

Project Control Points				
Point #	Raw Description	Elevation	Northing	Easting
1	CP MAG	611.93	13800057.6500	2256494.0800
2	CP MAG	613.02	13800266.7400	2256697.8900
3	CP IPSC	614.13	13800525.5000	2256968.8800
10	CP MAG	630.95	13800177.3290	2257655.6480
11	CP MAG	640.03	13800373.5850	2257871.0930
50	CP 60D	643.66	13800469.8320	2257779.9810

DESIGN SPEED = 30 MPH

PERMITS OR APPROVALS:

CITY OF NEW BRAUNFELS
CITY OF NEW BRAUNFELS FIRE DEPARTMENT
NEW BRAUNFELS UTILITIES
TOEC
TXDOT
UNION PACIFIC RAILROAD
CENTERPOINT ENERGY

PI 2024-0032
PENDING
W-245901 / WW-245902
N/A
N/A
N/A
N/A

NBU NOTES:

- ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, NEW BRAUNFELS UTILITIES MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
- THE ENGINEER OF RECORD ACKNOWLEDGES THAT ALL PROPOSED WATER OR WASTEWATER IMPROVEMENTS MUST COMPLY WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), THE CITY OF NEW BRAUNFELS, NBU WATER & WASTEWATER DESIGN CRITERIA, SOUND ENGINEERING JUDGEMENT, AND ANY OTHER GOVERNING ENTITY ORDINANCES OR CODES.
- THE ENGINEER OF RECORD ACKNOWLEDGES THAT THE POINT OF DELIVERY FOR THE NBU WATER SYSTEM IS THE MAIN SIDE OF THE SERVICE LATERAL LEAD FROM THE CUSTOMER'S METER, BACKFLOW PREVENTER, OR EASEMENT EDGE. THE CUSTOMER IS RESPONSIBLE FOR THE DESIGN, PERMITTING, CONSTRUCTION, OPERATION AND MAINTENANCE BEYOND THE POINT OF DELIVERY AND HAS SOLE CONTROL AND SUPERVISION OVER ITS INSTALLATION.
- THE ENGINEER OF RECORD ACKNOWLEDGES THAT THE POINT OF DELIVERY FOR A NBU WASTEWATER SYSTEM IS THE MAIN SIDE OF THE SERVICE LATERAL FROM THE CUSTOMER'S CLEAN OUT OR PROPERTY LINE, WHERE THE CUSTOMER IS RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, OPERATION AND MAINTENANCE BEYOND THE POINT OF DELIVERY AND HAS SOLE CONTROL AND SUPERVISION OVER ITS INSTALLATION.
- WATER IS A PRECIOUS COMMODITY IN THE STATE OF TEXAS AND NEW BRAUNFELS UTILITIES (NBU) IS PASSIONATE ABOUT PROTECTING THE LOCAL RESOURCE. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ACQUIRING A FIRE HYDRANT METER SO THAT ALL WATER USED FOR CONSTRUCTION OR TESTING PURPOSES IS PROPERLY ACCOUNTED FOR. NBU WILL NOT TOLERATE ANY WATER THEFT, REGARDLESS OF THE AMOUNT. IF WATER THEFT IS DISCOVERED, THE CONTRACTOR SHALL BE SUBJECT TO MONETARY PENALTIES, CRIMINAL CHARGES, AND STOPPAGE OF ALL CONSTRUCTION ACTIVITIES RELATED TO THE PROJECT. COSTS ASSOCIATED WITH ANY WORK STOPPAGE RESULTING FROM WATER THEFT SHALL BE AT THE FULL EXPENSE OF THE CONTRACTOR.

PLEASE NOTE: NBU REQUIRES GPS POINTS FOR CERTAIN ELECTRIC, WATER AND WASTEWATER ATTRIBUTES, SOME OF WHICH MUST BE MEASURED PRIOR TO BACKFILL, DURING CONSTRUCTION.

GPS POINTS ARE REQUIRED FROM THE DEVELOPER'S CONTRACTOR OR ENGINEER. A MINIMUM OF THREE (3) COORDINATE POINTS FOR GEOREFERENCING ARE REQUIRED. THE WATER AND WASTEWATER GPS POINTS SHALL BE TO SURVEY GRADE AND ELECTRIC GPS POINTS SHALL BE MEASURED TO MAP GRADE. PLEASE REFERENCE NBU'S WATER CONNECTION POLICY FOR ADDITIONAL CAD DELIVERABLE REQUIREMENTS

REQUIRED MEASUREMENTS FOR THE WATER SYSTEM INCLUDE:
VERTICAL BENDS AND EDGES OF STEEL CASING (IF APPLICABLE) PRIOR TO BACKFILL
HORIZONTAL BENDS PRIOR TO BACKFILL
TEES PRIOR TO BACKFILL
FITTINGS (REDUCERS AND COUPLINGS) PRIOR TO BACKFILL
FIRE HYDRANTS (TOP OF FLANGE)
VALVES
METERS (TOP CENTER OF BOX)
BLOW OFF ASSEMBLIES
CORNER SLAB OF WATER TANKS & THE ISOLATION GATE VALVE ON THE WATER TANK

REQUIRED MEASUREMENTS FOR THE WASTEWATER SYSTEM
MANHOLES
CLEANOUTS
CORNER SLAB OF LIFT ALL STATIONS

REQUIRED MEASUREMENTS FOR THE ELECTRIC SYSTEM
POLES
TRANSFORMERS, BOTH ABOVE AND UNDERGROUND (FRONT LOCK)
PULL BOXES
STREET LIGHTS

COORDINATE GPS REQUIREMENTS WITH NBU INSPECTOR

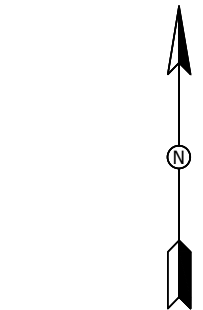
GENERAL NOTES:

- IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY OF NEW BRAUNFELS AND NEW BRAUNFELS UTILITIES (NBU) APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
- 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.
- A PORTION OF THE PROJECT IS LOCATED WITHIN THE EXISTING SPECIAL FLOOD HAZARD ZONE AE, 100-YEAR FLOOD BOUNDARY, AS DEFINED BY THE COMAL COUNTY, TEXAS MAP NUMBER 48091C0455F, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, EFFECTIVE DATE SEPTEMBER 2, 2009.
- THIS PROJECT IS LOCATED WITHIN THE EAA JURISDICTIONAL BOUNDARY AND IS NOT LOCATED WITHIN ANY EDWARDS AQUIFER RECHARGE ZONES.
- THIS PROJECT IS A RESIDENTIAL SUBDIVISION, DEVELOPMENT TYPE 3.
- PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS (CONB) AND NEW BRAUNFELS UTILITIES (NBU) TO SET A PRE-CONSTRUCTION MEETING. A 48-HOUR ADVANCED NOTIFICATION IS REQUIRED.
 - ALL CONB INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 (PHONE)
 - FAKED IN AT 830-608-2117 (FAX)
 - E-MAILED AT inspections@nbtexas.com (EMAIL)
 - NBU INSPECTIONS ARE TO BE CALLED AT 830-608-8971
- 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 FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.
- 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.

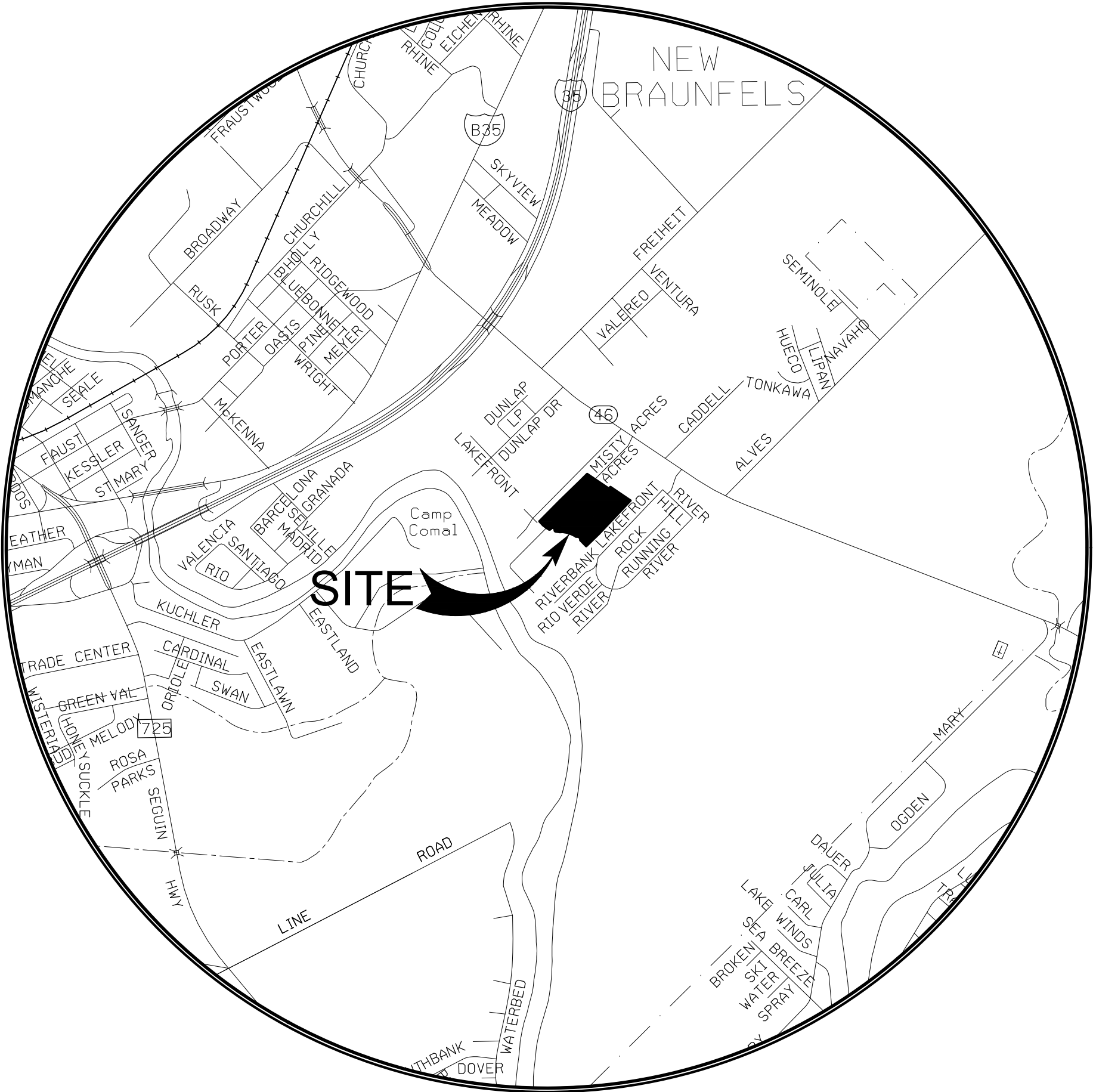
NOTE TO CONTRACTOR:

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.



LOCATION MAP
SCALE: 1" = 1,500'



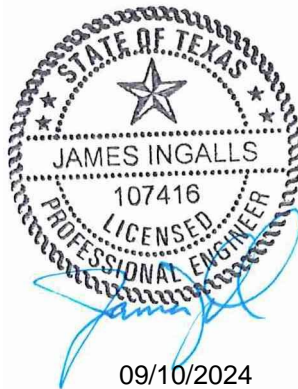
PREPARED BY:



2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

SUBMITTED BY:

JAMES INGALLS, P.E. #107416
INK CIVIL
TBPE FIRM #F-13351
2021 W SH46, STE 105
NEW BRAUNFELS, TX 78132



SUBMITTAL DATE: 9-10-2024

OWNER/DEVELOPER:
BRIGHTLAND HOMES
9601 McALLISTER FREEWAY, SUITE 600
SAN ANTONIO, TX 78216

ENGINEER/SURVEYOR:
INK CIVIL
JAMES INGALLS, P.E. - ENGINEER
2021 SH 46 W. STE 105
NEW BRAUNFELS, TX. 78130
(830) 358-7127

D.A. MAWYER LAND SURVEYING, INC.
DREW MAWYER, R.P.L.S. - SURVEYOR
5151 W. SH46
NEW BRAUNFELS, TEXAS 78132
(210) 325-0858

Sheet List Table

SHEET NUMBER	SHEET TITLE
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3	SUBDIVISION PLAT II
4	CLEAR COVE RD PLAN & PROFILE
5	CREEK BED DR PLAN & PROFILE
6	SLOW CREEK ST PLAN & PROFILE
7	STREET SECTIONS AND DETAILS I
8	STREET SECTION AND DETAILS II
9	TRAFFIC SIGNAGE & SIDEWALK PLAN
10	TRAFFIC SIGNAGE AND SIDEWALK DETAIL
11	EXISTING DRAINAGE AREA MAP
12	PROPOSED SCS DRAINAGE AREA MAP
13	PROPOSED RATIONAL DRAINAGE AREA MAP
14	CHANNEL A STA 19+14 TO END PLAN & PROFILE
15	OVERALL STORM DRAIN PLAN
16	STORM DRAIN LINE B
17	STORM DRAIN LINES B1 & B2
18	STORM DRAIN LINE C & C1
19	DRAINAGE DETAILS I
20	DRAINAGE DETAILS II
21	DRAINAGE DETAILS III
22	GRADING PLAN
23	GRADING DETAIL I
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25	RETAINING WALL DETAILS
26	OVERALL UTILITY PLAN
27	WATER DISTRIBUTION PLAN
28	OVERALL SANITARY SEWER PLAN
29	SANITARY SEWER LINE A 19+00 TO END
30	SANITARY SEWER LINE B 19+50 TO END
31	WATER DETAILS I
32	WATER DETAILS II
33	SANITARY SEWER DETAILS I
34	SANITARY SEWER DETAILS II
35	EROSION CONTROL PLAN
36	EROSION CONTROL DETAILS I

CLEAR CREEK SUBDIVISION - UNIT 2
PERMIT SET

NO	DATE	ISSUES AND REVISIONS
1	07-15-2024	REVISED PER CITY OF NEW BRAUNFELS COMMENTS
2	07-18-2024	REVISED PER NBU COMMENTS
3	08-13-2024	REVISED PER CONB COMMENTS
4	08-20-2024	REVISED PER NBU COMMENTS
5	09-09-2024	REVISED PER CITY OF NEW BRAUNFELS COMMENTS
6		
7		
8		

Drawing Name: N:\Projects\MARBOT Harris Tract\Civil\Constructor Drawings\Unit 2\1 GENERAL NOTES.dwg User: bryandandres Date: 10/20/2024 Time: 2:59pm

CITY OF NEW BRAUNFELS – CONSTRUCTION NOTES – REV 3–2020

1. IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
2. THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.
3. 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.

4. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS TO SCHEDULE A PRECONSTRUCTION MEETING.

FOR PUBLIC INFRASTRUCTURE PERMIT (SC) OR SITE PREP PERMIT (SD) PROJECTS:

- 4.1 FOR INSPECTIONS, YOU MUST CALL BEFORE 12:00 P.M., 48 HOURS PRIOR TO YOUR INSPECTION REQUEST.
- 4.2 EACH INSPECTION WILL BE ALLOTTED 1 HOUR UNLESS YOU REQUEST FOR MORE TIME.
- 4.3 ONCE YOUR REQUEST HAS BEEN ACCEPTED, YOU WILL RECEIVE A CALL FROM THE CITY OF NEW BRAUNFELS INSPECTOR.

FOR COMMERCIAL PERMIT (CP) PROJECTS:

- 4.4 ALL INSPECTIONS ARE TO BE CALLED IN AT 830–221–4068 OR,
- 4.5 FAXED IN AT 830–608–2117 OR,
- 4.6 E-MAILED AT INSPECTIONS@NBUTEXAS.ORG.

5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS AND LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IF, IN THE OPINION OF THE ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONSTRUCTION INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED. IF THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.

6. A TxDOT TYPE II B–8 BLUE REFLECTIVE RAISED PAVEMENT MARKER SHALL BE INSTALLED IN THE CENTER OF THE ROADWAY ADJACENT TO ALL FIRE HYDRANTS. IN LOCATIONS WHERE HYDRANTS ARE SITUATED ON CORNERS, BLUE REFLECTIVE RAISED PAVEMENT MARKERS SHALL BE INSTALLED ON BOTH APPROACHES WHICH POINT TOWARD THE HYDRANT. THE RAISED PAVEMENT MARKER SHALL MEET T201 MATERIAL, EPOXY AND ADHESIVE SPECIFICATIONS.

GROUNDWATER

7. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, CONTRACTOR, SUBCONTRACTORS, BUILDERS, GEO-TECHNICAL ENGINEER, AND PROJECT ENGINEER TO IMMEDIATELY NOTIFY THE OFFICE OF THE CITY ENGINEER AND PROJECT ENGINEER IF THE PRESENCE OF GROUNDWATER WITHIN THE SITE IS EVIDENT. UPON NOTIFICATION THE PROJECT ENGINEER SHALL RESPOND WITH PLAN REVISIONS FOR THE MITIGATION OF THE GROUNDWATER ISSUE. THE CITY ENGINEER SHALL RESPOND WITHIN TWO (2) BUSINESS DAYS UPON RECEIPT OF THE MITIGATION PLAN. ALL CONSTRUCTION ACTIVITY, IMPACTED BY THE DISCOVERY OF GROUNDWATER, SHALL BE SUSPENDED UNTIL THE CITY ENGINEER GRANTS A WRITTEN APPROVAL OF THE GROUNDWATER MITIGATION PLAN.

RECORD DRAWINGS

8. AS PER PLATTING ORDINANCE SECTION 118–38M.: WHEN ALL OF THE IMPROVEMENTS ARE FOUND TO BE CONSTRUCTED AND COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND WITH THE CITY'S STANDARDS, AND UPON RECEIPT OF ONE SET OF "RECORD DRAWING" PLANS, AND A DIGITAL COPY OF ALL PLANS (PDF COPY) THE CITY ENGINEER SHALL ACCEPT SUCH IMPROVEMENTS FOR THE CITY OF NEW BRAUNFELS, SUBJECT TO THE QUANTITY OF MATERIAL AND WORKMANSHIP PROVISIONS IN THIS SECTION.

CONSTRUCTION NOTE

9. ENGINEER OF RECORD IS RESPONSIBLE TO ENSURE THAT EROSION CONTROL, MEASURES AND STORMWATER CONTROL SUFFICIENT TO MITIGATE OFF SITE IMPACTS ARE IN PLACE AT ALL STAGES OF CONSTRUCTION.

DRAINAGE NOTE

10. DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE THE IMPACT OF CONSTRUCTION SHALL BE INSTALLED PRIOR TO ADDING IMPERVIOUS COVER.

FINISHED FLOOR ELEVATIONS

11. 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.

SOILS TESTING

12. PROCTORS SHALL BE SAMPLED FROM ON-SITE MATERIAL (ON-SITE IS DEFINED AS LIMITS OF CONSTRUCTION FOR THIS –PLAN SET) AND A COPY OF THE PROCTOR RESULTS SHALL BE DELIVERED TO THE CITY OF NEW BRAUNFELS STREET INSPECTOR PRIOR TO ANY DENSITY TESTS.

ROADWAY

13. ALL ROADWAY COMPACTION TESTS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FLEXIBLE BASE OR FILL/BANKMENT MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED EIGHT INCHES (8") LOOSE. THE REQUIRED DENSITY FOR THE FILL/BANKMENT MATERIAL SHALL MEET THE REQUIREMENTS OF TxDOT'S SPECIFICATION ITEM 132. THE REQUIRED DENSITY FOR THE FLEXIBLE BASE MATERIAL SHALL MEET THE REQUIREMENTS OF TxDOT'S SPECIFICATION ITEM 247. EACH LAYER OF MATERIAL, INCLUSIVE OF SUBGRADE, SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX–113–E, TEX–114–E, TEX–115–E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT. UPON COMPLETION OF THE ROADWAY, THE CONTRACTOR SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FLEXIBLE BASE, AND FILL MATERIAL, AND SUBGRADE, HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

ITEM 340

14. ASPHALTIC CONCRETE PAVEMENT SHALL BE THE TYPE OF HOT MIX ASPHALT AS DEFINED IN TxDOT'S STANDARD SPECIFICATIONS FOR CURRENT TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREET AND BRIDGES.

15. THE CITY OF NEW BRAUNFELS WILL NOT ACCEPT THE USE OF RECYCLED ASPHALT PAVEMENT (RAP) OR RECYCLED ASPHALT SHINGLES (RAS) IN ASPHALT MIXTURES FOR NEW ROADWAYS. ANY DEBRIS INCLUSIONS WITHIN NEW ASPHALT PAVEMENTS WILL RESULT IN ASPHALT REMOVAL AND REPLACEMENT FROM CURB TO CURB FOR LIMITS TO BE DETERMINED BY THE CITY OF NEW BRAUNFELS.

16. THE ASPHALTIC CONCRETE PAVEMENT SURFACE COURSE SHALL BE PLANT MIXED, HOT LAID TYPE "B" MEETING THE SPECIFICATION REQUIREMENTS OF TxDOT ITEM 340. THE ASPHALTIC CONCRETE PAVEMENT SUB-SURFACE COURSES SHALL BE PLANT MIXED, HOT LAID TYPE "B" MEETING THE SPECIFICATION REQUIREMENTS OF TxDOT ITEM 340. THE MIXTURE SHALL BE DESIGNED PER THE DESIGN REQUIREMENTS SPECIFIED IN TxDOT ITEM 340 AND SHALL BE COMPACTED TO BETWEEN 91 AND 95 PERCENT OF THE MAXIMUM THEORETICAL DENSITY AS DETERMINED BY TxDOT TEST METHOD TEX–227–F. PLACE THE MIXTURE WHEN THE ROADWAY SURFACE TEMPERATURE IS AT OR ABOVE 60°. COMPLETE ALL COMPACTION OPERATIONS BEFORE THE PAVEMENT TEMPERATURE DROPS BELOW 160°. THE ASPHALT CEMENT CONTENT BY PERCENT OF TOTAL MIXTURE WEIGHT SHALL FALL WITHIN A TOLERANCE OF +0.5 PERCENT FROM A SPECIFIC MIX DESIGN.

UTILITY TRENCH COMPACTION

17. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTION OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX–113–E, TEX–114–E, TEX–115–E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

CURB OUT DUE TO CONSTRUCTION OF NEW RIGHT-OF-WAY CONSTRUCTION

18. CURB CUTS SHALL BE THE FOLLOWING METHODS AND INDICATED ON THE PLANS IN DETAIL WHERE APPLICABLE.
- 18.1 SAWCUT EXISTING STREET AND MATCH TO NEW CONSTRUCTION.
- 18.2 SAWCUT EXISTING CURB TO THE INTO EXISTING CONSTRUCTION.

CONSTRUCTION STABILIZED ENTRANCE

19. SAWCUT CURB FOR CONSTRUCTION ENTRANCE.

20. STABILIZED CONSTRUCTION AREA SHALL BE CONSTRUCTED OF 3/4" S&W ROCK TO BE PLACED A MINIMUM LENGTH OF 25'-FT. AND MAINTAINED SO THAT CONSTRUCTION DEBRIS DOES NOT FALL WITHIN THE CITY RIGHT-OF-WAY. RIGHT-OF-WAY MUST BE CLEARED FROM MUD, ROCKS, ETC. AT ALL TIMES.

21. ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A. SPECIFICATIONS

SIGNING AND PAVEMENT MARKING PLAN NOTES

22. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY AND WARNING SIGNS, STREETS NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS. THE CITY WILL INSPECT ALL SIGNS AT FINAL INSPECTION.

23. THE CONTRACTOR SHALL INSTALL ALL PAVEMENT MARKINGS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS.

24. THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL MARKINGS. THE CITY WILL INSPECT ALL MARKINGS AT FINAL APPLICATION.

SEEDING AND ESTABLISHMENT OF VEGETATION WITHIN EARTHEN CHANNELS, STORMWATER BASINS AND DISTURBED AREAS

25. SEEDING FOR THE PURPOSE OF ESTABLISHING VEGETATION WITHIN CONSTRUCTED EARTHEN CHANNELS, BASINS AND DISTURBED AREAS SHALL BE CONDUCTED IN ACCORDANCE WITH ITEM 164 (SEEDING FOR EROSION CONTROL) OF TxDOT'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS AND BRIDGES MANUAL. ONLY SEED TYPES AND MIXES SPECIFIED FOR THE SAN ANTONIO DISTRICT (DISTRICT 15) IN TABLES 1 AND 2 UNDER ITEM 164 SHALL BE UTILIZED. DURING THE COOL SEASON (SEPT 1–NOV 30), CEREAL RYE AND SEED SPECIES SPECIFIED FOR THE SAN ANTONIO DISTRICT IN TABLE 3 MAY BE USED. FOR COOL SEASON SEEDING APPLICATIONS, COOL SEASON SEED MIXES SHALL BE USED IN CONJUNCTION WITH SEED MIXES FOR THE SAN ANTONIO DISTRICT AS SPECIFIED IN TABLE 1 AND 2 UNDER ITEM 164.
26. IT MAY BE DEEMED NECESSARY TO INCORPORATE TOPSOIL AND SOIL AMENDMENTS (I.E. COMPOST/FERTILIZER) INTO EXISTING SOIL IN ORDER TO FACILITATE VEGETATION GROWTH. TOPSOIL, COMPOST AND FERTILIZER ADDITIONS SHALL BE CONDUCTED ACCORDING TO ITEMS 160, 161 AND 166 OF TxDOT'S STANDARD SPECIFICATIONS MANUAL, RESPECTIVELY.

27. AREAS REQUIRING PERMANENT VEGETATION (EARTHEN CHANNELS, PONDS, ETC.) ARE REQUIRED TO MEET TxDOT SPECIFICATIONS FOR ITEM 160 TOPSOIL. TESTING PER TEX–128–E WILL BE REQUIRED AT ALL CITY'S REQUEST.

28. WATERING MAY ALSO BE NECESSARY TO FACILITATE AND EXPEDITE THE SPROUTING AND GROWTH OF VEGETATION. ITEM 168 OF TxDOT'S STANDARD SPECIFICATIONS MANUAL SHALL BE ADHERED TO FOR VEGETATIVE WATERING.

29. IF EXTENDED DROUGHT CONDITIONS EXIST THAT HINDER OR PROHIBIT THE GROWTH AND ESTABLISHMENT OF VEGETATION, THE CONTRACT/ DEVELOPER SHALL PROVIDE A PLAN TO THE CITY OF NEW BRAUNFELS DESCRIBING THE MEASURES THAT WILL BE TAKEN TO STABILIZE EARTHEN DRAINAGE INFRASTRUCTURE UNTIL A TIME WHEN GROWING CONDITIONS BECOME MORE FAVORABLE.

NEW BRAUNFELS UTILITIES – GENERAL NOTES (REV 1–1–2024)

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THE PROJECT SHALL BE APPROVED BY NEW BRAUNFELS UTILITIES AND COMPLY WITH THE CURRENT NEW BRAUNFELS UTILITIES WATER SYSTEMS CONNECTION/CONSTRUCTION POLICY.

2. CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE PLANS FROM THE CONSULTANT OR ENGINEER AND NOTIFY NBW WATER SYSTEMS ENGINEERING AT 830–608–8971 WITH AT LEAST THREE (2) WORKING DAYS (48 HOURS) NOTICE. WORK COMPLETED BY THE CONTRACTOR, WHICH HAS NOT RECEIVED A NOTICE TO PROCEED WITH NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.

3. THE DEVELOPER DEDICATES THE WATER / WASTEWATER MAINS UPON COMPLETION BY THE CONTRACTOR AND ACCEPTANCE BY THE NEW BRAUNFELS UTILITIES WATER SYSTEM. NBW WILL OWN AND MAINTAIN SAID WATER / WASTEWATER MAINS WHICH ARE LOCATED WITHIN PLATTED UTILITY EASEMENTS OR PUBLIC ROW OF PROPOSED DEVELOPMENTS. (AS APPLICABLE).

4. 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. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER AND HIS EMPLOYEES, PARTNERS, OFFICERS, 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.

5. CONTRACTOR TO CONTACT THE ENGINEER OF RECORD (EOR) FOR ANY FIELD CHANGES, ANY REVISIONS OR CHANGES TO THE APPROVED CONSTRUCTION PLANS WILL REQUIRE ADDITIONAL APPROVAL BY NBW IN WRITING.

6. CONTRACTOR AND / OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

7. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DAMAGES DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPES AND STRUCTURES, AND EXISTING UTILITIES (NOT ADJUSTED ON PLANS). COST OF RESTORATIONS, IF ANY, SHALL BE THE CONTRACTOR'S ENTIRE EXPENSE.

8. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION.

9. CONTRACTOR SHALL PROCURE ALL PERMITS AND LICENSES, PAY ALL CHARGES, FEES AND TAXES AND GIVE ALL NOTICES NECESSARY AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.

10. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.

11. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.

12. THE CONTRACTOR SHALL NOT PLACE ANY MATERIALS ON THE RECHARGE ZONE OF THE EDWARDS AQUIFER WITHOUT AN APPROVED WATER POLLUTION ABATEMENT PLAN FROM THE TCEO 31 31.4 AND 31 AC 31 31.9.

13. 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 EQUIPMENT. WHILE PROVIDING CONTINUOUS TRAFFIC FLOW, THE CONTRACTOR SHALL, AT TIMES DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.

14. CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. THE TERM "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH HORIZONTAL AND VERTICAL ALIGNMENT.

15. THE LOCATION OF UTILITIES, EITHER UNDERGROUND OR OVERHEAD, SHOWN WITHIN THE RIGHT OF WAY ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR BEFORE BEGINNING CONSTRUCTION OPERATIONS.

16. OSHA REGULATIONS PROHIBIT OPERATIONS THAT WILL BRING PERSONS OR EQUIPMENT WITHIN 10 FEET OF AN ENERGIZED LINE. WHERE WORKMEN AND/OR EQUIPMENT HAVE TO WORK CLOSE TO AN ENERGIZED ELECTRICAL LINE, THE CONTRACTOR SHALL NOTIFY THE ELECTRICAL POWER COMPANY INVOLVED AND MAKE WHATEVER ADJUSTMENTS NECESSARY TO ENSURE THE SAFETY OF THOSE WORKMEN.

17. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION. CONTRACTORS SHALL CALL THE ONE CALL SYSTEM FOR WATER/WASTEWATER LOCATION.

18. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192 (9), GAS COMPANIES MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

19. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE TRAFFIC CONTROL AND WILL BE RESPONSIBLE FOR FURNISHING ALL TRAFFIC CONTROL DEVICES, AND FLAGGERS. THE CONSTRUCTION METHODS SHALL BE CONDUCTED TO PROVIDE THE LEAST POSSIBLE INTERFERENCE TO TRAFFIC SO AS TO PERMIT THE CONTINUOUS MOVEMENT OF THE TRAFFIC IN ONE DIRECTION AT ALL TIMES. THE CONTRACTOR SHALL CLEAN UP AND REMOVE FROM THE WORK AREA ANY LOOSE MATERIAL RESULTING FROM CONTRACT OPERATIONS AT THE END OF EACH WORKDAY.

20. PRIOR TO ORDERING MATERIALS TO BE USED IN CONSTRUCTION, CONTRACTOR SHALL PROVIDE THE ENGINEER WITH FOUR (4) COPIES OF THE SOURCE, TYPE, GRADATION, MATERIAL SPECIFICATION DATA AND / OR SHOP DRAWINGS, AS APPLICABLE, TO SATISFY THE REQUIREMENTS OF THE FOLLOWING ITEMS AND ALL MATERIAL ITEMS REFERRED TO IN THESE LISTED ITEMS:
- 20.1. WATER MAINS AND SERVICES
- 20.2. SEWER MAINS AND SERVICES

21. WATER JETTING THE BACKFILL WITHIN A STREET WILL NOT BE PERMITTED. WASTEWATER TRENCHES SUBJECT TO TRAFFIC SHALL CONFORM TO NBW CONNECTION AND CONSTRUCTION POLICY MANUAL.

22. 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. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

23. UTILITY TRENCH COMPACTION WITH STREET R.O.W.
- 23.1. ALL UTILITY TRENCH COMPACTION TEST WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER.

- 23.2. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE.

- 23.3. EACH LAYER OF MATERIAL SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX–113–E, TEX–114–E, TEX–115–E.

- 23.4. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEO-TECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR.

- 23.5. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

NBW WATER NOTES (REV 1–1–2024)

1. THE POINT OF DELIVERY FOR AN OWNED AND MAINTAINED WATER LINE IS TYPICALLY THE DOMESTIC OR IRRIGATION WATER METER, FIRE LINE UP TO THE CONTAINMENT BACKFLOW DEVICE, OR HYDRANT METER OR AS DETERMINED BY NBW.

2. WATER INFRASTRUCTURE MUST BE CONSTRUCTED IN ACCORDANCE WITH THE NBW WATER CONNECTION POLICY.

3. ALL WATER MAINS SHALL BE CONSTRUCTED OF AWWA C900 DR 14 PVC, AWWA C900 DR 18 PVC OR MINIMUM CL 250 DUCTILE IRON PIPE.

4. ALL RESIDENTIAL WATER SERVICES SHALL BE SINGLE SERVICES CONSTRUCTED OF 1-INCH ASTM 888 TYPE K COPPER TUBING. 1-INCH AWWA C901 SDR9 CTS POLYETHYLENE TUBING MAY BE PERMITTED WITH SPECIAL APPROVAL FROM NBW ONLY.

5. ALL 2-INCH SERVICE LINES SHALL BE CONSTRUCTED OF AWWA C901 SDR9 CTS POLYETHYLENE TUBING.

6. WATER MAINS SHALL HAVE A MINIMUM OF 48 INCHES OF COVER TO FINISHED GRADE. CONCRETE ENCASEMENT WILL BE REQUIRED IF MINIMUM COVER CANNOT BE MET.

7. PIPE BEDDING OF WATER LINES SHALL BE COMPLIANT WITH NBW SPECIFICATION NO. 120, 'UTILITY TRENCHING AND BACKFILL'.

8. CONTRACTOR SHALL INSTALL LINE STOPPERS AT THEIR COST FOR AN OUTAGE DURING CONSTRUCTION IF COSTUM VALVES ARE NOT AVAILABLE OR THE EXISTING VALVES DO NOT FUNCTION. LINE STOPPERS WILL BE REQUIRED BASED ON THE FOLLOWING CRITERIA: A. IF THE NUMBER OF RESIDENTIAL CUSTOMERS AFFECTED IS GREATER THAN TEN OR IMPROVED TO LAST MORE THAN 4 HOURS; B. IF ANY COMMERCIAL CUSTOMERS ARE AFFECTED BY THE OUTAGE THEN THE USE OF LINE STOPPERS WILL BE DETERMINED ON A CASE BY CASE BASIS; C. IF ANY CRITICAL CARE CUSTOMERS ARE AFFECTED BY THE OUTAGE THEN THE USE OF LINE STOPPERS WILL BE DETERMINED ON A CASE BY CASE BASIS. D. SYSTEM CONDITIONS MAY REQUIRE A LINE STOPPER AND MAY NOT BE KNOWN UNTIL CONSTRUCTION COMMENCES.

9. CONTRACTOR WILL KEEP THE AREA ON TOP OF, AROUND, AND WITHIN THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.

10. PLACEMENT OF METER BOXES OR VAULTS IN SIDEWALKS, DRIVEWAYS, DRIVE AISLES, PARKING AREAS, OR OTHER AREAS EXPOSED TO VEHICULAR TRAFFIC IS NOT PERMITTED. ANY METER BOXES OR VAULTS SET IN THESE AREAS WILL BE RELOCATED AT THE CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.

11. METER BOXES OR VAULTS MUST BE SET AT PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTORS' AND/OR DEVELOPER'S EXPENSE.

12. METER BOXES FOR 5/8-INCH AND 1-INCH METERS MUST BE DFW PLASTICS DFW38C14–AFIMP.

13. METER BOXES FOR 1.5" METERS MUST BE DFW PLASTICS DFW65C–14-AFIMP.

14. METER BOXES FOR 2" METERS MUST BE DFW PLASTICS DFW1730F–12-AFIMP.

15. THRUST BLOCKS ARE NOT PERMITTED WITHOUT SPECIAL APPROVAL. JOINTS MUST BE RESTRAINED WITH RESTRAINING SYSTEMS APPROVED BY NBW AND RESTRAINT LENGTH SHALL BE SUBMITTED TO NBW AT THE TIME OF PLAN SUBMITTAL.

16. CONTRACTOR SHALL INSTALL TRACER WIRE ON TOP OF NON-FERROUS WATER MAINS IN ACCORDANCE WITH NBW SPECIFICATIONS. TRACER WIRE SHOULD RUN FROM VALVE TO VALVE AND EXIT AT A TRACER WIRE ACCESS POINT. THE TRACER WIRE SHOULD BE ATTACHED TO THE TOP OF THE PIPE USING TAPE. EXCESS WIRE SHOULD BE COILED WITHIN THE TRACER WIRE ACCESS POINT RISER. PAGE 1 OF 2 APPENDIX/APPENDIX B APPROVED 12/09/03, REV 1/01/24 NBW WATER NOTES

17. CONTRACTOR SHALL COORDINATE WITH THE ASSIGNED WATER/WASTEWATER INSPECTOR FOR COMPLETION OF THE FIELD ACCEPTANCE CHECKLIST. ALL TESTING AND ACCEPTANCE SHALL CONFORM TO NBW STANDARDS. THE CONTRACTOR SHALL NOT BE LIMITED TO: A. BACTERIOLOGICAL TESTING B. HYDROSTATIC TESTING (PERFORMED VALVE TO VALVE)

18. THE NBW WATER SYSTEM SHALL BE PROTECTED FROM HAZARDS WITH APPROPRIATE BACKFLOW PREVENTION ASSEMBLIES INSTALLED ON ALL IRRIGATION SYSTEMS, FIRE SUPPRESSION SYSTEMS AND MULTI-UNIT COMPLEXES ALONG WITH MULTI-LEVEL PROPERTIES ON THE DOMESTIC METER CONTAINMENT. NBW CAN ASSIST WITH THE DECISION APPROPRIATE BACKFLOW ASSEMBLIES ON A CASE-BY-CASE BASIS. CONTACT NBW BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBUTEXAS.COM

19. ALL BACKFLOW PREVENTION ASSEMBLIES SHALL BE TESTED UPON INSTALLATION AND REPORTS SENT TO NBW VIA THE ONLINE TRACKING SYSTEM. CONTACT AN NBW BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBUTEXAS.COM

20. ALL RESIDENTIAL AND COMMERCIAL PROPERTIES SHALL HAVE A CUSTOMER SERVICE INSPECTION CERTIFICATE (CSI INSPECTION) COMPLETED UPON COMPLETION OF THE BUILDING OR HOME STRUCTURE. CONTACT AN NBW BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBUTEXAS.COM

NBW WASTEWATER NOTES (REV 1–1–2024)

1. THE POINT OF DELIVERY FOR AN NBW OWNED AND MAINTAINED WASTEWATER LINE IS TYPICALLY THE CLEANOUT, PROPERTY LINE, OR EDGE OF EASEMENT OR AS DETERMINED BY NBW.

2. THE CONTRACTOR SHALL MAINTAIN SERVICE TO THE EXISTING WASTEWATER SYSTEM AT ALL TIMES DURING CONSTRUCTION.

3. ALL NEW WASTEWATER MAINS AND FITTINGS SHALL BE MINIMUM 8-INCH DIAMETER (ASTM D–3034 SDR–26 PVC).

4. ALL RESIDENTIAL WASTEWATER SERVICE LATERALS SHALL BE EXTENDED FOUR (4) FEET INTO THE PUBLIC UTILITY EASEMENT AND CLEANOUT INSTALLED AT THE ROW LINE PER NBW STANDARD DETAILS. SERVICES TO LOTS WILL EXTEND FOUR (4) FEET PAST THE UNDERGROUND ELECTRIC CONDUIT IF ELECTRIC IS INSTALLED IN THE FRONT EASEMENT.

5. ALL SEWER CLEANOUTS THAT LEAD TO NBW MAINS SHALL BE INSTALLED WITH A PROTECTIVE UTILITY SHROUD AND PIVOTING MARKER POLE DURING TIME OF CONSTRUCTION.

6. PIPE BEDDING OF WASTEWATER LINES SHALL BE COMPLIANT WITH NBW SPECIFICATION NO. 120, 'UTILITY TRENCHING AND BACKFILL'.

7. WASTEWATER MAINS SHALL HAVE A MINIMUM OF 48 INCHES OF COVER TO FINISHED GRADE AND WASTEWATER LATERALS MUST HAVE A MINIMUM OF 36 INCHES OF COVER TO FINISHED GRADE. CONCRETE ENCASEMENT WILL BE REQUIRED IF MINIMUM COVER CANNOT BE MET.

8. ALL GRAVITY WASTEWATER PIPES SHALL HAVE GASKETED, COMPRESSION OR FUSED JOINTS PER 30 TAC 8217.53 (C) (2).

9. FOR WASTEWATER LINES LESS THAN 24 INCHES IN DIAMETER, SELECT INITIAL BACKFILL MATERIAL SHALL BE PLACED IN TWO LIFTS. A. THE FIRST LIFT SHALL BE SPREAD UNIFORMLY AND SIMULTANEOUSLY ON EACH SIDE AND UNDER THE SHOULDERS OF THE PIPE TO THE MID-POINT OR SPRING LINE OF THE PIPE. B. THE SECOND LIFT SHALL BE PLACED TO A DEPTH AS SHOWN ON THE PIPE BACKFILL DETAIL. FOR PIPES LARGER THAN 24-INCH, 12-INCH MAXIMUM LIFTS SHALL BE USED.

10. ALL MANHOLES SHALL BE WATER-TIGHT, EITHER MONOLITHIC, CAST-IN-PLACE CONCRETE STRUCTURES OR PREFABRICATED MANHOLES SPECIFICALLY APPROVED BY NBW. POLYMER CONCRETE IS REQUIRED FOR MANHOLES ON MAINS 18-INCH DIAMETER AND LARGER, AT FORCE MAIN DISCHARGE POINTS, OR AT DROP MANHOLES WITH HIGH CORROSION POTENTIAL.

11. MANHOLES SHALL HAVE BOLTED WATER-TIGHT RINGS AND COVERS. IN NON-PAVED AREAS, A MANHOLE MARKER ASSEMBLY SHALL BE INSTALLED ON THE MANHOLE COVER.

12. MANHOLE VENTS SHALL BE INSTALLED AT INTERVALS NO GREATER THAN 1500 FEET.

13. ALL MANHOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE RING IS SIX INCHES (6") ABOVE SURROUNDING GROUND IN NON-PAVED AREAS. IN PAVED AREAS, THE MANHOLE RING SHALL BE FLUSH WITH PAVEMENT.

14. ALL NEW MANHOLES, UNLESS APPROVED BY NBW, SHALL HAVE COVERS WITH 32-INCH OPENINGS.

15. WASTEWATER PIPE CONNECTIONS TO PRE-CAST MANHOLES WILL BE COMPRESSION JOINTS OR MECHANICAL BOOT-TYPE JOINT AS APPROVED BY NBW.

16. EXISTING MANHOLES SHALL BE LINED, COATED, OR REPLACED WITH A CORROSION RESISTANT MATERIAL IF A NEW CONNECTION IS MADE BY A MAIN OR LATERAL.

17. WASTEWATER MAINS SHALL BE TESTED FROM MANHOLE TO MANHOLE.

18. IN AREAS WHERE A NEW WASTEWATER MANHOLE IS TO BE CONSTRUCTED OVER AN EXISTING WASTEWATER SYSTEM, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO TEST PAGE 1 OF 2 APPENDIX/APPENDIX B APPROVED 12/09/03, REV 1/01/24 NBW WASTEWATER NOTES. THE EXISTING MANHOLES BEFORE CONSTRUCTION. AFTER THE PROPOSED MANHOLE(S) HAS BEEN BUILT, THE CONTRACTOR SHALL RE-TEST THE EXISTING SYSTEM TO THE SATISFACTION OF THE CONSTRUCTION INSPECTOR, NO SEPARATE PAY.

19. NBW INSPECTOR TO BE PRESENT FOR ALL WASTEWATER LINES TO BE INSTALLED AT DEPTHS OF 15 FEET OR GREATER FROM FINAL GRADE.

20. WHERE THE MINIMUM 9-FOOT SEPARATION DISTANCE BETWEEN WASTEWATER LINES AND WATER LINES / MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF WASTEWATER LINES SHALL BE IN STRICT ACCORDANCE WITH TCEQ REQUIREMENTS. THE WASTEWATER LINE SHALL BE CONSTRUCTED OF ASTM D2241 PVC OR AWWA C900 PVC WITH PRESSURE RATING OF 150 PSI AND SHALL BE IN ACCORDANCE WITH 30 TAC 8217.53 (D) (3) (A) (I).

21. CONTRACTOR SHALL COORDINATE WITH THE ASSIGNED WATER/WASTEWATER INSPECTOR FOR COMPLETION OF THE FIELD ACCEPTANCE CHECKLIST. NO TESTING WILL BE PERFORMED PRIOR TO 30 DAYS FROM COMPLETE INSTALLATION. ALL TESTING AND ACCEPTANCE SHALL CONFORM TO NBW SPECIFICATIONS BE COMPLETED IN THE FOLLOWING ORDER:

- A. PIPE DEFLECTION TEST (MANDEL TEST)
- B. PIPE LOW PRESSURE AIR TEST
- C. MANHOLE VACUUM TEST
- D. MANHOLE PROTECTIVE COATING TEST
- E. CCTV INSPECTION (WITHIN 72 HOURS OF CLEANING AND FLUSHING)

22. TCEQ AND EPA REQUIRE EROSION AND SEDIMENTATION CONTROL FOR CONSTRUCTION OF WASTEWATER COLLECTION SYSTEMS. DEVELOPER OR AUTHORIZED REPRESENTATIVE SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL AS NOTES ON THE PROJECT'S PLAN

STATE OF TEXAS
COUNTY OF COMAL

I, THE UNDERSIGNED OWNER OF THE LAND SHOWN ON THIS PLAT, AND DESIGNATED HEREIN AS THE CLEAR CREEK SUBDIVISION UNIT 2 TO THE CITY OF NEW BRAUNFELS, COUNTY OF COMAL, TEXAS, AND WHOSE NAME IS SUBSCRIBED HERETO, DO HEREBY SUBDIVIDE SUCH PROPERTY AND DEDICATE TO THE USE OF THE PUBLIC ALL STREETS, ALLEYS, PARKS, DRAINS, EASEMENTS, AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.

OWNER:
RANDY HARRIS
850 S HWY 46, #5
NEW BRAUNFELS, TX 78130

STATE OF TEXAS
COUNTY OF COMAL

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS ____DAY OF _____20____

BY _____

NOTARY PUBLIC, STATE OF TEXAS
MY COMMISSION EXPIRES: _____

KNOW ALL MEN BY THESE PRESENTS:

I, THE UNDERSIGNED, DREW A. MAWYER, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE UNDER MY SUPERVISION AND IN COMPLIANCE WITH CITY AND STATE SURVEY REGULATIONS AND LAWS AND MADE ON THE GROUND AND THAT THE CORNER MONUMENTS WERE PROPERLY PLACED UNDER MY SUPERVISION.

DREW A. MAWYER
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5348
D.A. MAWYER LAND SURVEYING, INC.
5151 W. SH46
NEW BRAUNFELS, TEXAS 78132
FIRM #10191500



2021 W SH46, STE 105
NEW BRAUNFELS, TX 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

LEGEND:
P.O.B. = POINT OF BEGINNING
D.L. = DRAINAGE LOT
U.E. = UTILITY EASEMENT
R.O.W. = RIGHT-OF-WAY
= PAGE MATCH LINE
○ = 1/2" IRON PIN SET
● = IRON PIN FOUND

CLEAR CREEK SUBDIVISION - UNIT 2

BEING A 12.767 ACRE TRACT OF LAND OUT OF SUBDIVISION NO. 115 OF THE A.M. ESNAURIZAR ELEVEN LEAGUE GRANT, ABSTRACT NO. 98, IN COMAL COUNTY, TEXAS, BEING A PORTION OF A CALLED 10.096 ACRE TRACT OF LAND, AS CONVEYED TO RANDY HARRIS AND KELLYE HARRIS, AND RECORDED IN DOCUMENT NO. 200806016460, OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS, AND ALSO BEING ALL OF A CALLED 16.775 ACRE TRACT OF LAND, AS CONVEYED TO RANDY LLOYD HARRIS AND KELLYE DAWN HARRIS, AND RECORDED IN DOCUMENT NO. 202006036473, OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS.

GENERAL CITY OF NEW BRAUNFELS NOTES:

- ALL LOTS WITHIN THE SUBDIVISION WILL BE PROVIDED WATER AND SEWER BY NEW BRAUNFELS UTILITIES. ELECTRIC SERVICE WILL BE PROVIDED BY NEW BRAUNFELS UTILITIES.
- ALL STREETS ARE PROPOSED TO BE OF A LOCAL TYPE FUNCTIONAL CLASSIFICATION WITH 50 FOOT RIGHT-OF-WAYS UNLESS NOTED OTHERWISE. LAKE FRONT AVE IS A MINOR COLLECTORS AND HAS A 60 FOOT RIGHT-OF-WAY.
- SIDEWALK NOTES:
 - FOUR (4) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED BY THE HOME BUILDER PER CITY STANDARDS AT THE TIME OF BUILDING CONSTRUCTION, UNLESS OTHERWISE NOTED ON THE PLAT, ALONG:
 - CLEAR COVE RD, CREEK BED DR, SLOW CREEK ST
 - FOUR (4) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED BY THE DEVELOPER PER CITY STANDARDS AT THE TIME OF SUBDIVISION STREET CONSTRUCTION ALONG:
 - CLEAR COVE RD - LOT 901 BLOCK 2
 - SLOW CREEK STREET - LOT 900 BLOCK 2
- LOT 900 BLOCK 2 IS A DRAINAGE LOT AND IS A NON-BUILDABLE LOT. THESE LOTS WILL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER'S ASSOCIATION, THEIR SUCCESSOR'S OR ASSIGNS, AND SHALL NOT BE THE RESPONSIBILITY OF THE CITY OF NEW BRAUNFELS OR COMAL COUNTY.
- LOT 905 BLOCK 1 ARE COMMON AREA LOTS AND ARE NON-BUILDABLE LOTS. THESE LOTS WILL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER'S ASSOCIATION, THEIR SUCCESSOR'S OR ASSIGNS, AND SHALL NOT BE THE RESPONSIBILITY OF THE CITY OF NEW BRAUNFELS OR COMAL COUNTY. THESE LOTS CAN BE USED FOR ACCESS.
- THE SUBDIVISION IS WITHIN THE NEW BRAUNFELS INDEPENDENT SCHOOL DISTRICT.
- ALL BEARINGS AND COORDINATES SHOWN HEREON ARE IN GRID BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, TEXAS SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM 1983. DISTANCES SHOWN HEREON ARE SURFACE USING COMBINED SCALE FACTOR OF 1.00015.
- MONUMENTS WERE FOUND OR SET AT EACH CORNER OF THE SURVEY BOUNDARY OF THE SUBDIVISION. MONUMENTS AND MARKERS WILL BE SET WITH 1/2" IRON PIN WITH PLASTIC CAP STAMPED "DAM #5348 PROP. COR." IMMEDIATELY AFTER COMPLETION OF UTILITY INSTALLATION AND STREET CONSTRUCTION UNLESS NOTED OTHERWISE.
- CLEAR CREEK SUBDIVISION UNIT 2, IS WITHIN THE CITY LIMITS OF THE CITY OF NEW BRAUNFELS.
- THE PROPOSED USE OF THE SUBDIVISION IS FOR SINGLE FAMILY RESIDENTIAL.
- CLEAR CREEK SUBDIVISION UNIT 2, ESTABLISHING A TOTAL OF 67 LOTS, WITH 65 BEING BUILDABLE.
- THIS SUBDIVISION IS SUBJECT TO THE 2018 CITY OF NEW BRAUNFELS PARK LAND AND DEDICATION ORDINANCE. THIS PLAT IS APPROVED FOR 1 DWELLING UNIT PER BUILDABLE LOT WITH A MAXIMUM OF 114 BUILDABLE LOTS. AT SUCH TIME THAT ADDITIONAL DWELLING UNITS ARE CONSTRUCTED, THE OWNER OF THE LOT SHALL CONTACT THE CITY AND COMPLY WITH THE ORDINANCE FOR EACH DWELLING UNIT.
- NO STRUCTURES, WALLS OR OTHER OBSTRUCTIONS OF ANY KIND SHALL BE PLACED WITHIN THE LIMITS OF THE DRAINAGE EASEMENTS SHOWN ON THIS PLAT, NO LANDSCAPING, FENCES, OR OTHER TYPE OF MODIFICATIONS WHICH ALTER THE CROSS SECTIONS OF THE DRAINAGE EASEMENTS OR DECREASES THE HYDRAULIC CAPACITY OF THE EASEMENT. AS APPROVED, SHALL BE ALLOWED WITHOUT THE APPROVAL OF THE CITY ENGINEER. THE CITY OF NEW BRAUNFELS AND GUADALUPE COUNTY SHALL HAVE THE RIGHT OF INGRESS AND EGRESS OVER GRANTORS ADJACENT PROPERTY TO REMOVE ANY OBSTRUCTIONS PLACED WITHIN THE LIMITS OF SAID DRAINAGE EASEMENTS AND TO MAKE ANY MODIFICATIONS OR IMPROVEMENTS WITHIN SAID DRAINAGE EASEMENTS.
- 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 A FLOOR SLAB ELEVATION OR BOTTOM OF FLOOR JOISTS A MINIMUM OF ONE FOOT ABOVE THE 100-YEAR WATER FLOOD 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 AND SHALL PREVENT WATER FROM

LEAVING THE STREET.

- NO STRUCTURES IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO A PUBLIC WATER AND SEWER SYSTEM WHICH HAS BEEN APPROVED BY NEW BRAUNFELS UTILITIES.
- MAINTENANCE OF DRAINAGE EASEMENT DESIGNATED WITHIN A LOT SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNERS ASSOCIATION.
- A PORTION OF THE SUBDIVISION IS LOCATED WITHIN THE EXISTING SPECIAL FLOOD HAZARD ZONE A, 100-YEAR FLOOD BOUNDARY, AS DEFINED BY THE COMAL COUNTY, TEXAS COMMUNITY PANEL NUMBER 48091C0455F, REVISED SEPTEMBER 02, 2009 AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
- EACH LOT OWNER SHALL BE RESPONSIBLE FOR VERIFYING THE DEPTH OF THE SEWER SERVICE STUB OUT AND DETERMINING THE MINIMUM SERVICEABLE FINISH FLOOR ELEVATION.
- FUTURE DEVELOPMENT IS SUBJECT TO CHAPTER 114 (STREETS, SIDEWALKS, AND OTHER PUBLIC SPACES) OF THE NEW BRAUNFELS CODE OF ORDINANCES.
- ANY DRIVEWAY CONSTRUCTION ON COUNTY ROADS WITHIN THE UNINCORPORATED AREAS OF COMAL COUNTY MUST BE PERMITTED BY THE COMAL COUNTY ROAD DEPARTMENT.
- NO PORTION OF THIS PROPERTY IS WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
- NO VEGETATION OR STRUCTURE (INCLUDING BUILDINGS, FENCES, ETC.) SHALL BE LOCATED WITHIN THE CLEAR SITE DISTANCE EASEMENT.
- THIS PROJECT IS SUBJECT TO THE AIRPORT HAZARD ZONING DISTRICT STANDARDS AND REGULATIONS OF THE CITY OF NEW BRAUNFELS ZONING ORDINANCE (SEC. 114-50.2).
- ALL NEW CONSTRUCTIONS OF SUBSTANTIAL IMPROVEMENTS IN AREA OF SPECIAL FLOOD HAZARDS SHALL BE CONSTRUCTED 2 FEET ABOVE THE BASE FLOOD ELEVATION PER SEC. 58-30(1)(4).
- SIGHT DISTANCE EASEMENTS SHALL BE MAINTAINED FREE AND CLEAR OF VISUAL OBSTRUCTIONS. NO LANDSCAPE MATERIAL, WALL, OR OTHER OBSTRUCTIONS SHALL BE PERMITTED BETWEEN THE TWO AND ONE-HALF FEET AND SEVEN FEET ABOVE THE ADJACENT STREET ELEVATION.
- THE 15' WIDE ACCESS EASEMENT FROM LOT 100, BLOCK 3 TO LITTLE PEBBLE DRIVE SHALL BE OWNED AND MAINTAINED BY THE OWNER OF LOT 100, BLOCK 3.
- RETAINING WALLS ARE TO BE MAINTAINED BY THE INDIVIDUAL PROPERTY OWNERS OF LOTS THAT CONTAIN RETAINING WALLS.

