THERMOPLASTIC TRAFFIC ARROW TYPE 1 & II
(F)	THERMOPLASTIC TRAFFIC MARKING TEXT (ONLY) TYPE 1 & II
(G)	THERMOPLASTIC 8" SINGLE WHITE SOLID LINE WITH TYPE I-C RAISED REFLECTIVE PAVEMENT MARKING ON 20' ON CENTERS
(H)	THERMOPLASTIC 4" DOUBLE YELLOW SOLID LINE W/ TYPE II A-A RAISED REFLECTIVE PAVEMENT MARKINGS 20' ON CENTERS

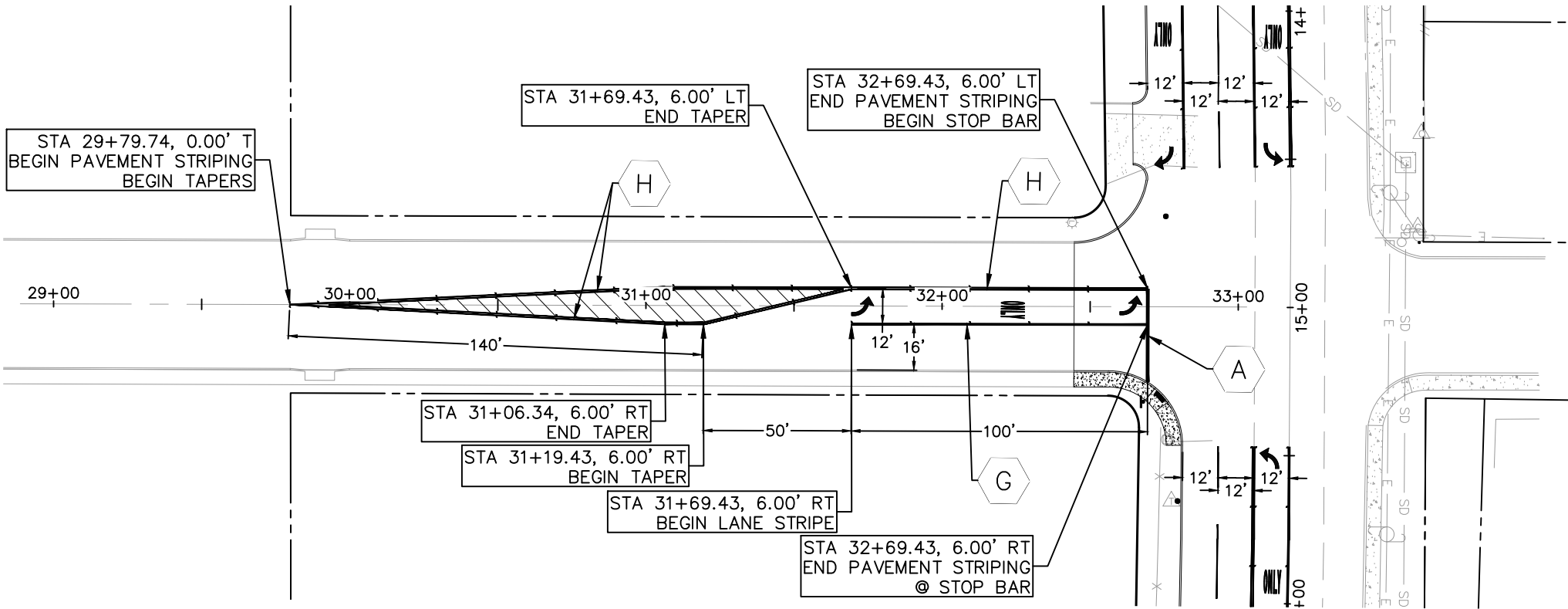


LEGEND

B.L. BUILDING SETBACK LINE
U.E. UTILITY EASEMENT
D.E. DRAINAGE EASEMENT

NOTES

- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
- PER TXDOT STATEWIDE PLANNING MAP, MAX SPEED = 55 MPH.



290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600



8/2/2023

FRIENDSHIP LANE
STRIPING PLAN (2 OF 2)

TXDOT TURN LANE - FRIENDSHIP OAKS
FREDERICKSBURG, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: July 23

DRAWN BY: MK

DESIGNED BY: RS

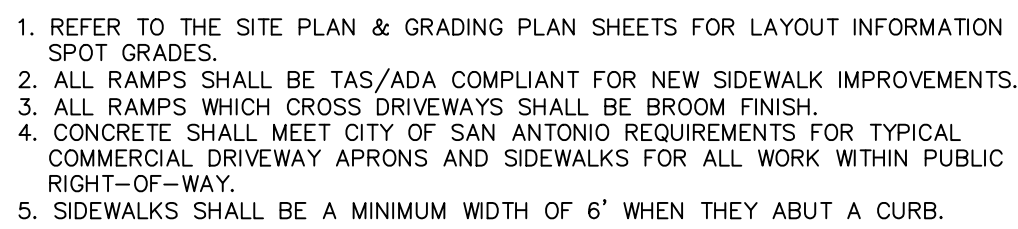
REVIEWED BY: WBB

HMT PROJECT NO.:

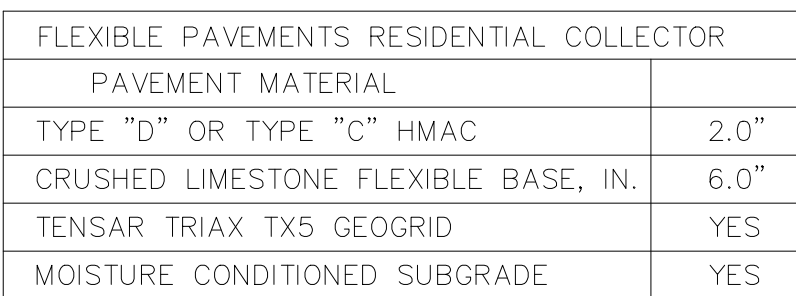
337.065

SHEET

C4.10

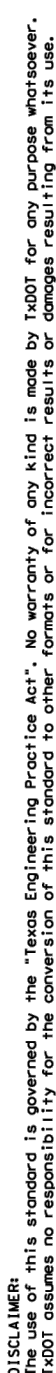


NOT TO SCALE



4. ALL PAVEMENT CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE TO THE "PRELIMINARY FOUNDATION AND PAVEMENT DESIGN REPORT, FRIENDSHIP OAKS SUBDIVISION, FRIENDSHIP LANE AND SOUTH CREEK STREET, FREDERICKSBURG, GILLESPIE COUNTY, TEXAS, TTL PROJECT NO. 003109000833.00", BY TTL, INC, DATED APRIL 16, 2021.
5. ALL PAVEMENT SECTIONS SHOWN ON THE ABOVE TABLE SHALL SUCCCEED ANY STANDARD DETAILS WITH RESPECT TO DEPTH OF MATERIALS ASSUMED WITH THIS PROJECT.
6. THE SUBGRADE SHOULD BE STABILIZED USING LIME IN ACCORDANCE WITH THE GEOTECHNICAL REPORT IN ORDER TO ACHIEVE THE FOLLOWING:
 - 3.1. PLASTICITY INDEX, REFER TO SECTION 4.2 COMPACTED FILL MATERIALS
7. THE SUBGRADE SOILS SHOULD BE TESTED FOR SOLUBLE SULPHATE CONTENT PRIOR TO INSTALLATION OF THE LIME OR GEMENT.
8. REFERENCE GEOTECHNICAL REPORT FOR LIME STABILIZATION NOTES
9. CONTRACTOR SHALL BE RESPONSIBLE TO ATTAIN A COPY OF THE GEOTECH REPORT AND THE CONTENTS OF THE REPORT.

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS



SHEET 2 OF 4		Design Division Standard		
	Texas Department of Transportation			
<h1 style="margin: 0;">PEDESTRIAN FACILITIES</h1> <h2 style="margin: 0;">CURB RAMPS</h2> <h3 style="margin: 0;">PED-18</h3>				
FILE: PED18	DM TxDOT	DMVP	CU KM	CU PK. S.
TxDOT: MARCH, 2002	CONT	SECT	JOB	ROADWAY
REVISIONS				
REVISED: 08-2008	DIS1			
REVISED: 06-2013	COUNTY			
REVISED: 01-2016	SHEET NO.			

Drawing Name: N:_Projects\337 - Lerner\065 - Friendship Oaks Unit 3\Draw\337_065_STREET_DETAILS.dwg User: mlab Aug 29, 2023 - 7:11am

TYPICAL STREET LIGHTING

HIGH PRESSURE SODIUM:

100 WATT	9,500 LUMEN
250 WATT	25,500 LUMEN

URD POLE:

Valmont 30" total steel pole with simplex fitting: EM50-730A300-05-HH-GAL.
6" X 2" steel arm with one bolt simplex attachment: 70820-Y17G.
#10 solid copper white and black.
#6-2 URD wire duplex (Clafin-Southwire).
Fuse kit (KTK 15 or 30 AMP midget fuse, HEB-CC fuse holder, IA0512 rubber boots.
2" duct cone.

OVERHEAD:

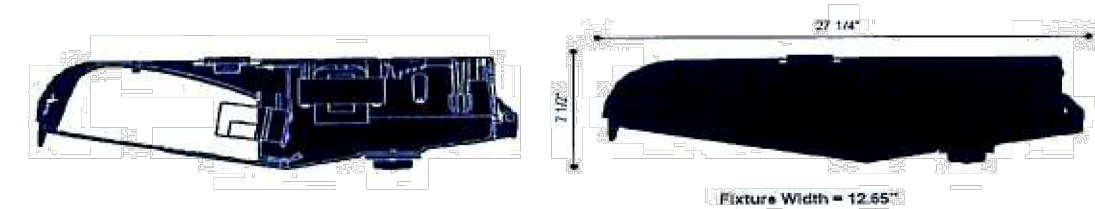
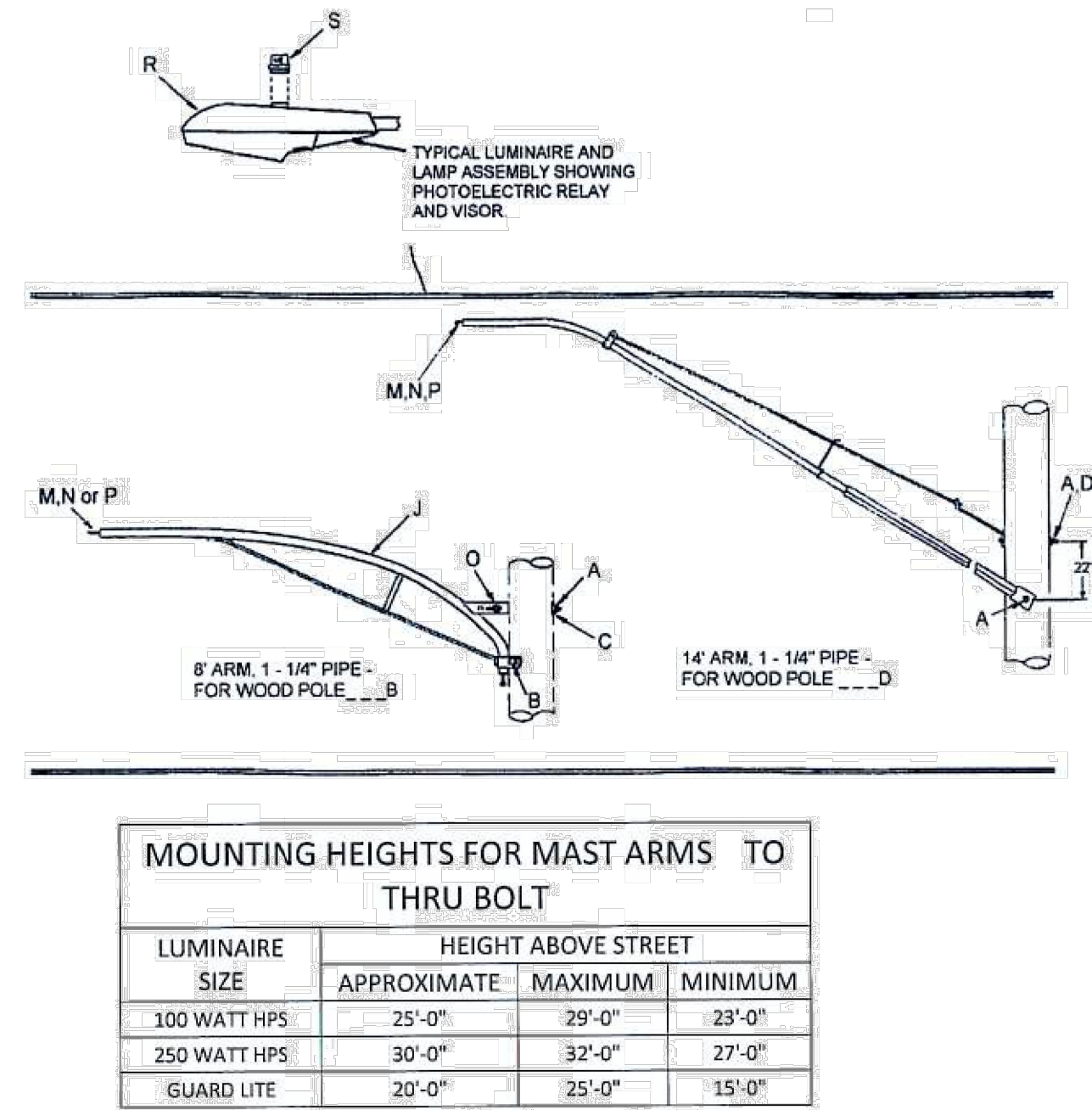
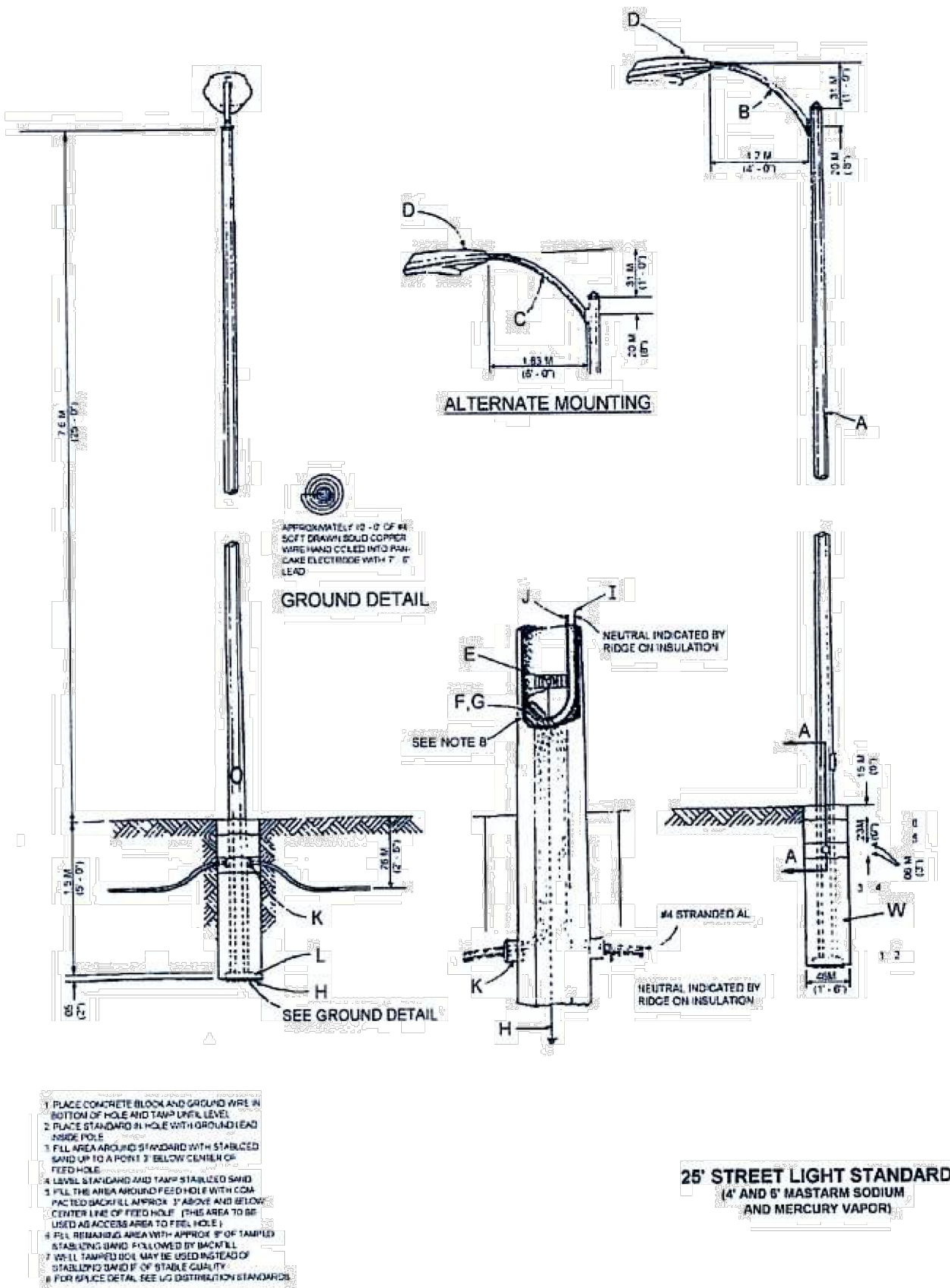
8" aluminum arm X 1 1/4"; A-125-8-UB aluminum Mastarm.
14" steel arm X 1 1/4"; D125S140.
#10 solid copper white and black.

ROADWAY LIGHTING:

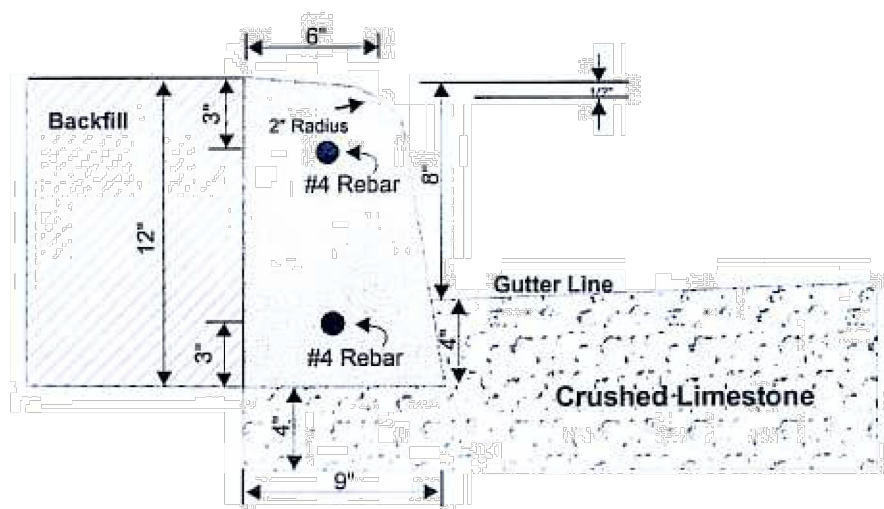
Residential Intersections:
Cooper 100HPS OVZ10SR22DF4 (Flat Glass) or equivalent.

State Highway Intersections:
Cooper 250HPS OVZ25SWW2D4F (Flat Glass) or equivalent.

Residential Area Lighting:
Cooper 100HPS OVZ10SR22DU1431 (Flat Glass) or equivalent.



Typical Machine Laid Stand-Up Curb

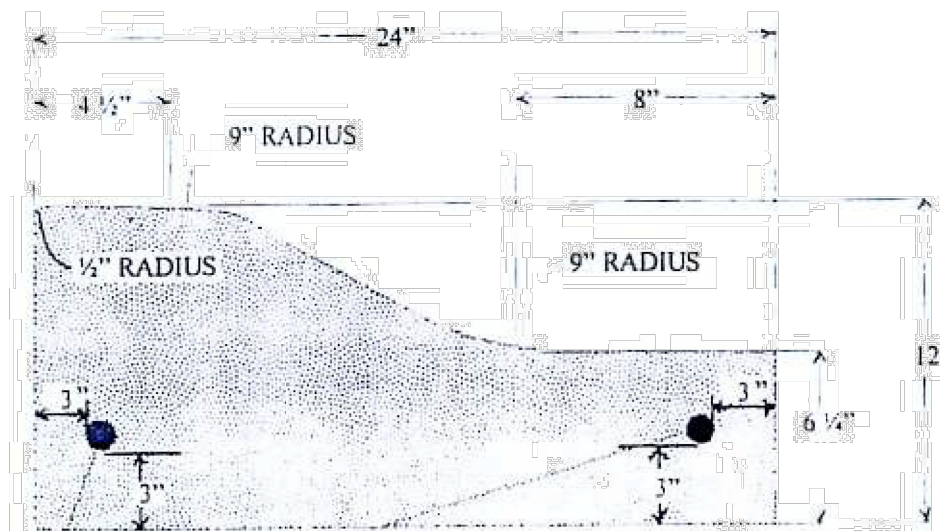


Construction Notes:

- Concrete - 3,000 P.S.I. (5 sack)
- Dummy Joints - Dummy joints shall be tooled into curb at 10 ft. intervals using a grooving tool to a minimum depth of 1/2". Saw cutting dummy joints is not permitted.
- Expansion Joints - Place asphalt impregnated fiber board approved by the City at all cold joints. Place 2 - #4 Smooth bars, 18" long, 3" from the top and 3" from the bottom of curb.
- Top of curb to have 1/2" drop from back to front of curb.
- Curbs must be brushed to a smooth and uniform finish.

INSPECTION IS REQUIRED BEFORE
PLACEMENT OF CONCRETE!!

Typical Machine Laid Rollover Curb

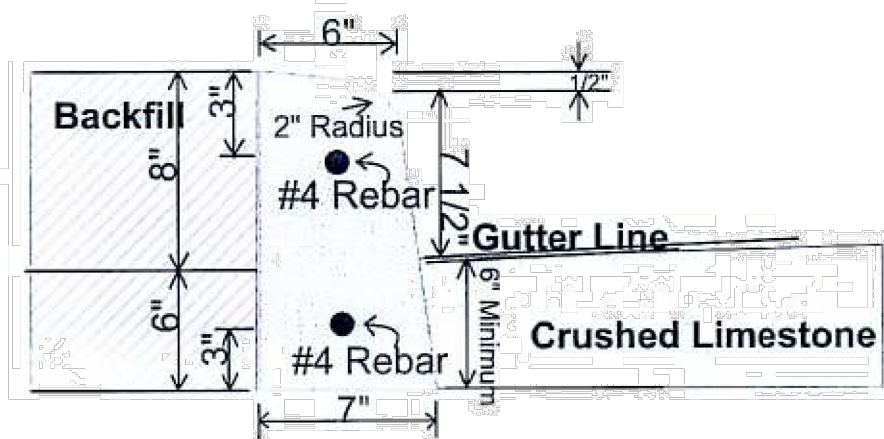


Construction Notes:

- Concrete - 3,000 P.S.I. (5 sack)
- Dummy Joints - Dummy joints shall be tooled into curb at 10 ft. intervals using a grooving tool to a minimum depth of 1/2". Saw cutting dummy joints is not permitted.
- Expansion Joints - Place asphalt impregnated fiber board approved by the City at all cold joints. Place 2 - #4 Smooth bars, 18" long, 3" from the bottom of curb at locations shown in the sketch above.
- Curbs must be brushed to a smooth and uniform finish.

INSPECTION IS REQUIRED BEFORE
PLACEMENT OF CONCRETE!!

Hand Formed Stand-Up Curb

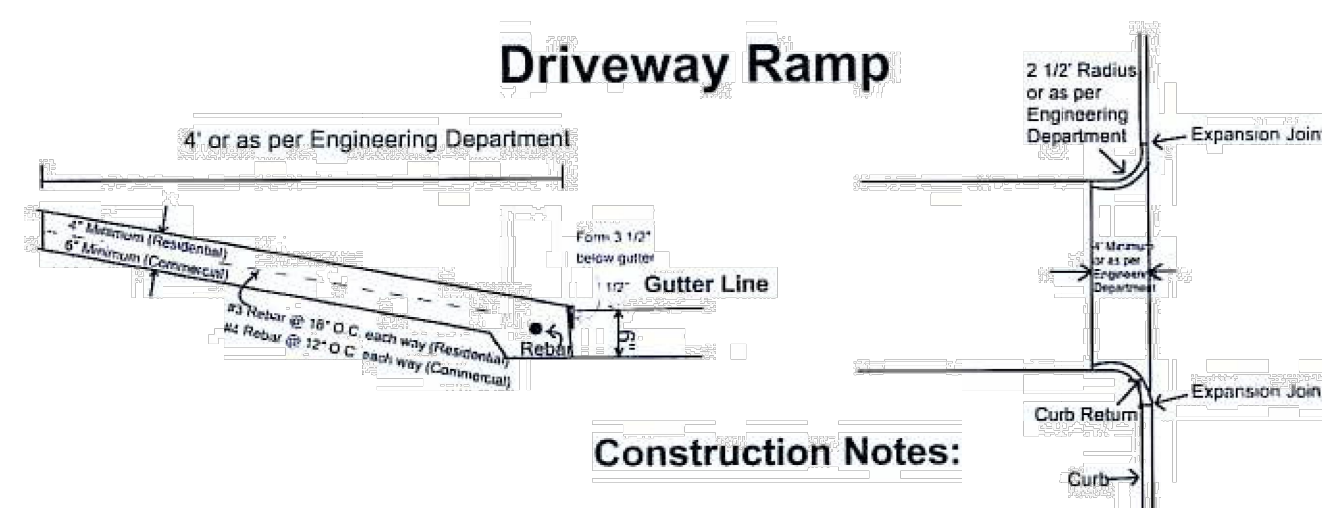


Construction Notes:

- Concrete - 3,000 P.S.I. (5 sack)
- Dummy Joints - Dummy joints shall be tooled into curb at 10 ft. intervals using a grooving tool to a minimum depth of 1/2". Saw cutting dummy joints is not permitted.
- Expansion Joints - Place asphalt impregnated fiber board approved by the City at all cold joints. Place 2 - #4 Smooth bars, 18" long, 3" from the top and bottom of curb.
- Top of curb to have 1/2" drop from back to front of curb.
- Front face of curb to be fully formed from top of curb to 6" below the street gutter elevation. Back of curb to be formed a minimum of 6" down from top of curb.
- Forms must be removed the same day the curb is poured and curbs must be plastered with mortar or brushed to a smooth and uniform finish.
- Curb radii at street corners shall be 2 1/2 ft. on back of curb or as specified by the City Engineering Department.

INSPECTION IS REQUIRED BEFORE
PLACEMENT OF CONCRETE!!

Driveway Ramp



Construction Notes:

- Concrete - 3,000 P.S.I. (5 sack)
- Driveway construction shall meet street pavement 1/2" above established gutter elevation.
- Face of driveway apron must be formed a minimum of 3 1/2" below the street gutter line.
CAUTION: The City does NOT guarantee vehicle clearances on driveway construction. This is the responsibility of the contractor.
- Where curbs are cut for driveway placement, cuts shall be vertical and neat.
- A minimum of 1' of reinforcing steel must be remaining in existing curb to be tied to steel in drive or dowels must be drilled and placed.
- When breaking out curbs, the entire curb must be removed and a thickened section poured in drive to bottom of curb.
- Expansion joints shall be provided where curb returns meet curb lines.

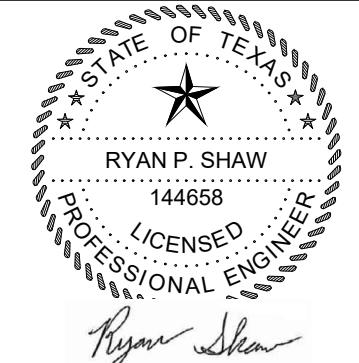
INSPECTION IS REQUIRED BEFORE PLACEMENT OF CONCRETE!!

STREET DETAILS (2 OF 3)

NO.	REVISION	DESCRIPTION	DATE

DATE: August 2023
DRAWN BY: MK
DESIGNED BY: RS
REVIEWED BY: WBB
HMT PROJECT NO.: 337.065

SHEET
C4.12



8/28/2023

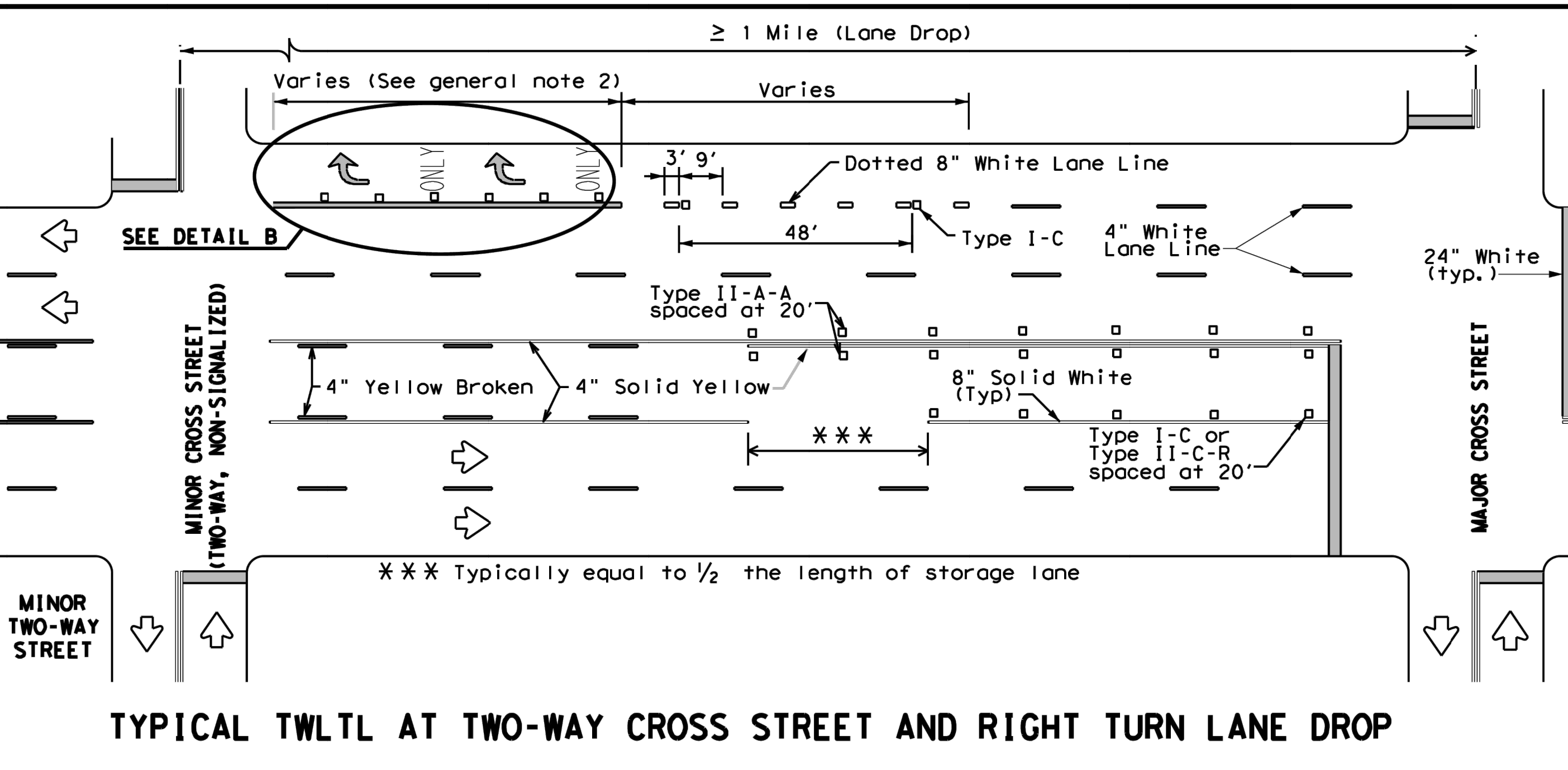
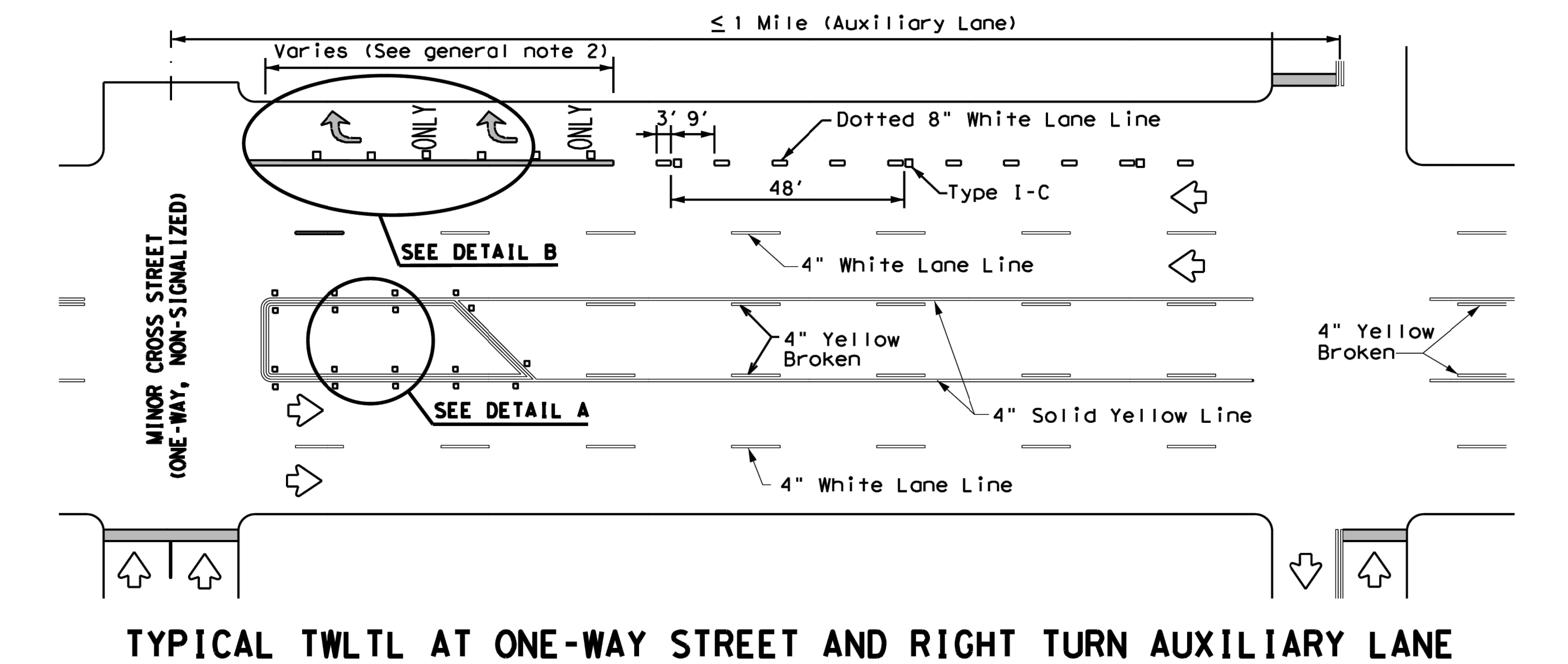
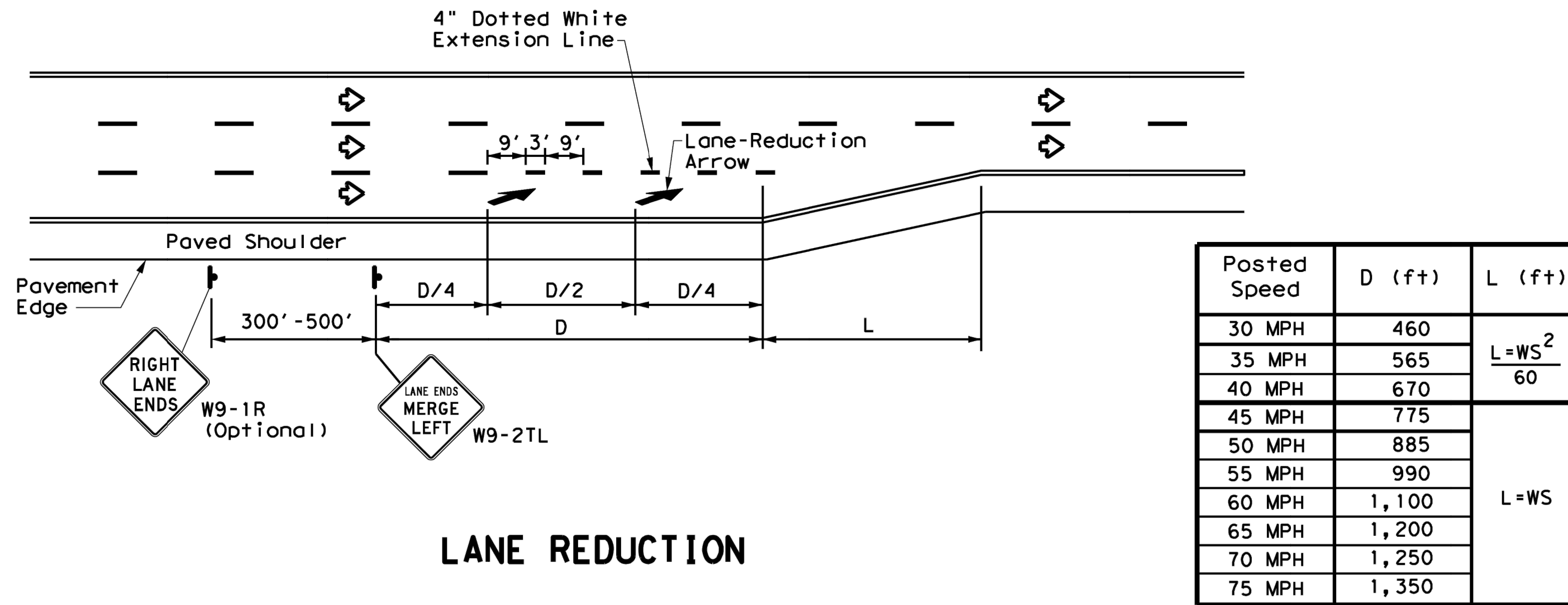
FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS



