CIVIL CONSTRUCTION DOCUMENTS FOR

PRAIRIE GREEN - UNIT 2 SUBDIVISION

BEXAR COUNTY, TEXAS

OWNER/DEVELOPER:	BRIGHTLAND HOMES, LTD. A TEXAS LIMITED PARTNERSHIP 3815 S. CAPITAL OF TEXAS HWY. STE 275 AUSTIN, TX 78704	SURVEYOR:	UP ENGINEERING + SURVEYING 111 TOWER DR. SUITE 325 SAN ANTONIO, TEXAS 78232 (210) 774-5504 CONTACT: RICHARD L. NEUBAUER
ENGINEER:	UP ENGINEERING + SURVEYING 111 TOWER DR, SUITE 325 SAN ANTONIO, TEXAS 78232 (210) 774-5504 CONTACT: RYAN R. PLAGENS, P.E.	GEOTECHNICAL ENGINEER:	InTEC OF SAN ANTONIO, L.P. 12028 RADIUM SAN ANTONIO, TX 78216 (210) 525-9033

ADDRESS:

GREEN ROAD AND GRAYTOWN ROAD, CITY OF SAN ANTONIO ETJ, TEXAS, 78109

FLOODPLAIN INFORMATION:

FIRM #48029, PANEL 0435 G 09/29/2010.

WATERSHED:

THIS SITE IS LOCATED IN THE UPPER CIBOLO CREEK WATERSHED.

BENCHMARKS:

TBM 1: COTTON SPINDLE SET IN POWER POLE
NORTHING: 13713572.6800
EASTING: 2202854.2280
ELEVATION: 621.67

TBM 2: COTTON SPINDLE SET IN POWER POLE
NORTHING: 13713667.0100
EASTING: 2202687.0380
ELEVATION: 623.27

SURVEY BASIS:

BEARINGS SHOWN HEREON ARE BASED ON ACTUAL GPS OBSERVATIONS, TEXAS STATE PLANE COORDINATES, SOUTH CENTRAL ZONE, GRID.

LEGAL DESCRIPTION:

BEING A TOTAL OF 14.30 ACRES OF LAND, INCLUSIVE OF A 0.083 ACRE RIGHT OF WAY DEDICATION TO THE CITY OF SAN ANTONIO, SITUATED WITHIN THE A.F. PHELAN SURVEY NO. 45, ABSTRACT NO. 580, COUNTY BLOCK 5107, AND THE PRESIDIO IRRIGATION COMPANY SURVEY NO. 4, ABSTRACT 365, COUNTY BLOCK 5108, BEXAR COUNTY, TEXAS OUT OF A 65.712 ACRE TRACT OF LAND, RECORDED IN DOCUMENT #20220125959, OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS.

UTILITY PROVIDERS:

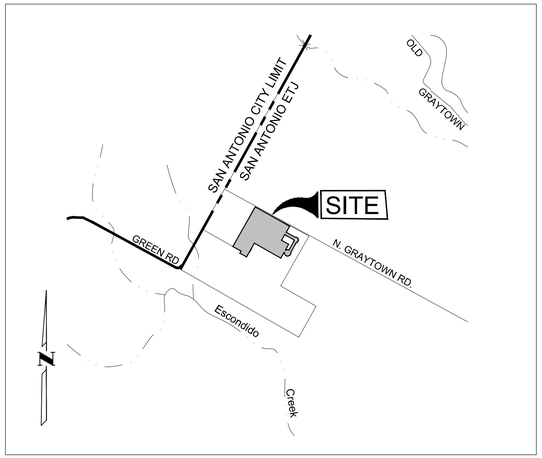
	CENTERPOINT ENERGY P.O. Box 4981 Houston, TX 77210 (713)-207-2222	CABLE:	TIME WARNER CABLE 1900 BLUE CREST LANE SAN ANTONIO, TX 78247 (210) 244-0500		
ELECTRIC:	CPS ENERGY 145 NAVARRO SAN ANTONIO, TX 78205 (210) 353-2376	WATER:	EAST CENTRAL SPECIAL UTILITY DISTRICT 5520 FM 1628 ADKINS, TX 78101 (210) 649-2383	WASTEWATER:	SAN ANTONIO RIVER AUTHORITY 100 E. GUENTHER STREET SAN ANTONIO, TX 78204 (210) 227-1373

LAND USE SUMMARY:

ZONING:	OCL
PROPOSED SITE USE:	SINGLE FAMILY
LOT SIZE:	45'x120' & 50'x120'

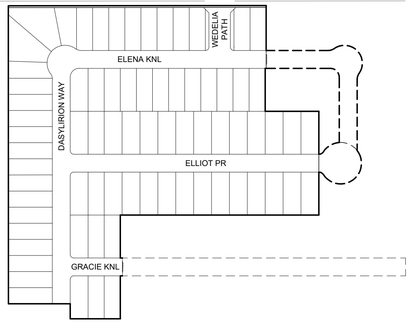
NOTES:

1. RELEASE OF THIS APPLICATION DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/ HER SUBMITTAL, WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY CITY ENGINEERS.
2. BY THE ACT OF SUBMITTING A BID FOR THE 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 AND SPECIFICATIONS AND 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.
3. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION AND/OR A FIELD SURVEY, AND MAY NOT MATCH LOCATIONS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT THE "ONE CALL" SYSTEM @ 811, OR THE OWNER OF EACH INDIVIDUAL UTILITY, FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITY CROSSING PRIOR TO BEGINNING CONSTRUCTION.
4. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION. (OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENT PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, FOUNTAINHEAD TOWER, SUITE 605, 8200 W. INTERSTATE 10, SAN ANTONIO, TEXAS 78230).
5. CONTRACTOR SHALL RESTORE ALL SIGNS AND PAVEMENT MARKINGS TO EXISTING CONDITIONS FOLLOWING THE COMPLETION OF EACH PHASE OF CONSTRUCTION. CONTRACTORS SHALL REFER TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) FOR SIGN AND MARKING DIMENSIONS AND COLORS.



VICINITY MAP
NOT TO SCALE

SUBMITTAL DATE:
September, 2024



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UP ENGINEERING + SURVEYING
111 TOWER DR. SUITE 325
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9/12/24

STATE OF TEXAS
RYAN R. PLAGENS
111640
LICENSED PROFESSIONAL ENGINEER

BRIGHTLAND HOMES, LTD. A
TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

OVERALL COVER

REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C1.0

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF SAN ANTONIO AND/OR BEXAR COUNTY STANDARD SPECIFICATIONS FOR CONSTRUCTION JUNE 2008, OR LATEST.
2. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS, BUT NOT INCLUDED IN THE BID PROPOSAL. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED IN THE PAY ITEM TO WHICH IT RELATES.
3. THE CONTRACTOR SHALL PROVIDE ACCESS FOR THE DELIVERY OF MAIL BY THE U.S. POSTAL SERVICE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES OR DRIVEWAYS. (NO SEPARATE PAY ITEM).
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL SIGNS AND BARRICADES ARE PROPERLY INSTALLED AND MAINTAINED. ALL LOCATIONS AND DISTANCES WILL BE DECIDED UPON IN THE FIELD BY THE CONTRACTOR, USING THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". THE CITY'S CONSTRUCTION INSPECTOR AND TRAFFIC ENGINEERING REPRESENTATIVE WILL ONLY BE RESPONSIBLE TO INSPECT BARRICADES AND SIGNS. IF, IN THE OPINION OF THE TRAFFIC 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.
6. IF THE NEED ARISES, ADDITIONAL BARRICADES AND DIRECTIONAL DEVICES MAY BE ORDERED BY THE TRAFFIC ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
7. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181 C.P.S. 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.
8. CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.
9. CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
10. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO EXCAVATION OPERATION:

EAST CENTRAL SPECIAL UTILITY DISTRICT	210-649-2383
WATER EMERGENCIES	210-649-2383
SAN ANTONIO RIVER AUTHORITY (SARA)	210-227-1373
STORM DRAINAGE (BEXAR COUNTY)	210-335-6663
SIGNAL OPERATIONS (CITY OF SAN ANTONIO)	210-207-8022
TEXAS STATE WIDE ONE CALL LOCATOR	811
CPS ENERGY (GAS & ELECTRIC)	210-353-2000
CPS ELECTRIC/GAS ISSUES OR EMERGENCIES	210-353-4357
TIME WARNER	210-244-0500
AT&T	972-742-5892

11. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED, BUT SHALL BE INVESTIGATED AND VERIFIED BY THE CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR THE MAINTENANCE AND PROTECTION OF THE EXISTING UTILITIES EVEN IF THEY ARE NOT SHOWN ON THE PLANS. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND HE SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION.
12. ALL WASTE MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.
13. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.
14. THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND / OR TRACKED CONSTRUCTION MATERIALS AND / OR DEBRIS.
15. IF THE CONTRACTOR ENCOUNTERS ANY ARCHAEOLOGICAL DEPOSITS DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR MUST STOP EXCAVATION IMMEDIATELY, CONTACT THE CITY INSPECTOR, AND CALL THE CITY HISTORIC PRESERVATION OFFICE AT 210-215-9274 FOR AN ARCHAEOLOGICAL INVESTIGATION. THE CONTRACTOR CANNOT BEGIN EXCAVATION AGAIN WITHOUT WRITTEN PERMISSION FROM THE CITY.

    IF MORE THAN THREE (3) DAYS ARE REQUIRED FOR INVESTIGATION (NOT INCLUDING HOLIDAY AND WEEKENDS) AND IF THE CONTRACTOR IS UNABLE TO WORK IN OTHER AREAS, THEN THE CONTRACTOR WILL BE ALLOWED TO NEGOTIATE FOR ADDITIONAL CONSTRUCTION TIME UPON WRITTEN REQUEST WITHIN TEN (10) DAYS AFTER THE FIRST NOTICE TO THE CITY OF ARCHAEOLOGICAL INVESTIGATION FOR EACH EVENT.

    IF THE TIME REQUIRED FOR INVESTIGATION IS LESS THAN OR EQUAL TO THREE (3) DAYS FOR EACH EVENT, CONTRACT DURATION WILL NOT BE EXTENDED.
16. IF SUSPECTED CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION OPERATIONS, C.O.S.A. SHALL BE NOTIFIED IMMEDIATELY WHEN CONTAMINATED SOILS AND / OR GROUNDWATER ARE ENCOUNTERED AT LOCATIONS NOT IDENTIFIED IN THE PLANS. THE NOTIFICATION SHOULD INCLUDE THE STATION NUMBER, TYPE OF CONTAMINATED MEDIA, EVIDENCE OF CONTAMINATION AND MEASURES TAKEN TO CONTAIN THE CONTAMINATED MEDIA AND PREVENT PUBLIC ACCESS. THE CONTAMINATED SOIL AND / OR GROUNDWATER SHALL NOT BE REMOVED FROM THE LOCATION WITHOUT PRIOR C.O.S.A. APPROVAL. THE CONTRACTOR MUST STOP THE EXCAVATION IMMEDIATELY AND CONTACT THE C.O.S.A. INSPECTOR. THE CONTRACTOR CANNOT BEGIN EXCAVATION ACTIVITIES WITHOUT WRITTEN PERMISSION FROM THE CITY.