NEW BRAUNFELS UTILITIES NOTES:

- MAINTENANCE OF DEDICATED UTILITY EASEMENTS IS THE RESPONSIBILITY OF THE PROPERTY OWNER. ANY USE OF AN EASEMENT, OR ANY PORTION OF IT, INCLUDING LANDSCAPING OR DRAINAGE FEATURES, IS SUBJECT TO AND SHALL NOT CONFLICT WITH THE TERMS AND CONDITIONS IN THE EASEMENT. MUST NOT ENDANGER OR INTERFERE WITH THE RIGHTS GRANTED BY THE EASEMENT TO NEW BRAUNFELS UTILITIES, ITS SUCCESSORS AND ASSIGNS, AND SHALL BE SUBJECT TO APPLICABLE PERMIT REQUIREMENTS OF THE CITY OF NEW BRAUNFELS OR ANY OTHER GOVERNING BODY. THE PROPERTY OWNER MUST OBTAIN, IN ADVANCE, WRITTEN AGREEMENT WITH THE UTILITIES TO UTILIZE THE EASEMENT, OR ANY PART OF IT.
- UTILITIES WILL POSSESS A 5' WIDE SERVICE EASEMENT TO THE BUILDING STRUCTURE ALONG THE SERVICE LINE TO THE SERVICE ENTRANCE. THIS EASEMENT WILL VARY DEPENDING UPON LOCATION OF DWELLING AND SERVICE.
- UTILITIES SHALL HAVE ACCESS TO THE METER LOCATIONS FROM THE FRONT YARD AND METER LOCATIONS SHALL NOT BE LOCATED WITHIN A FENCED AREA.
- EACH LOT MUST HAVE ITS OWN WATER AND SEWER SERVICE AT THE OWNER'S/DEVELOPER'S EXPENSE.
- DO NOT COMBINE ANY NEW UTILITY EASEMENTS (U.E.) WITH DRAINAGE EASEMENTS (D.E.) OR MAKE CHANGES IN GRADE WITHIN THE UTILITY EASEMENTS (U.E.) WITHOUT WRITTEN APPROVAL FROM NEW BRAUNFELS UTILITIES.

ADMINISTRATIVELY APPROVED THIS ____DAY OF _____, 20____
BY THE PLANNING COMMISSION OF THE CITY OF NEW BRAUNFELS, TEXAS.

CHAIRMAN _____

APPROVED FOR ACCEPTANCE

DATE _____ PLANNING DIRECTOR _____

DATE _____ CITY ENGINEER _____

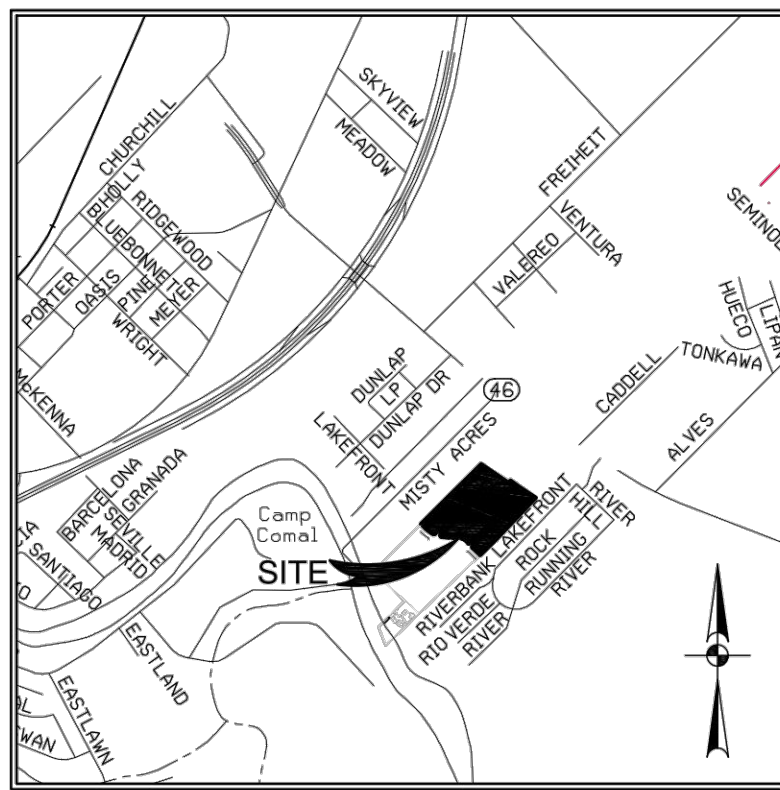
DATE _____ NEW BRAUNFELS UTILITIES _____

STATE OF TEXAS
COUNTY OF COMAL

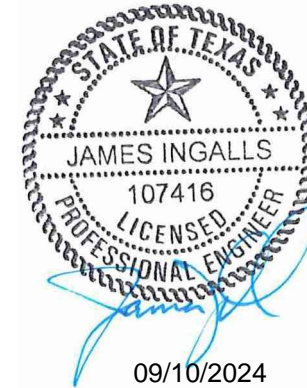
I, _____, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT WAS FILED FOR RECORD IN THE MAP AND PLAT RECORDS, DOC# _____ OF _____ COMAL COUNTY ON THE ____DAY OF _____20____, AT _____ M. WITNESS MY HAND OFFICIAL SEAL, THIS THE ____DAY OF _____, A.D. 20____.

COUNTY CLERK, COMAL COUNTY, TEXAS

DEPUTY _____



LOCATION MAP
SCALE: 1"=2,000'



BRIGHTLAND HOMES
9601 MCALLISTER FREEWAY, STE 600,
SAN ANTONIO, TX 78216

CLEAR CREEK SUBDIVISION
UNIT-2

SUBDIVISION PLAT I

SHEET
2 OF 36

NO	DATE	ISSUES AND REVISIONS
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1	09-09-2024	REVISED PER CITY OF NEW BRAUNFELS COMMENTS
---	------------	--



2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

PRELIMINARY PLAT HAS
CONDITIONAL APPROVAL ON 1-5-2022

LEGEND:
P.O.B. = POINT OF BEGINNING
D.L. = DRAINAGE LOT
U.E. = UTILITY EASEMENT
R.O.W. = RIGHT-OF-WAY
PAGE MATCH LINE
1/2" IRON PIN SET
IRON PIN FOUND

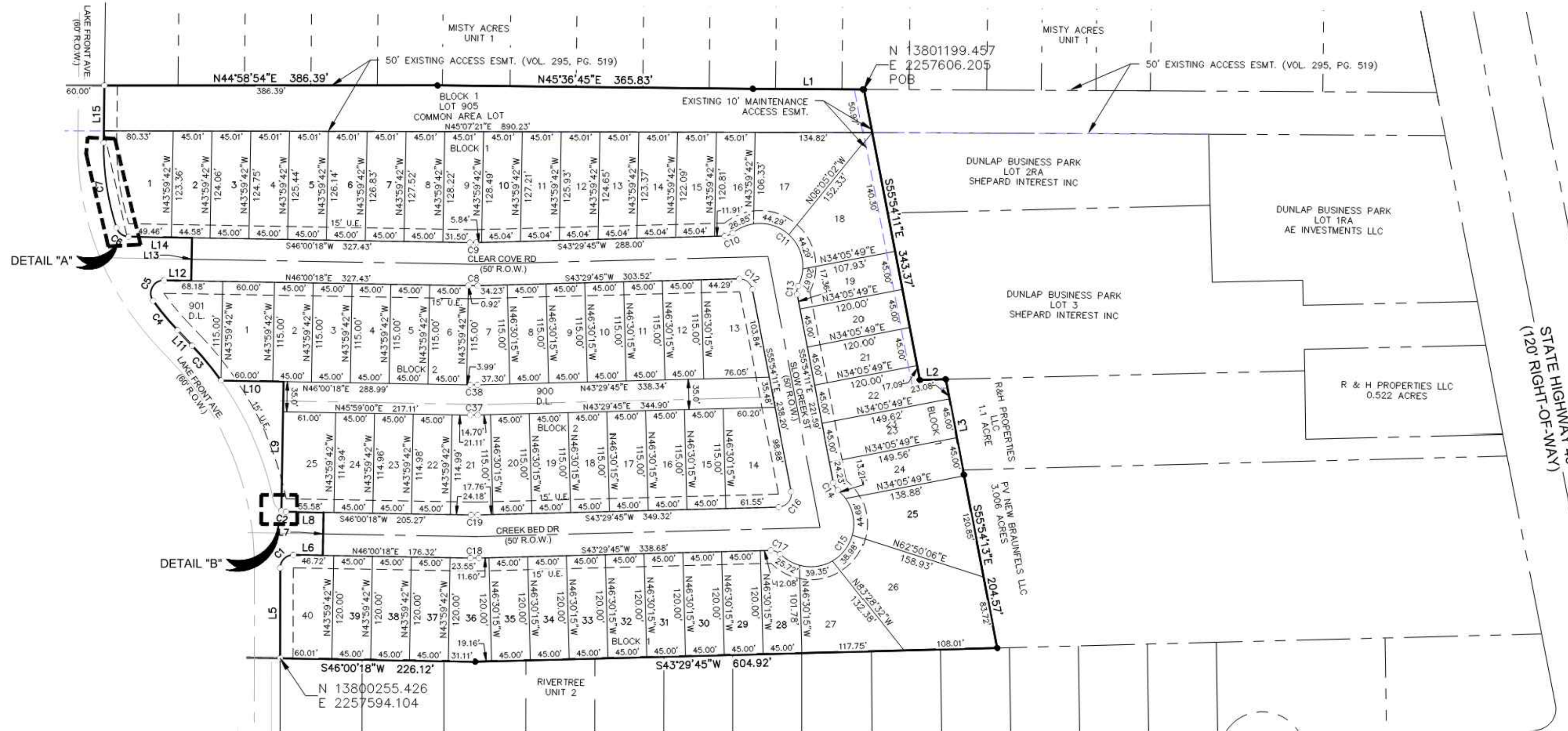
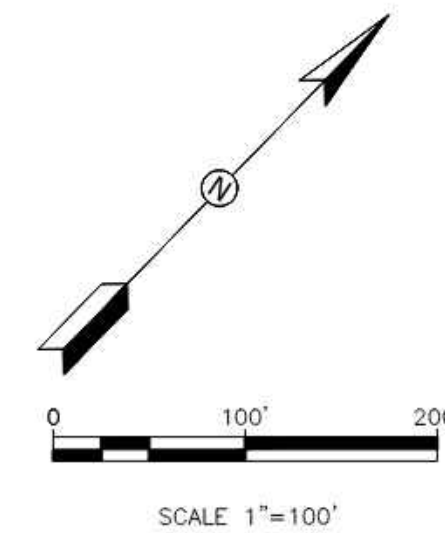


2021 W SH46, STE 105
NEW BRAUNFELS, TX 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

PREPARED: July 17, 2024

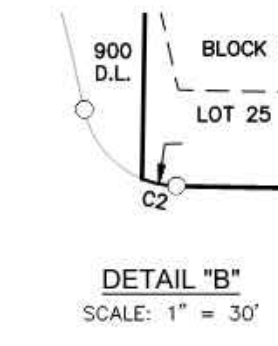
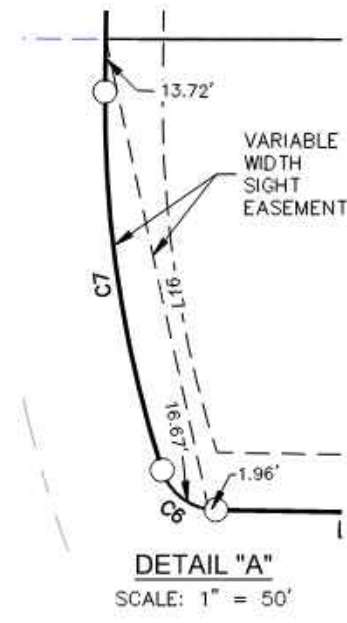
CLEAR CREEK SUBDIVISION - UNIT 2

BEING A 12.767 ACRE TRACT OF LAND OUT OF SUBDIVISION NO. 115 OF THE A.M. ESNAURIZAR ELEVEN LEAGUE GRANT, ABSTRACT NO. 98, IN COMAL COUNTY, TEXAS, BEING A PORTION OF A CALLED 10.096 ACRE TRACT OF LAND, AS CONVEYED TO RANDY HARRIS AND KELLYE HARRIS, AND RECORDED IN DOCUMENT NO. 200806016460, OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS, AND ALSO BEING ALL OF A CALLED 16.775 ACRE TRACT OF LAND, AS CONVEYED TO RANDY LLOYD HARRIS AND KELLYE DAWN HARRIS, AND RECORDED IN DOCUMENT NO. 202006036473, OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS.



LINE TABLE			CURVE TABLE				
LINE	LENGTH	BEARING	CURVE	LENGTH	RADIUS	DELTA	TANGENT
L1	110.00'	N42°45'19"W	C1	23.81'	15.00'	90°56'01"	15.25'
L1	127.77'	N45°18'34"E	C2	5.55'	15.00'	21°10'55"	2.80'
L2	30.04'	N43°21'30"E	C3	52.47'	370.00'	8°07'29"	26.28'
L3	111.85'	S55°49'41"E	C4	44.34'	310.00'	8°11'45"	22.21'
L4	134.86'	N45°13'57"W	C5	33.10'	15.00'	126°25'51"	29.71'
L5	104.77'	N44°55'43"W	C6	18.63'	15.00'	71°10'33"	10.73'
L6	49.84'	S44°35'07"W	C7	100.07'	310.00'	18°29'45"	50.47'
L6	33.95'	N46°00'17"E	C8	9.85'	225.00'	2°30'33"	4.93'
L7	50.00'	N43°59'36"W	C9	7.66'	175.00'	2°30'33"	3.83'
L8	33.95'	S46°00'17"W	C10	9.87'	15.00'	37°41'06"	5.12'
L9	148.99'	N43°59'42"W	C11	136.11'	50.00'	155°58'17"	234.94'
L10	72.64'	S46°00'18"W	C12	21.10'	15.00'	80°36'05"	12.72'
L11	24.72'	N88°37'18"W	C13	9.87'	15.00'	37°41'06"	5.12'
L12	31.67'	N46°00'18"E	C14	10.50'	15.00'	40°07'28"	5.48'
L13	50.00'	N43°59'44"W	C15	162.38'	50.00'	186°04'23"	942.55'
L14	73.54'	S46°00'18"W	C16	26.02'	15.00'	99°23'55"	17.69'
L15	66.35'	N44°19'39"W	C17	12.19'	15.00'	46°33'00"	6.45'
			C18	9.85'	225.00'	2°30'33"	4.93'
			C19	7.66'	175.00'	2°30'33"	3.83'

LINE TABLE EASEMENTS		
LINE	LENGTH	BEARING
L16	125.37'	N57°19'18"W



BRIGHTLAND HOMES
9601 MCALLISTER FREEWAY, STE 600,
SAN ANTONIO, TX 78216

**CLEAR CREEK SUBDIVISION
UNIT-2**

SUBDIVISION PLAT II

SHEET
3 OF **36**

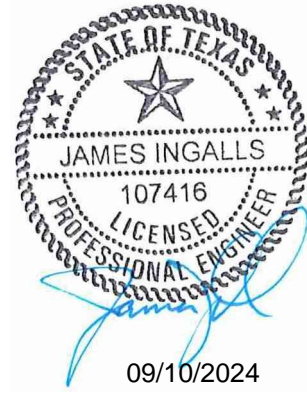
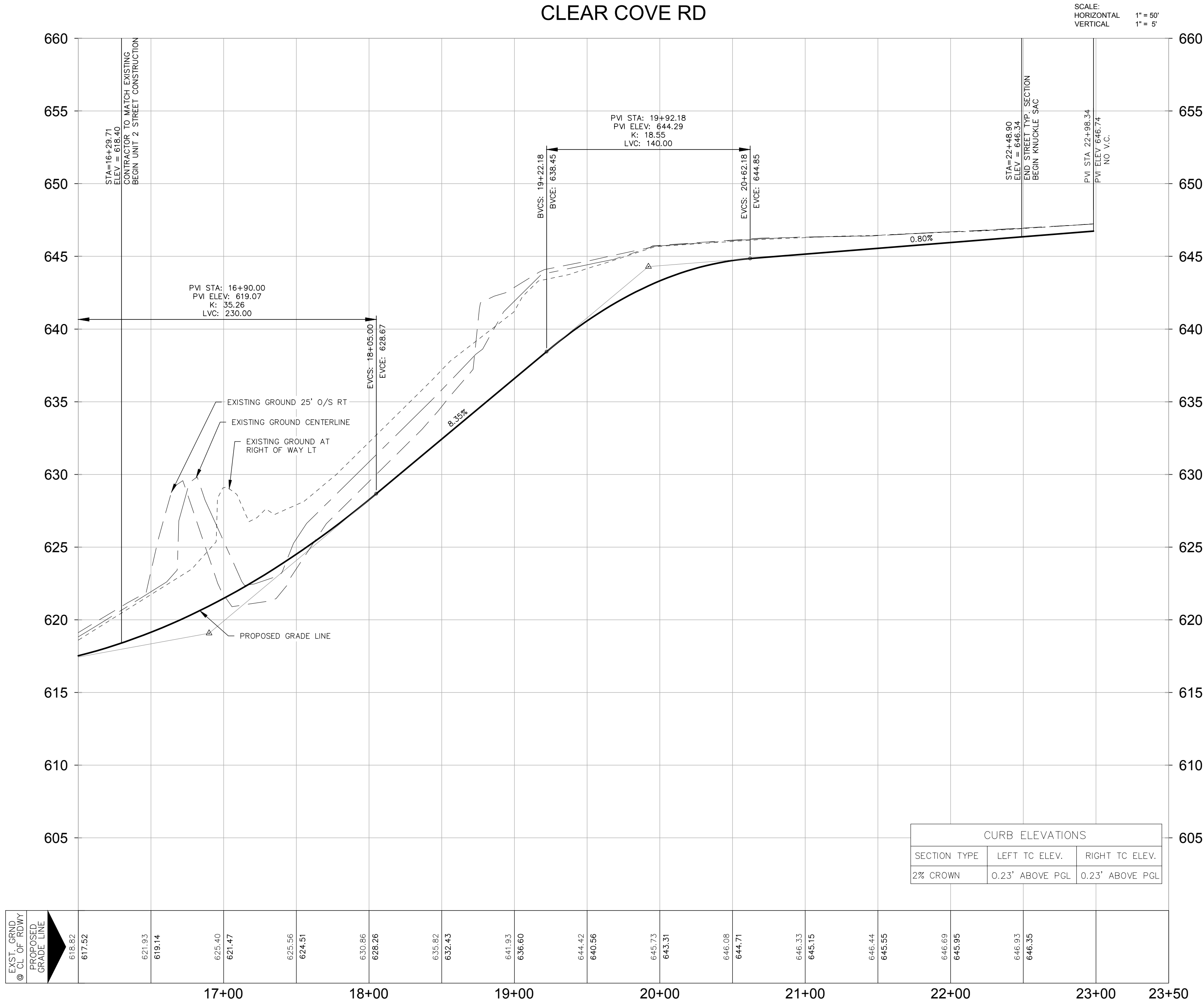
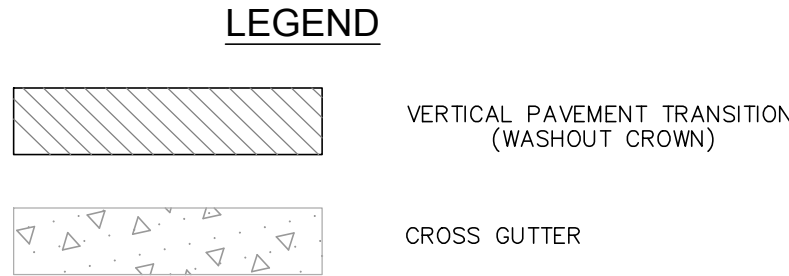
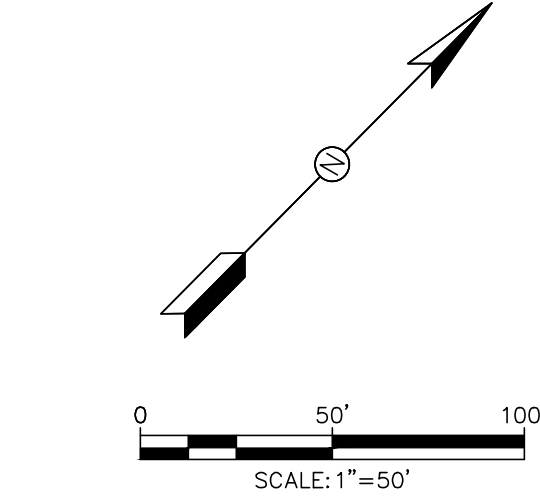
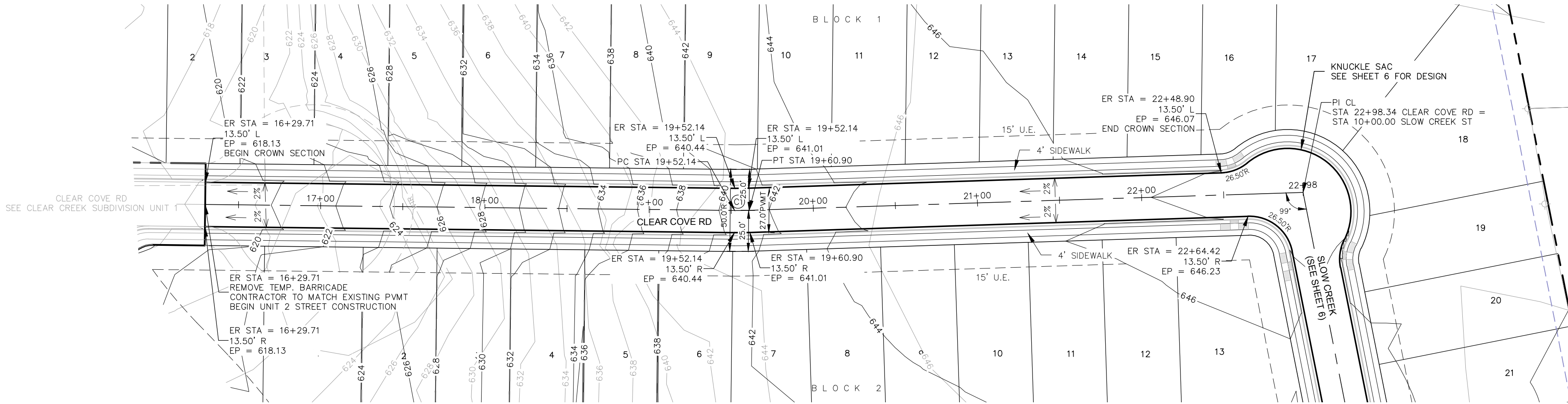
NO	DATE	ISSUES AND REVISIONS

2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

PRELIMINARY PLAT HAS
CONDITIONAL APPROVAL ON 1-5-2022

- CONSTRUCTION NOTES:
- DIMENSIONS SHOWN ARE TYPICALLY TO EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. SEE STREET SECTIONS AND CURB DETAILS FOR ADDITIONAL DETAIL.
 - SEE SHEET 7 & 8 FOR STREET SECTIONS AND DETAILS.
 - SEE SHEET 9 & 10 FOR STREET SIGNAGE.
 - SEE SHEET 7 FOR SIDEWALK RAMP DETAILS.
 - SIDEWALKS AND SIDEWALK RAMPS SHOWN SHALL BE CONSTRUCTED WITH STREET CONSTRUCTION.
 - ALL CURB & GUTTER IS CATCH CURB UNLESS OTHERWISE NOTED.
 - ALL RAMPS AND ANY SIDEWALKS THAT DO NOT FRONT PROPOSED RESIDENTIAL LOTS ARE REQUIRED TO BE CONSTRUCTED WITH STREET CONSTRUCTION.

Curve Table						
Curve #	Radius	Length	Delta	Tangent	Chord Length	Chord Direction
C1	200.00	8.758	2°30'33"	4.38'	8.76'	N44° 45' 01.35"E



BRIGHTLAND HOMES
9601 MCALLISTER FREEWAY, STE 600,
SAN ANTONIO, TX 78216

**CLEAR CREEK SUBDIVISION
UNIT-2**

**CLEAR COVE RD PLAN
& PROFILE**

SHEET
4 OF **36**

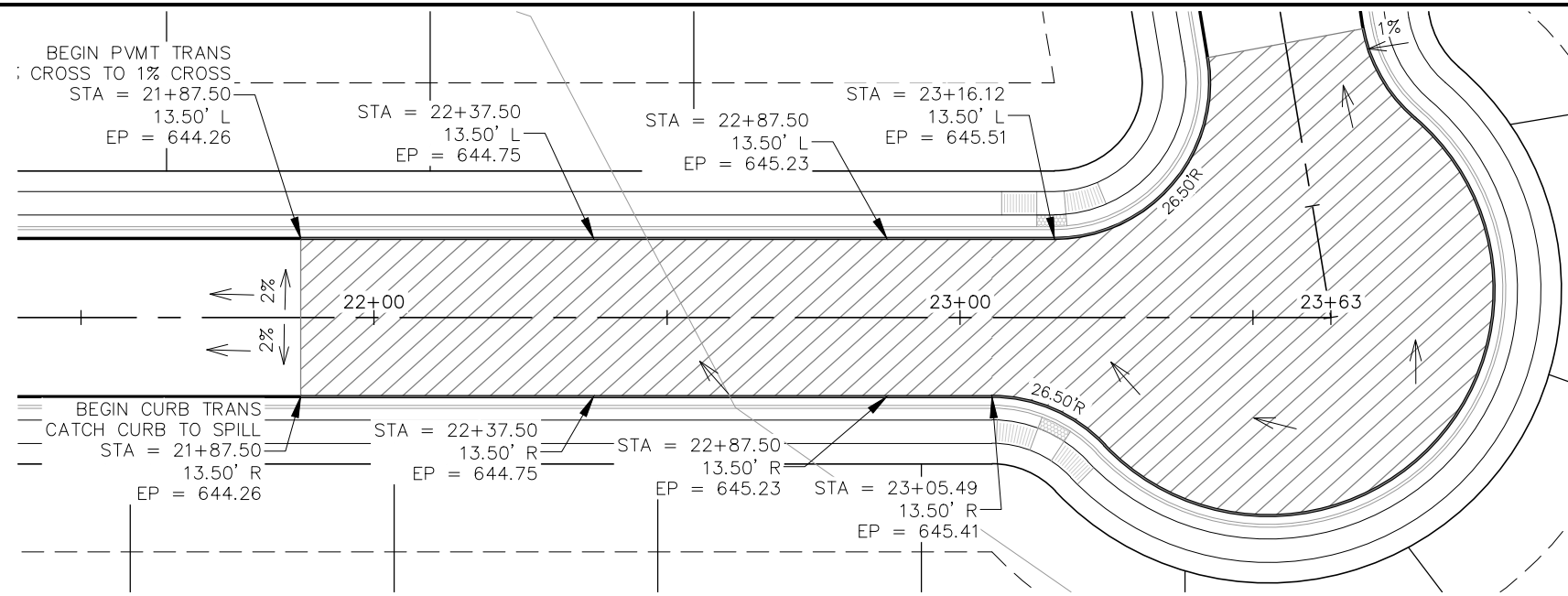
NO	DATE	ISSUES AND REVISIONS

2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
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TBPE FIRM F-13351

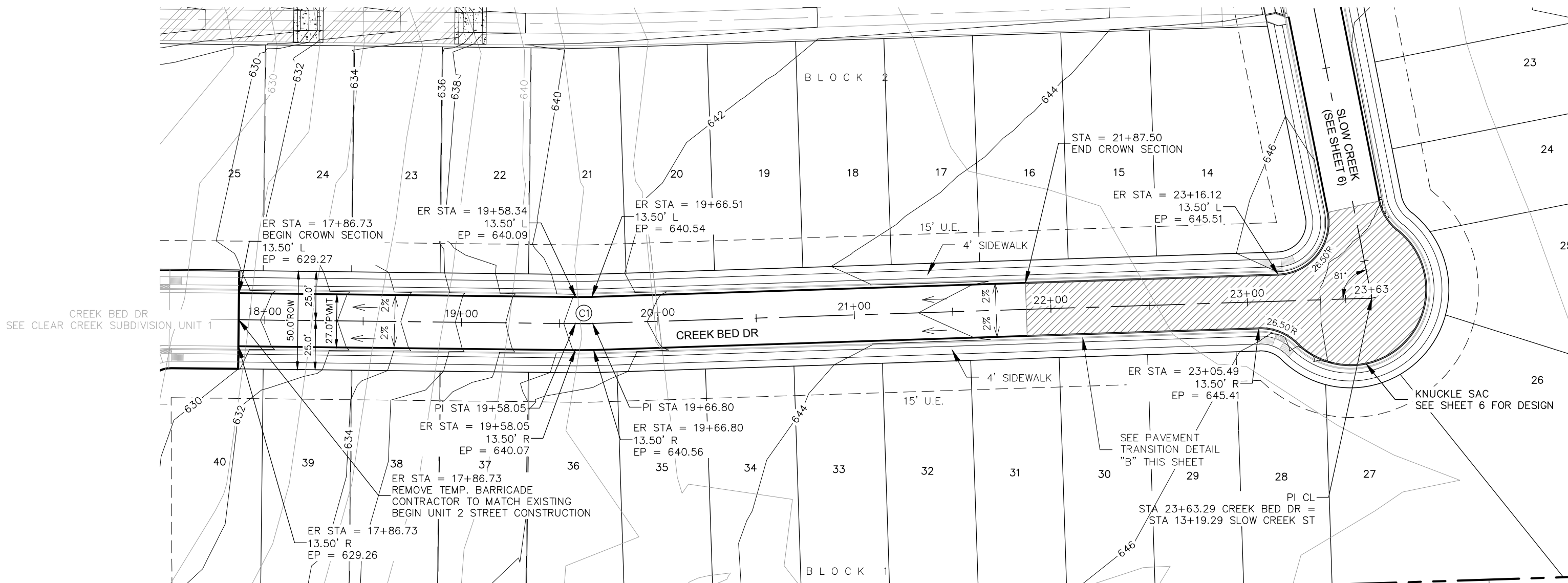
CONSTRUCTION NOTES:

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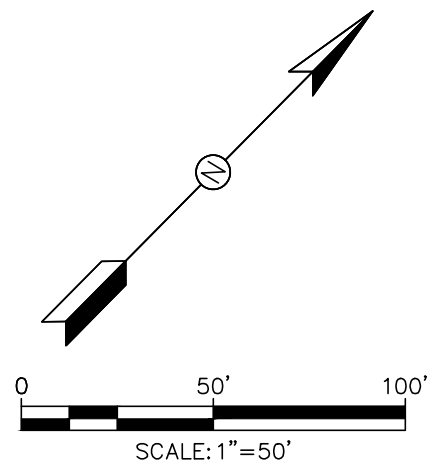
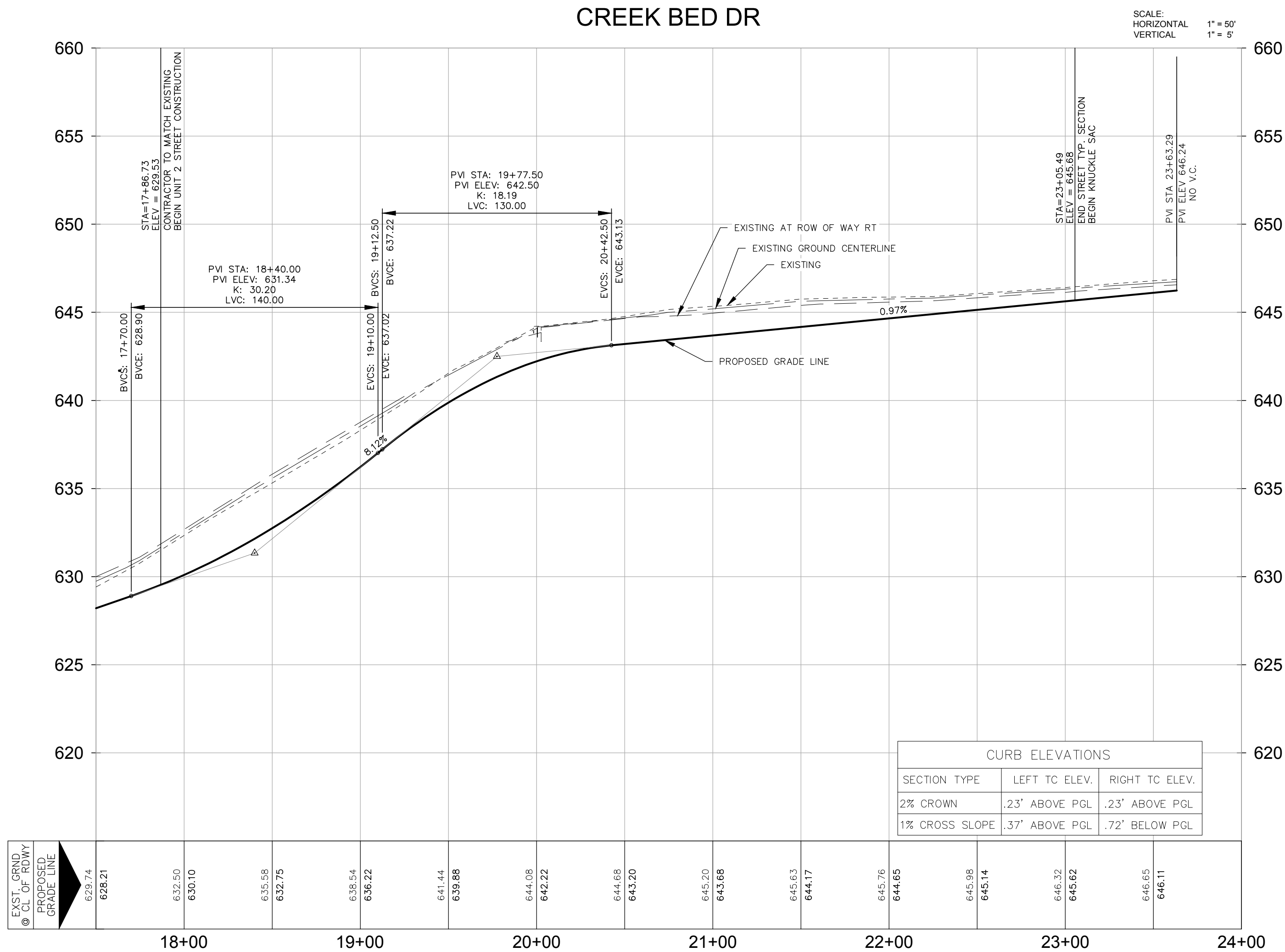
Curve Table					
Curve #	Radius	Length	Delta	Tangent	Chord Length
C1	200.00	8.758	2°30'33"	4.38'	8.76'
N44° 45' 01.35"E					



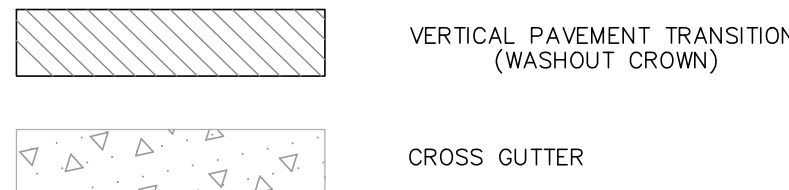
PAVEMENT TRANSITION DETAIL "B"
SCALE: 1"=30'



CREEK BED DR



LEGEND



BRIGHTLAND HOMES
9601 MCALLISTER FREEWAY, STE 600,
SAN ANTONIO, TX 78216

**CLEAR CREEK SUBDIVISION
UNIT-2**

**CREEK BED DR
PLAN & PROFILE**

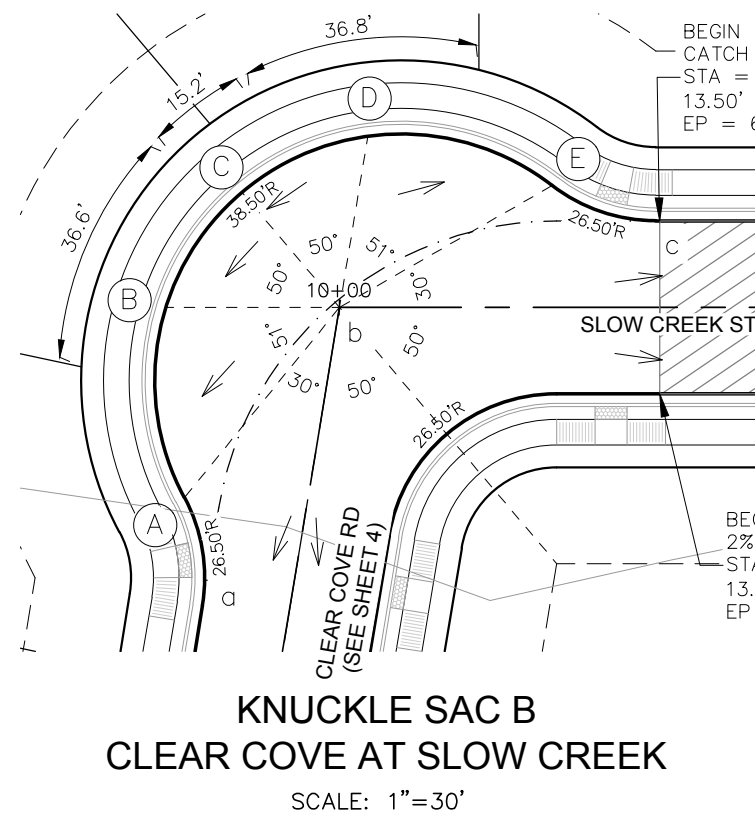
SHEET
5 OF **36**

NO DATE ISSUES AND REVISIONS

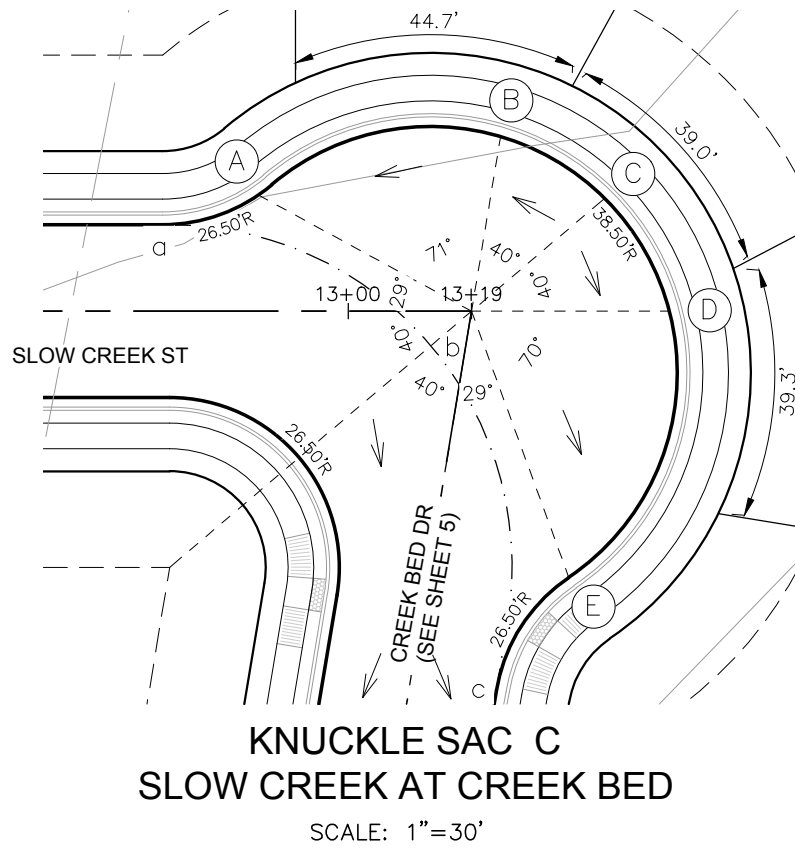
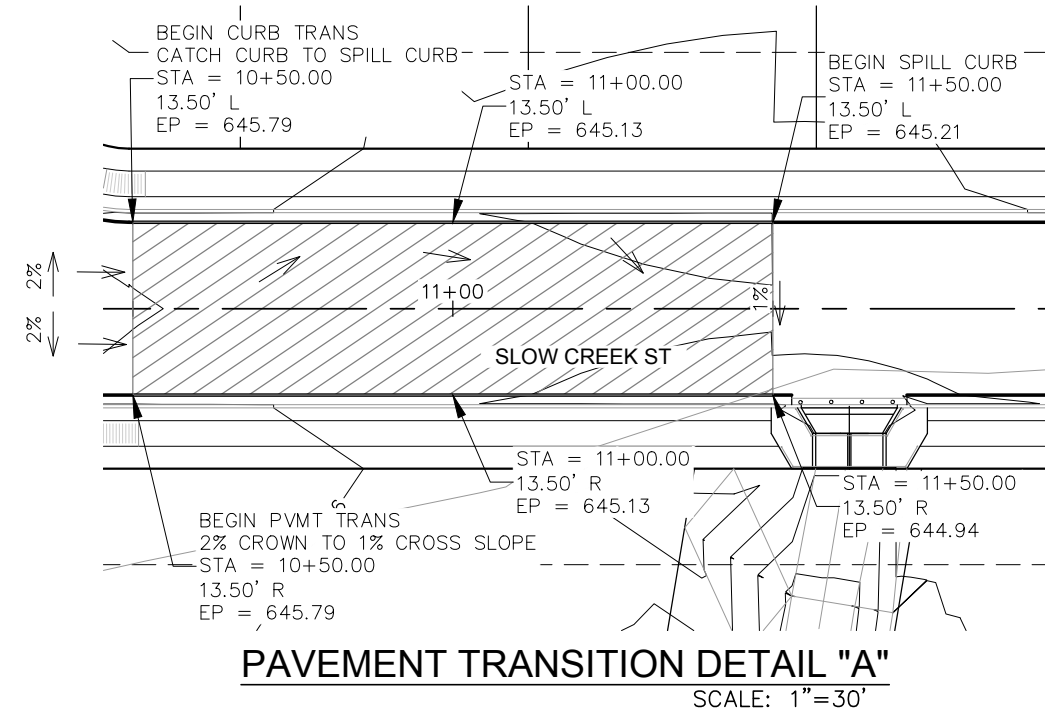


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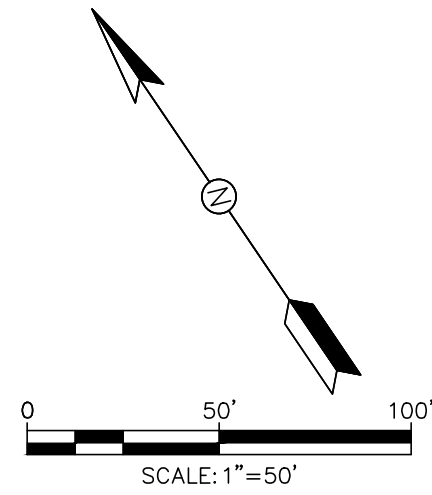
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 - SEE SHEET 7 & 8 FOR STREET SECTIONS AND DETAILS.
 - SEE SHEET 9 & 10 FOR STREET SIGNAGE.
 - SEE SHEET 7 FOR SIDEWALK RAMP DETAILS.
 - SIDEWALKS AND SIDEWALK RAMPS SHOWN SHALL BE CONSTRUCTED WITH STREET CONSTRUCTION.
 - ALL CURB & GUTTER IS CATCH CURB UNLESS OTHERWISE NOTED.
 - ALL RAMPS AND ANY SIDEWALKS THAT DO NOT FRONT PROPOSED RESIDENTIAL LOTS ARE REQUIRED TO BE CONSTRUCTED WITH STREET CONSTRUCTION.



KNUCKLE SAC HUB ELEV	
HUB	EP
A	646.21
B	646.44
C	646.64
D	646.36
E	645.98
a	646.07
b	646.72
c	645.77

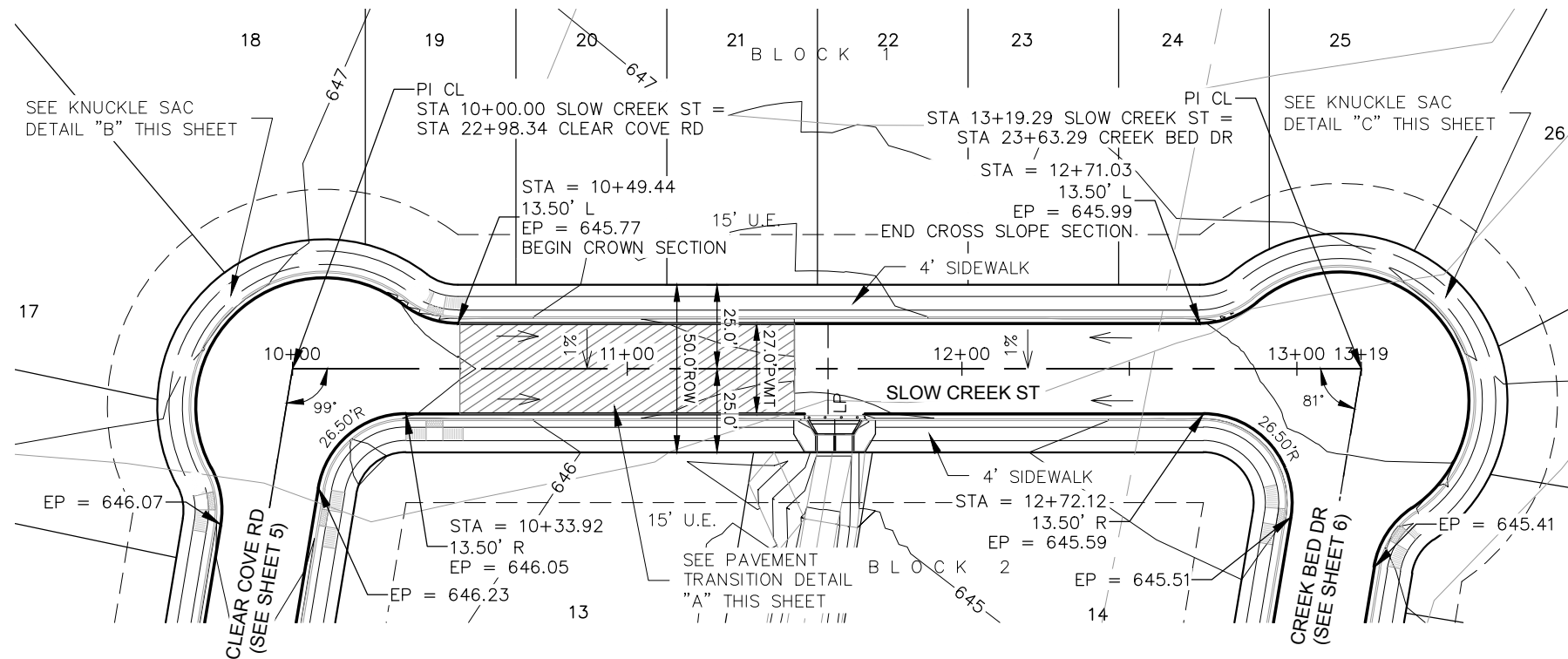


KNUCKLE SAC HUB ELEV	
HUB	EP
A	646.11
B	646.41
C	646.59
D	646.44
E	645.73
a	645.99
b	646.33
c	645.41

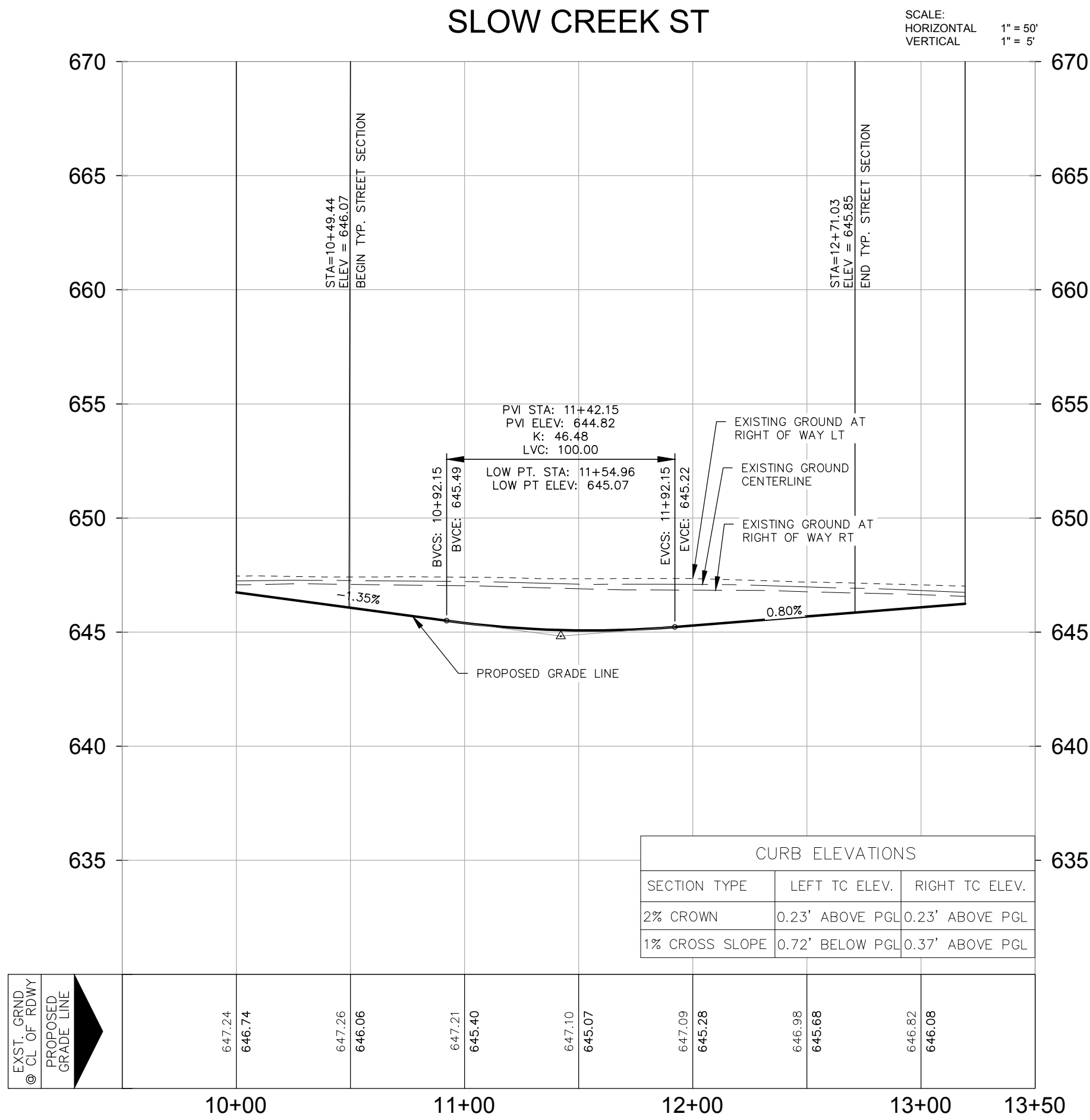


LEGEND

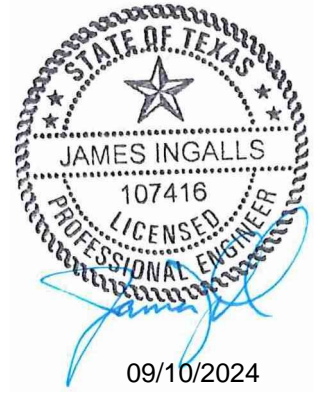
	VERTICAL PAVEMENT TRANSITION (WASHOUT CROWN)
	CROSS GUTTER



SLOW CREEK ST



CURB ELEVATIONS		
SECTION TYPE	LEFT TC ELEV.	RIGHT TC ELEV.
2% CROWN	0.23' ABOVE PGL	0.23' ABOVE PGL
1% CROSS SLOPE	0.72' BELOW PGL	0.37' ABOVE PGL



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**CLEAR CREEK SUBDIVISION
UNIT-2**

**SLOW CREEK ST PLAN &
PROFILE**

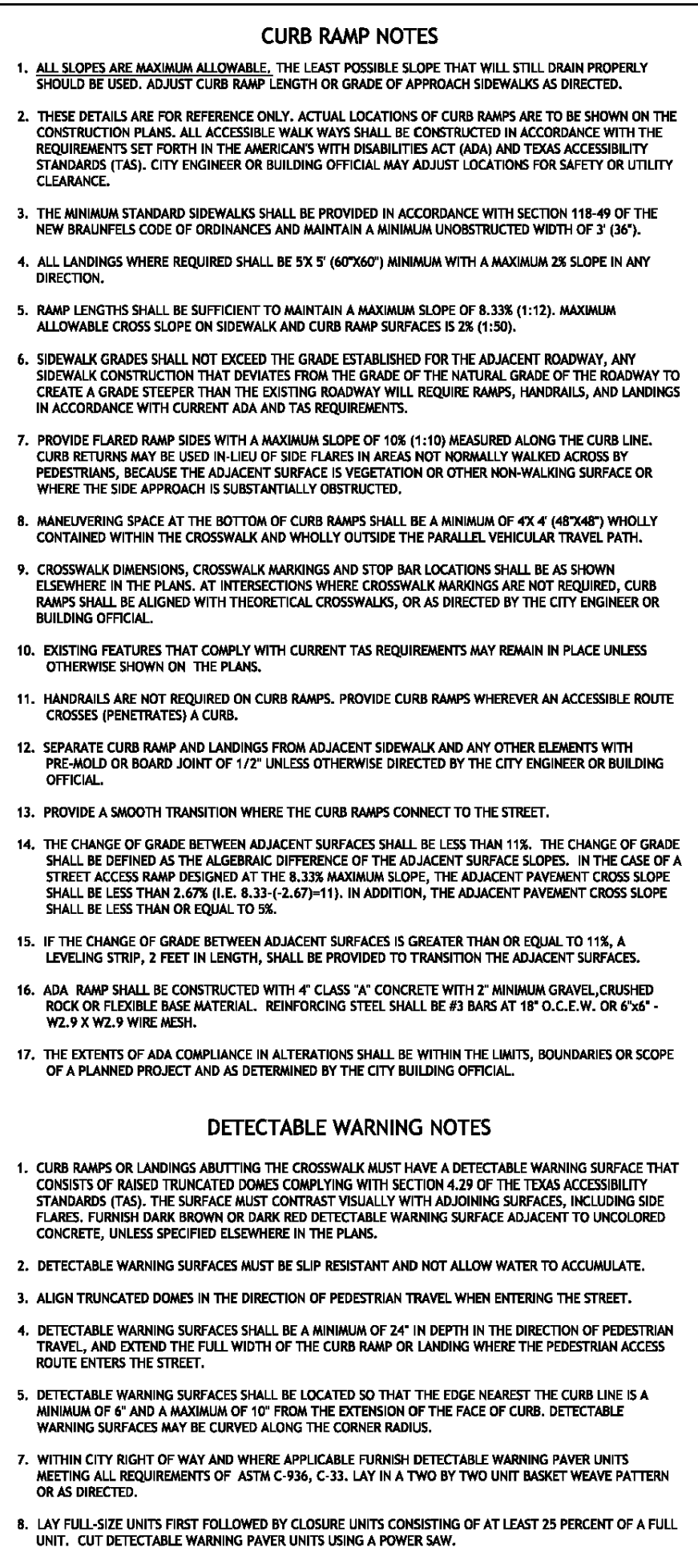
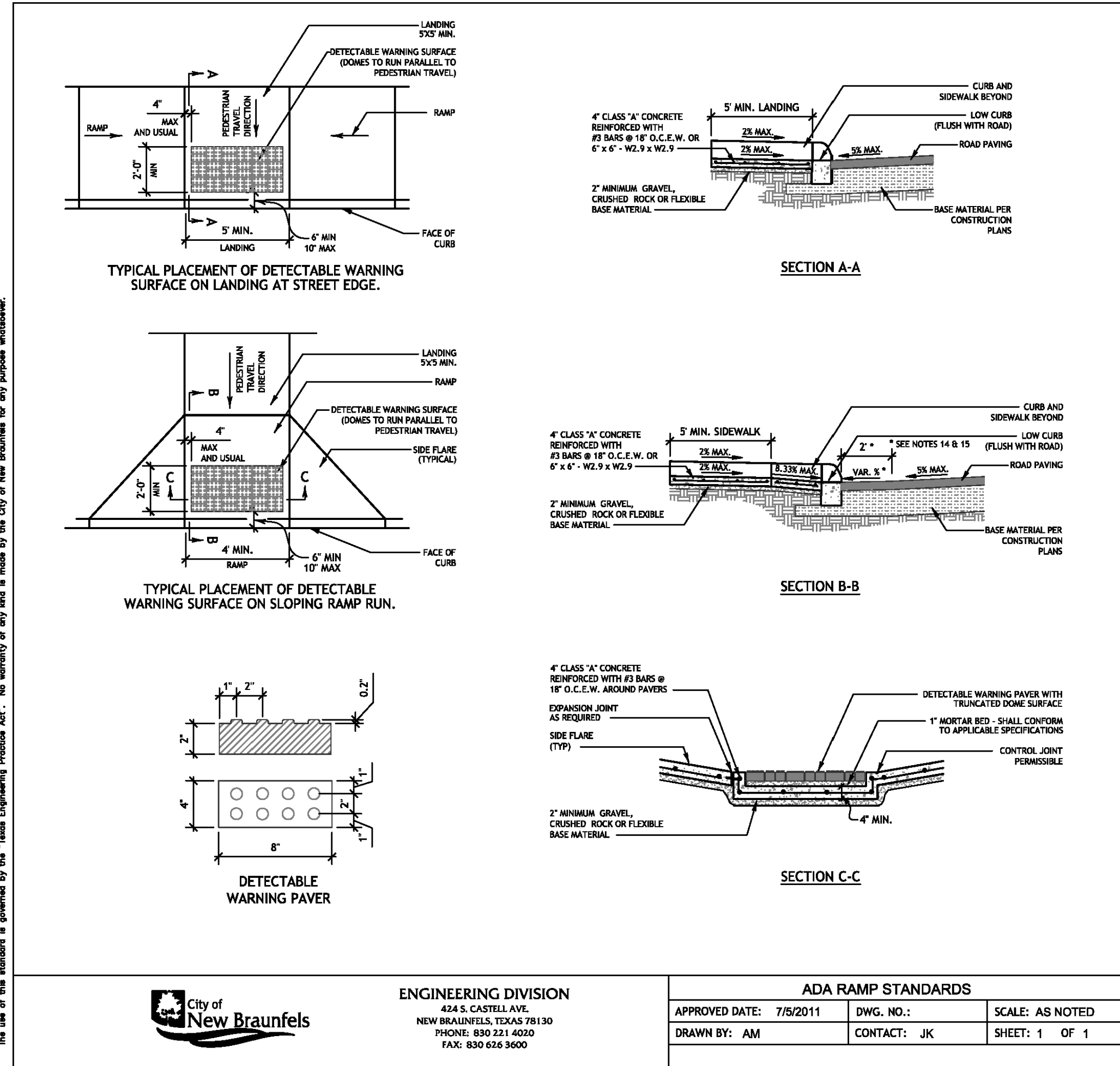
SHEET
6 OF **36**