290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

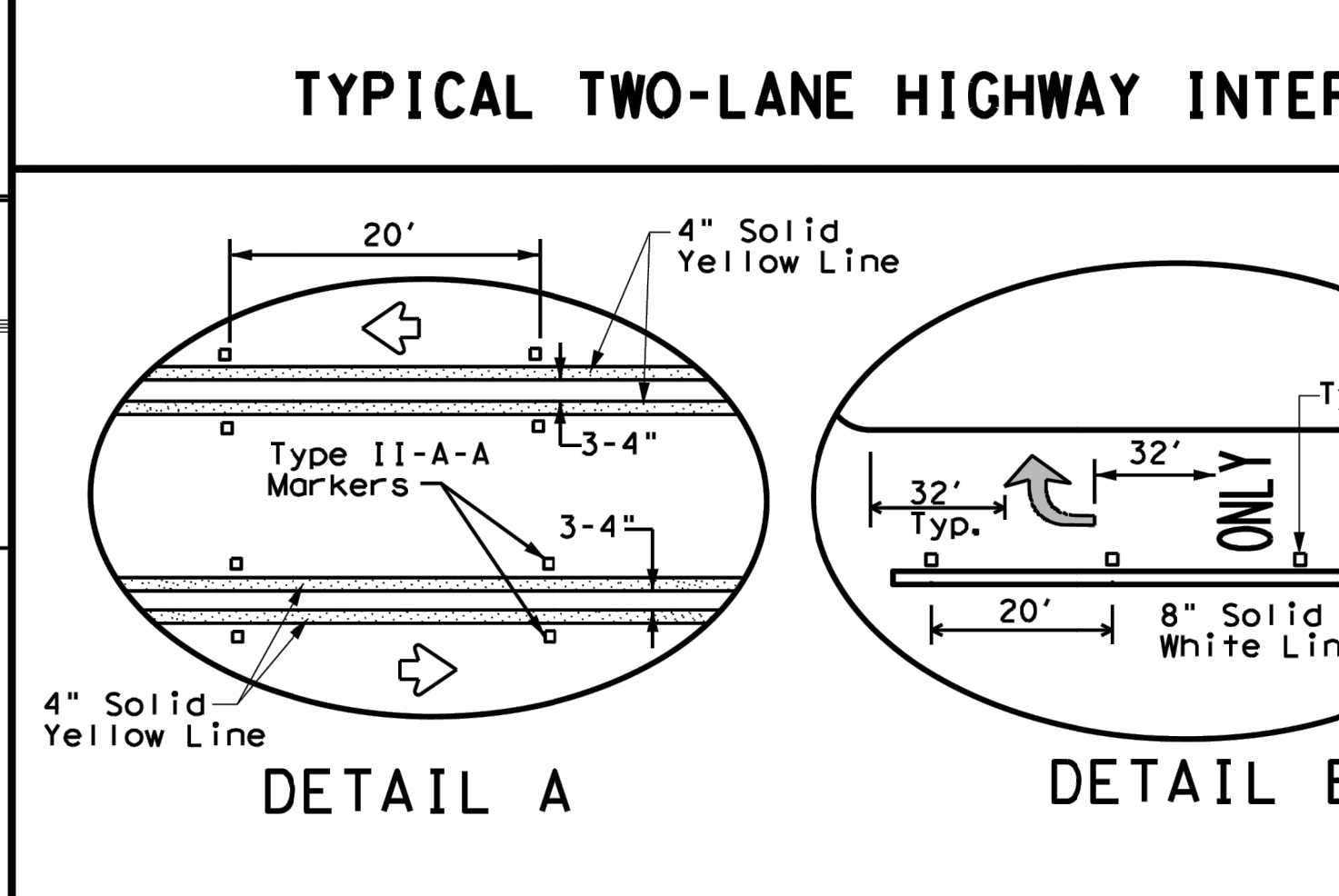
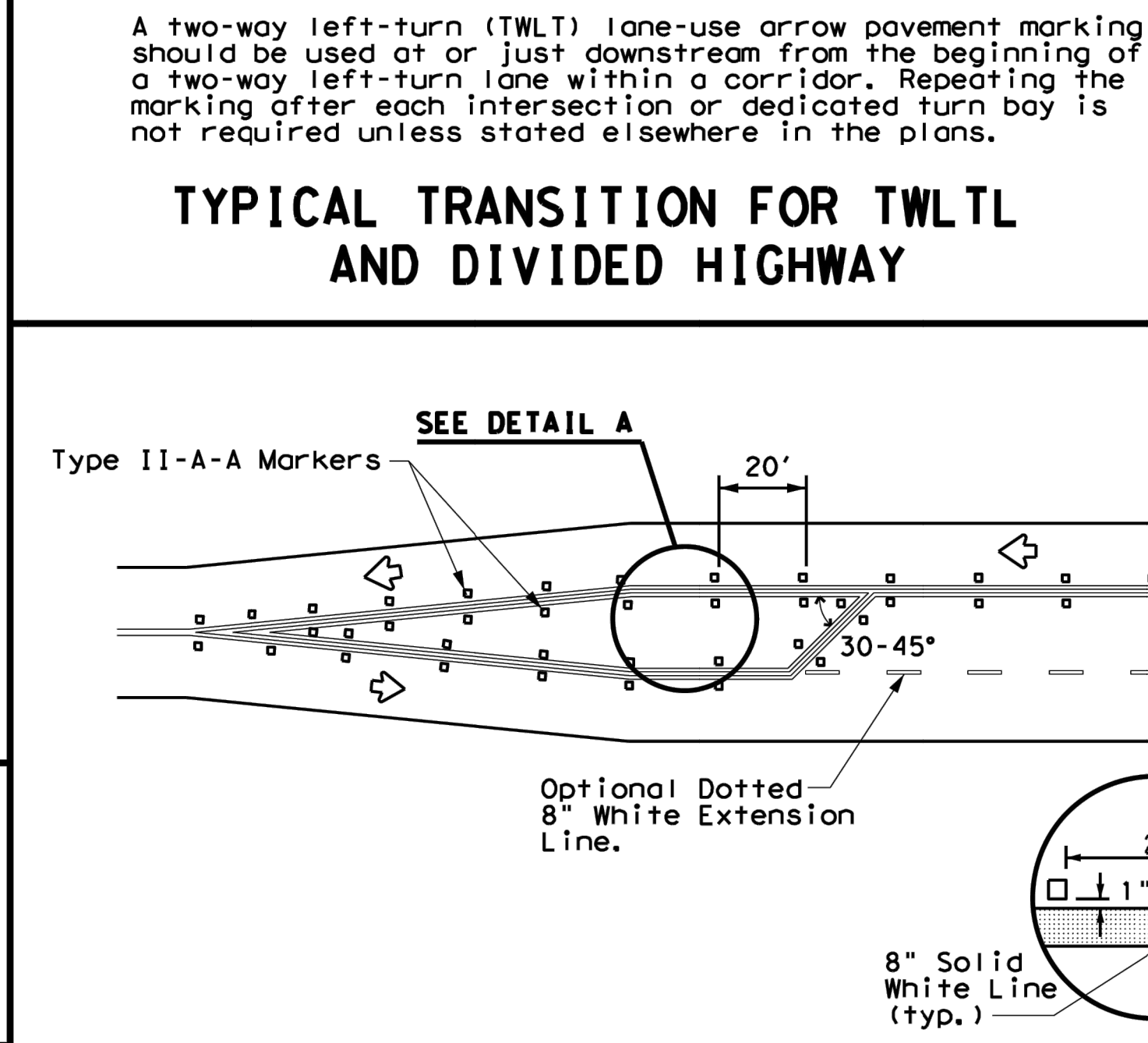
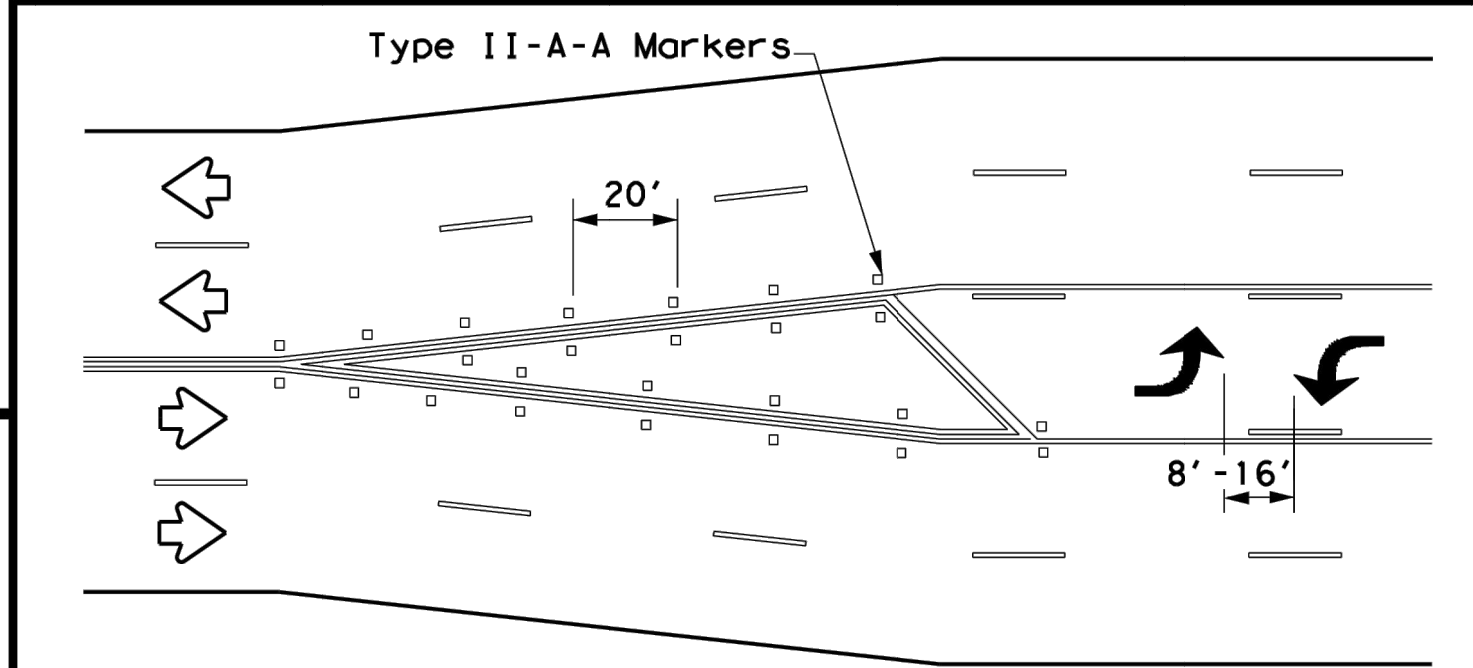
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DATE:
FILE:



NOTES

- Lane reduction pavement markings are used where the number of through lanes is reduced because of narrowing of the roadway or because of a section of on-street parking in what would otherwise be a through lane. For Texas Super 2 Passing Lanes, see TS2(PL) standard sheets.
- On divided highways, an additional W9-1R "RIGHT LANE ENDS" sign may be installed in the median aligned with the W9-1R sign on the right side of the highway.
- Lane reduction arrows are required for speeds of 45 mph or greater. An optional third lane reduction arrow may be added based on engineering judgement. If used, the optional third lane reduction arrow should be centered between the first and last lane reduction arrows.
- For lane reductions on Freeways and Expressways, signing shall conform to the TxDOT Freeway Signing Handbook.



GENERAL NOTES

- Lane use word and arrow markings shall be used where through lanes approaching an intersection become mandatory turn lanes. Lane use word and arrow markings should be used in auxiliary lanes of substantial length. Lane use arrow markings or word and arrow markings may be used in other lanes and turn bays for emphasis. Details for words and arrows are as shown in the Standard Highway Sign Designs for Texas.
- When lane-use words and arrow markings are used, two sets of arrows should be used if the length of the bay is greater than 180 feet. When a single lane use arrow or word and arrow marking is used for a short turn lane, it should be located at or near the upstream end of the full-width turn lane.
- Use raised pavement marker Type I-C with undivided highways, flush medians and two way left turn lanes. Use raised pavement marker Type II-C-R with divided highways and raised medians.
- Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.

Texas Department of Transportation

Traffic Safety Division Standard

TWO-WAY LEFT TURN LANES, RURAL LEFT TURN BAYS, AND LANE REDUCTION PAVEMENT MARKINGS

PM(3)-20

FILE: pm3-20.dgn	DN: CK: DN: CK:
© TxDOT April 1998	CONT SECT JOB HIGHWAY
5-00 2-10 REVISIONS	DIST COUNTY SHEET NO.
8-00 2-12	
3-03 6-20	

220

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600



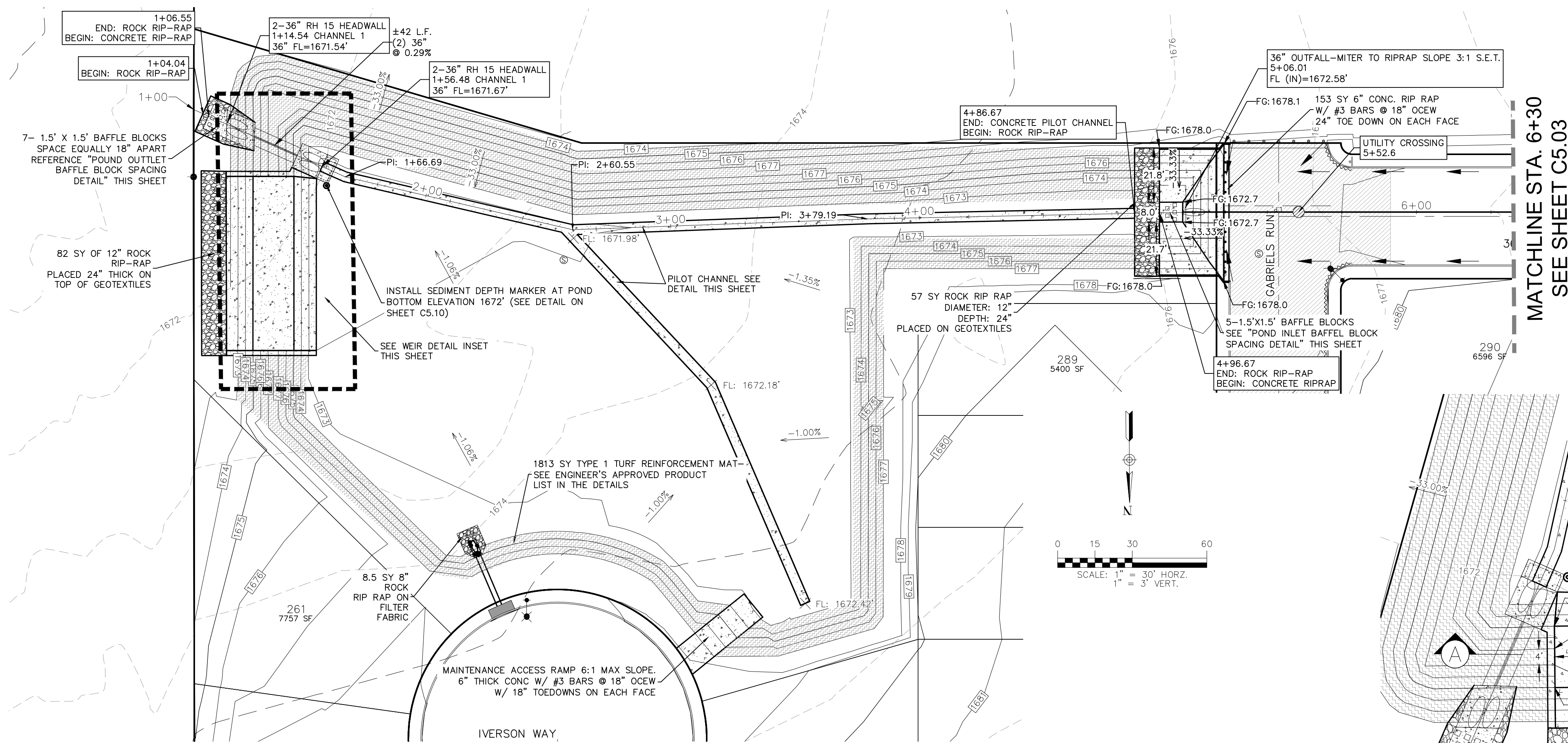
8/28/2023

STREET DETAILS (3 OF 3)

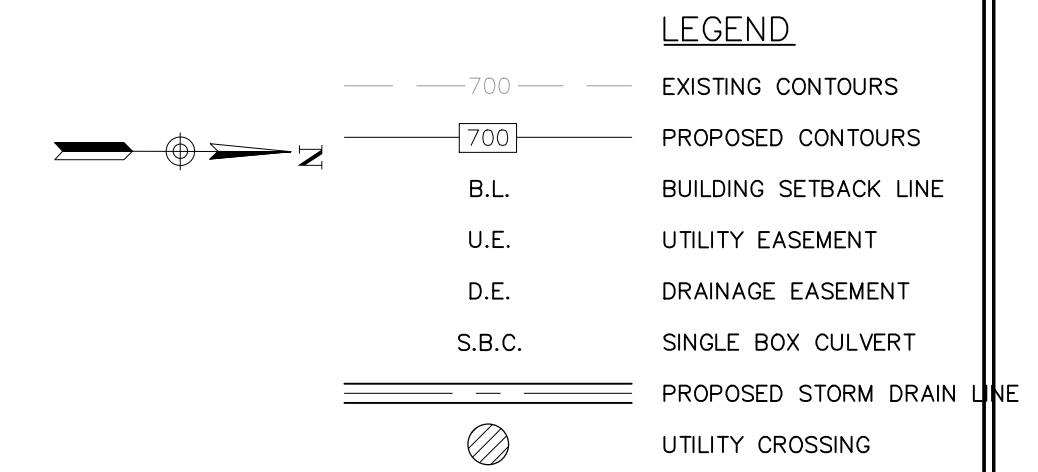
FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

REVISION	DATE	DESCRIPTION
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DATE:	August 2023	
DRAWN BY:	MK	
DESIGNED BY:	RS	
REVIEWED BY:	WBB	
HMT PROJECT NO.:	337.065	

SHEET
C4.13



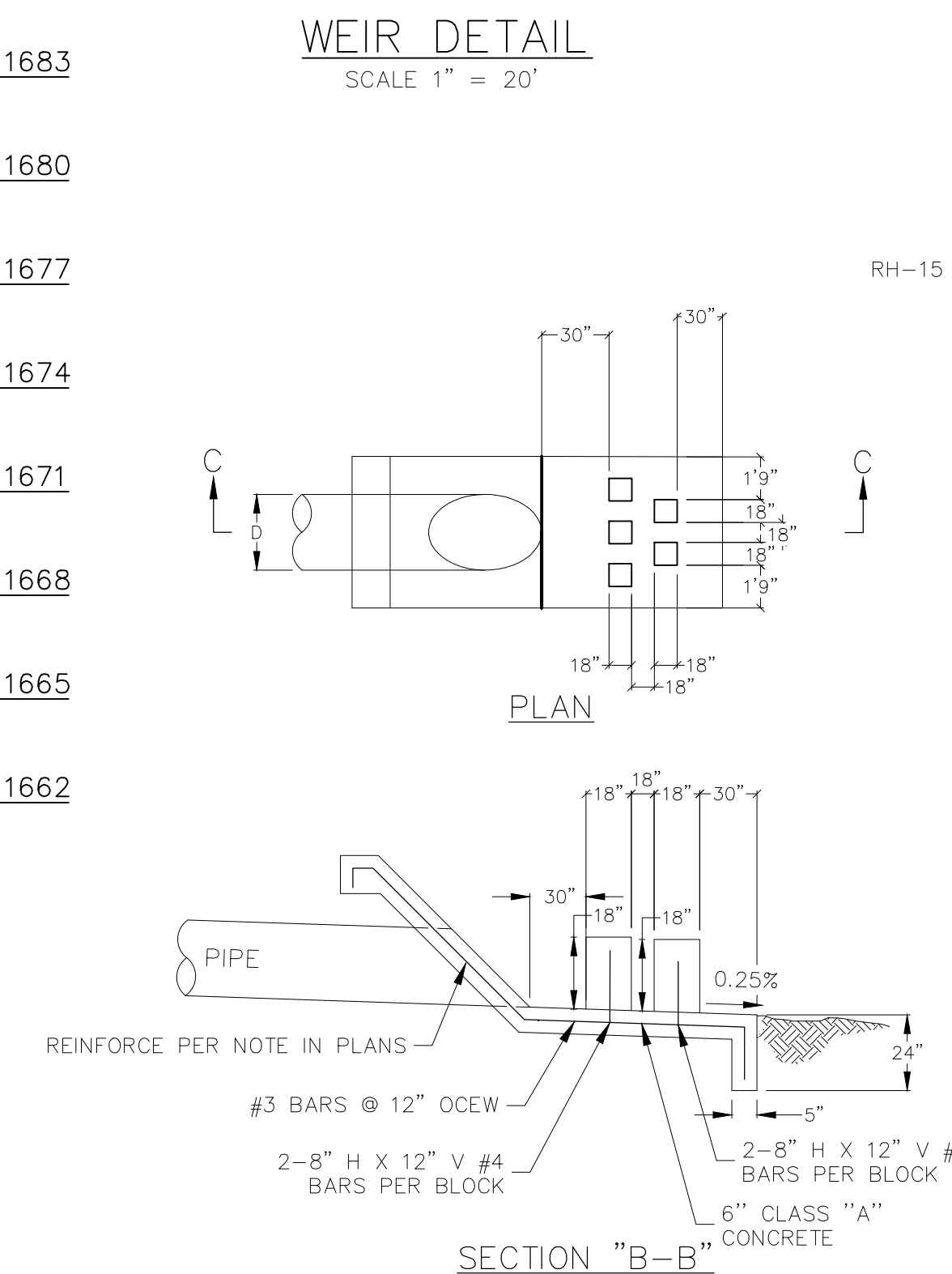
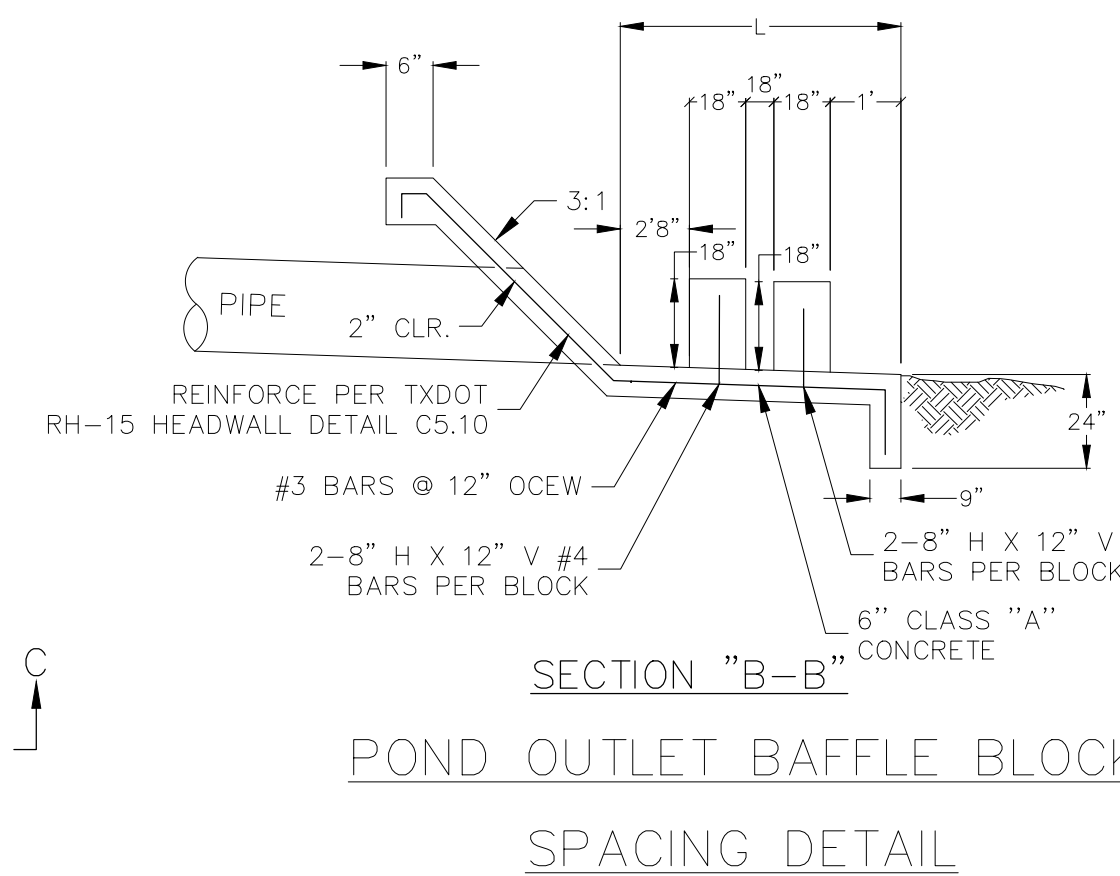
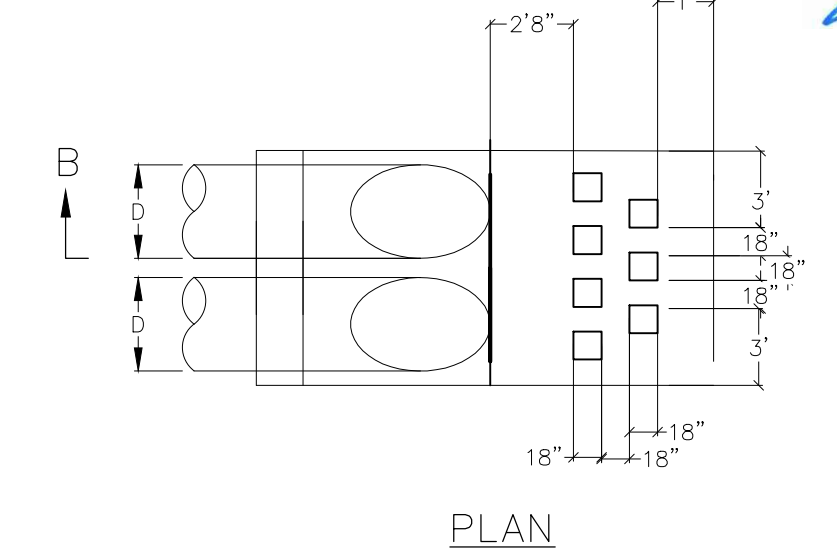
MATCHLINE STA. 6+30
SEE SHEET C5.03



DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:

SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.

- TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.
- ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
- BASINS SHALL BE MOWED ANNUALLY BETWEEN THE MONTHS OF JUNE AND SEPTEMBER.
- CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME A BASIN DOES NOT DRAIN COMPLETELY WITHIN 60 HOURS OR CESSATION OF INFLOW (IE: NO STANDING WATER IS ALLOWED).
- STRUCTURAL INTEGRITY OF BASINS SHALL BE MAINTAINED AT ALL TIMES.
- MAINTENANCE VEHICLE FOR POND ACCESS SHOULD BE A BOBCAT S175 SKID STEER LOADER OR VEHICLE OF EQUAL TO LESSER SIZE.



POND INLET BAFFLE BLOCK SPACING DETAIL

PILOT CHANNEL

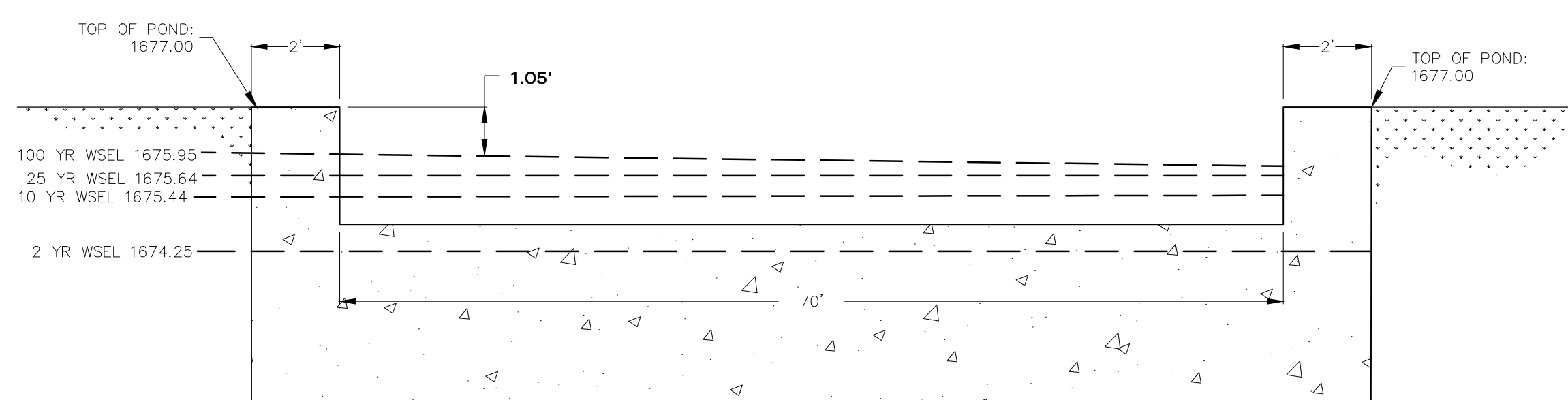
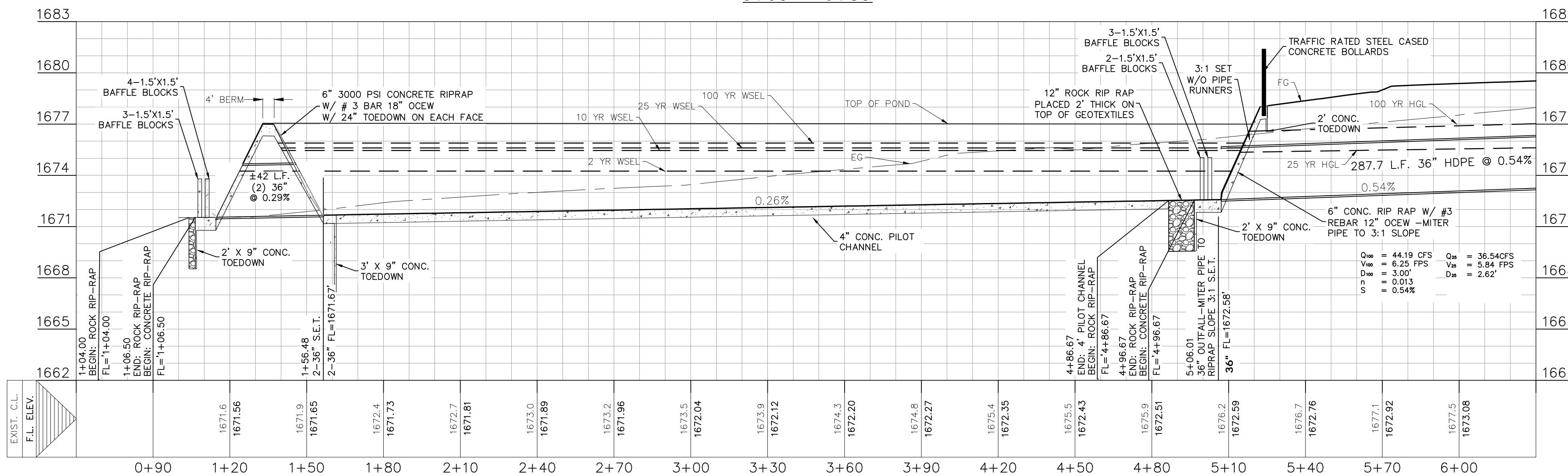
N.T.S.

REFER TO THE COVER SHEET FOR BENCHMARK INFORMATION.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

DETENTION POND B PILOT CHANNEL ALIGNMENT

0+60 - 6+30



POND B DETENTION CALCULATIONS SUMMARY					
DESCRIPTION	UNITS	2 YR	10 YR	25 YR	100 YR
Pond Outflow Rate	CFS	26.74	131.21	180.39	267.08
Peak Storage Volume	CFS	59,535	105,418	113,772	126,620
Water Surface Elevation	FT	1674.25	1675.44	1675.64	1675.95
Freeboard	FT	2.75	1.56	1.36	1.05
Time to Drain Pond	HR	26	26	26	26

ELEVATION	AREA (sqft)	VOLUME (ft³)
1672	1,871.00	309
1673	29,752.00	16,803.00
1674	35,930.00	50,389.00
1675	39,186.00	87,942.00
1676	42,484.00	128,773.00
1677	45,851.00	172,937.00

STORM DETENTION POND B

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

REVISION	DATE	DESCRIPTION
NO.		