UTILITY GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL COMPLY TO ALL APPLICABLE CITY OF SAN ANTONIO/BEXAR COUNTY RULES AND REQUIREMENTS FOR STREETS, SIDEWALKS, ALLEYS AND ROADWAY DESIGN (LATEST EDITIONS), THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (LATEST EDITIONS), THE EAST CENTRAL SPECIAL UTILITY DISTRICT SPECIFICATIONS FOR WATER WORKS CONSTRUCTION (LATEST EDITION) AND THE SAN ANTONIO RIVER AUTHORITY (SARA) SPECIFICATIONS FOR SANITARY SEWER CONSTRUCTION (LATEST EDITION).
2. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY CONFLICTS IMMEDIATELY. ANY DAMAGE BY THE CONTRACTOR TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OF NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
4. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE SYSTEMS WHETHER SHOWN ON PLANS OR NOT.
5. ALL UTILITIES SHALL BE INSTALLED PRIOR TO PAVEMENT CONSTRUCTION.
6. ALL UTILITY CONNECTIONS SHALL BE COORDINATED WITH THE MECHANICAL AND ELECTRICAL PLANS. NOTIFY ENGINEER OF ANY CONFLICTS PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR SHALL INSTALL ANY BENDS, FITTINGS, ETC. IN THE WATER & SEWER MAIN AS REQUIRED TO AVOID CONFLICTS WITH OTHER UTILITIES. (NO SEPARATE PAY).
8. NO WATER JETTING TO BACKFILL TRENCHES WILL BE ALLOWED ON THIS PROJECT.
9. POLYVINYL CHLORIDE (PVC) SEWER PIPE SHALL BE SDR 26. FITTINGS AND JOINTS SHALL CONFORM TO COMPATIBLE SDR 26 PIPE. SOLVENT CEMENTS JOINTS SHALL NOT BE USED.
10. WHEN SEWER LINES ARE INSTALLED IN THE VICINITY OF WATER MAINS, SUCH INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ).
11. ALL SPOIL AND OTHER UNSUITABLE MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT HIS EXPENSE.
12. ALL SERVICES ARE BROUGHT TO WITHIN 5 FEET OF THE BUILDING UNLESS OTHERWISE NOTED. REFERENCE MEP PLANS FOR UTILITY CONNECTIONS AT THE BUILDING.
13. WHETHER SHOWN ON THE PLANS OR NOT ALL CLEANOUT TOPS AND MANHOLES SHALL BE INSTALLED AT LEAST 3" ABOVE FINISHED GRADE OUTSIDE PAVEMENT AND FLUSH WITH FINISHED GRADE WITHIN THE PAVEMENT AREAS. TOPS WITHIN PAVEMENT SHALL BE TRAFFIC RATED.
14. SANITARY SEWER SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE AND THE SAN ANTONIO RIVER AUTHORITY PLUMBING SPECIFICATIONS, AND AS DIRECTED BY THE PLUMBING INSPECTOR.
15. THRUST BLOCKING SHALL BE INSTALLED IN ACCORDANCE WITH EAST CENTRAL SPECIAL UTILITY DISTRICT SPECIFICATIONS.
16. UTILITY CONTRACTOR SHALL COORDINATE WITH CPS ENERGY FOR THE GAS AND ELECTRICAL SERVICE.
17. FIRE LINE SHALL BE INSTALLED BY A LICENSED FIRE SPRINKLER CONTRACTOR.
18. DOMESTIC WATER SHALL BE PVC C900 FOR PIPES < 12" OR C905 FOR PIPES ≥ 12" OR COPPER TUBING AS SPECIFIED IN THE EAST CENTRAL SPECIAL UTILITY DISTRICT STANDARD SPECIFICATIONS.
19. CLEANOUTS SHALL BE TWO-WAYS AND INSTALLED IN ACCORDANCE WITH COSA PLUMBING CODE (EVERY 100') & AS DIRECTED BY PLUMBING INSPECTOR.
20. FIRE LINE SHALL BE PVC C900, CLASS 150 AND SHALL COMPLY WITH AWWA STANDARDS AND SHALL WITHSTAND A WORKING PRESSURE OF NOT LESS THAN 200 P.S.I.
21. CONTRACTOR SHALL MAINTAIN "AS-BUILT" DRAWINGS THROUGHOUT THE COURSE OF CONSTRUCTION & SHALL SUBMIT SAME TO THE ENGINEER FOR APPROVAL PRIOR TO FINAL ACCEPTANCE BY OWNER.

GRADING AND DRAINAGE NOTES

1. CONTRACTOR TO VERIFY ELEVATIONS PRIOR TO CONSTRUCTION. EXISTING CONTOURS BASED ON SURVEY TOPOGRAPHIC DATA.
2. ALL GRADES AND CONTOURS SHOWN ARE FINAL, TOP OF FINISHED SURFACE ELEVATIONS, CONTRACTOR SHALL SUBTRACT PAVEMENT, BASE, TOPSOIL, MULCH, ...ETC. TO OBTAIN PROPER SUBGRADE ELEVATIONS.
3. POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL AREAS WITHIN THE SCOPE OF THIS PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER. MINIMUM SLOPE 0.50%.
4. NO ABRUPT CHANGE OF GRADE SHALL OCCUR.
5. ALL DISTURBED AREAS SHALL BE REVEGETATED, BY THE CONTRACTOR, IN ACCORDANCE WITH PROJECT SPECIFICATIONS, AND ARCHITECTURAL LANDSCAPING PLANS.
6. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLAN OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
7. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT WHERE NOT SPECIFICALLY COVERED IN THE PROJECT SPECIFICATIONS SHALL CONFORM TO ALL APPLICABLE CITY OF SAN ANTONIO SPECIFICATIONS FOR CONSTRUCTION, TXDOT STANDARD SPECIFICATIONS, AND BEXAR COUNTY PUBLIC WORKS STANDARD SPECIFICATIONS.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ORIGINAL, OR BETTER CONDITION ANY DAMAGES DONE TO EXISTING SIGNS, UTILITIES, PAVEMENT, CURBS, SIDEWALKS OR DRIVEWAYS (NO SEPARATE ITEM).
9. DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, CPS ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVE THAT ARE IN THE PROJECT AREA.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH NECESSARY UTILITY COMPANIES FOR PROVIDING TEMPORARY UTILITY SERVICES DURING CONSTRUCTION.
11. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS FOR UNDERGROUND UTILITIES AND DRAINAGE SYSTEMS WHETHER SHOWN ON PLANS OR NOT.
12. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS, OF DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
13. THE CONTRACTOR SHALL SAW CUT EXISTING PAVEMENT AT NEW PAVEMENT AND CURB JUNCTURES. NO JAGGED OR IRREGULAR CUTS IN PAVEMENT WILL BE ACCEPTED.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
15. ALL EXCAVATION IS UNCLASSIFIED.
16. ALL ON-SITE CURBS ARE 7" HIGH UNLESS OTHERWISE SPECIFIED.
17. SEE CIVIL COVER SHEET FOR PROJECT BENCHMARK.
18. CONTRACTOR TO RAISE/LOWER ALL UTILITY BOXES, COVERS, GRATES, VALVES BOXES, MANHOLES, CLEANOUTS, ETC., TO MATCH PROPOSED FINISHED GRADE ELEVATIONS.
19. ALL DISTURBED AREAS WHICH ARE NOT TO BE PAVED SHALL BE COVERED WITH 6" MIN. CLEAN TOPSOIL UNLESS OTHERWISE NOTED. CUT OR FILL SHALL BE ADJUSTED TO ALLOW FOR TOPSOIL IN ORDER TO MAINTAIN PROPOSED ELEVATIONS. AREAS FOR LANDSCAPING SHOULD BE IN ACCORDANCE WITH THE LANDSCAPE ARCHITECTS PLANS.
20. PROVIDE THE REQUIRED MINIMUM DENSITY AND MOISTURE CONTENT OF COMPACTED FILL IN ACCORDANCE WITH THE SOILS REPORT AND THE REQUIREMENTS OF THE PROFESSIONAL ENGINEER (GEOTECH AND CIVIL).
21. A TESTING LABORATORY SHALL BE EMPLOYED BY THE CONTRACTOR TO CHECK THE SUITABILITY OF MATERIAL SELECTED FOR CONTROLLED FILLS, TO TEST AND DETERMINE IF THE REQUIRED IS BEING OBTAINED, AND TO TEST COMPACTION OF EXPOSED SUBGRADES, WHEN COMPACTION TESTS DOES NOT MEET GEOTECH REQUIREMENTS, FILL AND BACKFILL SHALL BE DRIED OUT OR MOISTENED AS NECESSARY, SCARIFIED, AND RECOMPACTED AT NO ADDITIONAL COSTS TO OWNER.

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

DEMOLITION NOTES

1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE CITY OF SAN ANTONIO STANDARDS AND SPECIFICATIONS.
2. ALL FILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR METHOD (ASTM D-698).
3. ALL CONSTRUCTION BARRICADING TO BE IN ACCORDANCE WITH CURRENT "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIG TEST" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN PER THE APPROPRIATE REMEDIAL ACTION AGREED UPON BY THE ENGINEER.
5. DISPOSAL OF ALL DEMOLISHED MATERIAL IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL MUNICIPAL REQUIREMENTS.
6. WHERE A STATE OR LOCAL MUNICIPAL STANDARD DETAIL DUPLICATES A DETAIL SHOWN IN THE PLANS, THE MORE STRINGENT DETAIL, AS DETERMINED BY THE REVIEWING AGENCY, SHALL APPLY.
7. ALL ITEMS NOT SPECIFICALLY CALLED OUT TO BE REMOVED SHALL REMAIN. ANY ITEM TO REMAIN WHICH IS REMOVED SHALL BE REPLACED AT THE CONTRACTORS EXPENSE. (NO SEPARATE PAY).
8. CONTRACTOR WILL BE RESPONSIBLE FOR ACQUIRING ALL NECESSARY DEMOLITION PERMITS FOR THE PROJECT AND COORDINATION WITH THE RESPECTIVE UTILITY COMPANIES FOR REMOVAL OF THEIR INDIVIDUAL SERVICES.
9. CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER REGARDING QUESTIONS ON THE DEMOLITION PLAN.
10. DEMOLITION CONTRACTOR SHALL CLEARLY MARK ALL EXISTING UTILITY SERVICES WHERE THEY CROSS PROPERTY LINES. THIS INFORMATION WILL BE USED BY UTILITY COMPANIES AND CONTRACTORS TO TIE INTO FOR THE PROPOSED UTILITY SERVICES.
11. CONTRACTOR SHALL VERIFY WHICH TREES ARE TO BE SAVED & PROTECTED PRIOR TO COMMENCING CONSTRUCTION. DURABLE FENCE PROTECTION BARRIERS SHALL BE INSTALLED AROUND ALL TREES TO BE SAVED WITH FENCE PLACEMENT A MINIMUM OF 10 FEET FROM TREES TRUNKS. (IF APPLICABLE)
12. CONTRACTOR SHALL NOT DISTURB AREAS AROUND EXISTING TREES TO BE SAVED. (IF APPLICABLE)
13. CONTRACTOR SHALL COMPENSATE OWNER FOR DAMAGE OF TREES THAT WERE TO REMAIN. (IF APPLICABLE)

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WWW.UPENGINEERING.COM TBPE F-17992
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9/12/24

STATE OF TEXAS · LICENSED PROFESSIONAL ENGINEER · RYAN R. PLAGENS · 111640 · 09/12/2024

BRIGHTLAND HOMES, LTD. A
TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

GENERAL NOTES

REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

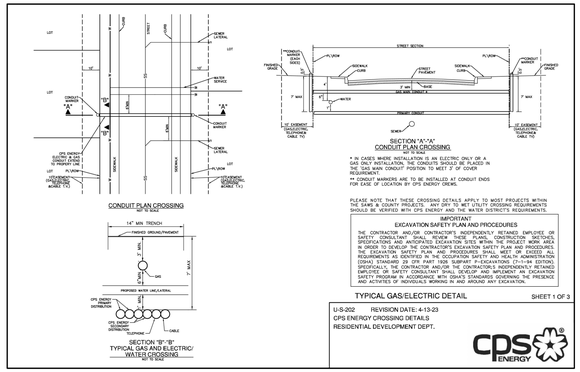
SHEET
C1.1

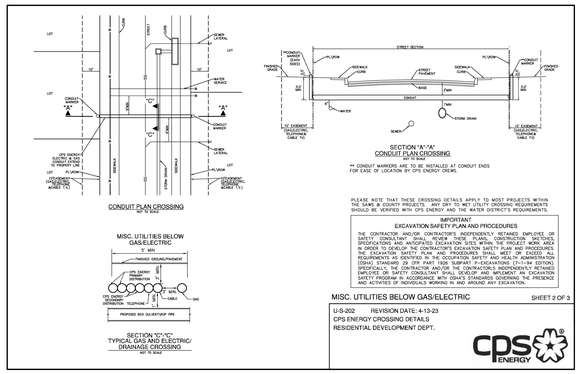
Date: Sep 12, 2024, 2:52pm User ID: LJ Ramones
File: G:_Projects\246 - Graytown - 65 Acres (First American)\246.2 - Prairie Green - UNIT 2\LDD\Sheets\C1.0 OVERALL COVER.dwg

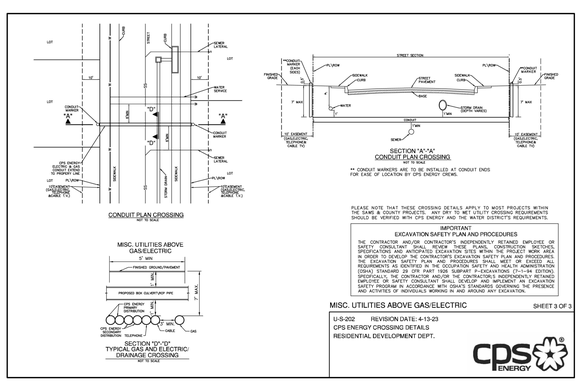
UTILITY CONSTRUCTION LAYOUT

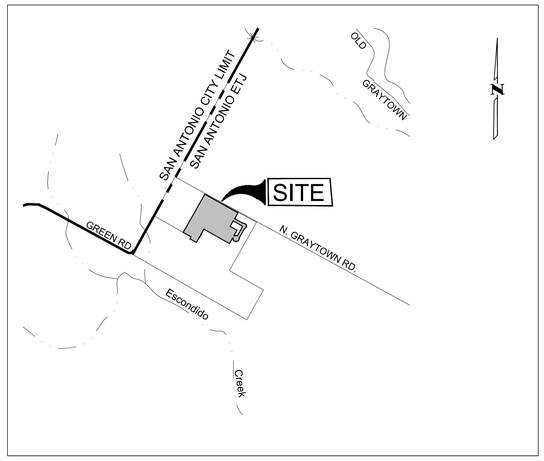
PRAIRIE GREEN - UNIT 2 SUBDIVISION

BEXAR COUNTY, TEXAS







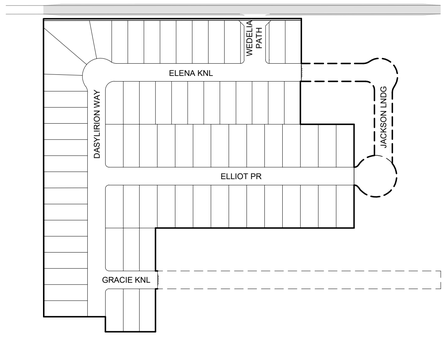


VICINITY MAP
NOT TO SCALE

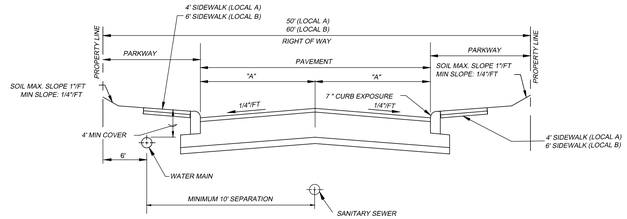
SUBMITTAL DATE:
September, 2024

OWNER/DEVELOPER: BRIGHTLAND HOMES, LTD. A TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY. STE 275
AUSTIN, TX 78704

ENGINEER: UP ENGINEERING + SURVEYING
111 TOWER DR, SUITE 325
SAN ANTONIO, TEXAS 78232
(210) 774-5504
CONTACT: RYAN R. PLAGENS, P.E.