NO	DATE	ISSUES AND REVISIONS

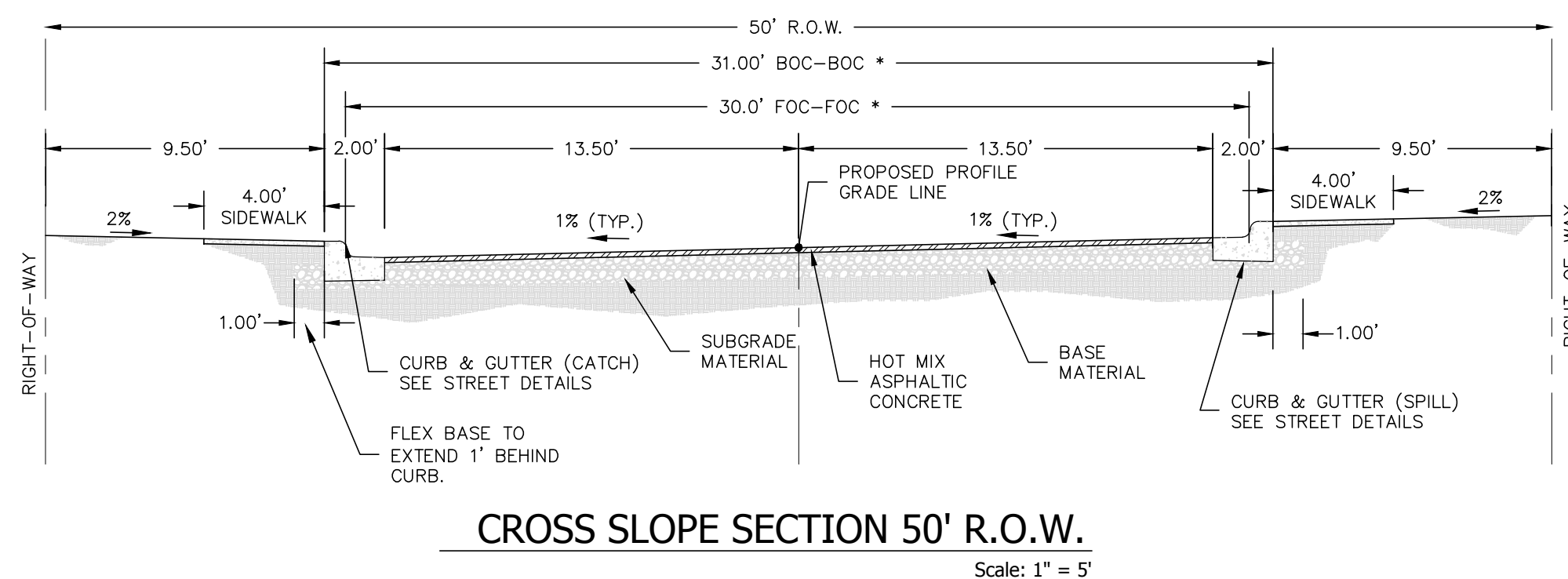
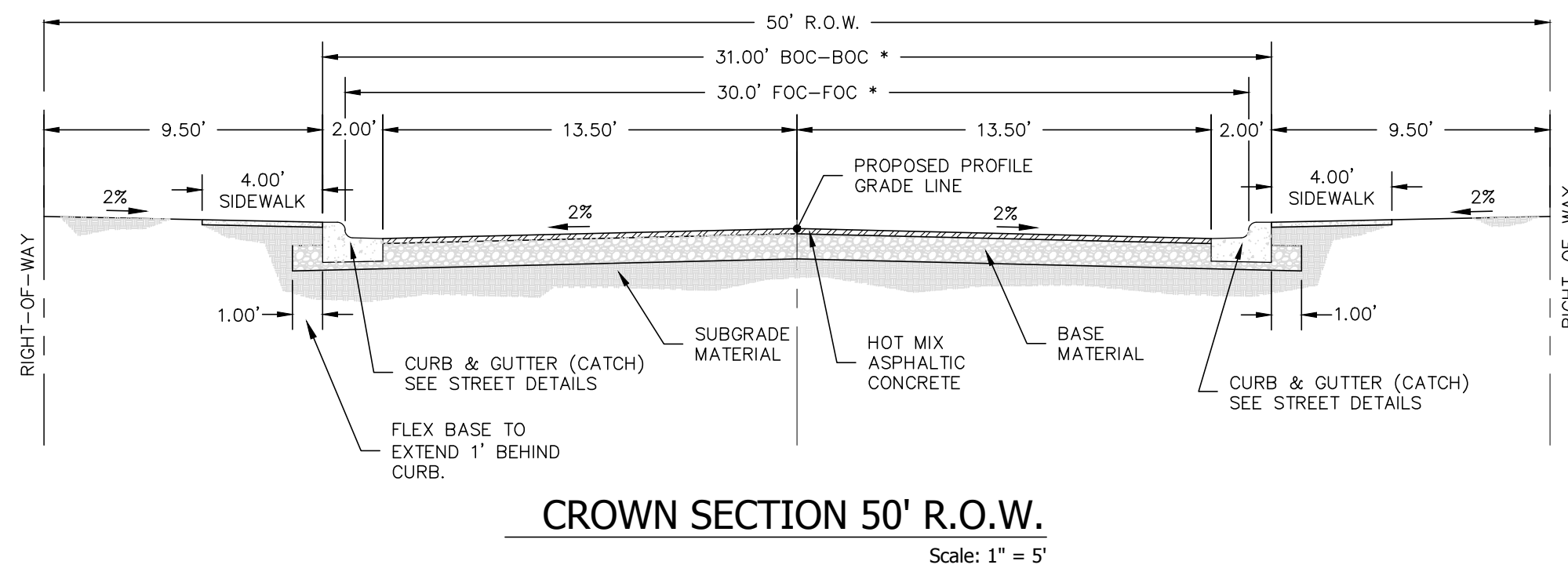
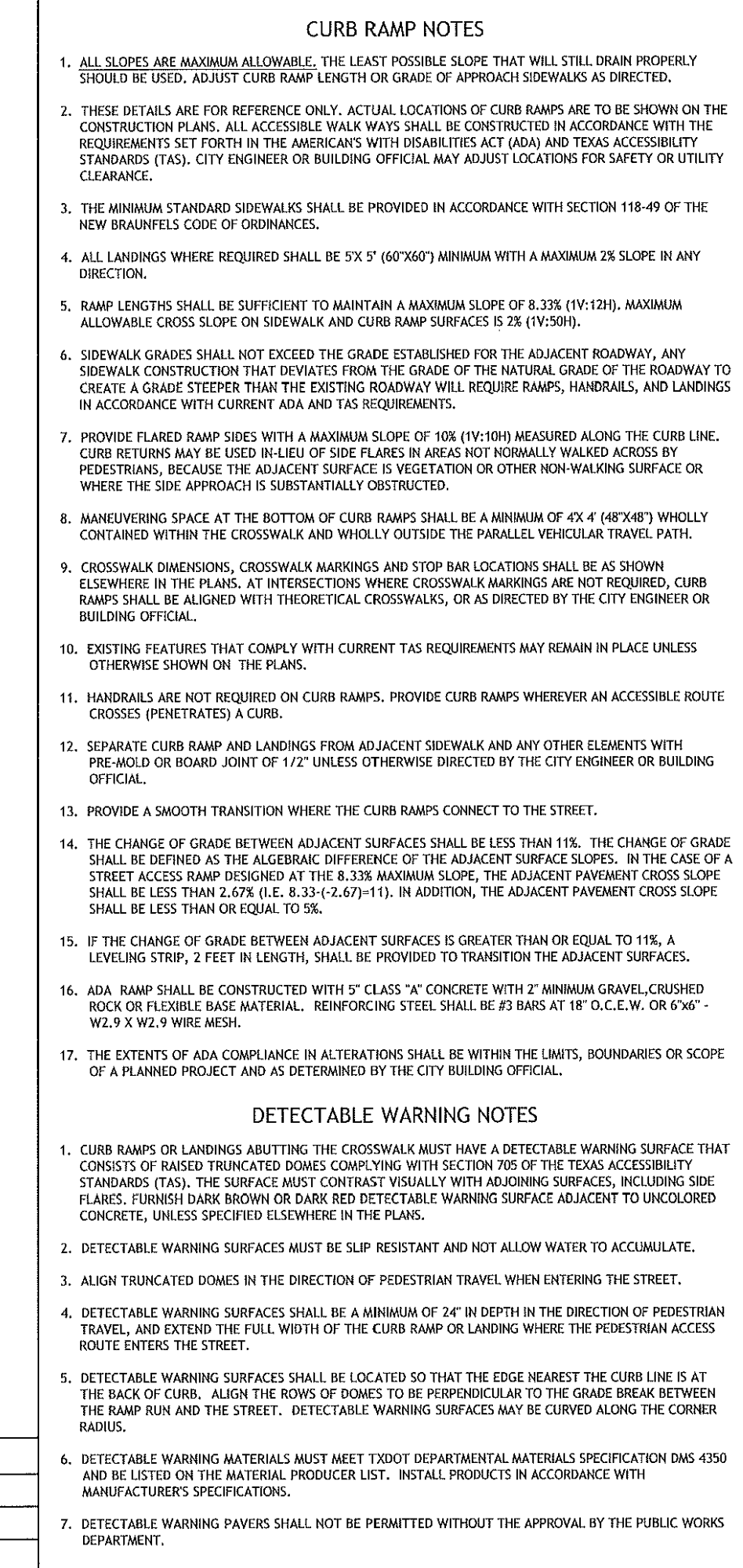
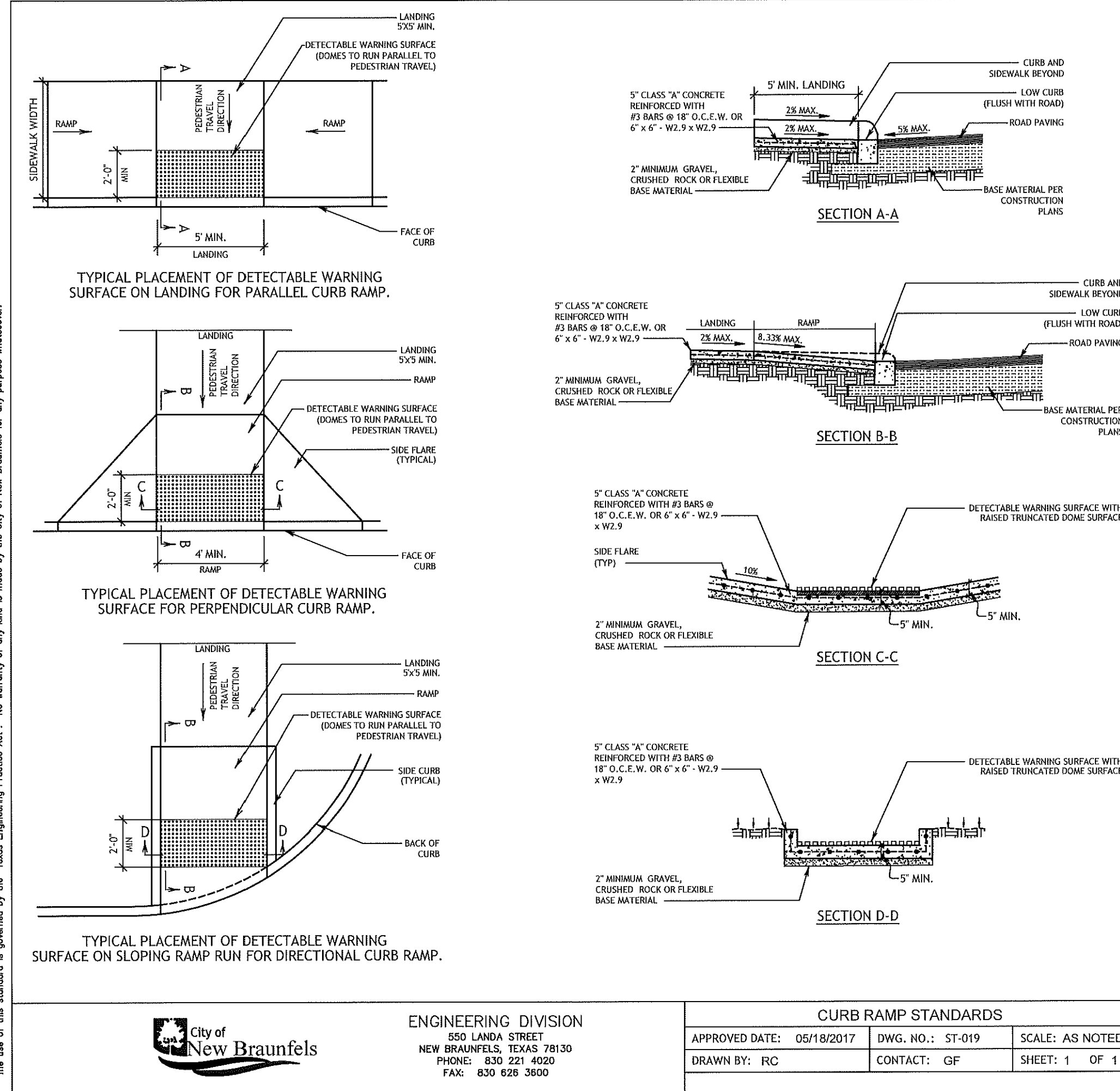
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
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TBPE FIRM F-13351

Drawing Name: N:\Projects\MAHROOD Harris\Trout\Civil\Construction Drawings\Unit 2\8 STREET SECTION AND DETAILS I.dwg User: bryancordes Sep 10, 2024 -- 2:53pm

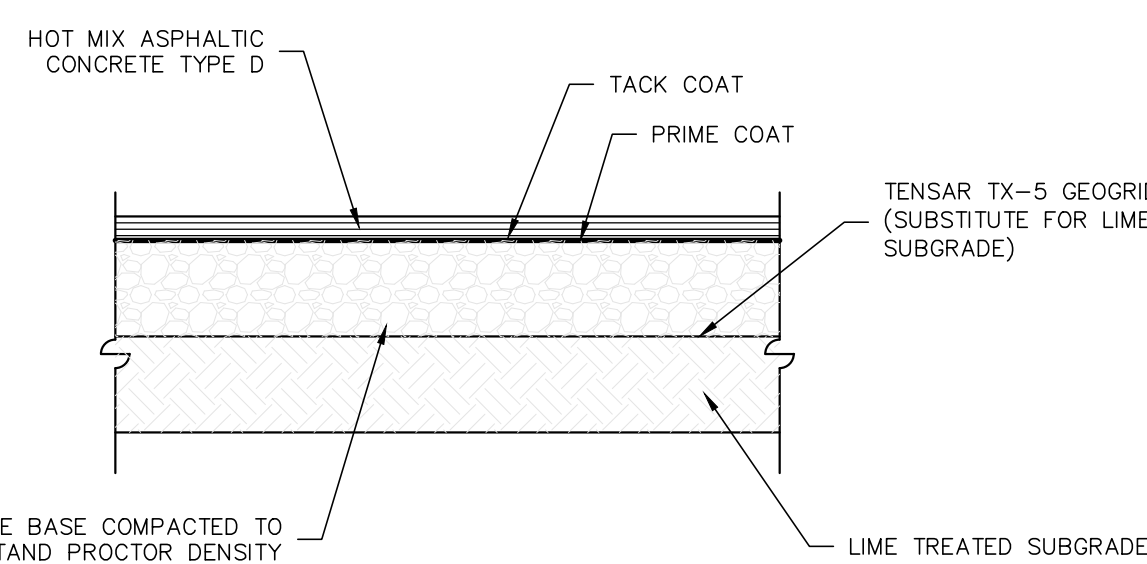
DISCLAIMER: The use of this standard is governed by the "Team Engineering Practice Act". No warranty of any kind is made by the City of New Braunfels for any purpose whatsoever.



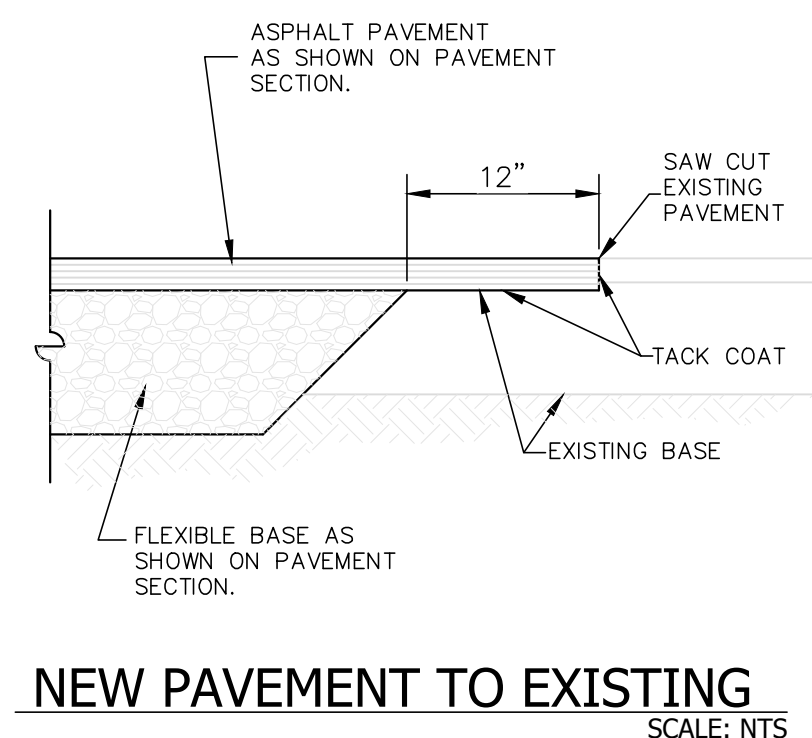
DISCLAIMER: The use of this standard is governed by the "Team Engineering Practice Act". No warranty of any kind is made by the City of New Braunfels for any purpose whatsoever.



- STREET SECTION NOTES:
1. ALL CONCRETE CURBING SHALL BE CONCRETE CURB AND GUTTER, (I.E. CATCH OR SPILL) UNLESS OTHERWISE SPECIFIED ON THE PLANS (I.E. RIBBON CURB).
 2. CROSS SLOPE VARIES WITHIN VERTICAL TRANSITIONS. THE TYPICAL CROSS SLOPE SHALL BE 1% UNLESS OTHERWISE SPECIFIED ON PLANS.
 3. BASE MATERIAL SHALL EXTEND 12" BEHIND BACK OF CURB.
 4. SEE GRADING PLAN FOR LOT GRADING BEYOND RIGHT OF WAY LINE.



TYPICAL PAVEMENT SECTION - LOCAL TYPE A
NOTE: PAVEMENT SECTION MEETS THE MINIMUM REQUIREMENTS AS PER CITY OF NEW BRAUNFELS
Scale: NTS

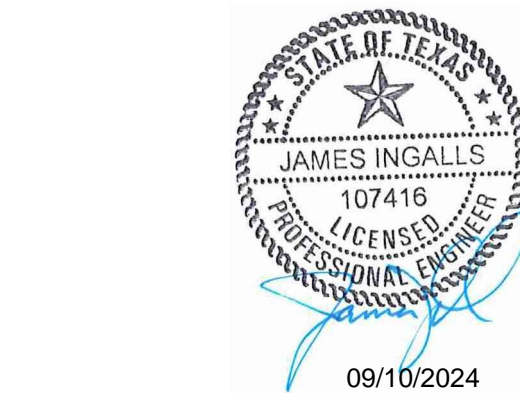


NOTE:

1. RESIDENTIAL LOCAL ONE & TWO FAMILY RESIDENTIAL PAVEMENT SECTION LIMITS
LITTLE PEBBLE, CLEAR COVE RD, CREEK BED DR, SLOW CREEK ST
2. CONTRACTOR TO REFERENCE PRELIMINARY GEOTECHNICAL ENGINEERING STUDY "CLEAR CREEK SUBDIVISION ROADWAY" PREPARED BY ROCK ENGINEERING & TESTING LABORATORY, INC. PROJECT NO.: 6222539 DATED APRIL 27, 2022.
3. SUBGRADE SOILS SHOULD BE TESTED FOR SOLUBLE SULFATE CONTENT PRIOR TO TREATMENT.

"ONE AND TWO FAMILY RESIDENTIAL" (Required AASHTO 18-KIP ESAL = 58,000)			
Hot Mix Asphaltic Concrete	2"	2"	
Crushed Limestone Base Material (TxDOT Item 247 Type A, Gr. 1-2)	12"	12"	
TENSAR Geogrid	TX-5 or HX5.5	---	
Lime Stabilized Subgrade	---	6"	
Moisture Conditioned Subgrade	6"	---	
Calculated AASHTO 18-kip ESAL	100,000	85,000	

"RESIDENTIAL COLLECTOR" (Required AASHTO 18-KIP ESAL = 279,000)			
Hot Mix Asphaltic Concrete	2.5"	2.5"	
Crushed Limestone Base Material (TxDOT Item 247 Type A, Gr. 1-2)	15"	15"	
TENSAR Geogrid	TX-5 or HX5.5	---	
Lime Stabilized Subgrade	---	6"	
Moisture Conditioned Subgrade	6"	---	
Calculated AASHTO 18-kip ESAL	343,000	356,000	



BRIGHTLAND HOMES
9601 MCALLISTER FREEWAY, STE 600,
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**CLEAR CREEK SUBDIVISION
UNIT-2**

**STREET SECTIONS AND
DETAILS I**

SHEET
7 OF **36**

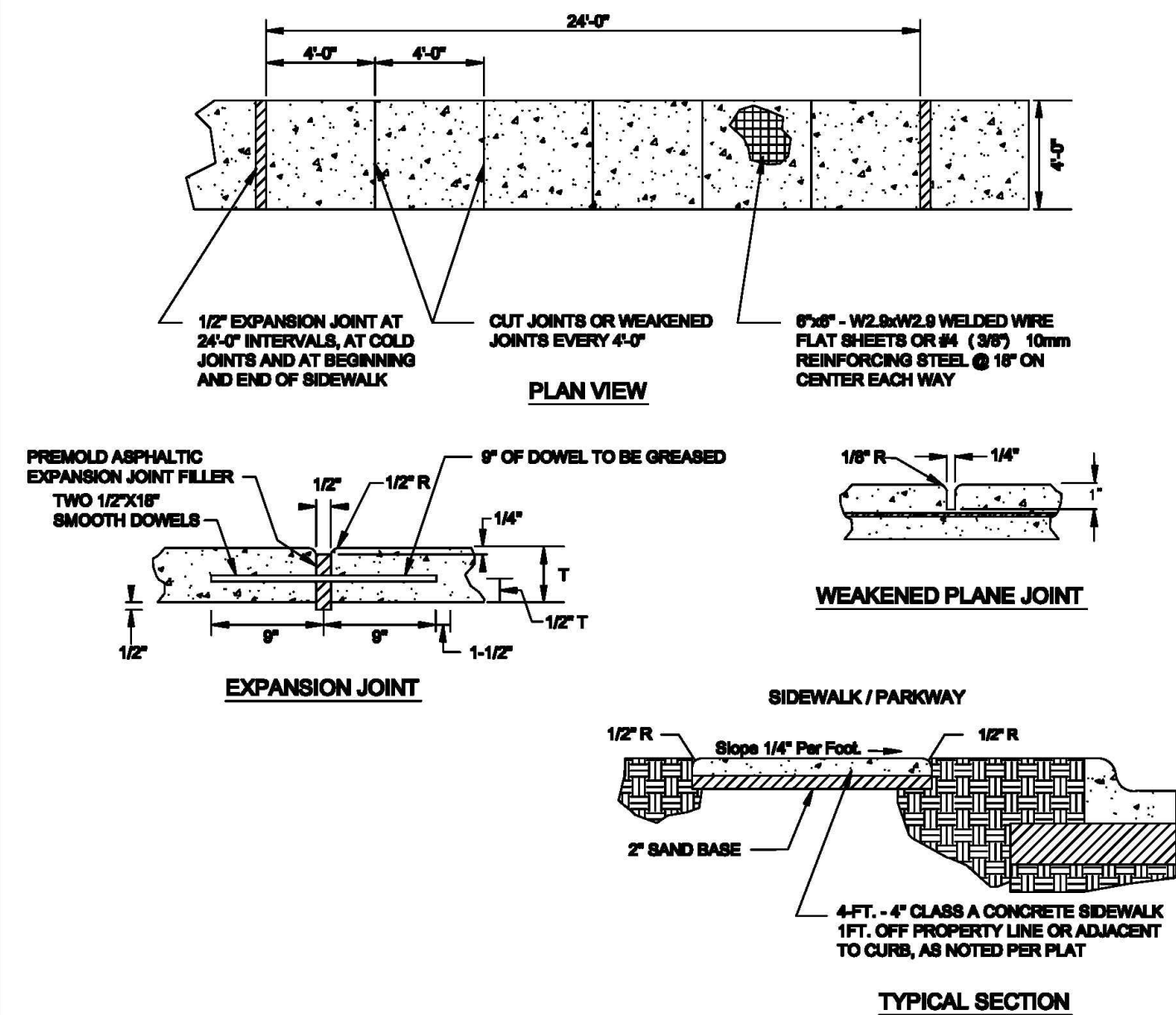
NO DATE ISSUES AND REVISIONS

**INK
CIVIL**

2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

Drawing Name: N:\Projects\HARBOR\ Harris Tract\Civil\Construction Drawings\Unit 2\B STREET SECTION AND DETAILS II.dwg User: bryancodes Sep 10, 2024 -- 2:53pm

SIDEWALK (RESIDENTIAL)



NOTES:

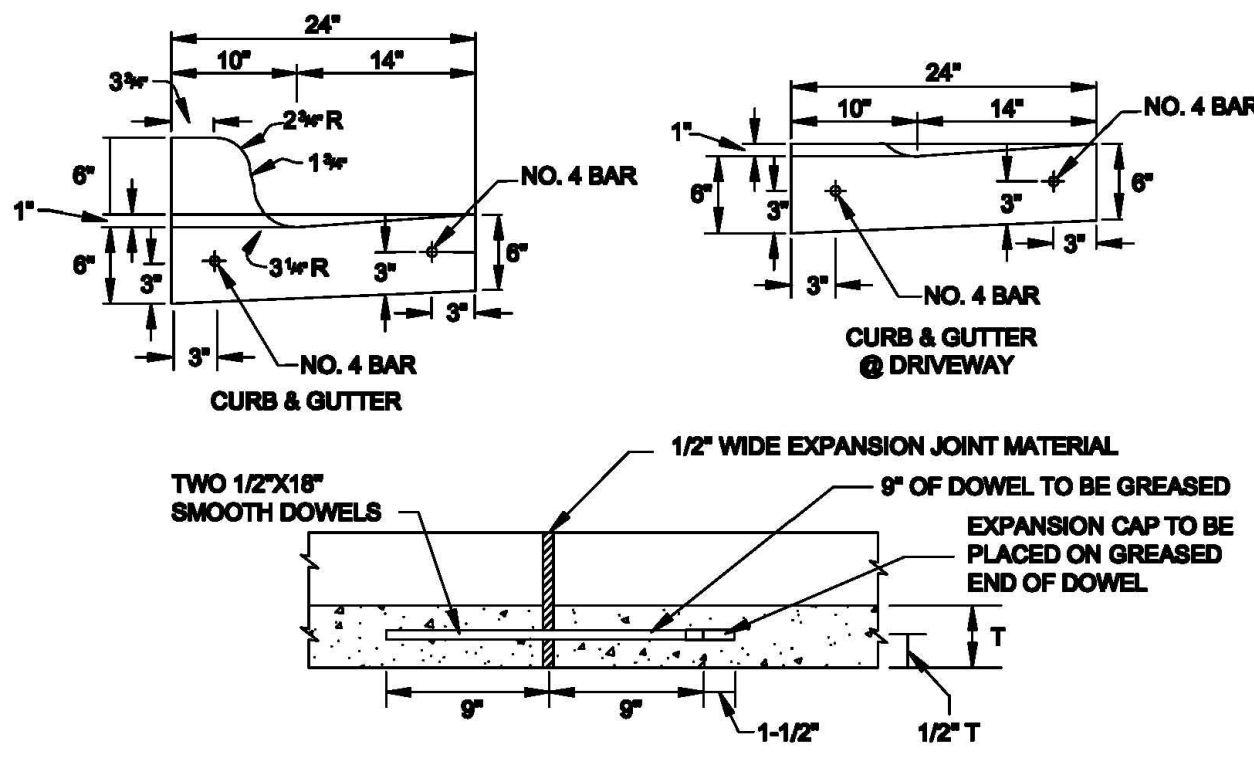
- EXPANSION JOINTS ARE TO BE USED BETWEEN CONCRETE DRIVEWAY AND SIDEWALK.
- SCORED JOINTS DENOTE SIDEWALK ACROSS THE DRIVEWAY AND ARE TO BE PLACED AT LEAST 1/3 rd. THROUGH THE SLAB THICKNESS.
- ALL SIDEWALK AND DRIVEWAY CONSTRUCTION SHALL MEET A.D.A. SPECIFICATIONS.

DATE APPROVED: 7/08
DRAWN BY: RAS
FILENAME: SIDEWALK (Residential)
P:\CURRENT NEW BRAUNFELS DETAILS\2008



ENGINEERING
DEPARTMENT

CURB AND GUTTER



LONGITUDINAL SECTION THRU CURB AND GUTTER SHOWING TYPICAL EXPANSION JOINT DETAILS. REINFORCING STEEL SHALL NOT CROSS EXPANSION JOINTS. STEEL SHALL BE TERMINATED 3" (+ OR -) 1" FROM FACE OF THE JOINT.

NOTES:

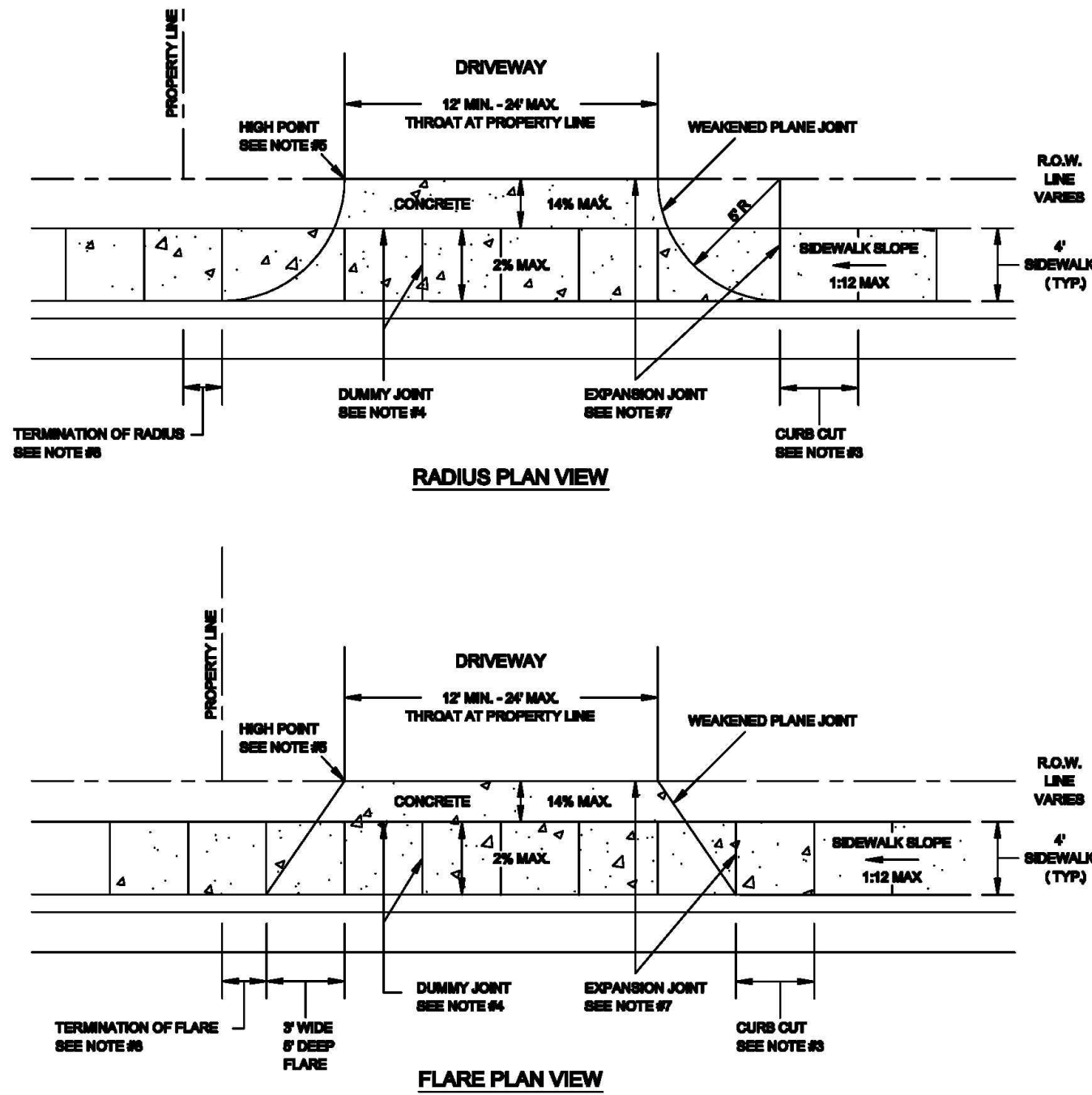
- REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 18".
- CURB AND GUTTER SHALL HAVE FORMED TOOLED OR SAWED CONTRACTION JOINTS AT $\pm 10'$. THE DEPTH OF THESE JOINTS SHALL BE SUFFICIENT TO ENSURE CRACKING AT THE JOINTS.
- CURB OR CURB AND GUTTER SHALL HAVE EXPANSION JOINTS AT POINTS OF CURVATURE, AT INTERVALS NO GREATER THAN 100' AND AT ALL ADJACENT STRUCTURES.
- UNLESS OTHERWISE SHOWN, TRANSITIONS BETWEEN CURBS OR CURBS AND GUTTER OF DIFFERING CROSS SECTION SHALL BE ACCOMPLISHED OVER A 10' LENGTH OR AS APPROVED BY THE CITY ENGINEER.
- ALL CONCRETE TO BE CLASS "A" 3000 PSI CONCRETE.
- ALL EXPOSED CONCRETE SURFACES TO BE BRUSHED SMOOTH AND UNIFORM.

DATE APPROVED: 7/08
DRAWN BY: RAS
FILENAME: Curb & Gutter
P:\CURRENT NEW BRAUNFELS DETAILS\2008



ENGINEERING
DEPARTMENT

DRIVEWAY APRON (RESIDENTIAL - RADIAL/FLARED)

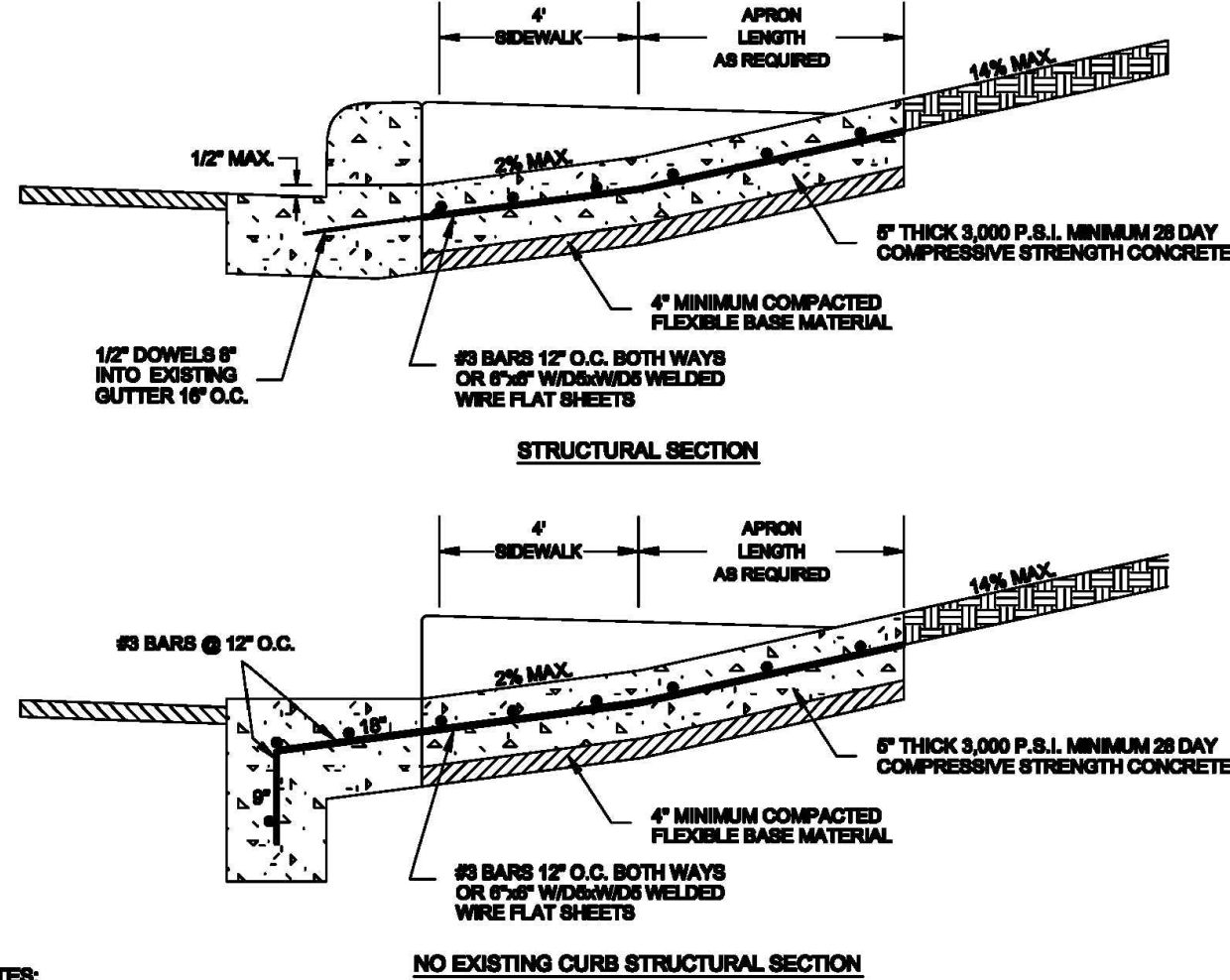


DATE APPROVED: 7/08
DRAWN BY: RAS
FILENAME: DRIVEWAY (Residential - Radial/Flared)
P:\CURRENT NEW BRAUNFELS DETAILS\2008



ENGINEERING
DEPARTMENT

DRIVEWAY APRON (ONE OR TWO FAMILY RESIDENTIAL)



NOTES:

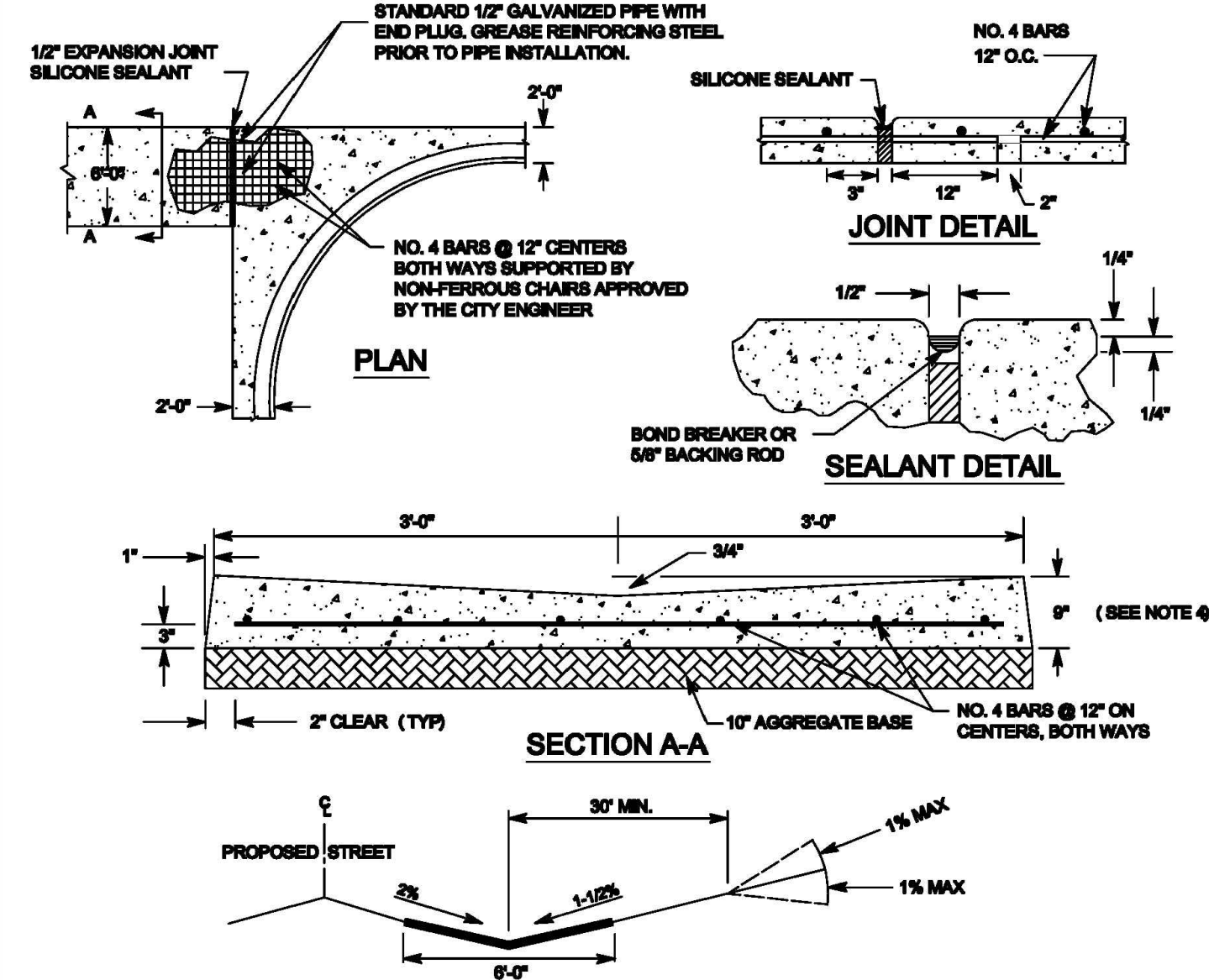
- WHERE GUTTER DOES NOT EXIST DRIVEWAY APRON SHALL EXTEND TO EDGE OF ASPHALT AND SHALL HAVE A MINIMUM 6" WIDE 1" DEEP GRADE BEAM MONOLITHIC AND REINFORCED SIMILAR TO APRON.
- PLACEMENT OF SIDEWALK SHOWN IS TYPICAL; HOWEVER, ALTERNATIVE SIDEWALK PLACEMENT COMMON TO DRIVEWAY APRON WILL BE CONSIDERED PROVIDED CROSS SLOPE OF SIDEWALK IS NO GREATER THAN 2%.
- CURB CUT LENGTH NO GREATER THAN AS REQUIRED TO MATCH SLOPE OF ADJACENT SIDEWALK.
- DUMMY JOINTS TO BE PROVIDED AT MINIMUM 4'-FT. INTERVALS PERPENDICULAR TO THE CURB LINE WITHIN THE SIDEWALK AREA AND PARALLEL TO THE SIDEWALK AREA.
- PROVIDE A MINIMUM 7" HIGH POINT. HIGH POINT HEIGHT SHALL BE MEASURED FROM THE GUTTER FLOW LINE TO THE DRIVEWAY APRON. NOTE HIGH POINT MAY OCCUR OUTSIDE OF ROW.
- DRIVEWAY THROAT TRANSITION MAY OCCUR OUTSIDE OF ROW.
- PROVIDE EXPANSION JOINTS AT ALL SIDEWALK AND DRIVEWAY THROAT JOINTS. EXPANSION JOINTS SHALL BE PLACED USING 1/2" ASPHALTIC MATERIAL WITH 1/2" DOWELS 18" O.C.
- THE TANGENT POINT OF THE DRIVEWAY CURB RETURN AT THE PUBLIC ROADWAY LINE OR FLARE SHALL BE A MINIMUM DISTANCE OF 1' OFF THE PROPERTY PROJECTED PERPENDICULAR TO THE STREET CENTERLINE, EXCEPT SINGLE FAMILY OR ZERO LOT LINE LOTS. ON SINGLE FAMILY ZERO LOT LINE LOTS WHERE THE DRIVE IS ON THE ZERO LOT LINE, THE TANGENT POINT OR FLARE SHALL BE NO GREATER THAN 3' BEYOND THE ADJOINING PROPERTY LINE PROJECTED PERPENDICULAR TO THE STREET CENTERLINE.
- ALL SIDEWALK AND DRIVEWAY CONSTRUCTION SHALL MEET A.D.A. SPECIFICATIONS.

DATE APPROVED: 7/08
DRAWN BY: RAS
FILENAME: DRIVEWAY (Residential - Radial/Flared)
P:\CURRENT NEW BRAUNFELS DETAILS\2008



ENGINEERING
DEPARTMENT

CROSS GUTTER



NOTES:

- ALL CONCRETE SHALL BE CLASS "A" 3,000 PSI.
- FINISHED ASPHALT CONCRETE SURFACE TO BE FLUSH WITH CROSS GUTTER LIP.
- CONSTRUCTION OF CROSS GUTTER IS NOT ALLOWED ACROSS MAJOR COLLECTOR OR ARTERIAL STREETS.
- ADJACENT SPANDREL SHALL BE 9" THICK CLASS "A" 3,000 PSI CONCRETE.

DATE APPROVED: 7/08
DRAWN BY: RAS
FILENAME: CROSS GUTTER
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ENGINEERING
DEPARTMENT



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**CLEAR CREEK SUBDIVISION
UNIT-2**

**STREET SECTION AND
DETAILS II**

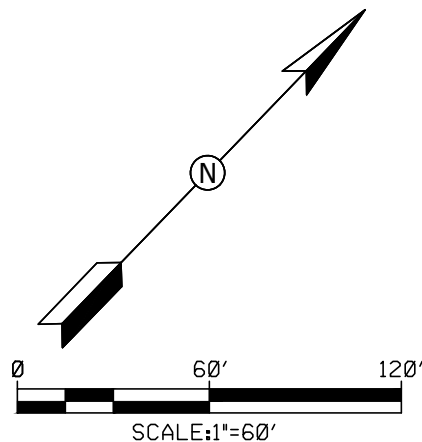
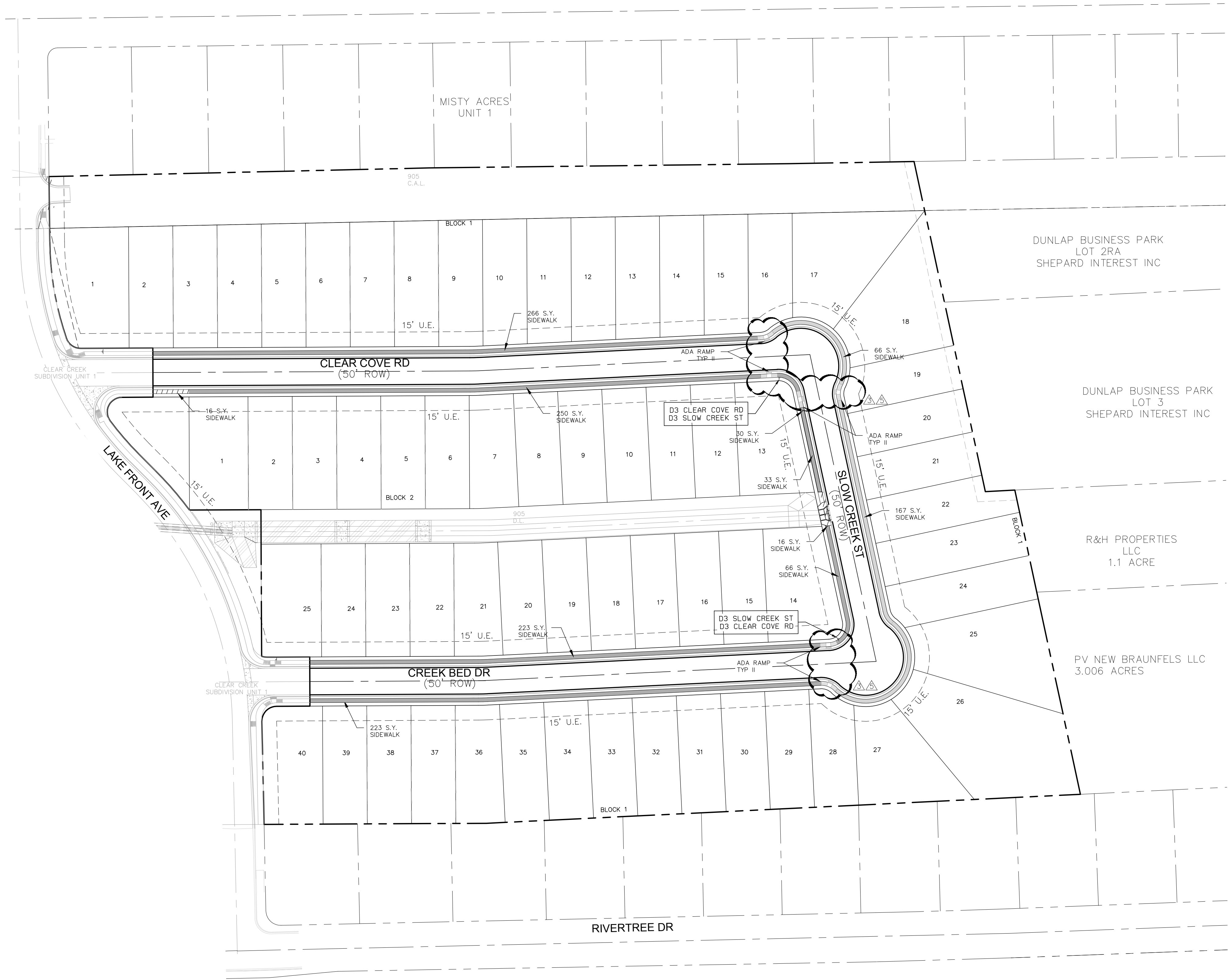
SHEET
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NO	DATE	ISSUES AND REVISIONS

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Drawing Name: N:\Projects\HARRIS TRIST\GIS\Construction Drawings\Unit 2\10 TRAFFIC SIGNAGE AND SIDEWALK DETAIL.dwg User: bryanders Sep 10, 2024 - 3:46pm



LEGEND

- 4" SIDEWALK TO BE INSTALLED BY THE DEVELOPER
- 4" SIDEWALK TO BE INSTALLED BY THE HOME BUILDER



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UNIT-2

TRAFFIC SIGNAGE &

SIDEWALK PLAN

SHEET

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OF

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NO	DATE	ISSUES AND REVISIONS
Δ	08-13-2024	REVISED PER CONB COMMENTS
Δ	09-09-2024	REVISED PER CITY OF NEW BRAUNFELS COMMENTS

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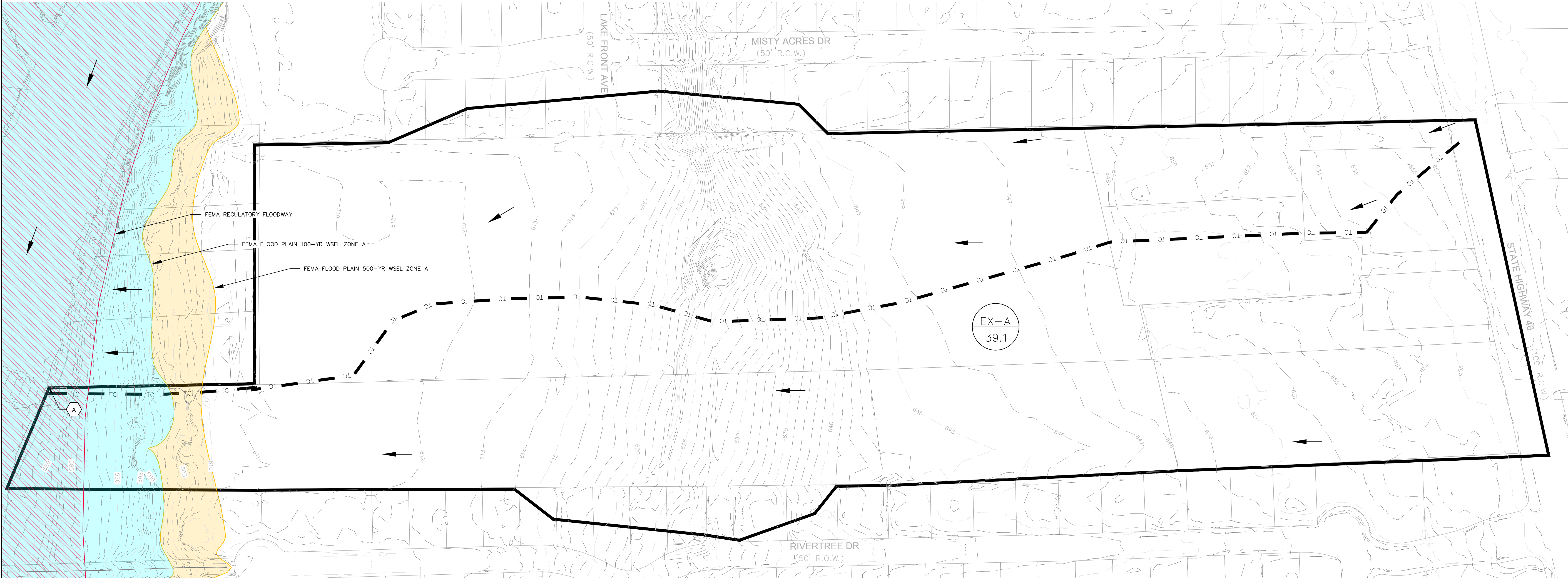
2021 W SH46, STE 105

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REFLECTOR UNIT SIZES FOR DELINEATORS AND OBJECT MARKERS					DELINEATORS				D & OM DESCRIPTIVE CODES	
DEVICE	SIZE 1	SIZE 2	SIZE 3	SIZE 4	DEVICE	SINGLE		DOUBLE		INSTL DEL ASSM (D-XX)SZ X (XXX)XXX (XX)
SHEETING Yellow, White or Red Type B or C reflective sheeting					SHEETING Yellow, White or Red Type B or C Reflective Sheeting					NUMBER OF REFLECTORS S = Single D = Double COLOR OF REFLECTORS W = White Y = Yellow R = Red REFLECTOR UNIT SIZE See 2 TYPE OF POST OR DELINEATOR WC = Wing Channel Post FLX = Flexible Post BRP = Barrier Reflector TYPE OF MOUNT GND = Embedded (drivable or set in concrete) CTB = Concrete Barrier Mount GR3 = GR3 = Guard Fence Attachment SRF = Surface Mount DIRECTION If Required BI = Bi-Directional OM = Bi-Directional with red on back INSTL OM ASSM (OM-XX) (XXX)XXX (XX) TYPE OF OBJECT MARKER 1, 2, 3, or 4 NUMBER OF REFLECTORS OR DIRECTION X = 3-Size 2 reflector units (Type 2 only) Y = 1-Size 3 reflector unit (Type 2 only) Z = 3-Size 2 or 1-Size 4 reflector units (Type 2 only) L = Left Side (Type 3 Object Marker only) R = Right Side (Type 3 Object Marker only) C = Center (Type 3 Object Marker only) TYPE OF POST WC = Wing Channel Post FLX = Flexible Post TWT = Thin Walled Tubing TYPE OF MOUNT GND = Embedded (drivable) SRF = Surface Mount BAS = Wedge Anchor Steel WAP = Wedge Anchor Plastic DIRECTION If Required BI = Bi-Directional
NOTE 1. Size 1 and 4 - Direct applied reflective sheeting for use on flexible post (FLX). 2. Size 2 and 3 - For use on wing channel (wc) post only. Use approved metal, plastic or fiberglass backplate with 17/64\"/>					NOTE 1. Size 1 and 4 - Direct applied reflective sheeting for use on flexible post (FLX). 2. Size 2 and 3 - For use on wing channel (wc) post only. Use approved metal, plastic or fiberglass backplate with 17/64\"/>					
OBJECT MARKERS										
DEVICE	Type 1 (OM-1)	Type 2 (OM-2)		Type 3 (OM-3)			Type 4 (OM-4)	SHEETING Yellow-Type B ₁ or C ₁ Sheeting	POST TYPE TWT	MOUNT TYPE WAS, WAP
	OM-1	OM-2X	OM-2Y	OM-2Z	OM-3L	OM-3R	OM-3C			
SHEETING Yellow-Type B ₁ or C ₁ Sheeting										
POST TYPE TWT										
MOUNT TYPE WAS, WAP										
BARRIER REFLECTORS (BRP)					CHEVRONS			ONE DIRECTION LARGE ARROW		
DEVICE	GF1	GF2	CTB	DEVICE	W1-6	W1-6	W1-6	W1-6	W1-6	W1-6
1. Barrier reflectors shall meet the requirements of DMS 8600.				1. CHEVRON (W1-6) signs and ONE DIRECTION LARGE ARROW (W1-6) signs shall be installed per Sign Mounting Details (SMD) Standard Sheets and paid under Item 644 (Small) Roadside Sign Assemblies.				1. CHEVRON (W1-6) signs and ONE DIRECTION LARGE ARROW (W1-6) signs shall be installed per Sign Mounting Details (SMD) Standard Sheets and paid under Item 644 (Small) Roadside Sign Assemblies.		
2. Approved Barrier Reflectors are Listed on the "Barrier Reflectors" Material Production List at: www.txdot.gov.				2. The Texas version of the ONE DIRECTION LARGE ARROW sign (W1-9T) may be used instead of the ONE DIRECTIONAL LARGE ARROW (W1-6).				2. The Texas version of the ONE DIRECTION LARGE ARROW sign (W1-9T) may be used instead of the ONE DIRECTIONAL LARGE ARROW (W1-6).		
SHEETING Yellow, White, Red				SHEETING Yellow, White, Red				SHEETING Yellow, White, Red		
NOTE				NOTE				NOTE		
1. Minimum 9 square inches of reflective sheeting surface area.				1. Minimum 9 square inches of reflective sheeting surface area.				1. Minimum 9 square inches of reflective sheeting surface area.		