DATE: **AUGUST 2024**

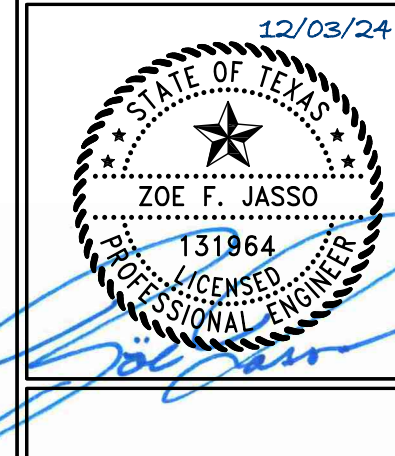
DRAWN BY: **JK**

DESIGNED BY: **RS**

REVIEWED BY: **ZJ**

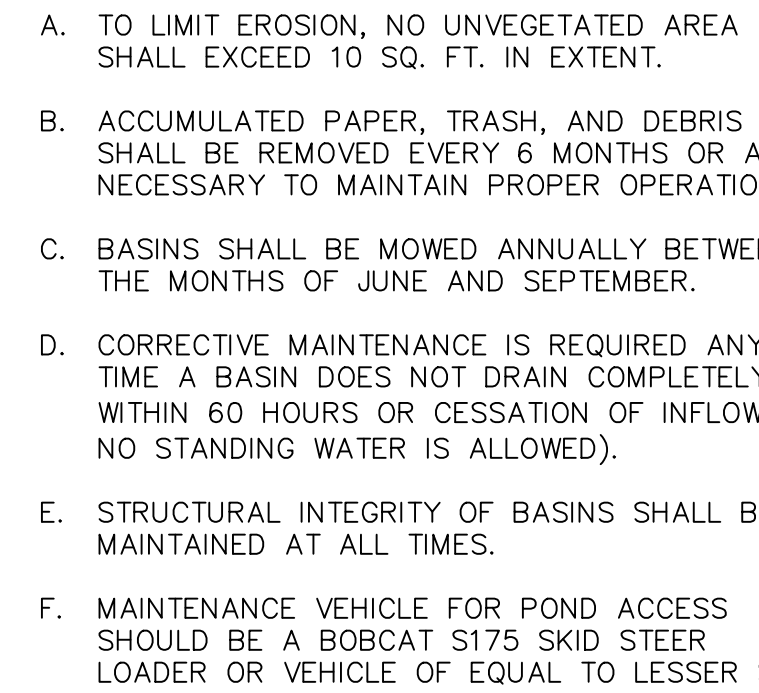
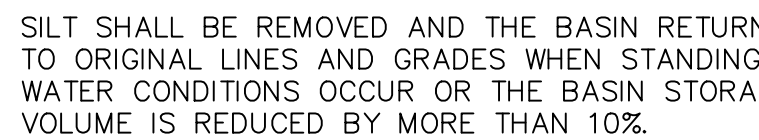
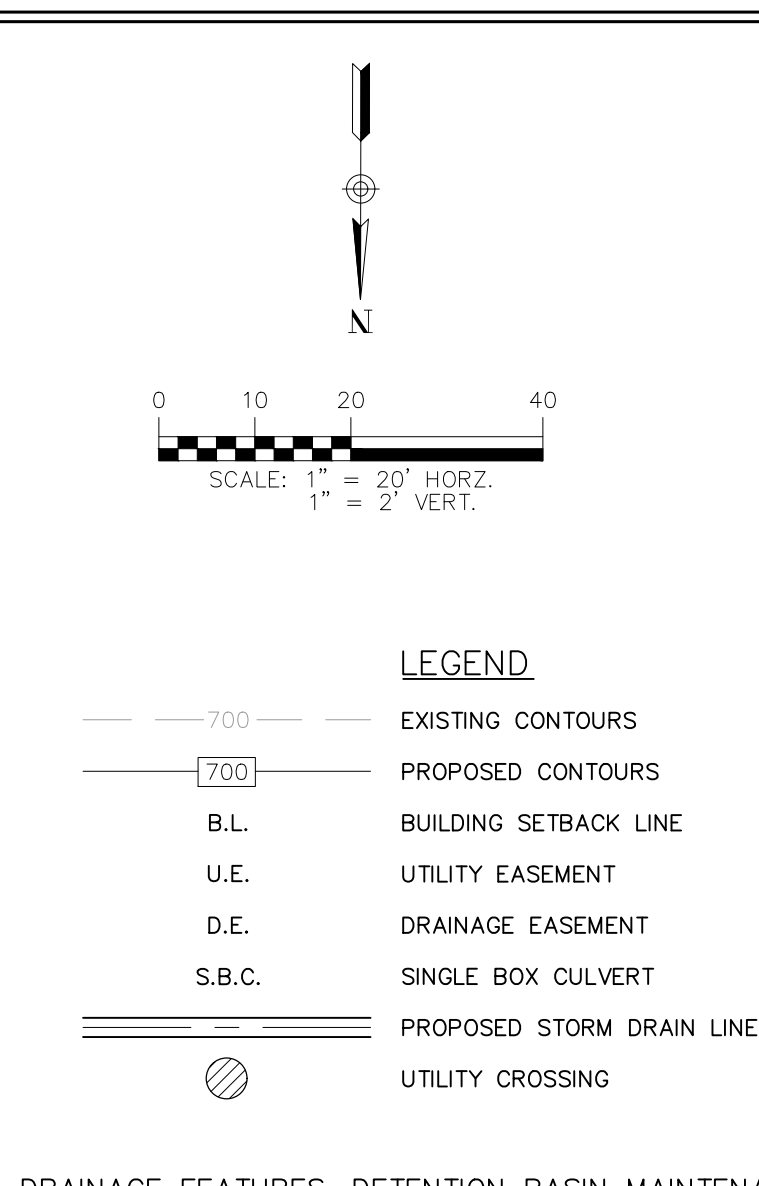
HMT PROJECT NO.:
337.065

SHEET
C5.02



HMT
ENGINEERING & SURVEYING

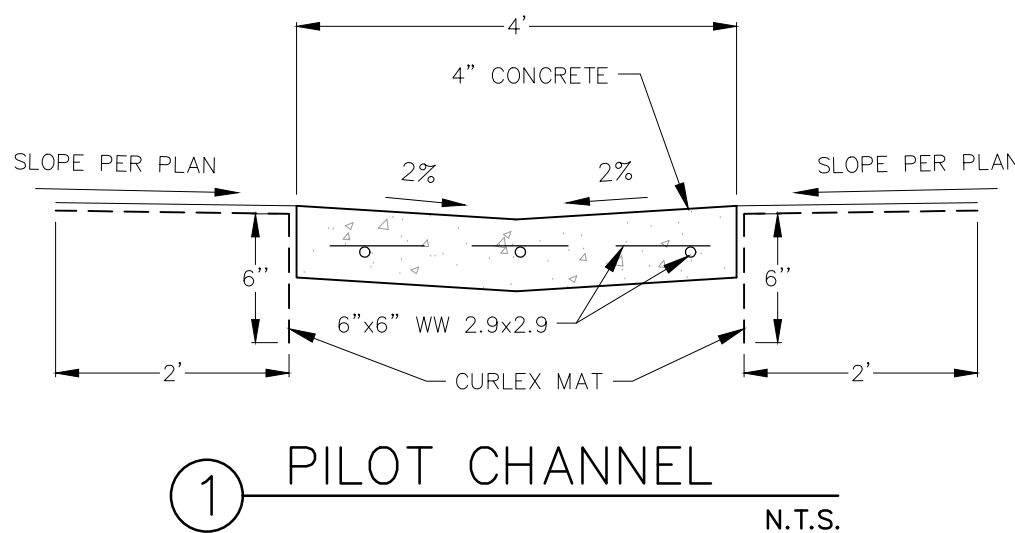
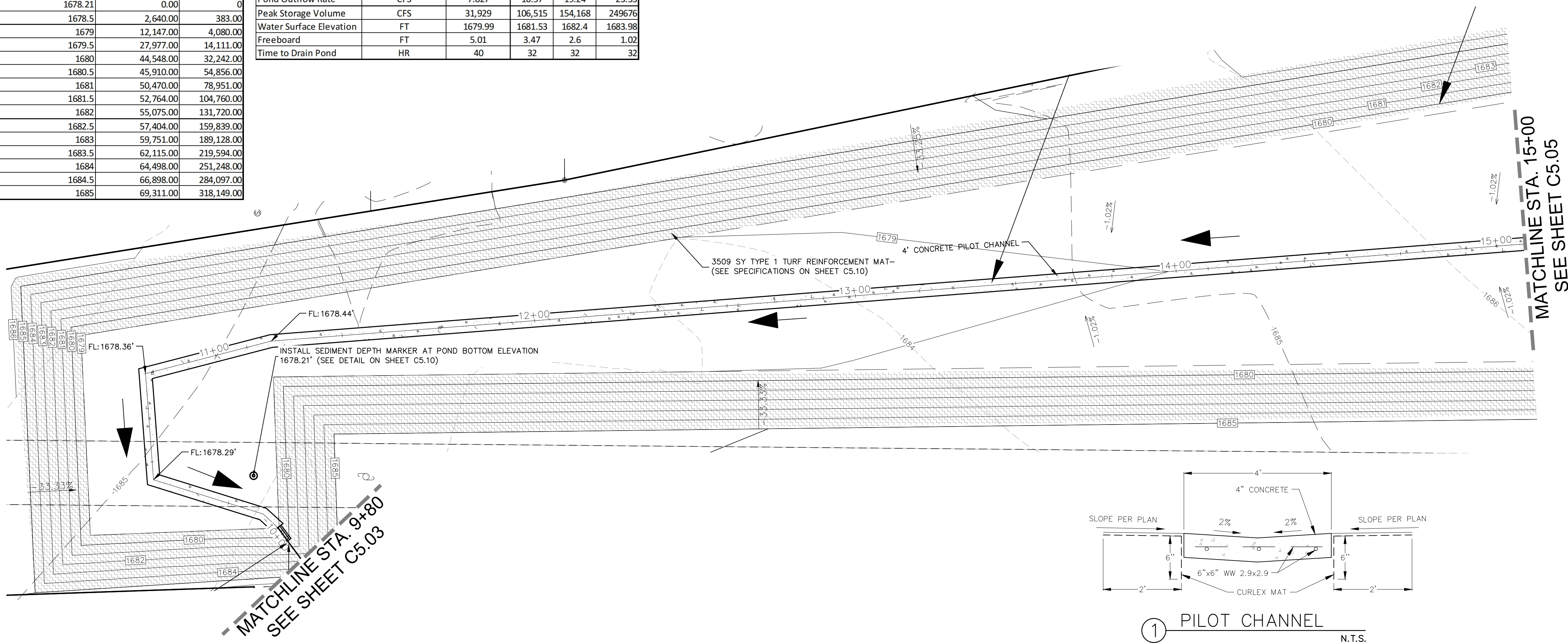
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600



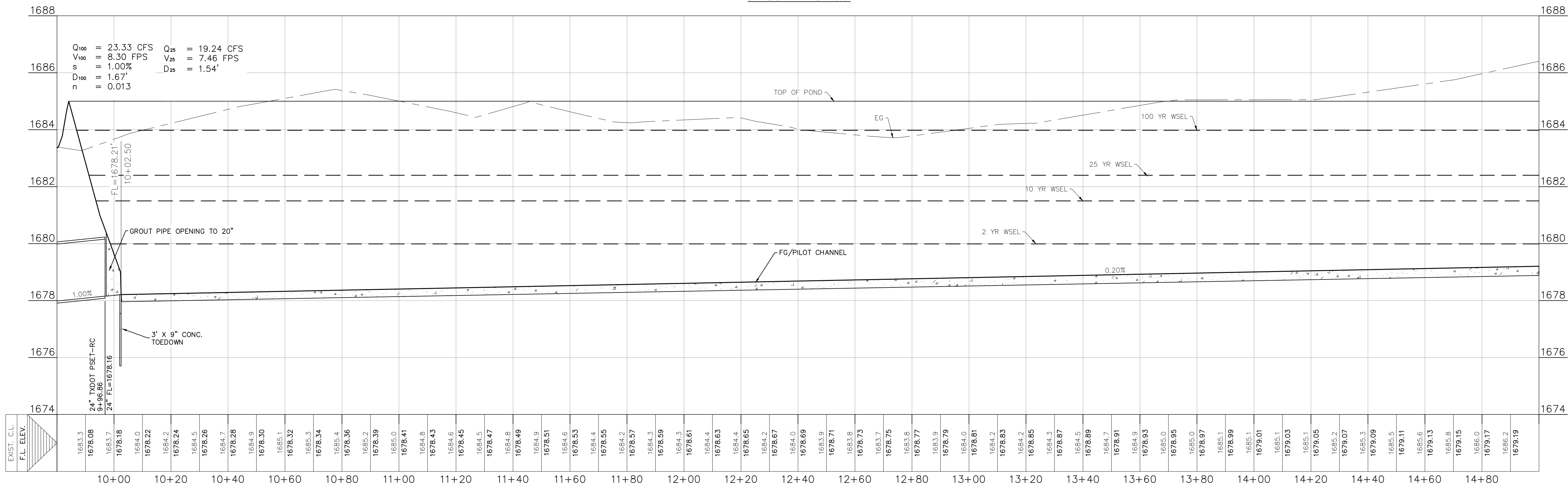
THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

POND A STAGE STORAGE		
ELEVATION	AREA (sqft)	VOLUME (ft³)
1678.21	0.00	0
1678.5	2,640.00	383.00
1679	12,147.00	4,080.00
1679.5	27,977.00	14,111.00
1680	44,548.00	32,242.00
1680.5	45,910.00	54,856.00
1681	50,470.00	78,951.00
1681.5	52,764.00	104,760.00
1682	55,075.00	131,720.00
1682.5	57,404.00	159,839.00
1683	59,751.00	189,128.00
1683.5	62,115.00	219,594.00
1684	64,498.00	251,248.00
1684.5	66,898.00	284,097.00
1685	69,311.00	318,149.00

POND A DETENTION CALCULATIONS SUMMARY					
DESCRIPTION	UNITS	2 YR	10 YR	25 YR	100 YR
Pond Outflow Rate	CFS	7.827	16.57	19.24	23.33
Peak Storage Volume	CFS	31,929	106,515	154,168	249,676
Water Surface Elevation	FT	1679.99	1681.53	1682.4	1683.98
Freeboard	FT	5.01	3.47	2.6	1.02
Time to Drain Pond	HR	40	32	32	32



CHANNEL 1 (3 OF 4)
9+80 - 15+00



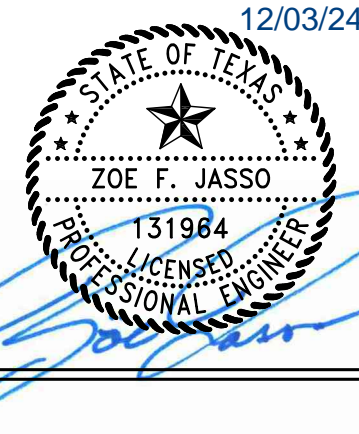
REFER TO THE COVER SHEET
FOR BENCHMARK INFORMATION.

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LEGEND

700 EXISTING CONTOURS
700 PROPOSED CONTOURS
B.L. BUILDING SETBACK LINE
U.E. UTILITY EASEMENT
D.E. DRAINAGE EASEMENT
S.B.C. SINGLE BOX CULVERT
PROPOSED STORM DRAIN LINE
UTILITY CROSSING

1. DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:
- SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.
- A. TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.
- B. ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
- C. BASINS SHALL BE MOWED ANNUALLY BETWEEN THE MONTHS OF JUNE AND SEPTEMBER.
- D. CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME A BASIN DOES NOT DRAIN COMPLETELY WITHIN 60 HOURS OR CESSATION OF INFLOW (IE: NO STANDING WATER IS ALLOWED).
- E. STRUCTURAL INTEGRITY OF BASINS SHALL BE MAINTAINED AT ALL TIMES.
- F. MAINTENANCE VEHICLE FOR POND ACCESS SHOULD BE A BOBCAT S175 SKID STEER LOADER OR VEHICLE OF EQUAL TO LESSER SIZE.



STORM DETENTION POND A
(1 OF 2)

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: AUGUST 2024
DRAWN BY: JK
DESIGNED BY: RS
REVIEWED BY: ZJ

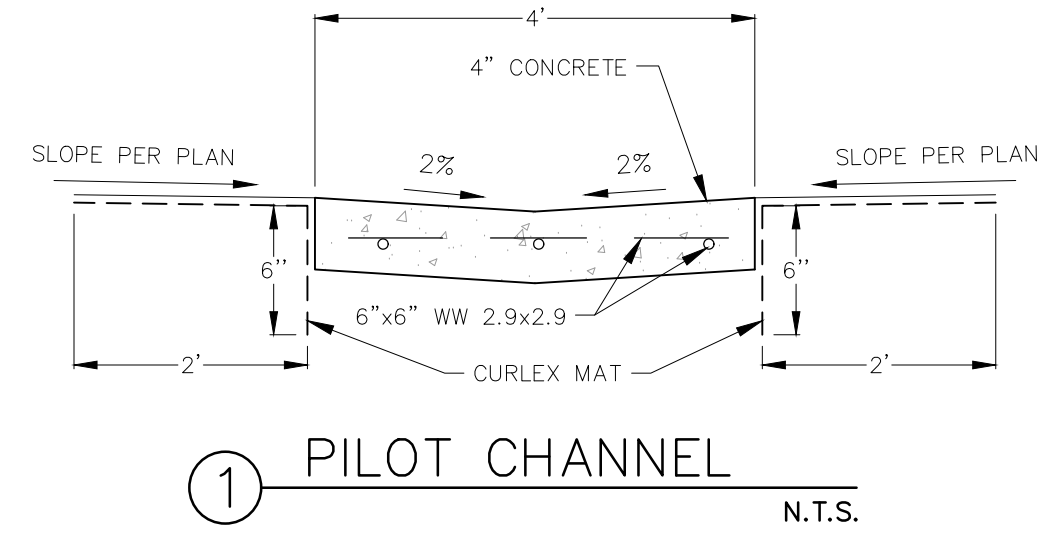
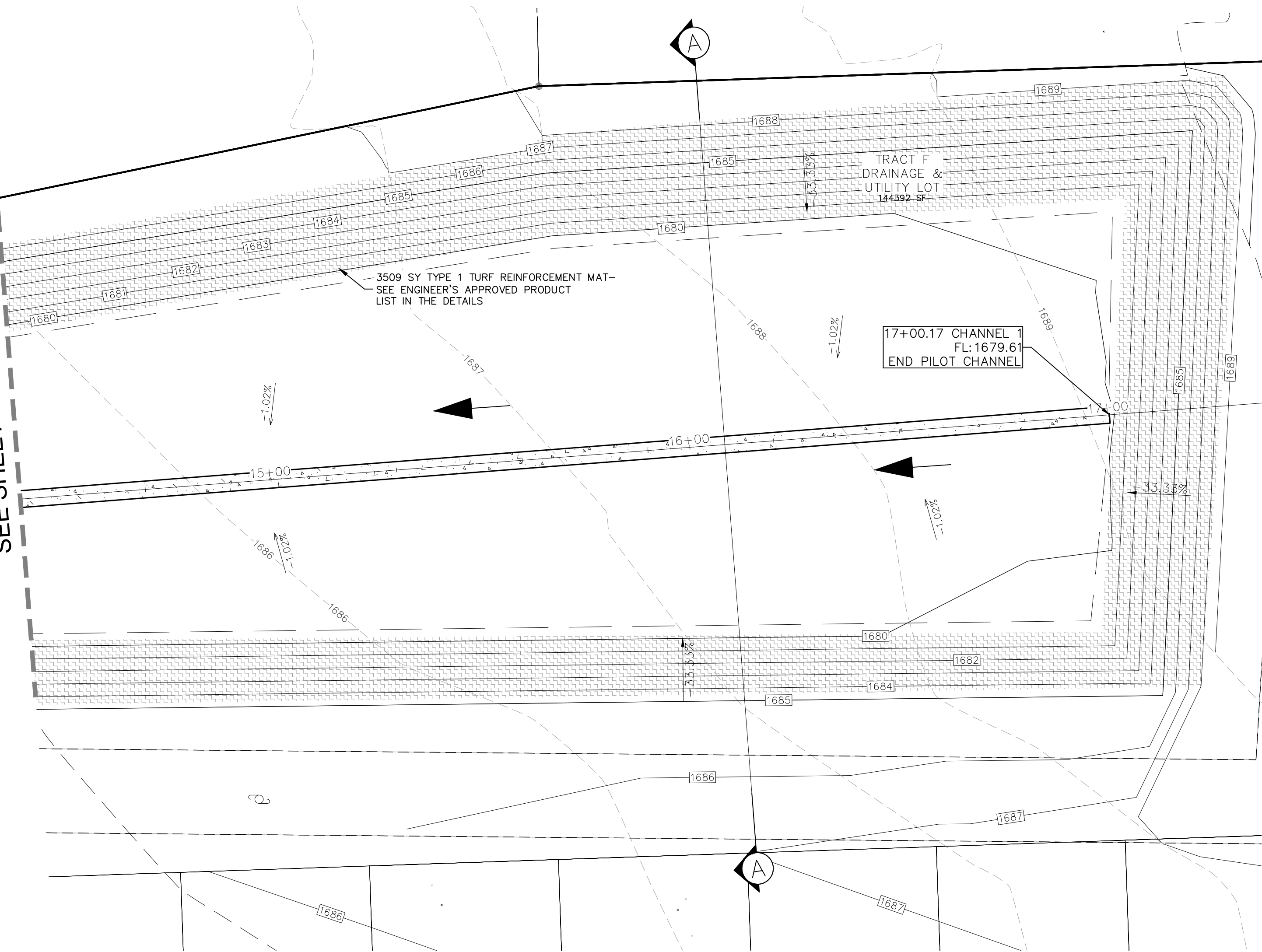
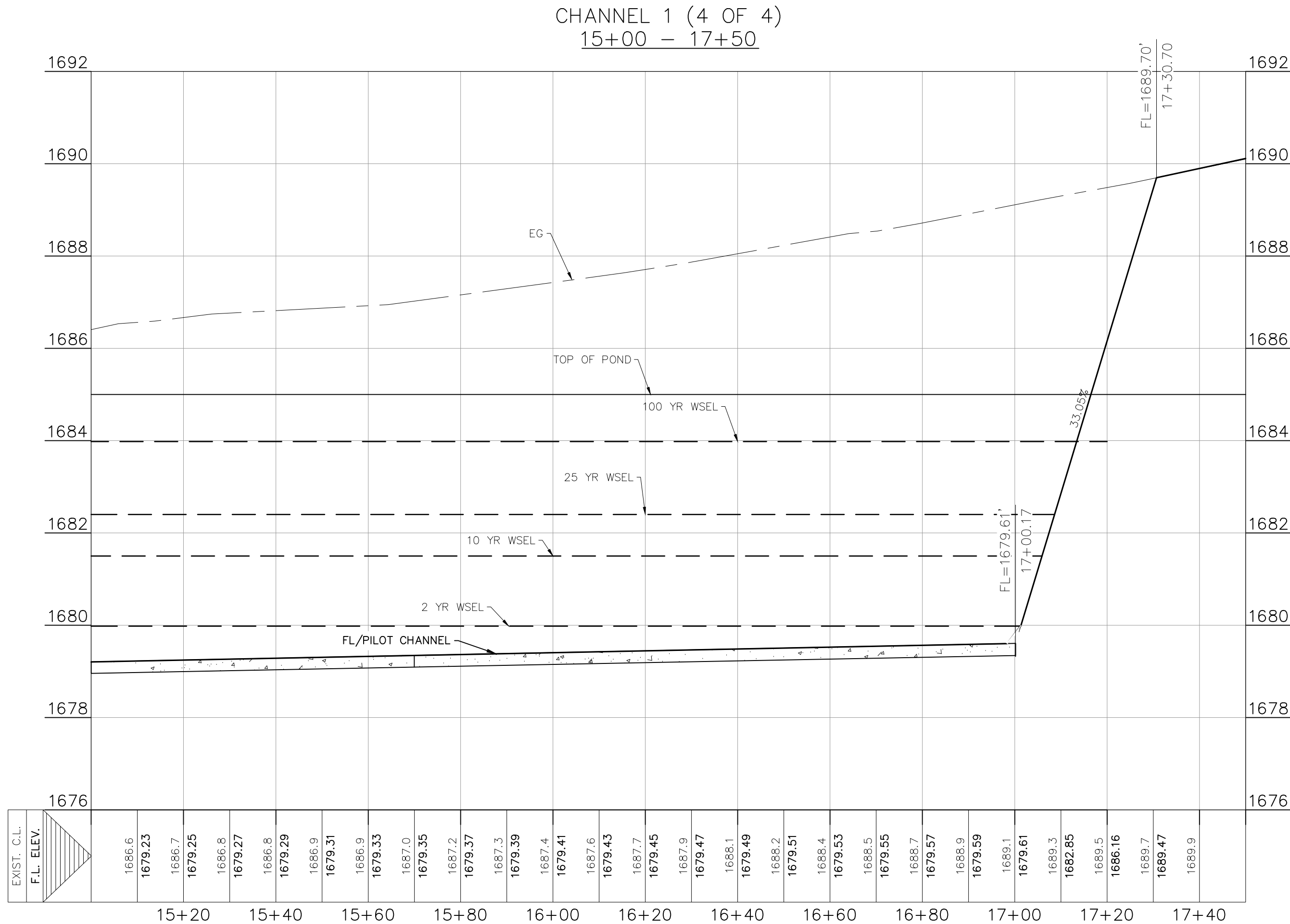
HMT PROJECT NO.: 337.065

SHEET
C5.04

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600

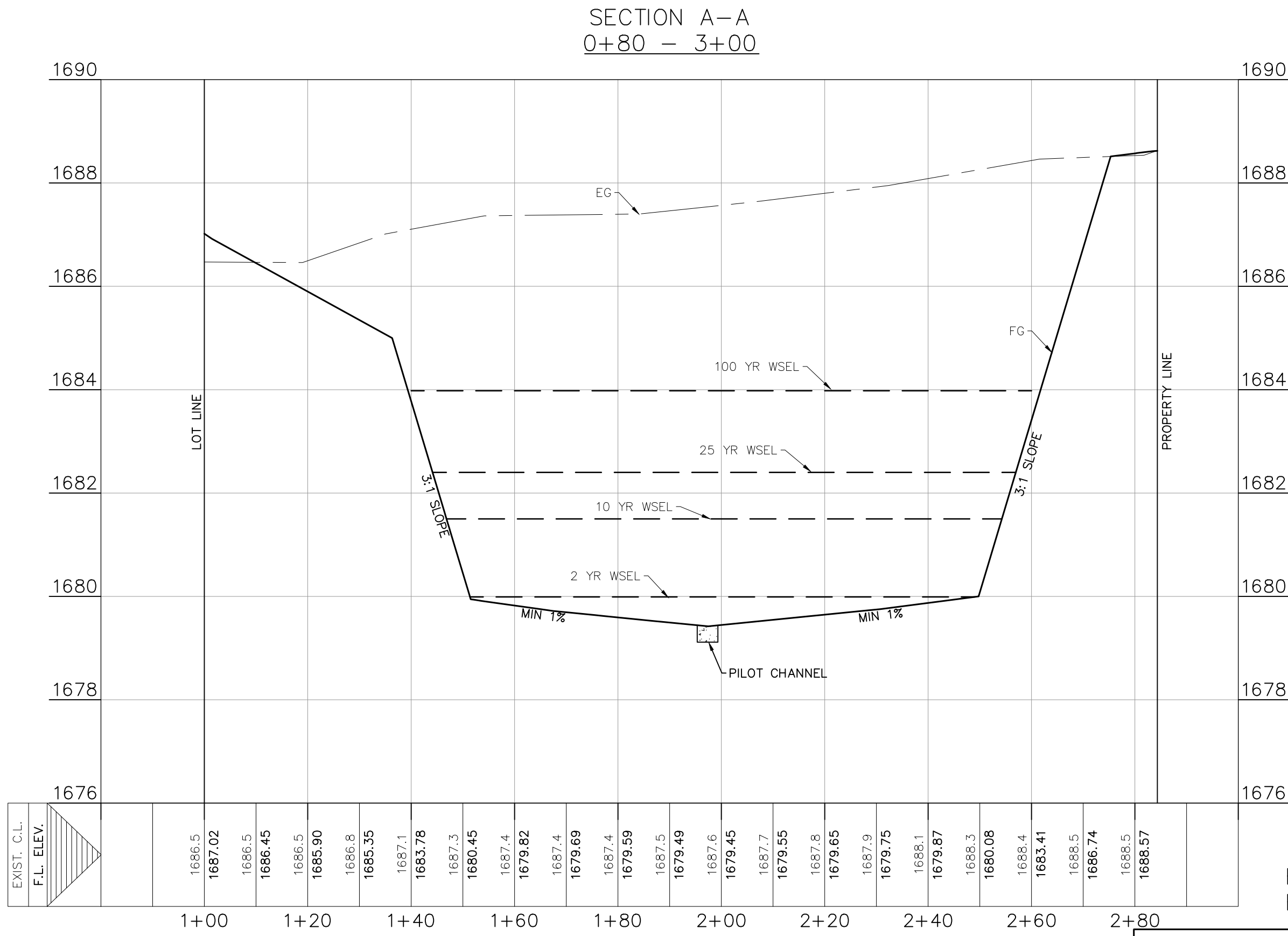


MATCHLINE STA. 15+00
SEE SHEET C5.04



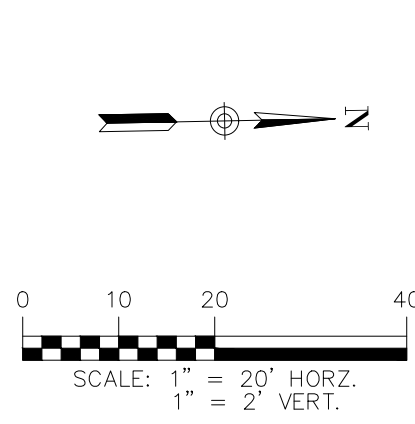
POND A DETENTION CALCULATIONS SUMMARY				
DESCRIPTION	UNITS	2 YR	10 YR	25 YR
Pond Outflow Rate	CFS	7.827	16.57	19.24
Peak Storage Volume	CFS	31,929	106,515	154,168
Water Surface Elevation	FT	1679.99	1681.53	1682.4
Freeboard	FT	5.01	3.47	2.6
Time to Drain Pond	HR	40	32	32

POND A STAGE STORAGE		
ELEVATION	AREA (sqft)	VOLUME (ft³)
1678.21	0.00	0
1678.5	2,640.00	383.00
1679	12,147.00	4,080.00
1679.5	27,977.00	14,111.00
1680	44,548.00	32,242.00
1680.5	45,910.00	54,856.00
1681	50,470.00	78,951.00
1681.5	52,764.00	104,760.00
1682	55,075.00	131,720.00
1682.5	57,404.00	159,839.00
1683	59,751.00	189,128.00
1683.5	62,115.00	219,594.00
1684	64,498.00	251,248.00
1684.5	66,898.00	284,097.00
1685	69,311.00	318,149.00



REFER TO THE COVER SHEET
FOR BENCHMARK INFORMATION.

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LEGEND	
---	EXISTING CONTOURS
---	PROPOSED CONTOURS
---	B.L. BUILDING SETBACK LINE
---	U.E. UTILITY EASEMENT
---	D.E. DRAINAGE EASEMENT
---	S.B.C. SINGLE BOX CULVERT
---	PROPOSED STORM DRAIN LINE
---	UTILITY CROSSING

DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE
AND EQUIPMENT ACCESS REQUIREMENTS:

SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.

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- STRUCTURAL INTEGRITY OF BASINS SHALL BE MAINTAINED AT ALL TIMES.
- MAINTENANCE VEHICLE FOR POND ACCESS SHOULD BE A BOBCAT S175 SKID STEER LOADER OR VEHICLE OF EQUAL TO LESSER SIZE.



STORM DETENTION POND A
(2 OF 2)

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: AUGUST 2024

DRAWN BY: JK

DESIGNED BY: RS

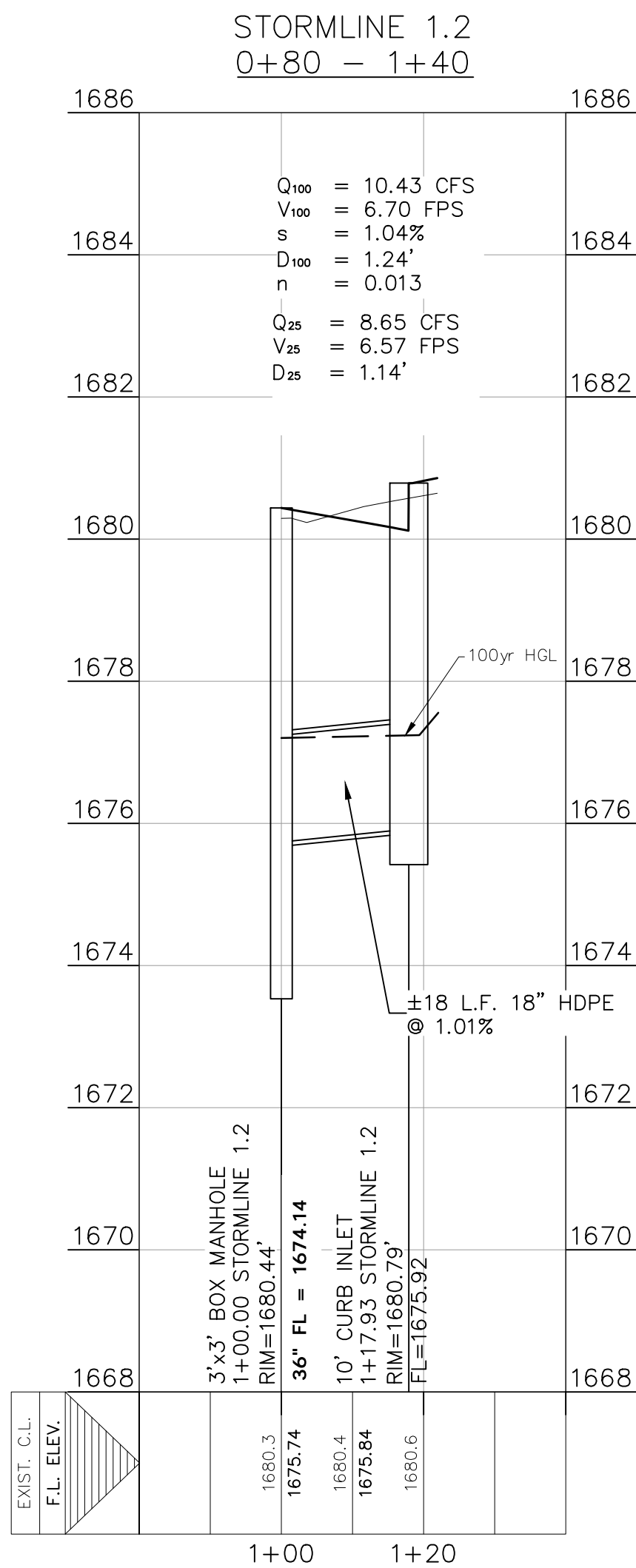
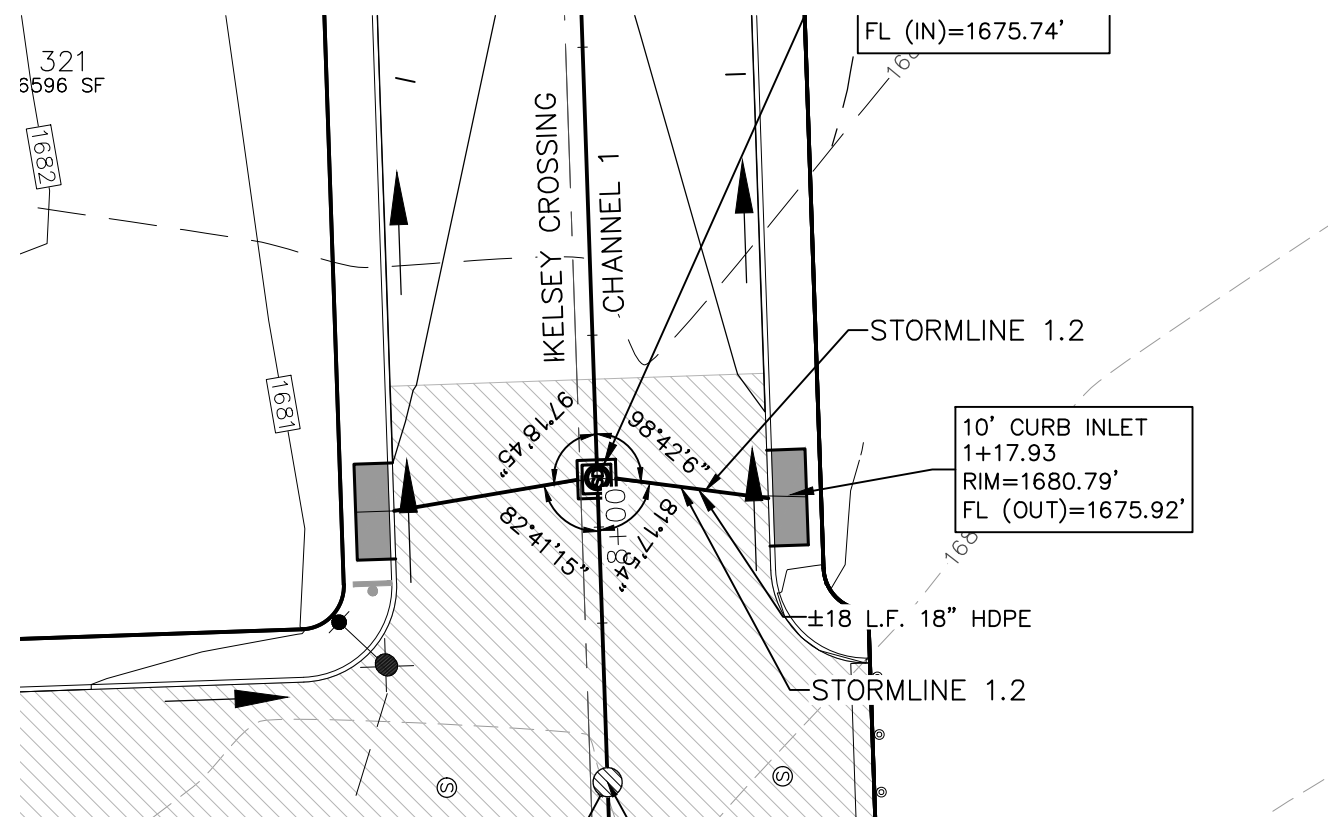
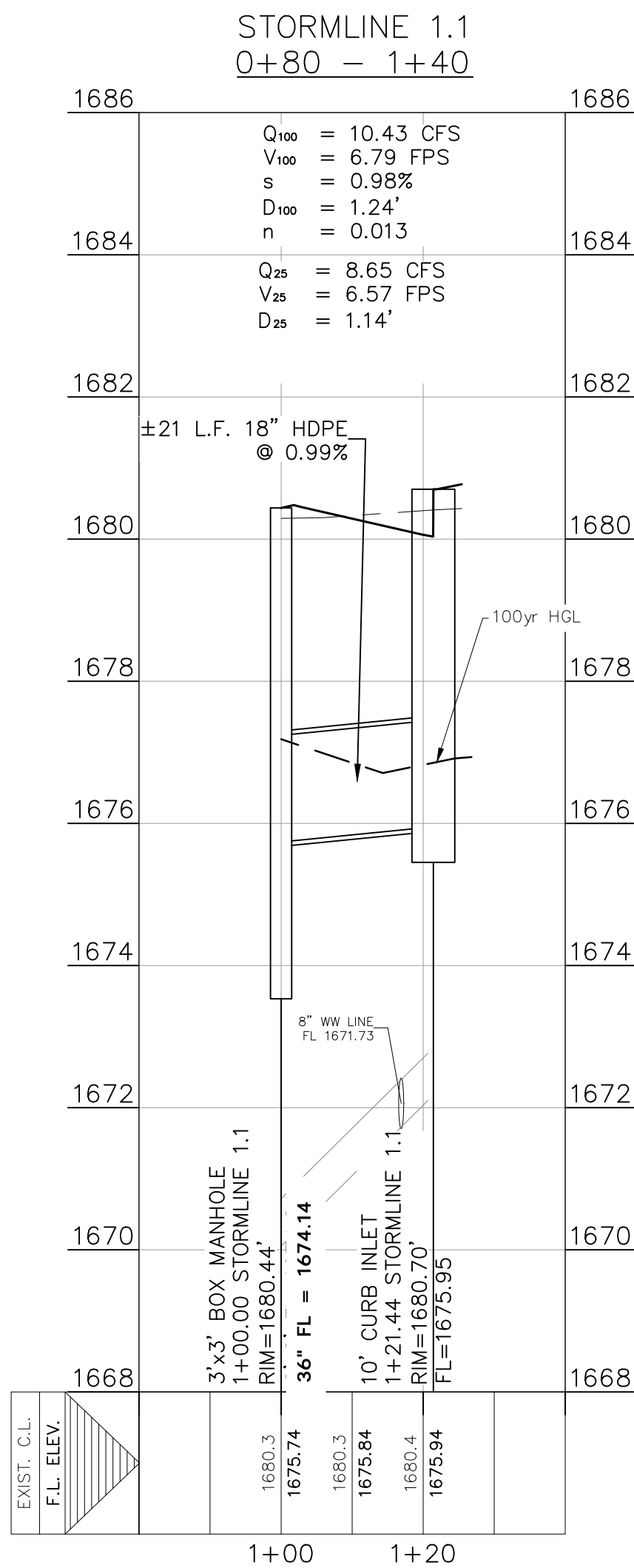
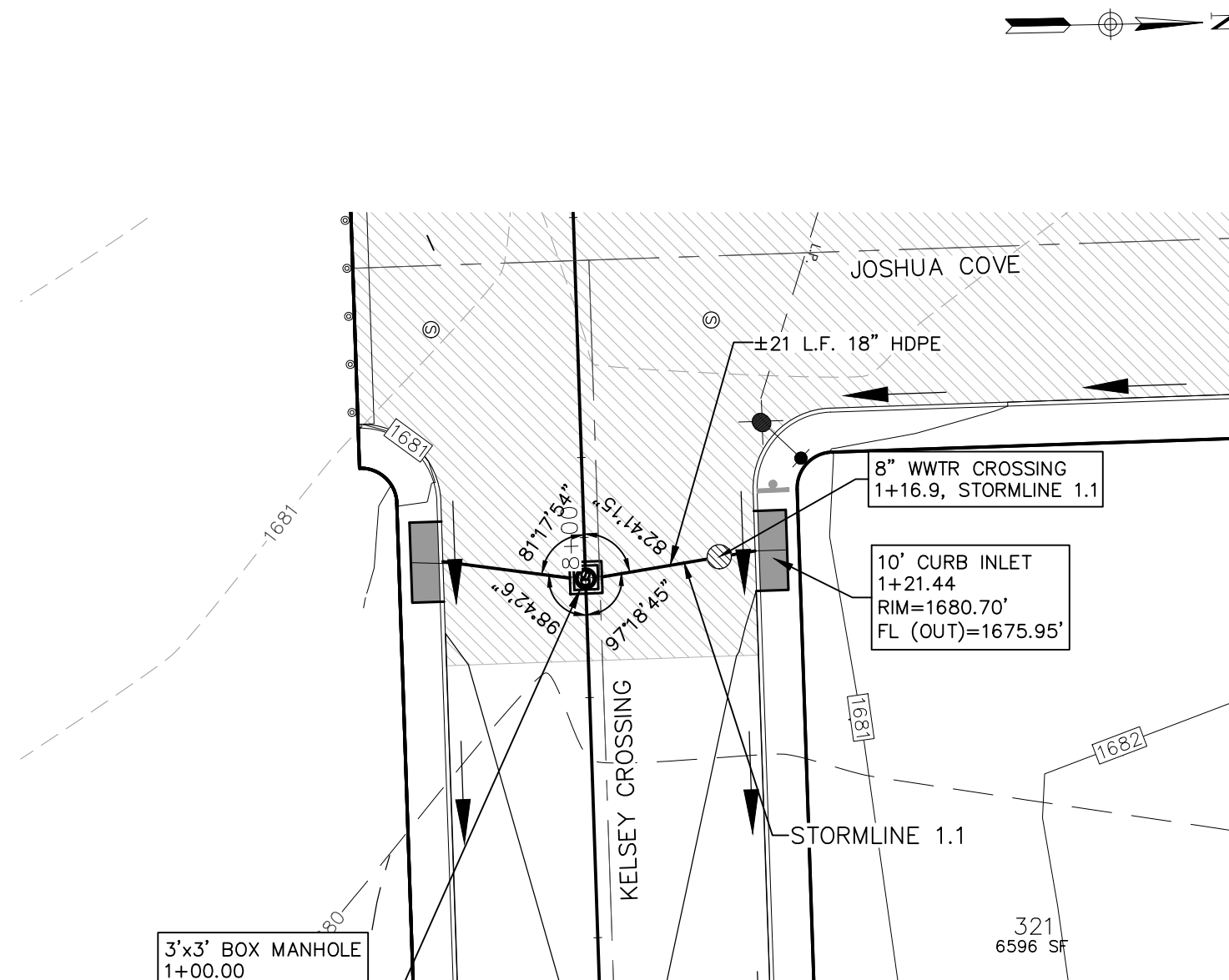
REVIEWED BY: ZJ

HMT PROJECT NO.: 337.065

SHEET
C5.05

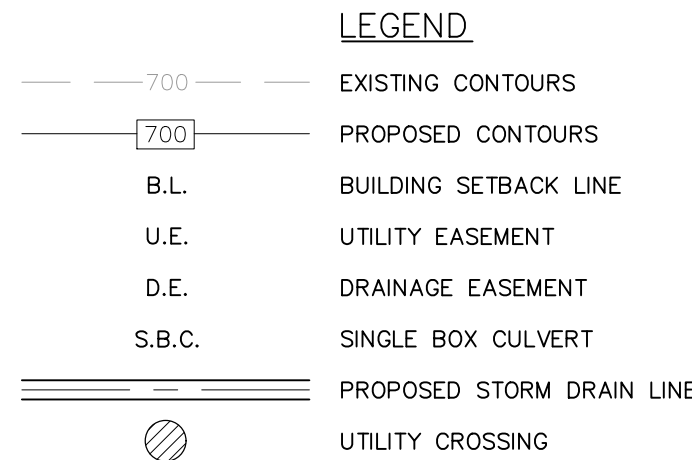
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600





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FOR BENCHMARK INFORMATION.