INDEX MAP



STANDARD STREET SECTION
UTILITIES NTS

NOTE:

1. A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW.

STREET SECTION TABLE		
DESCRIPTION	LOCAL A	LOCAL B
RIGHT OF WAY WIDTH	50'	60'
PAVEMENT WIDTH	30'	34'
1/2 PAVEMENT WIDTH	15'	17'
PARKWAY WIDTH	10'	13'

GENERAL NOTES:
1. LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF ALL UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON THE PLANS OR NOT. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.

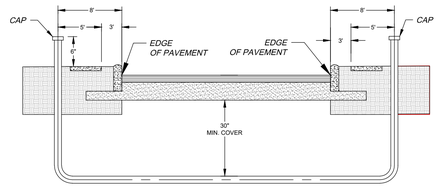
2. ALL SPOIL AND UNUSABLE MATERIAL FROM THIS PROJECT SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS., TESTS, APPROVALS REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.

4. 6" PVC SCHEDULE 80 WILL BE REQUIRED FOR CPS UTILITY CROSSINGS WHEN STREET OR DRAIN CONSTRUCTION PRECEDES DRY UTILITY INSTALLATION.

5. 4" PVC SCHEDULE 40 WILL BE REQUIRED FOR UNDERGROUND TELEPHONE AND CABLE TV IF NOTE 4 ABOVE APPLIES.

6. PVC CONDUIT WITH 90° SWEEPS TO 6" ABOVE GRADE WITH CAP.



TYPICAL OWNER CONDUIT DETAIL
UTILITIES

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111 TOWER DR, SUITE 325
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WWW.UPENGINEERING.COM TBPE F-17992

9/12/24

STATE OF TEXAS
RYAN R. PLAGENS
111640
LICENSED PROFESSIONAL ENGINEER

BRIGHTLAND HOMES, LTD. A
TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

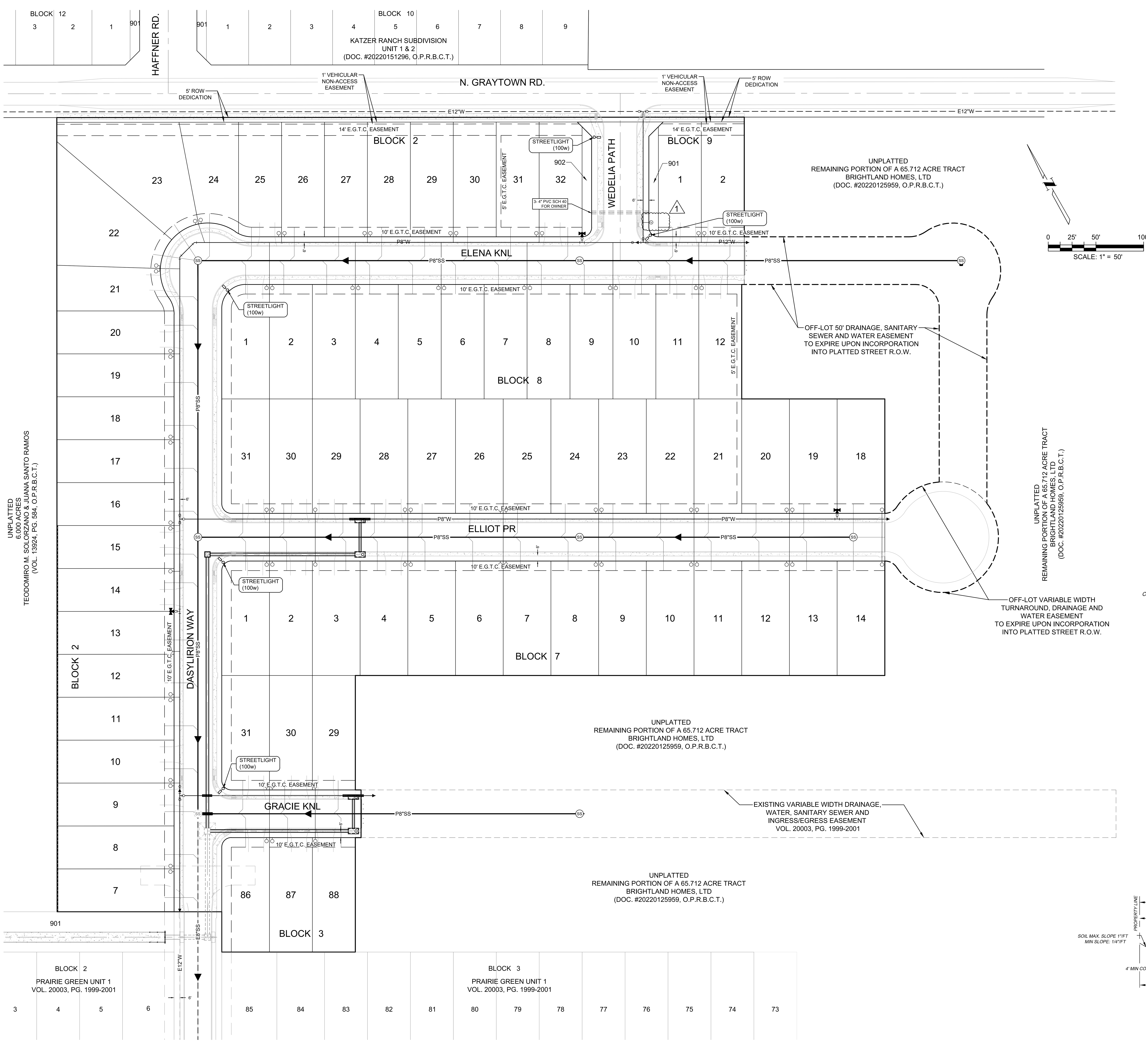
PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

UTILITY COVER

REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C2.0

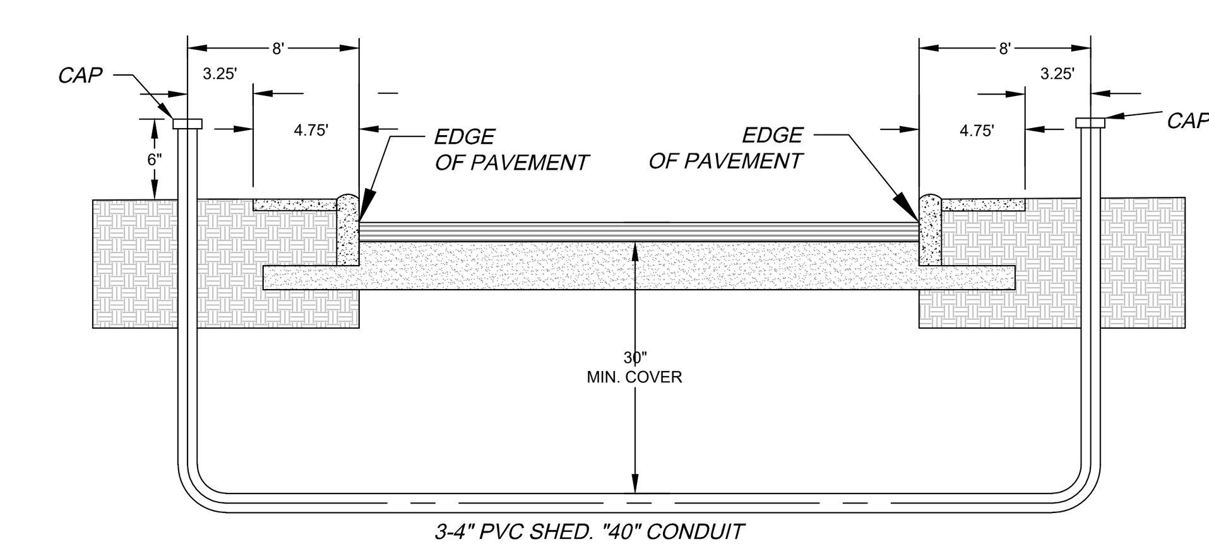


Date: Nov 13, 2024, 1:47pm User ID: ryan
File: U:_Projects\246 – Graytown – 60 Acres (First American)\246.2 – Prairie Green – UNIT 2\ACAD\Sheets\C2.1 UTILITY OVERALL.dwg

LEGEND

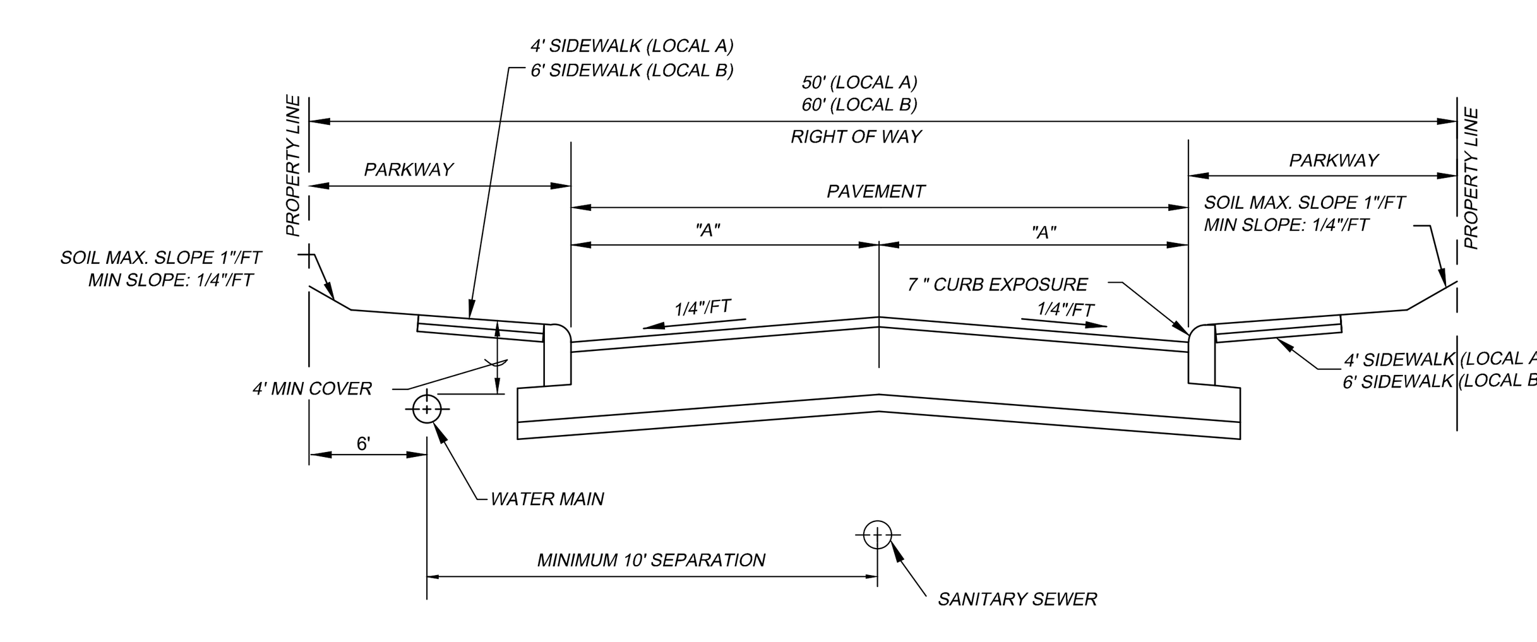
	FIRE HYDRANT
	EXISTING FIRE HYDRANT
P8"W	WATER MAIN
E8"W	EXISTING WATER MAIN
	DUAL WATER SERVICE
	SINGLE WATER SERVICE
P8"SS	SANITARY SEWER PIPE
E8"SS	EXISTING SANITARY SEWER PIPE
SS	EXISTING SANITARY SEWER MANHOLE
WW	PROPOSED SANITARY SEWER MANHOLE
	FLOW DIRECTION
	SANITARY SEWER LATERAL
	EXIST. SANITARY SEWER LATERAL
OE	EXIST. OVERHEAD ELECTRIC
E.G.T.C.	ELECTRIC, GAS, TELEPHONE AND CABLE TV
VNAE	VEHICLE NON-ACCESS EASEMENT
BSL	BUILDING SETBACK LINE
ESM'T.	EASEMENT
1937/550	VOLUME/PAGE
O.P.R.B.C.T.	OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY TEXAS
D.P.R.	DEED AND PLAT RECORDS OF BEXAR COUNTY TEXAS
●	POWER POLE
	EXISTING POWER POLE
■	ELECTRIC TRANSFORMER
T	TELEPHONE PEDESTAL
CTV	CABLE T.V. PEDESTAL
	ELECTRIC RISER POLE
	EXISTING STREET LIGHT
	PROPOSED STREET LIGHT (100 WATT UG)
250W	PROPOSED STREET LIGHT (250 WATT UG)
R.O.W.	RIGHT-OF-WAY
○	BLOWOFF

NOTE:
1. A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW.