LEGEND

- LIMITS OF DRAINAGE AREA
- - - LIMITS OF SUB-DRAINAGE AREA
- TC — TC — TIME OF CONCENTRATION
- - - 900 - - - EXISTING CONTOURS
- ← FLOW ARROWS
- (A) 9.0 DRAINAGE BASIN LABEL
BASIN AREA (AC)
- (A1) 2.0 SUB-DRAINAGE AREA LABEL
SUB-DRAINAGE AREA (AC)
- [A1] INLET LABEL
- {A1} ANALYSIS POINT LABEL



EXISTING CONDITIONS
SCALE: 1"=100'

Clear Creek Subdivision - Existing Conditions Hydrology SCS Calculations									
Point	AREA ID	Area (ac)	CN	T _c (min)	Q ₂ (cfs)	Q ₁₀ (cfs)	Q ₂₅ (cfs)	Q ₅₀ (cfs)	Q ₁₀₀ (cfs)
A	EX-A	39.10	73.5	33	42.93	105.04	155.96	202.35	255.98

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**CLEAR CREEK SUBDIVISION
UNIT-2**

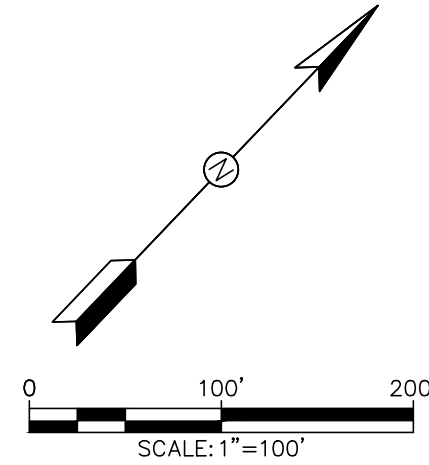
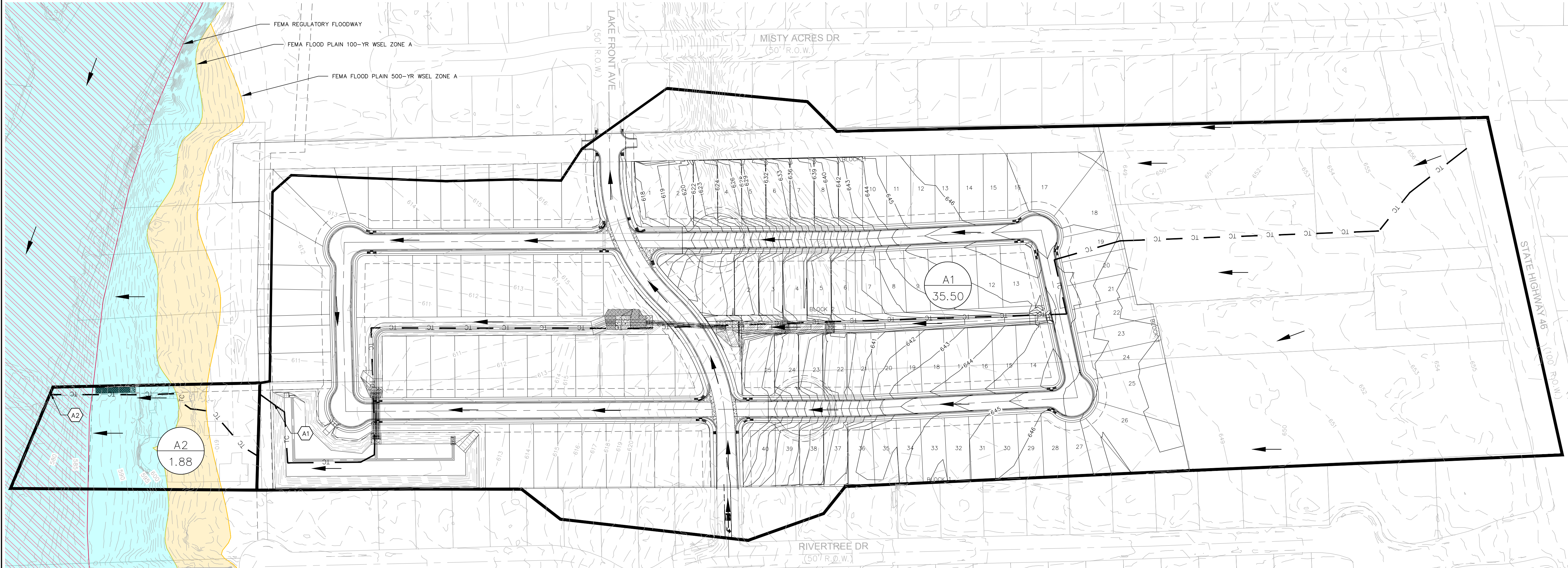
**EXISTING DRAINAGE AREA
MAP**

SHEET **11** OF **36**

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LEGEND

- LIMITS OF DRAINAGE AREA
- LIMITS OF SUB-DRAINAGE AREA
- TIME OF CONCENTRATION
- EXISTING CONTOURS
- PROPOSED CONTOURS
- FLOW ARROWS
- DRAINAGE BASIN LABEL
- BASIN AREA (AC)
- SUB-DRAINAGE AREA LABEL
- SUB-DRAINAGE AREA (AC)
- INLET LABEL
- ANALYSIS POINT LABEL



PROPOSED SCS METHOD FOR ULTIMATE CONDITIONS
SCALE: 1"=100'

Clear Creek Subdivision-Proposed Conditions Hydrology SCS Calculations								
Point	AREA ID	Area (ac)	CN	T _c (min)	Q ₇ (cfs)	Q ₁₀ (cfs)	Q ₂₅ (cfs)	Q ₁₀₀ (cfs)
A1	SCS A1	35.50	84.1	31	59.14	119.16	165.27	206.35
	DET POND A				42.26	102.22	151.03	193.10
A2	SCS A2	1.88	74.3	14	2.84	6.83	10.06	13.00
A	Pond + A2				43.05	104.69	155.21	198.86

Clear Creek - Ultimate Build Out - SCS Summary		
Storm	Exist Flow	Pro Flow
2-YR	48.3	43.1
10-YR	112.2	104.7
25-YR	163.7	155.2
100-YR	263.8	248.0

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UNIT-2

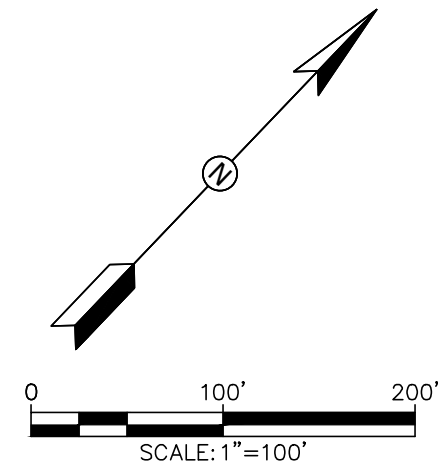
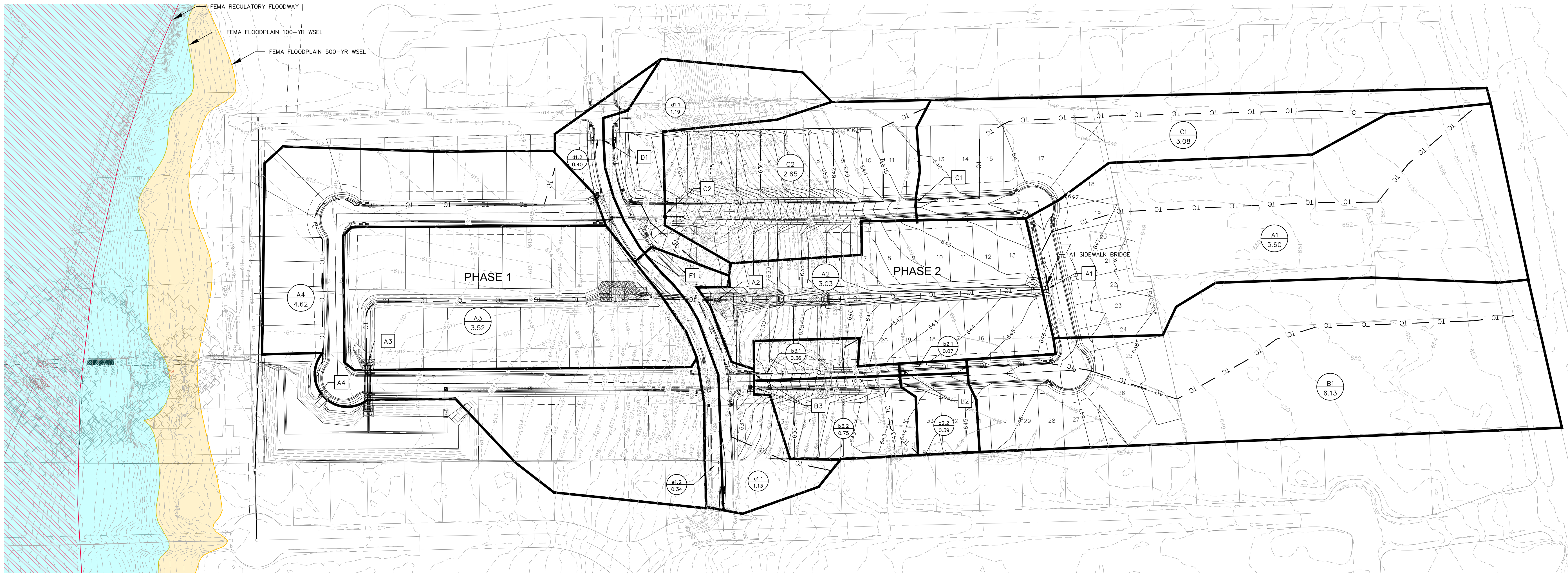
PROPOSED SCS DRAINAGE
AREA MAP

SHEET
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LEGEND

- LIMITS OF DRAINAGE AREA
- - - LIMITS OF SUB-DRAINAGE AREA
- TC TC TIME OF CONCENTRATION
- 900 EXISTING CONTOURS
- 900 PROPOSED CONTOURS
- ← FLOW ARROWS
- A DRAINAGE BASIN LABEL
- 9.0 BASIN AREA (AC)
- A1 SUB-DRAINAGE AREA LABEL
- 2.0 SUB-DRAINAGE AREA (AC)
- A1 INLET LABEL
- A1 ANALYSIS POINT LABEL



PROPOSED RATIONAL MAP - FOR ULTIMATE BUILDOUT CONDITIONS
SCALE: 1"=100'

Clear Creek - Ultimate Build Out - Rational Summary									
Point	AREA ID	Area (ac)	Q ₂ (cfs)	Q ₅ (cfs)	Q ₁₀ (cfs)	Q ₂₅ (cfs)	Q ₅₀ (cfs)	Q ₁₀₀ (cfs)	Location
A1	a1	5.60	11.83	15.69	19.47	24.95	29.69	35.49	Offsite & Sidewalk Bridge A1
A2	a1+a2	8.55	15.79	21.02	26.13	33.66	40.14	48.13	Channel A upstream
B1	b1	6.13	17.61	23.53	29.38	38.08	45.56	54.57	Street Capacity & STORM Drain Inlets b1.1 and b1.2
	b2.1	0.07	0.23	0.30	0.38	0.49	0.58	0.70	Storm Drain Inlets B2.1
	b2.2	0.39	1.01	1.35	1.70	2.23	2.67	3.22	Storm Drain Inlets B2.2
B2	b1+b2.1+b2.2	6.59	18.84	25.19	31.45	40.79	48.82	58.48	Street Capacity
	b3.1	0.36	1.05	1.40	1.75	2.28	2.73	3.28	Storm Drain Inlets B3.1
	b3.2	0.75	2.04	2.74	3.44	4.49	5.39	6.47	Storm Drain Inlets B3.2
C1	c1	3.08	6.22	8.29	10.31	13.28	15.88	19.07	Street Capacity & Storm Drain Inlets c1.1 and c1.2
C2	c2	2.65	6.45	8.70	10.95	14.38	17.32	20.89	Street Capacity & Storm Drain Inlets c2.2 and c2.2
	d1.1	1.40	3.13	4.26	5.38	7.12	8.60	10.44	Storm Drain Inlets D1.1
	d1.2	0.41	1.36	1.82	2.26	2.93	3.50	4.17	Storm Drain Inlets D1.2
	e1.1	0.99	2.42	3.27	4.11	5.40	6.50	7.84	Storm Drain Inlets E1.1
	e1.2	0.34	1.19	1.58	1.97	2.55	3.04	3.62	Storm Drain Inlets E1.2
A3	a1+a2+c1+c2+d1+e1	28.85	50.88	68.22	85.39	111.02	133.30	160.89	Channel A downstream
A4	a4	5.29	12.63	17.02	21.39	28.05	33.74	40.68	Sidewalk Bridge A4

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CLEAR CREEK SUBDIVISION
UNIT-2

PROPOSED RATIONAL
DRAINAGE AREA MAP

SHEET
13 OF 36

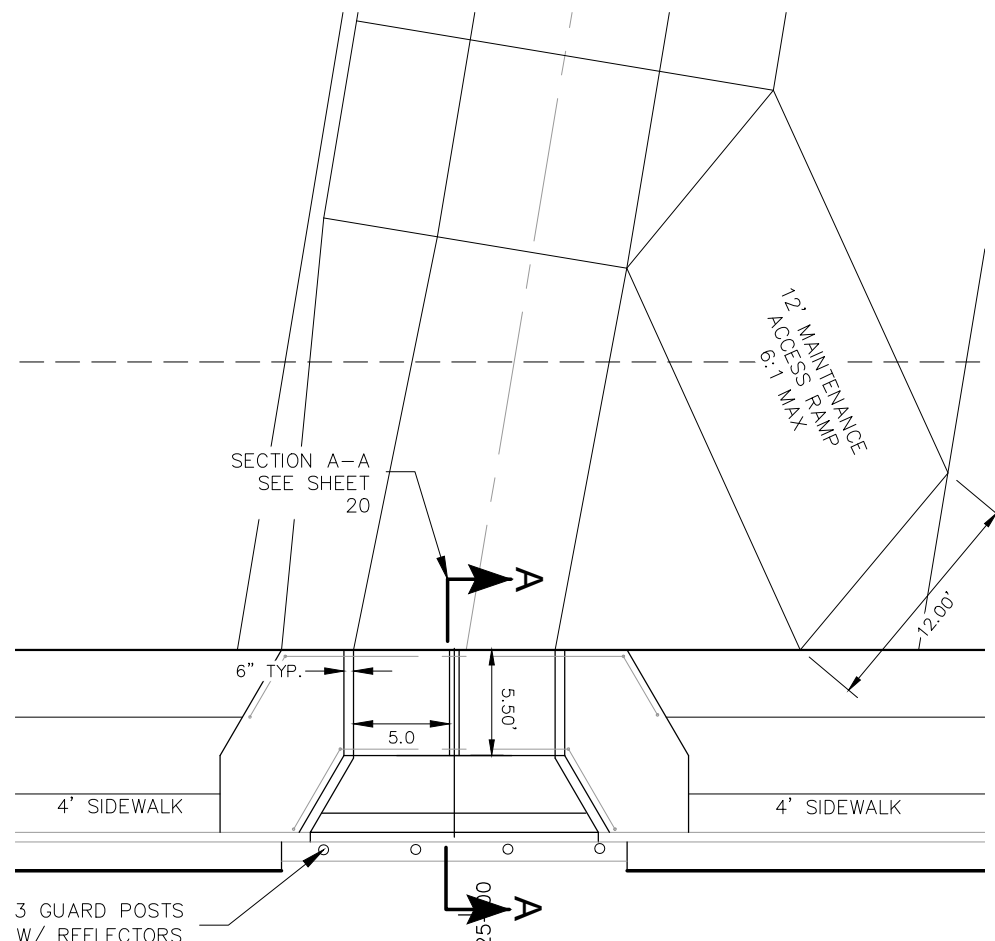
NO	DATE	ISSUES AND REVISIONS

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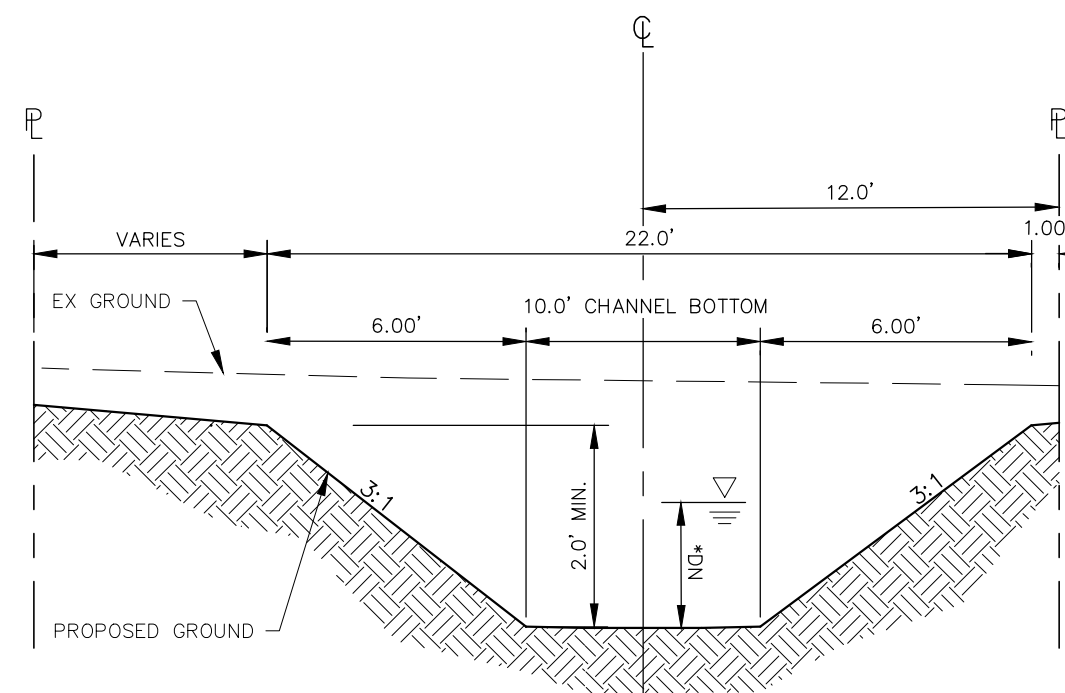
CONCRETE RIP RAP DETAIL "C"

SCALE: 1" = 10'



SIDEWALK BRIDGE A1 AND RIPRAP DETAIL

SCALE: 1" = 10'



SECTION A1 - A1

NOT TO SCALE

*NOTE: - SEE CHANNEL HYDRAULIC TABLE THIS SHEET

CHANNEL NOTES:
CONSTRUCTION SPECIFICATION - TOP SOIL

1. VEGETATION OF CHANNEL BOTTOM - THE WORK CONSISTS OF PLACEMENT OF TOP SOIL ON NEW EARTH EMBANKMENTS, OTHER EARTHFILLS, AND EARTH BACKFILLS REQUIRED BY THE DRAWINGS.
2. MATERIAL - THE TOPSOIL SHALL BE FERTILE SOIL, CONSISTING PRIMARILY OF CLAY AND CLAYEY MATERIALS, WITH A PLASTICITY INDEX GREATER THAN 15, AND SHALL BE FREE OF LARGE ORGANIC OR ROCK MATERIAL.
3. APPLICATION - TOPSOIL SHALL BE PLACED AT GRADES INDICATED ON THE PLANS AND ROLLED TO REDUCE EROSION. PERIODIC INSPECTION ARE REQUIRED AND ADDITIONAL TOPSOIL ADDED AS NEEDED

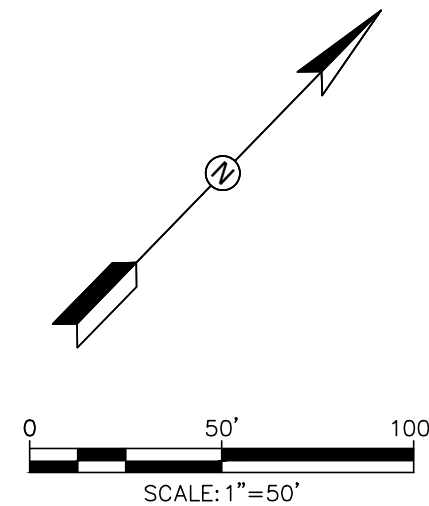
CONSTRUCTION SPECIFICATION – VEGETATION

1. VEGETATION OF EMBANKMENT – THE WORK CONSISTS OF ESTABLISHING VEGETATION ON NEW EARTH EMBANKMENTS, OTHER EARTHFILLS, AND EARTH BACKFILLS REQUIRED BY THE DRAWINGS.
2. MATERIAL – VEGETATION SHALL CONSIST OF "NATIVE SUN TURF GRASS" AS SUPPLIED BY NATIVE AMERICAN SEED IN JUNCTION, TX, CONSISTING OF 34% BLUE GRAMMA AND 64% BUFFALO GRASS, OR ENGINEER APPROVED EQUAL. SEED MIXTURE SHALL CONSIST OF A PURE LIVE SEED OF 90-95%.
3. APPLICATION – THE SEED MIXTURE SHALL BE INSTALLED PER DISTRIBUTORS RECOMMENDATIONS AT A RATE OF 1 LB PER 400 SQFT. SEED MIXTURE SHALL BE WATERED AS REQUIRED UNTIL VEGETATION IS ESTABLISHED.





DRAINAGE INFRASTRUCTURE MAINTENANCE AND MONITORING GUIDELINES

- ACCESS - DRIVE OVER TOP OF CURB FOR MOWING AND MAINTENANCE OF DETENTION POND.

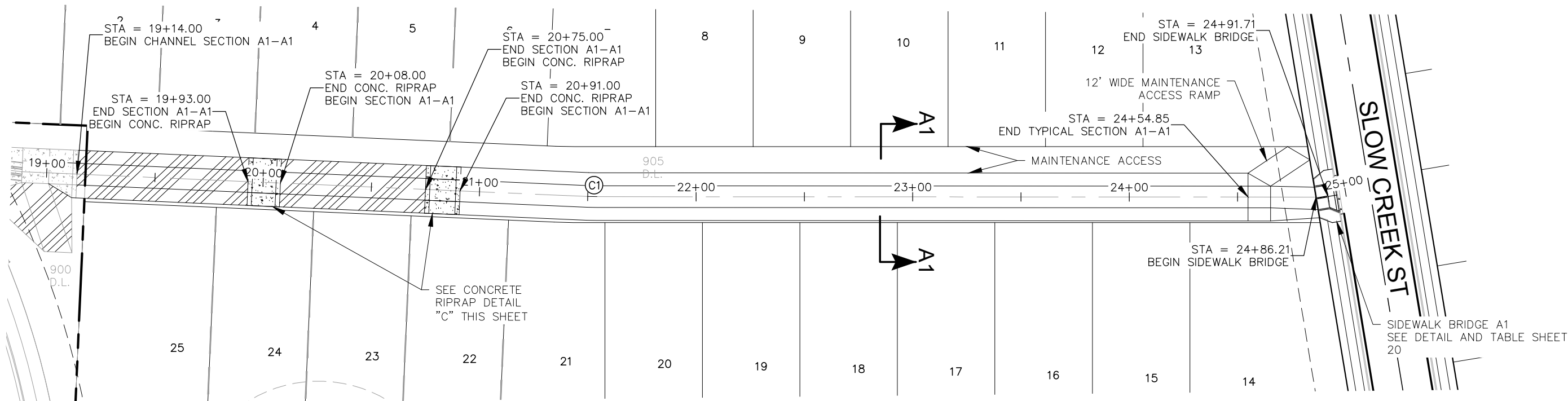
CHANNEL A
STA 19+40 TO STA END - WILL BE ACCESSED FROM A MAINTENANCE RAMP OFF SLOW CREEK ST



LEGEND

 HYDROTURF (ENGINEER APPROVED EQUIVALENT)
 CONCRETE
 ROCK RIP-RAP
 CHANNEL CENTERLINE

PRIOR TO CONSTRUCTION CONTRACTOR SHALL
VERIFY HORIZONTAL AND VERTICAL LOCATION OF
ALL UTILITES AND REPORT ANY DISCREPANCIES
TO ENGINEER



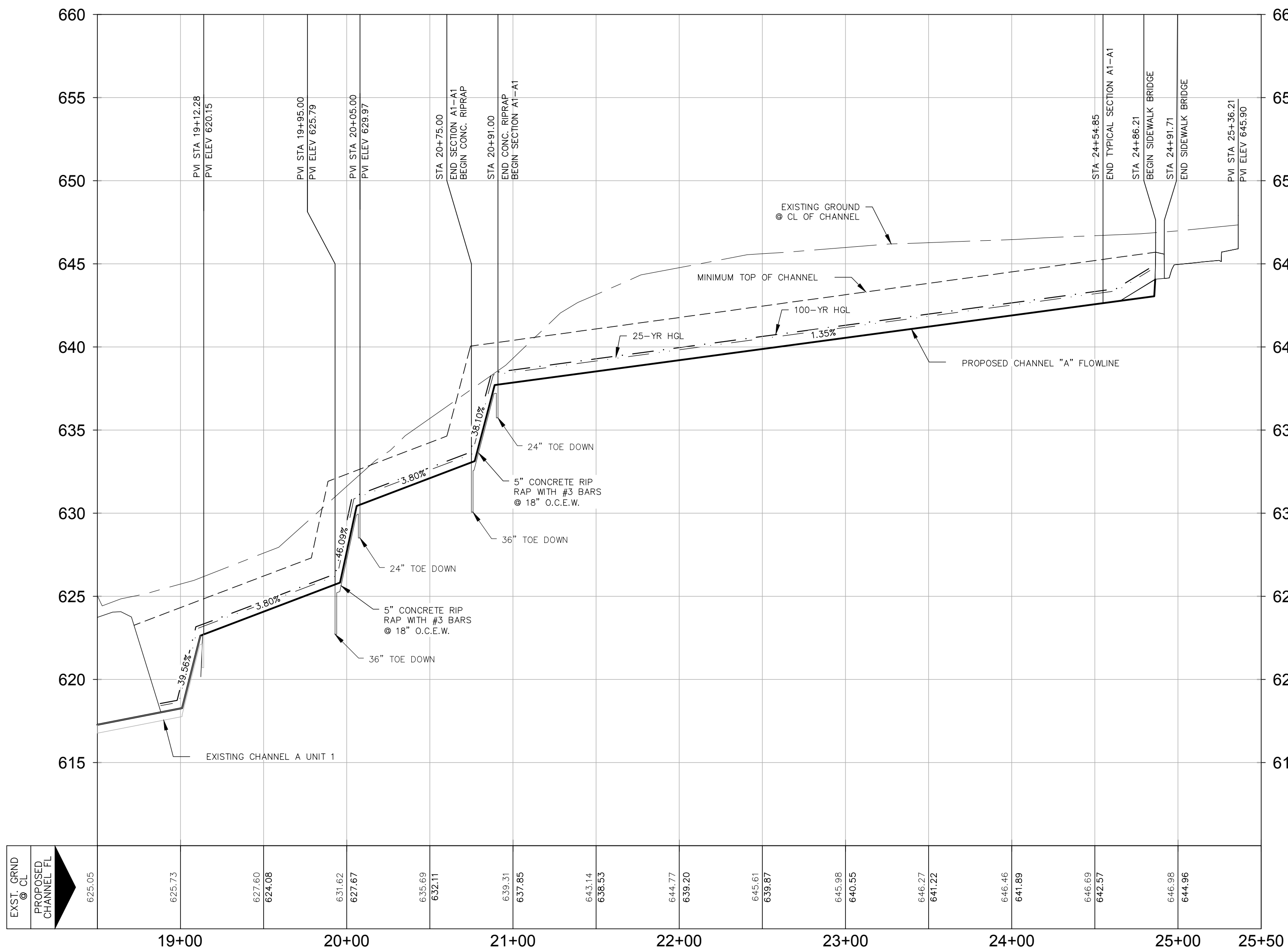
CHANNEL A STA 19+14 TO END

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

SIDEWALK BRIDGE "A1" SUMMARY						
STORM EVENT	CULVERT SIZE	H.W. ELEV	CULVERT Q (CFS)	WEIR Q (CFS)	CULVERT V (FT/S)	TOTAL Q (CFS)
10-YEAR	2 - 5x1'	644.95	19.49	0.00	5.01	19.47
100-YEAR		645.36	35.47	0.00	5.93	35.49

Channel Section A1									
Q ₂ (CFS)	S	n	V ₂ (FT/S)	dh (FT)	Tw (FT)	ΔH (FT)	REQUIRED FREEBOARD	REQUIRED DEPTH (dn) (FT)	DEPTH PROVIDED (D) (FT)
11.83	1.35	0.033	2.64	0.40	12.40	0.03	n/a	0.43	2.00
Q ₂₅ (CFS)	S	n	V ₂₅ (FT/S)	dh (FT)	Tw (FT)	ΔH (FT)	REQUIRED FREEBOARD	REQUIRED DEPTH (dn) (FT)	DEPTH PROVIDED (D) (FT)
24.95	1.35	0.033	3.41	0.62	13.70	0.05	0.50	1.17	2.00
Q ₅₀ (CFS)	S	n	V ₅₀ (FT/S)	dh (FT)	Tw (FT)	ΔH (FT)	REQUIRED FREEBOARD	REQUIRED DEPTH (dn) (FT)	DEPTH PROVIDED (D) (FT)
29.69	1.35	0.033	3.61	0.68	14.09	0.06	n/a	0.74	2.00
Q ₁₀₀ (CFS)	S	n	V ₁₀₀ (FT/S)	dh (FT)	Tw (FT)	ΔH (FT)	REQUIRED FREEBOARD	REQUIRED DEPTH (dn) (FT)	DEPTH PROVIDED (D) (FT)
35.49	1.35	0.033	3.83	0.75	14.53	0.07	n/a	0.82	2.00

Channel Section A1									
Q ₂ (CFS)	S (%)	n	V ₂ (FT/S)	dh (FT)	Tw (FT)	ΔH (FT)	REQUIRED FREEBOARD	REQUIRED DEPTH (dn) (FT)	DEPTH PROVIDED (D) (FT)
11.83	3.80	0.033	3.67	0.30	11.77	0.05	n/a	0.35	2.00
Q ₂₅ (CFS)	S (%)	n	V ₂₅ (FT/S)	dh (FT)	Tw (FT)	ΔH (FT)	REQUIRED FREEBOARD	REQUIRED DEPTH (dn) (FT)	DEPTH PROVIDED (D) (FT)
24.95	3.80	0.033	4.79	0.46	12.75	0.09	0.50	1.05	2.00
Q ₅₀ (CFS)	S (%)	n	V ₅₀ (FT/S)	dh (FT)	Tw (FT)	ΔH (FT)	REQUIRED FREEBOARD	REQUIRED DEPTH (dn) (FT)	DEPTH PROVIDED (D) (FT)
29.69	3.80	0.033	5.09	0.51	13.04	0.10	n/a	0.61	2.00
Q ₁₀₀ (CFS)	S (%)	n	V ₁₀₀ (FT/S)	dh (FT)	Tw (FT)	ΔH (FT)	REQUIRED FREEBOARD	REQUIRED DEPTH (dn) (FT)	DEPTH PROVIDED (D) (FT)
35.49	3.80	0.033	5.41	0.56	13.37	0.12	n/a	0.68	2.00



09/10/2024

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CLEAR CREEK SUBDIVISION

UNIT-2

CHANNEL A STA 19+14 TO END
PLAN & PROFILE

SHEET

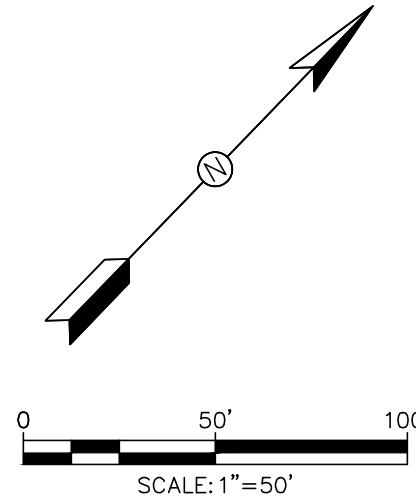
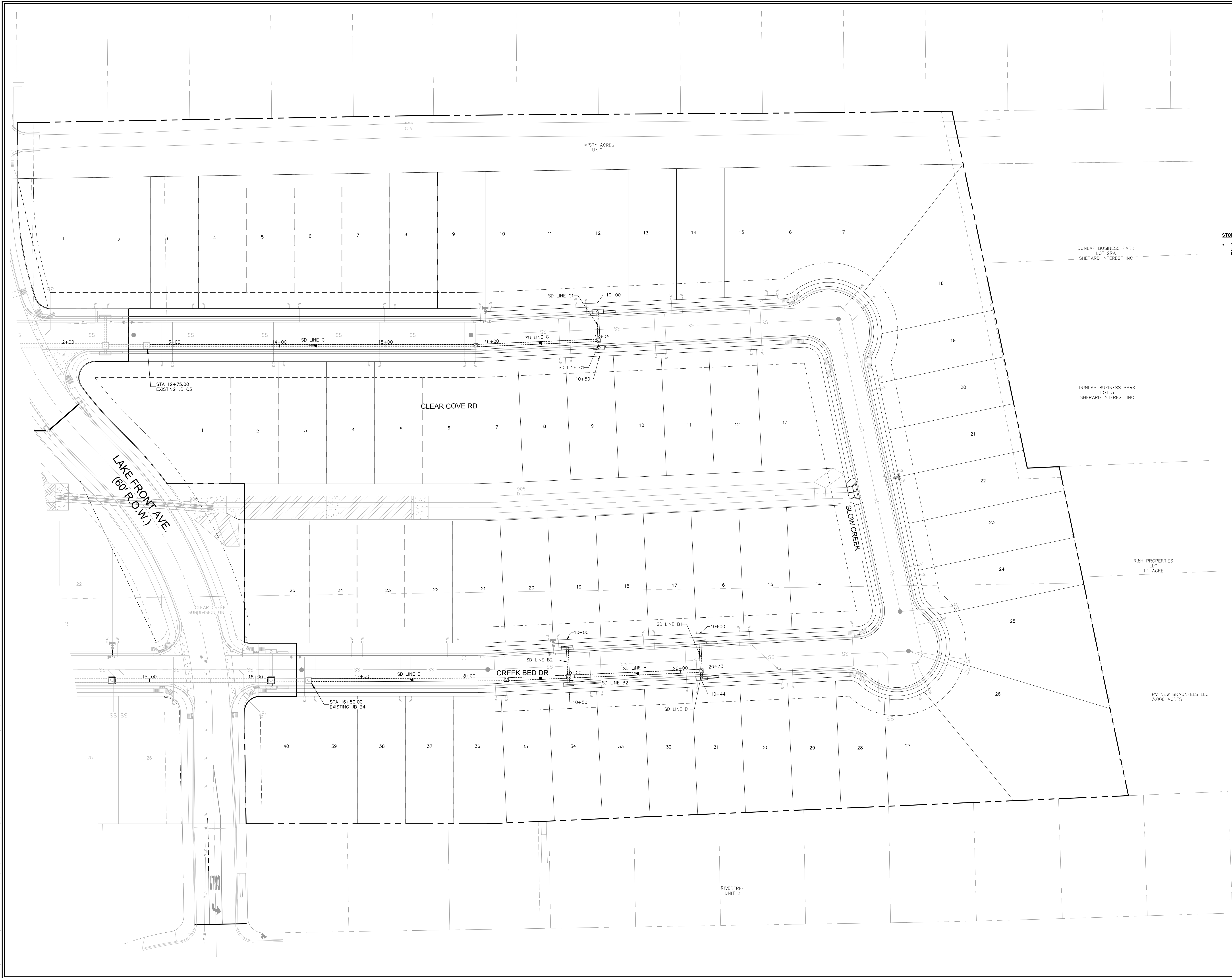
14 OF 36

NO	DATE	ISSUES AND REVISIONS

The logo for INK CIVIL features the word "INK" in a large, bold, sans-serif font, enclosed within a thick black rounded rectangular border. Below this, the word "CIVIL" is written in a smaller, spaced-out, sans-serif font.

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Drawing Name: N:\Projects\HARBOR\Harris Tract\Civil\Construction Drawings\Unit 2\15 OVERALL STORM DRAIN PLAN.dwg User: briscedera Sep 10, 2024 2:54pm



LEGEND

- SS NEW SANITARY SEWER
- W NEW WATER SERVICE

STORM DRAIN AND CULVERT MAINTENANCE

- INSPECT INLETS, JUNCTION STRUCTURES, OUTLETS AND CHANNELS THROUGH PERIODIC INSPECTION BUT NO LESS THAN EVERY 6 MONTHS TO CLEAR STRUCTURES OF OBSTRUCTIONS, DEBRIS AND STRUCTURAL INTEGRITY.



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**CLEAR CREEK SUBDIVISION
UNIT-2**

OVERALL STORM DRAIN PLAN

SHEET
15 OF **36**

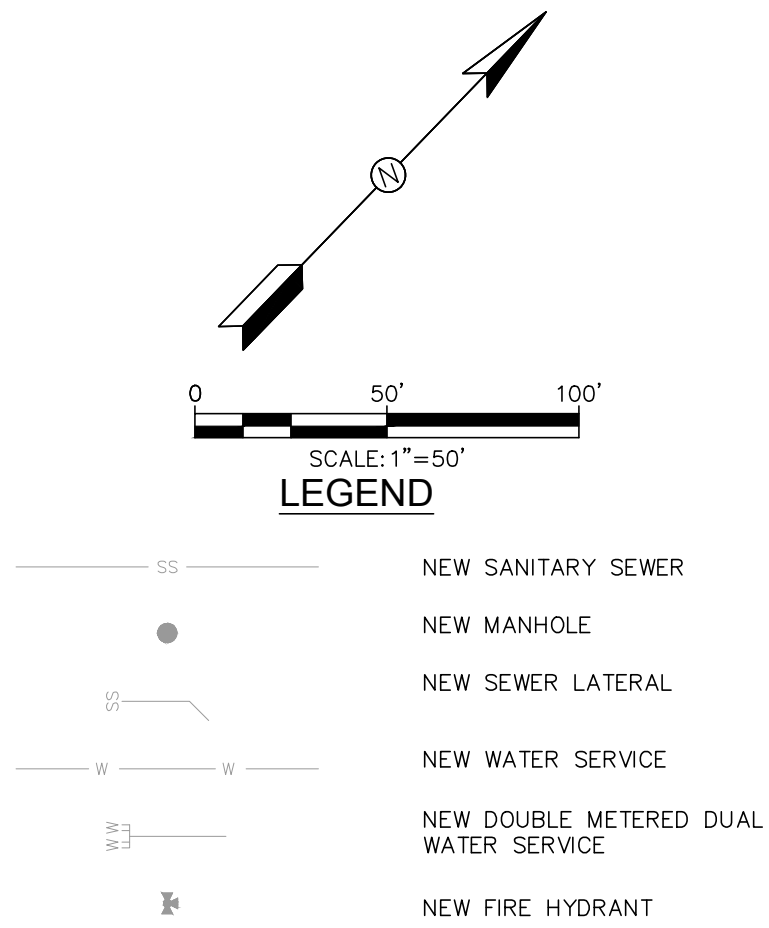
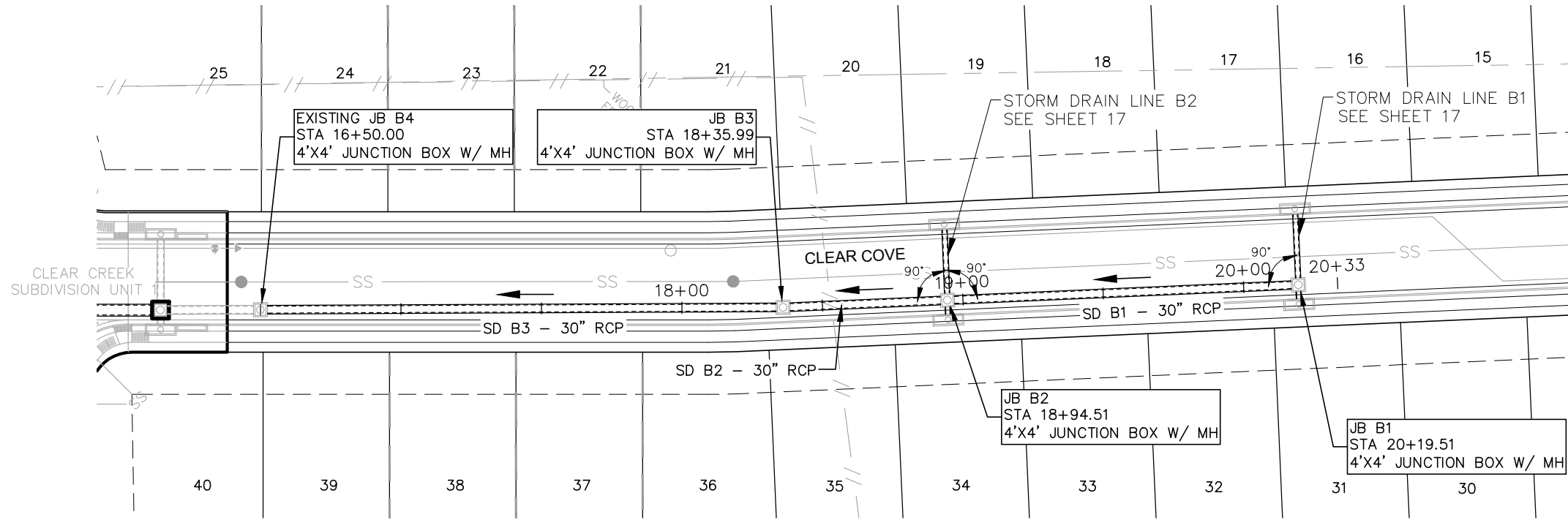
NO	DATE	ISSUES AND REVISIONS

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Drawing Name: N:\Projects\HARBOR\ Harris Tract\Civil\Construction Drawings\Unit 2\16 STORM DRAIN LINE B.dwg User: bryanders Sep 10, 2024 - 2:55pm

STORM DRAIN B 25-YR					
NAME	V (ft/s)	UPSTREAM 25-YR HGL	GROUND ELEV	DIFF	25-YR HGL 2' Below Gutter?
JB B4		620.44	629.79	9.35	✓
CB B3-1		622.3	628.92	6.62	✓
CB B3-2		622.3	628.92	6.62	✓
PIPE B3	14.88				
JB B3		631.53	641.4	9.87	✓
PIPE B2	14.14				
JB B2		633.08	642.93	9.85	✓
PIPE B2-1	4.62				
PIPE B2-2	10.16				
CB B2-1		634.37	643.39	9.02	✓
CB B2-2		634.38	643.46	9.08	✓
PIPE B1	12.6				
JB B1		636.6	644.15	7.55	✓
PIPE B1-1	6.06				
PIPE B1-2	6.06				
CB B1-1		638.66	644.59	5.93	✓
CB B1-2		638.57	644.68	6.11	✓

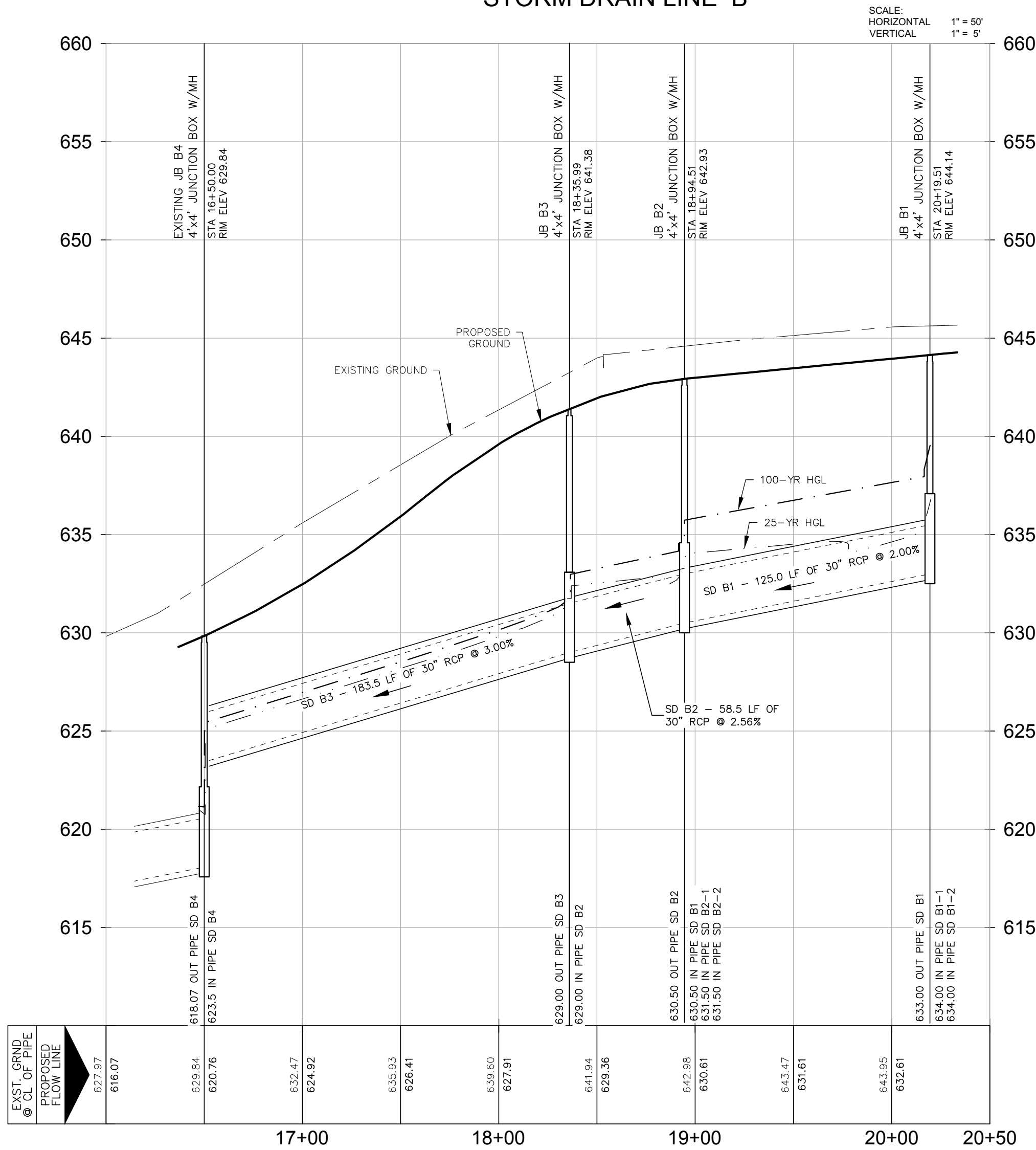


ALL RCP TO BE CLASS IV RCP AND IS RATED FOR DIRECT TRAFFIC LOADING

STORM DRAIN AND CULVERT MAINTENANCE

- INSPECT INLETS, JUNCTION STRUCTURES, OUTLETS AND CHANNELS THROUGH PERIODIC INSPECTION BUT NO LESS THAN EVERY 6 MONTHS TO CLEAR STRUCTURES OF OBSTRUCTIONS, DEBRIS AND STRUCTURAL INTEGRITY.

STORM DRAIN LINE B



CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-675-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1708
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E LOCATOR

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

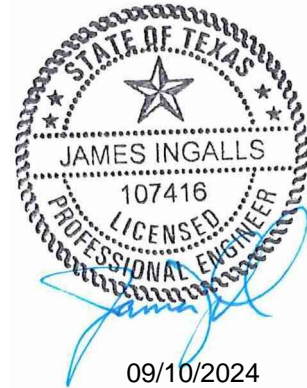
TELEPHONE LOCATOR

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

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 CONTRACTORS 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.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN 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.



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CLEAR CREEK SUBDIVISION
UNIT-2

STORM DRAIN LINE B

SHEET

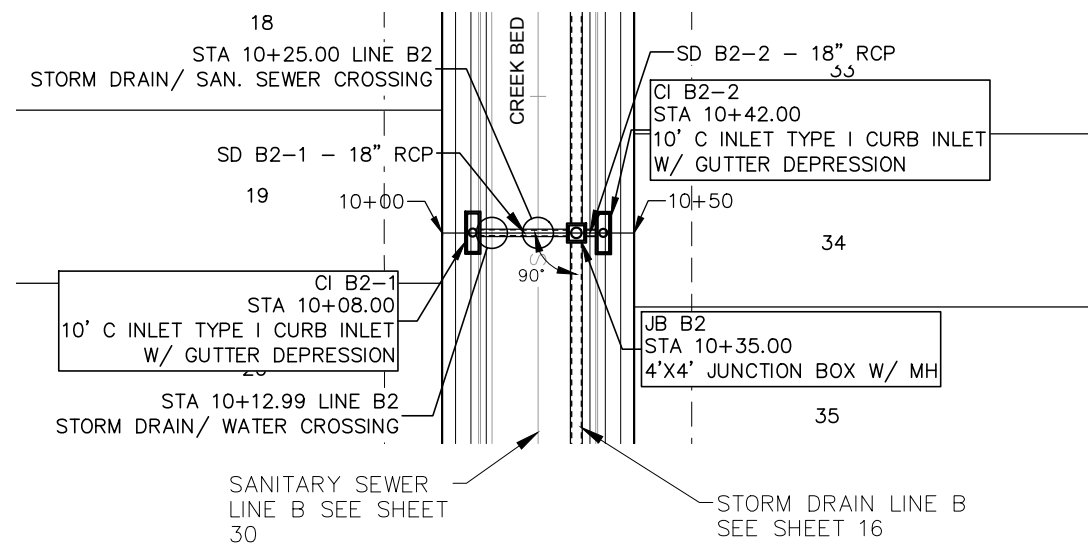
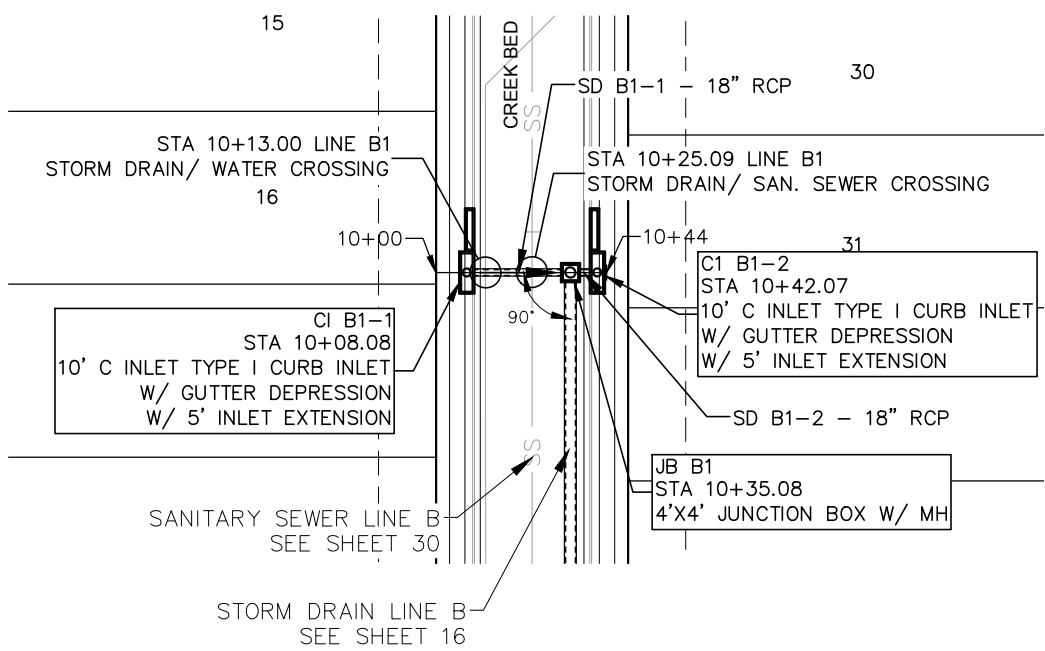
16 OF 36

NO	DATE	ISSUES AND REVISIONS
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STORM DRAIN B 25-YR					
NAME	V (ft/s)	UPSTREAM 25-YR HGL	GROUND ELEV	DIFF	25-YR HGL 2' Below Gutter?
JB B4		620.44	629.79	9.35	✓
CB B3-1		622.3	628.92	6.62	✓
CB B3-2		622.3	628.92	6.62	✓
PIPE B3	14.88				
JB B3		631.53	641.4	9.87	✓
PIPE B2	14.14				
JB B2		633.08	642.93	9.85	✓
PIPE B2-1	4.62				
PIPE B2-2	10.16				
CB B2-1		634.37	643.39	9.02	✓
CB B2-2		634.38	643.46	9.08	✓
PIPE B1	12.6				
JB B1		636.6	644.15	7.55	✓
PIPE B1-1	6.06				
PIPE B1-2	6.06				
CB B1-1		638.66	644.59	5.93	✓
CB B1-2		638.57	644.68	6.11	✓

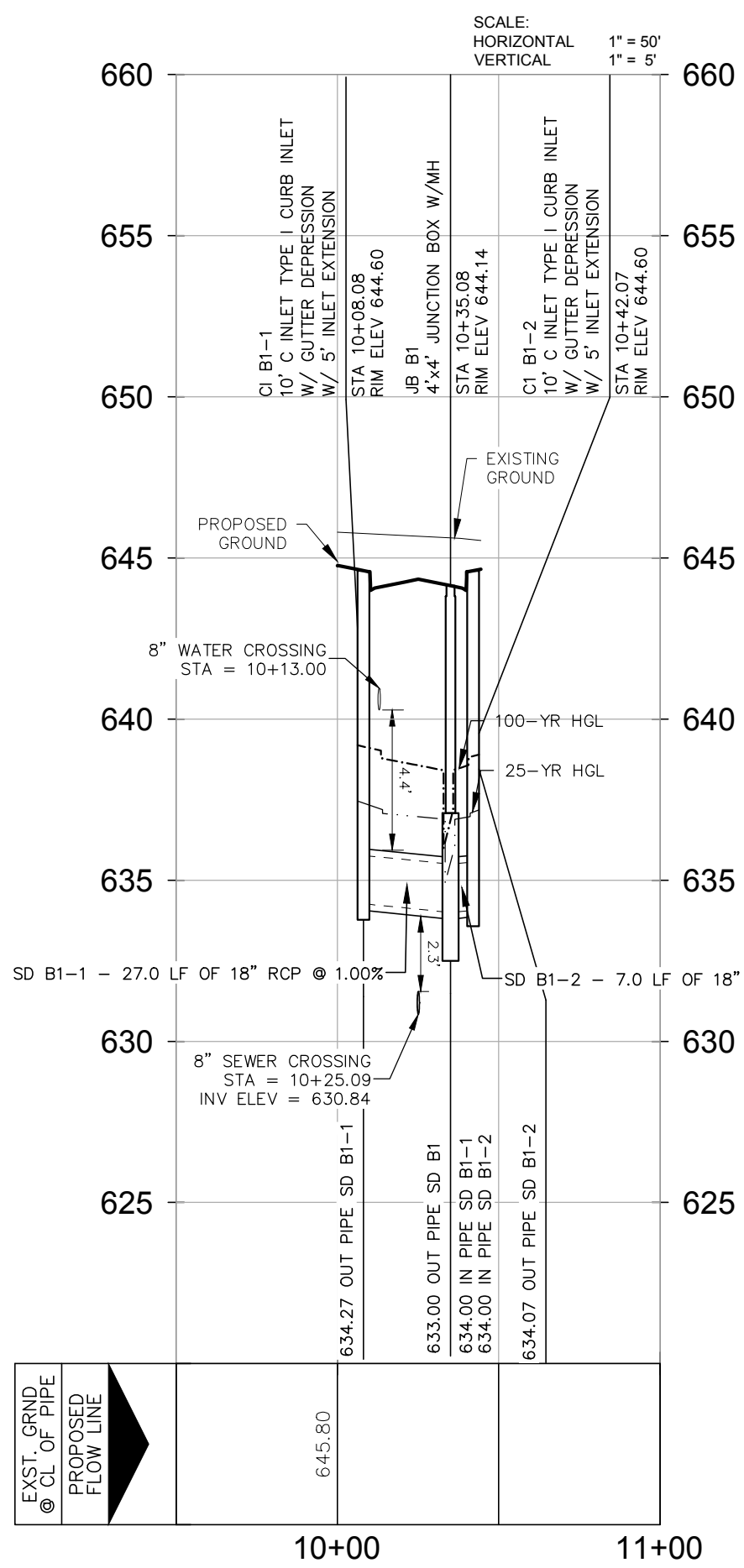


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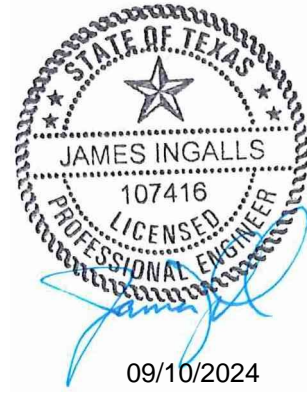
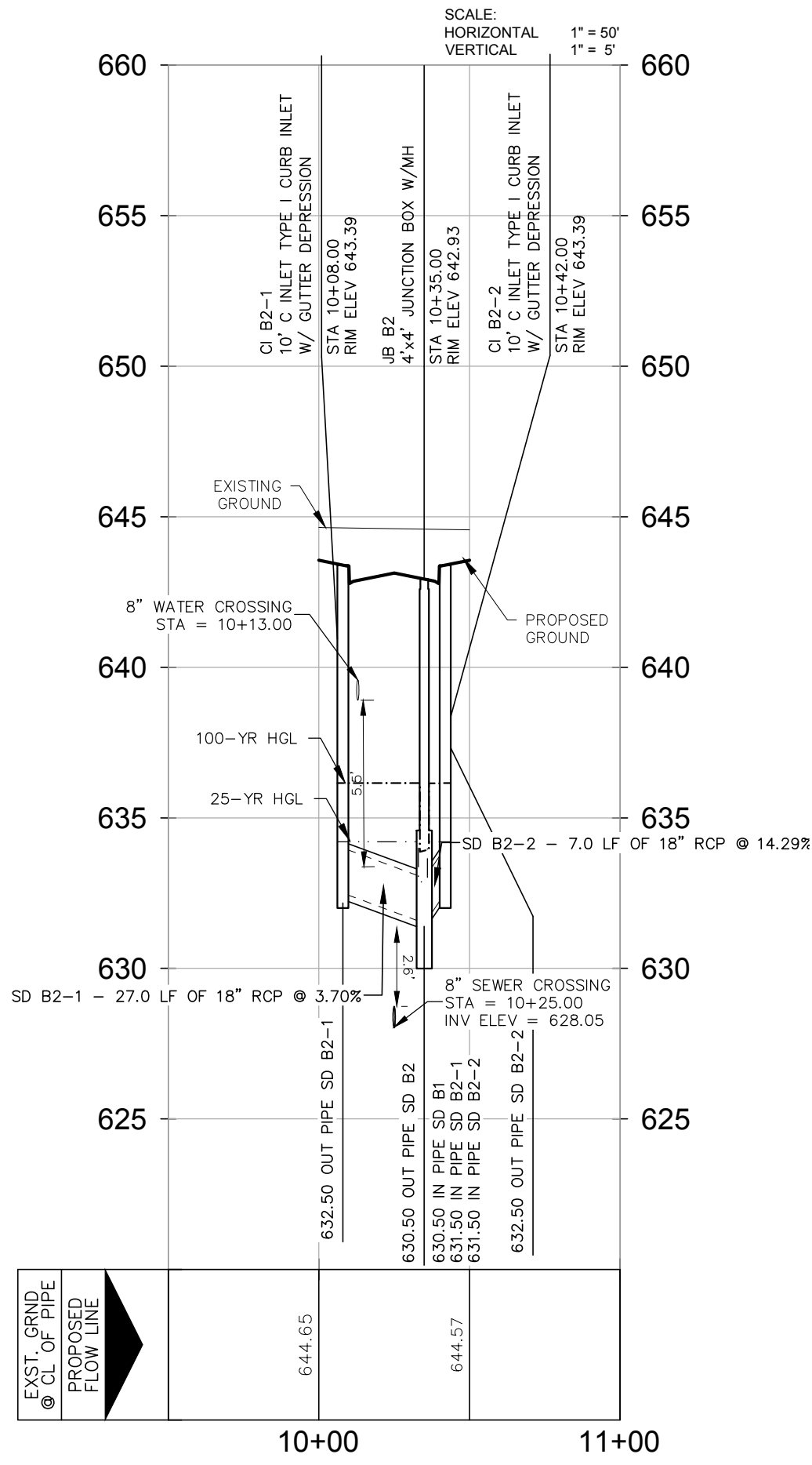
STORM DRAIN AND CULVERT MAINTENANCE

- INSPECT INLETS, JUNCTION STRUCTURES, OUTLETS AND CHANNELS THROUGH PERIODIC INSPECTION BUT NO LESS THAN EVERY 6 MONTHS TO CLEAR STRUCTURES OF OBSTRUCTIONS, DEBRIS AND STRUCTURAL INTEGRITY.