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STORM CHANNEL 1.1 & 1.2
PLAN & PROFILE

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: AUGUST 2024

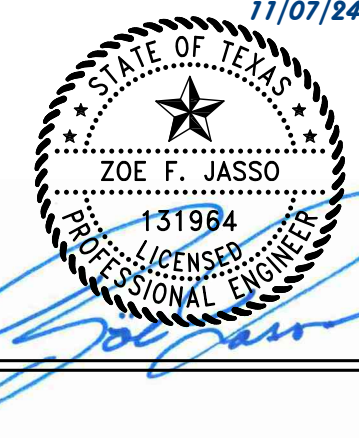
DRAWN BY: JK

DESIGNED BY: RS

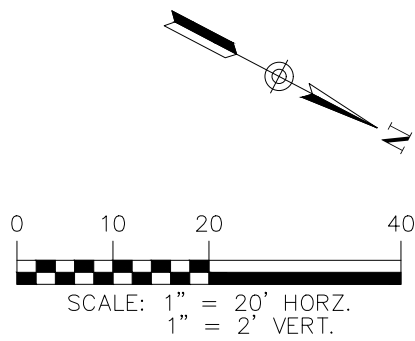
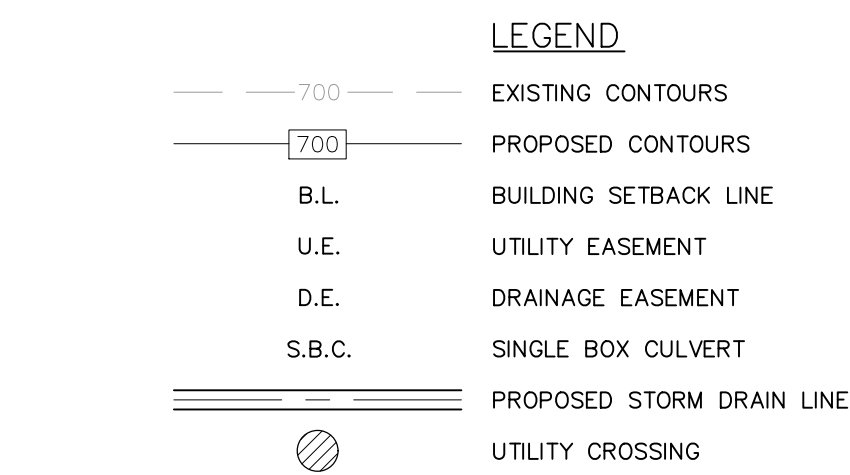
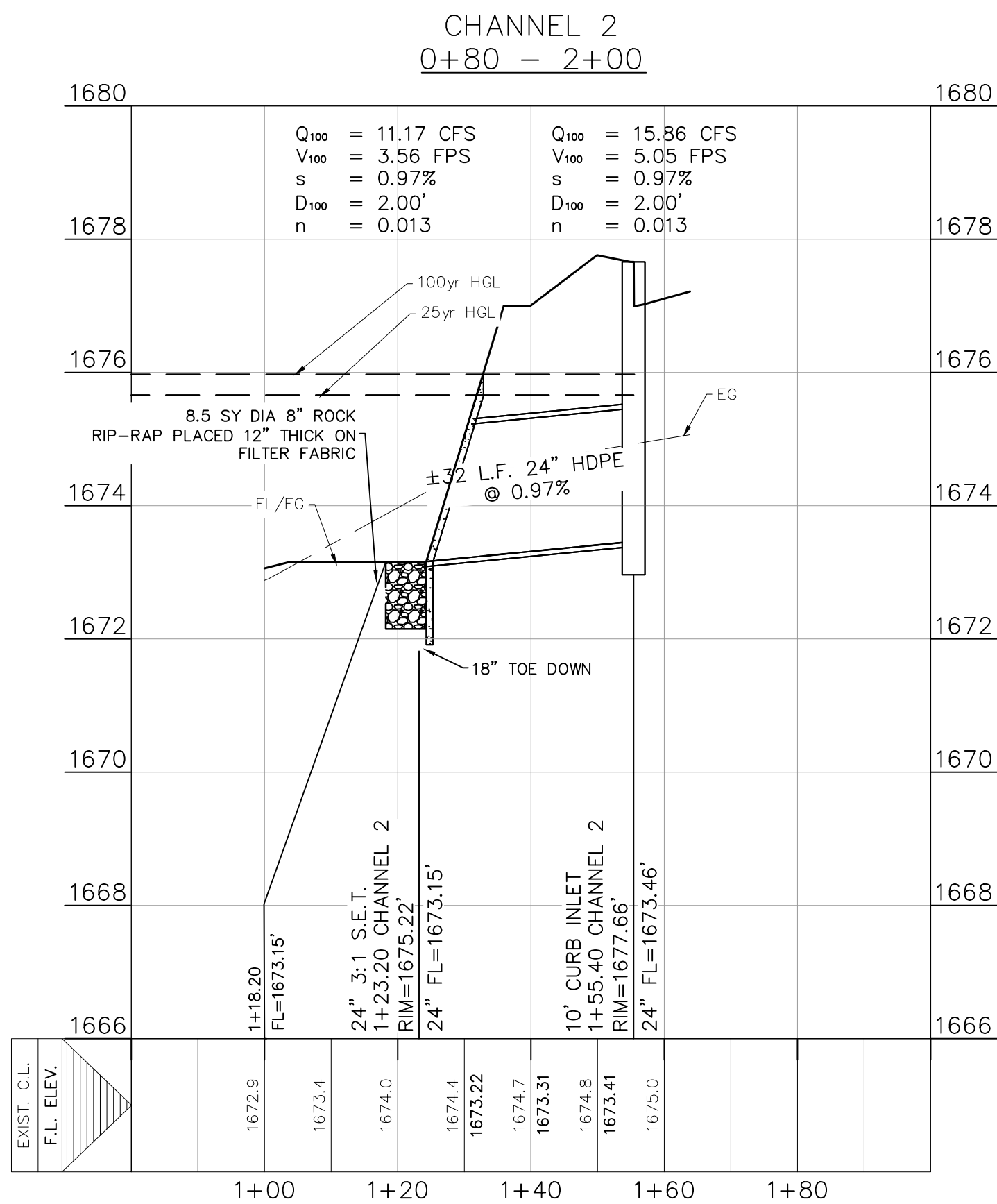
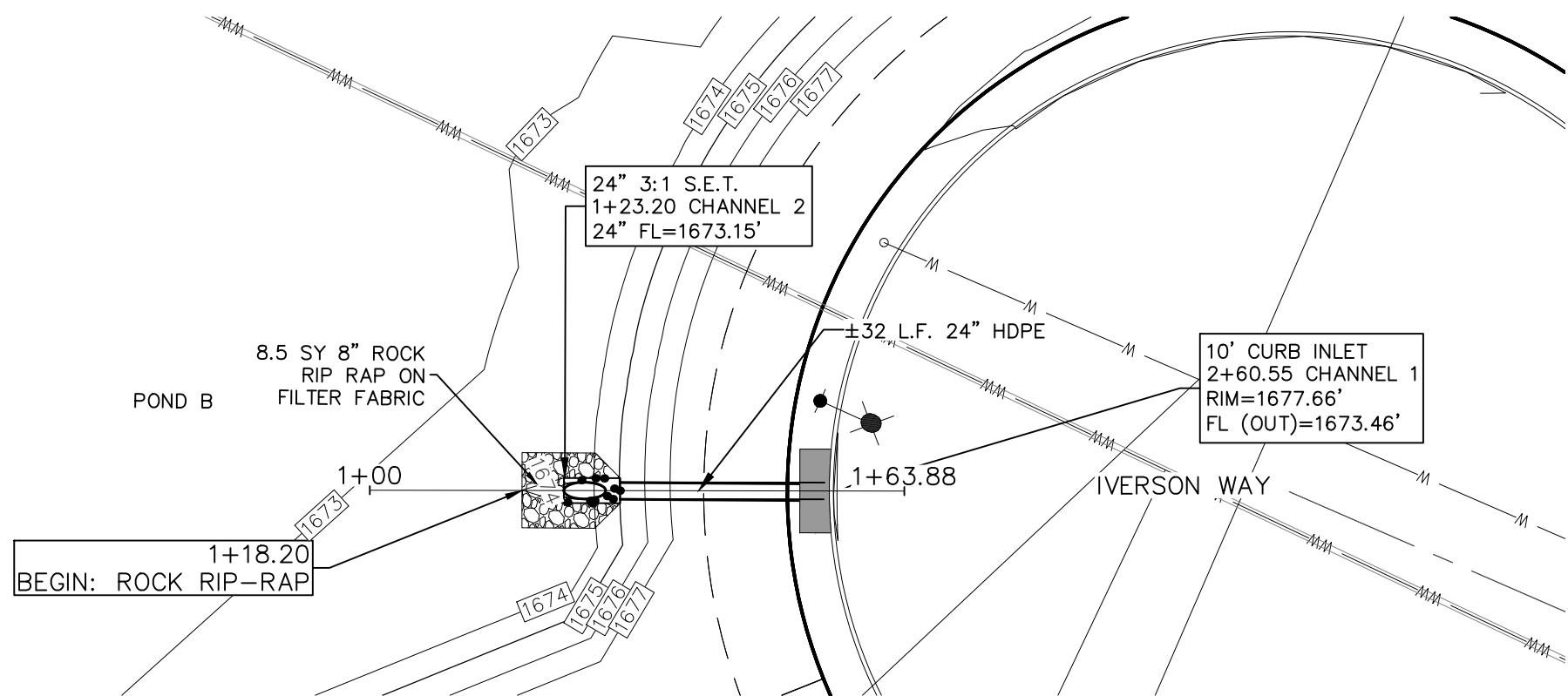
REVIEWED BY: ZJ

HMT PROJECT NO.: 337.065

SHEET
C5.06



290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600



DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:

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290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600

HMT
ENGINEERING & SURVEYING

11/07/84

ZOE F. JASSO
131984
PROFESSIONAL ENGINEER
STATE OF TEXAS

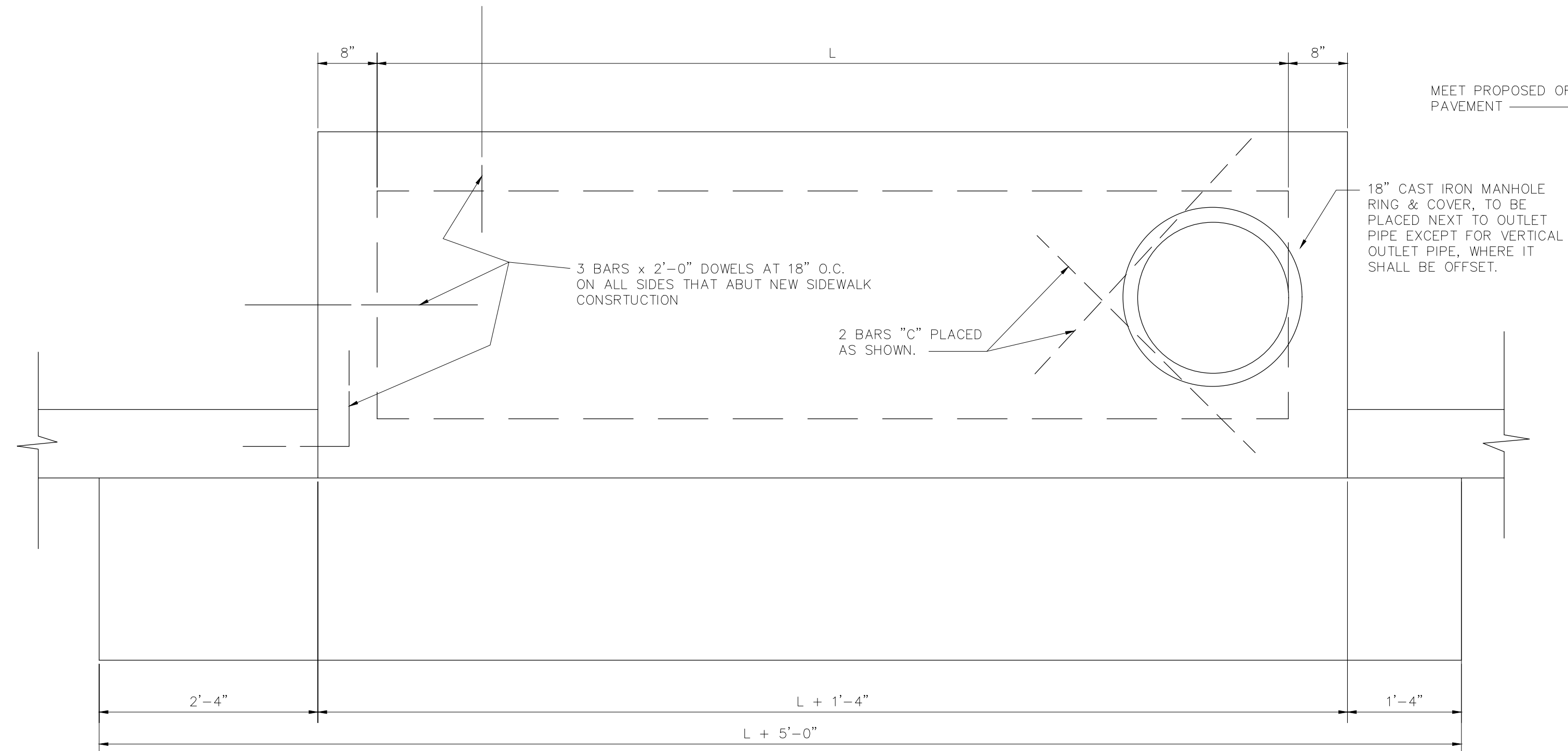
STORM CHANNEL 2
PLAN & PROFILE

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

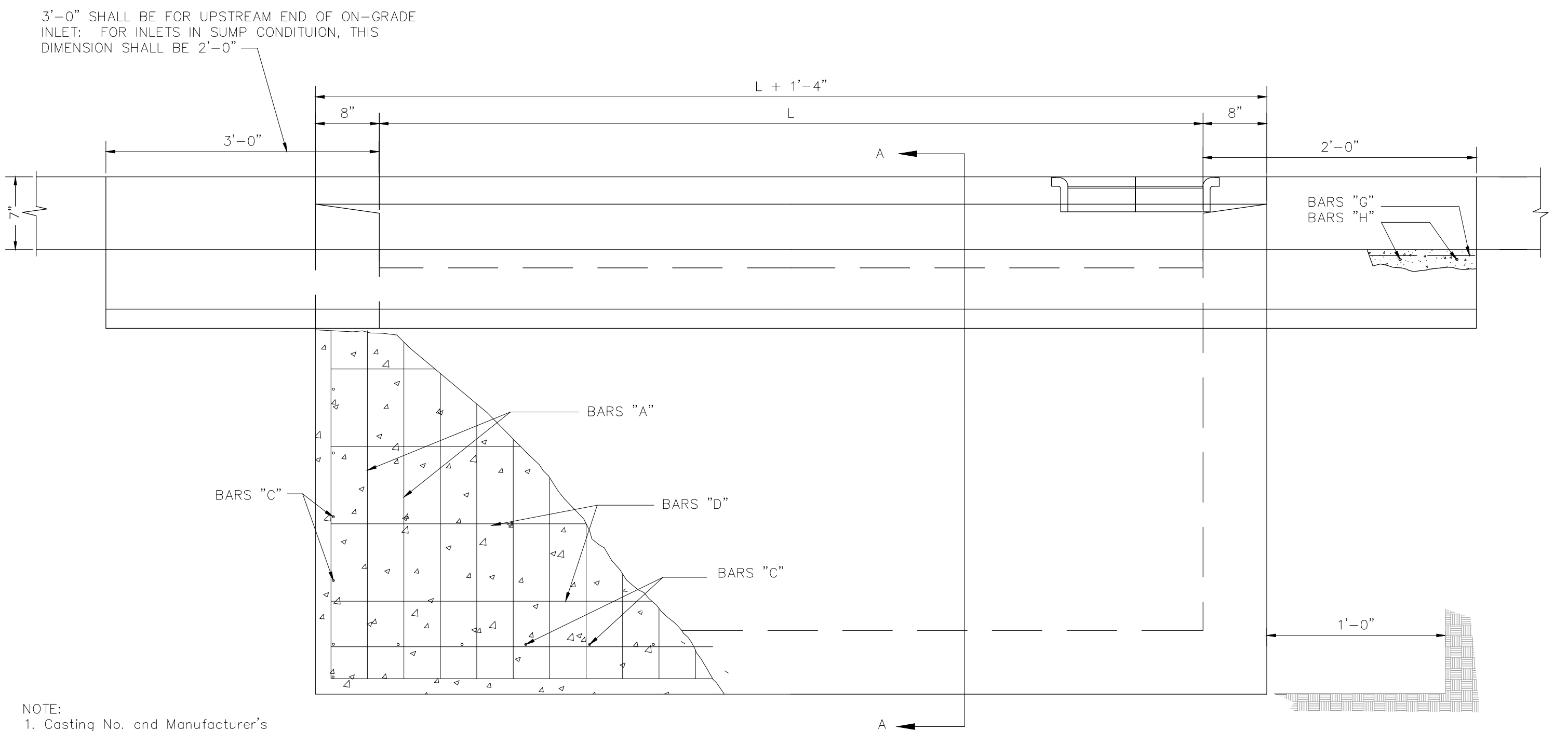
NO.	REVISION DESCRIPTION	REVISION DATE

DATE:	AUGUST 2024
DRAWN BY:	JK
DESIGNED BY:	RS
REVIEWED BY:	ZJ
HMT PROJECT NO.:	337.065

SHEET
C5.07

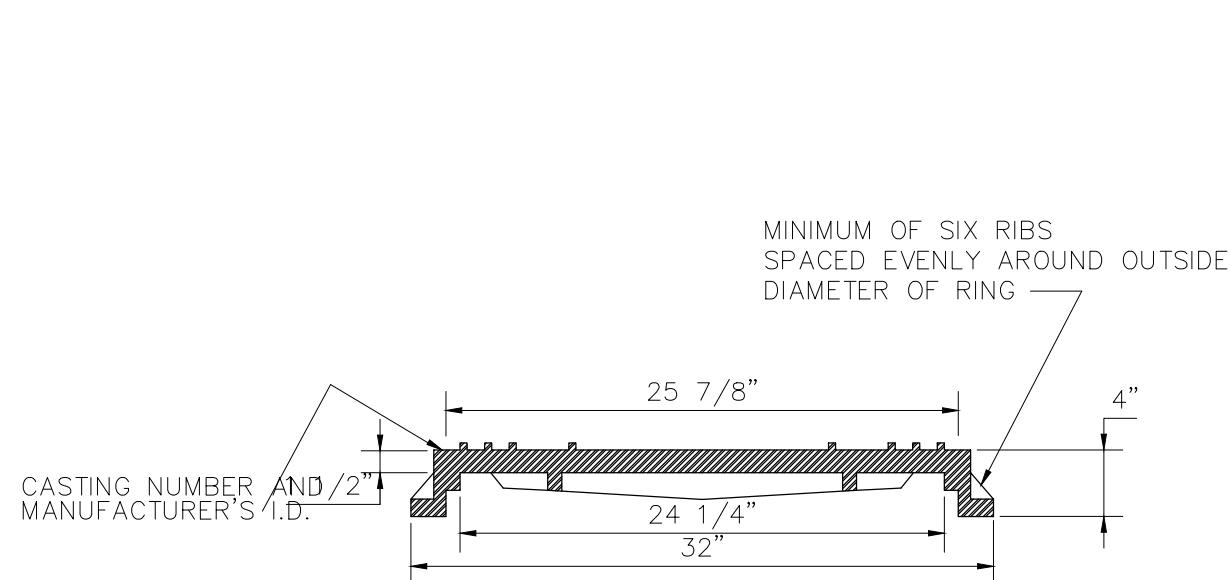


PLAN VIEW
SCALE: N.T.S.

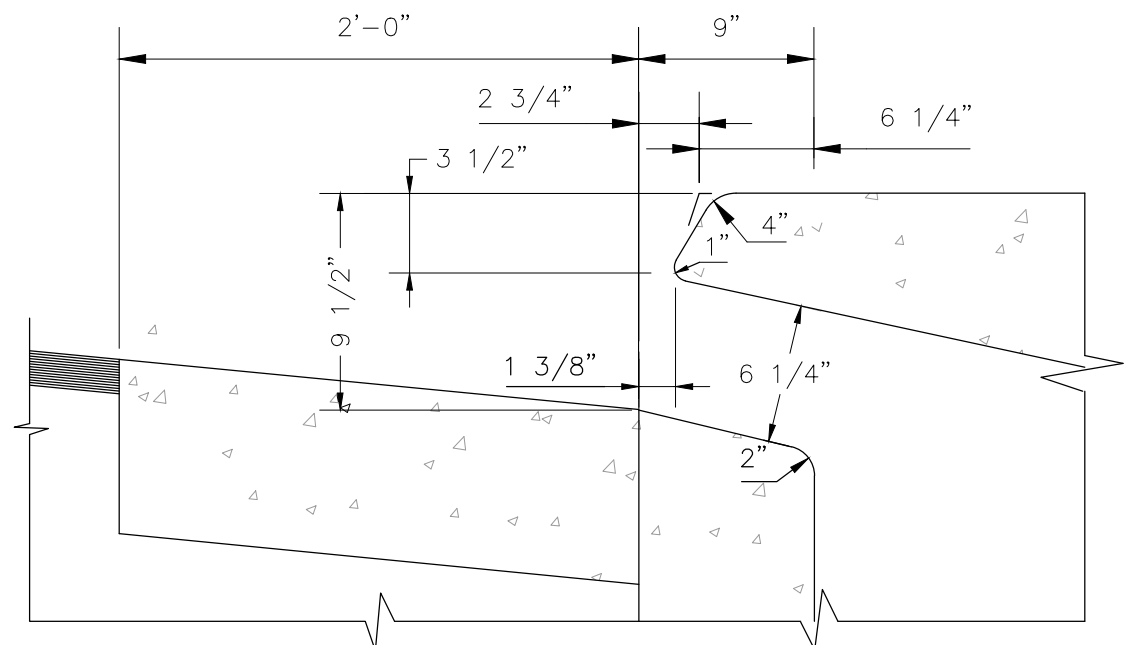
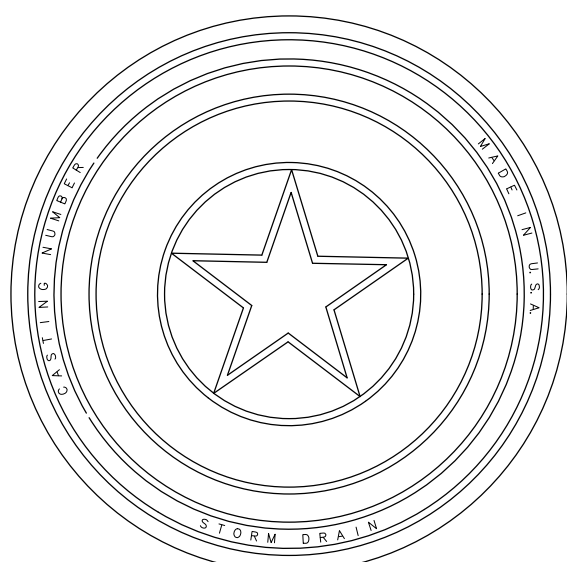


FRONT VIEW
SCALE: N.T.S.

- NOTE:
- Casting No. and Manufacturer's I.D. on lid and ring.
 - Load bearing capability of N=20 minimum.
 - The load bearing surface shall be machine ground.
 - The combined weight of the manhole ring and cover must be at least 260 lbs.

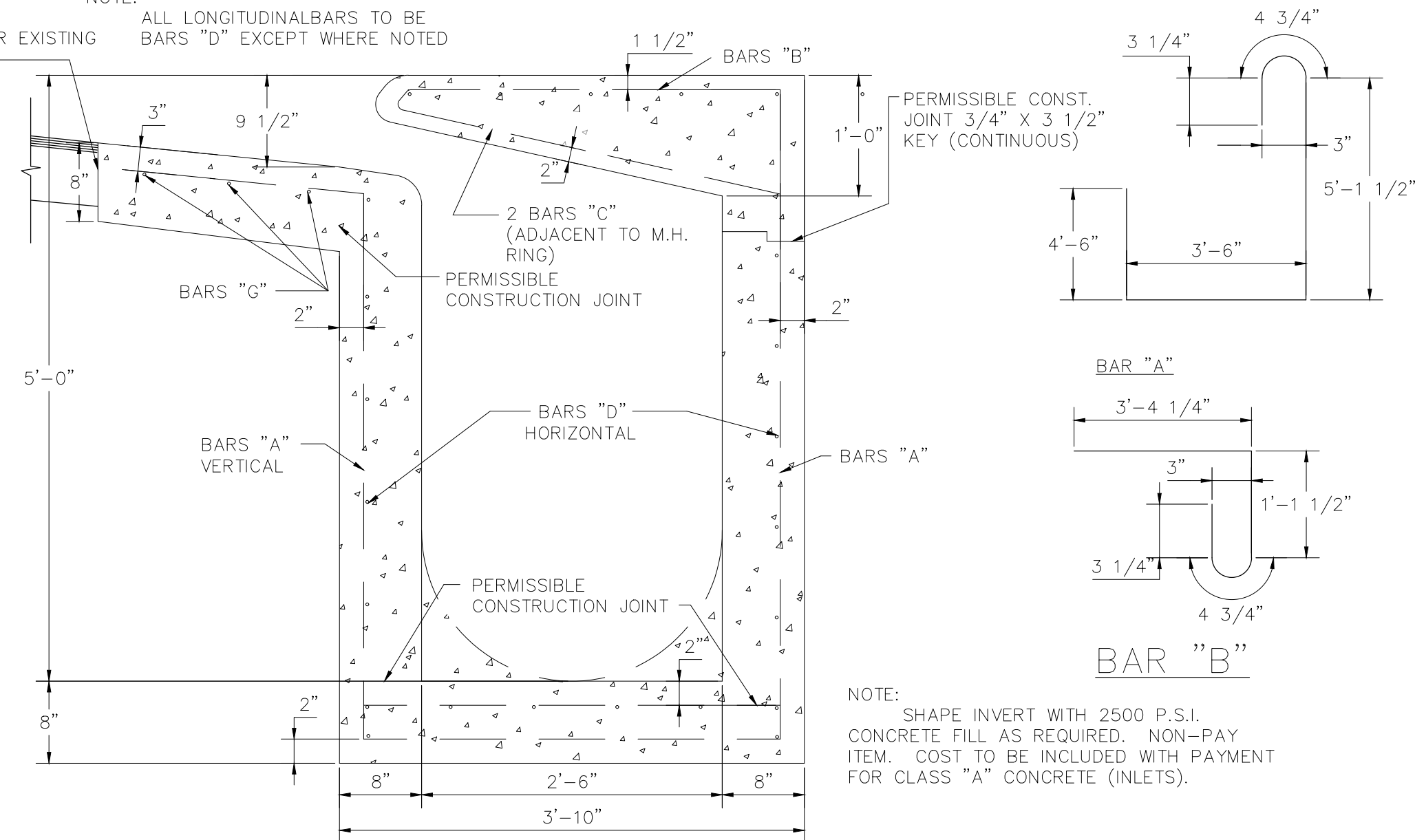


MANHOLE RING & COVER DETAILS

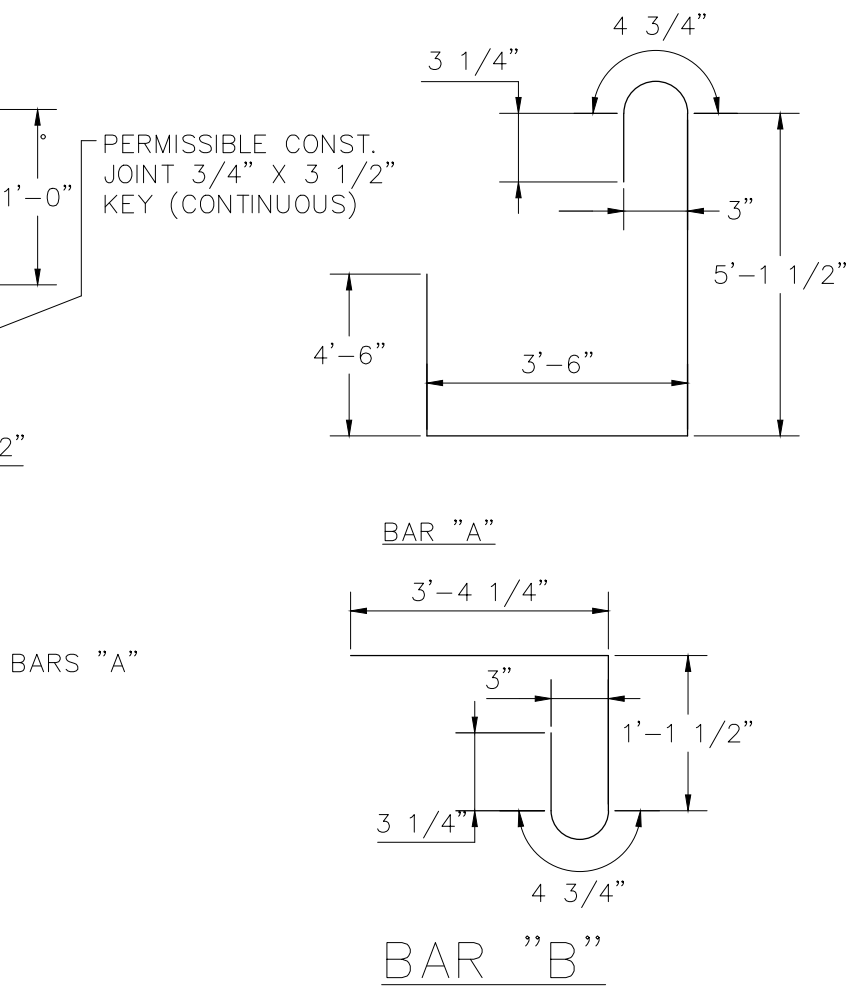


OPENING DETAIL FOR CURB SECTION

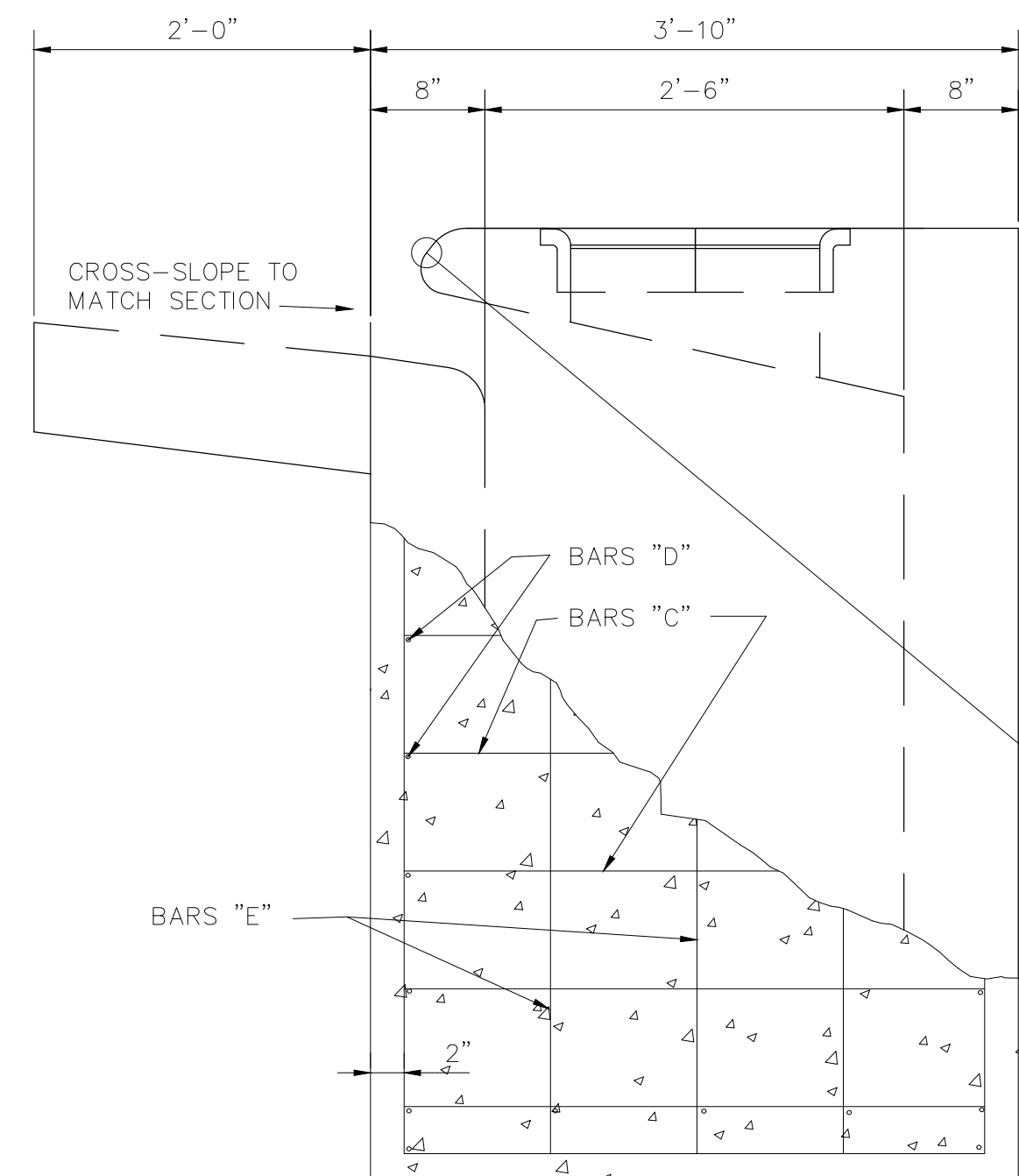
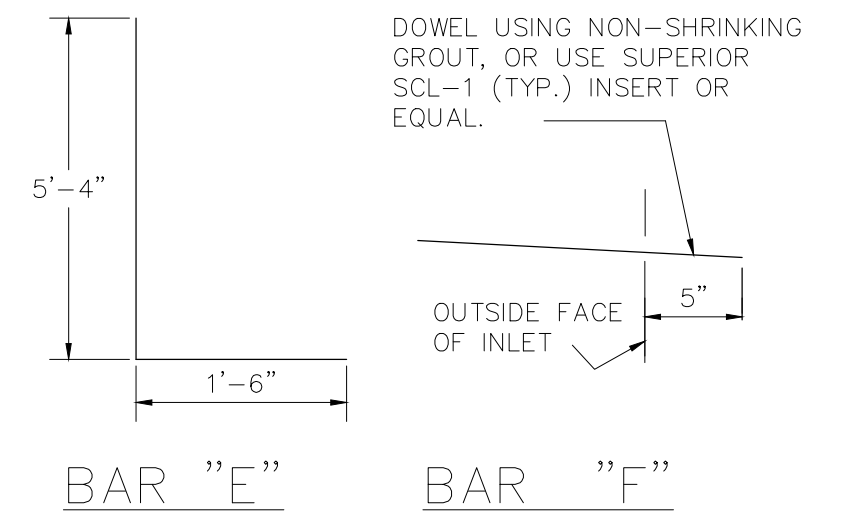
NOTE:
ALL LONGITUDINAL BARS TO BE BARS "D" EXCEPT WHERE NOTED
MEET PROPOSED OR EXISTING PAVEMENT



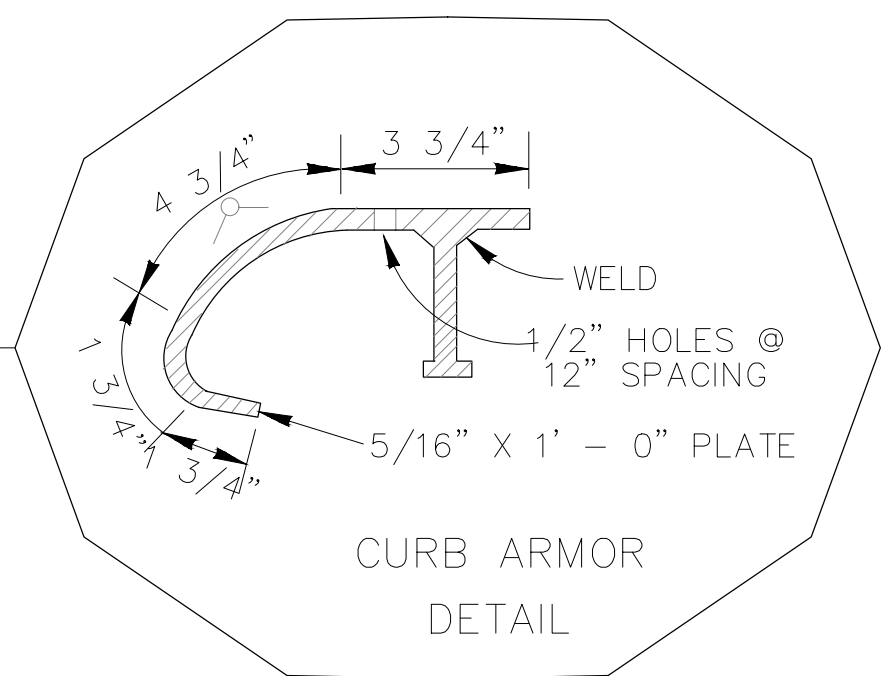
SECTION A-A
SCALE: N.T.S.