TYPICAL OWNER CONDUIT DETAIL
UTILITIES

STREET SECTION TABLE		
DESCRIPTION	LOCAL A	LOCAL B
RIGHT OF WAY WIDTH	50'	60'
PAVEMENT WIDTH	30'	34'
LENGTH - "A"	15'	17'
PARKWAY WIDTH	10'	13'



STANDARD STREET SECTION
UTILITIES NTS

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STATE OF TEXAS
RYAN R. PLAGENS
111640
LICENSED
PROFESSIONAL ENGINEER
11/13/24
[illegible]

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STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

UTILITY OVERALL

REV	DATE	DESCRIPTION	BY
1	11/13/24	ADDED IRRIGATION SERVICE	WS

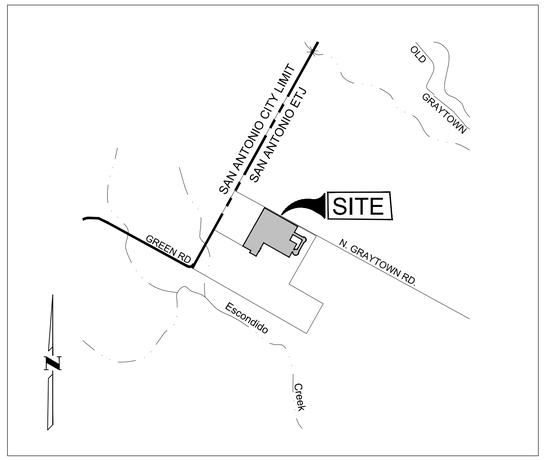
DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C2.1

SANITARY SEWER CONSTRUCTION DOCUMENTS FOR

PRAIRIE GREEN - UNIT 2 SUBDIVISION

BEXAR COUNTY, TEXAS



VICINITY MAP
NOT TO SCALE

SUBMITTAL DATE:
September, 2024

SHEET INDEX TABLE	
SHEET NUMBER	SHEET TITLE
C3.0	SEWER COVER
C3.1	SEWER NOTES
C3.2	SEWER OVERALL
C3.3	SANITARY SEWER LINE "E" PLAN & PROFILE
C3.4	SANITARY SEWER LINE "F" PLAN & PROFILE
C3.5	SANITARY SEWER LINE "G" PLAN & PROFILE
C3.6	SANITARY SEWER LINE "H" PLAN & PROFILE
C3.7	SEWER DETAILS

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
NOT-TO-SCALE

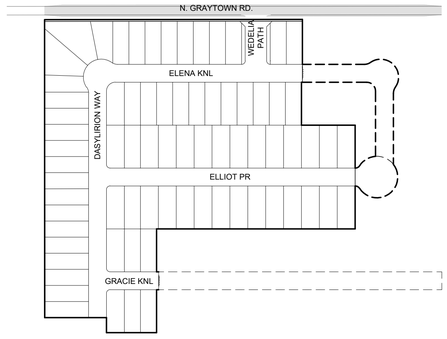
SANITARY SEWER QUANTITIES

ITEM NO.	DESCRIPTION		QUANTITY		UNIT
1	6" Lateral PVC Pipe (SDR-26) with Cleanout		2,641		L.F.
2	8" S.S. PVC Pipe (SDR-26) (0'-6')		61		L.F.
3	8" S.S. PVC Pipe (SDR-26) (6'-8')		1,079		L.F.
4	8" S.S. PVC Pipe (SDR-26) (8'-10')		610		L.F.
5	8" S.S. PVC Pipe (SDR-26) (10'-12')		513		L.F.
6	8" S.S. PVC Pipe (SDR-26) (12'-14')		206		L.F.
7	Standard S.S. Manhole		6		EA.
8	Drop S.S. Manhole		1		EA.
9	Reconstruct Existing S.S. Manhole		1		EA.
10	Extra Depth Manhole		25.3		V.F.
11	Vertical Stack		134.1		V.F.
12	24" Steel Casing		14.0		L.F.
13	Trench Excavation Protection		2,469		L.F.
14	TV Inspection		2,469		L.F.

BENCHMARKS:

TBM 1: COTTON SPINDLE SET IN POWER POLE
NORTHING: 13713572.6800
EASTING: 2202854.2280
ELEVATION: 621.67

TBM 2: COTTON SPINDLE SET IN POWER POLE
NORTHING: 13713667.0100
EASTING: 2202687.0380
ELEVATION: 623.27



INDEX MAP

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9/12/24

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PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

SEWER COVER

REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C3.0

Date: Sep 12, 2024, 2:53pm User ID: Li Ramones
File: c:_Projects\246 - Graytown - 60 Acres (First American)\246.2 - Prairie Green - UNIT 2\4540\Sheets\c3.0 SEWER COVER.dwg

GENERAL NOTES:

1. SAN ANTONIO RIVER AUTHORITY (RIVER AUTHORITY) STANDARD SPECIFICATIONS AND STANDARD DETAILS ARE PROVIDED FOR DESIGN AND CONSTRUCTION OF SEWER COLLECTION SYSTEMS MANAGED AND CONTRACTED BY THE RIVER AUTHORITY.

2. AT ANY TIME, THESE STANDARD SPECIFICATIONS AND DETAILS MAY BE ALTERED OR SUPERSEDED BY THE GENERAL CONDITIONS, SUPPLEMENTAL CONDITIONS, PLANS OR PROJECT SPECIFICATIONS WITHIN THE CONTRACT DOCUMENT PER DIRECTION FROM THE RIVER AUTHORITY.

3. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY RIVER AUTHORITY AND COMPLY WITH THE CONTRACT DOCUMENTS AND THE FOLLOWING AS APPLICABLE:

3.1. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30, PART 1, CHAPTER 217.

3.2. CURRENT TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT), "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE".

3.3. CURRENT RIVER AUTHORITY "STANDARD SPECIFICATIONS FOR SANITARY SEWER CONSTRUCTION".

3.4. CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION". CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL".

4. THE CONTRACTOR IS TO NOTIFY AND MAKE ARRANGEMENTS WITH THE RIVER AUTHORITY INSPECTIONS DIVISION AT (210) 302-4200 FORTY EIGHT (48) HOURS PRIOR TO ANY EXCAVATION. CONTRACTOR SHALL ALSO PROVIDE PROCEDURES THAT WILL BE USED TO NOTIFY AFFECTED RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO ANY EXCAVATION OR CONSTRUCTION. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD BEFORE ANY EXCAVATION OR START OF PROJECT.

5. WORK SHALL NOT BE PERFORMED ON SATURDAYS, SUNDAYS, FEDERAL HOLIDAYS, RIVER AUTHORITY HOLIDAYS, BEFORE 7:30 AM, OR AFTER 4:30 PM, UNLESS PRIOR APPROVAL IS GRANTED BY THE RIVER AUTHORITY ENGINEER. REQUEST TO PERFORM WORK DURING THESE TIMES MUST BE EMAILED 48 HOURS IN ADVANCE TO UTILITIESDEVELOPMENT@SARIVERAUTHORITY.ORG.

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

7. WORK COMPLETED BY CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR THE CONSENT OF RIVER AUTHORITY WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE EXPENSE OF THE CONTRACTOR.

8. LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 48 HOURS PRIOR TO CONSTRUCTION REGARDLESS OF ILLUSTRATION ON THE PLANS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO RIVER AUTHORITY. CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGES TO EXISTING UTILITIES AND REPAIRS WILL BE AT CONTRACTOR'S EXPENSE.

THE FOLLOWING CONTACT INFORMATION IS SUPPLIED FOR VERIFICATION PURPOSES:

EAST CENTRAL SPECIAL UTILITY DISTRICT	210-649-2383
CITY OF SAN ANTONIO DRAINAGE	210-207-5048
CITY PUBLIC SERVICE (CPS)	210-973-3500
CITY OF CONVERSE (PUBLIC WORKS)	210-659-9513
TIME WARNER	210-352-4872
VALERO ENERGY CO.	210-349-7555
RIVER AUTHORITY INSPECTIONS	210-302-4200
TEXAS 811	800-344-8377
SAN ANTONIO WATER SYSTEM (SAWS)	210-233-3500

9. CERTAIN PORTIONS OF THE PROJECT MAY PARALLEL AND/OR CROSS EXISTING UTILITIES, AND CONTRACTOR IS REQUIRED TO PROTECT THESE UTILITIES. ADDITIONAL SUPPORTIVE SHORING MAY BE REQUIRED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT HIS WORKERS, EXISTING UTILITIES, AND FINISHED WORK THROUGHOUT THE PROJECT. CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGES AND REPAIRS WILL BE AT CONTRACTORS EXPENSE.

10. WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE LESS THAN 9 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 AND 30 TAC 290.

11. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.161, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND VALVES THAT ARE IN THE PROJECT AREAS.

12. AN APPROPRIATELY SAFE OVERHEAD CLEARANCE MUST BE MAINTAINED BETWEEN ALL OVERHEAD EQUIPMENT AND PERSONNEL. THE CONTRACTOR SHALL NOTIFY CPS AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION IN THE VICINITY OF CPS OVERHEAD LINES. CONTRACTOR SHALL MAINTAIN CPS RECOMMENDED CLEARANCE REQUIREMENTS.

13. ALL WORK IN THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) RIGHT-OF-WAY SHALL PROCEED DURING WORKING HOURS AGREED UPON BY RIVER AUTHORITY AND TXDOT INSPECTORS.

14. BEFORE THE START OF ANY CONSTRUCTION, THE PROJECT SITE MUST BE VIDEO RECORDED BY THE CONTRACTOR WITH ONE COPY SUBMITTED TO RIVER AUTHORITY. THE PRE-CON SITE VIDEO WILL PROVIDE ACCURATE DOCUMENTATION OF EXISTING CONDITIONS.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ORIGINAL OR BETTER CONDITION AS A RESULT OF DAMAGE DONE DURING THE PROJECT CONSTRUCTION.

16. ANY AND ALL FENCING, INCLUDING ELECTRIC FENCE, WHETHER OR NOT IDENTIFIED ON THE PLANS, MUST BE MAINTAINED AT ALL TIMES. ANY AND ALL DAMAGES DIRECTLY ATTRIBUTED TO THE CONTRACTOR MUST BE REPLACED TO EQUAL OR BETTER CONDITIONS AT THE CONTRACTOR'S EXPENSE AND AS APPROVED BY THE RIVER AUTHORITY INSPECTOR. GAPS IN THE FENCING MUST BE PROVIDED AT ALL LOCATIONS WHERE THE SEWER LINE EASEMENT CROSSES FENCING. FENCING REQUIRED TO MAINTAIN LIVESTOCK MUST BE MAINTAINED AT ALL TIMES.

17. CONTRACTOR MUST AVOID DAMAGE TO ADJACENT LAND OUTSIDE THE IDENTIFIED CONSTRUCTION LIMITS. ANY CLAIMS DIRECTLY ATTRIBUTED TO THE CONTRACTOR RESULTING FROM HIS STRAYING BEYOND THE CONSTRUCTION LIMITS MUST BE SETTLED BY THE CONTRACTOR TO THE SATISFACTION OF RIVER AUTHORITY AND THE APPROPRIATE LANDOWNER.

18. CONTRACTOR MUST MAINTAIN ACCESS FOR PRIVATE INDIVIDUALS AND BUSINESSES AT ALL TIMES. IF NORMAL ACCESS IS DAMAGED DURING CONSTRUCTION, THE CONTRACTOR MUST REPLACE THE ACCESS TO EQUAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE AND AS APPROVED BY RIVER AUTHORITY.

19. CONTRACTOR MUST COMPLY WITH TEXAS GOVERNMENT CODE SECTION 2166.303 UNIFORM TRENCH SAFETY CONDITIONS.

20. CONTRACTOR SHALL BACKFILL ALL OPEN TRENCHES AT THE END OF THE DAY. CONTRACTOR SHALL NOT INSTALL MORE PIPE THAN CAN BE COVERED. NO OPEN TRENCHES WILL BE PERMITTED OVERNIGHT. ALL ENDS OF OPEN PIPE SHALL BE PLUGGED OVERNIGHT.