STORM DRAIN LINE B1



STORM DRAIN LINE B2



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CLEAR CREEK SUBDIVISION
UNIT-2

STORM DRAIN LINES B1 & B2

SHEET
17 OF 36

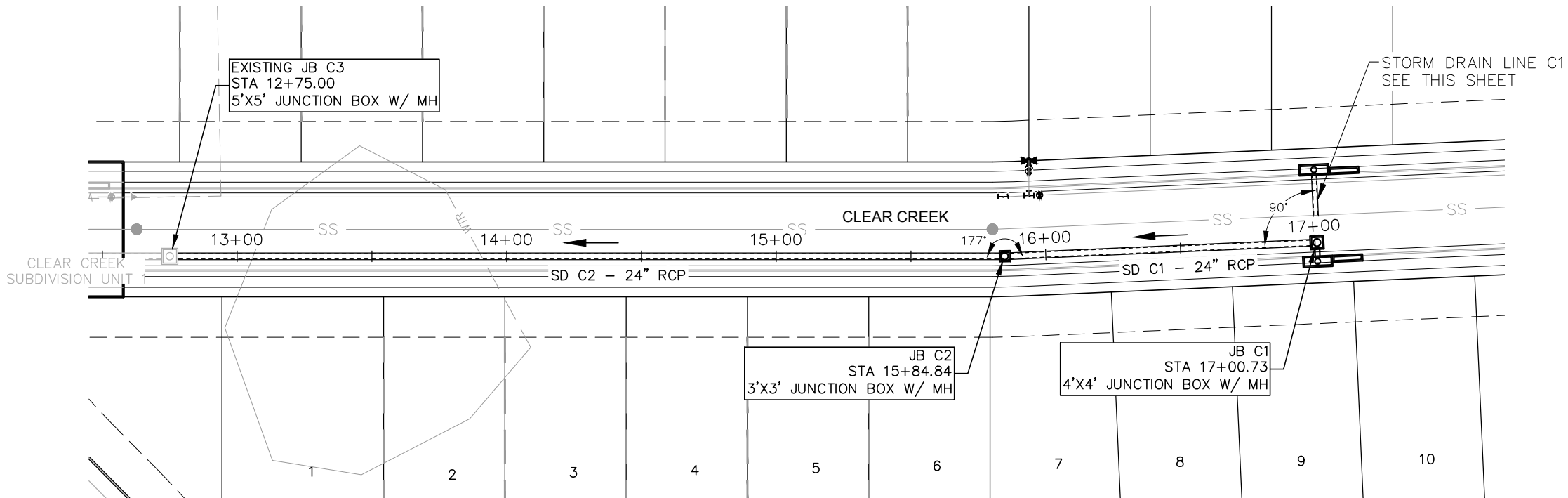
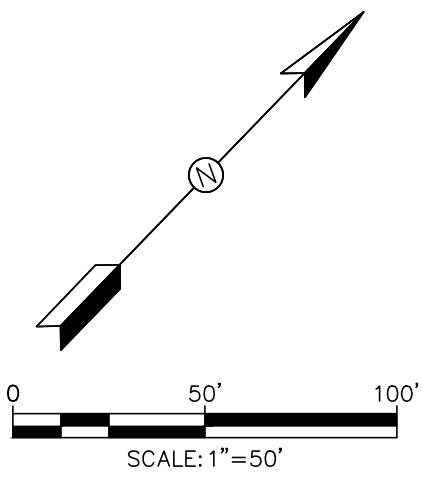
NO	DATE	ISSUES AND REVISIONS

INK

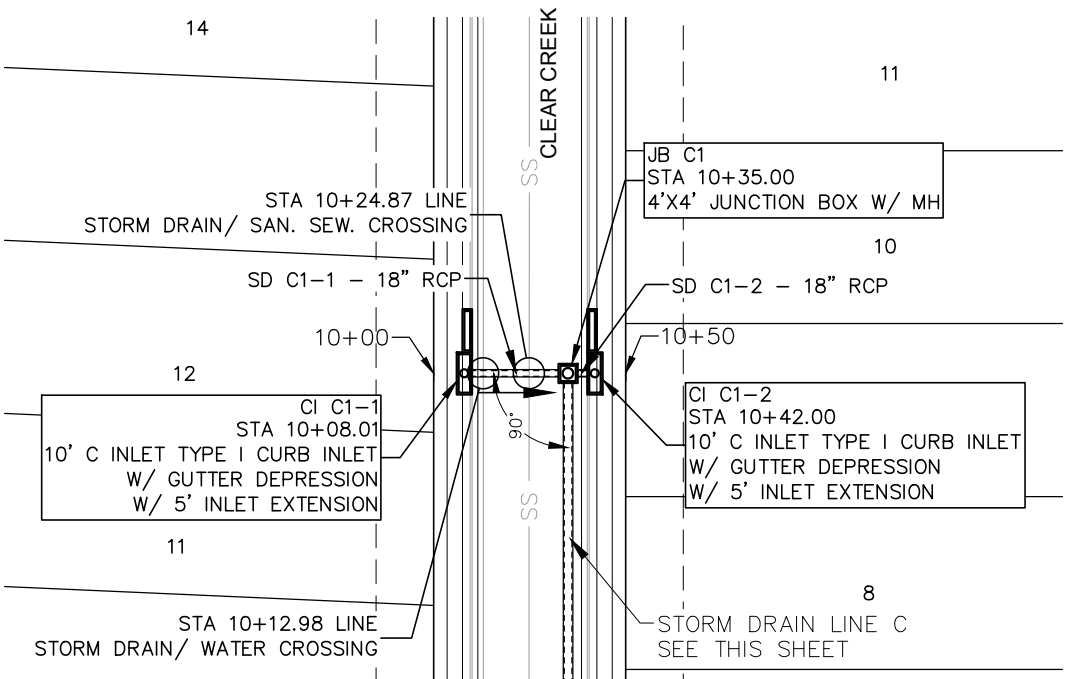
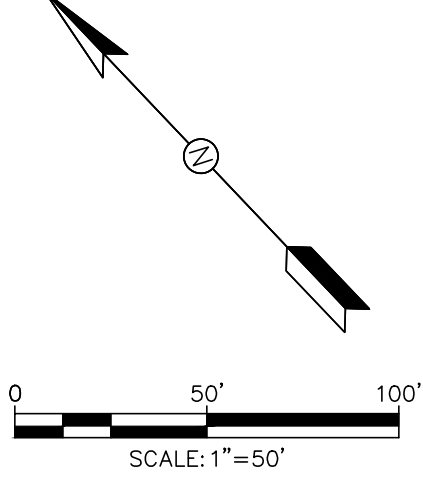
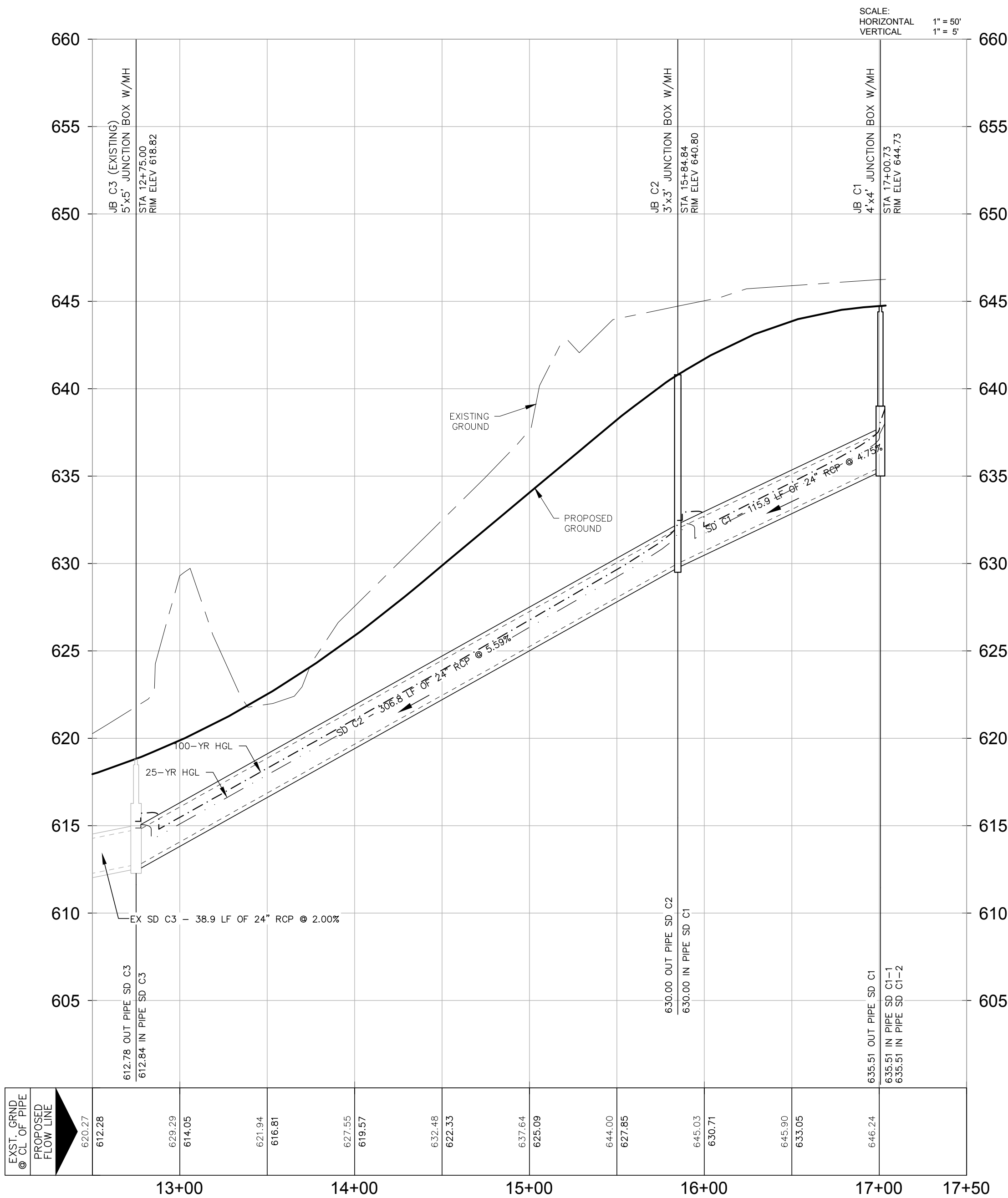
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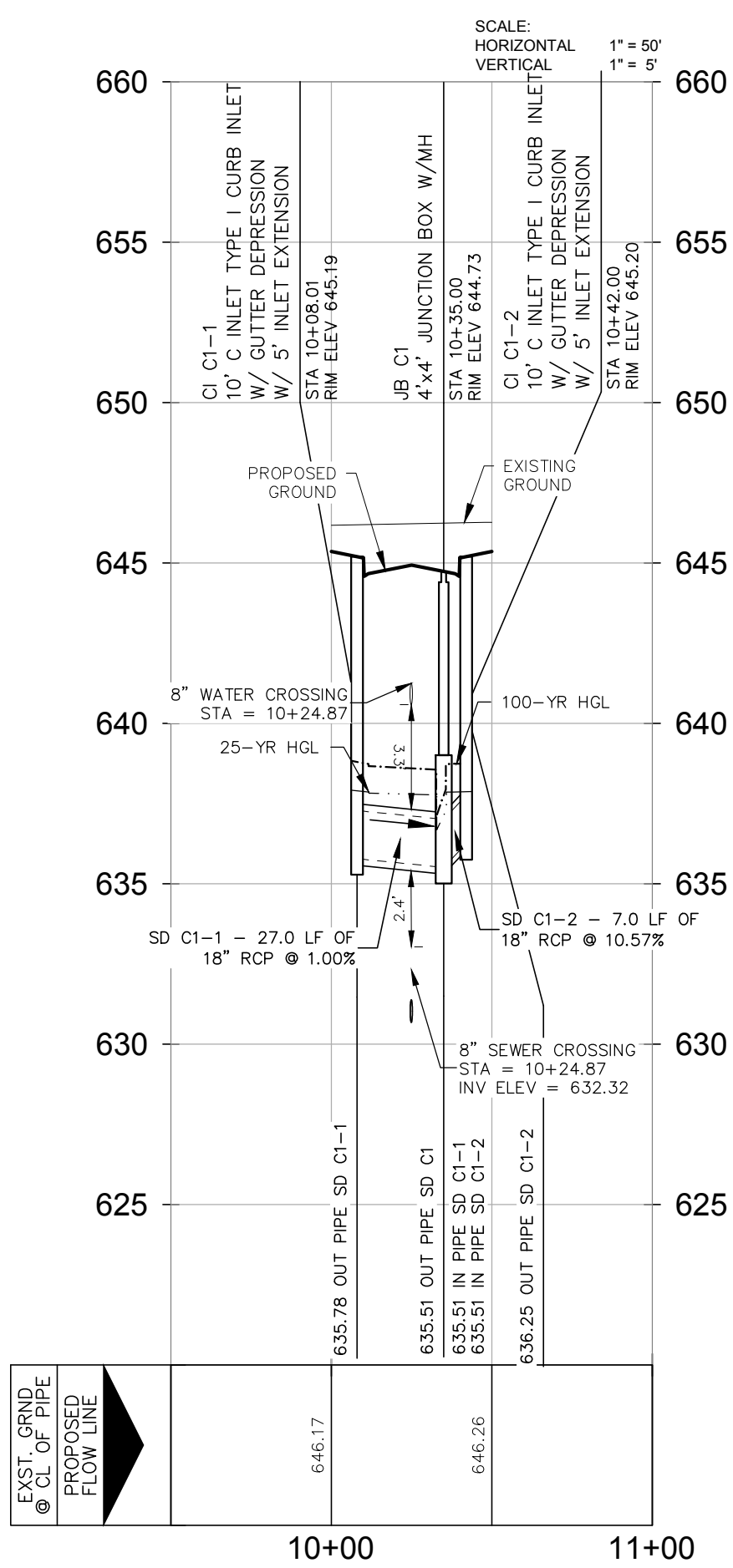
STORM DRAIN C 25-YR					
NAME	V (ft/s)	UPSTREAM 25-YR HGL	GROUND ELEV	DIFF	25-YR HGL 2' Below Gutter?
JB C3		614.86	618.82	3.96	✓
PIPE C2	14.1				
JB C2		632.09	640.79	8.70	✓
PIPE C1	13.33				
JB C1		638.2	644.71	6.51	✓
PIPE C1-1	3.17				
PIPE C1-2	11.01				
CB C1-1		638.45	645.18	6.73	✓
CB C1-2		638.22	645.26	7.04	✓



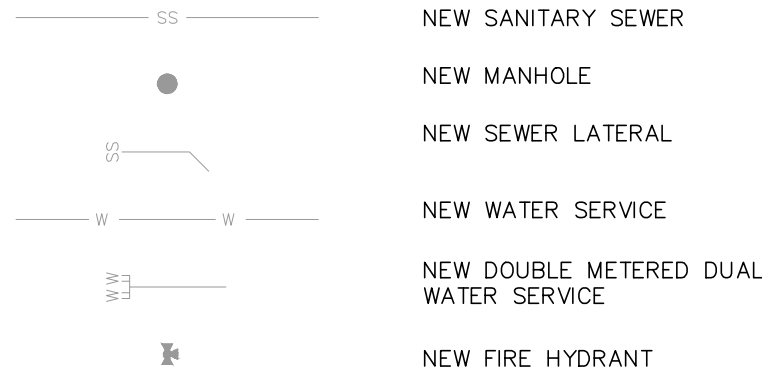
STORM DRAIN LINE C



STORM DRAIN LINE C1



LEGEND



ALL RCP TO BE CLASS IV RCP AND IS RATED FOR DIRECT TRAFFIC LOADING

STORM DRAIN AND CULVERT MAINTENANCE

- INSPECT INLETS, JUNCTION STRUCTURES, OUTLETS AND CHANNELS THROUGH PERIODIC INSPECTION BUT NO LESS THAN EVERY 6 MONTHS TO CLEAR STRUCTURES OF OBSTRUCTIONS, DEBRIS AND STRUCTURAL INTEGRITY.



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CLEAR CREEK SUBDIVISION
UNIT-2

STORM DRAIN LINE C & C1

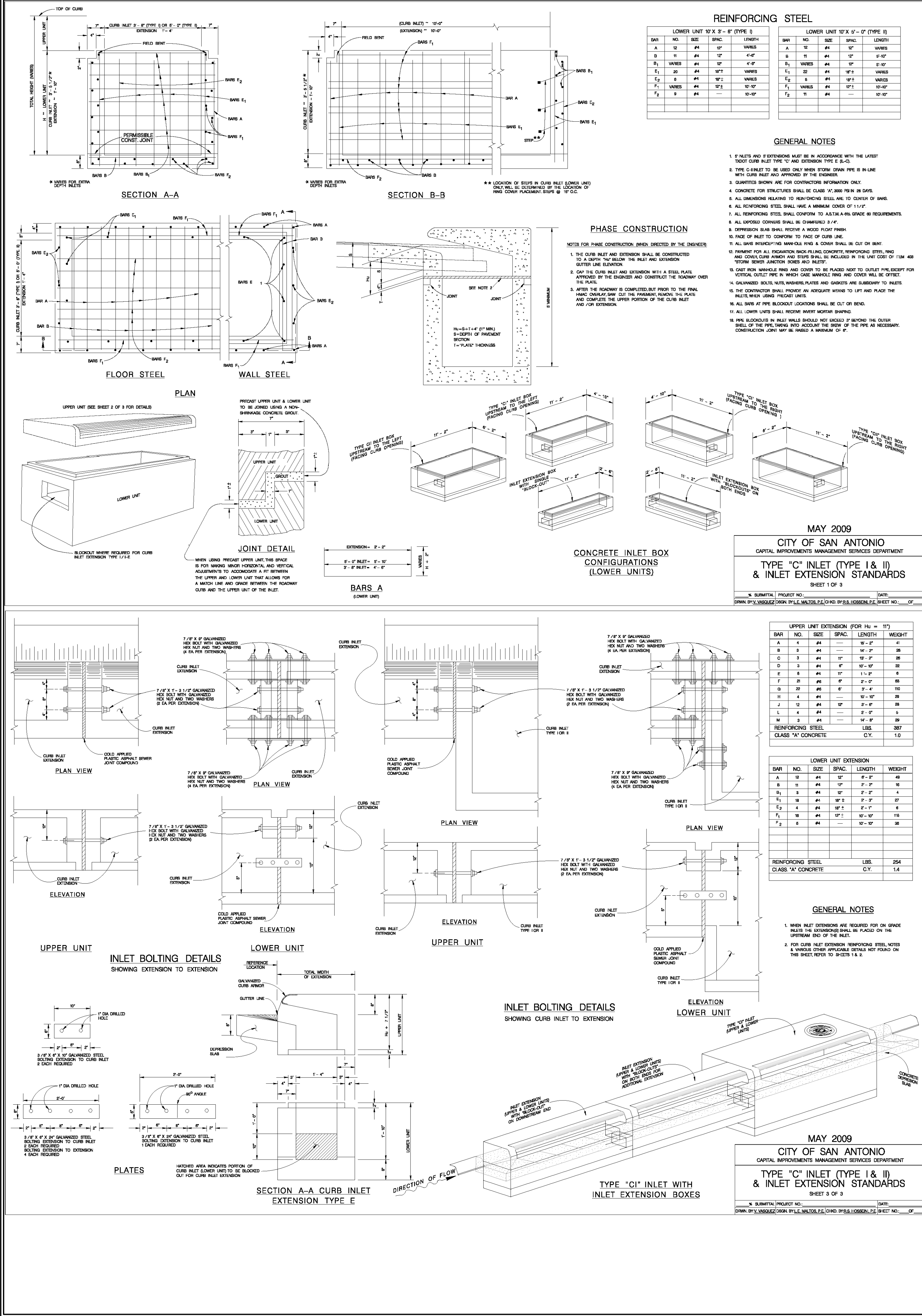
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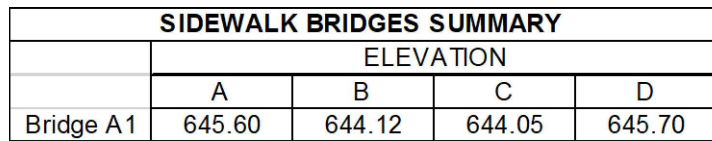
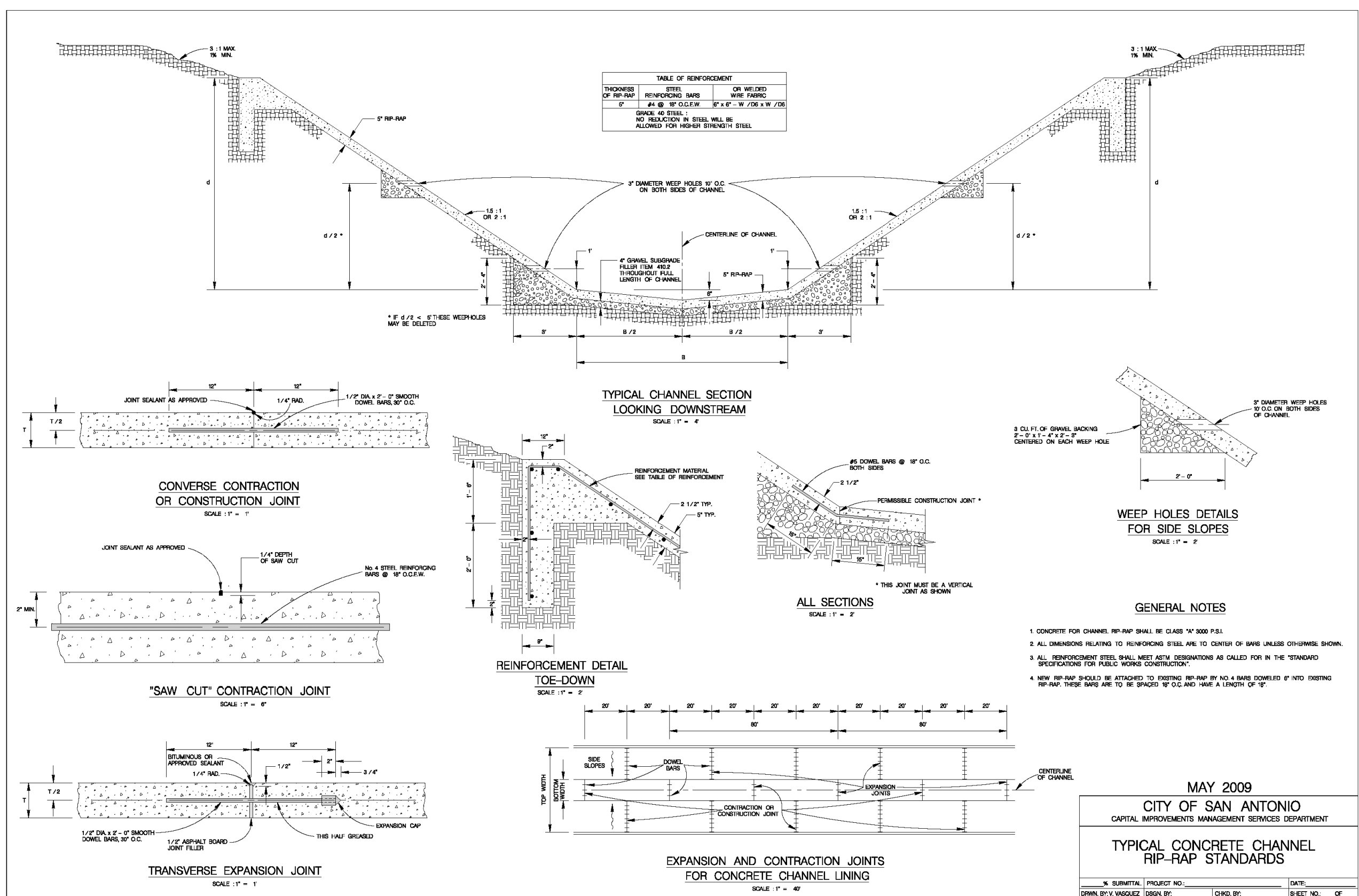
18 OF 36

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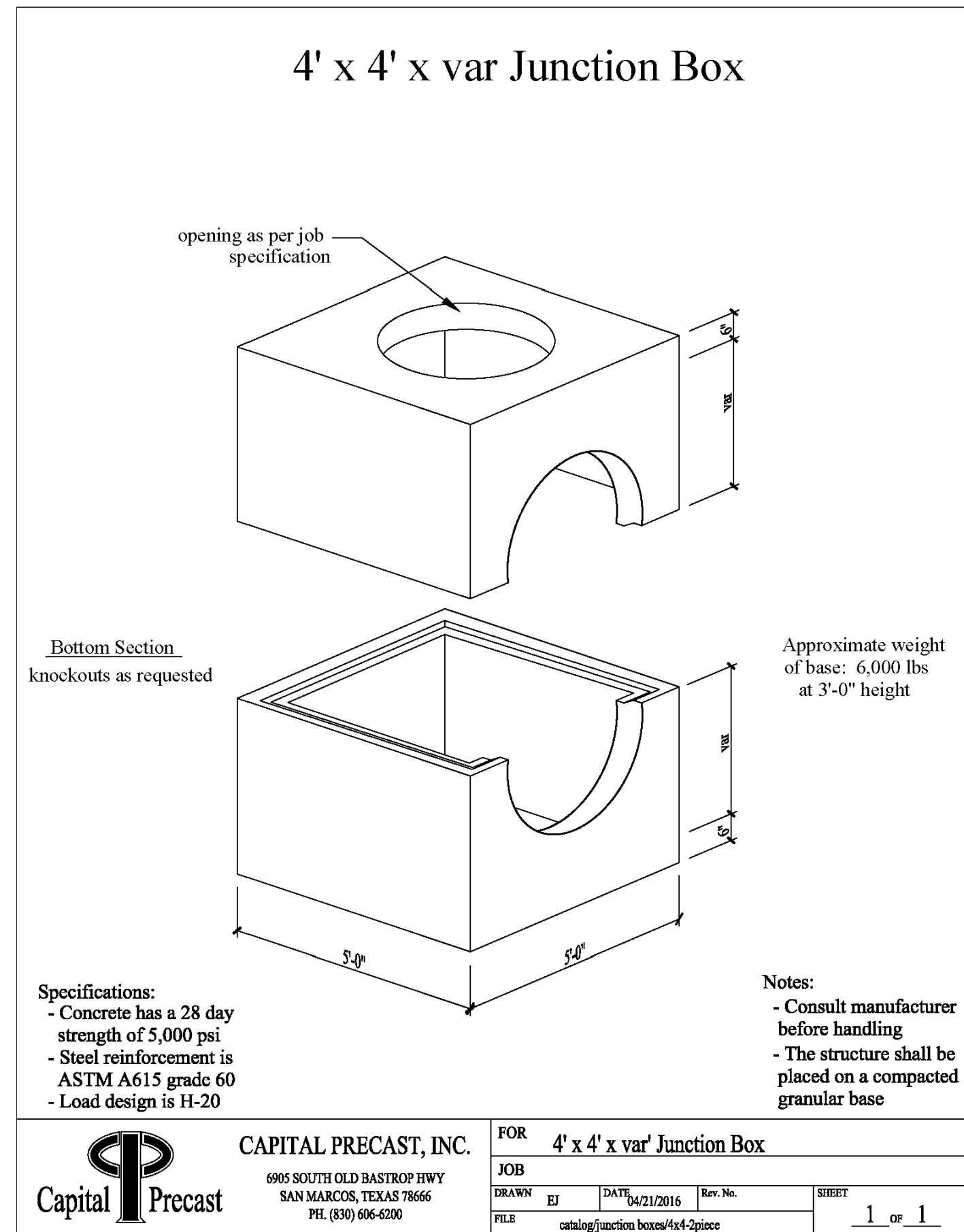
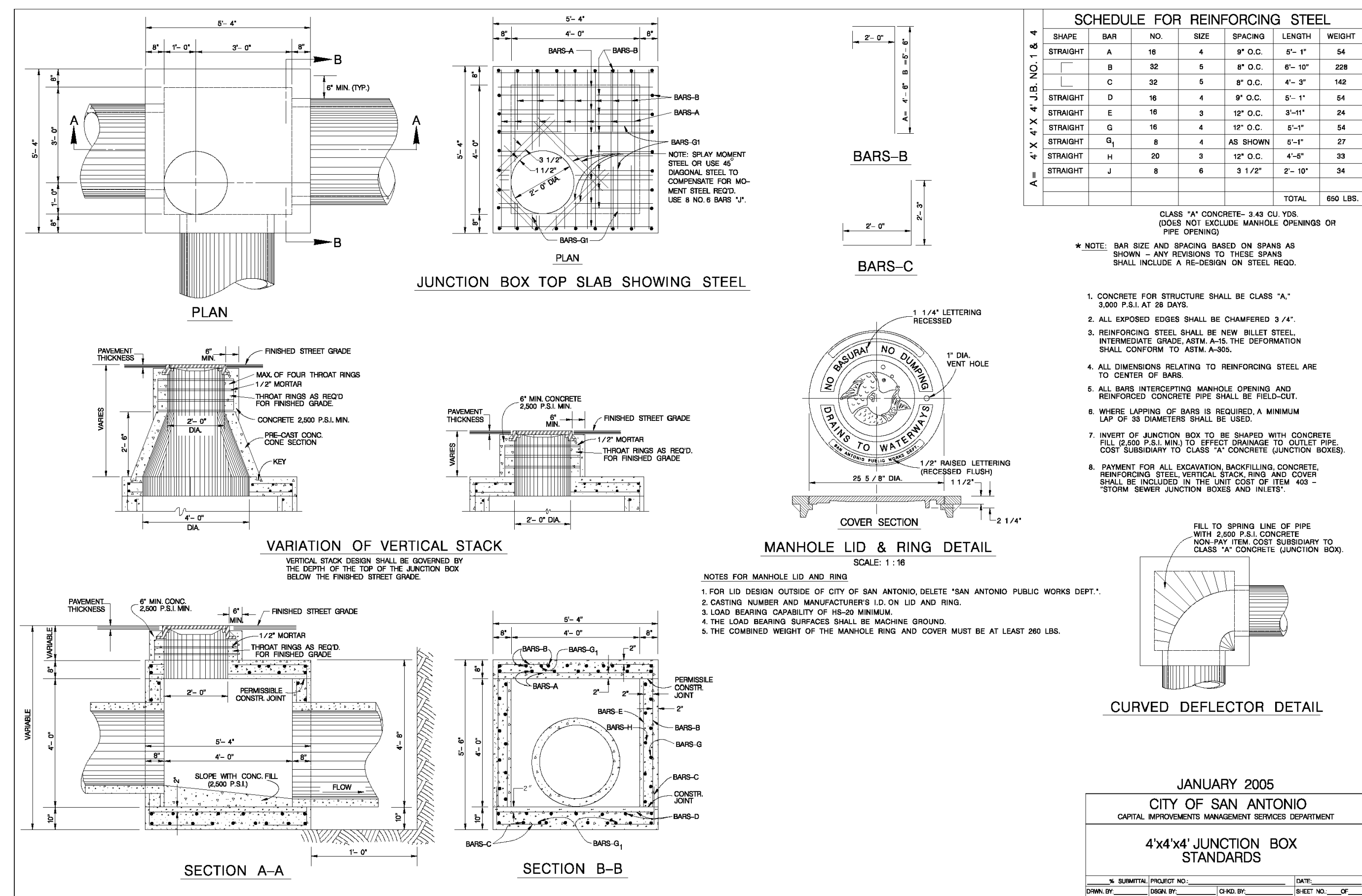
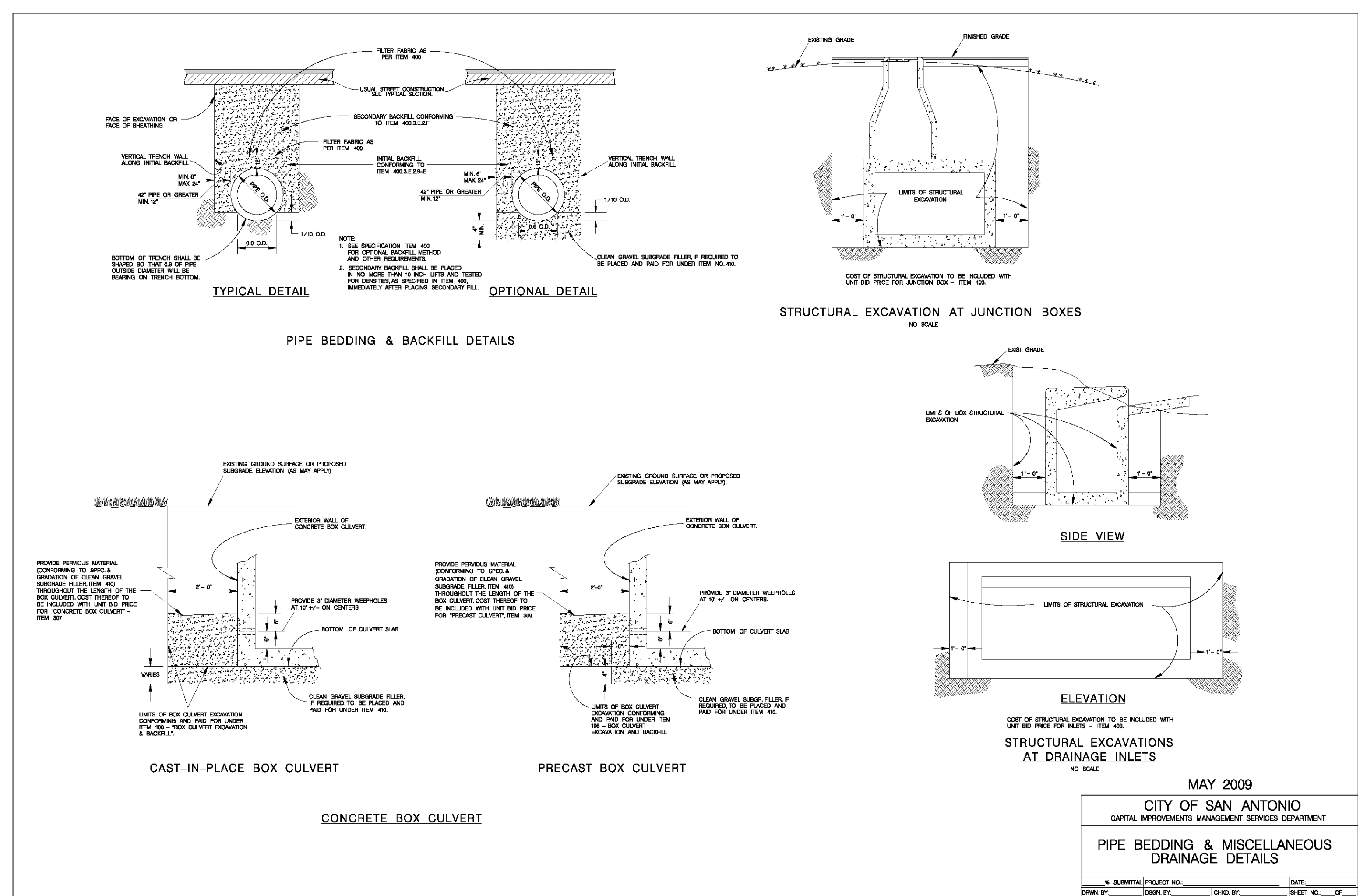
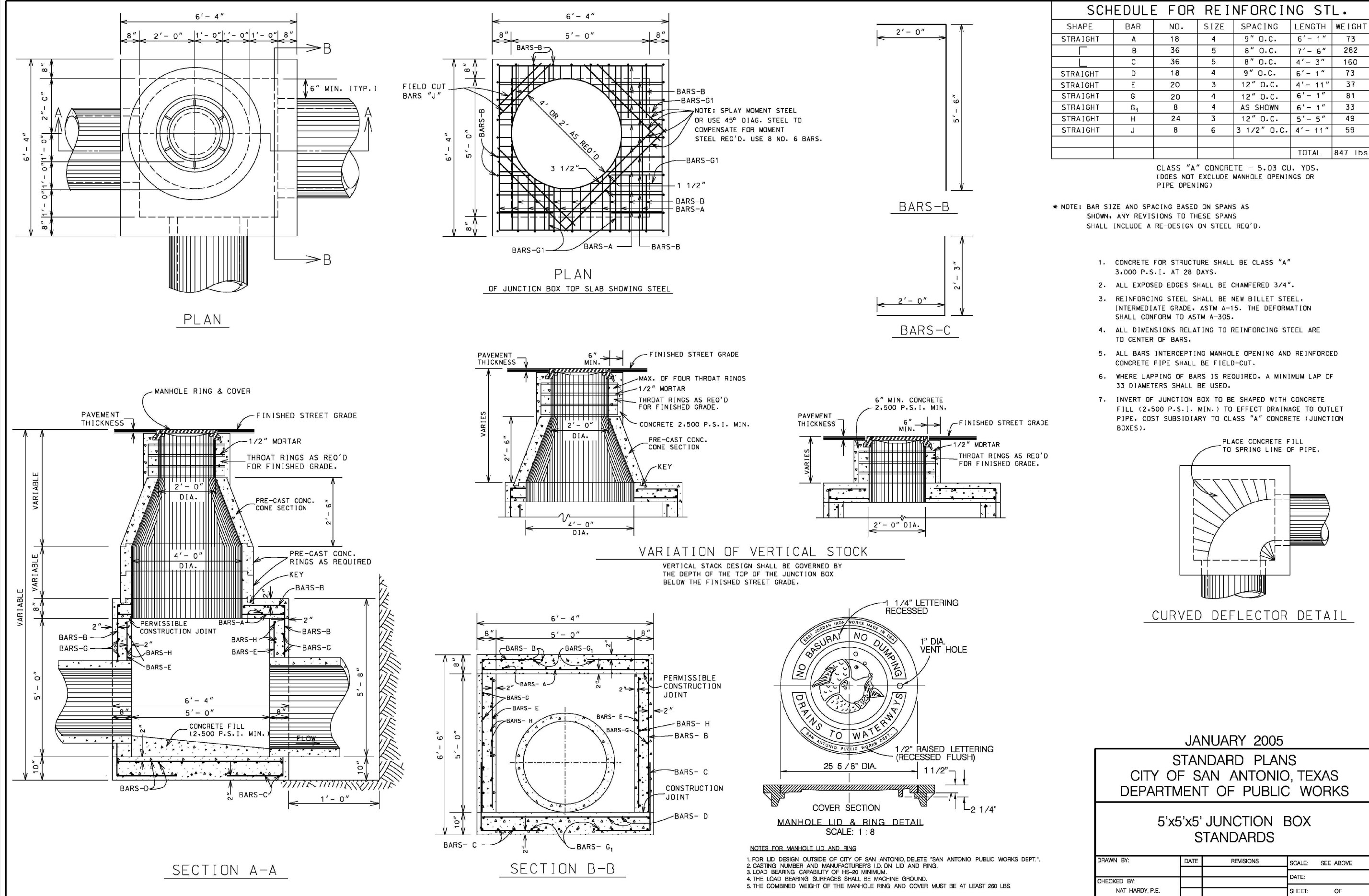




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SHEET 20 OF 36

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DRAINAGE DETAILS III

SHEET 21 OF 36

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GENERAL SPECIFICATIONS FOR SITE PREPARATION

GENERAL DESCRIPTION
THIS ITEM SHALL CONSIST OF ALL CLEARING AND PREPARATION OF LAND TOO 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 MATERIAL 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 T10-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 796.

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).

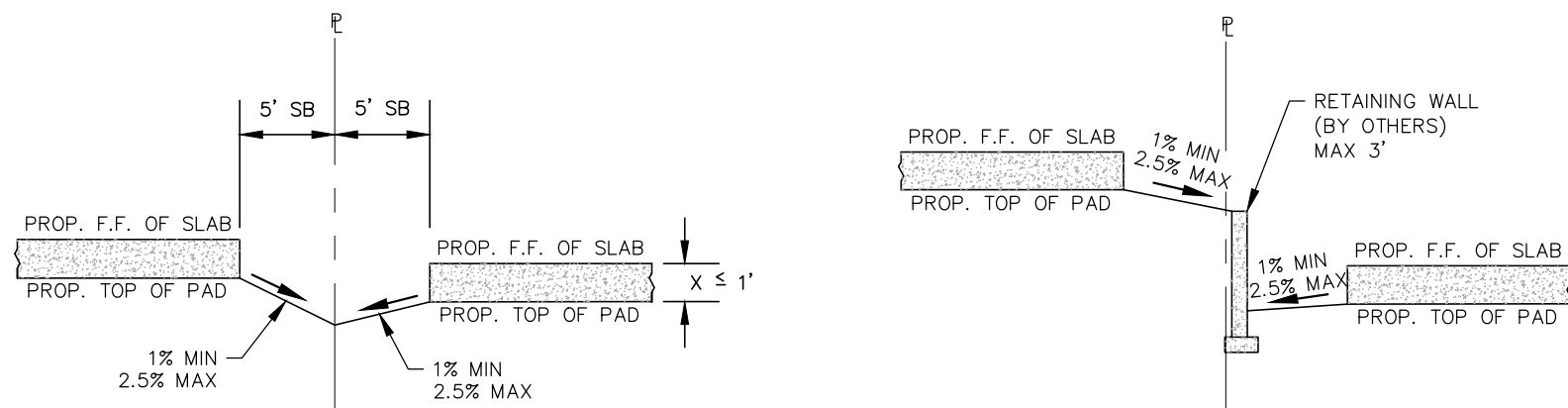
COMPACTION OF SLOPES
THE FACES OF FILL SLOPES SHALL BE COMPACTED. COMPACTION OPERATIONS SHALL BE CONTINUED UNTIL THE SLOPE FACES ARE STABLE BUT NOT TOO DENSE FOR PLANTING ON THE SLOPES. COMPACTION OF THE SLOPE FACE MAY BE DONE PROGRESSIVELY IN INCREMENTS OF THREE TO FIVE FEET (3' TO 5') IN FILL HEIGHT 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 APPROXIMATE DESIRED TIME OF TESTING. WHEN THESE TESTS 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 GEOTECHNICAL ENGINEER OR STAFF.

1. THE LAND TO BE FILLED (PREPARED SUBGRADE) SHALL BE PREPARED AND TESTED AT A FREQUENCY AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
2. 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.
3. FILL AREAS SHALL BE TESTED AT A MAXIMUM OF EACH TWELVE INCHES (12") OF FILL.
4. 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.

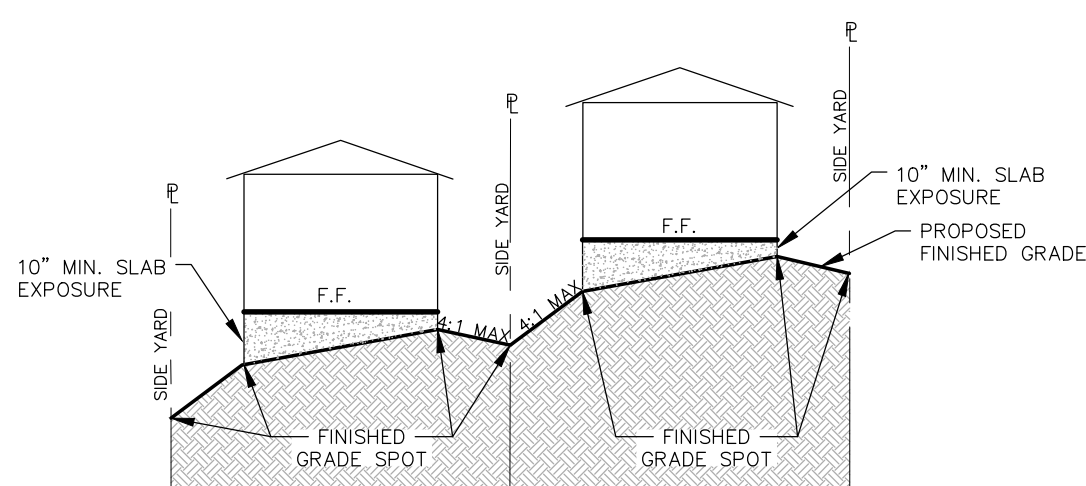
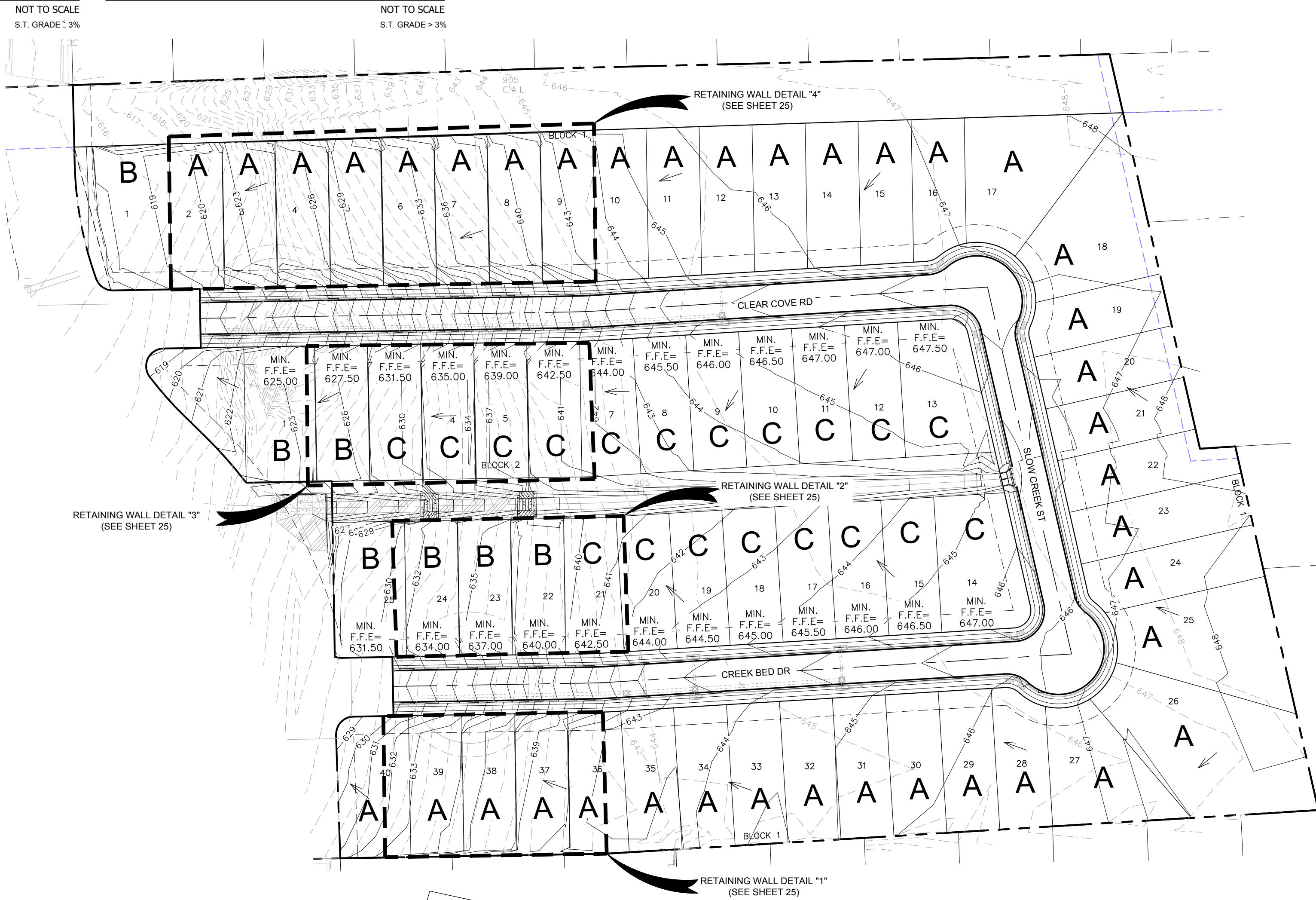
CUT/FILL LOTS
AREAS INVOLVING CUT ON THE PORTION AND FILL ON ANOTHER PORTION OF A SPECIFIC LOT SHALL BE PREPARED TO A MINIMUM DEPTH OF 6 IN., AND WILL BE THE SAME MATERIAL CLASSIFICATION AT THE SAME COMPACTION AND MOISTURE CONTENT. FIELD DENSITY TESTS SHALL BE REQUIRED ON EACH CUT/FILL LOT FOR THE PURPOSE 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, CONTRACTOR MUST RETAIN A GEOTECHNICAL ENGINEER TO PROVIDE VERIFICATION OF ALL AREAS WHICH DO NOT REQUIRE HUD 79-G. AFTER SITE GRADING IS COMPLETED, CONTRACTOR TO RETAIN GEOTECHNICAL ENGINEER TO PROVIDE THE OWNER A 79-G LETTER.

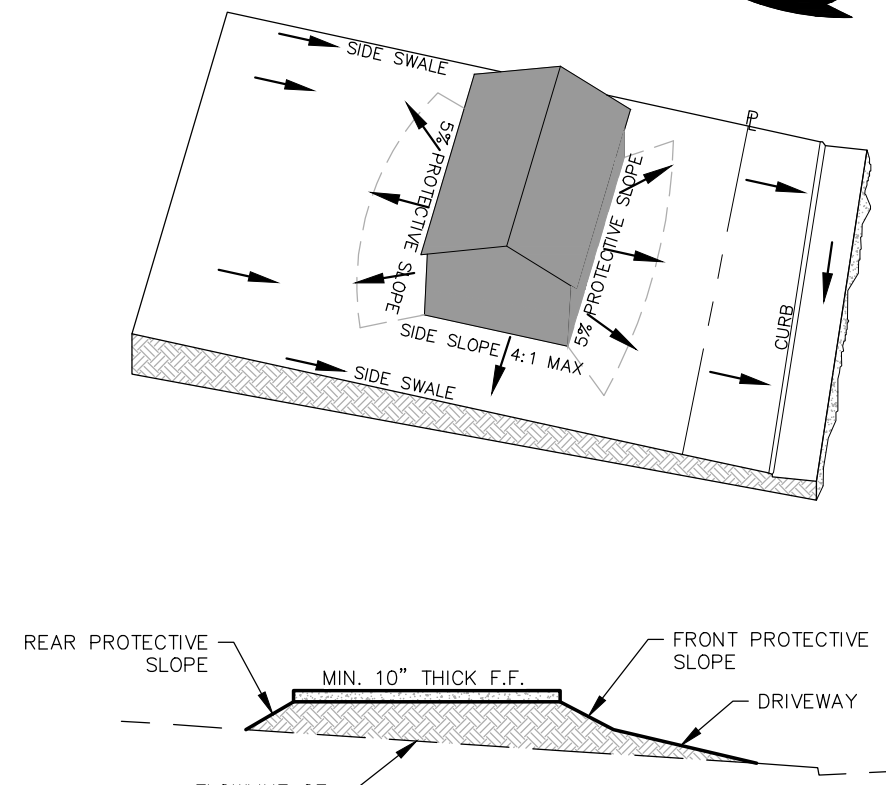


TYPICAL SIDE LOT GRADING DETAIL

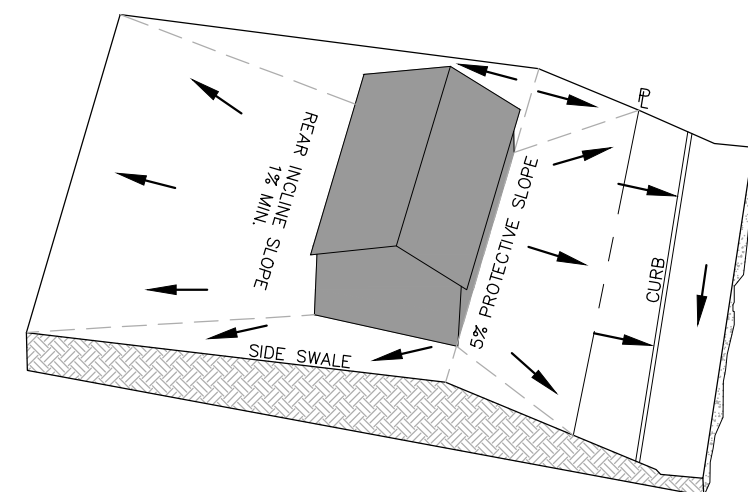
NON TYPICAL SIDE LOT GRADING DETAIL



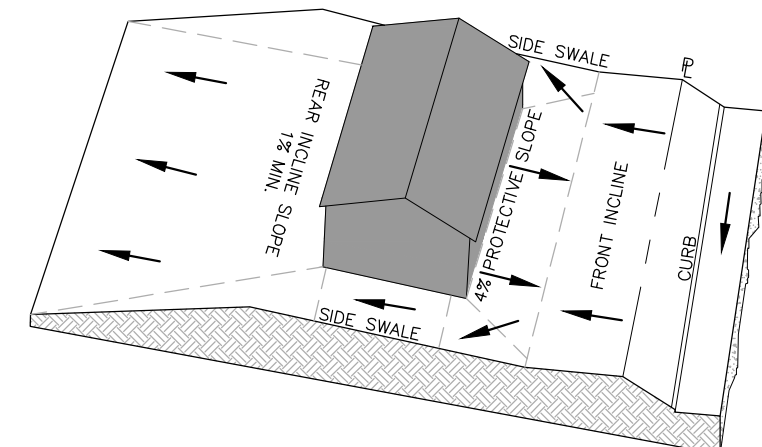
TYPICAL SIDE YARD GRADING



TYPE A LOT GRADING



TYPE B LOT GRADING



TYPE C LOT GRADING

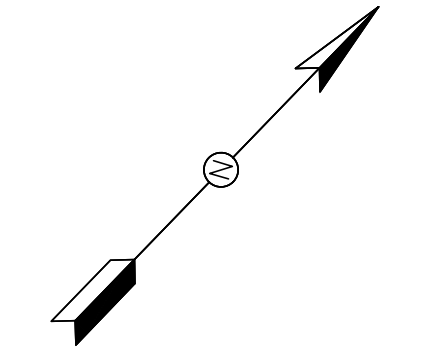
GRADING NOTES:

1. STRIPPING OF VEGETATION FROM PROJECT SITES SHALL BE PHASED SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST POSSIBLE PERIOD OF TIME PER THE NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL SEC.12.2(N).
2. GRADING SHOWN ON THIS GRADING PLAN IS FOR MASS GRADING PURPOSES ONLY. FINAL GRADING AROUND HOMES, SETTING FINISHED FLOOR ELEVATIONS, ETC. WILL BE DONE AS PART OF EACH BUILDING PERMIT PROCESSED FOR THE INDIVIDUAL HOMES.
3. IN ALL FILL AREAS, LOOSE OR ORGANIC MATERIAL SHALL BE STRIPPED AND REMOVED FROM THE SITE UPON WHICH THE FILL IS TO BE PLACED AND THE AREA SHALL BE BROUGHT TO THE PROPER GRADE GRADE WITH ADEQUATE MOISTURE CONTENT AND COMPACTED TO NOT LESS THAN 90% DENSITY.
4. CONTRACTOR TO INSURE THAT ALL LOTS FILLED WILL HAVE POSITIVE DRAINAGE TO PREVENT ANY PONDING OF WATER AND PROVIDE A MINIMUM FINAL GRADE OF 1.2% WITHIN THE LOT.
5. CONTRACTOR TO CONTACT OWNER PRIOR TO ANY LOT FILLING TO DETERMINE IF TREES WITHIN THE FILL AREA CAN BE SAVED.
6. ALL LARGE ROCKS 10" OR LARGER SHALL BE KEPT OUT OF THE FILL SITE UNLESS INSTRUCTED BY THE OWNER TO PLACE SUCH ROCKS ON THE SITE.
7. CONTRACTOR TO ENSURE POSITIVE DRAINAGE FOR ALL GRADING WITHIN LIMITS OF PROJECT.
8. FINISHED FLOOR ELEVATION FOR HOMES WILL BE A MINIMUM OF 12" ABOVE THE TOP OF CURB FRONTING THE LOT, AND ON C LOTS' DRIVEWAY SWALE FLOWLINE WILL BE A MINIMUM OF 6" BELOW THE FINISHED FLOOR OF THE HOUSE.