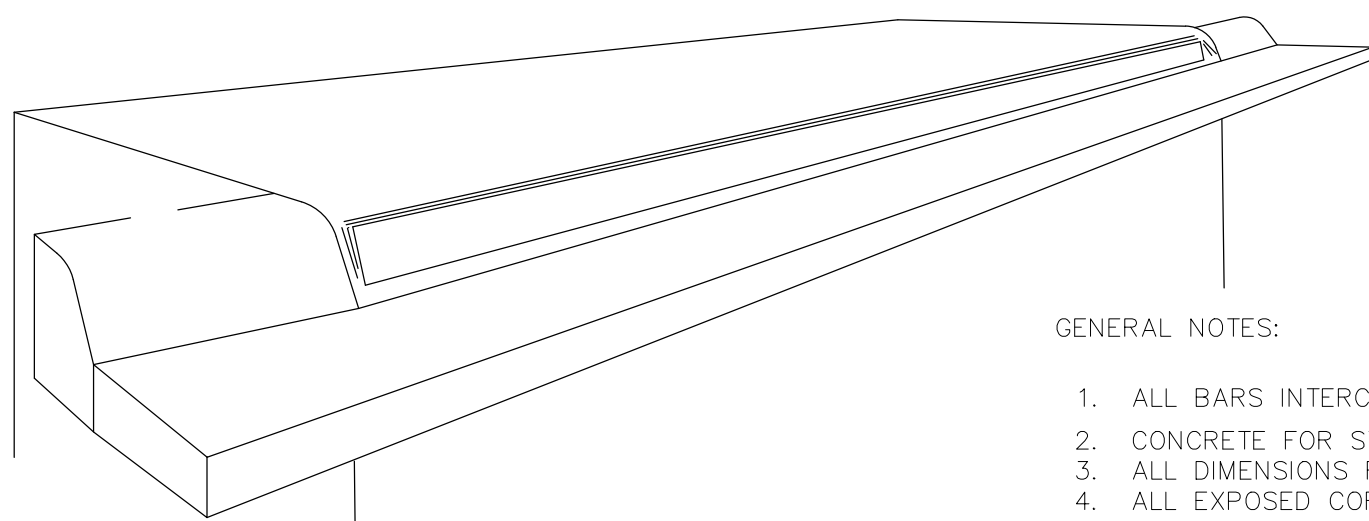
NOTE:
SHAPE INVERT WITH 2500 P.S.I. CONCRETE FILL AS REQUIRED. NON-PAY ITEM. COST TO BE INCLUDED WITH PAYMENT FOR CLASS "A" CONCRETE (INLETS).



SIDE VIEW
SCALE: N.T.S.



CURB ARMOR
DETAIL



ISOMETRIC

GENERAL NOTES:

- ALL BARS INTERCEPTING MANHOLE RING & REINFORCING CONCRETE PIPE SHALL BE FIELD CUT.
- CONCRETE FOR STRUCTURES SHALL BE CLASS "A", 3000 P.S.I. IN 28 DAYS.
- ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
- ALL EXPOSED CORNERS SHALL BE CHAMFERED TO 3/4"
- CONSTRUCTION JOINT SHOWN AT FLOWLINE MAY BE RAISED A MAXIMUM OF 6" AT THE CONTRACTOR'S DISCRETION. ADJUST LENGTH OF VERTICAL STEEL AS REQUIRED.
- ALL REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A-615, GRADE 60.
- CURB ARMORING REQUIRED

Reinforcing Steel Schedule						
L=5'-00"	BAR	NO.	SIZE			
	A	15				
	B	15				
	C	23				
	D	22				
	E	10				
	F	6				
	G	3				
	H	5				
	*CONCRETE TOTAL=353 CY. MANHOLE CASTING=100 LBS. STEEL TOTAL=422 LBS.					
10'	A	27	4	5"OC	13'-9 1/2"	249
	B	27	4	5"	5'-1"	93
	C	30	4	9"	3'-6"	70
	D	22	4	10"	11'-1"	163
	E	10	4	10 1/2"	6'-10"	46
	F	12	5	12"	2'-3"	27
	G	3	4	12"	14'-8"	30
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=5.75CY. MANHOLE CASTING=100LBS. STEEL TOTAL=687LBS						
15'	A	39	4	5"OC	13'-9 1/2"	359
	B	39	4	5"	5'-1"	134
	C	36	4	9"	3'-6"	84
	D	22	4	10"	16'-1"	236
	E	10	4	10 1/2"	6'-10"	46
	F	17	5	12"	2'-3"	38
	G	3	4	12"	19'-8"	40
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=7.97CY. MANHOLE CASTING=100LBS. STEEL TOTAL=946LBS						
20'	A	51	4	5"OC	13'-9 1/2"	470
	B	51	4	5"	5'-1"	175
	C	43	4	9"	3'-6"	101
	D	22	4	10"	6'-1"	310
	E	10	4	10 1/2"	6'-10"	46
	F	22	5	12"	2'-3"	50
	G	3	4	12"	9'-8"	50
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=10.19CY. MANHOLE CASTING=100LBS. STEEL TOTAL=1211LBS						
25'	A	63	4	5"OC	13'-9 1/2"	580
	B	63	4	5"	5'-1"	217
	C	50	4	9"	3'-6"	117
	D	22	4	10"	6'-1"	383
	E	10	4	10 1/2"	6'-10"	46
	F	27	5	12"	2'-3"	61
	G	3	4	12"	9'-8"	60
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=12.41CY. MANHOLE CASTING=100LBS. STEEL TOTAL=1473LB						
30'	A	75	4	5"OC	13'-9 1/2"	691
	B	75	4	5"	5'-1"	258
	C	56	4	9"	3'-6"	131
	D	22	4	10"	6'-1"	457
	E	10	4	10 1/2"	6'-10"	46
	F	32	5	12"	2'-3"	72
	G	3	4	12"	9'-8"	70
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=14.63CY. MANHOLE CASTING=100LBS. STEEL TOTAL=1734LB						

*These figures do not include concrete and steel intercepted by Manhole and Reinforced Concrete Pipe.
*Includes concrete gutter for on-grade inlet. Reduce by .05 cy for inlets in sump.

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600



STORM DETAILS
(1 OF 3)

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION	DESCRIPTION	DATE

DATE: January 2023

DRAWN BY: JK

DESIGNED BY: RS

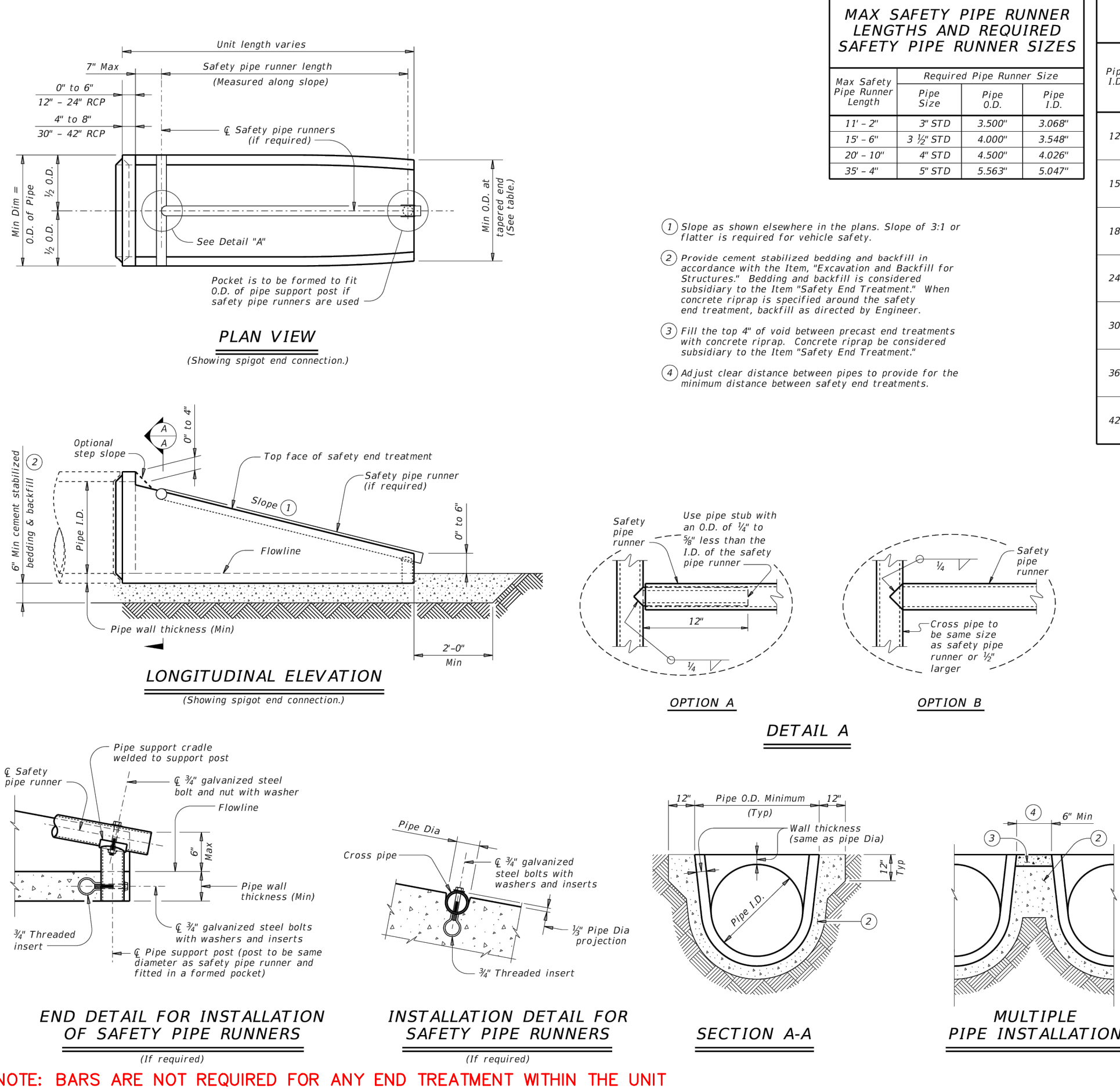
REVIEWED BY: CC

HMT PROJECT NO.:
337.065

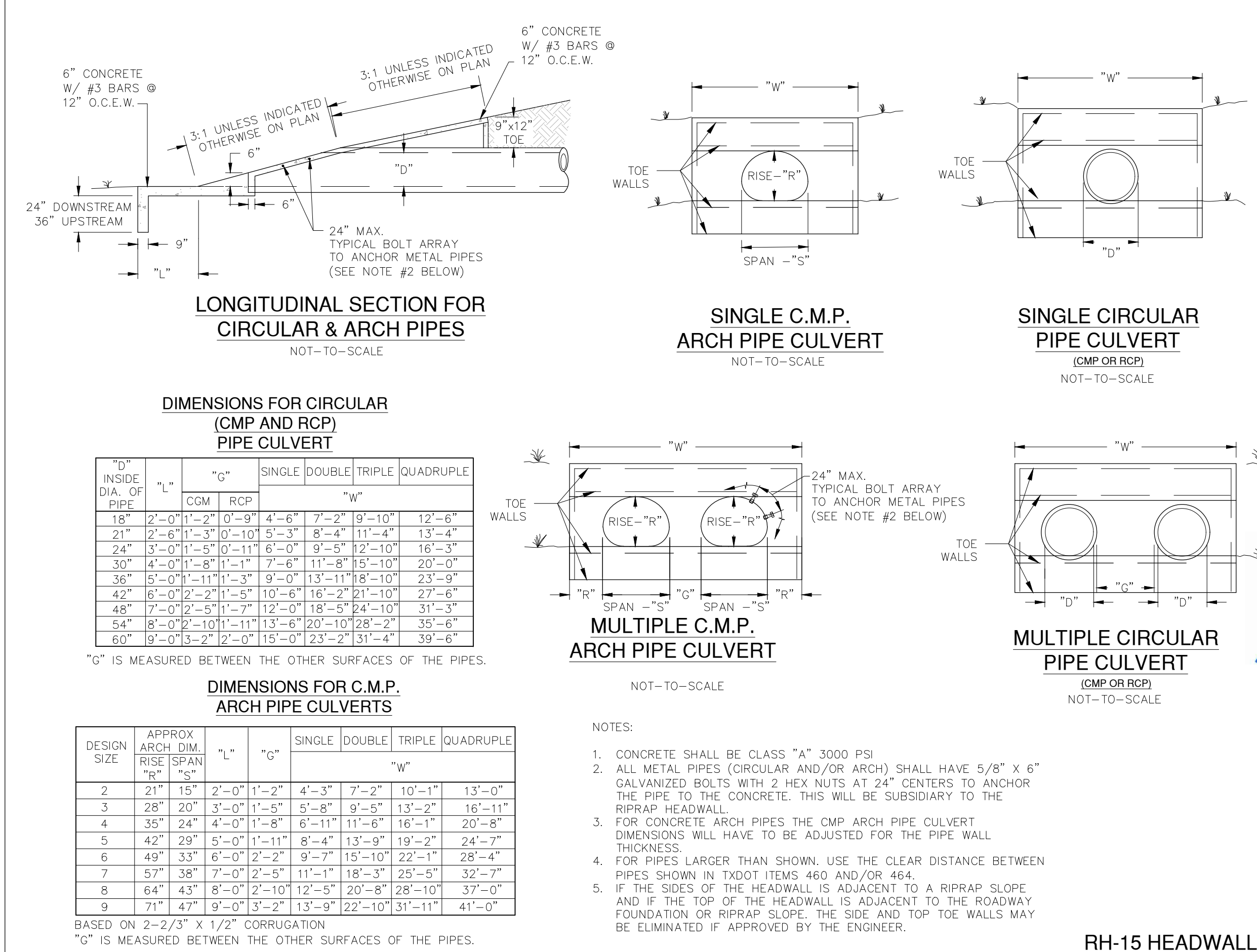
SHEET

C5.08

DISCLAIMER: This drawing is created in accordance with the Texas Engineering Practice Act. No warranty is made by TCEM for any purpose whatsoever. TCEM assumes no responsibility for the diversion of this solution or for indirect results or damages resulting from its use.



NOTE: BARS ARE NOT REQUIRED FOR ANY END TREATMENT WITHIN THE UNIT



STORM DETAILS
(2 OF 3)

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION	DESCRIPTION	DATE

DATE: **AUGUST 2024**

DRAWN BY: **JK**

DESIGNED BY: **RS**

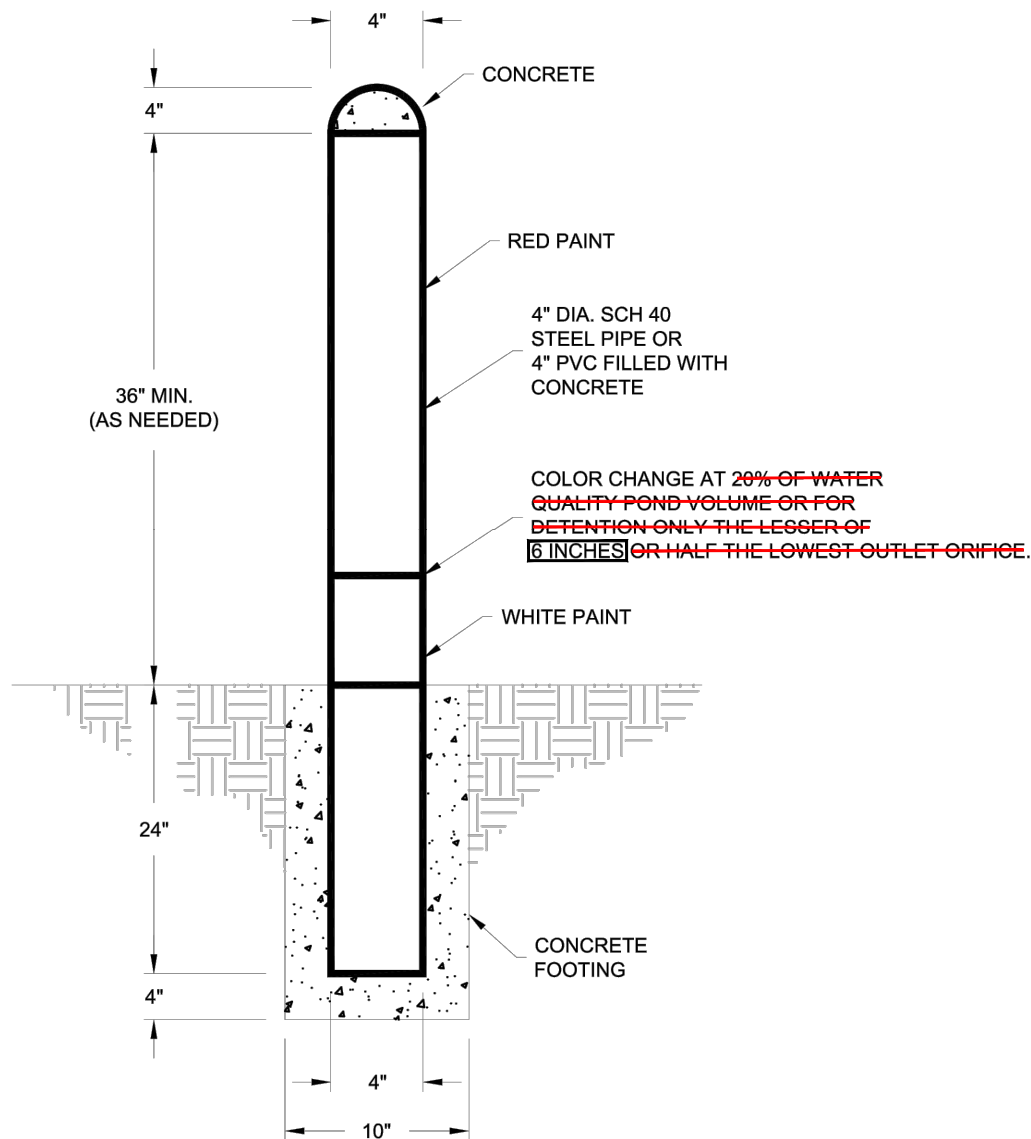
REVIEWED BY: **ZJ**

HMT PROJECT NO.: **337.065**

SHEET
C5.09

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600





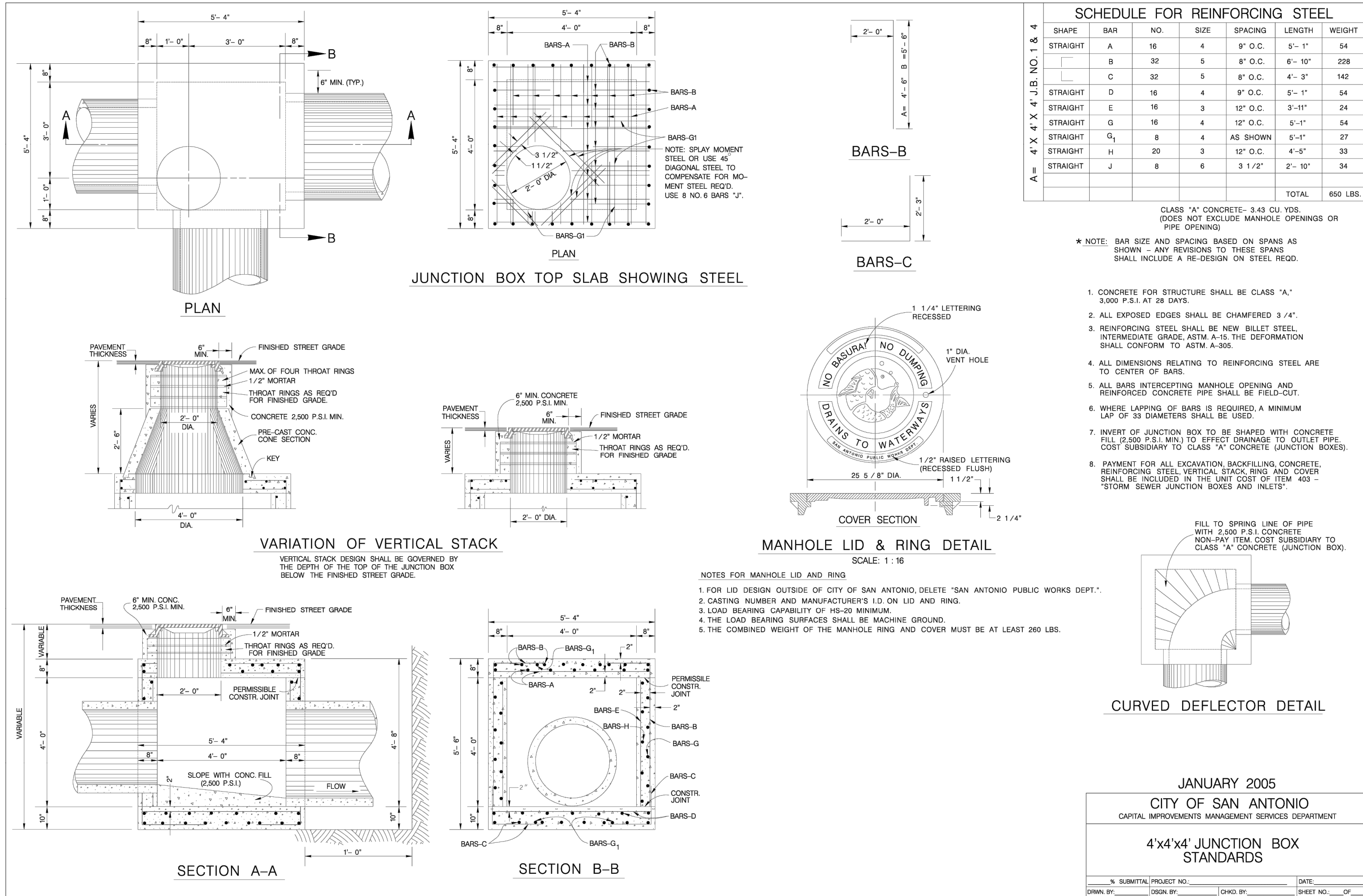
NOTES

1. PLAN MUST CALL OUT ELEVATION OF THE POND AT SEDIMENT MARK LOCATION.
2. PLAN MUST CALL OUT THE ELEVATION THAT SEDIMENT MUST BE REMOVE FORM THE POND AND NOTED COLOR CHANGE MUST MATCH THAT ELEVATION.
3. SEDIMENT MARK MUST BE WITHIN WITH 10 FEET OF THE LOWEST OUT FLOW CONTROL DEVICE.
4. PAINT NEEDS TO BE UV RESISTANT. SEDIMENT MARKERS IN THE WET POND NEED TO BE DESIGN FOR UNDER WATER USE. (possible)

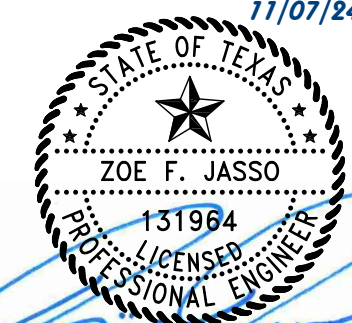
The City of San Marcos Engineering and Capital Improvements		POND SEDIMENT MAKER	
RECORD COPY SIGNED BY LAURIE MOYER, P.E.		STANDARD NO. 508S-PSM-SM 1 OF 1	
CURRENT AS OF 1/1/2022		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	
ADOPTED			

Permanent Turf Reinforcement Mat	Class	Max Shear (vegitated)	Max Velocity	Manning's N (unveg)*
Landlok 435	1	8	12	0.025
Futerra 7010 Green Armor	1	8	16	.025 - .045
EroNet P300	1	8	16	.020 - .034
Landlok 450	2	10	18	0.025
VMax P350	2	10	20	.012 - .041
VMax P550	2	12	22	.023 - .029
Futerra 7020 Green Armor	3	17	20	.025 - .045
Futerra R45 (HP-TRM)	3	20	30	-

Note: Contractor to select permanent turf reinforcement mat from list above based on class. If an alternate mat is preferred, contact the engineer on record to approve any unlisted erosion control mats. Installation of turf reinforcement mat shall be in accordance with manufacturers specifications



290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600



STORM DETAILS
(3 OF 3)
FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: **AUGUST 2024**

DRAWN BY: **JK**

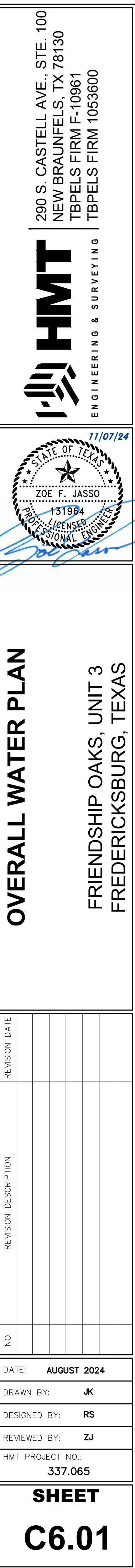
DESIGNED BY: **RS**

REVIEWED BY: **ZJ**

HMT PROJECT NO.:
337.065

SHEET

C5.10



No work requiring inspection shall be done between the hours of 6:00 pm and 7:00 am, Monday through Friday, at any time on Saturdays, Sundays, or legal holidays without the written approval of the City of Fredericksburg in each case, except for such work as may be necessary for the proper care and protection of work already done or of equipment or in the case of an emergency.

The CONTRACTOR shall maintain the utilities in service during construction and will be responsible for any damage he may inflict on a utility. All damages resulting from the CONTRACTOR'S operations shall be repaired by the CONTRACTOR immediately at the CONTRACTOR'S expense to the satisfaction of the owner of such a utility.

Whenever existing utilities are encountered whose present grade would conflict with the new construction, the CONTRACTOR shall notify the City of Fredericksburg who shall arrange revisions without unreasonable delay.

SAW CUTTING:

BEDDING:

A four (4) inch minimum of sand or pea gravel bedding material shall be deposited uniformly in the bottom of the trench, on both sides of the pipe, for the full width of the trench and to a height of six (6) inches above the top of the pipe. The backfill material shall contain no rocks, stones, or objectionable material larger than three (3) inches in diameter and shall be free from material that

REPAVING:

BARRICADES:

BLOCKING:

See Figure 18-A on page 18 for minimum blocking requirements

The CONTRACTOR shall protect all piping material from contamination during storage, handling, and installation. Prior to disinfection, the pipeline interior shall be clean, dry, and unobstructed. All dirt, debris, gasket lubrication, etc., shall be washed from the line by swabbing with hypochlorite solution and/or flushing with clean water.

PROCEDURE AND DOSAGE:

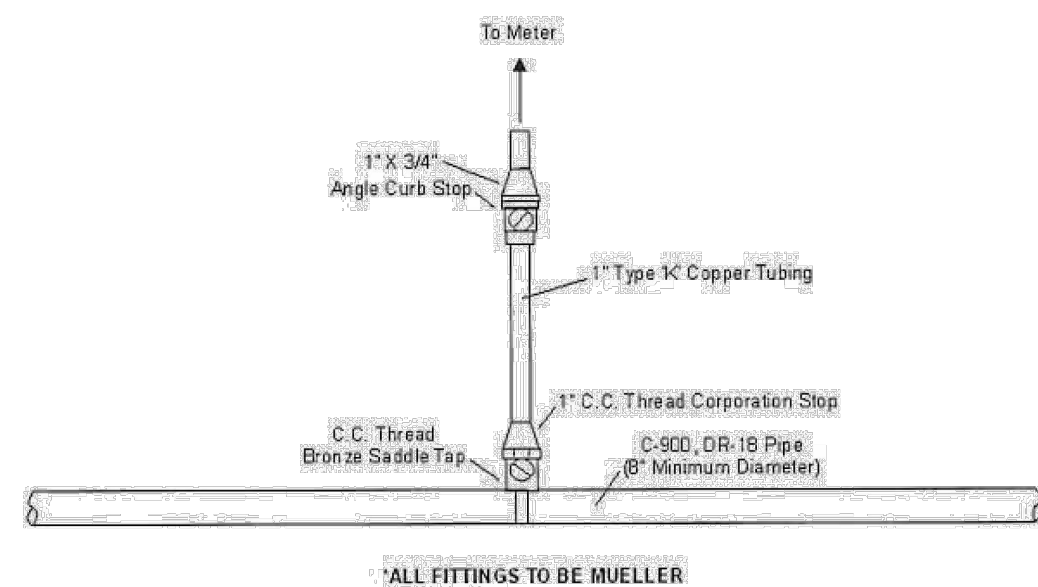
This heavily chlorinated water shall then be carefully flushed from the lines until the chlorine concentration is no higher than the residual generally prevailing in the existing distribution system, or approximately one (1) part per million. Proper planning and appropriate preparation to handle, dilute, and dispose of this strong chlorine solution without causing injury or damage to the public, the water system, or the environment, must be approved by the City before flushing of the line may begin, and the flushing shall be witnessed by an authorized representative of the City.

After final flushing of the strong disinfecting solution, water samples from the line shall be tested for bacteriological quality by the City and must be found free of coliform organisms before the pipeline may be placed in service. One test sample shall be drawn from the end of the main and additional samples collected at intervals of not more than 3,000 feet along the pipeline.

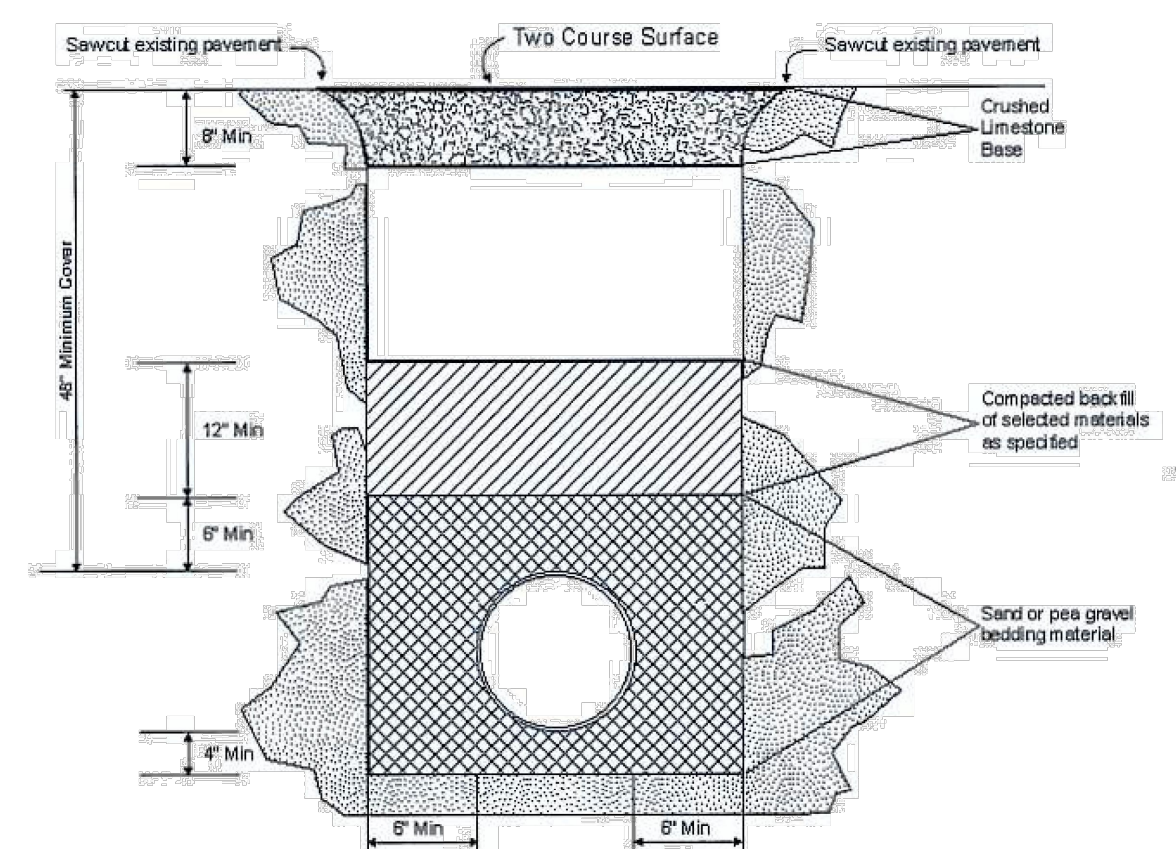
1. Pipe: C-900 DR18 Gasket type, 8" minimum diameter;
2. Valves: Mueller resilient seat valves, M.J. both ends; catalogue # A-2370-20.
3. Six (6) inch blow-off will be provided by the City. The blow-off line will then be filled with water over night, then blow off again the next day.
4. Taps: no direct taps. Use 8" X 1" C.C. Thread bronze saddles with 1" C.C. Thread Corporation stop.
5. 1" type "K" copper tubing to be used for all service connections with 1" X 3/4" angle stops.