21. NO TREES SHALL BE REMOVED AS PART OF THIS PROJECT UNLESS OTHERWISE SPECIFIED IN THE PLANS.

22. FOR PORTIONS OF THE CONSTRUCTION THAT ARE WITHIN THE LIMITS OF THE 100-YEAR FLOODPLAIN, THE CONTRACTOR IS REQUIRED TO KEEP THE CHANNEL CLEAR OF POTENTIAL OBSTRUCTIONS TO FLOOD FLOWS. POTENTIAL OBSTRUCTIONS INCLUDE HEAVY CONSTRUCTION EQUIPMENT, TEMPORARY ROADS ACROSS CHANNEL, EXCAVATED MATERIAL, STOCKPILED DEBRIS, AND ALL OTHER ITEMS DEEMED UNACCEPTABLE BY RIVER AUTHORITY. UNDER THREATENING WEATHER CONDITIONS AND WHERE FLOODING IS LIKELY, OBSTRUCTIONS SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR AT NO ADDITIONAL COST TO RIVER AUTHORITY. THE CONTRACTOR ASSUMES ALL RISK FOR UNFINISHED WORK. NO EQUIPMENT OR MATERIALS SHALL BE STOCKPILED IN THE 100-YEAR FLOODPLAIN.

23. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING DRAINAGE LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS, NATURAL DRAINAGE, OR PLACED WITHIN THE LIMITS OF EXISTING FLOODPLAIN.

24. IF A THREATENED OR ENDANGERED PLANT OR ANIMAL SPECIES AND/OR CULTURAL/ARCHAEOLOGICAL RESOURCES ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL STOP WORK IMMEDIATELY AND NOTIFY THE APPROPRIATE PERSONNEL.

SAN ANTONIO RIVER AUTHORITY
100 E. GUENTHER STREET
SAN ANTONIO, TEXAS 78283

DESIGNED BY: DRAWN BY: CHECKED BY: APPROVED BY: DATE: FILE:

NO. REVISION DATE BY

REVISED 10/2/2023

GENERAL NOTES 1 OF 4

SHEET 1 OF 5

SEWER NOTES:

25. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SANITARY SEWER OVERFLOW (SSO) OCCURS AS A RESULT OF THE WORK. ALL PERSONNEL RESPONSIBLE FOR SSO PREVENTION AND CONTROL SHALL BE TRAINED ON THE PROPER RESPONSE. SHOULD AN SSO OCCUR, THE CONTRACTOR SHALL:

25.1. IDENTIFY THE SOURCE OF THE SSO AND ATTEMPT TO ELIMINATE ANY ADDITIONAL SPILLAGE.
25.2. NOTIFY RIVER AUTHORITY CONSTRUCTION INSPECTIONS DIVISION AT 210-302-4216 OR 210-219-0130.
25.3. ATTEMPT TO ELIMINATE THE SOURCE OF THE SSO.
25.4. CONTAIN SEWAGE FROM THE SSO TO PREVENT CONTAMINATION OF WATERWAYS.
25.5. CLEAN UP THE SPILL SITE AND REMOVE CONTAMINATED MATERIALS.
25.6. DISINFECT THE AREA OF THE SPILL WITH A MIXTURE OF HTH CHLORINE AND WATER.
25.7. CLEAN THE AFFECTED SEWER LINE AND REMOVE ANY DEBRIS.
25.8. IDENTIFY AND TRAIN PERSONNEL RESPONSIBLE FOR SPILLAGE PREVENTION AND CONTROL.
25.9. NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR THIS WORK. ALL WORK SHALL BE DONE ACCORDING TO GUIDELINES SET BY THE TCEQ AND RIVER AUTHORITY.

26. TIE-INS OR SHUTDOWNS OF EXISTING FORCE MAINS OF ANY SIZE MUST BE COORDINATED WITH THE RIVER AUTHORITY INSPECTOR AT LEAST ONE WEEK IN ADVANCE OF THE SHUTDOWN. CONTRACTOR SHALL PROVIDE A SEQUENCE OF WORK AS RELATED TO TIE-INS AT NO ADDITIONAL COST TO RIVER AUTHORITY OR THE PROJECT.

27. ELEVATIONS OF THE TOP OF MANHOLES AND INVERTS ARE FOR REFERENCE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR THE TOPS OF MANHOLES AND INVERTS TO MATCH THE FINISHED GRADE OF THE PROJECT IMPROVEMENTS (NSPI).

28. THE CONTRACTOR SHALL PROVIDE BYPASS PUMPING OF SEWAGE AROUND EACH SEGMENT OF PIPE TO BE REPLACED. CONTRACTOR SHALL HAVE STANDBY PUMPS AVAILABLE TO BYPASS FLOW IN CASE PRIMARY PUMP FAILS. THE CONTRACTOR SHALL PROVIDE A SEQUENCE OF BYPASS PUMPING FOR REVIEW AND APPROVAL BY RIVER AUTHORITY. THE CONTRACTOR SHALL ALSO PROVIDE A DETAILED SKETCH SHOWING THE LOCATION OF BYPASS PUMPING; SPECIFICATIONS FOR THE PUMPING EQUIPMENT; AND TYPE, SIZE, CAPACITY AND NUMBER OF PUMPS REQUIRED TO HANDLE THE PEAK WET WEATHER FLOW.

29. CONTRACTOR WILL MAINTAIN SERVICE TO ALL EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR WILL CLEAN ALL DEBRIS, GRAVEL, DIRT, ETC. OUT OF MANHOLES AND FIX ANY STOPPAGES CAUSED BY DEBRIS DURING CONSTRUCTION AT CONTRACTOR'S EXPENSE. ANY DAMAGE TO EXISTING MANHOLES OR SEWER MAIN WILL BE CORRECTED AT CONTRACTOR'S EXPENSE. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO EXISTING OR NEW RINGS, COVERS, OR CONES FROM EQUIPMENT AND MATERIALS USED OR TAKEN THROUGH THE WORK AREA. IF AN EXISTING OR NEW MANHOLE COVER, RING, OR CONE IS DAMAGED BY THE CONTRACTOR, IT SHALL BE REPLACED AS DIRECTED BY THE RIVER AUTHORITY INSPECTOR. MANHOLES WILL NEED TO BE RESEALED WITH RIVER AUTHORITY APPROVED SEALANT. IF SEAL COATING IS COMPROMISED, CONTRACTOR WILL HAVE MANHOLE RECOATED. CONTRACTOR SHALL RESEAL ALL LEAKS AT CONTRACTOR EXPENSE.

30. CONTRACTOR TO ENSURE ALL PLUGS USED TO PLUG SEWER LINES WHILE TESTING THE PROJECT (SUCH AS AIR PLUGS, SCREW TYPE PLUGS, ETC.) ARE LABELED, MARKED OR TAGGED. THE CONTRACTOR SHALL RECORD HOW MANY PLUGS ARE BEING USED, AS WELL AS THE LOCATION AND IDENTIFICATION OF EACH PLUG. CONTRACTOR WILL REPORT TO PROJECT INSPECTOR OF ANY LOST OR UNRESTRAINED PLUGS.

31. CONTRACTOR WILL BE HELD LIABLE FOR ANY DAMAGE TO SEWER COLLECTION SYSTEM, STOPPAGES, OVER-FLOWS, OR BACKUPS INTO HOMES CAUSED BY LOST OR RUNAWAY SEWER PLUGS.

32. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO WASTEWATER TREATMENT EQUIPMENT CAUSED BY LOST OR RUNAWAY SEWER PLUGS. CONTRACTOR WILL BE HELD LIABLE FOR REPAIRS.

33. RIVER AUTHORITY IS NOT RESPONSIBLE FOR ANY ABNORMALITIES ON STUB OUT, INVERT, GRADE OR SLOPE FOR ANY EXISTING MANHOLE TIE-IN OR SERVICE LATERAL

MANHOLE NOTES:

34. THERE SHALL BE 400 FEET MAXIMUM SPACE BETWEEN MANHOLES TO PROVIDE ACCESS FOR CLEANING. A 16-FOOT WIDE GATE WITH A LOCK SHALL ALSO BE SUPPLIED AND INSTALLED BY THE CONTRACTOR FOR ACCESSING THE SANITARY SEWER LINE IN EASEMENTS.

35. ALL MANHOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE RING IS AT LEAST FOUR (4) INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND IN UNPAVED AREAS. IN PAVED AREAS, THE MANHOLE RING SHALL BE FLUSH WITH THE PAVEMENT.

36. EVERY THIRD MANHOLE COVER WILL HAVE A 1"HOLE FOR A VENT. VENTING SHALL COMPLY WITH TAC 217.55.

37. EACH MANHOLE SHALL HAVE TWO LOCKS INSTALLED TO PREVENT REMOVAL.

38. ALL MANHOLES SHALL HAVE A 30"OPENING, WATERTIGHT RINGS AND COVERS, WITH THE RIVER AUTHORITY LOGO AND I/I BARRIER.

39. NEW MANHOLE PROTECTIVE COATING LINER MUST BE APPLIED TO ALL MANHOLES. APPLICATION PROCEDURES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION AND PER THE FOLLOWING SPECIFICATIONS:

39.1. CONTRACTOR WILL BE RESPONSIBLE FOR MANHOLE SAFETY AND CONFINED SPACE ENTRY SET BY OCCUPATIONAL SAFETY AND HEALTH STANDARDS, 29 CFR 1910.146 APP. E.
39.2. THE CONTRACTOR SHALL NOTIFY THE RIVER AUTHORITY UTILITIES INSPECTIONS DEPARTMENT A MINIMUM OF 48 HOURS IN ADVANCE OF THE START OF ANY FIELD SURFACE PREPARATION WORK FOR MANHOLES.
39.3. ALL NEW MANHOLES AND THE EXISTING MANHOLE THAT THE PROPOSED SEWER LINE WILL TIE-IN TO SHALL HAVE THE INTERIOR WALL PREPPED AS PER MANUFACTURER'S RECOMMENDATIONS AND COATED WITH A RIVER AUTHORITY APPROVED PRODUCT.
39.4. FOR ALL MANHOLES, APPLY THE CEMENTITIOUS COATING FIRST, FOLLOWED BY THE EPOXY COATING. LAFARGE SEWPERCOAT 200 HR PRODUCT IS THE ONLY APPROVED PRODUCT WHICH COMBINES THE CEMENTITIOUS AND EPOXY COATINGS, UNLESS OTHERWISE LISTED IN THE APPROVED PRODUCT LIST.
39.5. CEMENTITIOUS COATING WITH REQUIRED ONE-INCH-THICK APPLICATION: SEE RIVER AUTHORITY APPROVED PRODUCT SHEET.
39.6. EPOXY COATING: WITH SPECIFIED THICKNESS APPLICATION: SEE RIVER AUTHORITY APPROVED PRODUCT SHEET.
39.7. SPRAY WALL POLYURETHANE SYSTEM REQUIRED THICKNESS 150 MILS
39.8. CONTRACTOR SHALL SUBMIT WARRANTY LETTER ON MANHOLE PROTECTIVE COATING FOR 10 YEARS AFTER FINAL ACCEPTANCE OF PROTECTIVE COATINGS.

40. ANY CONNECTIONS TO EXISTING MANHOLES WILL REQUIRE A CRADLE TO SUPPORT THE INCOMING PIPE. A RUBBER GASKET WILL ALSO BE REQUIRED (CENTERED AT MANHOLE WALL) WITH GROUTING AT INTERIOR AND EXTERIOR PENETRATIONS.

41. PENETRATION INTO THE MANHOLE WILL BE CORE DRILLED. ANY DAMAGE TO EXISTING MANHOLE WILL BE REPAIRED AT CONTRACTOR'S EXPENSE. IF EXISTING SEWER MANHOLE SEAL COATING IS COMPROMISED, ALL OF THE MANHOLE WILL BE RESEALED.

42. IF ANY EXISTING MANHOLES CONNECTED WITH THIS PROJECT ARE FOUND TO HAVE INFILTRATION, THE MANHOLES SHALL BE SEALED AND TESTED AT CONTRACTORS EXPENSE.

43. MANHOLES WITH STUB-OUTS 8-INCH OR LARGER MUST BE LOCATED AT THE END OF ALL SEWER LINES THAT MAY BE EXTENDED IN THE FUTURE. STUB-OUTS SHALL BE PLUGGED.

44. MANHOLE COVER INSERTS ARE SHOWN IN RIVER AUTHORITY APPROVED PRODUCT SHEET. INSERTS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE NECESSARY FIELD MEASUREMENTS FOR THE MANUFACTURER PRIOR TO PRODUCTION.

45. BEFORE BACK FILLING/COMPACTION/CONCRETE ENCASEMENT, ALL MANHOLE JOINT SECTION RISERS, CONE SECTIONS AND GRADE RING SHALL BE WRAPPED WITH INFI-SHIELD GATOR WRAP SEALING SYSTEMS, BUTYL ADHESIVE SEALANT WITH A MINIMUM THICKNESS OF 30 MILS. JOINT SEALANT MUST MEET ASTM C923. MASTIC MUST MEETS ASTM C 990 OR BE APPROVED BY THE RIVER AUTHORITY ENGINEER.

46. IF CONCRETE THROAT RINGS ARE TO BE INSTALLED THEY MUST BE USED IN CONJUNCTION WITH A UV STABILIZED POLYETHYLENE LINER AND I/I BARRIER. I/I BARRIER MUST MEET THE FOLLOWING ASTM STANDARDS: ASTM D-790/1505 DENSITY OF POLYETHYLENE MATERIALS, ASTM D-1238 MELT FLOW INDEX, ASTM 638 TENSILE STRENGTH@ YIELD (50 mm/mm), ASTM 790 FLEXURAL MODULUS, ASTM 648 HEAT DEFLECTION TEMPERATURE @IGEPAL, ASTM 1693 EsCR,100% IGEPAL /10% IGEPAL.