NON TYPICAL "A" LOT GRADING DETAIL

NON TYPICAL "C" LOT GRADING DETAIL

Project Control Points				
Point #	Raw Description	Elevation	Northing	Easting
1	CP MAG	611.93	13800057.6500	2256494.0800
2	CP MAG	613.02	13800266.7400	2256697.8900
3	CP IPSC	614.13	13800525.5000	2256968.8800
10	CP MAG	630.95	13800177.3290	2257655.6480
11	CP MAG	640.03	13800373.5850	2257871.0930
50	CP 60D	643.66	13800469.8320	2257779.9810

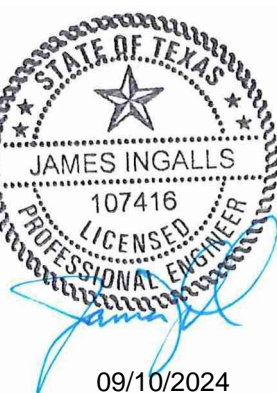


0 70' 140'

SCALE: 1"=70'

LEGEND

- 900 — PROPOSED CONTOUR
- - - 900 - - - EXISTING CONTOUR
- ← DRAINAGE FLOW ARROW
- . - . - GRADE BREAK/SWALE



BRIGHTLAND HOMES
9601 MCALLISTER FREEWAY, STE 600,
SAN ANTONIO, TX 78216

CLEAR CREEK SUBDIVISION
UNIT-2

GRADING PLAN

SHEET
22 OF **36**

NO DATE ISSUES AND REVISIONS



2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

GENERAL SPECIFICATIONS FOR SITE PREPARATION

GENERAL DESCRIPTION
THIS ITEM SHALL CONSIST OF ALL CLEARING AND PREPARATION OF LAND TOO 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 MATERIAL 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 T1D-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).

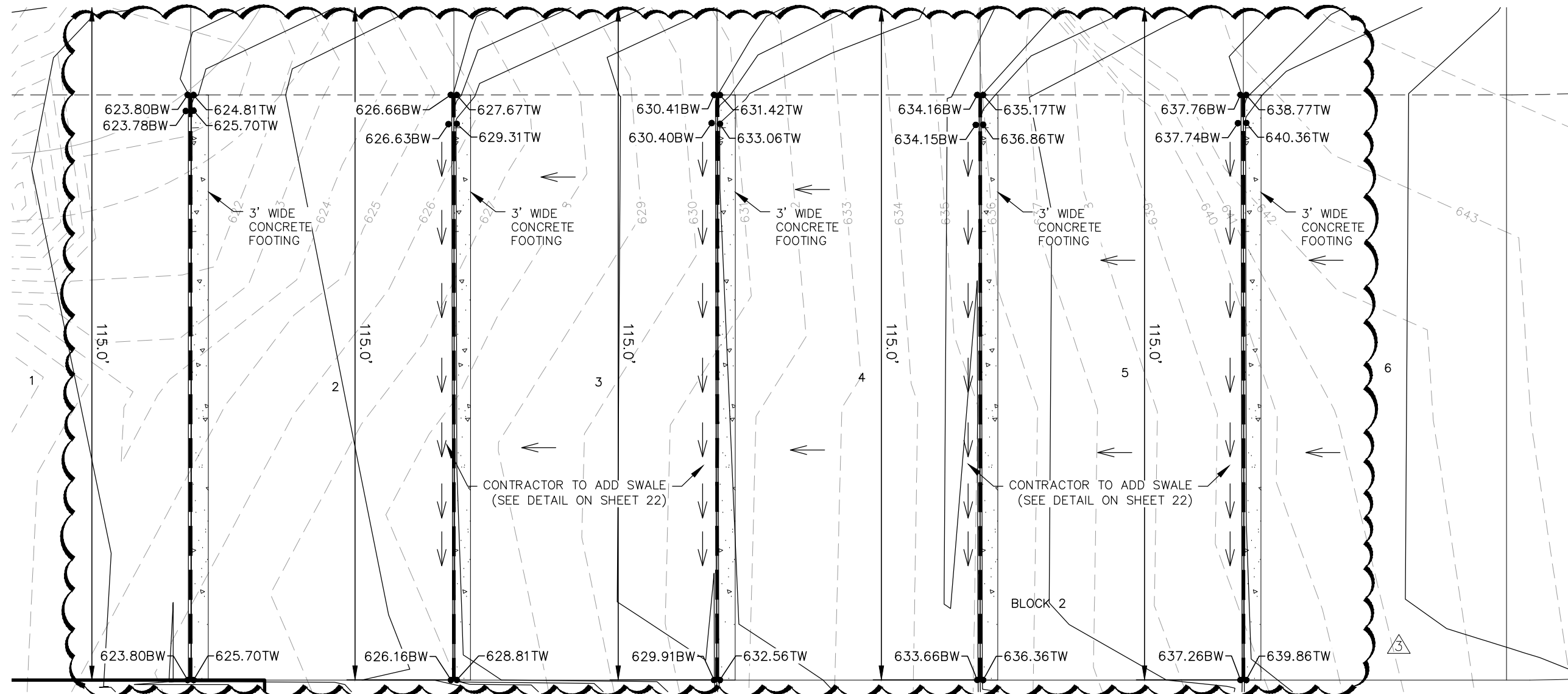
COMPACTION OF SLOPES
THE FACES OF FILL SLOPES SHALL BE COMPACTED. COMPACTION OPERATIONS SHALL BE CONTINUED UNTIL THE SLOPE FACES ARE STABLE BUT NOT TOO DENSE FOR PLANTING ON THE SLOPES. COMPACTION OF THE SLOPE FACE MAY BE DONE PROGRESSIVELY IN INCREMENTS OF THREE TO FIVE FEET (3' TO 5') IN FILL HEIGHT 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 APPROXIMATE DESIRED TIME OF TESTING. WHEN THESE TESTS 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 GEOTECHNICAL ENGINEER OR STAFF.

1. THE LAND TO BE FILLED (PREPARED SUBGRADE) SHALL BE PREPARED AND TESTED AT A FREQUENCY AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
2. 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.
3. FILL AREAS SHALL BE TESTED AT A MAXIMUM OF EACH TWELVE INCHES (12") OF FILL.
4. 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.

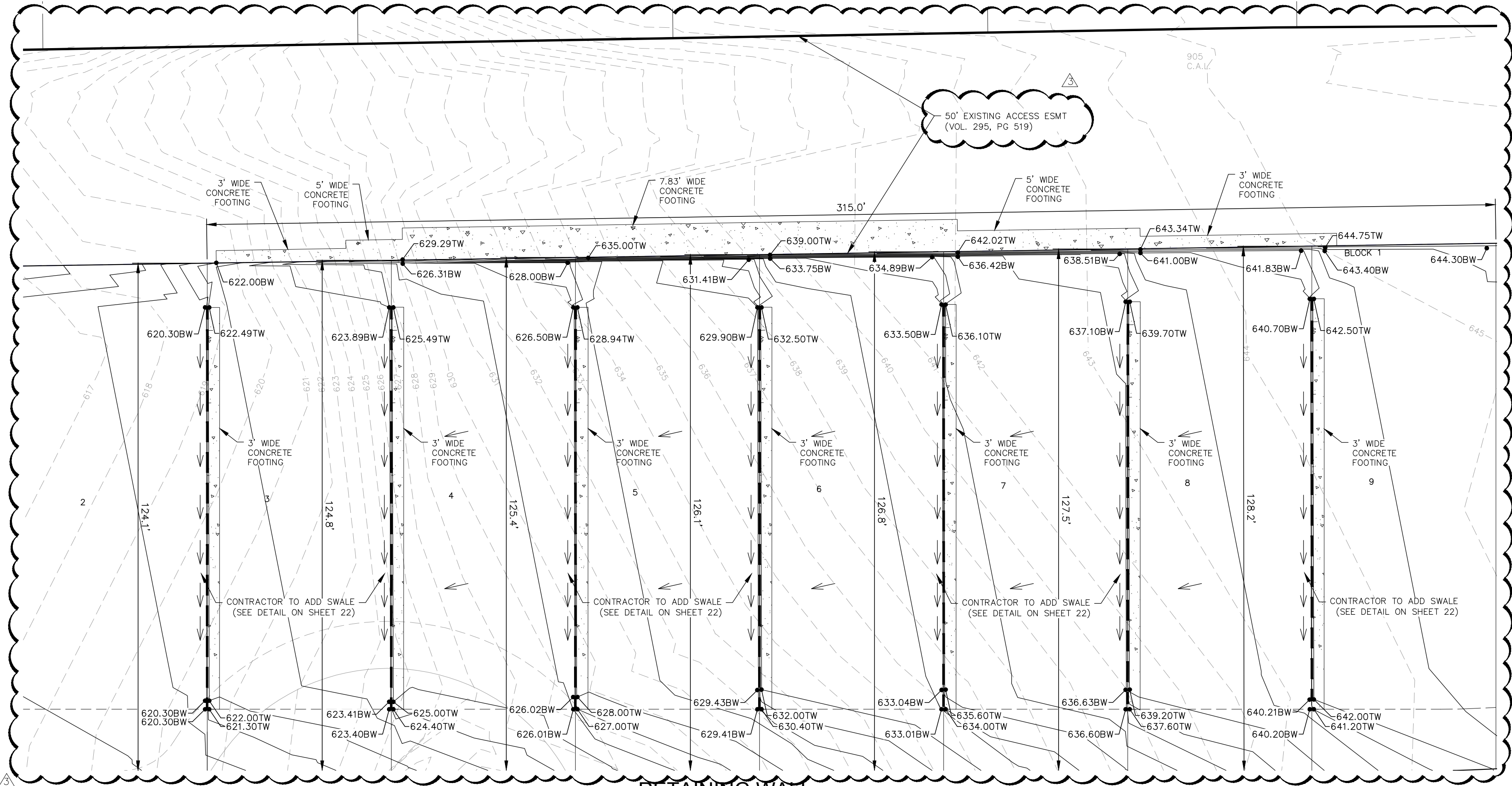
CUT/FILL LOTS
AREAS INVOLVING CUT ON THE PORTION AND FILL ON ANOTHER PORTION OF A SPECIFIC LOT SHALL BE PREPARED TO A MINIMUM DEPTH OF 6 IN., AND WILL BE THE SAME MATERIAL CLASSIFICATION AT THE SAME COMPACTION AND MOISTURE CONTENT. FIELD DENSITY TESTS SHALL BE REQUIRED ON EACH CUT/FILL LOT FOR THE PURPOSE 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, CONTRACTOR MUST RETAIN A GEOTECHNICAL ENGINEER TO PROVIDE VERIFICATION OF ALL AREAS WHICH DO NOT REQUIRE HUD 79-G. AFTER SITE GRADING IS COMPLETED, CONTRACTOR TO RETAIN GEOTECHNICAL ENGINEER TO PROVIDE THE OWNER A 79-G LETTER.



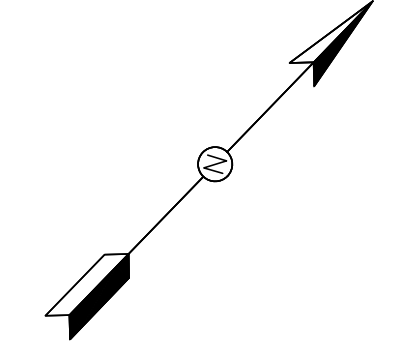
RETAINING WALL
GRADING DETAIL "3"
SCALE: 1" = 20'

NOTE:
SEE NON TYPICAL "A" LOT GRADING DETAIL SHEET 22
ALL WALLS SHOWN ARE 3' OR LESS PLEASE SEE DETAIL 3 SHEET 25



RETAINING WALL
GRADING DETAIL "4"
SCALE: 1" = 20'

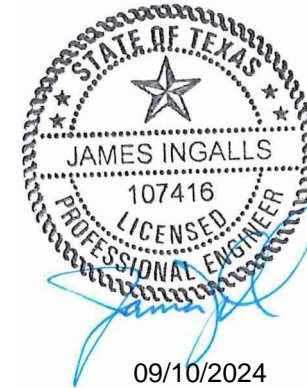
NOTE:
SEE NON TYPICAL "C" LOT GRADING DETAIL SHEET 22
ALL WALLS SHOWN ARE 3' OR LESS PLEASE SEE DETAIL 3 SHEET 25



0 30' 60'
SCALE H=30'

LEGEND

- 900 PROPOSED CONTOUR
- 900 EXISTING CONTOUR
- DRAINAGE FLOW ARROW
- GRADE BREAK/SWALE
- SWALE
- RETAINING WALL



BRIGHTLAND HOMES
9601 MCALLISTER FREEWAY, STE 600,
SAN ANTONIO, TX 78216

CLEAR CREEK SUBDIVISION
UNIT-2

GRADING DETAILS II

SHEET
24 OF 36

NO	DATE	ISSUES AND REVISIONS
1	07-15-2024	REVISED PER CITY OF NEW BRAUNFELS COMMENTS
2	08-13-2024	REVISED PER CONB COMMENTS

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NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

GENERAL NOTES:

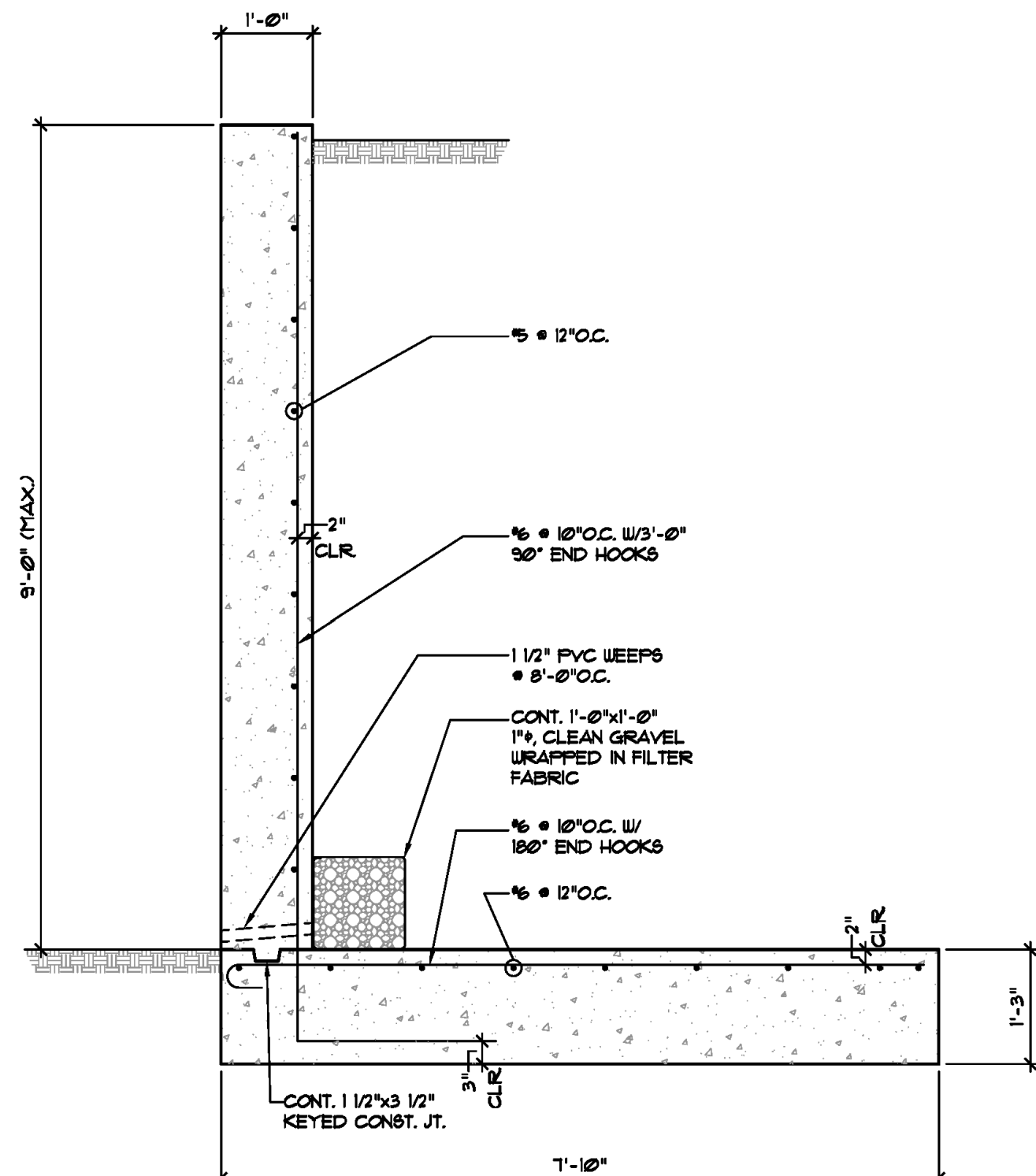
- THIS STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE AS ADOPTED AND AMENDED BY THE CITY OF SAN ANTONIO.
- THE USE OF REPRODUCTIONS OF THESE CONTRACT DRAWINGS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREIN AS CORRECT, AND OBLIGATES HIMSELF TO ANY AND ALL EXPENSES, REAL OR IMPLIED ARISING FROM SUCH ACCEPTANCE. THE CONTRACTOR SHALL MAINTAIN THESE DRAWINGS AT A CURRENT STATUS, INCLUDING ALL ADDENDA AND REVISIONS.
- EXPANSION JOINTS IN WALLS AND FOOTINGS SHALL BE PROVIDED SO THAT NO LENGTH OF WALL IS GREATER THAN 100 FEET BETWEEN EXPANSION JOINTS. EXPANSION JOINTS OCCUR AT ALL "T" INTERSECTIONS. REFER TO DETAILS 4/5/1 AND 6/6/1.

CONCRETE/REINFORCING NOTES:

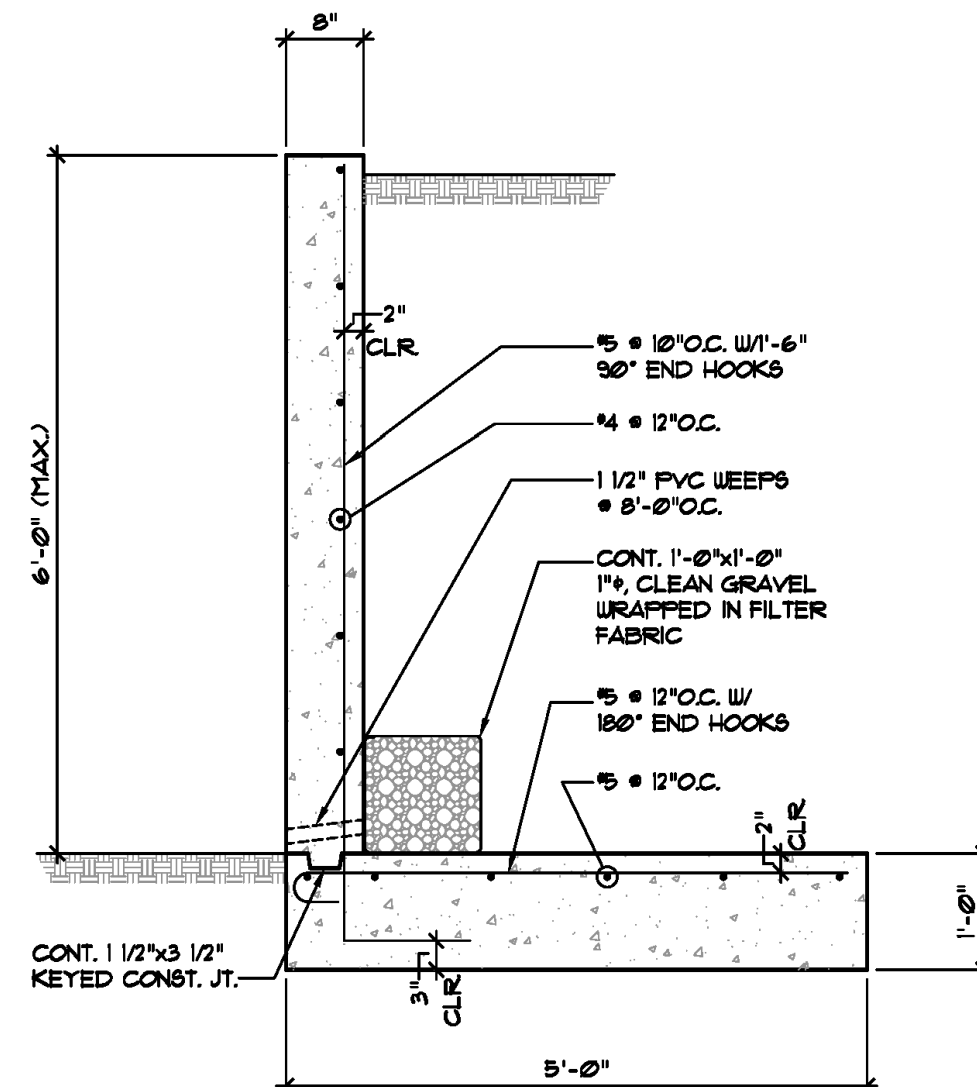
- CONCRETE SHALL BE LABORATORY DESIGNED TO DEVELOP A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI FOR DRILLED PIERS. USE OF FLY ASH WILL BE PERMITTED UP TO 20% CEMENT REPLACEMENT BY WEIGHT.
- CONCRETE MIX DESIGN SHALL MEET THE FOLLOWING REQUIREMENTS:
 - CEMENT TYPE: ASTM C150, TYPE I (5 BAGS MIN. FOR 3000 PSI)
 - FLY ASH: ASTM C618, TYPE C OR F
 - AGGREGATES: ASTM C33
 - SUMP LIMITS: NO LESS THAN 3", NOT MORE THAN 5"GENERAL CONTRACTOR SHALL SUBMIT WRITTEN REPORT FOR THE PROPOSED MIX DESIGN AT LEAST 14 WORK DAYS PRIOR TO START OF CONCRETE WORK.
- GENERAL CONTRACTOR IS TO EMPLOY A TESTING LABORATORY TO PERFORM SAMPLING TESTING DURING CONCRETE PLACEMENT AS FOLLOWS:
 - AGGREGATES: ASTM C33, ONE TEST THE FIRST DAY
 - COMPRESSIVE STRENGTH: ASTM C39, ONE SET OF 3 CYLINDERS, FOR EACH 150 CUBIC YARDS OF CONCRETE. TWO CYLINDERS TESTED AT 1 DAYS, TWO TESTS AT 28 DAYS, REMAINING ONE TO BE TESTED AT 56 DAYS IF NECESSARY.
 - SUMP: ASTM C143, AT LEAST TWO TEST SHALL BE MADE RANDOMLY DURING EACH DAY OF PLACEMENT.
- REINFORCING STEEL SHALL BE FROM DOMESTIC, NEW BILLET AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615. ALL REINFORCING STEEL SHALL BE GRADE 60.
- ALL ITEMS EMBEDDED IN CONCRETE MUST BE TIED AND SECURED PRIOR TO PLACEMENT OF CONCRETE.
- MECHANICAL VIBRATOR, HAND RODDING AND TAMPING MUST BE USED TO CONSOLIDATE CONCRETE AND TO INSURE THAT CONCRETE IS WORKED AROUND REINFORCEMENT, OTHER EMBEDDED ITEMS AND INTO FORMS.
- ABSOLUTELY NO WELDING OF REINFORCEMENT BARS OR TORCHING TO BEND REINFORCEMENT BARS SHALL BE ALLOWED WITHOUT THE SPECIFIC APPROVAL OF THE STRUCTURAL ENGINEER.
- DETAILING OF REINFORCEMENT BARS AND ACCESSORIES SHALL BE IN ACCORDANCE WITH LATEST ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 318). BAR SPLICES SHALL BE A LENGTH EQUAL TO A MINIMUM OF 55 BAR DIAMETERS.
- LOCATIONS OF CONSTRUCTION JOINTS IN MONOLITHIC CONCRETE SHALL BE APPROVED BY THE STRUCTURAL ENGINEER.

SHOP DRAWINGS AND FIELD VISITS

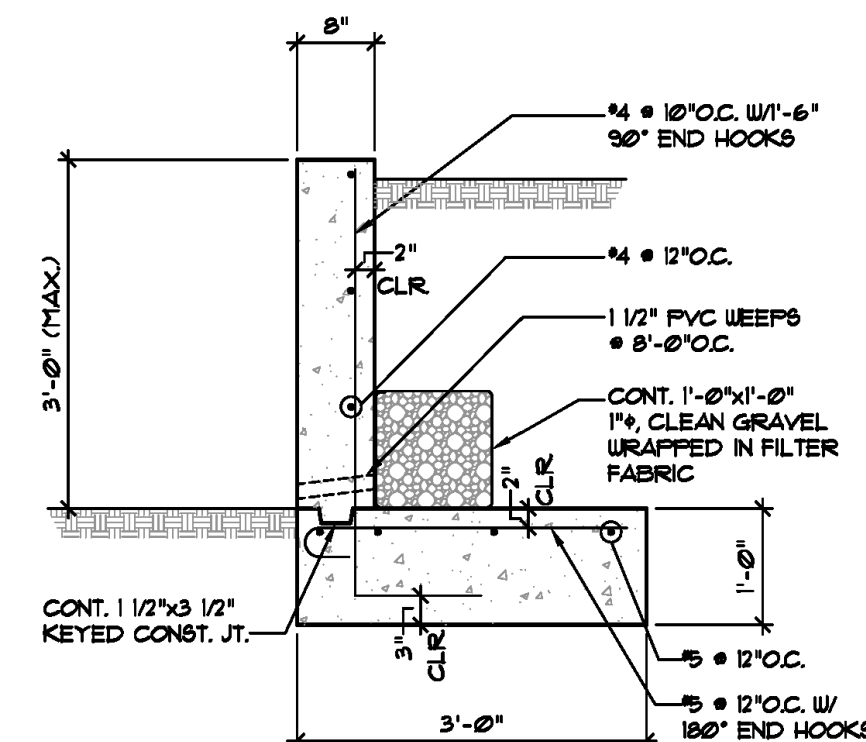
- THE STRUCTURAL ENGINEER OF RECORD WILL REVIEW SHOP DRAWINGS FOR THE LIMITED PURPOSE OF CHECKING FOR GENERAL CONFORMANCE WITH INFORMATION GIVEN AND THE DESIGN CONCEPT EXPRESSED IN THE CONTRACT STRUCTURAL DOCUMENTS. SUBMITTALS REQUIRED FOR THIS PROJECT INCLUDE, REINFORCING AND CONCRETE MIX DESIGNS.
- THE STRUCTURAL ENGINEER-OF-RECORD SHALL REVIEW EACH SUBMITTAL AND RETURN THEM WITH ONE OF THE FOLLOWING STATEMENTS CHECKED OFF ON THE STAMP.
 - "NO EXCEPTIONS TAKEN" INFORMS THE CONTRACTOR THAT THE STRUCTURAL ENGINEER TAKES NO EXCEPTION TO THE SUBMITTAL BEING APPROVED AS PER AND IN ACCORDANCE WITH AIA DOCUMENT 201, SECTION 4.2.1.
 - "MAKE CORRECTIONS NOTED" INFORMS THE CONTRACTOR THAT THE STRUCTURAL ENGINEER HAS MADE CORRECTIONS OR COMMENTS ON THE SUBMITTALS BUT OTHERWISE TAKES NO EXCEPTION TO THE SUBMITTAL BEING APPROVED AS PER AND IN ACCORDANCE WITH AIA DOCUMENT 201, SECTION 4.2.1.
 - "REVISE AND RESUBMIT" INDICATES IMPORTANT ITEMS MUST BE CORRECTED AND RESUBMITTED. COMMENTS MADE ON THE SUBMITTAL MAY NOT NECESSARILY COVER ALL OF THE DEFECTS OF THE SUBMITTAL. THIS ACTION CONSTITUTES THE STRUCTURAL ENGINEER'S CONCERN AND HIS RECOMMENDATION TO THE CONTRACTOR THAT THE SUBMITTAL BE REVIEWED AND RESUBMITTED AS PER AND IN ACCORDANCE WITH AIA DOCUMENT 201, SECTION 4.2.1.
 - "RETURN ONE CORRECTED COPY FOR FILE" INFORMS THE CONTRACTOR THAT THE SUBMITTAL MAY BE APPROVED AS PER AIA DOCUMENT 201, SECTION 4.2.1, BUT A SINGLE CORRECTED COPY SHOWING THAT CORRECTIONS HAVE BEEN ACKNOWLEDGED MUST BE RETURNED FOR THE STRUCTURAL ENGINEER'S FILE.
- STRUCTURAL ENGINEER SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY CONCRETE POUR OR OTHER ACTION THAT WILL COVER UP STRUCTURAL ELEMENTS THAT HAVE NOT BEEN OBSERVED BY AN AUTHORIZED REPRESENTATIVE OF THE OFFICE OF THE STRUCTURAL ENGINEER OF RECORD.
- THE STRUCTURAL ENGINEER-OF-RECORD ("SER") WILL MAKE A SITE VISIT AT APPROPRIATE STAGES OF CONSTRUCTION AND AS DEFINED BY THE CONTRACT TO VISUALLY OBSERVE THE QUALITY AND THE PROGRESS OF THE CONSTRUCTION WORK RELATIVE TO THE PRIMARY STRUCTURAL SYSTEM. THE GENERAL CONTRACTOR IS RESPONSIBLE TO NOTIFY THE SER WHEN STRUCTURAL ELEMENTS ARE READY FOR REVIEW AND PRIOR TO THEIR BEING COVERED UP. FAILURE TO DO SO MAY RESULT IN KEY OBSERVATIONS NOT BEING MADE. PREVENTING THE ENGINEER FROM RECOMMENDING ACCEPTANCE OF THE WORK. A WRITTEN REPORT WILL BE MADE OF EACH VISIT DESCRIBING WHAT WAS OBSERVED AND LISTING DISCREPANCIES, IF ANY. IF A SUBSEQUENT VISIT IS NECESSARY IT WILL BE SO NOTED ON THE REPORT.
- THE SER SHALL NOT HAVE CONTROL OVER OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORKS FOR THIS PART OF THE PROJECT. THESE ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY UNDER THE CONTRACT FOR CONSTRUCTION. THE SER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S OR A SUBCONTRACTOR'S SCHEDULE OR FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE SER SHALL NOT HAVE CONTROL OVER OR CHARGE OF ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, THEIR AGENTS OR EMPLOYEES OR OTHER PERSONS PERFORMING PORTIONS OF THE WORK.



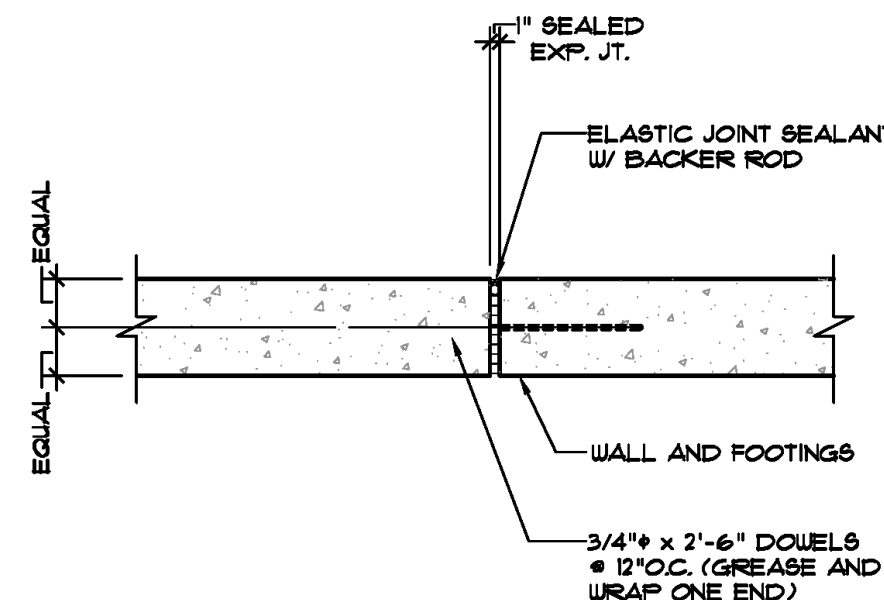
1 9'-0" MAX. RETAINAGE WALL
SCALE : 3/4" = 1'-0"



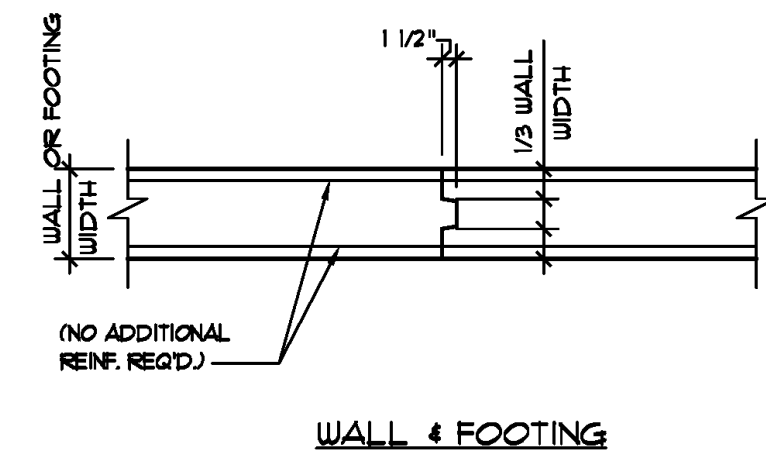
2 6'-0" MAX. RETAINAGE WALL
SCALE : 3/4" = 1'-0"



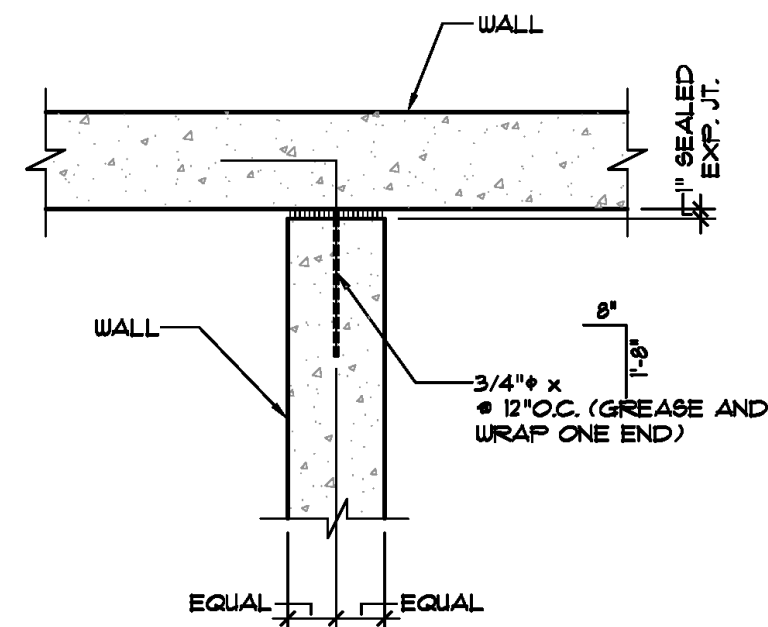
3 3'-0" MAX. RETAINAGE WALL
SCALE : 3/4" = 1'-0"



4 TYPICAL EXPANSION JOINT
SCALE : N.T.S.



5 TYP. CONSTRUCTION JOINTS
SCALE : N.T.S.



6 EXP. JOINT @ "T" INTERSECTION
SCALE : N.T.S.

AccuTech Consultants, LLC
STRUCTURAL & FORENSIC ENGINEERING
909 NORTHEAST LOOP 410, SUITE 900
SAN ANTONIO, TEXAS 78209
TEL. (210) 930-5355
FAX (210) 930-5460

INTERIM REVIEW
NOT FOR
CONSTRUCTION
ENGINE MARKING, P.E.
NO. 06866

CLEAR CREEK SUBDIVISION

SAN ANTONIO, TEXAS



BRIGHTLAND HOMES

9601 MCALLISTER FREEWAY, STE 600,
SAN ANTONIO, TX 78216

CLEAR CREEK SUBDIVISION
UNIT-2

RETAINING WALL DETAILS

SHEET

25 OF 36

NO	DATE	ISSUES AND REVISIONS

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NOTES:

1. GATE VALVES ON FIRE HYDRANT LEADS SHALL BE RESTRAINED AT THE TEE. SEE THIS SHEET FOR CALLOUTS FOR ANCHOR TEES FOR FIRE HYDRANTS.
2. THE MAIN SUPPLY LINE THAT SUPPLIES ALL DOMESTIC METERS WITHIN THIS PROJECT SHALL REQUIRE AN RP BACKFLOW PREVENTION.
3. ALL IRRIGATION METERS SHALL HAVE AN RP BACKFLOW PREVENTION.
4. ALL DOMESTIC WATER SERVICES TO BE 1".
5. ALL DOMESTIC WATER METERS TO BE 5/8".

EXISTING WATER SERVICES
INSTALLED WITH UNIT 1
EXISTING 8" PVC WATER MAIN
EXISTING 8" PVC SEWER MAIN

EXISTING 50' ACCESS ESMT.
(VOL.295 PG.519)

STA 16+35.12.0' L
CONTRACTOR TO CONNECT TO
EXISTING 8" WATER MAIN TO
BE CONSTRUCTED WITH CLEAR
CREEK SUBDIVISION UNIT 1
COORDINATE CONNECTION
WITH NBU OPERATIONS

STA 19+27.95
EX MH A5 (VENTED)
CONNECT TO EX MH A5

STA 22+45.38
MH A6 (DROP)

STA 23+65.42 LINE
SAN. SEW. / STORM DRAIN CROSSING

EXISTING 10' MAINTENANCE
ACCESS ESMT
(DOC. NO. 202006036473)

DUNLAP BUSINESS
PARK
LOT 2RA
SHEPARD INTEREST INC

DUNLAP BUSINESS
PARK
LOT 3
SHEPARD INTEREST INC

R&H PROPERTIES LLC
1.1 ACRE

PV NEW BRAUNFELS LLC
3.006 ACRES

CLEAR CREEK SUBDIVISION
UNIT 1

EXISTING WATER SERVICE
INSTALLED WITH UNIT 1

EXISTING 8" PVC WATER MAIN

EXISTING 8" PVC SEWER MAIN

STA 17+92.12.0' L
CONTRACTOR TO CONNECT TO
EXISTING 8" WATER MAIN TO
BE CONSTRUCTED WITH CLEAR
CREEK SUBDIVISION UNIT 1
COORDINATE CONNECTION
WITH NBU OPERATIONS

STA 22+14.46 LINE
SAN. SEW. / STORM DRAIN CROSSING

STA 19+63.55
EX MH B3 CONNECT
TO EX MH B3

STA 21+38.63
MH B4 (VENTED)

STA 23+39.48 LINE
SAN. SEW. / STORM DRAIN CROSSING

STA 24+00.35 LINE B
SAN. SEW. / WATER CROSSING

STA 28+72.91
MH A8

STA 25+35.11
MH B5

CONSTRUCTION NOTES:

1. WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
2. WHERE A 9' (NINE FOOT) SEPARATION FROM WATER AND SEWER LINES CROSSING CANNOT BE MAINTAINED, THE NEW WATER LINE SHALL BE ABOVE THE SEWER LINE AS SHOWN ON THE WATER / SEWER LINE CROSSING DETAIL. AT NO TIME SHALL A WATER LINE OR WATER SERVICE BE PLACED UNDER A SEWER LINE OR SEWER SERVICE.
3. WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
4. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.
5. UTILITY SERVICES TO HAVE A MINIMUM A 3' COVER UNLESS OTHERWISE NOTED OR REQUIRED BY THE UTILITY COMPANY.
6. METER BOXES MUST BE SET AT PROPOSED FINISHED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINALE GRADE WILL BE ADJUSTED BY THE CONTRACTOR AT NO ADDITIONAL COST.
7. CONTRACTOR TO COORDINATE WITH NBU IF EXISTING WATER MAINS WILL BE REMOVED FROM SERVICE AT ANY TIME.
8. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
9. ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A. SPECIFICATIONS.
10. NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
11. CONTRACTOR TO PROTECT INSTALLED PIPE FROM BEING CONTAMINATED OR DAMAGED PRIOR TO PLACING INTO SERVICE. ANY PIPE NBU INSPECTIONS DETERMINES IS CONTAMINATED, DIRTY, OR DAMAGED, SHALL BE REPLACED. (NSP)
12. REFERENCE TO "CAP" ON THE DESIGN PLANS MEANS CAP OR PLUG. CAPS SHALL BE USED ON ALL SPIGOT ENDS AND PLUGS ON ALL BALL ENDS PER NBU SPECIFICATIONS.
13. INITIAL BACKFILL OF WATER LINES SHALL BE 3/4" TO DUST OR PEA GRAVEL AS PER NBU SPECIFICATIONS.
14. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.
15. CONTRACTOR TO PRE-DIG TO VERIFY SIZE, TYPE AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES MUST BE MAINTAINED UNTIL FINAL ACCEPTANCE OF NEW SYSTEM AND SWITCH OVER OCCURS (NSP)
16. CONTRACTOR TO UTILIZE WATER LINE STOPPERS TO MINIMIZE OUTAGES. USE OF LINE STOPPERS, INSTEAD OF EXISTING VALVES, MUST BE APPROVED BY NBU INSPECTIONS PRIOR TO INSTALLATION.
17. CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
18. NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
19. METER BOXES MUST BE SET AT PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
20. EXISTING PIPE MATERIALS ARE UNKNOWN. CONTRACTOR WILL BE REQUIRED TO TIE PROPOSED WATER MAINS TO EXISTING WATER MAINS PER NBU SPECIFICATIONS. ADDITIONAL PIPE NEEDED TO MAKE THE TIE IN WILL BE PAID FOR UNDER THE UNIT BID PRICE OF WATER PIPE OF THE SIZE INSTALLED. FITTINGS NEEDED TO MAKE THE CONNECTION TO THE EXISTING PIPE WILL BE PAID AS PART OF ITEM 510, PIPE. NO SEPARATE PAYMENT WILL BE MADE FOR THESE FITTINGS.
21. DOMESTIC SERVICE BACKFLOW PREVENTER TO BE SPECIFIED AS: WATTS SERIES 909M1QT (REDUCED PRESSURE ZONE ASSEMBLY) OR ENGINEER APPROVED EQUAL
22. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
23. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.
24. REFER TO ARCHITECTURAL PLANS FOR COORDINATION OF BUILDING, APPURTENANCES, DIMENSIONS, AND UTILITY ENTRANCE LOCATIONS.
25. CONTRACTOR TO COORDINATE SANITARY SEWER AND WATER CONNECTIONS TO BUILDING WITH M.E.P. PLANS.
26. CONTRACTOR TO COORDINATE ELECTRIC, TELEPHONE, AND GAS SERVICES WITH UTILITY PROVIDERS AND M.E.P. PLANS.
27. THE GAS AND TELECOMMUNICATIONS SERVICES SHOWN ARE PRELIMINARY. REFERENCE THE M.E.P. PLANS FOR EXACT LOCATIONS OF ELECTRICAL, GAS, AND TELECOMMUNICATIONS SERVICES ARE NOT PART OF THE CIVIL DESIGN PLANS.
28. MINIMUM DEPTH OF COVER OVER THE UPPERMOST PROJECTION OF THE WATER PIPE AND ALL APPURTENANCES SHALL BE 42 INCHES, IF COVER IS LESS 42 INCHES ADD A CONCRETE CAP OR ENCASEMENT.
29. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5 FEET IN DEPTH LOCATED IN PUBLIC RIGHT OF WAY OR EASEMENTS, DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.

CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4866
Texas One Call	830-545-6005

C.P.E. LOCATOR

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

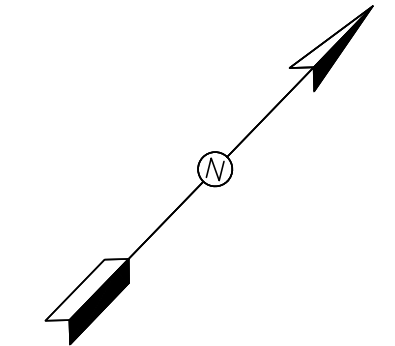
TELEPHONE LOCATOR

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

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.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN 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 DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.



0 50' 100'
SCALE: 1"=50'

LEGEND

- | | |
|-----|---|
| SS | NEW SANITARY SEWER |
| —E— | EXISTING OVERHEAD ELECTRIC LINE |
| ● | NEW MANHOLE |
| —S— | NEW SEWER LATERAL |
| —W— | PROPOSED 8" WATER MAIN |
| —M— | NEW SINGLE METERED WATER SERVICE |
| —F— | NEW FIRE HYDRANT |
| —R— | PROPOSED RETAINING WALL |
| —S— | EXISTING SINGLE METERED WATER SERVICE (INSTALLED WITH UNIT 1) |
| —S— | EXISTING SEWER LATERAL (INSTALLED WITH UNIT 1) |
| SS | EXISTING 8" SANITARY SEWER |



BRIGHTLAND HOMES

9601 MCALLISTER FREEWAY, STE 600,
SAN ANTONIO, TX 78216

CLEAR CREEK SUBDIVISION
UNIT-2

OVERALL UTILITY PLAN

SHEET

26 OF 36

NO DATE ISSUES AND REVISIONS

Δ	07-18-2024	REVISED PER NBU COMMENTS
Δ	08-20-2024	REVISED PER NBU COMMENTS



2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

CONSTRUCTION NOTES:

- WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
- WHERE A 6" (NINE FOOT) SEPARATION FROM WATER AND SEWER LINES CROSSING CANNOT BE MAINTAINED, THE NEW WATER LINE SHALL BE ABOVE THE SEWER LINE AS SHOWN ON THE WATER/SEWER LINE CROSSING DETAIL. AT NO TIME SHALL A WATER LINE OR WATER SERVICE BE PLACED UNDER A SEWER LINE OR SEWER SERVICE.
- WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
- ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.
- FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
- METER BOXES MUST BE SET AT PROPOSED FINISHED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED BY THE CONTRACTOR AT NO ADDITIONAL COSTS.
- CONTRACTOR TO COORDINATE WITH NBU IF EXISTING WATER MAINS WILL BE REMOVED FROM SERVICE AT ANY TIME.
- ALL UTILITIES SHALL BE CONSTRUCTED PRIOR TO STREETS.
- ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A. SPECIFICATIONS.
- NO VALVES, FIRE HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.
- ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-115-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEO-TECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.
- THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5- FEET IN DEPTH LOCATED IN PUBLIC RIGHT-OF-WAY OR EASEMENTS. DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
- THE POINT OF DELIVERY IS WATER METER. NBU IS RESPONSIBLE FROM WATER MAIN TO WATER METER. CUSTOMER IS RESPONSIBLE FOR LINE FROM THE METER TO PRIVATE PLUMBING, INCLUDING DESIGN, CONSTRUCTION, OPERATION, AND COMPLIANCE WITH CITY CODES.

NOTE:

MINIMUM DEPTH OF COVER FOR THE UPPERMOST PROJECTION OF THE WATER PIPE AND ALL APPURTENANCES SHALL BE 42 INCHES. ADD CONCRETE CAP OR ENCASEMENT IF COVER IS LEES THAN 42 INCHES.

NOTES:

- STATIONING FOR 8" WATER MAINS ARE BASED ON ROAD ALIGNMENTS.
- GATE VALVES ON FIRE HYDRANT LEADS SHALL BE RESTRAINED AT THE TEE. SEE THIS SHEET FOR CALLOUTS FOR ANCHOR TEES FOR FIRE HYDRANTS.
- THE MAIN SUPPLY LINE THAT SUPPLIES ALL DOMESTIC METERS WITHIN THIS PROJECT SHALL REQUIRE AN RP BACKFLOW PREVENTION.
- ALL IRRIGATION METERS SHALL HAVE AN RP BACKFLOW PREVENTION.
- ALL DOMESTIC WATER SERVICES TO BE 1".
- ALL DOMESTIC WATER METERS TO BE 5/8".

CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4866
Texas One Call	830-545-6005

C.P.E. LOCATOR

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

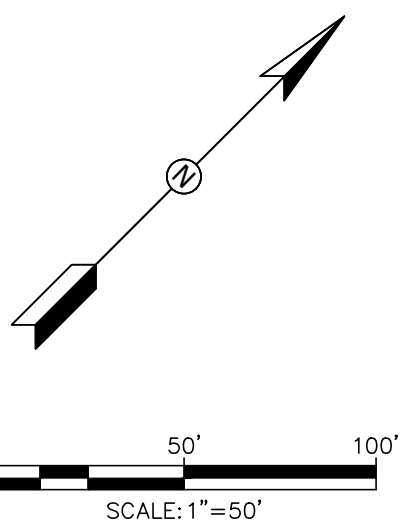
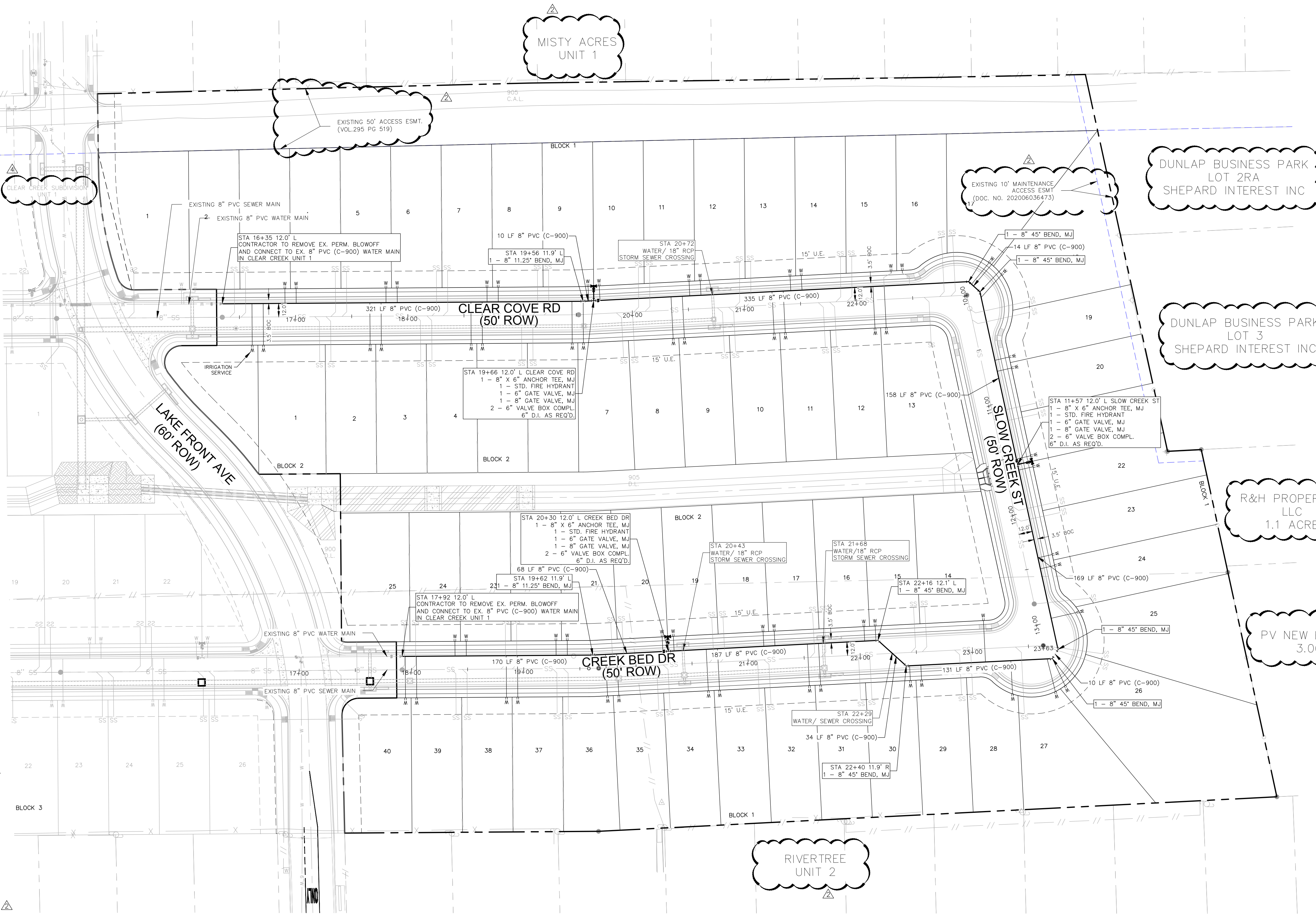
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TRENCH EXCAVATION SAFETY PROTECTION

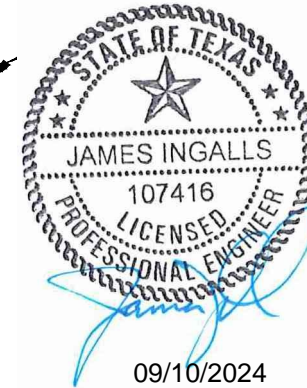
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S 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'S OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYER 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.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE LOCATION 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.



LEGEND

- SS NEW SANITARY SEWER
- NEW MANHOLE
- NEW SEWER LATERAL
- NEW WATER MAIN
- NEW SINGLE METERED WATER SERVICE
- NEW FIRE HYDRANT
- 8" SS EXISTING 8" SANITARY SEWER
- EXISTING WOOD FENCE
- EXISTING BARBWARE FENCE
- EXISTING SIGN
- EXISTING UTILITY POLE
- PROPOSED RETAINING WALL
- EXISTING SINGLE METERED WATER SERVICE (INSTALLED WITH UNIT 1)
- EXISTING SEWER LATERAL (INSTALLED WITH UNIT 1)
- 8" SS NEW SANITARY SEWER



BRIGHTLAND HOMES

9601 MCALLISTER FREEWAY, STE 600,
SAN ANTONIO, TX 78216

CLEAR CREEK SUBDIVISION
UNIT-2

WATER DISTRIBUTION PLAN

SHEET

27 OF 36

NO DATE ISSUES AND REVISIONS

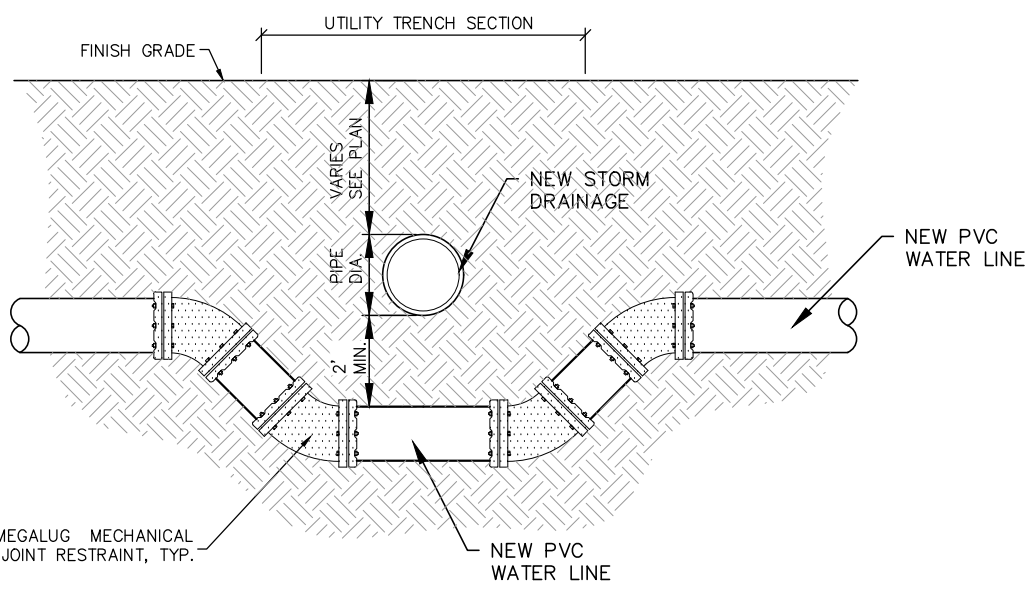
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| Δ | 07-18-2024 | REVISED PER NBU COMMENTS |
| Δ | 08-20-2024 | REVISED PER NBU COMMENTS |

INK
CIVIL

2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

CLEAR CREEK SUBDIVISION UNIT 2

ITEM	QTY.
WATER MAIN (8" PVC C-900)	1603 LF
1" WATER SERVICES	62 EA.
1" IRRIGATION SERVICES	1 EA.
5/8" WATER METERS	62 EA.
FIRE HYDRANTS	3 EA.
6" FIRE LINES	39 LF
6" GATE VALVE	3 EA.
8" GATE VALVE	3 EA.
EXISTING 1" WATER SERVICES (CONSTRUCTED WITH UNIT 1)	3 EA.
5/8" WATER METERS (CONSTRUCTED WITH UNIT 1)	3 EA.