PLACEMENT OF WATER METERS:

Single Service Connection



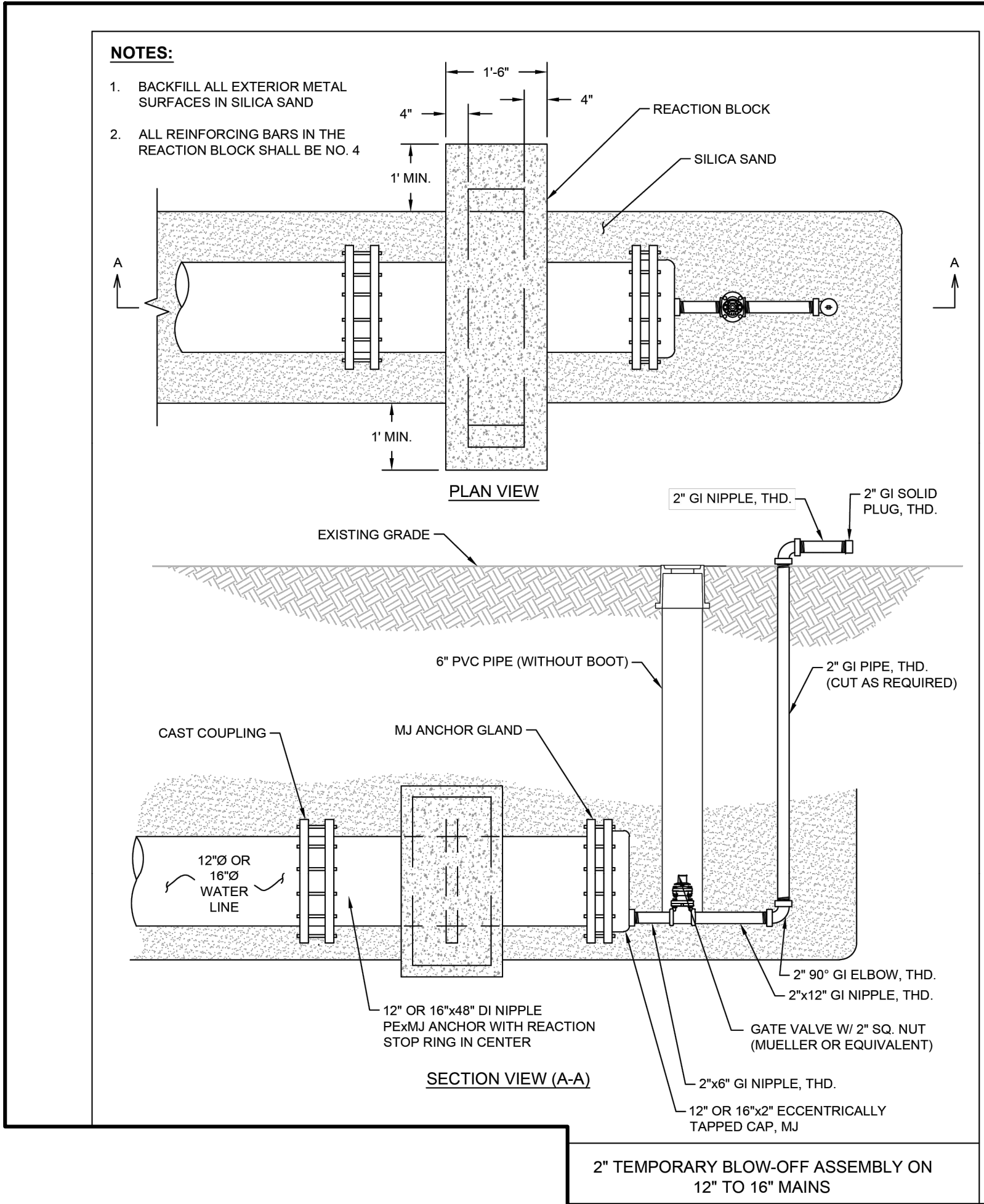
To be used to backfill all open cuts in City Streets



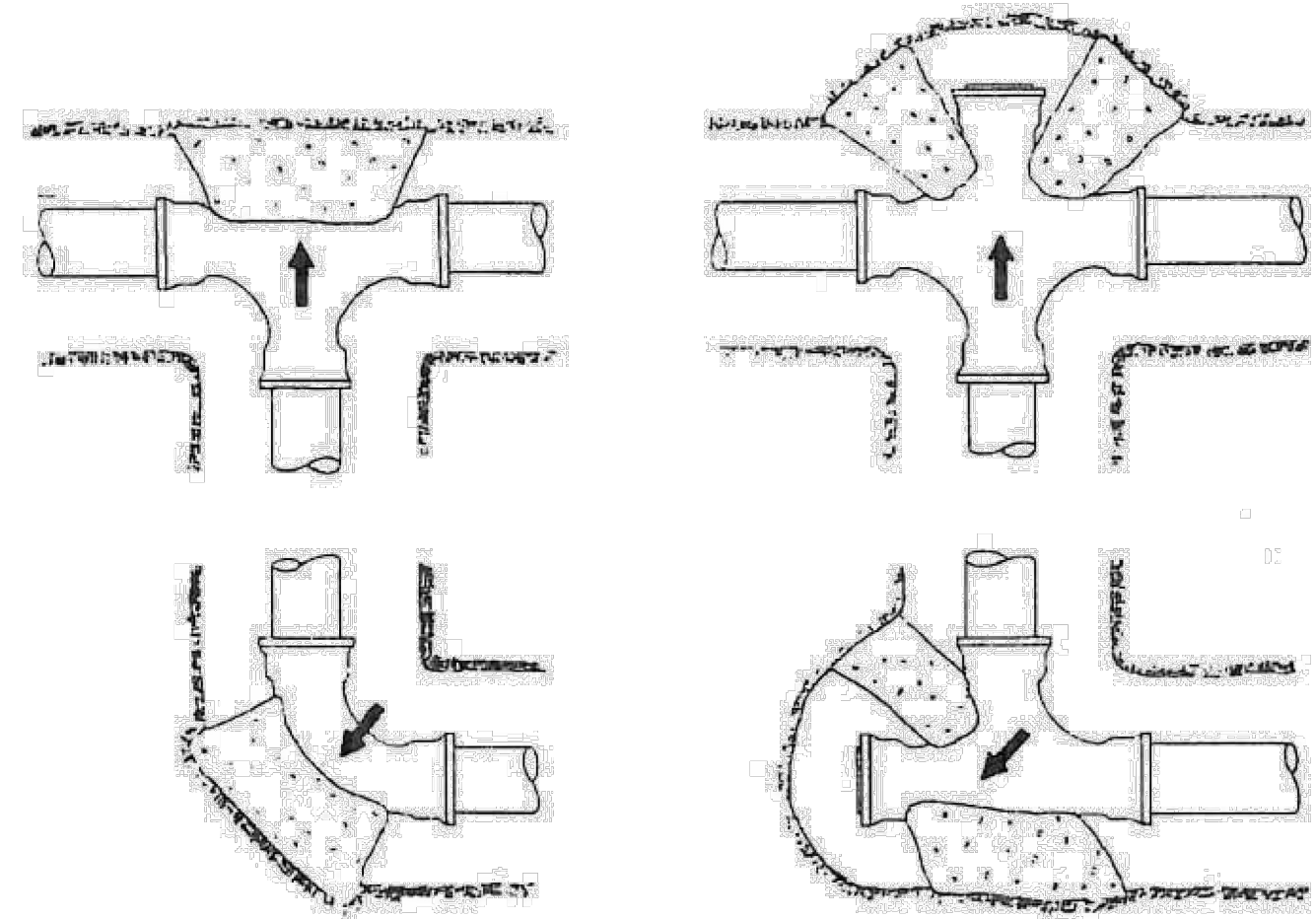
Note: Compaction may be accomplished with backhoe mounted sheep foot or vibratory trench compactor.

[illegible]

1. Embed all exterior metal surpluses in silica sand.
2. All reinforcing bars in the concrete reaction block shall be #4.



THRUST BLOCK INSTALLATIONS:

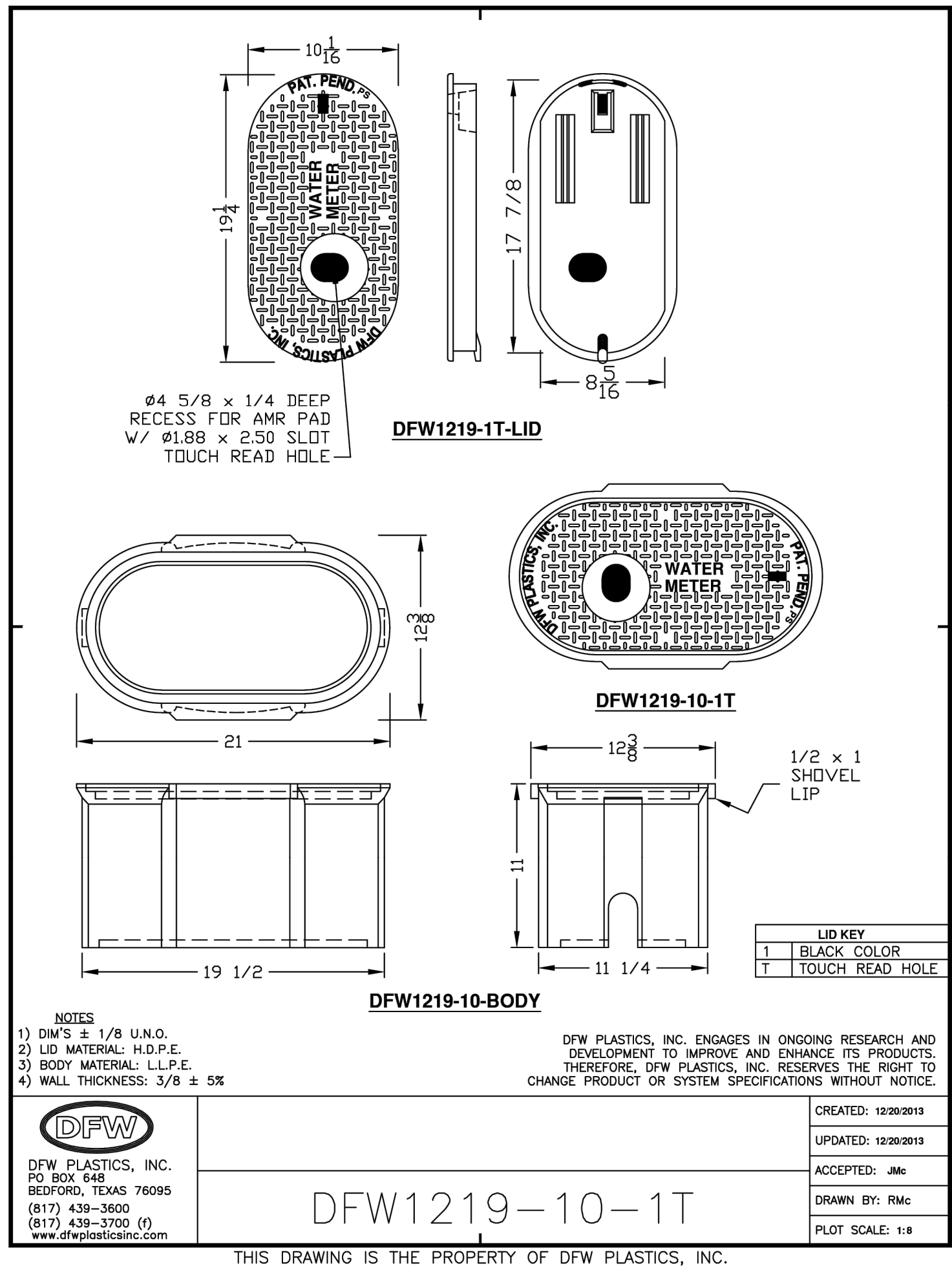
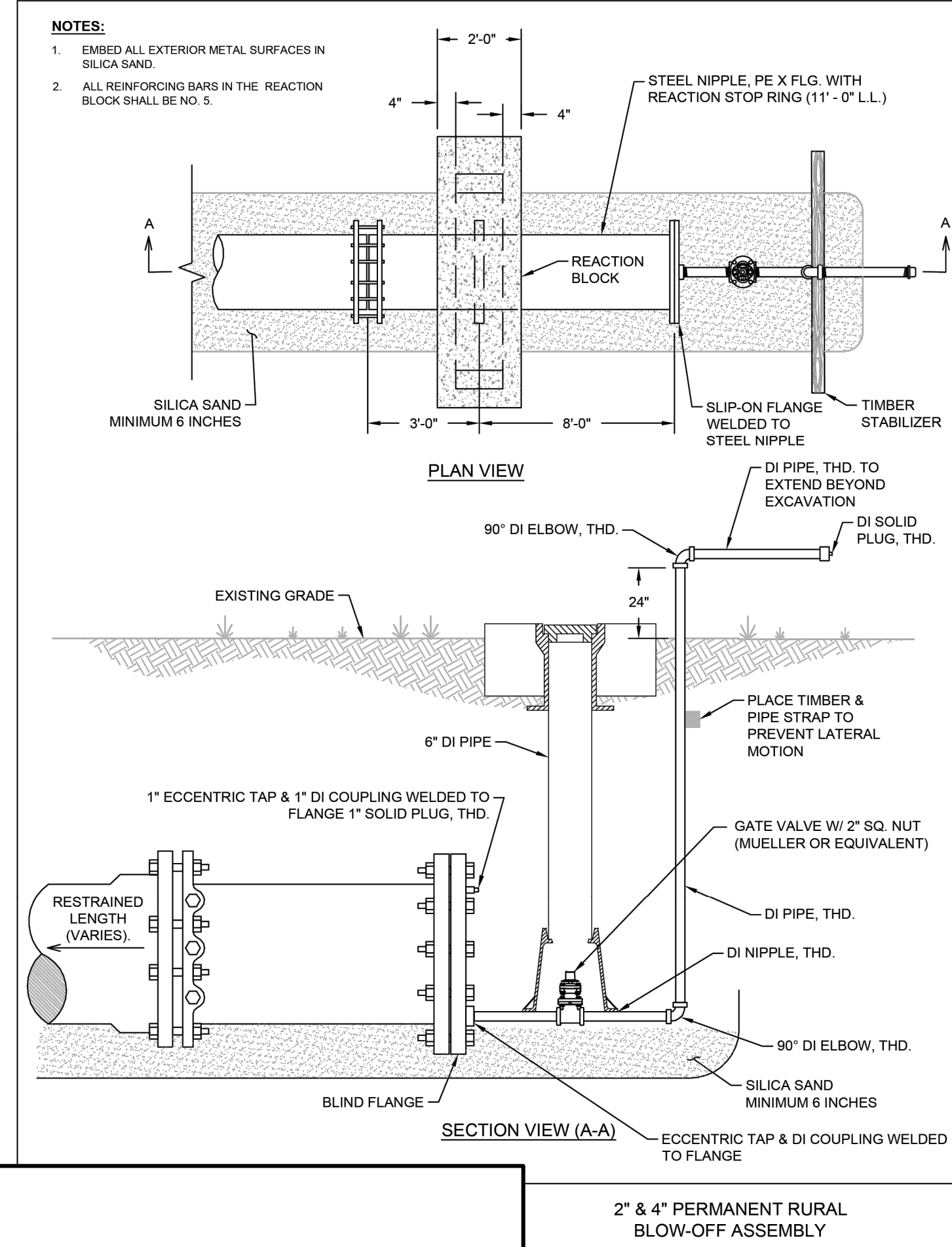


ALL FITTINGS TO BE MECHANICAL JOINT

Figure 18-A:

MINIMUM SQUARE FEET OF REQUIRED BLOCKING				
Size Pipe	Tees & Dead Ends	90° Bends	45° Bends	22 1/2° Bends
6"	3	4	2	2
8"	4	6	4	4
12"	10	14	8	8
16"	18	25	14	14

18

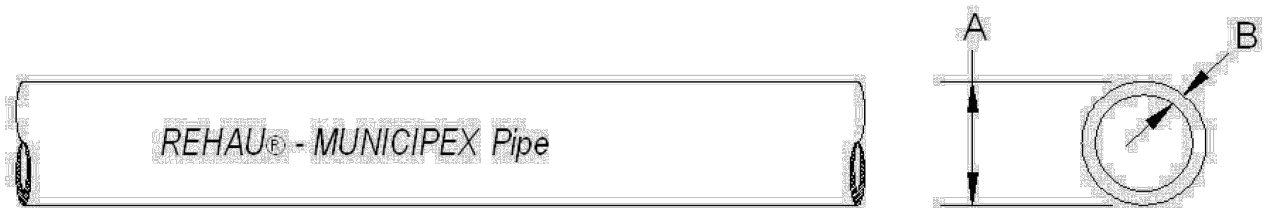


Construction
Automotive
Industry



PRODUCT SUBMITTAL 110

Product: MUNICIPEX® Pipe
Date: 01 January 2017 (supersedes 24 August 2015)



Article No.	Nominal Diameter in	Average OD A in (mm)	Wall Thickness B in (mm)	Weight lb/ft (kg/m)	Capacity gal/ft (l/m)
261056	3/4	0.875 (22.22)	0.097 (2.47)	0.10 (0.15)	0.0189 (0.2356)
261076	1	1.125 (28.582)	0.125 (3.18)	0.17 (0.26)	0.0316 (0.3939)
261096	1 1/4	1.375 (34.92)	0.153 (3.88)	0.25 (0.37)	0.0467 (0.5827)
261116	1 1/2	1.625 (41.28)	0.181 (4.59)	0.35 (0.52)	0.0650 (0.8118)
261136	2	2.125 (53.98)	0.236 (6.00)	0.60 (0.90)	0.1114 (1.3906)

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PS110, 01-Jan-17, Page 1 of 2

WATER DETAILS (2 OF 2)

NO.	REVISION	DESCRIPTION	DATE

DATE: AUGUST 2024

DRAWN BY: JK

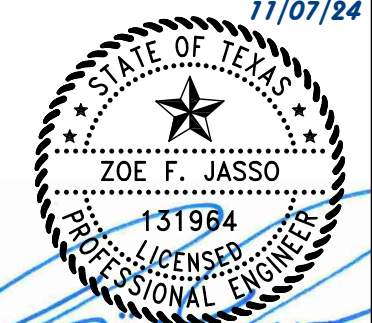
DESIGNED BY: RS

REVIEWED BY: ZJ

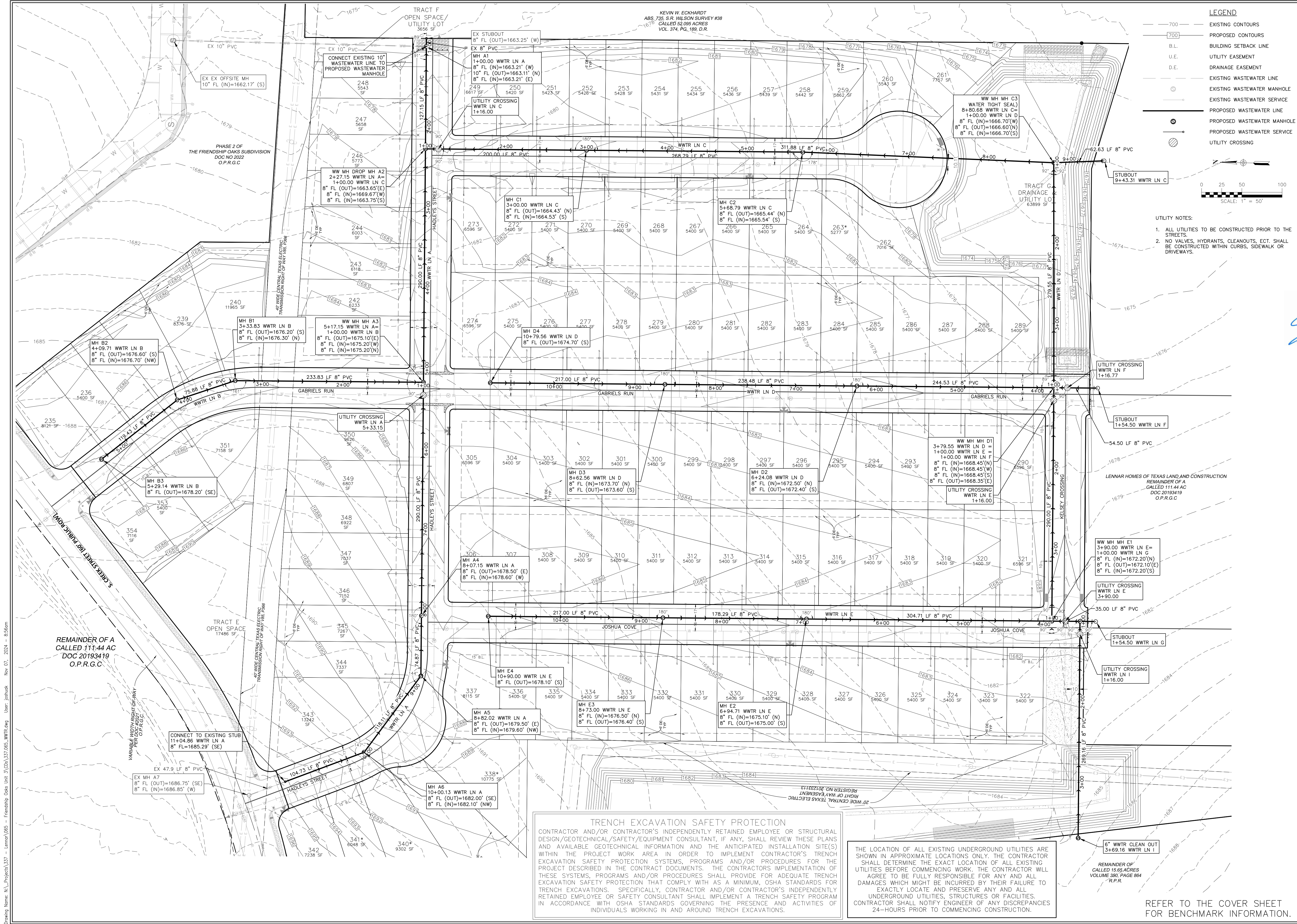
HMT PROJECT NO.: 337.065

SHEET
C6.03

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600



FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS



TRENCH EXCAVATION SAFETY PROTECTION
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REFER TO THE COVER SHEET FOR BENCHMARK INFORMATION.

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600

HMT
ENGINEERING & SURVEYING

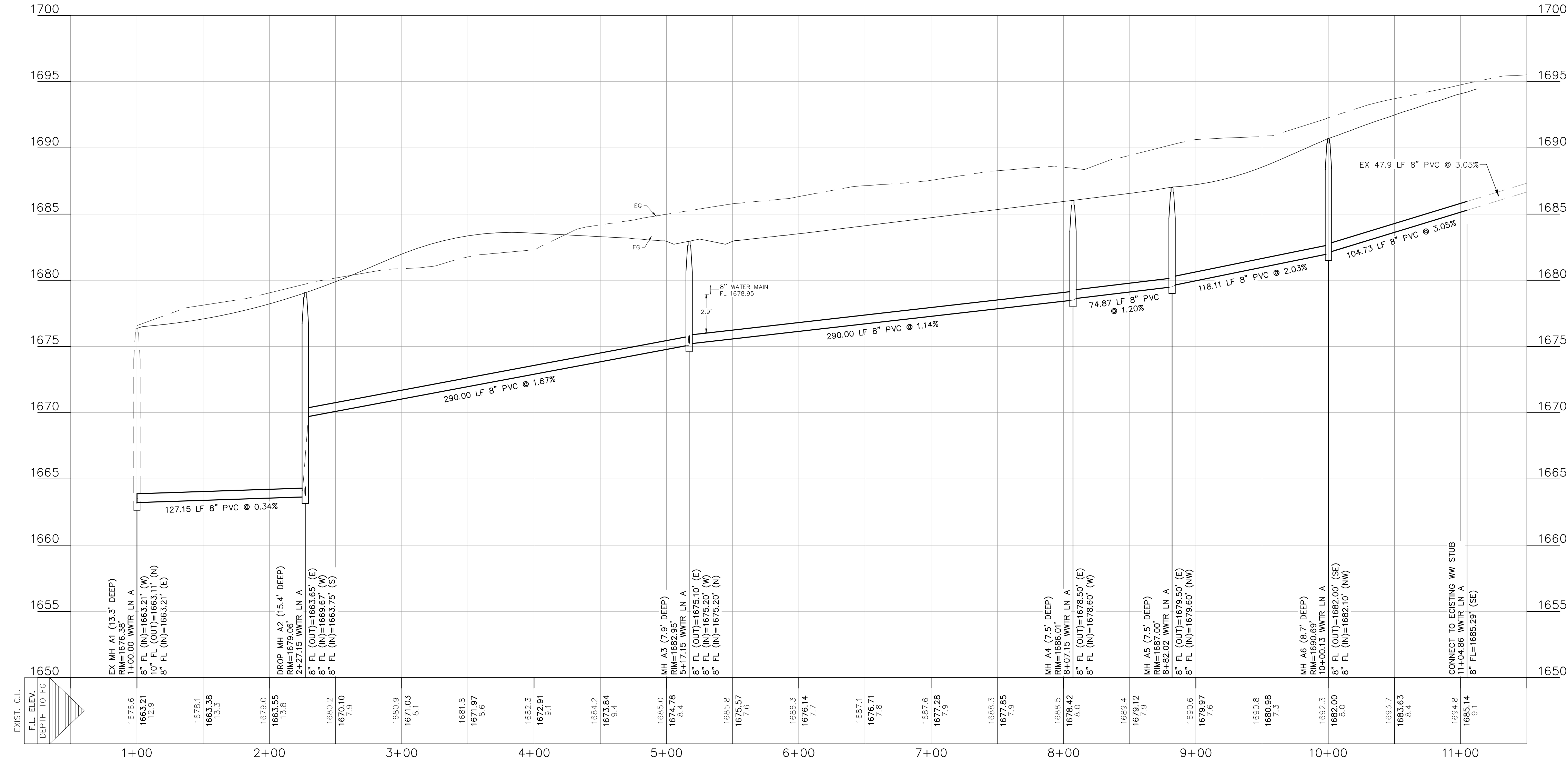
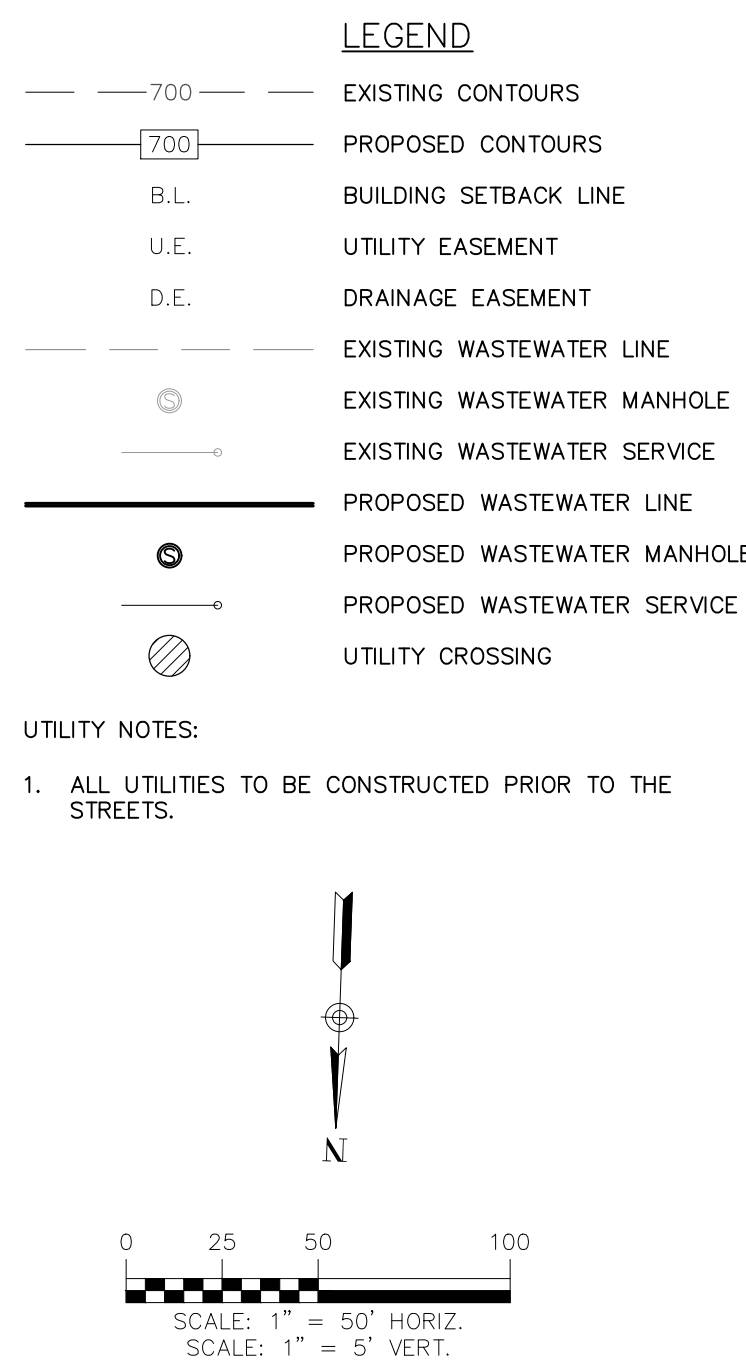
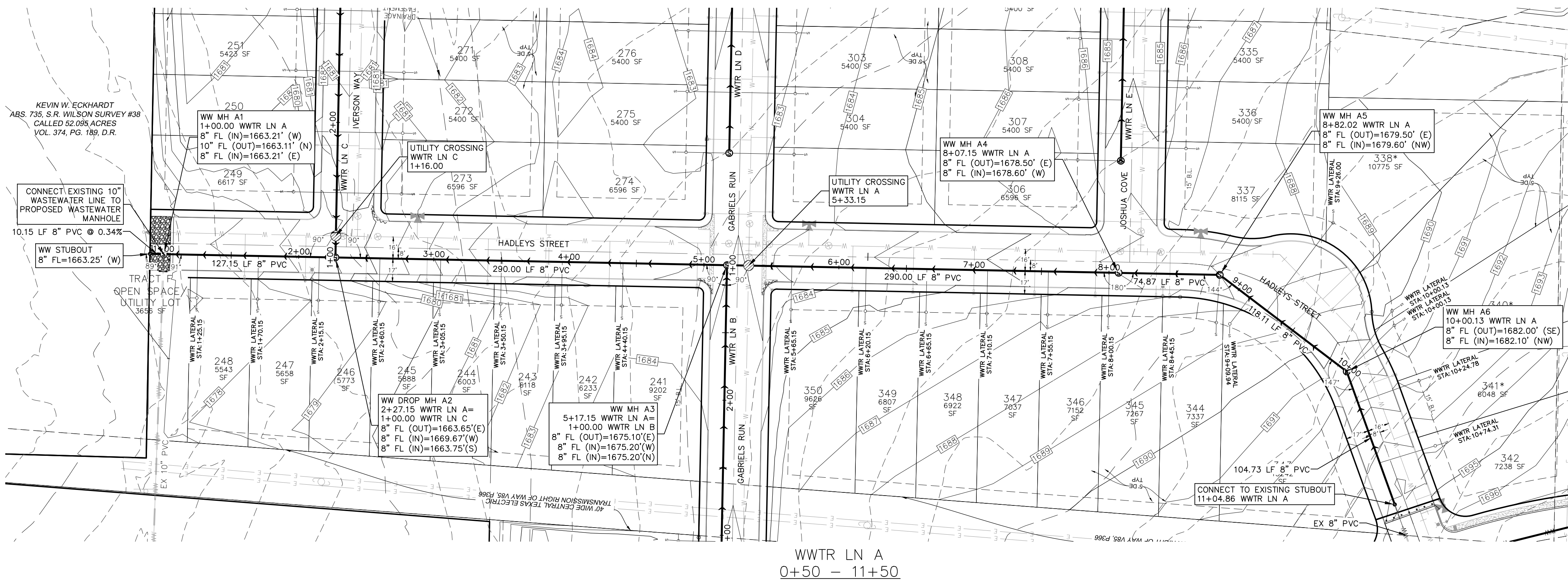
OVERALL WASTEWATER PLAN

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION	DESCRIPTION	DATE

DATE: **AUGUST 2024**
DRAWN BY: **JK**
DESIGNED BY: **RS**
REVIEWED BY: **ZJ**
HMT PROJECT NO.: **337.065**

SHEET
C7.01



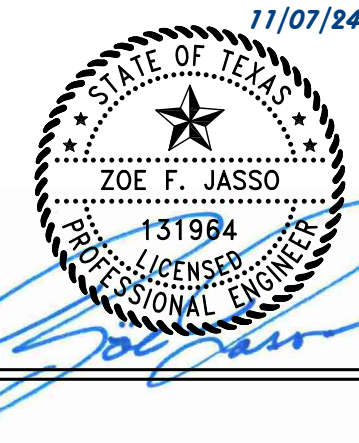
TRENCH EXCAVATION SAFETY PROTECTION

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290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600



**WASTEWATER LN A
PLAN & PROFILE**

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

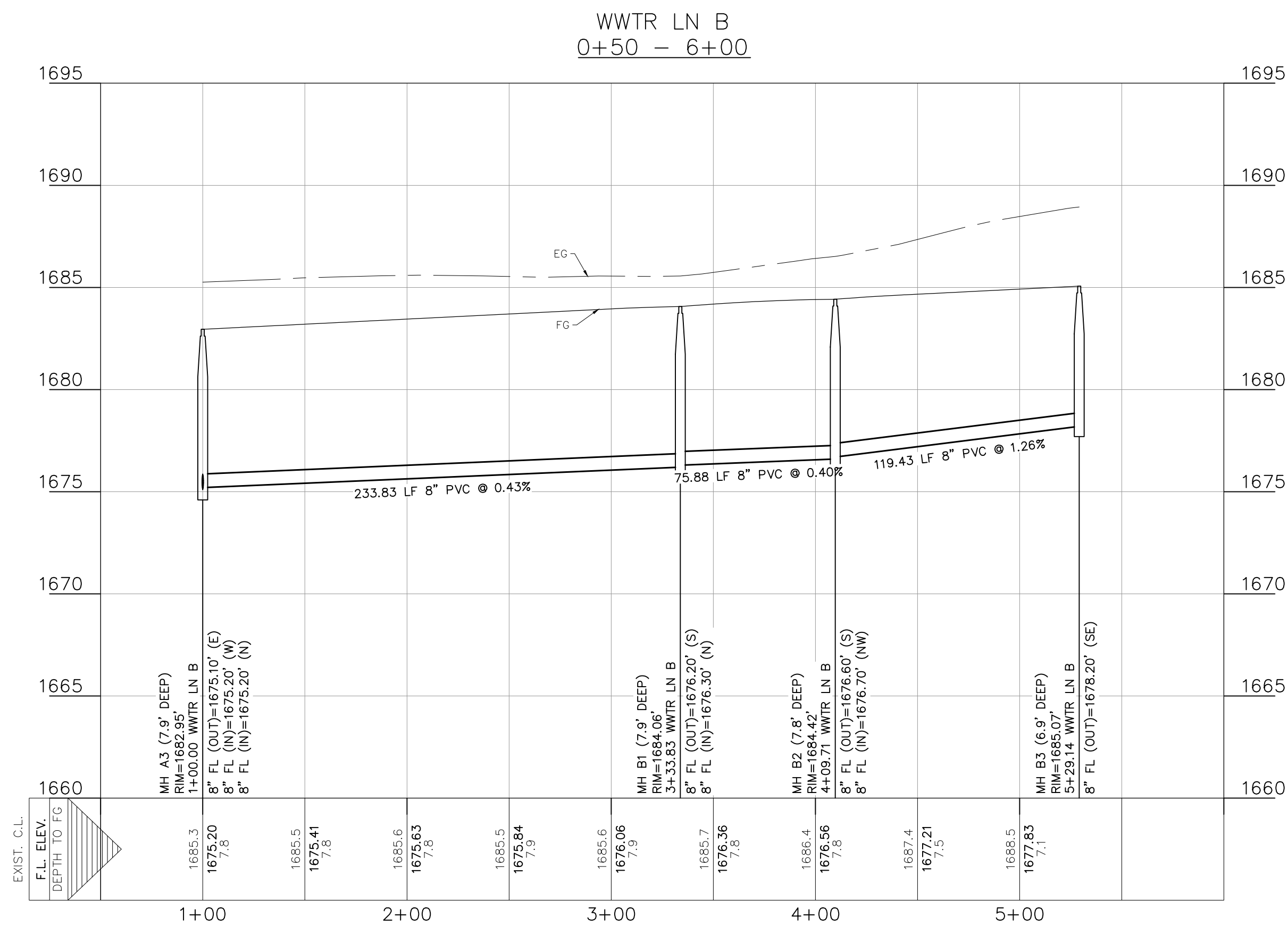
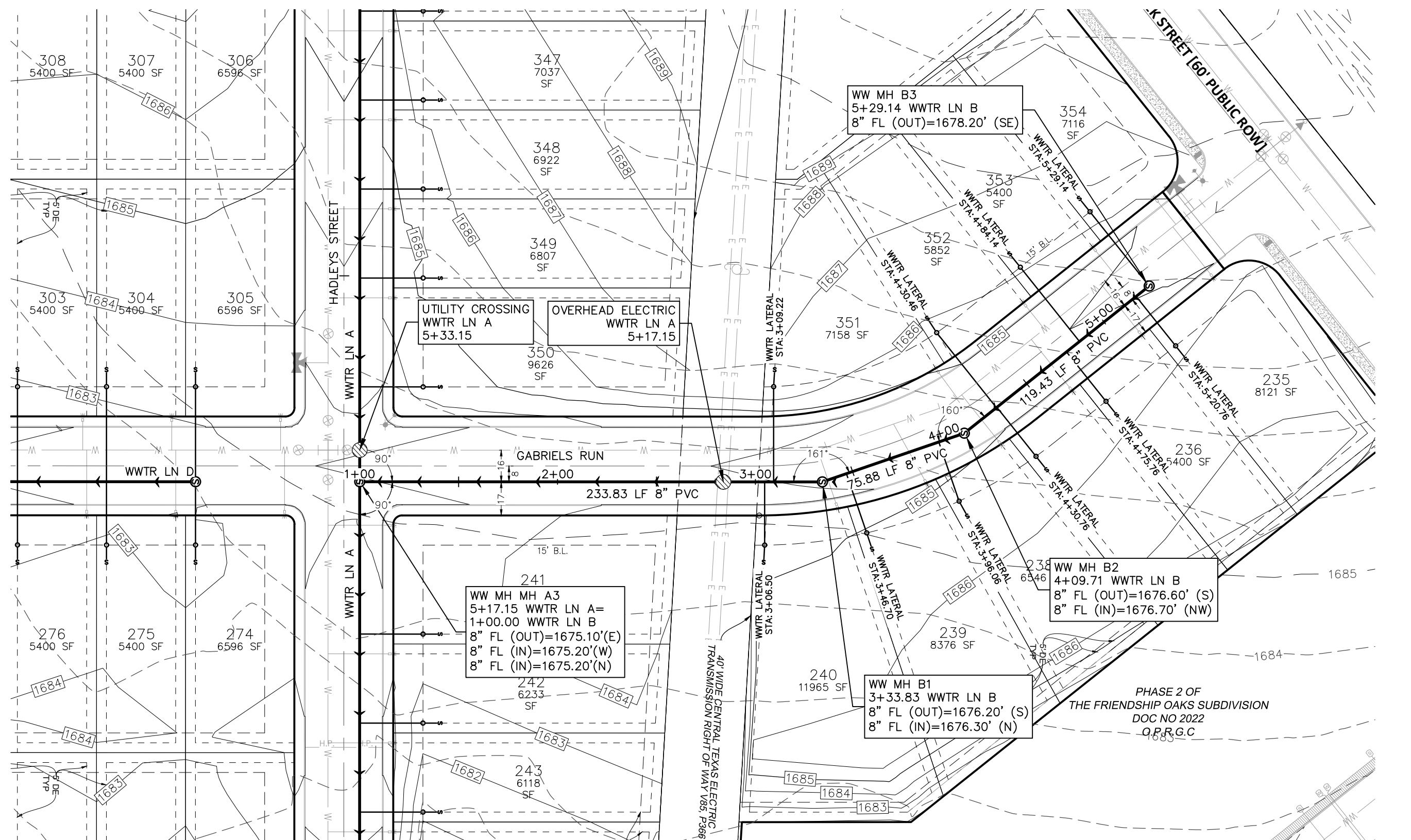
NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: **AUGUST 2024**
DRAWN BY: **JK**
DESIGNED BY: **RS**
REVIEWED BY: **ZJ**