47. A MINIMUM OF TWO AND A MAXIMUM OF FOUR THROAT RINGS WILL BE USED AT EACH MANHOLE FOR ADJUSTMENT.

48. DROP MANHOLES SHALL BE REQUIRED WHEN THE INFLOW ELEVATION IS MORE THAN 24 INCHES ABOVE THE OUTFLOW ELEVATION. DROP SHALL BE LOCATED OUTSIDE THE MANHOLE WITH THE FLOWLINE ELEVATION LOCATED BETWEEN THE CENTER LINE AND TOP OF SEWER LINE.

49. THERE SHALL BE CONCRETE ENCASEMENT 18 INCHES AROUND MANHOLE RING, AND 28 INCHES AROUND THE GATOR WRAP SEALING SYSTEM. CONCRETE ENCASEMENT SHALL BE CIRCULAR, FORMED LEVEL, AND HAVE A SMOOTH OR BROOM FINISH. SEE SPECIFICATIONS.

50. SEWER PIPE CONNECTIONS TO PRECAST MANHOLES SHALL BE APPROVED BY RIVER AUTHORITY. REFER TO APPROVED PRODUCT LIST. SEWER PIPE CONNECTIONS TO MONOLITHIC MANHOLES WILL BE AS SHOWN ON THE STANDARD DETAIL SHEET. ANY CHANGES IN THESE METHODS MUST BE APPROVED BY RIVER AUTHORITY ENGINEER.

51. ALL PIPE TRENCHING, BEDDING AND BACKFILL SHALL BE DONE IN ACCORDANCE WITH APPROPRIATE ASTM/ANSI SPECIFICATIONS [REFERENCE 30 TAC 217.54; ASTM C-12 (ANSI A106.2) OR ASTM D-2321 (ANSI K65.171)]. ALL COMPACTION SHALL BE TO 98% DENSITY. THERE SHALL BE ONE RANDOM DENSITY TEST PER LIFT FOR EVERY 400 FEET. ALL TESTING SHALL BE IN COMPLIANCE WITH CURRENT TXDOT SPECIFICATIONS.

52. A SAND MIGRATION PREVENTION COLLAR SHALL BE INSTALLED WHEN TRANSITIONING FROM SELECT INITIAL BACKFILL TO OPTIONAL SELECT INITIAL BACKFILL. A 2-FOOT LONG CLASS B CONCRETE ENCASEMENT BETWEEN THE TWO SHALL BE PROVIDED FOR THE ENTIRE HEIGHT OF THE INITIAL BACKFILL EVERY 180 FEET ALONG PIPE AND 20 FEET FROM WALL OF MANHOLE IN EACH DIRECTION.

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53. UPON REQUEST FROM THE SAN ANTONIO RIVER AUTHORITY, CONTRACTOR SHALL PROVIDE SAMPLE VERIFYING PROPER INSTALLATION OF FLOWABLE BACKFILL, INCLUDING, BUT NOT LIMITED TO CORE SAMPLES.

SANITARY SEWER PIPING:

54. THE TYPE AND DESCRIPTION OF THE PIPE CONDUIT IS SHOWN ON THE PLANS. REFER TO RIVER AUTHORITY SPECIFICATIONS FOR MATERIALS, STIFFNESS, AND TYPE.

55. THE USE OF ASBESTOS CEMENT PIPE WILL BE PROHIBITED UNDER THIS CONTRACT.

56. ALL DUCTILE IRON PIPE USED IN THIS SYSTEM SHALL BE CORROSION PROTECTED ON BOTH THE INTERIOR AND EXTERIOR SURFACES. ALL CORROSION PROTECTION SHALL BE APPLIED AND INSTALLED IN SUCH A MANNER AS TO MAINTAIN A CONTINUOUSLY PROTECTED SURFACE AFTER FINAL PIPE INSTALLATION.

57. SEE SPECIFICATIONS FOR PVC SEWER PIPE WITH OVER 14 FEET OF COVER.

58. ALL SEWER PIPES SHALL HAVE COMPRESSION OR MECHANICAL JOINTS.

59. SAND MIGRATION PREVENTION COLLAR WHEN CHANGING THE INITIAL BACKFILL FROM SELECT INITIAL BACKFILL TO OPTIONAL SELECT INITIAL BACKFILL. A TWO (2) FOOT LONG CLASS B CONCRETE ENCASEMENT OR FIRMLY COMPACTED, CONSOLIDATED CLAY ENCASEMENT BETWEEN THE TWO SHALL BE PROVIDED FOR THE ENTIRE HEIGHT OF THE INITIAL BACKFILL, EVERY 180 FEET ALONG PIPE AND 20 FEET FROM WALL OF MANHOLE IN EACH DIRECTION.

SEWER LINE LOCATION:

60. SEWER LINES SHALL BE SIZED AND EXTENDED THROUGH THE LIMITS OF A DEVELOPMENT TO SERVE ADJACENT PROPERTY, WITH MANHOLE AND STUB-OUT AT END OF SEWER LINE.

61. IN PHASED CONSTRUCTION OF THOROUGHFARES, THE SEWER LINE SHALL BE EXTENDED THE ENTIRE LENGTH OF PROPOSED THOROUGHFARE.

62. ALL SANITARY SEWER LINES SHALL BE LOCATED A MINIMUM OF FIVE (5) FEET FROM ANY TREE.

63. SIZES AND GRADES FOR SANITARY SEWER SHALL BE AS REQUIRED BY THE RIVER AUTHORITY ENGINEER AND CONSIDERATION SHALL BE GIVEN AS TO POSSIBLE EXTENSIONS FOR FUTURE DEVELOPMENT. NO SANITARY SEWERS, OTHER THAN LATERALS AND FORCE MAINS, SHALL BE LESS THAN EIGHT (8) INCH IN DIAMETER.

SEWER SERVICE LATERALS

64. WHEN SEWER LATERALS ARE TO BE CONNECTED TO EXISTING SEWER MAINS AND NO STUB-OUT HAS BEEN EARLIER PROVIDED, THE CONNECTION MUST BE CONDUCTED PER THE RIVER AUTHORITY STANDARD DETAILS AND APPROVED PRODUCT LIST.

65. REFER TO THE RIVER AUTHORITY APPROVED PRODUCTS LIST FOR ACCEPTABLE FITTINGS AND CONNECTIONS.

66. ALL RESIDENTIAL SERVICE LATERALS SHALL BE SDR 26 PVC WITH RATING OF 115 PSI OR 160 PSI, DETERMINED BY RIVER AUTHORITY SPECIFICATION. LINE SHALL BE EXTENDED TO THE PROPERTY LINE AT (6 x 6) CAPPED AND SEALED. ATTACH SEWER BURIAL TAPE TO THE END OF ALL SEWER LATERALS AND BRING UP TO THE GROUND LEVEL FOR MARKER (GREEN). (SEE HOUSE LATERALS DETAILS).

67. THE SIZES AND LOCATIONS OF LATERALS SHALL BE DESIGNATED AS FOLLOWS UNLESS OTHERWISE DIRECTED BY THE RIVER AUTHORITY ENGINEER:

68. IN GENERAL, FOR SINGLE FAMILY DWELLING, THE LATERAL SIZE SHALL BE A SIX (6) INCH MINIMUM. HOUSE LATERALS SHALL BE INSTALLED SO THAT CLEANOUTS SHALL HAVE A TWO (2) FOOT SEPARATION FROM DRIVEWAYS, AND SHALL HAVE A NINE (9) FOOT SEPARATION FROM THE WATER SERVICE. THE SERVICE SHALL THEN BE EXTENDED AT A FORTY-FIVE (45) DEGREE ANGLE TO FOUR (4) FEET ABOVE THE FINISHED GRADE AND CAPPED. USE SEWER BURIAL TAPE TO MARK ALL SEWER SERVICE LATERALS.

69. MULTIPLE UNITS, APARTMENTS, LOCAL RETAIL AND COMMERCIAL SIX (6) INCH MINIMUM, MANUFACTURING AND INDUSTRIAL - EIGHT (8) INCH MINIMUM, OR LARGER AS REQUIRED.

TRAPS AND INTERCEPTORS (FOG - TECQ)

70. UNIFORM PLUMBING CODE, CITY OF SAN ANTONIO BUILDING INSPECTIONS DEPARTMENT. ALL COMMERCIAL BUILINGS WILL HAVE TRAPS (FOG -TECQ).

OIL SEPARATORS

71. WHICH INCLUDE OIL SEPARATOR- GASOLINE SERVICE STATIONS, CAR WASHES, GARAGES, DRY CLEANERS, CHEMICAL PLANTS, GAS PLANTS, HIDE PROCESSORS, TESTING LABORATORIES, OR ANY PLACE WHERE OIL OR SOLVENTS MAY BE INTRODUCED INTO THE SANITARY SEWER SYSTEM.THE SIZING CRITERIA FOR OIL SEPARATORS SHALL BE BASED ON THE G.P.M. RATE OF ALL FIXTURES, APPLIANCE OR APPURTENANCE, DRAINING INTO SEWER SYSTEM.

SAND INTERCEPTORS

72. SAND INTERCEPTORS SHALL BE INSTALLED IN THE SEWER SYSTEM OF THE FOLLOWING ESTABLISHMENTS, GARAGES, CAR WASHES, SERVICE STATIONS, OR ANY PLACE OF BUSINESS WHERE HEAVY SOLIDS MAY BE INTRODUCED INTO THE SANITARY SEWER SYSTEM. THE SIZING CRITERIA FOR A SAND INTERCEPTOR SHALL BE BASED ON THE REQUIRED G.P.M. x 12 MINUTE RETENTION TIMES TO OBTAIN THE TANK SIZE IN GALLONS CAPACITY.

AUTOMATIC CAR WASHES

73. WITH HIGH PRESSURE SPRAYS AND /OR BRUSHES INSTALL A 50 G.P.M. INTERCEPTOR.MINIMUM, FOR A 4-BAY VEHICLE WASH, THE SIZE OF THE INTERCEPTOR SHALL INCREASE 10 G.P.M. FOR EACH ADDITIONAL WASH BAY OVER 4. SINGLE BAY OR PORTABLE WASHER TYPE VEHICLE WASHES SHALL INSTALL A 20 GPM INTERCEPTOR MINIMUM.

NEUTRALIZING DEVICES

74. IN NO CASE SHALL CORROSIVE LIQUIDS, SPENT ACIDS, OR OTHER HARMFUL CHEMICALS WHICH MIGHT DESTROY OR INJURE A DRAIN, SEWER, SOIL, OR WASTE PIPE, OR WHICH MIGHT CREATE NOXIOUS OR TOXIC FUMES, DISCHARGE INTO THE SANITARY SEWER SYSTEM WITHOUT BEING THOROUGHLY NEUTRALIZED BY PASSING THROUGH A PROPERLY CONSTRUCTED AND ACCEPTABLE NEUTRALIZING DEVICE. SUCH DEVICE SHALL BE PROVIDED WITH A SUFFICIENT INTAKE OF NEUTRALIZING MEDIUM, CONSISTING OF LIMESTONE OR MARBLE CHIPS, SO AS TO MAKE ITS CONTENTS NON-INJURIOUS BEFORE BEING DISCHARGED INTO THE SANITARY SEWER SYSTEM.

LINT TRAPS

75. PUBLIC AND PRIVATE LAUNDROMATS AND COMMERCIAL LAUNDRIES SHALL INSTALL A LINT TRAP EQUIPPED WITH A CONVENIENTLY LOCATED AND EASILY REMOVABLE WIRE BASKET OR OTHER SIMILAR DEVICE THAT WILL PREVENT THE STRINGS, RAGS, BUTTONS, OR OTHER PROHIBITED MATERIAL FROM ENTERING THE SANITARY SEWER SYSTEM. THE BASKET OR OTHER SIMILAR DEVICE SHALL PREVENT PASSAGE TO THE SANITARY SEWER SYSTEM OF SOLIDS GREATER THAN ½"INCH IN DIAMETER. THE LINT TRAP SIZE SHALL BE BASED ON THE TOTAL G.P.M. OF ALL FIXTURES, APPLIANCES AND APPURTENANCES DRAINING TO IT IN LIEU OF A LINT TRAP,A LINT INTERCEPTOR MAY BE INSTALLED.THE INTERCEPTOR SHALL BE SIZED AND DESIGNED BY A TEXAS REGISTERED ENGINEER WITH HIS SEAL AND SIGNATURE ON THE DRAWINGS.

SILVER RECOVERY UNITS

76. SILVER RECOVERY UNITS SHALL BE INSTALLED IN WASTE LINE(S) LEADING FROM X- RAY PROCESSING, PHOTOGRAPHIC PROCESSING, AND /OR ANY PROCEDURES IN ESTABLISHMENT SUCH AS MEDICAL LABS, DENTAL LABS, PHOTO FINISHERS, PRINTERS, GRAPHIC ARTS PRODUCTION FACILITIES, HOSPITAL, FACILITIES, VETERINARY HOSPITALS, OR OTHER ESTABLISHMENTS WHERE SILVER MAY BE INTRODUCED INTO THE SANITARY SEWER SYSTEM.