- NOTES:
- MECHANICAL JOINTS SHALL CONFORM TO THE AWWA C-600 INSTALLATION PROCEDURES.
 - REFERENCE THE SPECIFICATIONS FOR MECHANICALLY RESTRAINED JOINTS FOR ADDITIONAL INFORMATION.
 - RECOMPACT ALL PIPE BEDDING AROUND NEW AND EXISTING PIPES AND REPAIR OR RECONSTRUCT FINISH GRADE MATERIAL.

WATER LINE / STORM DRAINAGE CROSSING DETAIL
(NOT TO SCALE)

- CONSTRUCTION NOTES:
- WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WATER LINES, WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.5(X) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
 - WHERE A 9' (NINE FOOT) SEPARATION FROM WATER AND SEWER LINES CROSSING CANNOT BE MAINTAINED, THE NEW WATER LINE SHALL BE ABOVE THE SEWER LINE AS SHOWN ON THE WATER / SEWER LINE CROSSING DETAIL. AT NO TIME SHALL A WATER LINE OR WATER SERVICE BE PLACED UNDER A SEWER LINE OR SEWER SERVICE.
 - WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
 - ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM. IF IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION, THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.
 - UTILITY SERVICES TO HAVE A MINIMUM A 3' COVER UNLESS OTHERWISE NOTED OR REQUIRED BY THE UTILITY COMPANY.
 - METER BOXES MUST BE SET AT PROPOSED FINISHED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED BY THE CONTRACTOR AT NO ADDITIONAL COST.
 - CONTRACTOR TO COORDINATE WITH NBU IF EXISTING WATER MAINS WILL BE REMOVED FROM SERVICE AT ANY TIME.
 - FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
 - ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A. SPECIFICATIONS.
 - NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
 - CONTRACTOR TO PROTECT INSTALLED PIPE FROM BEING CONTAMINATED OR DAMAGED PRIOR TO PLACING INTO SERVICE. ANY PIPE NBU INSPECTIONS DETERMINES IS CONTAMINATED, DIRTY, OR DAMAGED, SHALL BE REPLACED (NSP).
 - REFERENCE TO "CAP" ON THE DESIGN PLANS MEANS CAP OR PLUG. CAPS SHALL BE USED ON ALL SPIGOT ENDS AND PLUGS ON ALL BELL ENDS PER NBU SPECIFICATIONS.
 - INITIAL BACKFILL OF WATER LINES SHALL BE 3/4" TO DUST OR PEA GRAVEL AS PER NBU SPECIFICATIONS.
 - THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.
 - CONTRACTOR TO PRE-DO TO VERIFY SIZE, TYPE AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES MUST BE MAINTAINED UNTIL FINAL ACCEPTANCE OF NEW SYSTEM AND SWITCH OVER OCCURS (NSP).
 - CONTRACTOR TO UTILIZE WATER LINE STOPPERS TO MINIMIZE OUTAGES. USE OF LINE STOPPERS, INSTEAD OF EXISTING VALVES, MUST BE APPROVED BY NBU INSPECTIONS PRIOR TO INSTALLATION.
 - SIZES ON SIZE WATER TAPS ARE ACCEPTABLE ONLY IF SOLID TAPS ARE USED.
 - CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
 - NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
 - METER BOXES MUST BE SET AT PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
 - EXISTING PIPE MATERIALS ARE UNKNOWN. CONTRACTOR WILL BE REQUIRED TO TIE PROPOSED WATER MAINS TO EXISTING WATER MAINS PER NBU SPECIFICATIONS. ADDITIONAL PIPE NEEDED TO MAKE THE TIE IN WILL BE PAID FOR UNDER THE UNIT BID PRICE OF WATER PIPE OF THE SIZE INSTALLED. FITTINGS NEEDED TO MAKE THE CONNECTION TO THE EXISTING PIPE WILL BE PAID AS PART OF ITEM 510, PIPE. NO SEPARATE PAYMENT WILL BE MADE FOR THESE FITTINGS.
 - DOMESTIC SERVICE BACKFLOW PREVENTER TO BE SPECIFIED AS: WATTS SERIES 909M1GT (REDUCED PRESSURE ZONE ASSEMBLY) OR ENGINEER APPROVED EQUAL.
 - ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
 - ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTION OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 FEET FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.
 - REFER TO ARCHITECTURAL PLANS FOR COORDINATION OF BUILDING, APPURTENANCES, DIMENSIONS, AND UTILITY ENTRANCE LOCATIONS.
 - CONTRACTOR TO COORDINATE SANITARY SEWER AND WATER CONNECTIONS TO BUILDING WITH M.E.P. PLANS.
 - CONTRACTOR TO COORDINATE ELECTRIC, TELEPHONE, AND GAS SERVICES WITH UTILITY PROVIDERS AND M.E.P. PLANS.
 - THE GAS AND TELECOMMUNICATIONS SERVICES SHOWN ARE PRELIMINARY. REFERENCE THE M.E.P. PLANS FOR EXACT LOCATIONS OF ELECTRICAL, GAS, AND TELECOMMUNICATIONS SERVICES ARE NOT PART OF THE CIVIL DESIGN PLANS.
 - MINIMUM DEPTH OF COVER OVER THE UPPERMOST PROJECTION OF THE WATER PIPE AND ALL APPURTENANCES SHALL BE 42 INCHES. IF COVER IS LESS 42 INCHES ADD A CONCRETE CAP OR ENCASEMENT.
 - THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5 FEET IN DEPTH LOCATED IN PUBLIC RIGHT OF WAY OR EASEMENTS. DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO THE CITY OF NEW BRAUNFELS PRIOR TO UTILITY INSTALLATION.
 - NEW MANHOLES MUST BE CONSTRUCTED OF OR LINED WITH A CORROSION RESISTANT MATERIAL. WHERE NEW CONSTRUCTION CONNECTS TO AN EXISTING MANHOLE THAT IS NOT CONSTRUCTED OF A CORROSION RESISTANT MATERIAL, THE EXISTING MANHOLES MUST BE LINED WITH OR REPLACED WITH A CORROSION RESISTANT MATERIAL.
 - MINIMUM SLOPE ALLOWED FOR SEWER SERVICE LATERALS SHALL BE 2% AND A MAXIMUM SLOPE OF 12.5%.
 - IN ALL NEW SYSTEMS, GRADE BREAKS EXCEEDING ALLOWABLE JOINT DEFLECTION MUST BE MADE WITH APPROVED FITTINGS AND SHALL NOT EXCEED CUMULATIVE TOTAL OF 45 DEGREES.
 - POINT OF DELIVERY IS DETERMINED BY NBU AND MAY NOT BE CLEANOUT, IT MAY BE A PROPERTY LINE OR EASEMENT BOUNDARY. NBU IS RESPONSIBLE FROM MAIN TO CLEANOUT OR PROPERTY LINE. CUSTOMER IS RESPONSIBLE FOR PIPE FROM THE CLEANOUT/ PROPERTY LINE TO PRIVATE PLUMBING, INCLUDING DESIGN, CONSTRUCTION, OPERATION, AND COMPLIANCE WITH CITY CODES.
 - WASTEWATER SERVICE LINES, BETWEEN THE MAIN AND PROPERTY LINE, SHALL HAVE AN INSIDE DIAMETER NOT LESS THAN SIX (6) INCHES.
 - ALL MANHOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE RING IS TWO INCHES (2") ABOVE SURROUNDING GROUND EXCEPT WHEN LOCATED IN PAVED AREA. IN PAVED AREAS, THE MANHOLE RING SHALL BE FLUSH WITH PAVEMENT.

CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

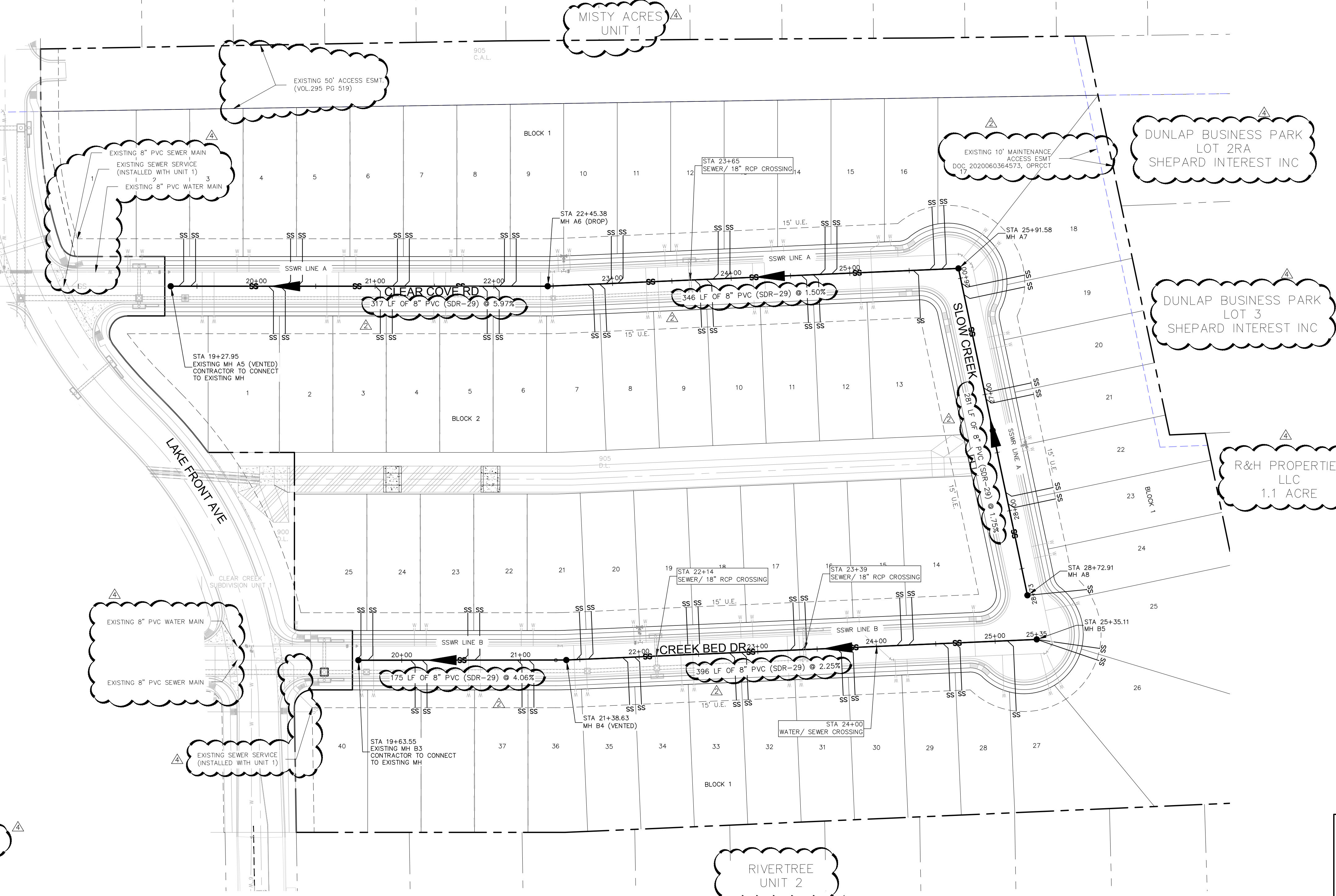
C.P.E. LOCATOR
CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

TELEPHONE LOCATOR
THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

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.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE LOCATION 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.

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- LEGEND**
- SS NEW SANITARY SEWER
 - NEW MANHOLE
 - SL NEW SEWER LATERAL
 - NEW WATER MAIN
 - NEW SINGLE METERED WATER SERVICE
 - NEW FIRE HYDRANT
 - PROPOSED RETAINING WALL
 - EXISTING SEWER LATERAL (INSTALLED WITH UNIT 1)
 - EXISTING SINGLE METERED WATER SERVICE (INSTALLED WITH UNIT 1)
 - EXISTING 8" SSWR LINE



BRIGHTLAND HOMES
9601 MCALLISTER FREEWAY, STE 600,
SAN ANTONIO, TX 78216

**CLEAR CREEK SUBDIVISION
UNIT-2**

**OVERALL SANITARY
SEWER PLAN**

SHEET
28 OF **36**

NO	DATE	ISSUES AND REVISIONS
Δ	07-18-2024	REVISED PER NBU COMMENTS
Δ	08-20-2024	REVISED PER NBU COMMENTS



2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

- CONSTRUCTION NOTES:
- WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (9'-), WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
 - WHERE A 9' (NINE FOOT) SEPARATION FROM WATER AND SEWER LINES CROSSING CANNOT BE MAINTAINED, THE NEW WATER LINE SHALL BE ABOVE THE SEWER LINE AS SHOWN ON THE WATER/SEWER LINE CROSSING DETAIL. AT NO TIME SHALL A WATER LINE OR WATER SERVICE BE PLACED UNDER A SEWER LINE OR SEWER SERVICE.
 - WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
 - ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(i). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.
 - UTILITY SERVICES TO HAVE A MINIMUM A 3" COVER UNLESS OTHERWISE NOTED OR REQUIRED BY THE UTILITY COMPANY.
 - METER BOXES MUST BE SET AT PROPOSED FINISHED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED BY THE CONTRACTOR AT NO ADDITIONAL COST.
 - CONTRACTOR TO COORDINATE WITH NBU IF EXISTING WATER MAINS WILL BE REMOVED FROM SERVICE AT ANY TIME.
 - FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
 - ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A. SPECIFICATIONS.
 - NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
 - CONTRACTOR TO PROTECT INSTALLED PIPE FROM BEING CONTAMINATED OR DAMAGED PRIOR TO PLACING INTO SERVICE. ANY PIPE NBU INSPECTIONS DETERMINES IS CONTAMINATED, DIRTY, OR DAMAGED, SHALL BE REPLACED (NSP).
 - REFERENCE TO "CAP" ON THE DESIGN PLANS MEANS CAP OR PLUG. CAPS SHALL BE USED ON ALL SPIGOT ENDS AND PLUGS ON ALL BELL ENDS PER NBU SPECIFICATIONS.
 - INITIAL BACKFILL OF WATER LINES SHALL BE 3/4" TO DUST OR PEA GRAVEL AS PER NBU SPECIFICATIONS.
 - THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE EXISTING LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.
 - CONTRACTOR TO PRE-DIG TO VERIFY SIZE, TYPE AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES MUST BE MAINTAINED UNTIL FINAL ACCEPTANCE OF NEW SYSTEM AND SWITCH OVER OCCURS (NSP).
 - CONTRACTOR TO UTILIZE WATER LINE STOPPERS TO MINIMIZE OUTAGES. USE OF LINE STOPPERS, INSTEAD OF EXISTING VALVES, MUST BE APPROVED BY NBU INSPECTIONS PRIOR TO INSTALLATION.
 - SIZES ON SIZE WATER TAPS ARE ACCEPTABLE ONLY IF SOLID TAPS ARE USED.
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TEX-321, TEX-322, TEX-323, TEX-324, TEX-325, TEX-326, TEX-327, TEX-328, TEX-329, TEX-330, TEX-331, TEX-332, TEX-333, TEX-334, TEX-335, TEX-336, TEX-337, TEX-338, TEX-339, TEX-340, TEX-341, TEX-342, TEX-343, TEX-344, TEX-345, TEX-346, TEX-347, TEX-348, TEX-349, TEX-350, TEX-351, TEX-352, TEX-353, TEX-354, TEX-355, TEX-356, TEX-357, TEX-358, TEX-359, TEX-360, TEX-361, TEX-362, TEX-363, TEX-364, TEX-365, TEX-366, TEX-367, TEX-368, TEX-369, TEX-370, TEX-371, TEX-372, TEX-373, TEX-374, TEX-375, TEX-376, TEX-377, TEX-378, TEX-379, TEX-380, TEX-381, TEX-382, TEX-383, TEX-384, TEX-385, TEX-386, TEX-387, TEX-388, TEX-389, TEX-390, TEX-391, TEX-392, TEX-393, TEX-394, TEX-395, TEX-396, TEX-397, TEX-398, TEX-399, TEX-400, TEX-401, TEX-402, TEX-403, TEX-404, TEX-405, TEX-406, TEX-407, TEX-408, TEX-409, TEX-410, TEX-411, TEX-412, TEX-413, TEX-414, TEX-415, TEX-416, TEX-417, TEX-418, TEX-419, TEX-420, TEX-421, TEX-422, TEX-423, TEX-424, TEX-425, TEX-426, TEX-427, TEX-428, TEX-429, TEX-430, TEX-431, 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TEX-765, TEX-766, TEX-767, TEX-768, TEX-769, TEX-770, TEX-771, TEX-772, TEX-773, TEX-774, TEX-775, TEX-776, TEX-777, TEX-778, TEX-779, TEX-780, TEX-781, TEX-782, TEX-783, TEX-784, TEX-785, TEX-786, TEX-787, TEX-788, TEX-789, TEX-790, TEX-791, TEX-792, TEX-793, TEX-794, TEX-795, TEX-796, TEX-797, TEX-798, TEX-799, TEX-800, TEX-801, TEX-802, TEX-803, TEX-804, TEX-805, TEX-806, TEX-807, TEX-808, TEX-809, TEX-810, TEX-811, TEX-812, TEX-813, TEX-814, TEX-815, TEX-816, TEX-817, TEX-818, TEX-819, TEX-820, TEX-821, TEX-822, TEX-823, TEX-824, TEX-825, TEX-826, TEX-827, TEX-828, TEX-829, TEX-830, TEX-831, TEX-832, TEX-833, TEX-834, TEX-835, TEX-836, TEX-837, TEX-838, TEX-839, TEX-840, TEX-841, TEX-842, TEX-843, TEX-844, TEX-845, TEX-846, TEX-847, TEX-848, TEX-849, TEX-850, TEX-851, TEX-852, TEX-853, TEX-854, TEX-855, TEX-856, TEX-857, TEX-858, TEX-859, TEX-860, TEX-861, TEX-862, TEX-863, TEX-864, TEX-865, TEX-866, TEX-867, TEX-868, TEX-869, TEX-870, TEX-871, TEX-872, TEX-873, TEX-874, TEX-875, TEX-876, TEX-877, TEX-878, TEX-879, TEX-880, TEX-881, TEX-882, TEX-883, TEX-884, TEX-885, TEX-886, TEX-887, TEX-888, TEX-889, TEX-890, TEX-891, TEX-892, TEX-893, TEX-894, TEX-895, TEX-896, TEX-897, TEX-898, TEX-899, TEX-900, TEX-901, TEX-902, TEX-903, TEX-904, TEX-905, TEX-906, TEX-907, TEX-908, TEX-909, TEX-910, TEX-911, TEX-912, TEX-913, TEX-914, TEX-915, TEX-916, TEX-917, TEX-918, TEX-919, TEX-920, TEX-921, TEX-922, TEX-923, TEX-924, TEX-925, TEX-926, TEX-927, TEX-928, TEX-929, TEX-930, TEX-931, TEX-932, TEX-933, TEX-934, TEX-935, TEX-936, TEX-937, TEX-938, TEX-939, TEX-940, TEX-941, TEX-942, TEX-943, TEX-944, TEX-945, TEX-946, TEX-947, TEX-948, TEX-949, TEX-950, TEX-951, TEX-952, TEX-953, TEX-954, TEX-955, TEX-956, TEX-957, TEX-958, TEX-959, TEX-960, TEX-961, TEX-962, TEX-963, TEX-964, TEX-965, TEX-966, TEX-967, TEX-968, TEX-969, TEX-970, TEX-971, TEX-972, TEX-973, TEX-974, TEX-975, TEX-976, TEX-977, TEX-978, TEX-979, TEX-980, TEX-981, TEX-982, TEX-983, TEX-984, TEX-985, TEX-986, TEX-987, TEX-988, TEX-989, TEX-990, TEX-991, TEX-992, TEX-993, TEX-994, TEX-995, TEX-996, TEX-997, TEX-998, TEX-999, TEX-1000, TEX-1001, TEX-1002, TEX-1003, TEX-1004, TEX-1005, TEX-1006, TEX-1007, TEX-1008, TEX-1009, TEX-1010, TEX-1011, TEX-1012, TEX-1013, TEX-1014, TEX-1015, TEX-1016, TEX-1017, TEX-1018, TEX-1019, TEX-1020, TEX-1021, TEX-1022, TEX-1023, TEX-1024, TEX-1025, TEX-1026, TEX-1027, TEX-1028, TEX-1029, TEX-1030, TEX-1031, TEX-1032, TEX-1033, TEX-1034, TEX-1035, TEX-1036, TEX-1037, TEX-1038, TEX-1039, TEX-1040, TEX-1041, TEX-1042, TEX-1043, TEX-1044, TEX-1045, TEX-1046, TEX-1047, TEX-1048, TEX-1049, TEX-1050, TEX-1051, TEX-1052, TEX-1053, TEX-1054, TEX-1055, TEX-1056, TEX-1057, TEX-1058, TEX-1059, TEX-1060, TEX-1061, TEX-1062, TEX-1063, TEX-1064, TEX-1065, TEX-1066, TEX-1067, TEX-1068, TEX-1069, TEX-1070, TEX-1071, TEX-1072, TEX-1073, TEX-1074, TEX-1075, TEX-1076, TEX-1077, TEX-1078, TEX-1079, TEX-1080, TEX-1081, TEX-1082, TEX-1083, TEX-1084, TEX-1085, TEX-1086, TEX-1087, 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- CONSTRUCTION NOTES:
- WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E. WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
 - WHERE A 9' (NINE FOOT) SEPARATION FROM WATER AND SEWER LINES CROSSING CANNOT BE MAINTAINED, THE NEW WATER LINE SHALL BE ABOVE THE SEWER LINE AS SHOWN ON THE WATER / SEWER LINE CROSSING DETAIL. AT NO TIME SHALL A WATER LINE OR WATER SERVICE BE PLACED UNDER A SEWER LINE OR SEWER SERVICE.
 - WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
 - ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(i). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A LICENSED PROFESSIONAL ENGINEER, TEXAS-REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.
 - UTILITY SERVICES TO HAVE A MINIMUM A 3' COVER UNLESS OTHERWISE NOTED OR REQUIRED BY THE UTILITY COMPANY.
 - METER BOXES MUST BE SET AT PROPOSED FINISHED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED BY THE CONTRACTOR AT NO ADDITIONAL COST.
 - CONTRACTOR TO COORDINATE WITH NBU IF EXISTING WATER MAINS WILL BE REMOVED FROM SERVICE AT ANY TIME.
 - FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
 - ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A. SPECIFICATIONS.
 - NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
 - CONTRACTOR TO PROTECT INSTALLED PIPE FROM BEING CONTAMINATED OR DAMAGED PRIOR TO PLACING INTO SERVICE. ANY PIPE NBU INSPECTIONS DETERMINES IS CONTAMINATED, DIRTY, OR DAMAGED, SHALL BE REPLACED. (NSP)
 - REFERENCE TO "CAP" ON THE DESIGN PLANS MEANS CAP OR PLUG. CAPS SHALL BE USED ON ALL SPIGOT ENDS AND PLUGS ON ALL BELL ENDS PER NBU SPECIFICATIONS.
 - INITIAL BACKFILL OF WATER LINES SHALL BE 3/4" TO DUST OR PEA GRAVEL AS PER NBU SPECIFICATIONS.
 - THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.
 - CONTRACTOR TO PRE-DIG TO VERIFY SIZE, TYPE AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES MUST BE MAINTAINED UNTIL FINAL ACCEPTANCE OF NEW SYSTEM AND SWITCH OVER OCCURS (NSP)
 - CONTRACTOR TO UTILIZE WATER LINE STOPPERS TO MINIMIZE OUTAGES. USE OF LINE STOPPERS, INSTEAD OF EXISTING VALVES, MUST BE APPROVED BY NBU INSPECTIONS PRIOR TO INSTALLATION.
 - SIZES ON SIZE WATER TAPS ARE ACCEPTABLE ONLY IF SOLID TAPS ARE USED.
 - CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
 - NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
 - METER BOXES MUST BE SET AT PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
 - EXISTING PIPE MATERIALS ARE UNKNOWN. CONTRACTOR WILL BE REQUIRED TO THE PROPOSED WATER MAINS TO EXISTING WATER MAINS PER NBU SPECIFICATIONS. ADDITIONAL PIPE NEEDED TO MAKE THE TIE IN WILL BE PAID FOR UNDER THE UNIT BID PRICE OF WATER PIPE OF THE SIZE INSTALLED. FITTINGS NEEDED TO MAKE THE CONNECTION TO THE EXISTING PIPE WILL BE PAID AS PART OF ITEM 510, PIPE. NO SEPARATE PAYMENT WILL BE MADE FOR THESE FITTINGS.
 - DOMESTIC SERVICE BACKFLOW PREVENTER TO BE SPECIFIED AS:
WATTS SERIES 909M1QT (REDUCED PRESSURE ZONE ASSEMBLY) OR ENGINEER APPROVED EQUAL
 - ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.

- ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.
- REFER TO ARCHITECTURAL PLANS FOR COORDINATION OF BUILDING, APPURTENANCES, DIMENSIONS, AND UTILITY ENTRANCE LOCATIONS.
- CONTRACTOR TO COORDINATE SANITARY SEWER AND WATER CONNECTIONS TO BUILDING WITH M.E.P. PLANS.
- CONTRACTOR TO COORDINATE ELECTRIC, TELEPHONE, AND GAS SERVICES WITH UTILITY PROVIDERS AND M.E.P. PLANS.
- THE GAS AND TELECOMMUNICATIONS SERVICES SHOWN ARE PRELIMINARY. REFERENCE THE M.E.P. PLANS FOR EXACT LOCATIONS OF ELECTRICAL, GAS, AND TELECOMMUNICATIONS SERVICES ARE NOT PART OF THE CIVIL DESIGN PLANS.
- MINIMUM DEPTH OF COVER OVER THE UPPERMOST PROJECTION OF THE WATER PIPE AND ALL APPURTENANCES SHALL BE 42 INCHES; IF COVER IS LESS 42 INCHES ADD A CONCRETE CAP OR ENCASEMENT.
- THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5 FEET IN DEPTH LOCATED IN PUBLIC RIGHT OF WAY OR EASEMENTS. DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
- NEW MANHOLES MUST BE CONSTRUCTED OF OR LINED WITH A CORROSION RESISTANT MATERIAL, WHERE NEW CONSTRUCTION EXISTING MANHOLE THAT IS NOT CONSTRUCTED OF A CORROSION RESISTANT MATERIAL, THE EXISTING MANHOLES MUST BE LINED WITH OR REPLACED WITH A CORROSION RESISTANT MATERIAL.
- MINIMUM SLOPE ALLOWED FOR SEWER SERVICE LATERALS SHALL BE 2%.
- IN ALL NEW SYSTEMS, GRADE BREAKS EXCEEDING ALLOWABLE JOINT DEFLECTION MUST BE MADE WITH APPROVED FITTINGS AND SHALL NOT EXCEED CUMULATIVE TOTAL OF 45 DEGREES.
- POINT OF DELIVERY IS DETERMINED BY NBU AND MAY NOT BE CLEANOUT, IT MAY BE A PROPERTY LINE OR EASEMENT BOUNDARY. NBU IS RESPONSIBLE FROM MAIN TO CLEANOUT OR PROPERTY LINE. CUSTOMER IS RESPONSIBLE FOR PIPE FROM THE CLEANOUT/ PROPERTY LINE TO PRIVATE PLUMBING, INCLUDING DESIGN, CONSTRUCTION, OPERATION, AND COMPLIANCE WITH CITY CODES.
- WASTEWATER SERVICE LINES, BETWEEN THE MAIN AND PROPERTY LINE, SHALL HAVE AN INSIDE DIAMETER NOT LESS THAN SIX (6) INCHES.

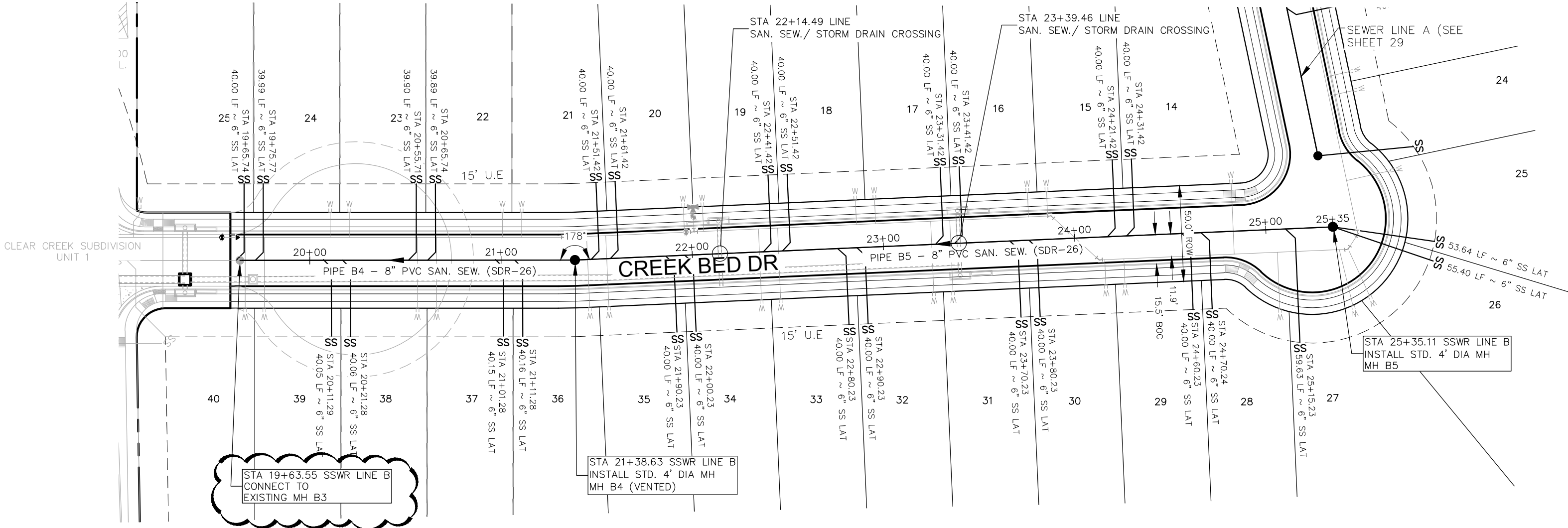
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:
- | | |
|--------------------------------|--------------|
| New Braunfels Utilities | 830-629-8400 |
| Spectrum Cable | 830-625-3408 |
| Centerpoint Gas | 830-643-6434 |
| Robert Sanders | 830-643-6903 |
| Damaged Line | 888-876-5786 |
| AT&T Telephone | 830-303-1333 |
| Erick White PM | 210-283-1706 |
| Scott McBrearty (Construction) | 210-658-4866 |
| Texas One Call | 830-545-6005 |

C.P.E. LOCATOR
CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

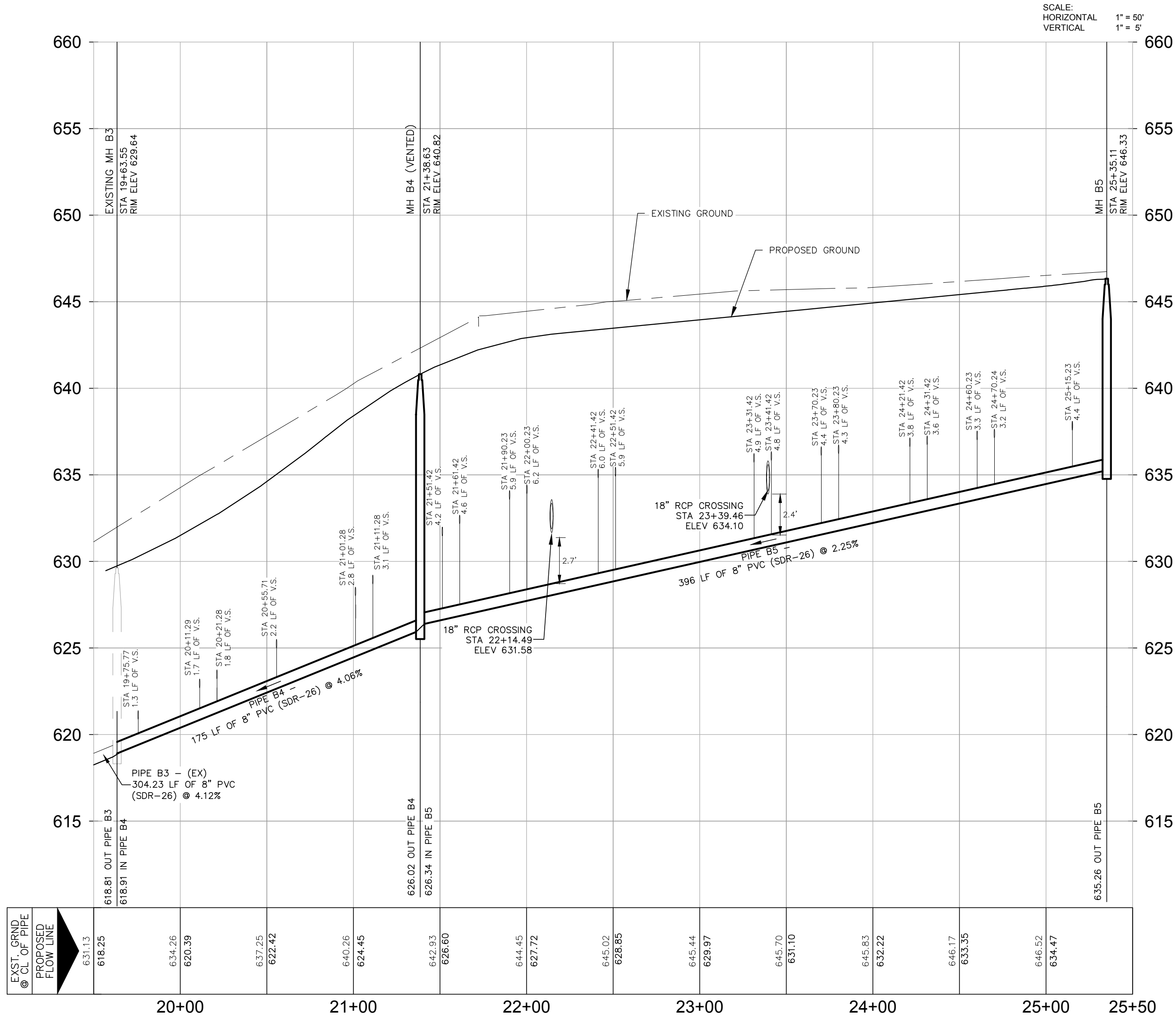
TELEPHONE LOCATOR
THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

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.

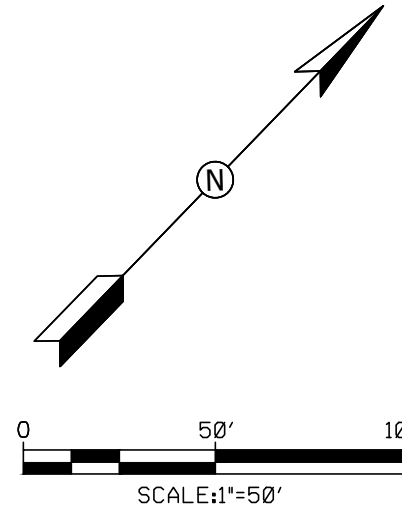
THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR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



SSWR LINE B - STA. 19+50 TO END

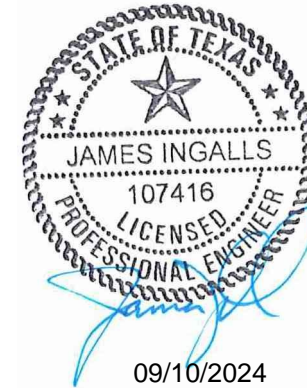


Clear Creek Unit 2 Sewer Design Calculations									
Pipe Label	Diameter (in)	Slope (%)	Calculated Discharge Full Flow (gpd)	Full Flow Velocity (ft/sec)	PDW Flow (gpd)	Velocity (ft/sec)	% Capacity	PWW Flow (gpd)	Velocity (ft/s)
A7	8	1.75%	1,033,133	4.58	52,920	2.40	5.12%	62,495	2.53
A6	8	1.50%	685,303	4.61	52,920	2.28	7.72%	62,495	2.39
A5	8	5.97%	1,908,203	8.46	52,920	3.69	2.77%	62,495	3.89
B5	8	2.25%	1,171,463	5.19	52,920	2.62	4.52%	62,495	2.76
B4	8	4.06%	1,573,621	6.98	52,920	3.23	3.36%	62,495	3.39



LEGEND

- NEW SANITARY SEWER
- NEW MANHOLE
- NEW SEWER LATERAL
- NEW WATER MAIN
- NEW DOUBLE METERED DUAL WATER SERVICE
- NEW FIRE HYDRANT
- PROPOSED RETAINING WALL



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CLEAR CREEK SUBDIVISION
UNIT-2

SANITARY SEWER LINE B
19+50 TO END

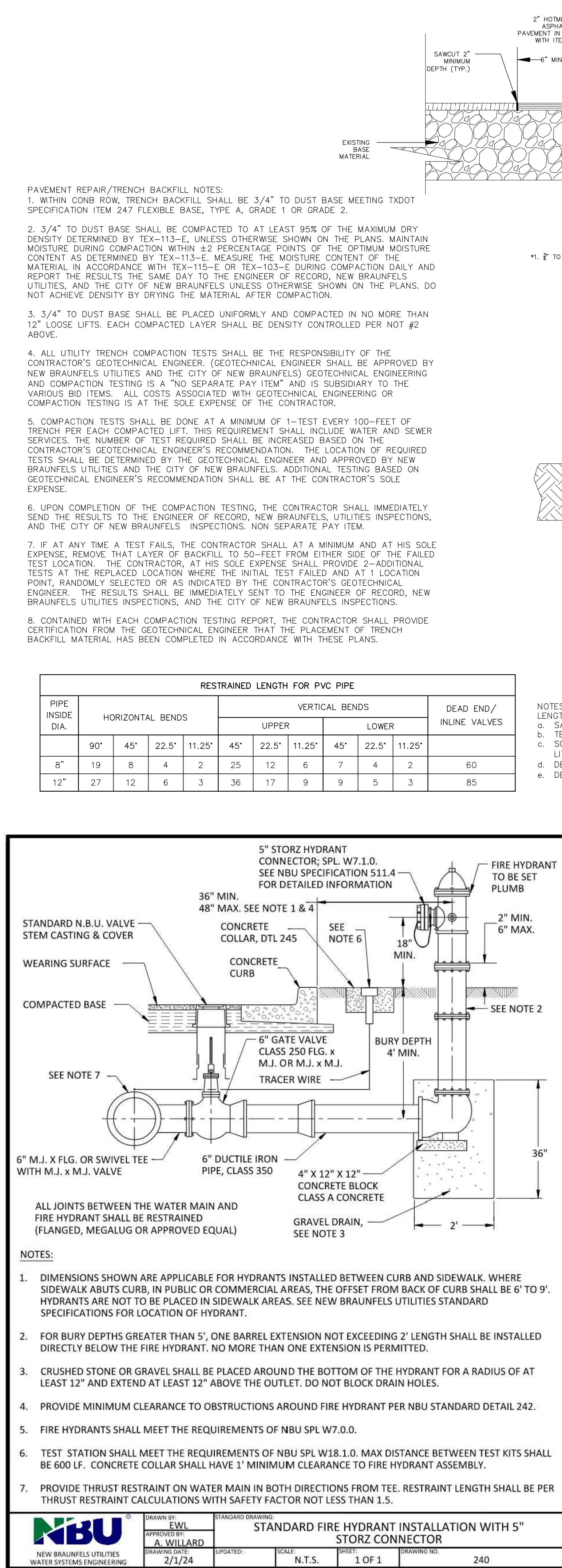
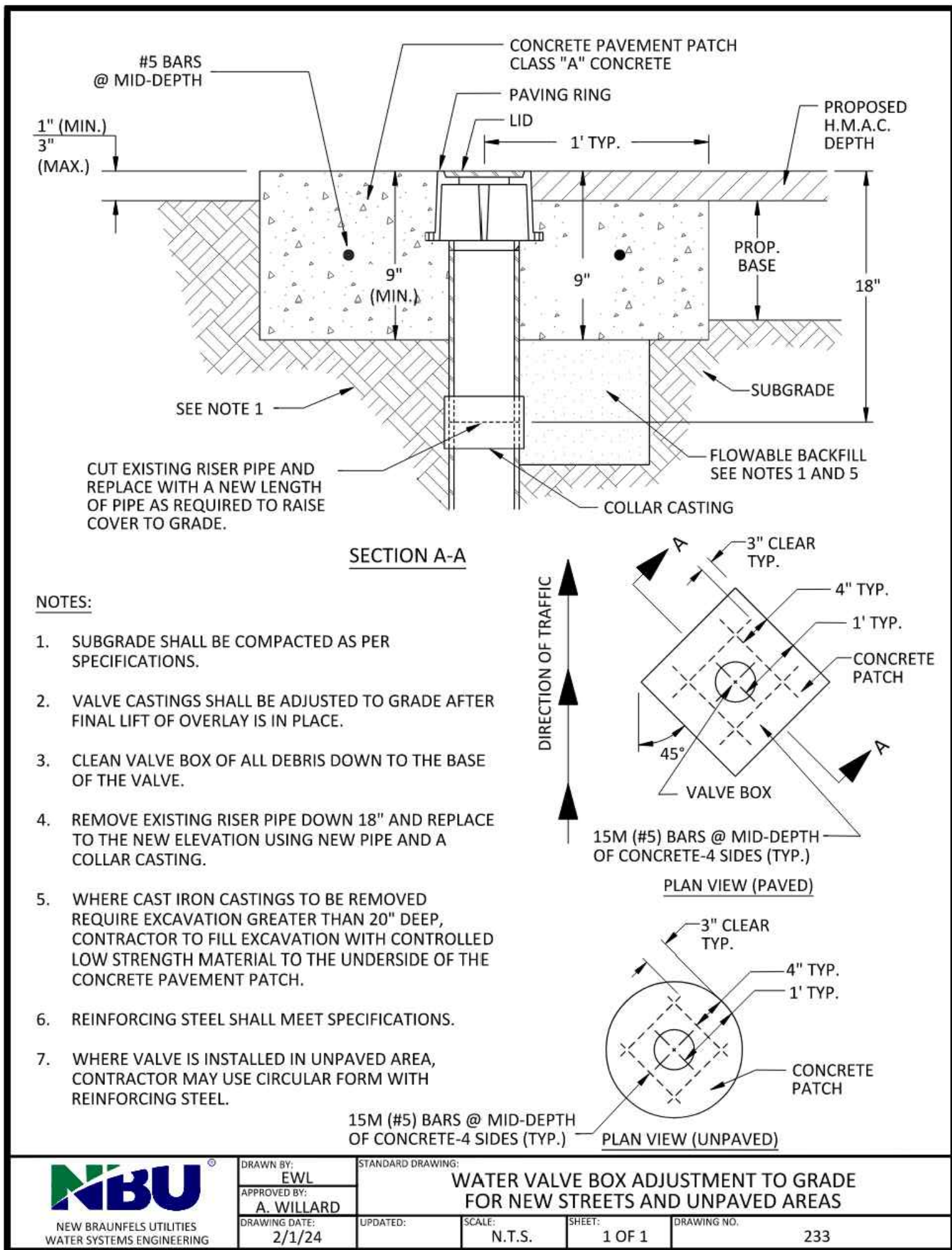
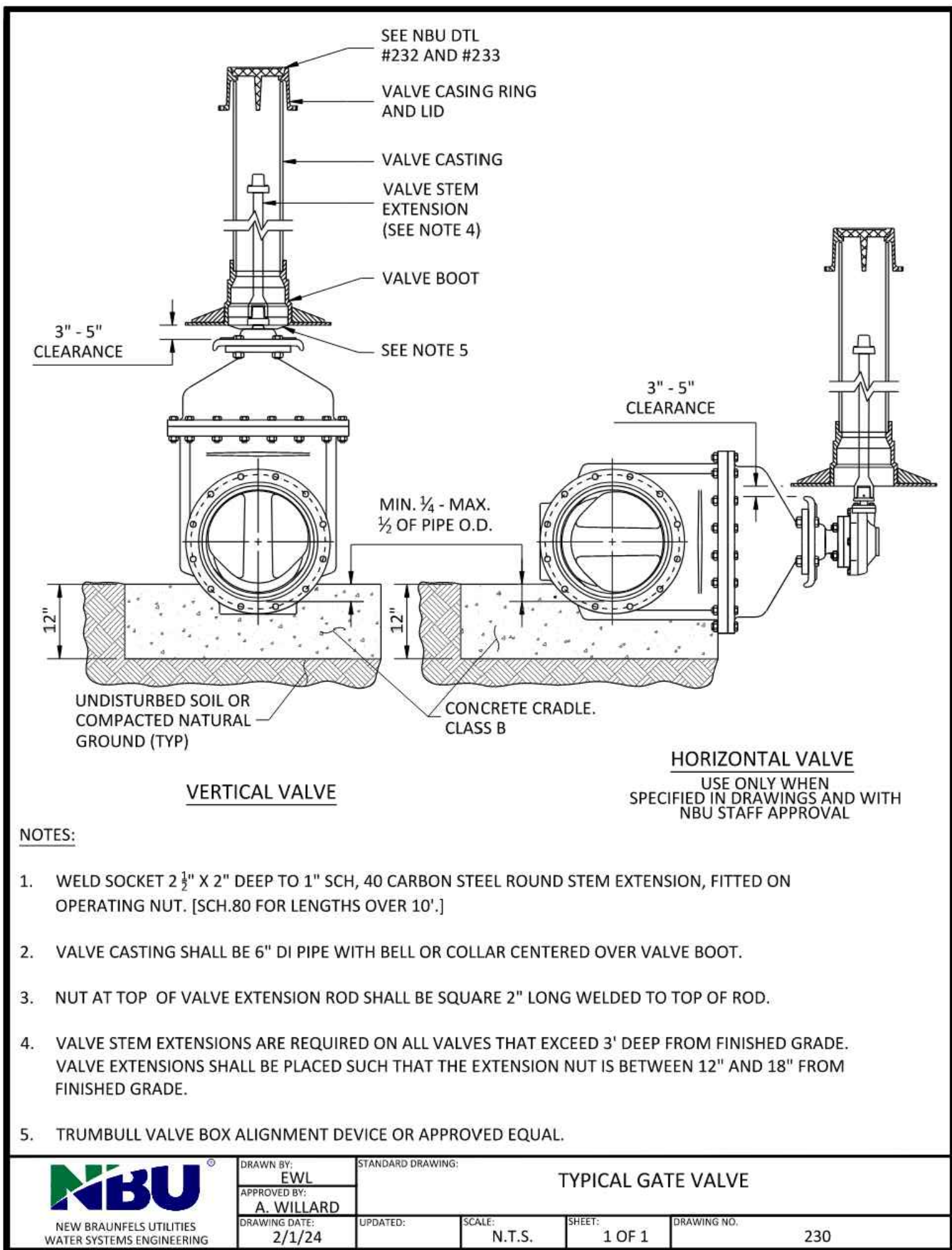
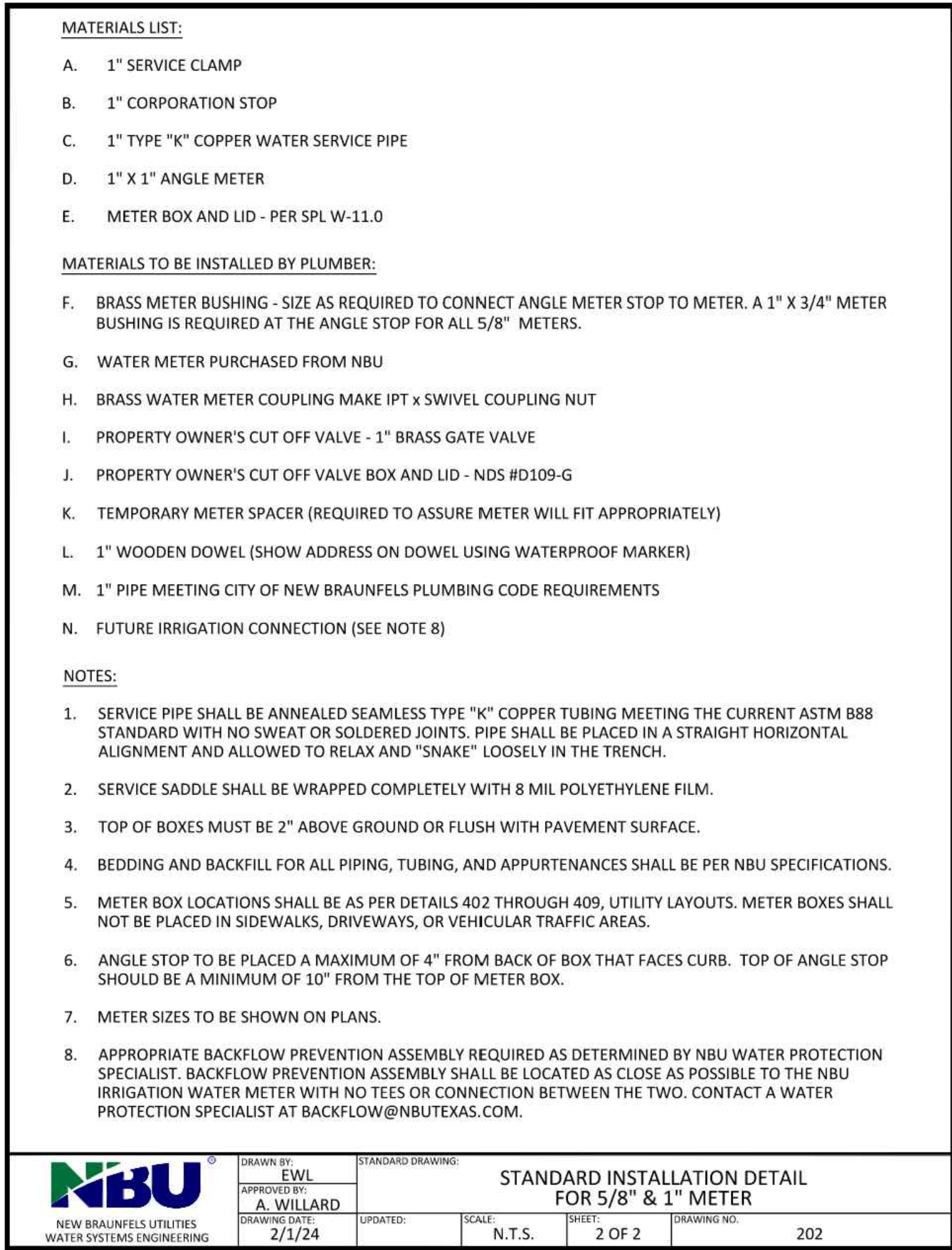
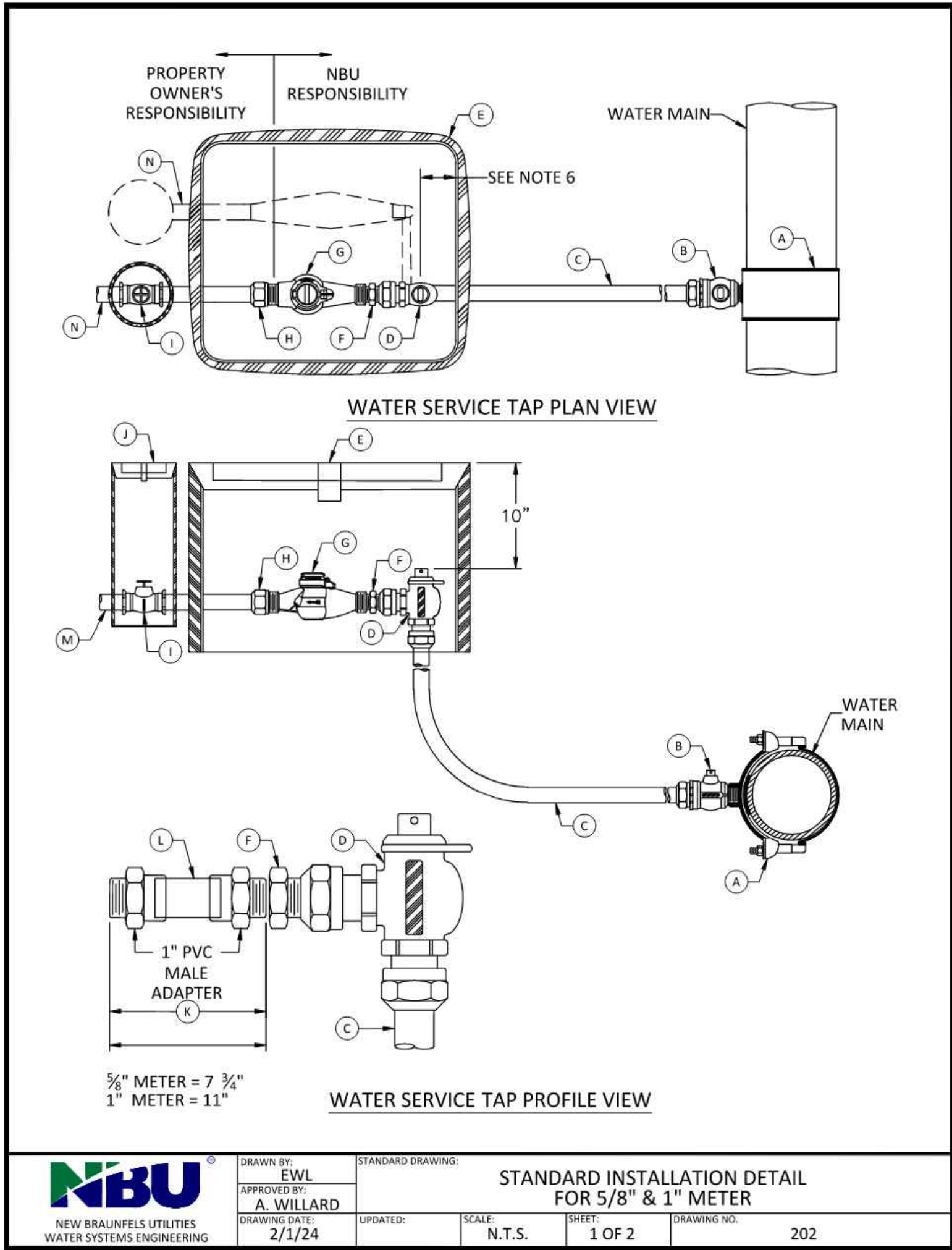
SHEET
30 OF **36**

NO	DATE	ISSUES AND REVISIONS
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Δ	08-20-2024	REVISED PER NBU COMMENTS
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UNIT-2