HMT PROJECT NO.:
337.065

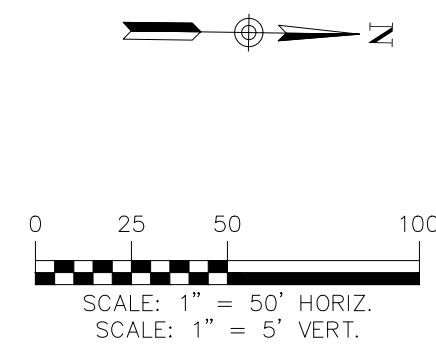
SHEET
C7.02

TRENCH EXCAVATION SAFETY PROTECTION


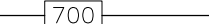












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LEGEND

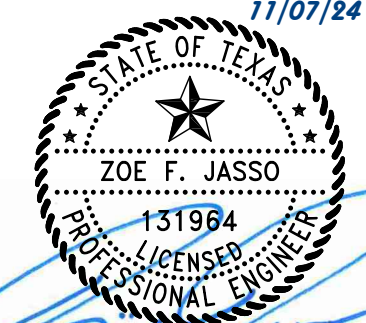
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	PROPOSED CONTOURS
	B.L. BUILDING SETBACK LINE
	U.E. UTILITY EASEMENT
	D.E. DRAINAGE EASEMENT
	EXISTING WASTEWATER LINE
	EXISTING WASTEWATER MANHOLE
	EXISTING WASTEWATER SERVICE
	PROPOSED WASTEWATER LINE
	PROPOSED WASTEWATER MANHOLE
	PROPOSED WASTEWATER SERVICE
	UTILITY CROSSING

UTILITY NOTES:

WASTEWATER LN B PLAN & PROFILE

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600

[illegible]

DRAWN BY: JK

DESIGNED BY: **RS**

REVIEWED BY: ZJ

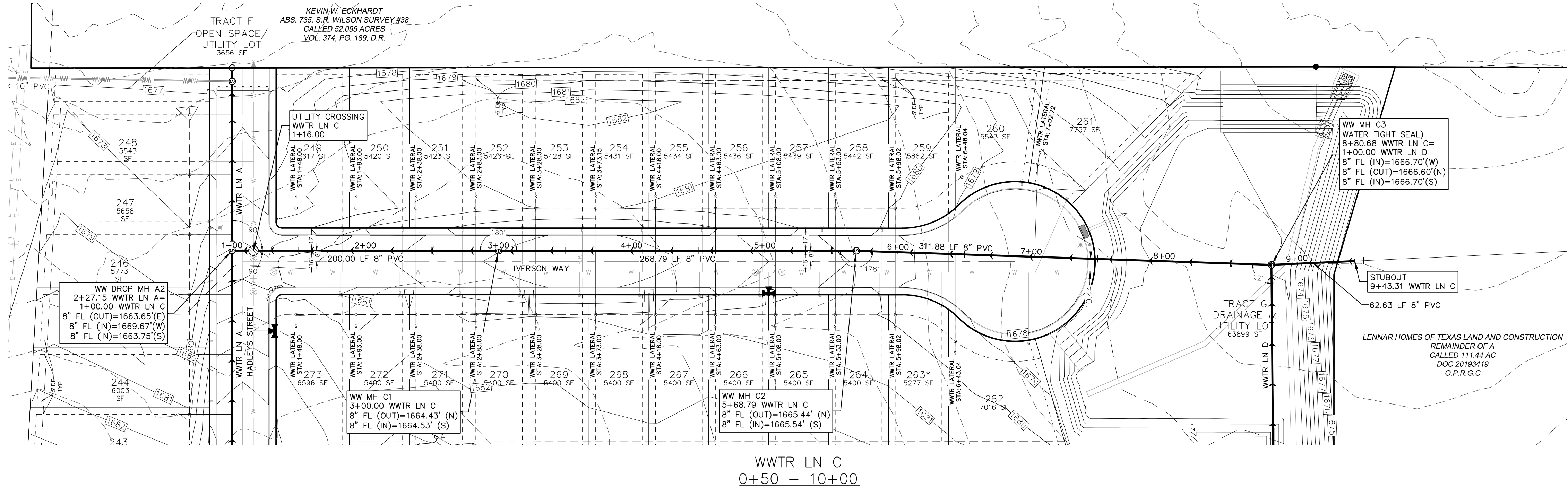
HMT PROJECT NO.:
337.065

SHEET

C7.03

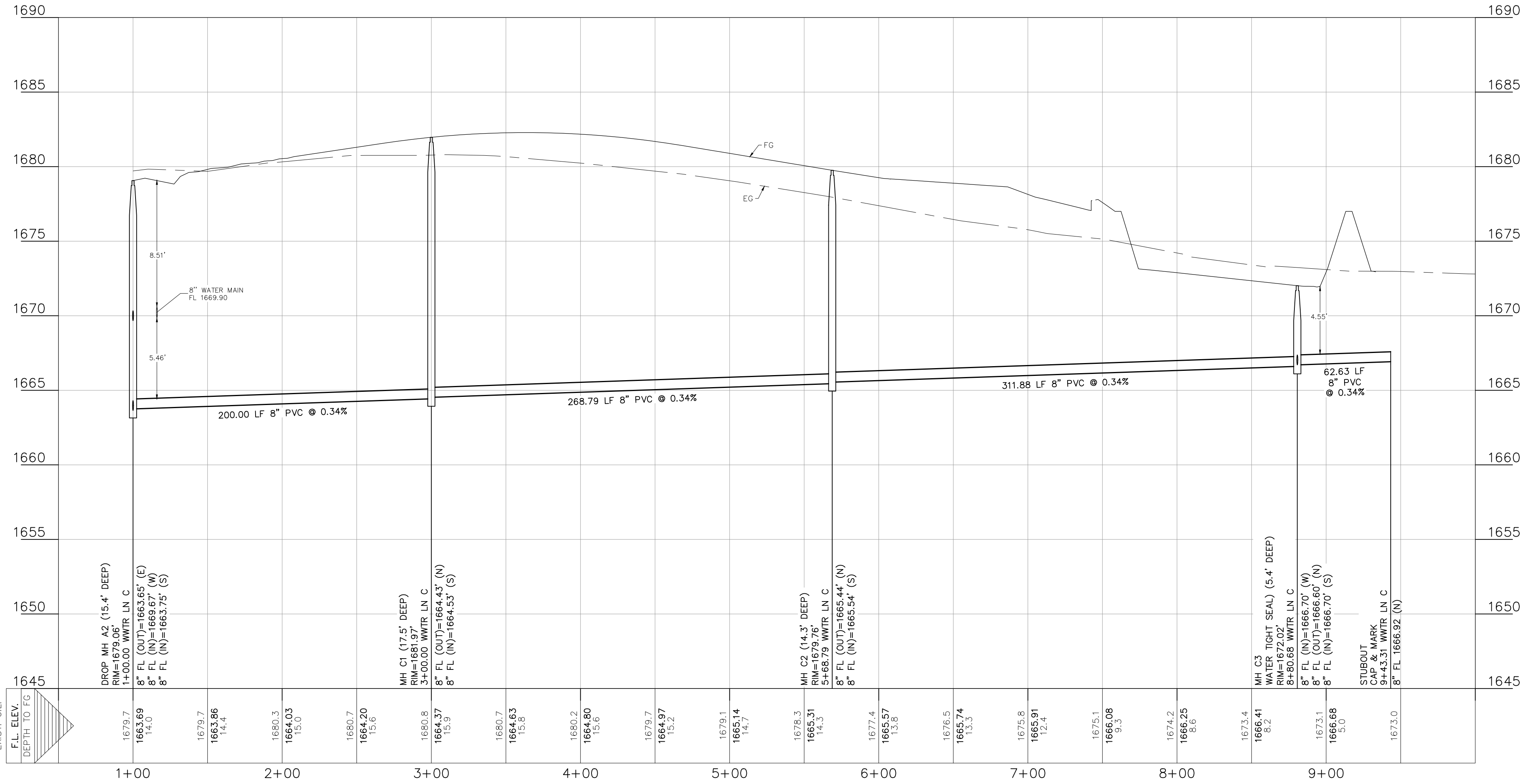
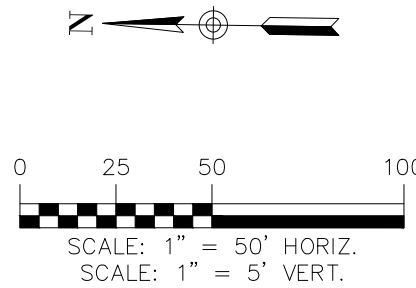
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TRENCH EXCAVATION SAFETY PROTECTION
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- LEGEND**
- 700 EXISTING CONTOURS
 - 700 PROPOSED CONTOURS
 - B.L. BUILDING SETBACK LINE
 - U.E. UTILITY EASEMENT
 - D.E. DRAINAGE EASEMENT
 - WW EXISTING WASTEWATER LINE
 - WW EXISTING WASTEWATER MANHOLE
 - EXISTING WASTEWATER SERVICE
 - PROPOSED WASTEWATER LINE
 - PROPOSED WASTEWATER MANHOLE
 - PROPOSED WASTEWATER SERVICE
 - UTILITY CROSSING

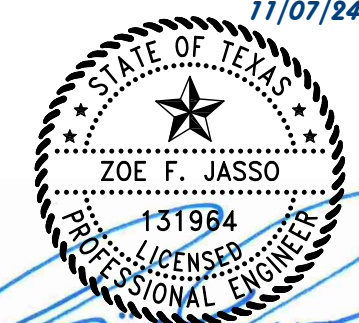
UTILITY NOTES:
1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE STREETS.



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FOR BENCHMARK INFORMATION.

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290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600

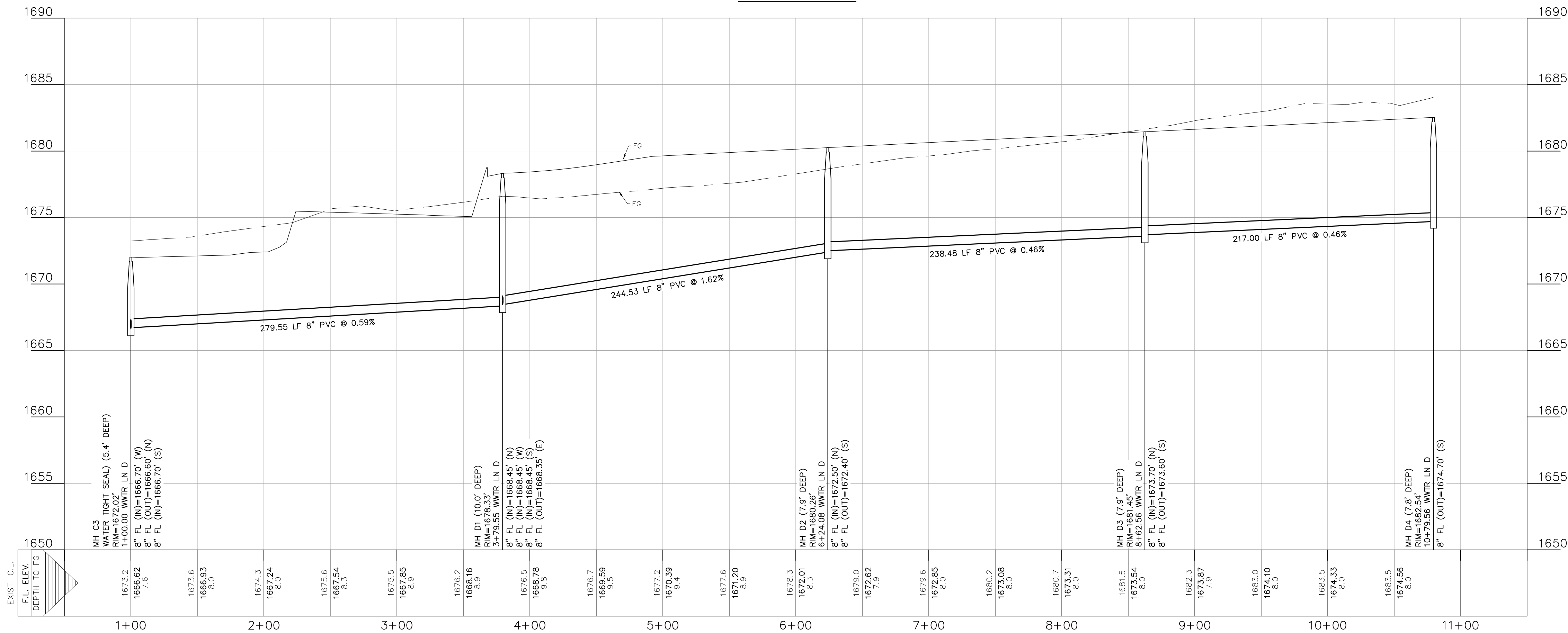


**WASTEWATER LN C
PLAN & PROFILE**
FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: **AUGUST 2024**
DRAWN BY: **JK**
DESIGNED BY: **RS**
REVIEWED BY: **ZJ**
HMT PROJECT NO.: **337.065**

SHEET
C7.04

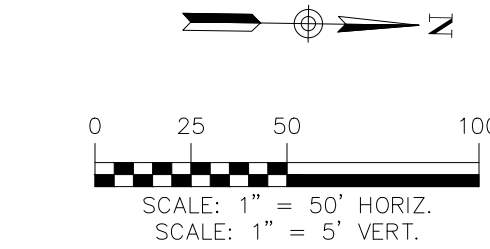
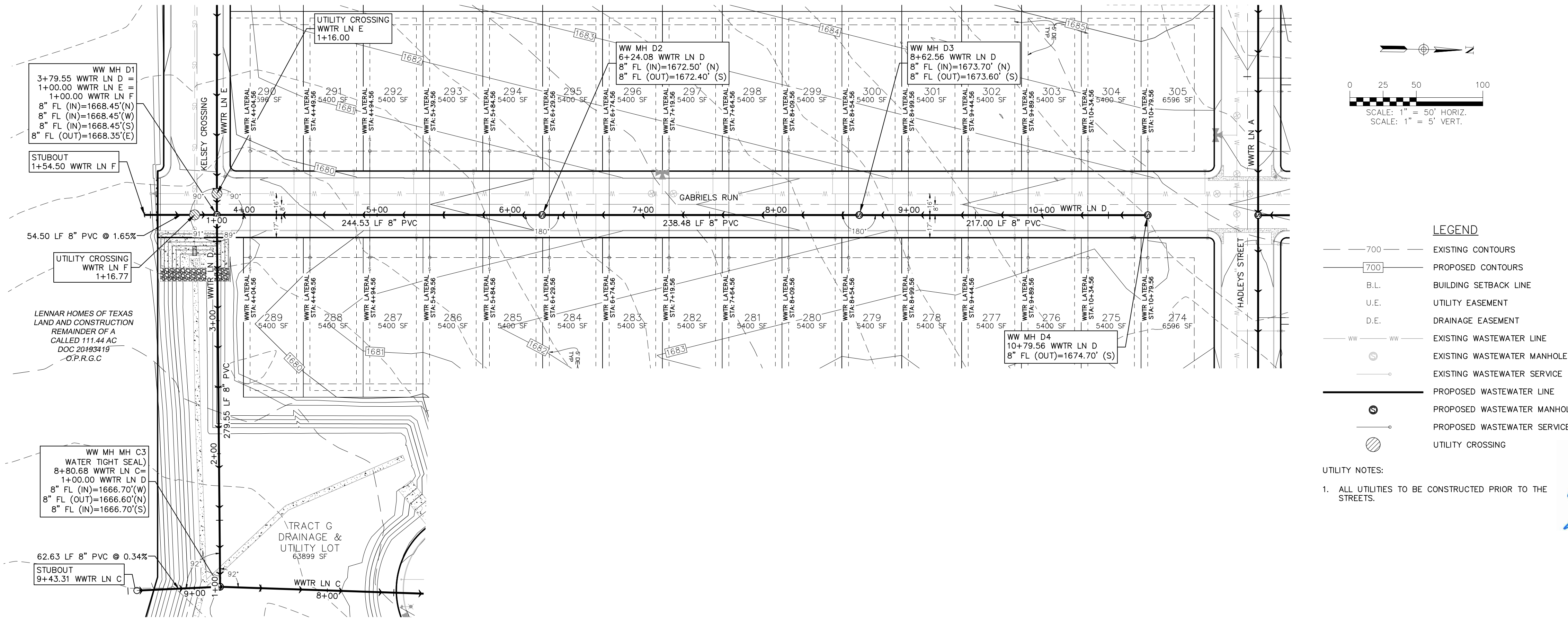


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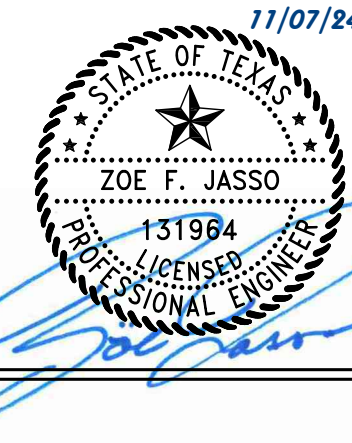


- LEGEND**
- 700 EXISTING CONTOURS
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 - B.L. BUILDING SETBACK LINE
 - U.E. UTILITY EASEMENT
 - D.E. DRAINAGE EASEMENT
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 - WW PROPOSED WASTEWATER LINE
 - EXISTING WASTEWATER MANHOLE
 - PROPOSED WASTEWATER MANHOLE
 - PROPOSED WASTEWATER SERVICE
 - PROPOSED WASTEWATER SERVICE
 - UTILITY CROSSING

UTILITY NOTES:

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290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBP&S FIRM F-10961
TBP&S FIRM 1053600



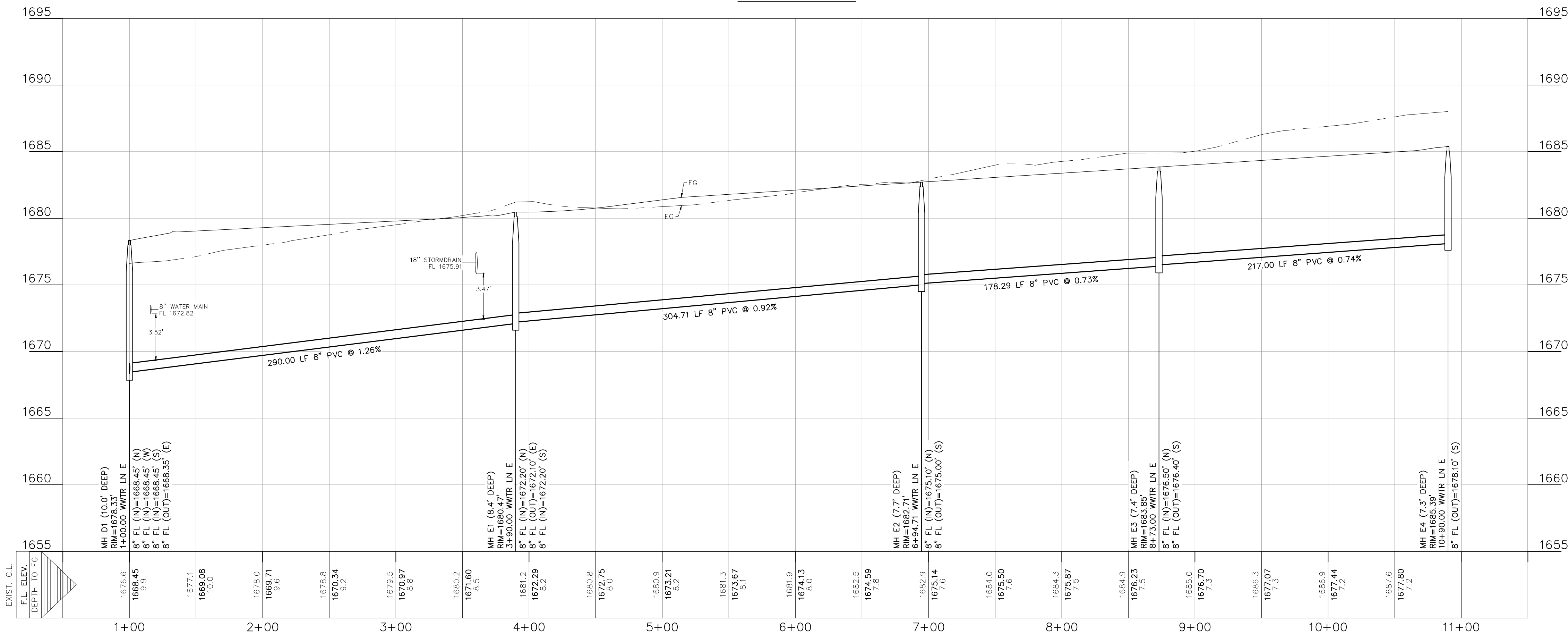
WASTEWATER LN D
PLAN & PROFILE
FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION	DESCRIPTION	REVISION DATE

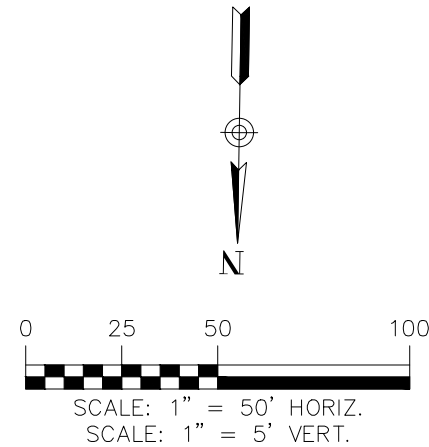
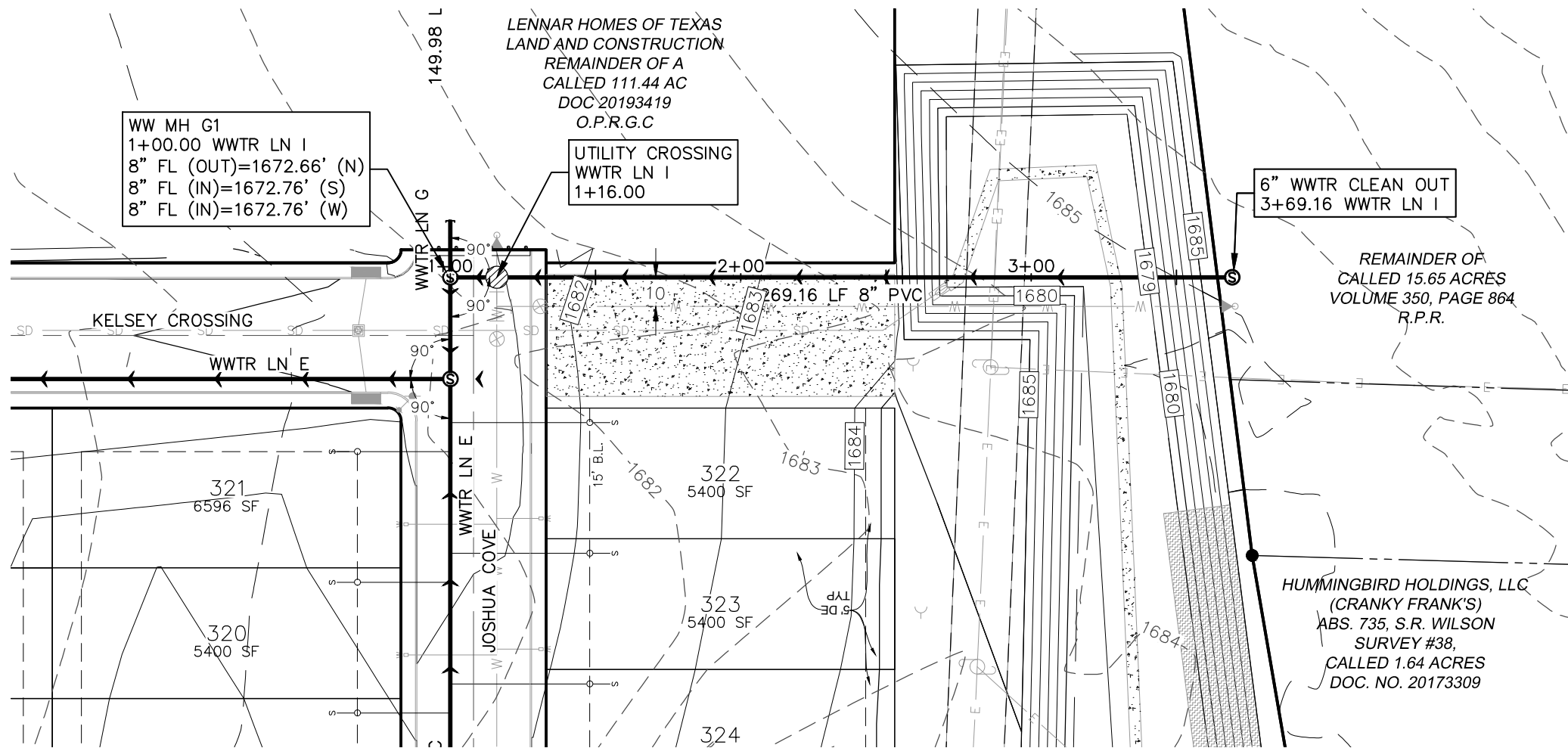
DATE: **AUGUST 2024**
DRAWN BY: **JK**
DESIGNED BY: **RS**
REVIEWED BY: **ZJ**

HMT PROJECT NO.:
337.065

SHEET
C7.05

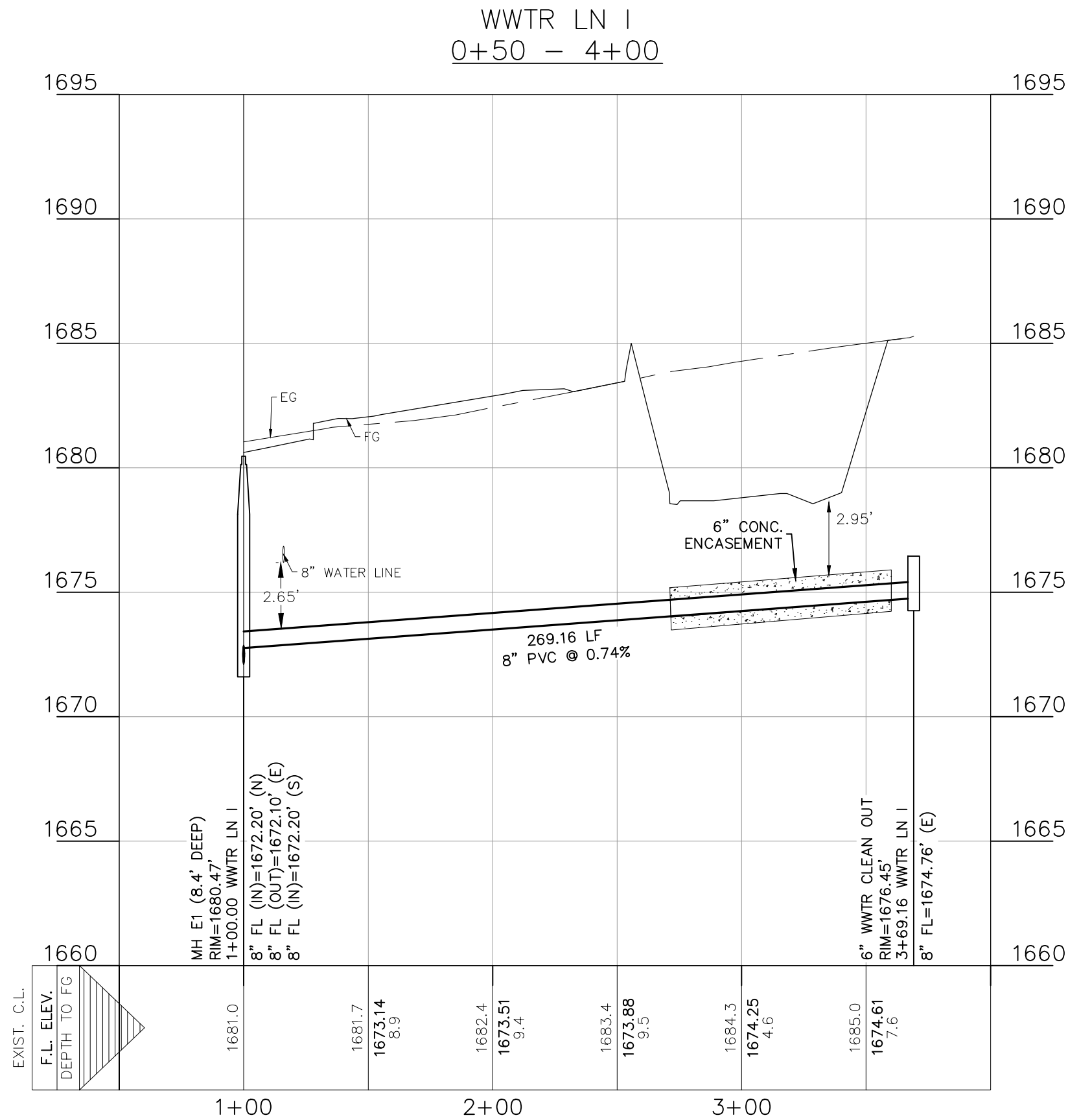


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 - 700 — PROPOSED CONTOURS
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 - D.E. DRAINAGE EASEMENT
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 - — EXISTING WASTEWATER MANHOLE
 - — EXISTING WASTEWATER SERVICE
 - — PROPOSED WASTEWATER LINE
 - — PROPOSED WASTEWATER MANHOLE
 - — PROPOSED WASTEWATER SERVICE
 - — UTILITY CROSSING

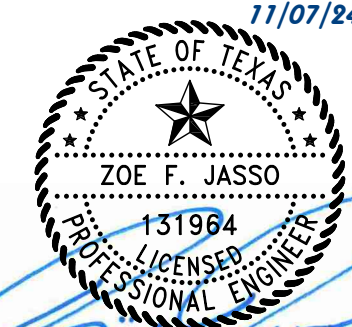
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290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600