SOLIDS INTERCEPTORS

77. SOLIDS INTERCEPTORS SHALL BE INSTALLED WHEN PRE-TREATMENT OF WASTE STREAMS IS NECESSARY TO PREVENT SOLIDS GREATER THAN ½" IN DIAMETER, WHICH MAY CAUSE LINE STOPPAGE FROM ENTERING THE SANITARY SEWER SYSTEM.

INTERCEPTORS

78. INTERCEPTORS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN APPROVED BY THE SAN ANTONIO RIVER AUTHORITY CONSISTING OF A MINIMUM OF TWO COMPARTMENTS WITH FITTINGS DESIGNED FOR GREASE RETENTION AND PROVIDE FOR A MINIMUM OF TWELVE (12) MINUTES RETENTION.

79. THERE SHALL BE AN ADEQUATE NUMBER OF MANHOLES TO PROVIDE ACCESS FOR CLEANING ALL AREAS OF AN INTERCEPTOR, ONE MANHOLE PER TRAP COMPARTMENT. MANHOLE COVERS SHALL BE GAS TIGHT IN CONSTRUCTION HAVING A MINIMUM OPENING DIMENSION OF 20 INCH INCHES (0.5 M).

80. IN AREAS WHERE TRAFFIC MAY EXIST THE INTERCEPTOR SHALL BE DESIGNED TO HAVE ADEQUATE REINFORCEMENT AND COVER.

81. ALL INTERCEPTORS SHALL HAVE THE SIZE OF THE INTERCEPTOR (IN GALLON PER MINUTE OR GALLON CAPACITY) PERMANENTLY AFFIXED TO THE DEVICE.

82. ALL CONCRETE UTILIZED IN THE CONSTRUCTION OF INTERCEPTOR SHALL HAVE A MINIMUM STRENGTH OF 3000 PSI.

83. AN EFFLUENT SAMPLING WELL ON ALL INTERCEPTORS SHALL BE REQUIRED. THE SAMPLE WELL SHALL HAVE A RISER A MINIMUM OF 6" INCHES IN DIAMETER AND SHALL BE INSTALLED AFTER THE CONFLUENCE OF ALL WASTE STREAMS FROM THE FACILITY AND PRIOR TO DISCHARGING INTO SANITARY SEWER COLLECTION SYSTEM. THE WELL SHALL BE PERPENDICULAR TO THE EFFLUENT LATERAL TO ALLOW VISUAL OBSERVATION OF THE FLOW STREAM AND PROVIDE FOR SAMPLING OF WASTEWATER.

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WATERTIGHT TESTING (24 HOURS):

84. ALL INTERCEPTORS SHALL BE WATER TESTED OUT AT JOB SITE AFTER BEING INSTALLED (PLUG BOTH ENDS AND FILL TO TOP OF INTERCEPTOR). INTERCEPTOR SHALL SHOW NO LEAKAGE FROM SECTION SEAMS, PINHOLES, OR OTHER IMPERFECTIONS. ANY LEAKAGE IS CAUSE FOR REJECTION. WHEN LEAKAGE OCCURS, ADDITIONAL WATER TESTING SHALL BE MADE. AFTER CORRECTING MEASURE TEST, REPORTS SHALL SHOW TOTAL NUMBER OF INTERCEPTERS TESTED. WHEN LEAKAGE OCCURS, CORRECTIVE MEASURES TAKEN SHALL BE REPORTED BY THE RIVER AUTHORITY INSPECTORS. RIVER AUTHORITY INSPECTORS SHALL RECORD IN DAILY LOG WITH PROJECT NAME, DATE IT WAS TESTED AND COMPLETED.

84.1. MANHOLES WILL BE REQUIRED ON SIX (6) INCH AND LARGER LATERALS WHERE THEY CONNECT TO THE MAIN.
84.2. LATERALS WILL NOT BE ATTACHED TO SEWER MAINS THAT ARE DEEPER THAN TWELVE (12) FEET.
84.3. FITTINGS ARE NOT PERMITTED ON LATERALS BETWEEN THE WYE AND THE PROPERTY LINE.
84.4. DEEP CUT OR DROP CONNECTIONS SHALL NOT BE PERMITTED.
84.5. A MINIMUM OF ONE (1) LATERAL PER BUILDING SHALL BE REQUIRED. ALSO, A MINIMUM OF ONE (1) LATERAL PER RESIDENTIAL LOT SHALL BE REQUIRED. DUPLEXES SHALL HAVE TWO (2) LATERALS THAT SHALL BE INDEPENDENTLY ATTACHED TO THE MAIN.
84.6. ALL SEWER LATERAL CROSSING WATER MAINS OR WATER SERVICE LINES SHALL CONFORM TO THE SAME REQUIREMENTS OF TAC CHAPTER 217.53, LATEST REVISION, SDR 26 150 PSI, OR DUCT IRON PIPE, CONCRETE ENCASMENT.

85. WHERE REQUIRED CONCRETE ENCASEMENT SHALL BE PLACED FOR FULL WIDTH OF THE TRENCH TO A PLAIN SIX (6) INCHES ABOVE THE TOP OF THE PIPE WITH PAY UNITS AS SHOWN ON THE STANDARD DETAIL SHEET.

86. A MINIMUM OF FOUR (4) FEET OF COVER IS TO BE MAINTAINED OVER THE SANITARY SEWER MAIN AND LATERALS AT GRADE, OTHERWISE CONCRETE ENCASEMENT IS REQUIRED.

87. WHERE POROUS MATERIAL INCLUDING "SUBGRADE FILLER" IS USED FOR BACKFLL IN THE BEDDING AND INITIAL BACKFILL ZONES, REFER TO SPECIFICATIONS SEC. 33-05-05 FOR SPACING OF SEEPAGE RETAINERS. RETAINERS SHALL CONSIST OF CLASS "D CONCRETE ENCASEMENT OR FIRMLY COMPACTED. CONSOLIDATED CLAY ENCASEMENT, THE RETAINERS SHALL EXTEND FROM THE BOTTOM OF THE TRENCH TO THE TOP OF THE GRANULAR MATERIAL FOR THE ENTIRE TRENCH WIDTH. ENCASEMENT SHALL BE 24 INCHES LONG. NO EXTRA PAY ITEM.

BLASTING

88. BLASTING SHALL NOT BE ACCEPTABLE.

TESTING

89. TESTING SHALL NOT BE CONDUCTED UNTIL ALL OTHER UTILITIES WITHIN THE VICINITY OF THE SANTIARY SEWER ARE FULLY INSTALLED.

THE FOLLOWING SEQUENCE WILL BE STRICTLY ADHERED TO:

A. PULL MANDREL AFTER 30 DAYS OF INSTALLATION
B. PERFORM AIR TEST
C. PULL WIPER (AFTER STREET HAS BEEN ASPHALTED), AS APPLICABLE
D. VACUUM TEST ALL MANHOLES WITHIN THE PROJECT
E. CCTV- ALL OF THE NEW LINES AND PAN/TILT ALL SERVICE LATERALS TO 6"X6" CLEAN OUT. CONTRACTOR SHALL FLOOD ALL LINES BEFORE CCTV.

AT END OF PROJECT, CONTRACTOR SHALL SUBMIT FIELD COPY PLAN AND PROFILES SHOWING AS-BUILT WORK, CCTV DVD, AND COMPACTION DENSITY REPORTS FOR MAIN SEWER LINES AND ALL SERVICE LATERALS. CONTRACTOR SHALL ALSO ISSUE WARRANTY LETTERS FOR MATERIAL AND WORKMANSHIP FOR 12 MONTHS AFTER FINAL ACCEPTANCE.

90. ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH THE FOLLOWING:

A. 217.57; DEFLECTION TEST FOR FLEXIBLE AND SEMI-RIGID PIPE CONDUCTED AFTER FINAL BACKFILL HAS BEEN IN PLACED AT LEAST 30 DAYS.

B. 217.57, OR RIVER AUTHORITY SPECIFICATIONS INFILTRATION AND OR EXFILTRATION AND OR LOW-PRESSURE AIR TEST.

C. 217.58 OR RIVER AUTHORITY SPECIFICATIONS: ALL MANHOLES AND WET WELLS MUST BE TESTED SEPARATELY AND INDEPENDENTLY OF THE COLLECTION LINES.

D. IN THE EVENT THAT TESTING REQUIREMENTS CONFLICT, THE LATEST TCEQ DESIGN CRITERIA SHALL BE USED.

91. SEWER LINES SHALL BE TESTED FROM MANHOLE TO MANHOLE.

92. SANITARY SEWER CONNECTIONS MADE DIRECTLY TO EXISTING MANHOLES WHICH REQUIRE PENETRATION INTO THE MANHOLE WILL BE CORE DRILLED. ANY DAMAGE TO EXISTING MANHOLE WILL BE REPLACED AT CONTRACTOR'S EXPENSE AND WILL REQUIRE SUCCESSFUL TESTING OF THE EXISTING MANHOLE IN ACCORDANCE WITH THE RIVER AUTHORITY SPECIFICATIONS. THEY MUST HAVE A PROTECTIVE COATING SPECIFIED IN THE RIVER AUTHORITY APPROVED PRODUCTS LIST, COATING WILL BE MINIMUM OF 200 MILS THICKNESS DEPENDING ON EXISTING CONDITIONS, TO PREVENT INFRASTRUCTURE INFILTRATION, FOLLOW MANUFACTURER'S RECOMMENDATION ON PROTECTIVE COATING.

93. AFTER CONSTRUCTION, TESTING WILL BE DONE BY PAN/TILT TV CAMERA BY THE CONTRACTOR AND OBSERVED BY THE INSPECTOR, WASTEWATER ENGINEERING PERSONNEL AND CONTRACTOR AS CAMERA IS RUN THROUGH THE LINES. PAN/TILT ALL 6" SERVICE LATERALS TO 6"X6" STUB-OUT. VIDEOS MUST INCLUDE SUBDIVISION NAME, MANHOLE NUMBER, SERVICE LATERAL STATION NUMBER, FLOW DIRECTION, LOCATION ANY ABNORMALITIES, SUCH AS BROKEN PIPE OR MISALIGNED, JOINT, GRAVEL, DIRT, MUST BE CLEANED OUT, REPLACE AT CONTRACTOR'S EXPENSE. NEW SEWER SYSTEM WILL BE FLOODED WITH H2O BEFORE BEING TV. ALL SEWER LINES MUST BE PRESSURE CLEANED TO INCLUDE SERVICE LATERALS 6"INCH TO STUB-OUT. ALL VIDEOS SHALL BE SUBMITTED IN DVD FORMAT WITH WRITTEN REPORTS.

94. A COPY OF ALL TESTING REPORTS INCLUDING BACKFILL COMPACTION TESTS SHALL BE FORWARDED TO THE RIVER AUTHORITY.

95. DENSITY TEST WILL BE REQUIRED ON ALL SANITARY SEWER TRENCHES INCLUDING SERVICE LATERALS. SERVICE LATERALS TO BE CHOSEN RANDOMLY BY FIELD INSPECTOR. DENSITIES ON SERVICE LATERAL SHALL NOT EXCEED 25% OF TOTAL NUMBER OF SERVICE.

EXCAVATION

96. 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 CONTRACTORS 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. SPECIALLY, CONTRACTOR AND/OR CONTRACTORS 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.

97. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT STOCKPILE ANY WASTE MATERIAL IN THE 100 YEAR FLOODPLAIN.