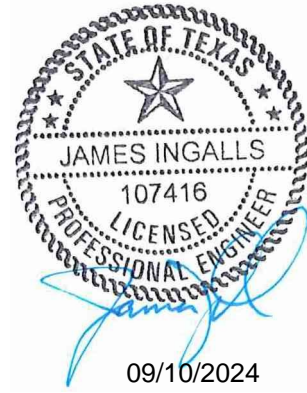
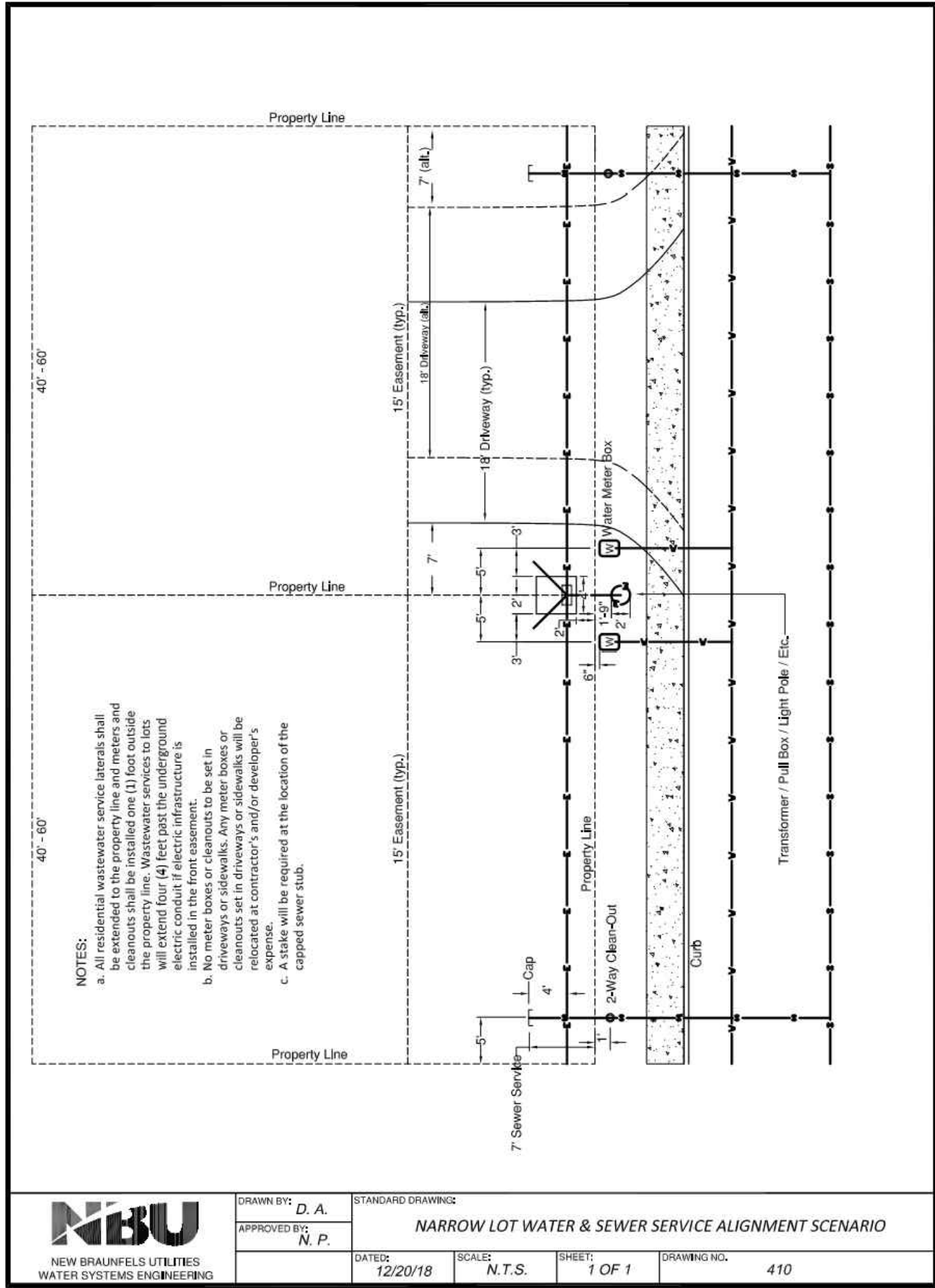
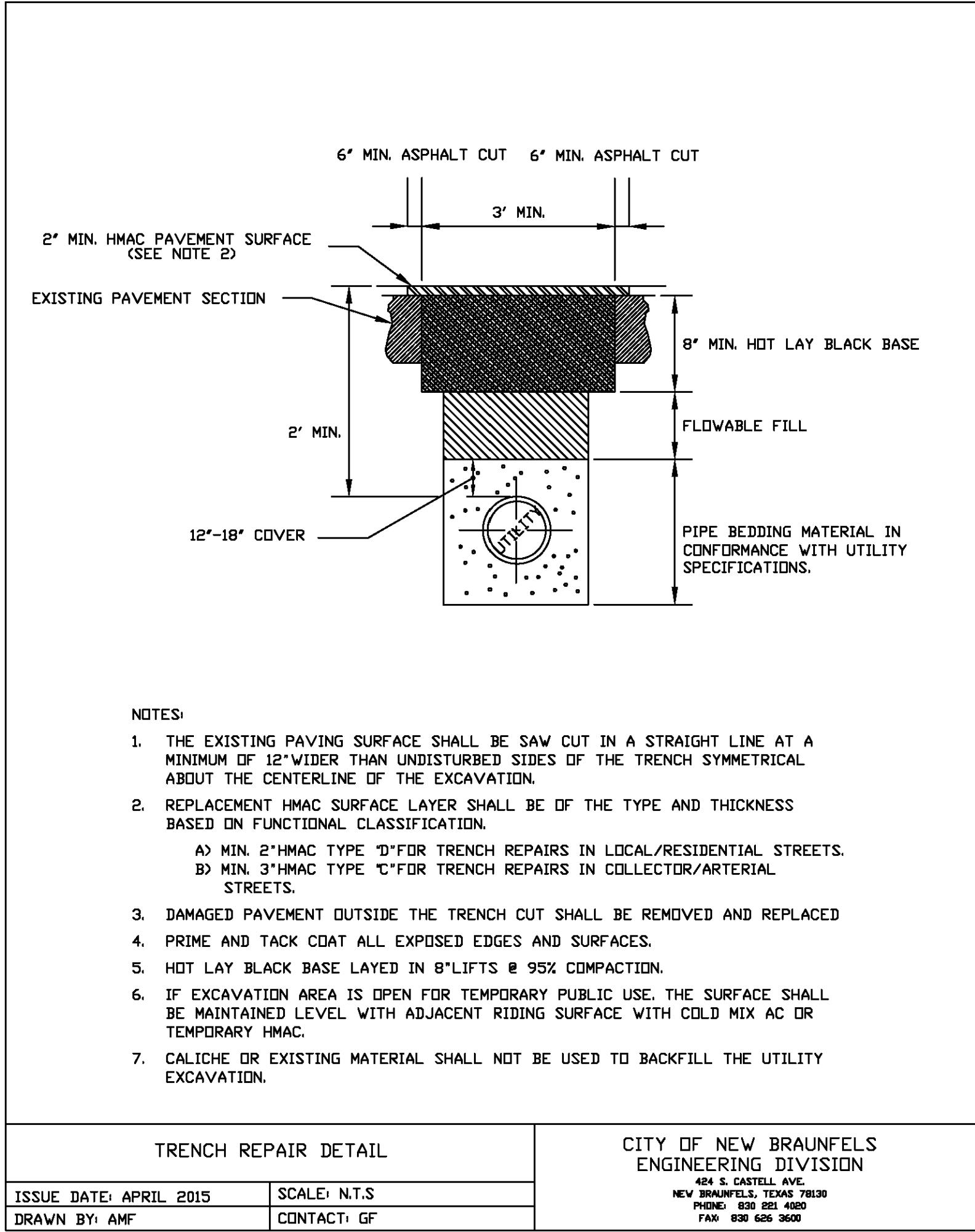
WATER DETAILS I

SHEET **31** OF **36**

NO	DATE	ISSUES AND REVISIONS

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**CLEAR CREEK SUBDIVISION
UNIT-2**

WATER DETAILS II

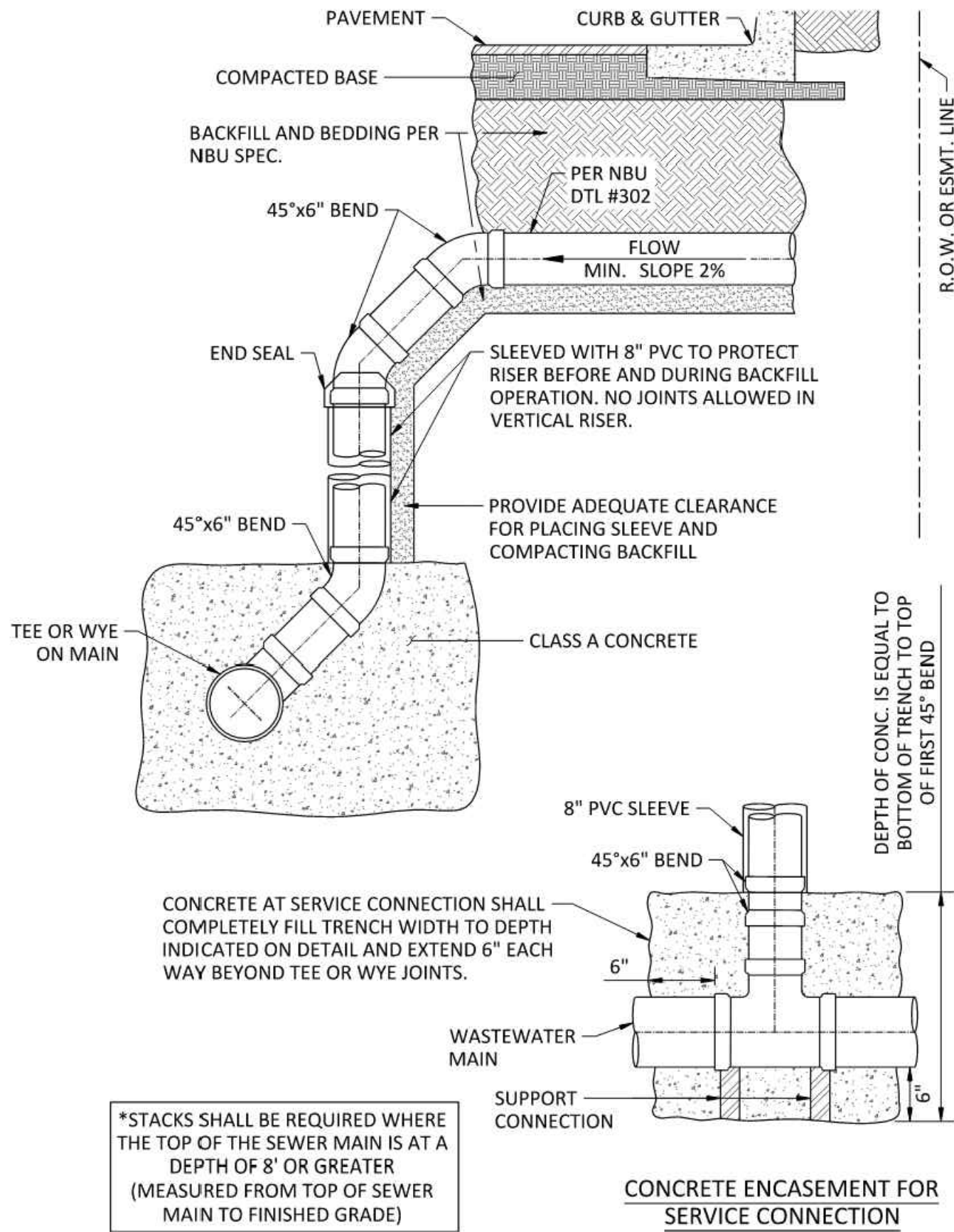
SHEET **32** OF **36**

NO	DATE	ISSUES AND REVISIONS

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Drawing Name: N:\Projects\HARBOR\ Harris Tract\Civil\Construction Drawings\Unit 2\14. SANITARY SEWER DETAILS I.dwg User: bryanders Sep 10, 2024 - 2:59pm



NBU
NEW BRAUNFELS UTILITIES
WATER SYSTEMS ENGINEERING

DRAWN BY: EWL
APPROVED BY: A. WILLARD
DRAWING DATE: 2/1/24

STANDARD DRAWING:
WASTEWATER DEEP SERVICE CONNECTION DETAIL

UPDATED: SCALE: N.T.S. SHEET: 1 OF 1 DRAWING NO.: 301

NOTES:

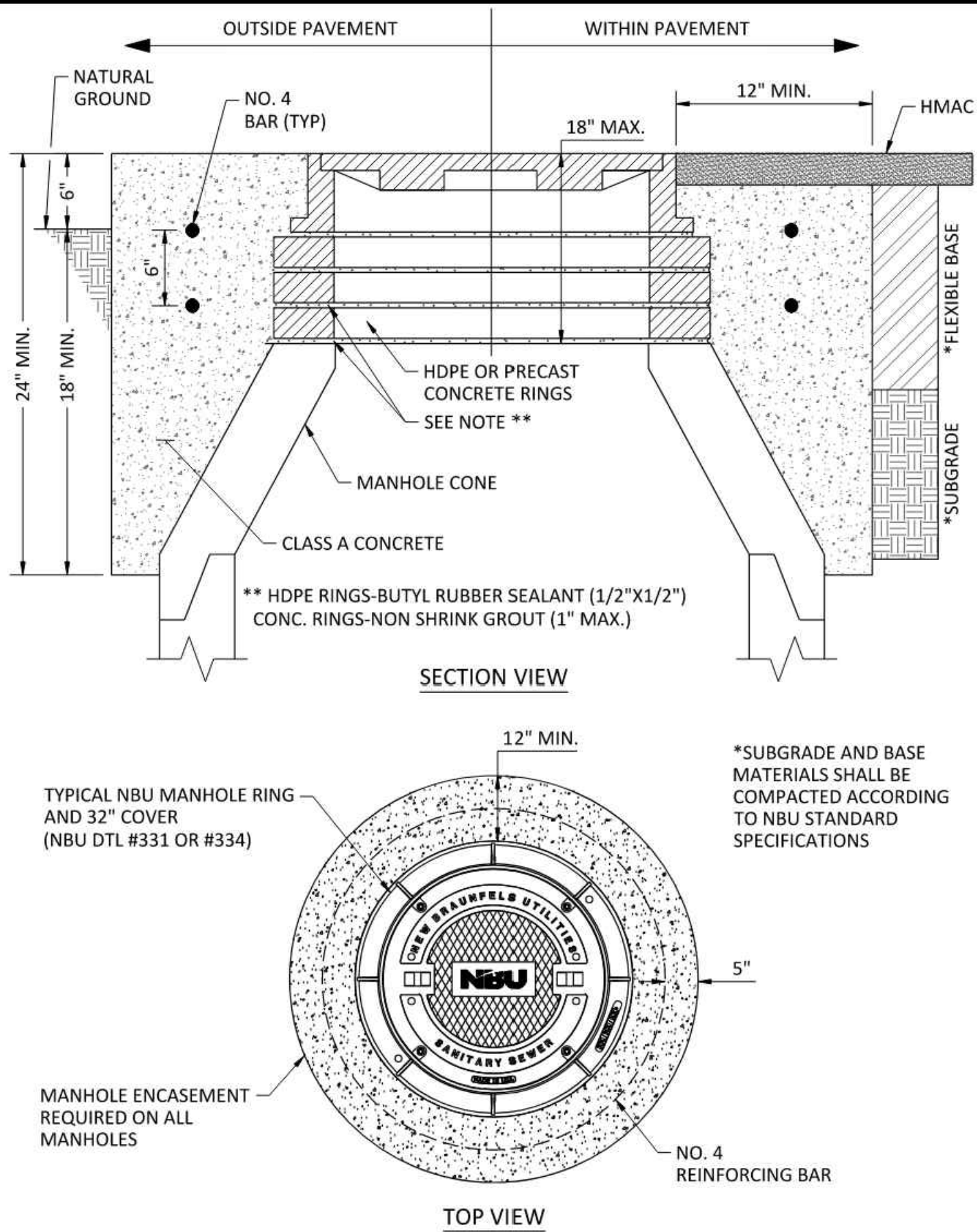
- UTILITY CONTRACTOR, DURING SUBDIVISION CONSTRUCTION, SHALL INSTALL WASTEWATER CONNECTION TO MAIN, 6" STUB WITH 6" SERVICE BRANCH WITH 2-WAY CLEANOUT, CONCRETE SUPPORT (MIN. 18"Wx18"Lx6"H), RISER FOR CLEAN OUT (CAPPED), UTILITY SHROUD, 7' EXTENSION, AND PLUG. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SHALL SLOPE DOWNWARD TO MAIN AT A MINIMUM 2% SLOPE, 1" PER FOOT, MINIMUM TO 45" MAXIMUM. DEPTH OF SERVICE STUB AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER OR DESIGNATED REPRESENTATIVE IF GREATER THAN 6', OTHERWISE, THE INSTALLED DEPTH WILL TYPICALLY BE 4' TO 6'. IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45°, REFER TO DETAIL 301. ALL INSTALLATIONS SHALL BE MADE IN ACCORDANCE WITH INFORMATION SHOWN ON APPLICABLE STANDARD DRAWINGS AND WILL BE INSPECTED BY NBU CONSTRUCTION INSPECTION PERSONNEL.
- CUSTOMER SHALL REMOVE PLUG, INSTALL 4" WASTEWATER LINE [EXTEND 4" PIPE 6" MINIMUM INTO 6" PIPE AND JOINT WITH FLEXIBLE ADAPTOR]. IF WASTEWATER WILL NOT SATISFACTORILY FLOW BY GRAVITY TO SEWER MAIN ADJACENT TO PROPERTY, PUMP EQUIPMENT MUST BE PROVIDED BY THE CUSTOMER AS PART OF CUSTOMER'S WASTEWATER SYSTEM.
- CUSTOMER IS RESPONSIBLE FOR PIPING SYSTEM UNTIL WASTEWATER IS CONNECTED. ANY MISSING OR DAMAGED PARTS SHALL BE REINSTALLED BY CUSTOMER WHO SHALL GUARANTEE, FOR A PERIOD OF TWO (2) YEARS FROM DATE OF FINAL ACCEPTANCE, THAT CONNECTIONS TO NBU SYSTEMS ARE FREE FROM DEFECTS IN WORKMANSHIP OR MATERIALS. CUSTOMER MUST ENSURE THAT 2-WAY CLEANOUTS REMAIN CLEAR OF SIDEWALKS AND OTHER OBSTRUCTIONS.
- NBU ACTIVITY IS LIMITED TO INSPECTION OF CONNECTIONS TO NBU'S WASTEWATER SYSTEM. NBU'S MAINTENANCE RESPONSIBILITY ENDS AT THE CUSTOMER'S WASTEWATER CONNECTION TO THE 2-WAY CLEANOUT OR THE PROPERTY LINE, WHICHEVER IS CLOSER TO WASTEWATER MAIN.
- PIPING IN STREET RIGHT-OF-WAY AND IN EASEMENT AREA SHALL BE BEDDED IN GRANULAR MATERIALS AND BACKFILLED AS REQUIRED BY NBU STANDARD SPECIFICATIONS. SERVICE LINES IN THESE AREAS SHALL HAVE A MINIMUM COVER BELOW FINAL STREET GRADE OF 42"; ANY EXCEPTION MUST BE SPECIFICALLY APPROVED BY NBU WATER ENGINEERING.

NBU
NEW BRAUNFELS UTILITIES
WATER SYSTEMS ENGINEERING

DRAWN BY: EWL
APPROVED BY: A. WILLARD
DRAWING DATE: 2/1/24

STANDARD DRAWING:
SINGLE WASTEWATER SERVICE CONNECTION DETAIL

UPDATED: SCALE: N.T.S. SHEET: 2 OF 2 DRAWING NO.: 302

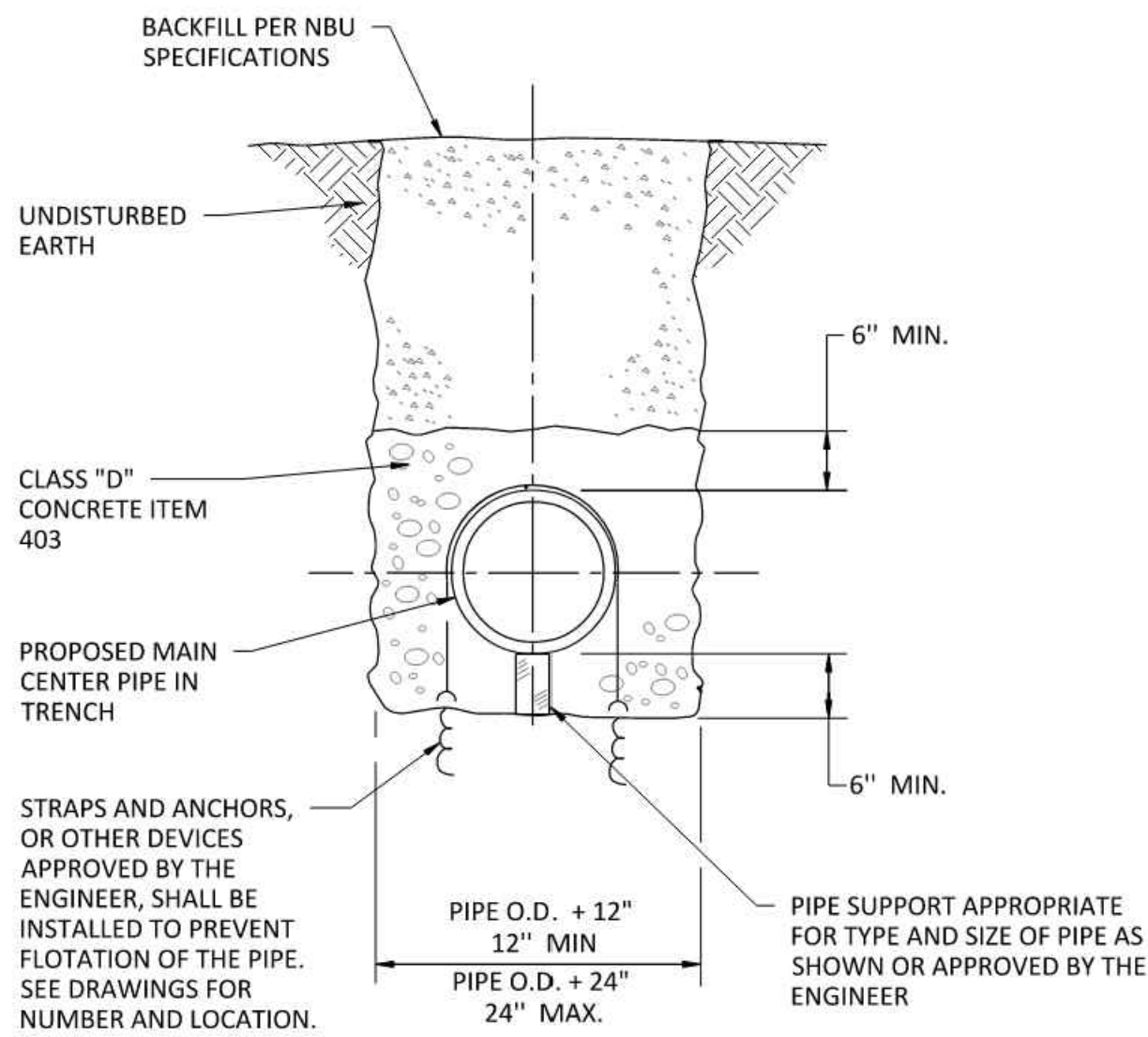


NBU
NEW BRAUNFELS UTILITIES
WATER SYSTEMS ENGINEERING

DRAWN BY: EWL
APPROVED BY: A. WILLARD
DRAWING DATE: 2/1/24

STANDARD DRAWING:
NEW MANHOLE CONSTRUCTION AND MINOR MANHOLE ADJUSTMENT

UPDATED: SCALE: N.T.S. SHEET: 1 OF 1 DRAWING NO.: 322



NBU
NEW BRAUNFELS UTILITIES
WATER SYSTEMS ENGINEERING

DRAWN BY: EWL
APPROVED BY: A. WILLARD
DRAWING DATE: 2/1/24

STANDARD DRAWING:
CONCRETE ENCASEMENT

UPDATED: SCALE: N.T.S. SHEET: 1 OF 1 DRAWING NO.: 310



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**CLEAR CREEK SUBDIVISION
UNIT-2**

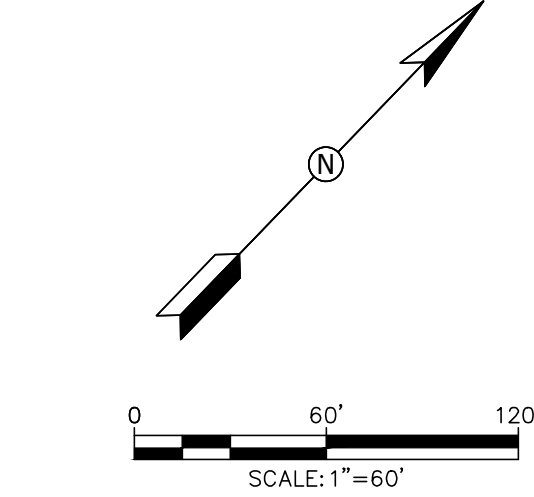
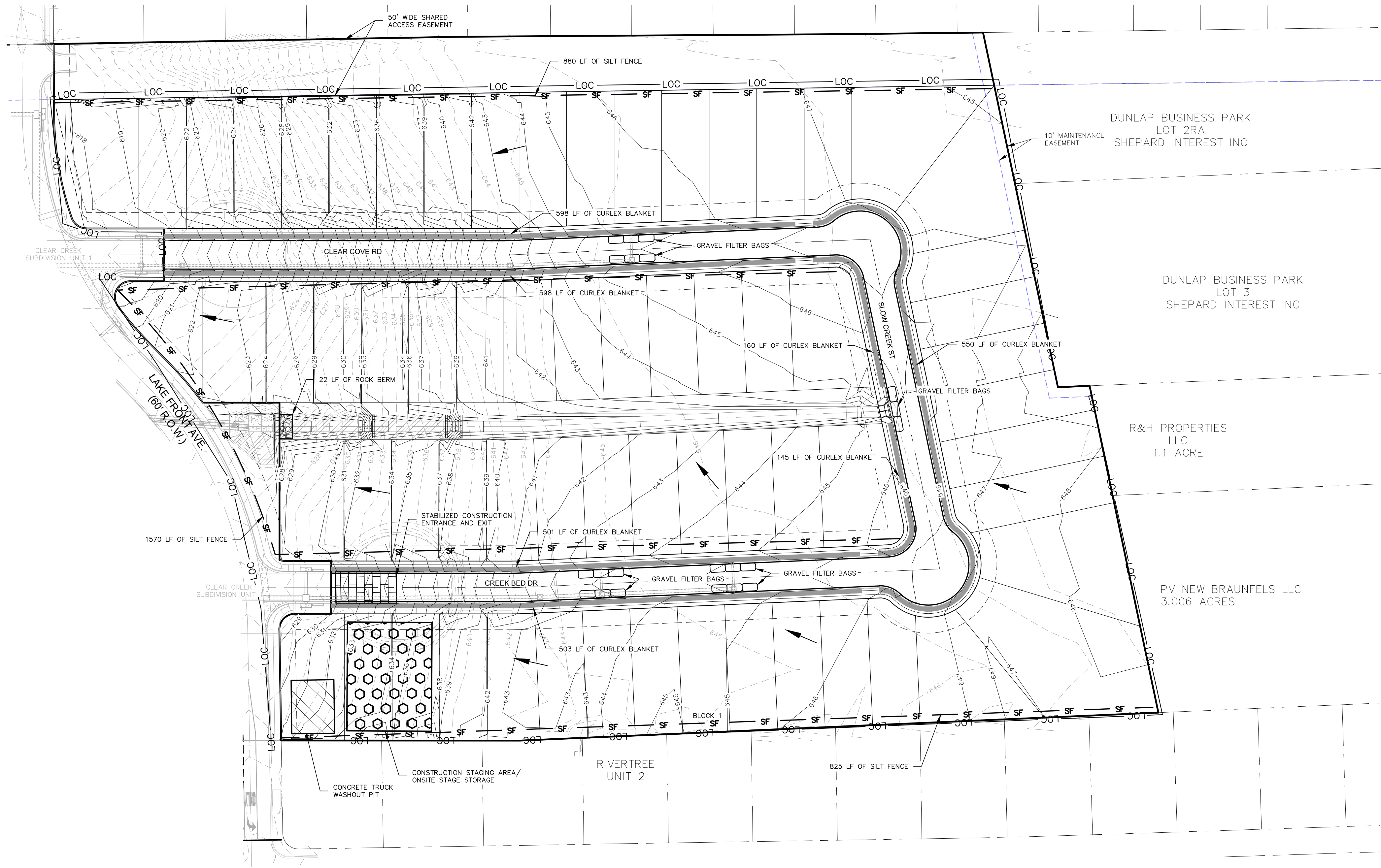
SANITARY SEWER DETAILS I

SHEET
33 OF **36**

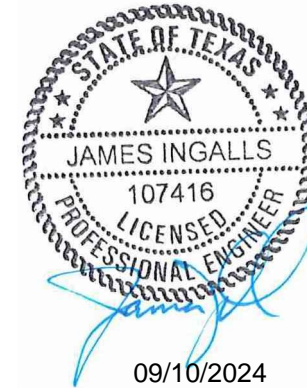
NO	DATE	ISSUES AND REVISIONS
1	07-18-2024	REVISED PER NBU COMMENTS

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LEGEND	
	SILT FENCE
	CURLEX BLANKET
	EXISTING CONTOURS
	PROPOSED CONTOURS
	EDGE OF PAVEMENT
	FLOW ARROWS
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING WATER METER
	EXISTING WATER VALVE
	EXISTING FIRE HYDRANT
	EXISTING TREE
	STABILIZED CONSTRUCTION ENTRANCE/EXIT
	TRUCK WASH OUT PIT
	CONSTRUCTION STAGING AREA
	ROCK BERM
	GRAVEL FILTER BAGS



SEQUENCE OF CONSTRUCTION:

- OBTAIN CITY APPROVED SITE PREPARATION PLANS, AND TPDES PERMIT (NOT A COPY OF THE TPDES APPLICATION TO TCEQ), IF APPLICABLE.
- INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS.
- BEGIN DEMOLITION ACTIVITIES, IF APPLICABLE.
- BEGIN SITE CLEARING AND GRADING.
- RESTORE AND REVEGETATE ALL DISTURBED AREAS NOT UNDER IMPERMEABLE IMPROVEMENTS.
- COMPLETE ANY REMAINING "PUNCH LIST" ITEMS.
- CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROLS AFTER PERMANENT STABILIZATION IS AT LEAST 70% EVENLY ESTABLISHED. RYE IS NOT ACCEPTED.

EROSION CONTROL NOTES:

- LIMITS OF CONSTRUCTION AND OTHER EROSION CONTROL IMPROVEMENTS SHOWN OUTSIDE THE PROPERTY ARE SHOWN FOR GRAPHICAL PURPOSE ONLY. IF NEAR PROPERTY LINE, THE INTENT IS TO BE PLACED NEAR THE PROPERTY LINE, NOT ON THE ADJACENT PROPERTY.
- DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.
- CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PIT, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD.
- STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED IN THE SWPPP DOCUMENTS AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.
- RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.
- ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.
- STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL CLARITY.
- AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT SPECIFICATIONS.
- BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UP-GRADIENT AREAS.
- BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE WATERSHED FOR THAT PORTION CONTROLLED BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED IN ACCORDANCE WITH TPDES REQUIREMENTS.
- UPON COMPLETION OF THE PROJECT, INCLUDING SITE STABILIZATION, AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES, PAYING SPECIAL ATTENTION TO ROCK BERMS IN DRAINAGE FEATURES.
- STRIPPING OF VEGETATION FROM PROJECT SITES SHALL BE PHASED SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST POSSIBLE PERIOD OF TIME PER THE NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL SEC. 12.2(N).

RESIDENTIAL LOT STABILIZATION

- CURLEX BLANKET (1) (4' MIN WIDTH) OR ENGINEER APPROVED EQUAL.
- CURLEX MUST BE INSTALLED PER MANUFACTURER SPECIFICATIONS.
- MAX SLOPE FOR CURLEX (1) < 2H : 1V

SOIL STABILIZATION NOTE

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

SUBSTANTIAL GRADING IS PROPOSED WITH THIS UNIT. PER THE NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL SEC. 13.2(N), STRIPPING OF VEGETATION FROM PROJECT SITES SHALL BE PHASED SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST POSSIBLE TIME.

HYDRAULIC MULCH

MATERIALS:

HYDRAULIC MULCHES: WOOD FIBER MULCH CAN BE APPLIED ALONE OR AS A COMPONENT OF HYDRAULIC MATRICES. WOOD FIBER APPLIED ALONE IS TYPICALLY APPLIED AT THE RATE OF 2,000 TO 4,000 LB/ACRE. WOOD FIBER MULCH IS MANUFACTURED FROM WOOD OR WOOD WASTE FROM LUMBER MILLS OR FROM URBAN SOURCES.

HYDRAULIC MATRICES: HYDRAULIC MATRICES INCLUDE A MIXTURE OF WOOD FIBER AND ACRYLIC POLYMER OR OTHER TACKIFIER AS BINDER. APPLY AS A LIQUID SLURRY USING A HYDRAULIC APPLICATION MACHINE (I.E., HYDRO SEEDER) AT THE FOLLOWING MINIMUM RATES, OR AS SPECIFIED BY THE MANUFACTURER TO ACHIEVE COMPLETE COVERAGE OF THE TARGET AREA: 2,000 TO 4,000 LB/ACRE WOOD FIBER MULCH, AND 5 TO 10% (BY WEIGHT) OF TACKIFIER (ACRYLIC COPOLYMER, GUAR, PSYLLIUM, ETC.).

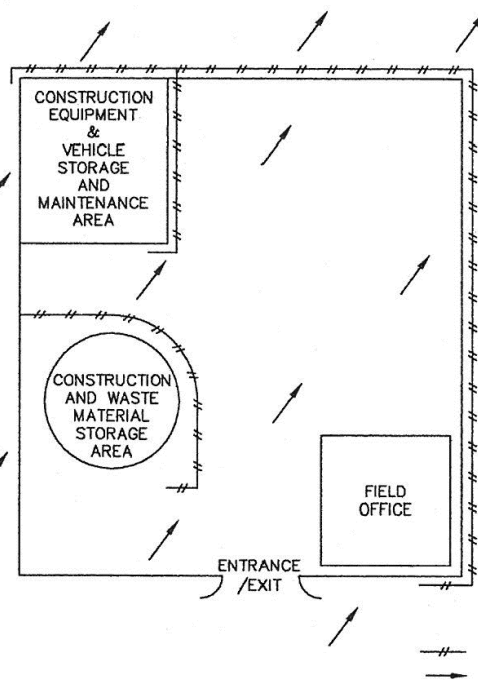
BONDED FIBER MATRIX: BONDED FIBER MATRIX (BFM) IS A HYDRAULICALLY APPLIED SYSTEM OF FIBERS AND ADHESIVES THAT UPON DRYING FORMS AN EROSION RESISTANT BLANKET THAT PROMOTES VEGETATION, AND PREVENTS SOIL EROSION. BFMS ARE TYPICALLY APPLIED AT RATES FROM 3,000 LB/ACRE TO 4,000 LB/ACRE BASED ON THE MANUFACTURER'S RECOMMENDATION. A BIODEGRADABLE BFM IS COMPOSED OF MATERIALS THAT ARE 100% BIODEGRADABLE. THE BINDER IN THE BFM SHOULD ALSO BE BIODEGRADABLE AND SHOULD NOT DISSOLVE OR DISPERSE UPON RE-WETTING. TYPICALLY, BIODEGRADABLE BFMS SHOULD NOT BE APPLIED IMMEDIATELY BEFORE, DURING OR IMMEDIATELY AFTER RAINFALL IF THE SOIL IS SATURATED. DEPENDING ON THE PRODUCT, BFMS TYPICALLY REQUIRE 12 TO 24 HOURS TO DRY AND BECOME EFFECTIVE.

INSTALLATION:

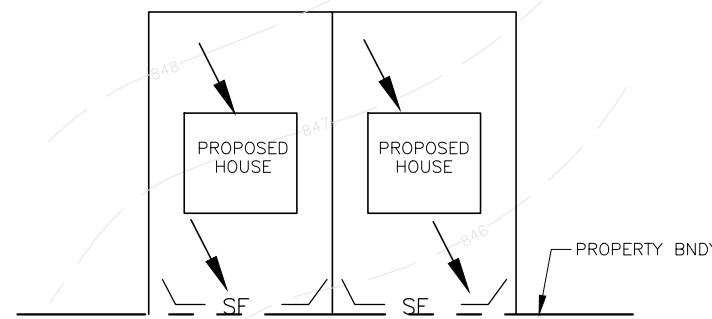
- PRIOR TO APPLICATION, ROUGHEN EMBANKMENT AND FILL AREAS BY ROLLING WITH A CRIMPING OR PUNCHING TYPE ROLLER OR BY TRACK WALKING. TRACK WALKING SHALL ONLY BE USED WHERE OTHER METHODS ARE IMPRACTICAL.
- TO BE EFFECTIVE, HYDRAULIC MATRICES REQUIRE 24 HOURS TO DRY BEFORE RAINFALL OCCURS.
- AVOID MULCH OVER SPRAY ONTO ROADS, SIDEWALKS, DRAINAGE CHANNELS, EXISTING VEGETATION, ETC.
- 4" OF TOP SOIL SHALL BE PLACED.

INSPECTION AND MAINTENANCE GUIDELINES:

- MULCHED AREAS SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAIN EVENT TO LOCATE AND REPAIR ANY DAMAGE.
- AREAS DAMAGED BY STORMS OR NORMAL CONSTRUCTION ACTIVITIES SHOULD BE REGRADED AND HYDRAULIC MULCH REAPPLIED AS SOON AS PRACTICAL.

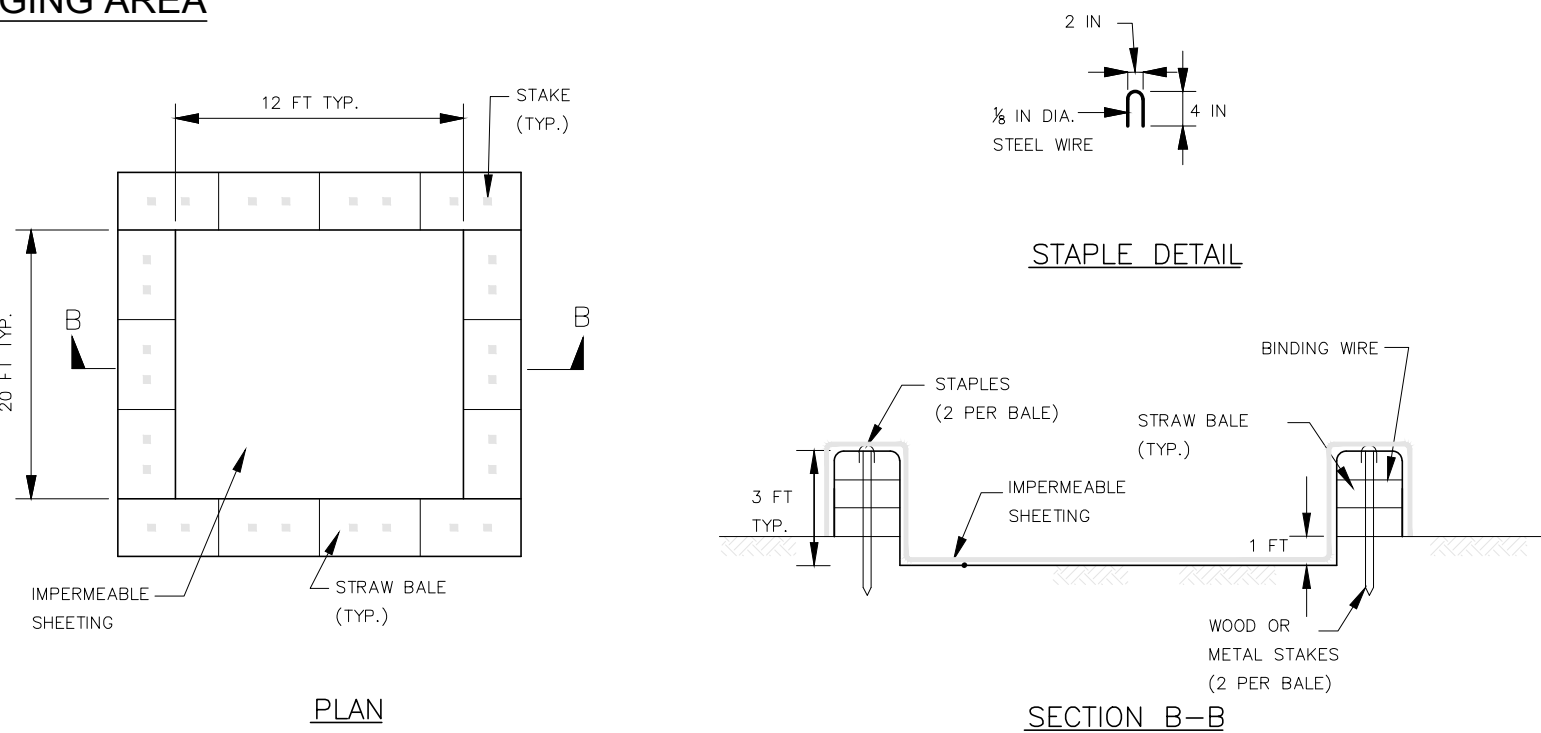


TYPICAL CONSTRUCTION STAGING AREA



TYPICAL SILT FENCE AT RESIDENTIAL LOT

NOTE: RESIDENTIAL LOT CONSTRUCTION MUST MEET THE REQUIREMENTS OF THIS WMAP AS WELL AS WITH LOCAL, STATE, AND FEDERAL REGULATIONS. TEMPORARY BMPs MUST BE IN PLACE PRIOR TO ANY RESIDENTIAL LOTS CONSTRUCTION.



TYPICAL CONCRETE TRUCK WASHOUT PIT

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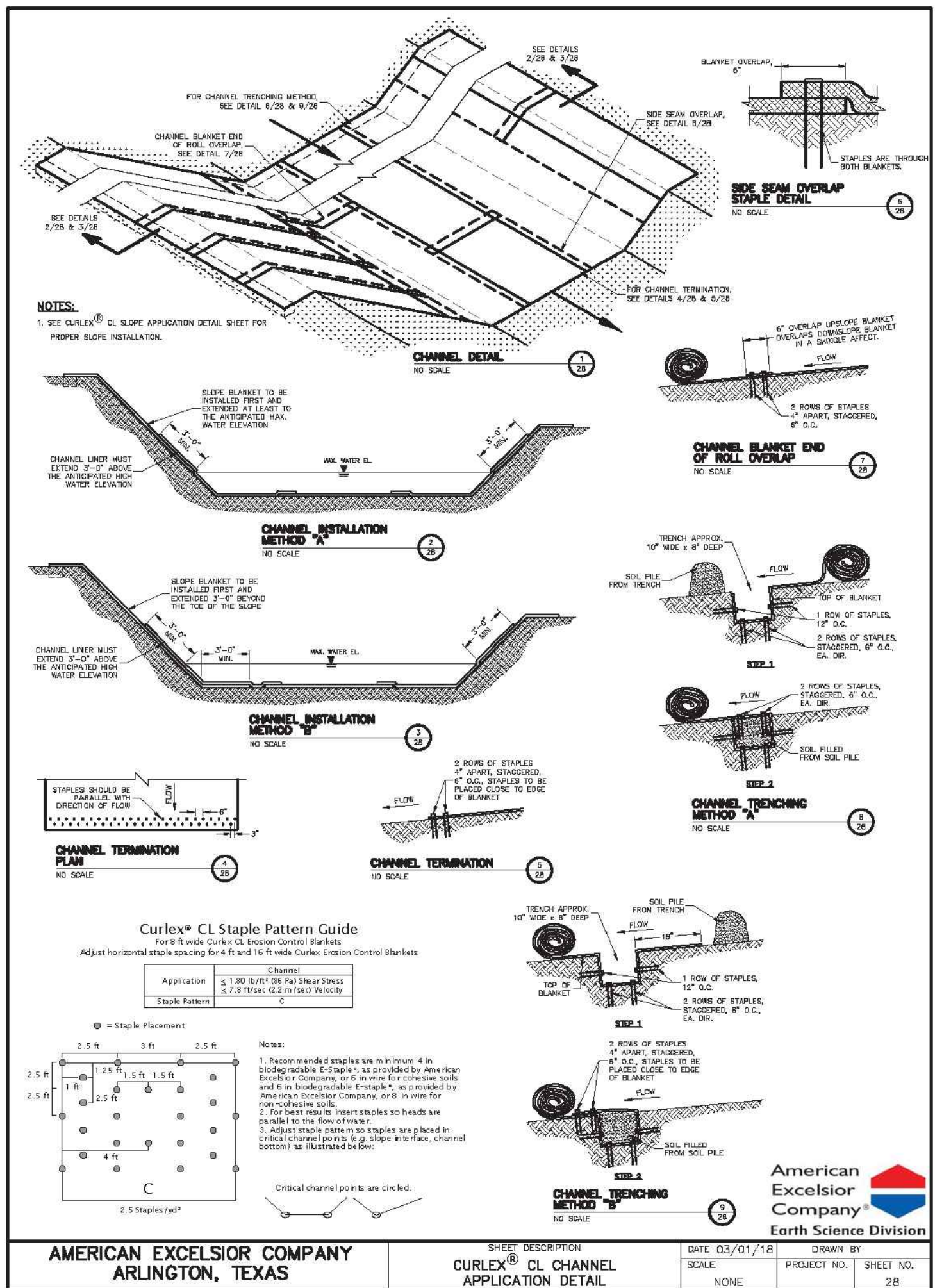
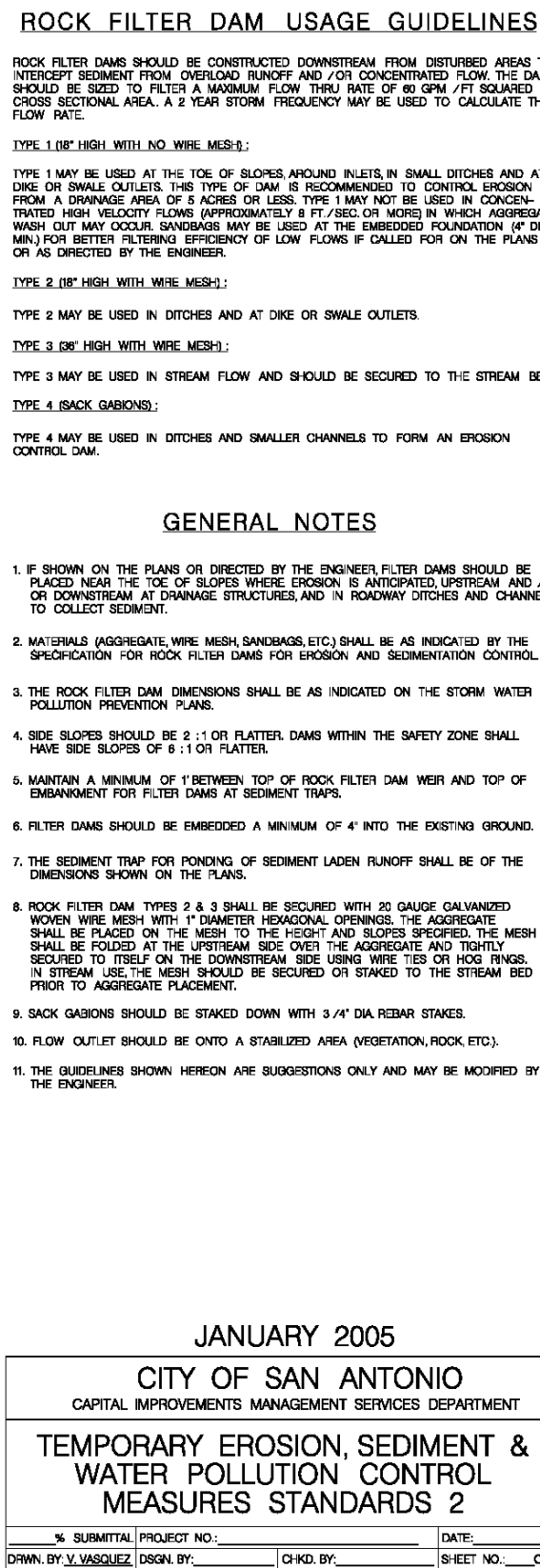
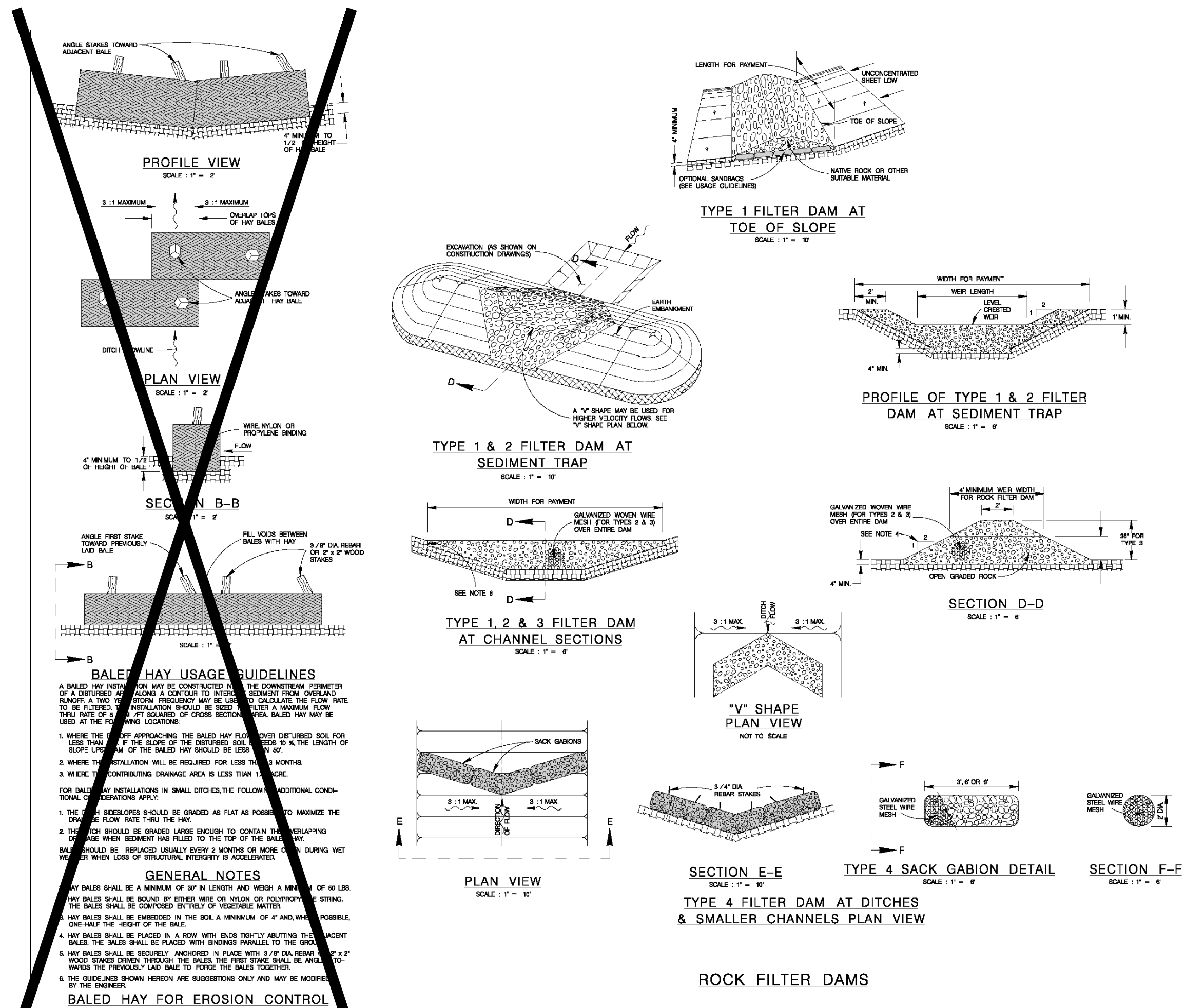
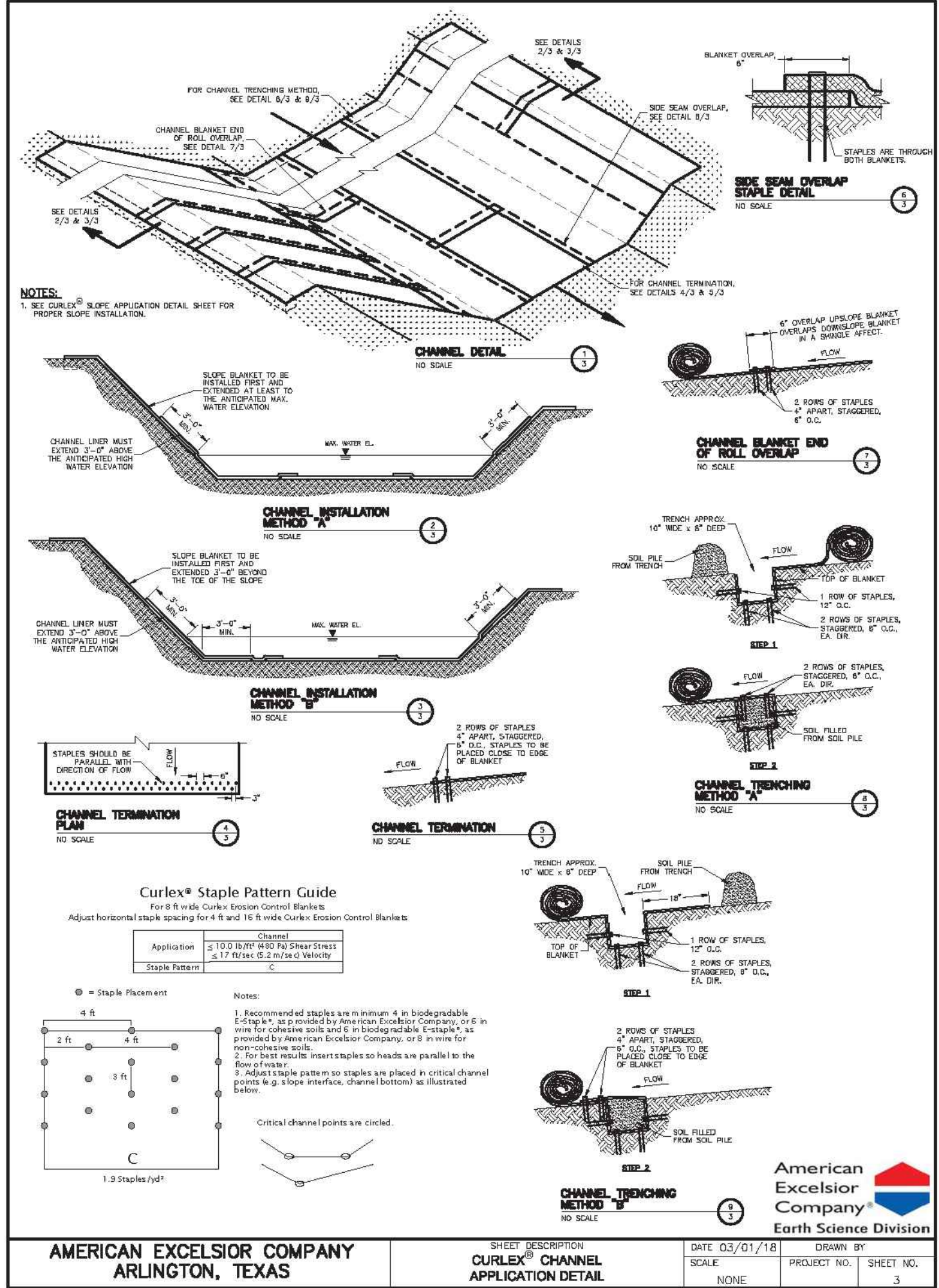
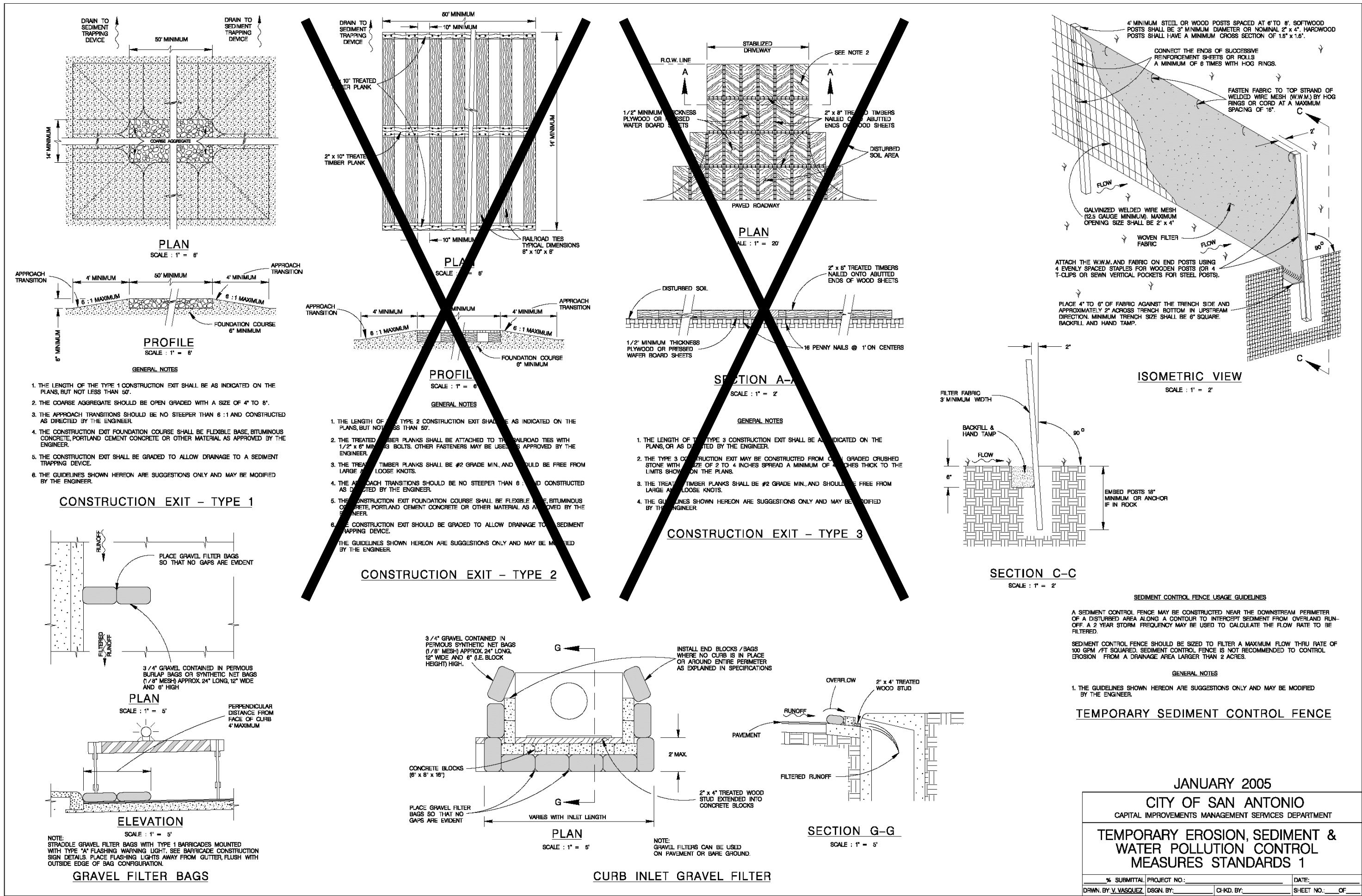
**CLEAR CREEK SUBDIVISION
UNIT-2**

EROSION CONTROL PLAN

SHEET
35 OF **36**

NO	DATE	ISSUES AND REVISIONS

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CLEAR CREEK SUBDIVISION
UNIT-2

EROSION CONTROL DETAILS I

SHEET 36 OF 36

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