**WASTEWATER LN I
PLAN & PROFILE**
FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **AUGUST 2024**

DRAWN BY: **JK**

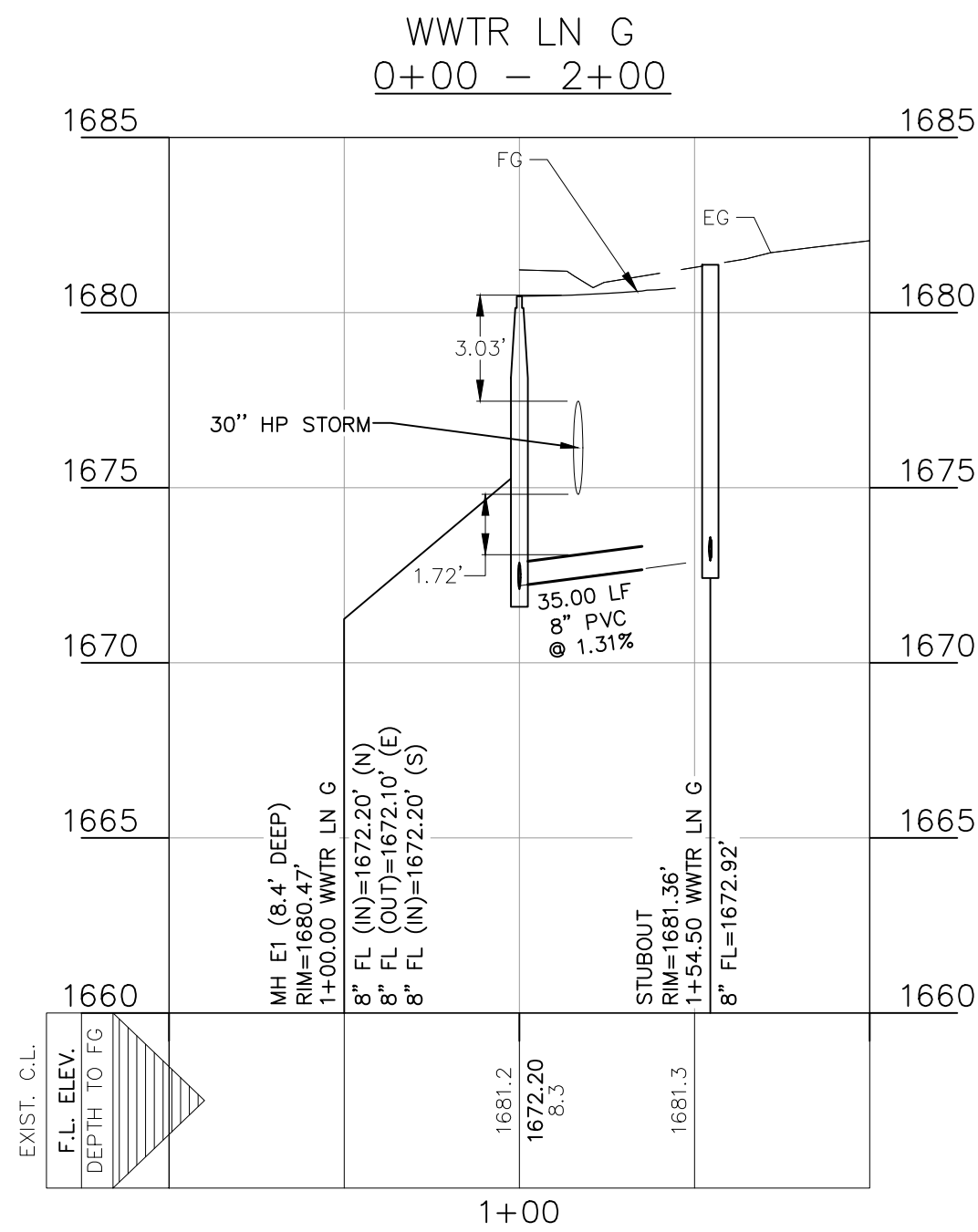
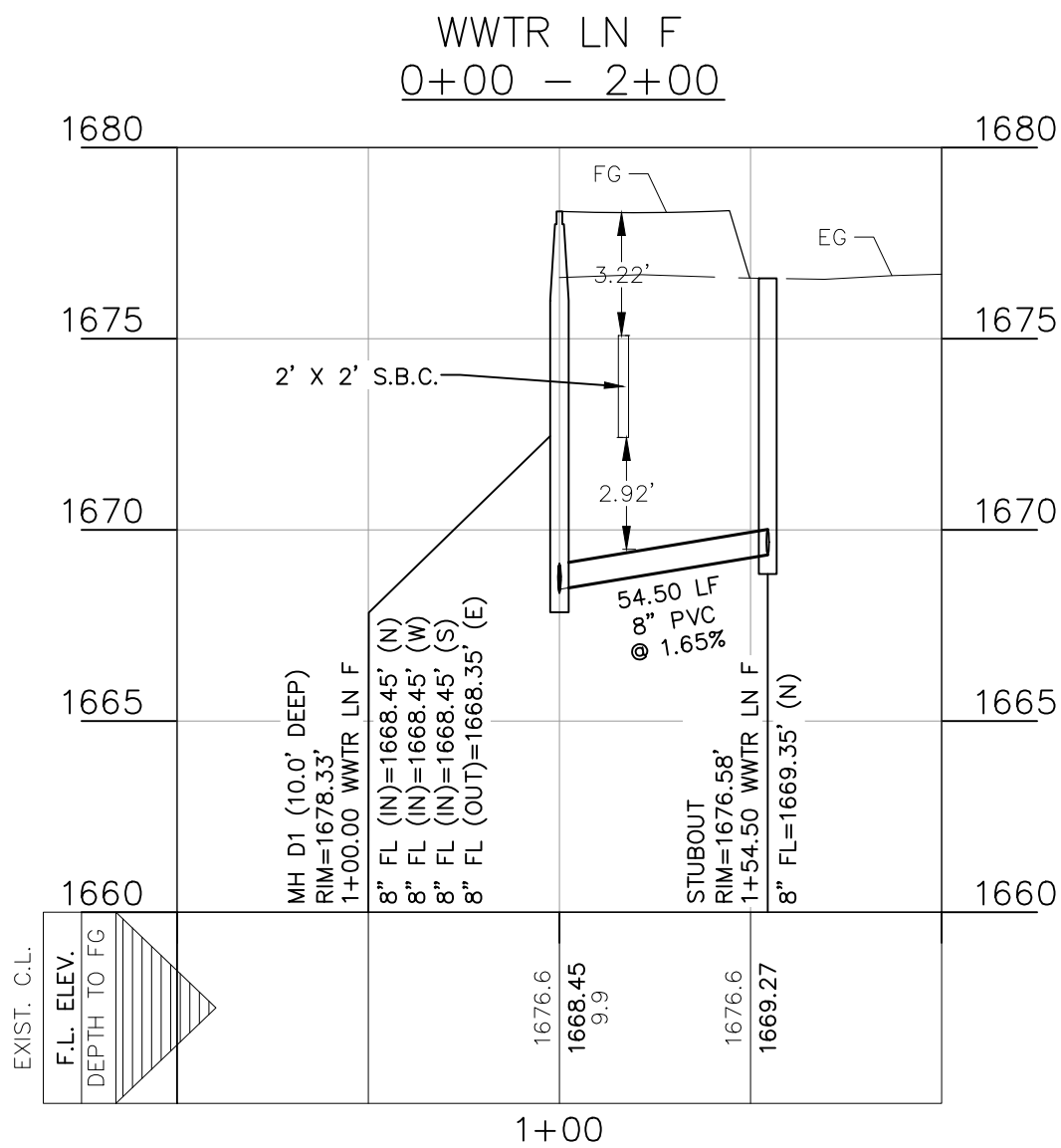
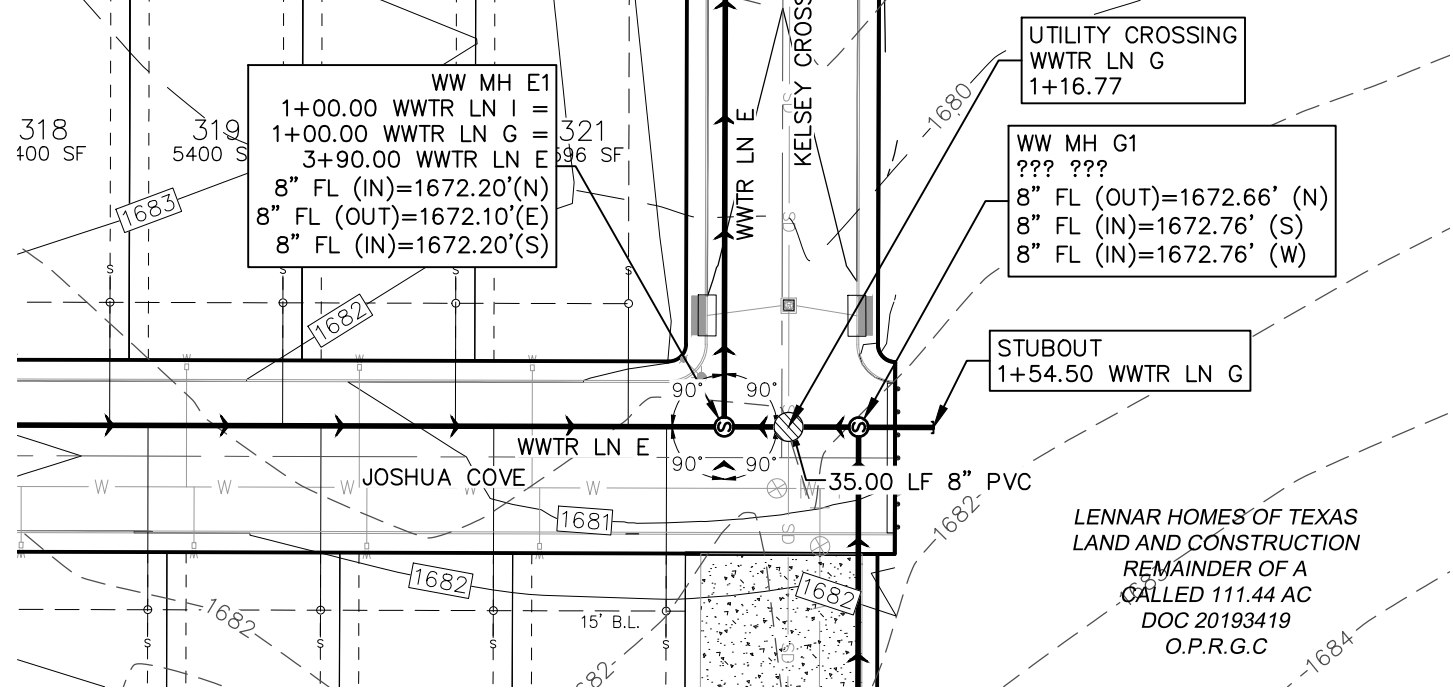
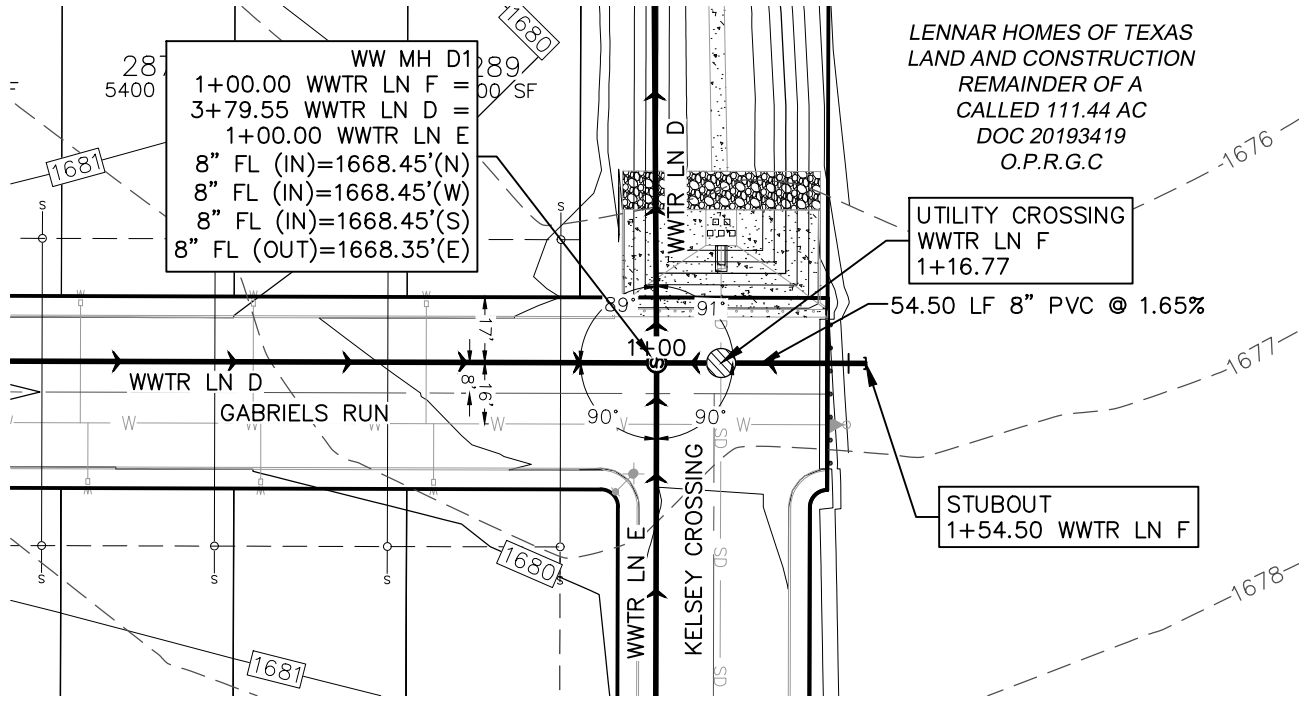
DESIGNED BY: **RS**

REVIEWED BY: **ZJ**

HMT PROJECT NO.:
337.065

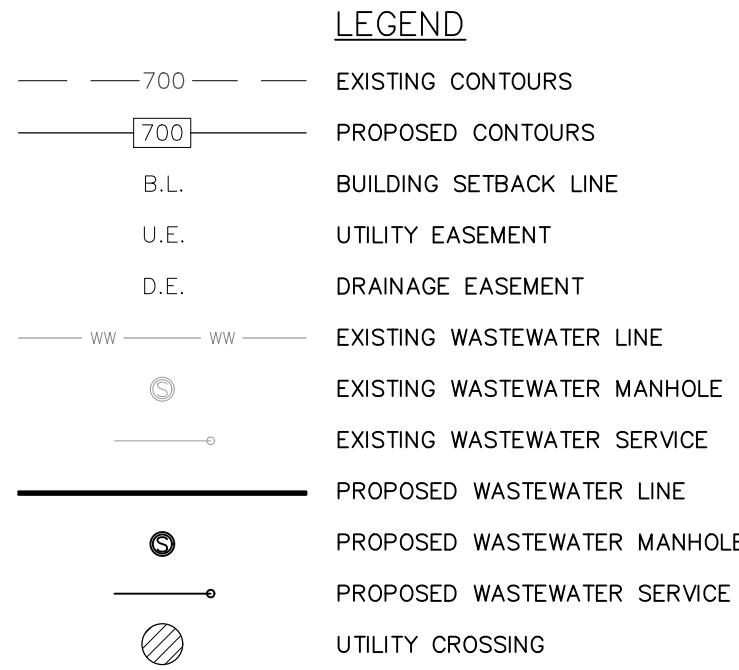
**SHEET
C7.07**

TRENCH EXCAVATION SAFETY 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 EXCAVATIONS.



REFER TO THE COVER SHEET
FOR BENCHMARK INFORMATION.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.



290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600

HMT
ENGINEERING & SURVEYING

11/07/24
ZOE F. JASSO
131984
PROFESSIONAL ENGINEER
STATE OF TEXAS

**WASTEWATER LN F & G
PLAN AND PROFILE**

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: **AUGUST 2024**

DRAWN BY: **JK**

DESIGNED BY: **RS**

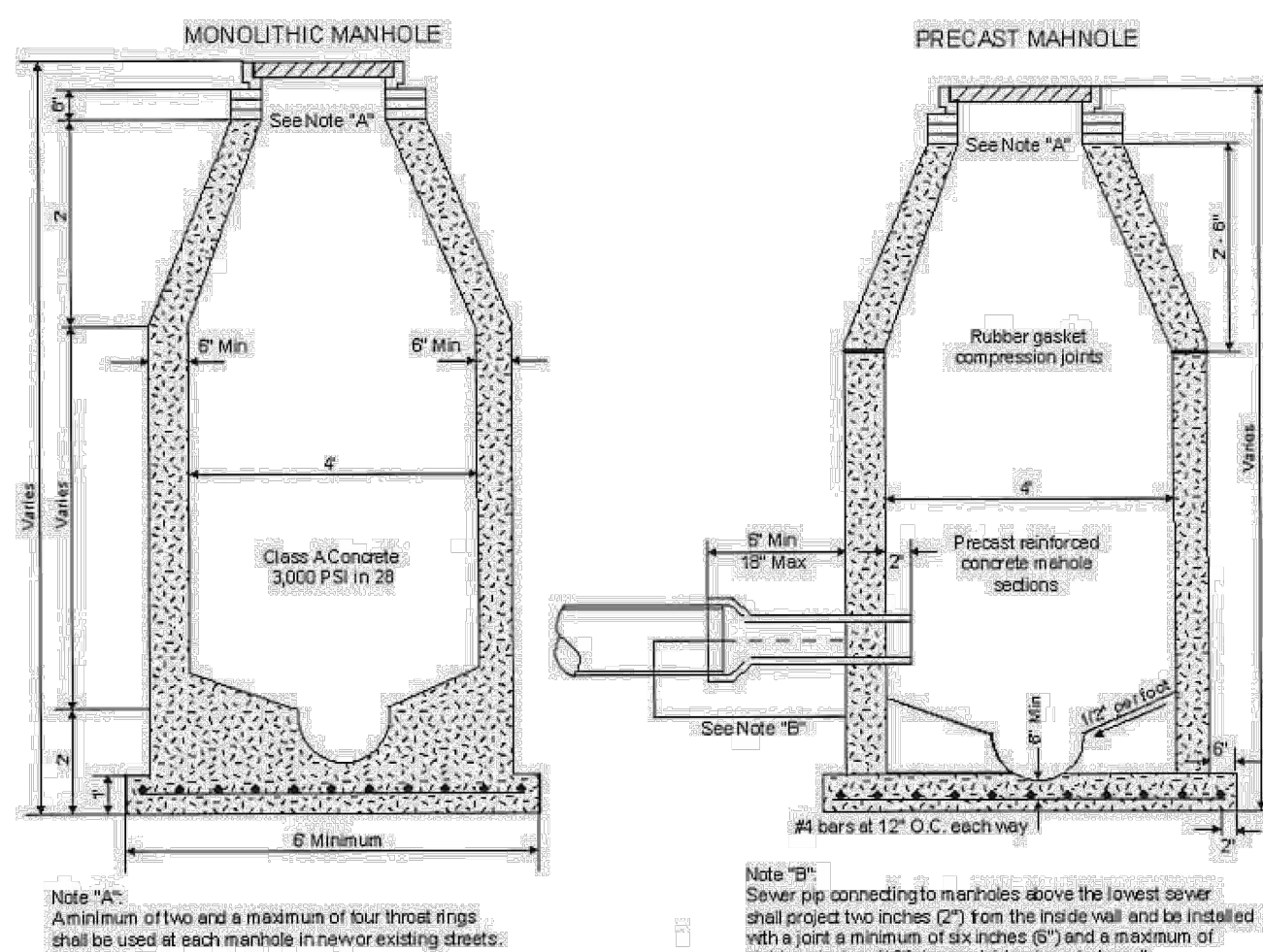
REVIEWED BY: **ZJ**

HMT PROJECT NO.: **337.065**

SHEET

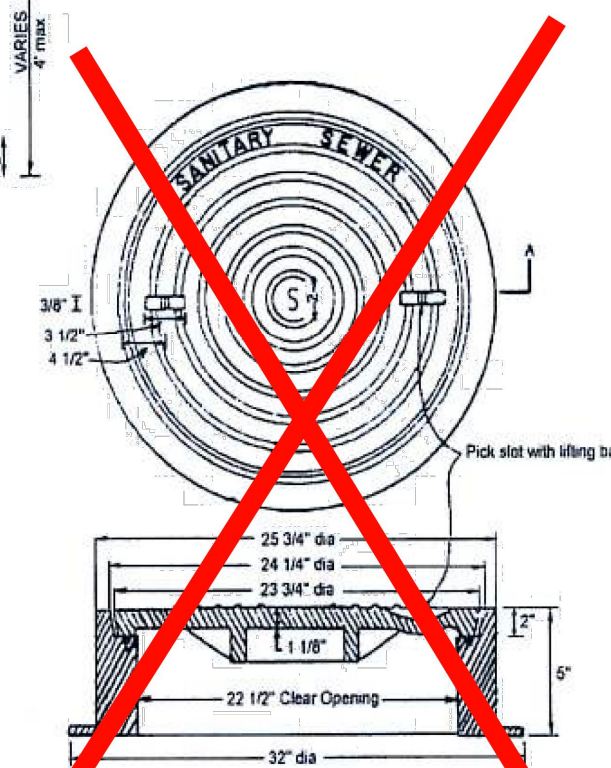
C7.08

Service Connections: All service connections shall be 4" diameter PVC and located near the center of each lot and shall extend approximately 1 foot beyond the R.O.W. line. Services shall have a minimum of 36 inches of cover at the end of the service. The end of the service shall be plugged.



12

SHALLOW MANHOLE



See East Jordan Detail for
Manhole Ring & Cover

13

Where sewers are located in streets stacks and laterals will be constructed as shown

STREET

End stacks shall curve or bend and plug where required

Use "Y" branch tees and elbows laterals are required on both sides of main

Only "T" branch when house line is only required on one side

Peg to wall of trench at each point

45 Bend
Hub of tee
tee

Concrete encasement
No separate pipe dam

NOTE: City

Typical Stacks shall be required where top of sewer main is at a depth of eight feet (8') or greater. However, it is the Engineer's responsibility to show on the plans where stacks shall be required, based on elevations of the sewer main, natural ground and building

Diagram illustrating the minimum clearance requirements for a sewer main crossing a property line. The diagram shows a cross-section of a street with a curb, a sidewalk, and a sewer main. The sewer main is shown with a 14' minimum slope and a 14' minimum clearance from the property line. The property line is shown with a 6' minimum clearance from the sewer main. The diagram also shows a 6' minimum clearance from the sewer main to the sidewalk. A note indicates that the depth and grade of service laterals are shown as typical only and that actual depth, alignment, and grade of service laterals shall be as determined by the Engineer based on evaluations of the sewer main, street, nature ground, and existing to be avoided.

NOTE:
Depth and grade of service laterals as shown are typical only. Actual depth, alignment, and grade of service laterals shall be as determined by the Engineer based on evaluations of the sewer main, street, nature ground, and existing to be avoided.

In the case of a utility assessment behind the property line, the clearance will need to be shared beyond the assessment boundary.

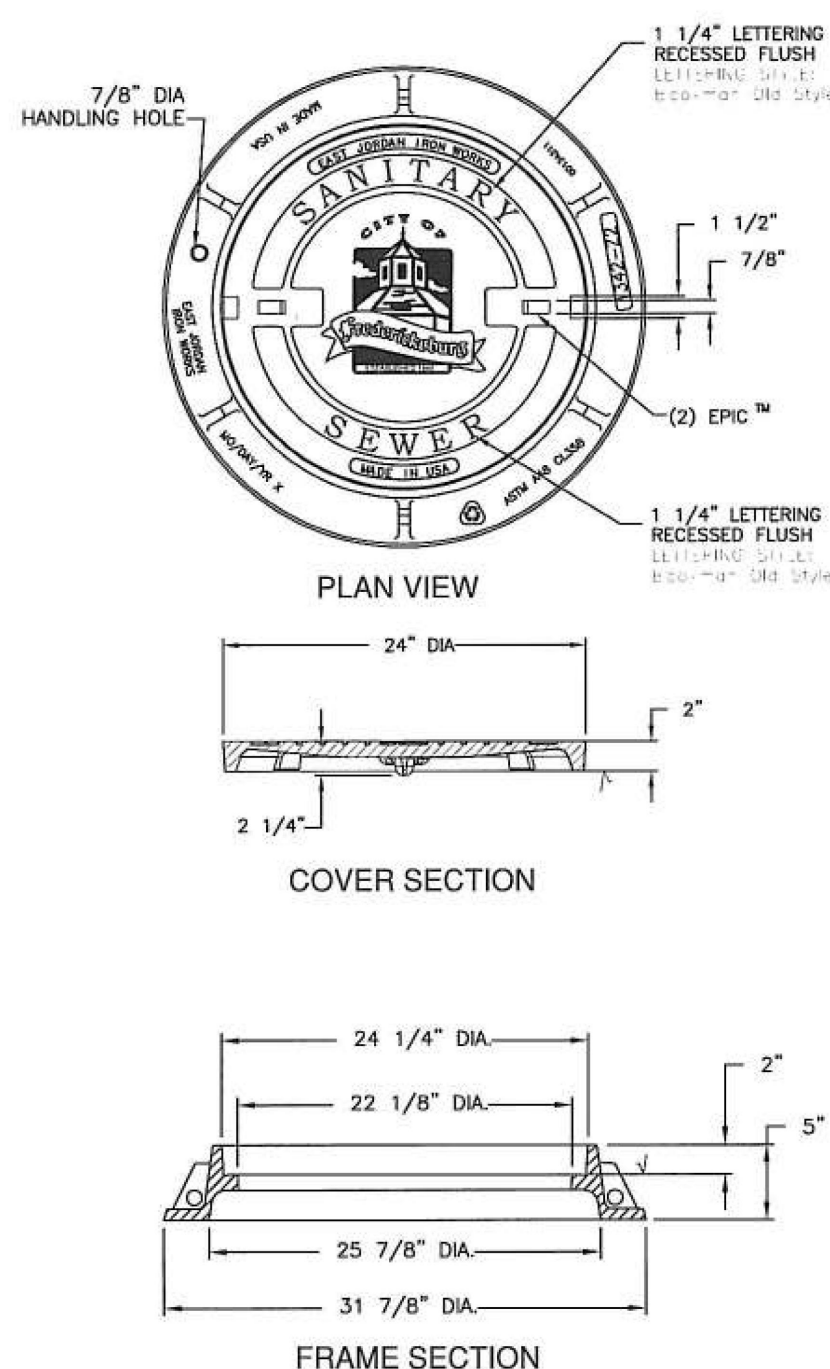
14

TYPICAL SECTION 50' ROADWAY
(RESIDENTIAL STREET)

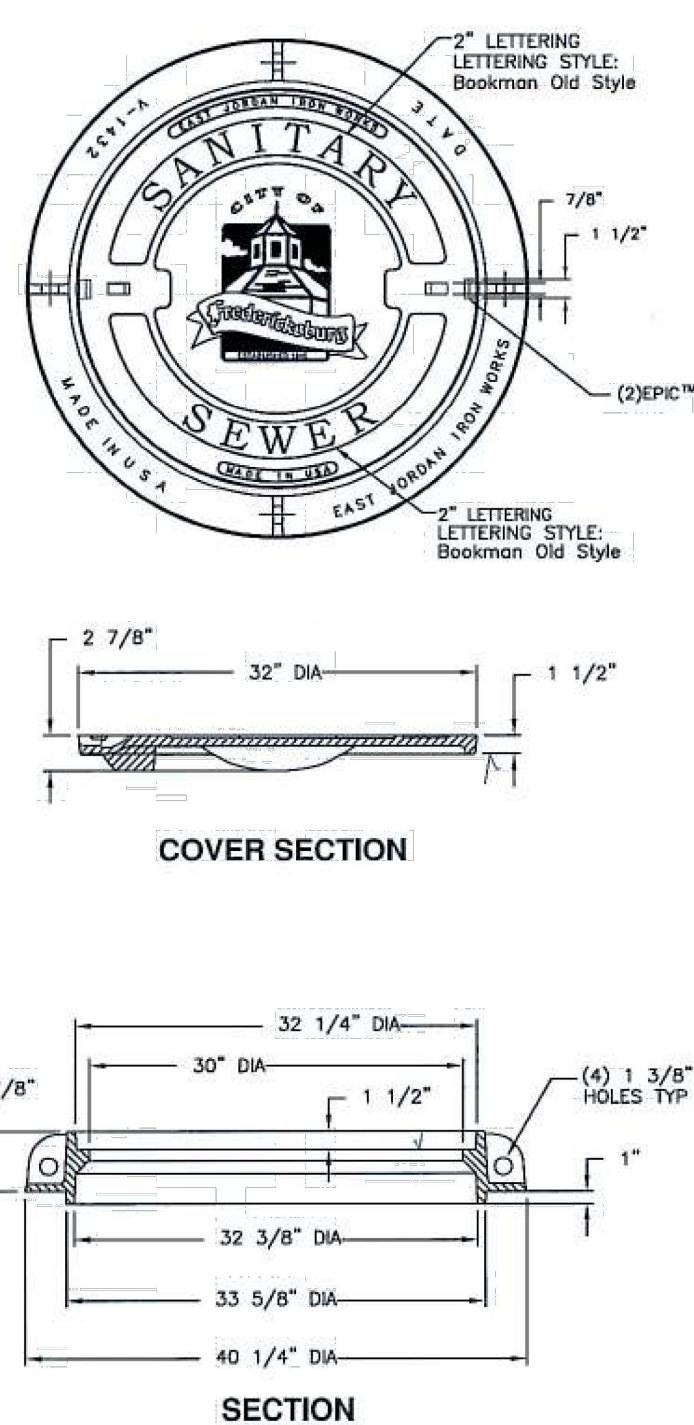
This diagram illustrates the cross-section of a 50-foot wide residential street. The total width is divided into several functional zones:

- Left Side (from R.O.W. to Center Line):**
 - 5.00' (PARKWAY)
 - 20.00' (FROM BACK OF CURB TO CENTER LINE)
 - 15.00' (PAVEMENT)
 - 15.00' (PARKWAY)
- Center Line:**
 - Center Line of Street
 - 3" Crown
- Right Side (from Center Line to R.O.W.):**
 - 15.00' (PARKWAY)
 - 20.00' (FROM BACK OF CURB TO CENTER LINE)
 - 5.00' (PARKWAY)
- Other Features and Dimensions:**
 - Double Surface Treatment:** Indicated on the pavement areas.
 - Roller Curb:** Located at the edge of the pavement on both sides.
 - Superslope:** 90% Relative Compaction.
 - Gas Line:** Shown with a 2.5' clearance from the curb.
 - Electric Cable:** Shown with a 1' clearance from the curb.
 - Manhole:** Located on the right side of the roadway.
 - Dimensions:** 17' total width from roller curb to roller curb, 8' from roller curb to sewer, 1' from roller curb to gas line, 1' from roller curb to electric cable, 1' from roller curb to manhole.
 - Angles:** 1/4" 1' slope for the curb and 1/4" 1' slope for the superslope.

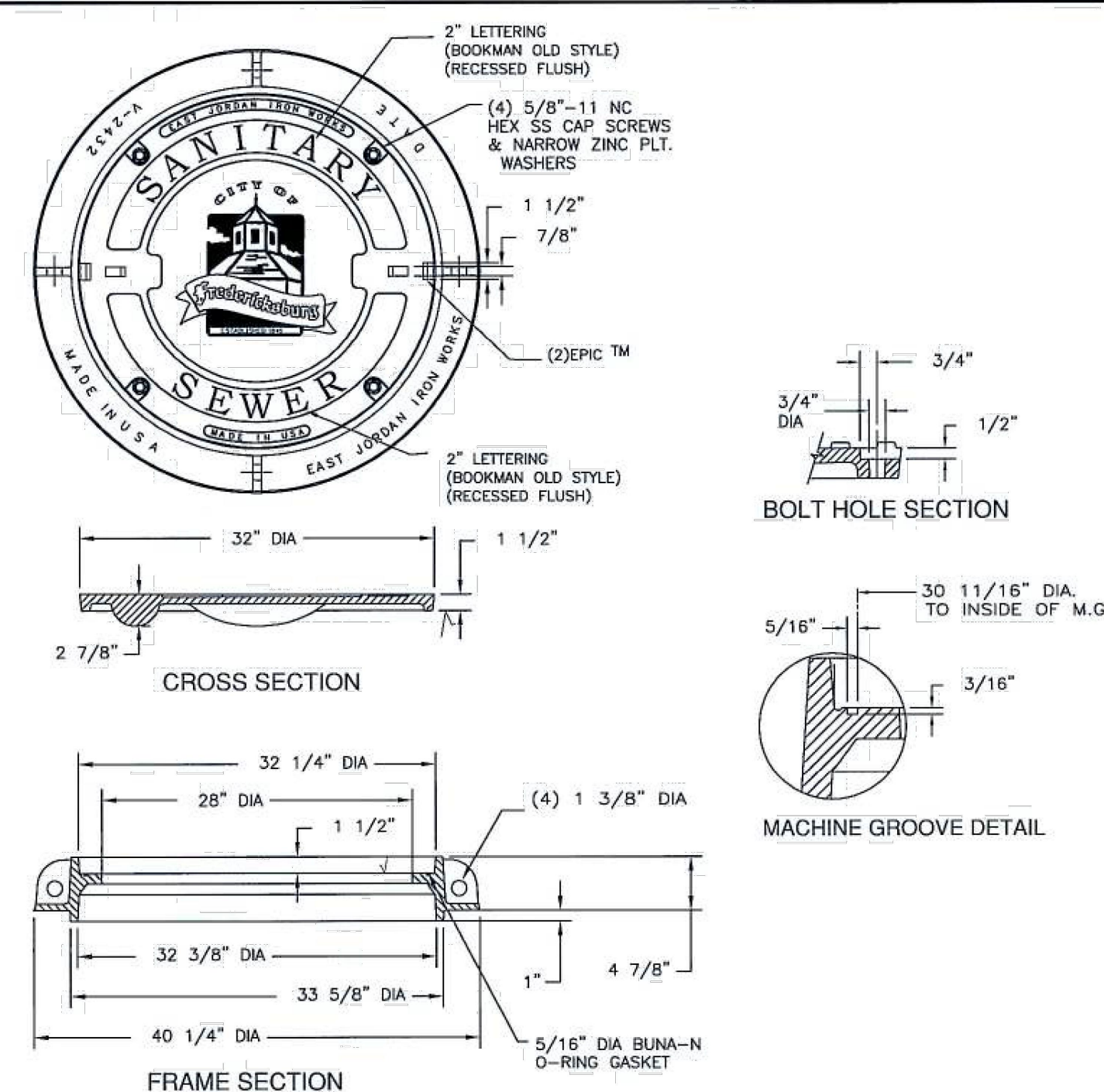
15



EJW EAST JORDAN ROCK WORKS EST.1983 800-426-4653 www.ejw.com MADE IN USA				
PRODUCT NUMBER 00134349A01				
CATALOG NUMBER 1342A1 1342Z2				
MANHOLE ASSEMBLY				
LOAD RATING HEAVY DUTY				
COATING UNDIPPED				
MATERIAL SPECIFICATION COVER = GRAY IRON ASTM A48 CL35B FRAME = GRAY IRON ASTM A48 CL35B				
24" Ring & Cover To be used when specified by City of Fredericksburg				
OPEN AREA N/A				
✓ DESIGNATES MACHINED SURFACE				
<table border="1"> <tr> <td>DRAWN GAD</td> <td>DATE 08/12/08</td> </tr> <tr> <td>LAST REVISED</td> <td>DATE</td> </tr> </table>	DRAWN GAD	DATE 08/12/08	LAST REVISED	DATE
DRAWN GAD	DATE 08/12/08			
LAST REVISED	DATE			
REFERENCE INFORMATION 00134349 00134311				



EJW EAST JORDAN <small>IRON WORKS EST. 1961</small> 800-426-4653 www.ejw.com MADE IN USA	
PRODUCT NUMBER 41432001	
CATALOG NUMBER V-1432-3 CV V-1432 FR	
ASSEMBLY	
LOAD RATING HEAVY DUTY	
COATING UNDIPPED	
MATERIAL SPECIFICATION COVER - DUCTILE IRON ASTM A536 RING - GRAY IRON ASTM A48 CL35B 32" Ring & Cover <i>To be used when specified by City of Fredericksburg</i>	
OPEN AREA N/A	
*DESIGNATES MACHINE SURFACE	
DRAWN GAD	DATE 08/08/08
LAST REVISED 08/	DATE
REFERENCE INFORMATION 41432010 41432139	



ETJW EAST JORDAN IRON WORKS EST. 1988 800-426-4653 www.etjw.com MADE IN USA	
PRODUCT NUMBER 42432093	
CATALOG NUMBER V2432-3 DI V-2432	
MANHOLE ASSEMBLY	
LOAD RATING HEAVY DUTY	
COATING UNDIPPED	
MATERIAL SPECIFICATION COVER — DUCTILE IRON ASTM A536 FRAME — GRAY IRON ASTM A48 CLASSB	
32" Bolted / Water-tight Ring & Cover <i>To be used when specified by City of Frederickburg</i>	
OPEN AREA N/A	
✓ DESIGNATES MACHINED SURFACE	
DRAWN GAD	DATE 08/08/08
LAST REVISED	DATE
REFERENCE INFORMATION 42432035 42432010	

**WASTEWATER DETAILS (1
OF 2)**

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE
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REVISION DESCRIPTION

DATE: January 2023

DRAWN BY: JK

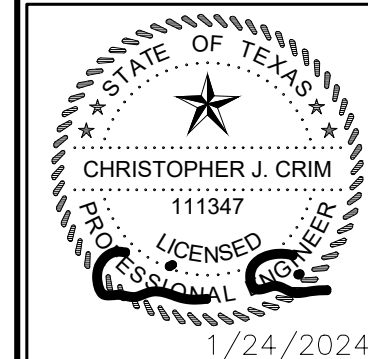
DESIGNED BY: R

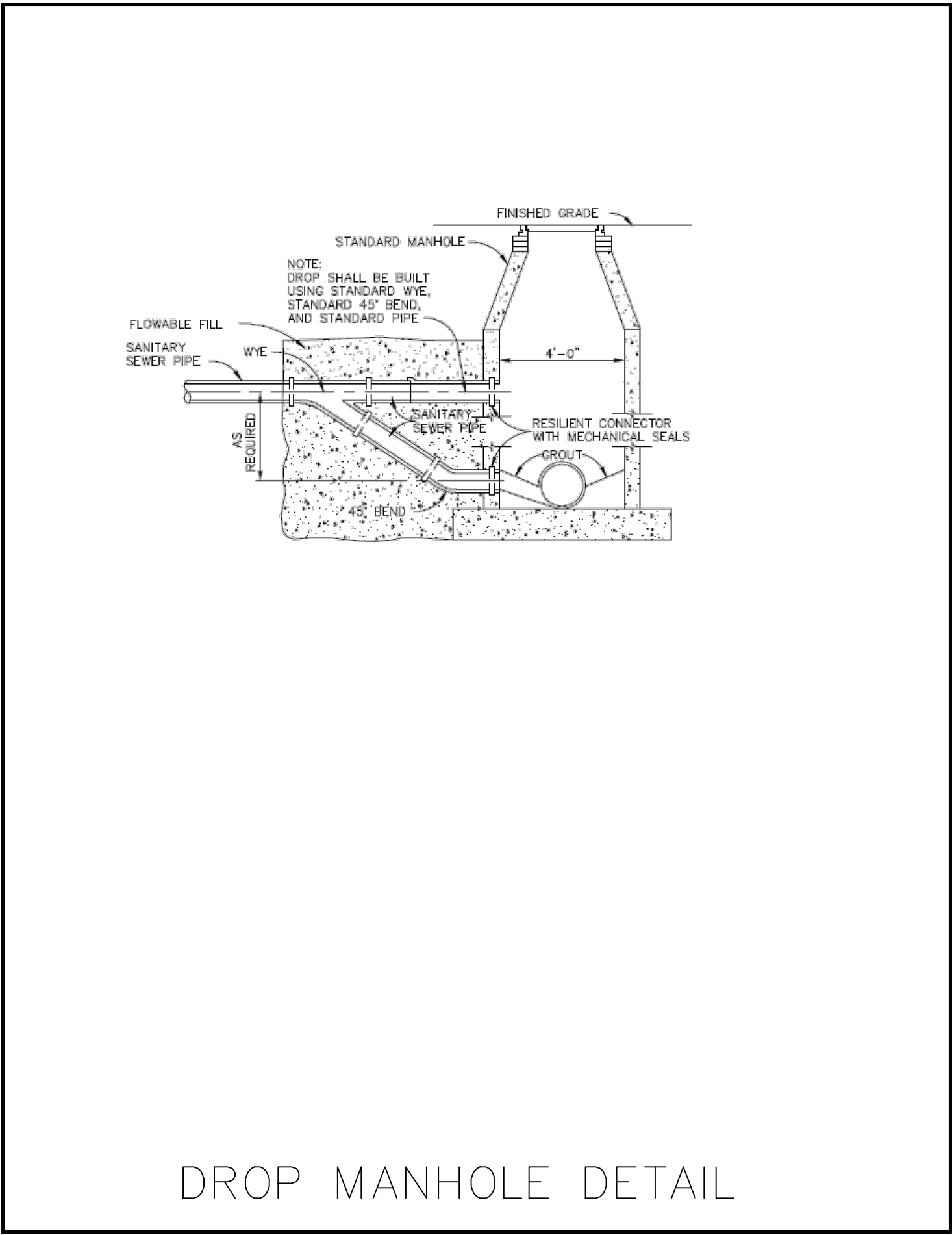
REVIEWED BY: CR

HMT PROJECT NO.:	337.06
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SHEET
C7.09

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600





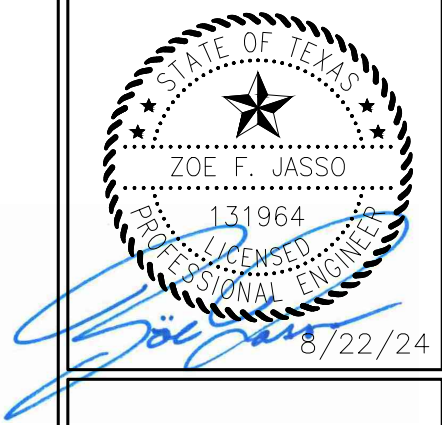
NO.	REVISION DESCRIPTION	REVISION DATE

DATE:	AUGUST 2024
DRAWN BY:	JK
DESIGNED BY:	RS
REVIEWED BY:	ZJ
HMT PROJECT NO.:	337.065

SHEET
C7.10

**WASTEWATER DETAILS (2
OF 2)**

FRIENDSHIP OAKS, UNIT 3
FREDERICKSBURG, TEXAS



290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPELS FIRM F-10961
TBPELS FIRM 1053600