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REVISED 10/2/2023

GENERAL NOTES 4 OF 4

SHEET 4 OF 5

UP ENGINEERING + SURVEYING
111 TOWER DR, SUITE 325
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TBPELS F-10194606

STATE OF TEXAS
RYAN R. PLAGENS
111640
LICENSED PROFESSIONAL ENGINEER
9/12/24

BRIGHTLAND HOMES, LTD. A
TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

SEWER NOTES

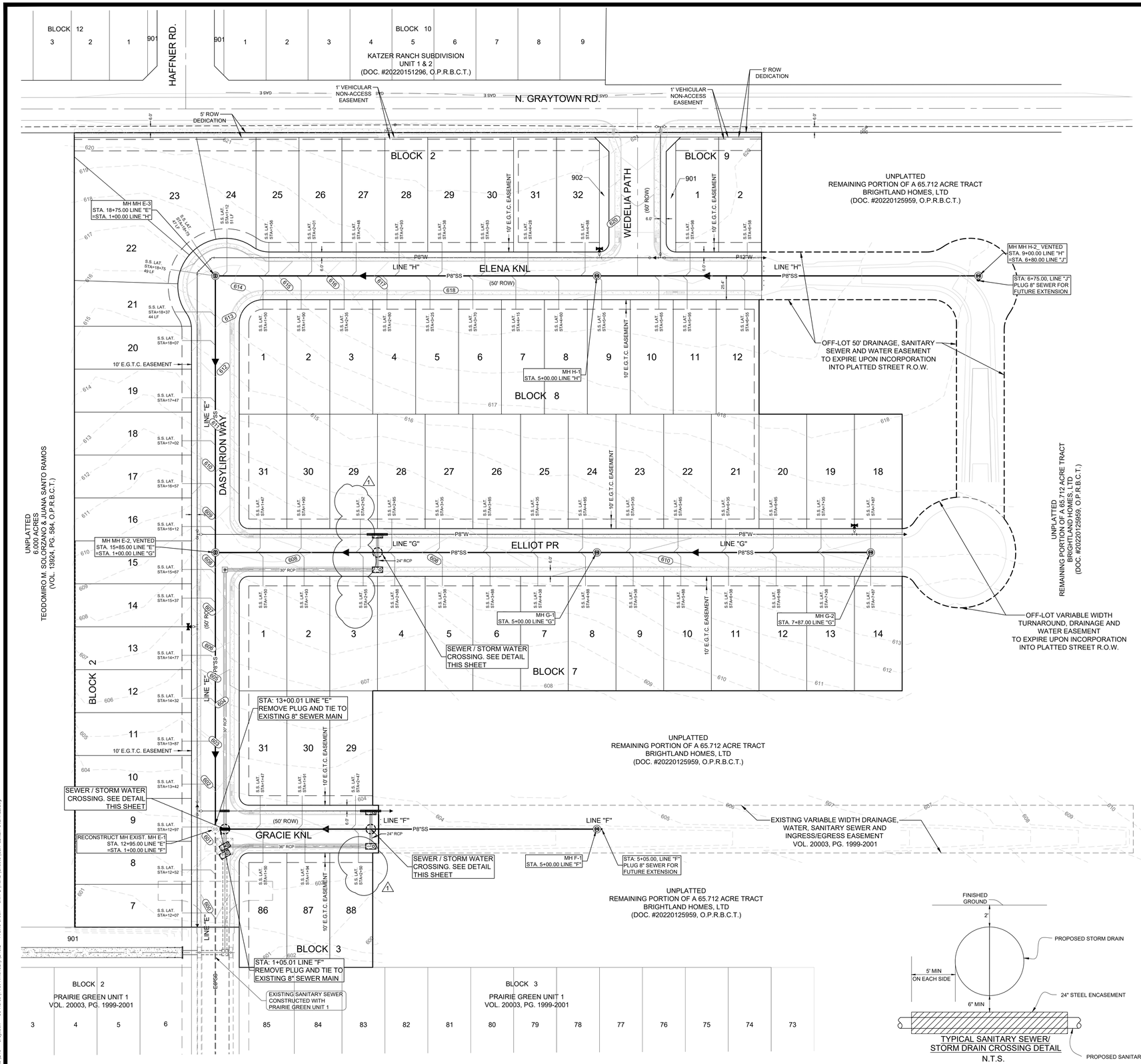
REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET

C3.1

Date: Sep 12, 2024, 2:53pm User ID: LJ Ramones
File: U:_Projects\246 - Graytown - 60 Acres (First American)\246.2 - Prairie Green - UNIT 2\ACAD\Sheets\C3.0 SEWER COVER.dwg



LEGEND

- BOUNDARY / RIGHT OF WAY
- EASEMENT / SETBACK
- CURB / EDGE OF PAVEMENT
- EXIST. GRADE ELEVATIONS
- PROP. GRADE ELEVATIONS
- BSL — BUILDING SETBACK LINE
- E8"W — EXISTING WATER LINE
- P8"W — PROPOSED WATER LINE
- OE — EXISTING OVERHEAD UTILITIES
- UE — EXISTING UNDERGROUND ELECTRIC
- G — EXISTING GAS LINE
- EXISTING UTILITY POLE
- EXISTING SIGN
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- PROPOSED WATER METER
- EXISTING GUY WIRE
- WW — PROPOSED SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER LATERAL
- P8"SS — PROPOSED SANITARY SEWER LINE
- E12"SS — EXISTING SANITARY SEWER LINE

0 25' 50' 100'
SCALE: 1" = 50'

CAUTION:
CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

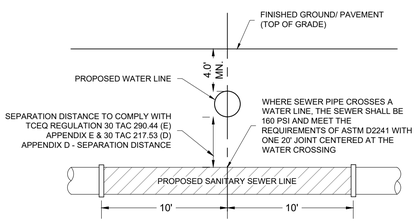
NOTES:

1. ALL SANITARY SEWER MAINS SHALL BE CONSTRUCTED PER 2020 SAN ANTONIO RIVER AUTHORITY DESIGN STANDARDS.
2. ALL WASTEWATER PIPE TO BE PVC SDR 26.
3. ALL GRAVITY LINES ARE TO BE INSTALLED FROM DOWNSTREAM TO UPSTREAM.
4. DOMESTIC WATER LINES AND SANITARY SEWER LINES AND LATERALS TO BE INSTALLED BY PLUMBER PER CITY OF SAN ANTONIO PLUMBING CODE.
5. REPAIR ASPHALT AS REQUIRED FOR INSTALLATION OF WATER & WASTEWATER LINES.
6. CONTRACTOR SHALL FURNISH & INSTALL ALL MATERIALS AND APPURTENANCES AS CALLED OUT ON PLANS.
7. REFERENCE GENERAL NOTES SHEETS FOR ADDITIONAL UTILITY NOTES.
8. CONTRACTOR TO COORDINATE WITH CPS ELECTRIC AND GAS ON ELECTRICAL SERVICE CONNECTION AND INSTALLATION OF RISER POLES AND TRANSFORMER PADS.
9. INSTALL CLEANOUTS EVERY 100 FEET ALONG SANITARY SEWER LINES, OR PER SARA SPECIFICATIONS. CLEANOUTS IN PAVEMENT SHALL HAVE TRAFFIC RATED COVERS. MATCH TOP TO PROPOSED GRADES.
10. SEE MEP PLANS FOR STREET LIGHT ELECTRICAL PATH AND CONTINUATION OF WATER, SEWER, GAS AND ELECTRIC LINES INTO BUILDINGS.
11. SEE LANDSCAPE ARCHITECT PLANS FOR IRRIGATION PLANS AND DETAILS.
12. 6" SANITARY SEWER CLEANOUTS ARE NOT ALLOWED TO BE INSTALLED IN DRIVEWAYS. REFER TO GENERAL NOTES

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

TYPICAL SANITARY SEWER/
STORM DRAIN CROSSING DETAIL
N.T.S.



TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL
NOT - TO - SCALE

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TBPELS F-10194605

2/13/25
STATE OF TEXAS — RYAN R. PLAGENS — 111640 — LICENSED PROFESSIONAL ENGINEER

BRIGHTLAND HOMES, LTD. A
TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

SEWER OVERALL

REV	DATE	DESCRIPTION	BY
1	02/11/25	S.S. LATERALS CORRECTED	GM

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C3.2

Date: Feb 11, 2025, 4:59pm User ID: gabri
File: U:_Projects\246 – Grayfawn – 60 Acres (First American)\246.2 – Prairie Green – UNIT 2\ACAD\Sheets\C3.1_SEWER OVERALL.dwg

TRENCH EXCAVATION SAFETY PROTECTION

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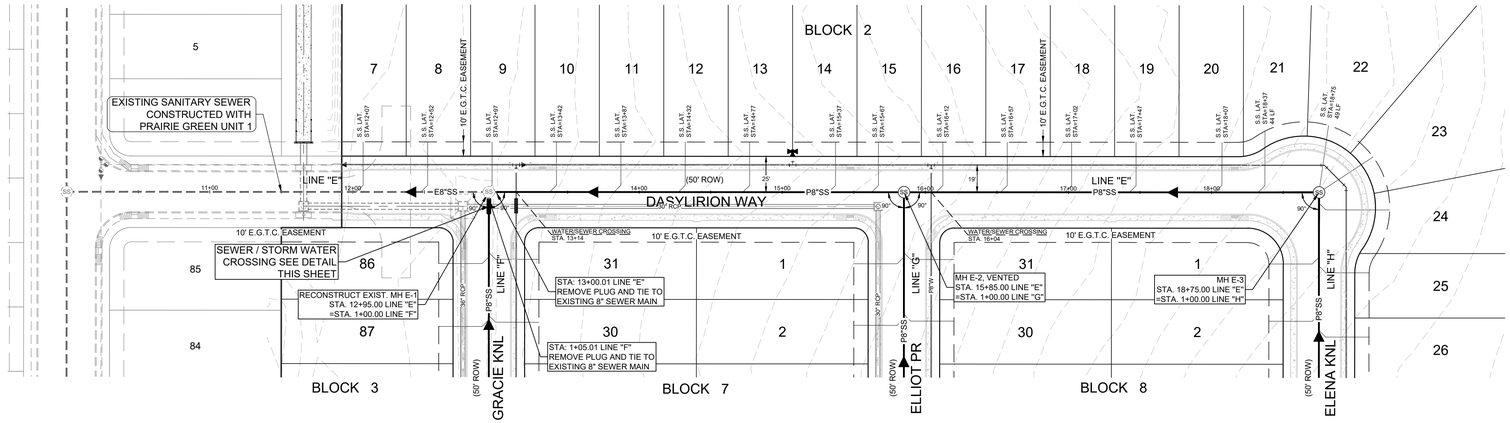
- EXISTING UTILITY POLE
- EXISTING SIGN
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- PROPOSED WATER METER
- EXISTING GUY WIRE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER LATERAL
- P8"SS — PROPOSED SANITARY SEWER LINE
- E12"SS — EXISTING SANITARY SEWER LINE



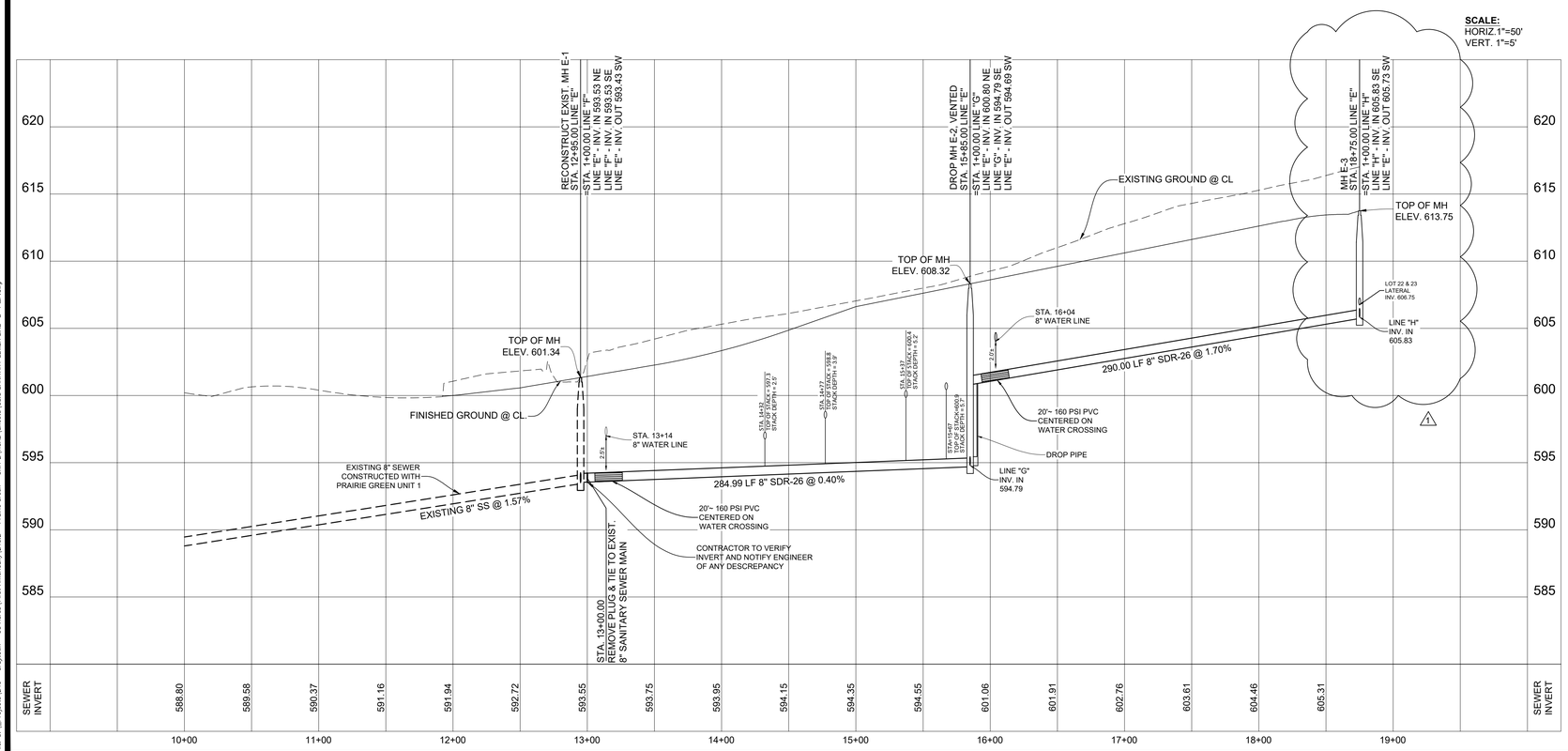
0 25' 50' 100'

SCALE: 1" = 50'

LINE "E"

STA. 13+05.00 TO STA. 18+75.00

SCALE:
HORIZ. 1"=50'
VERT. 1"=5'



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2/18/25

STATE OF TEXAS — RYAN R. PLAGENS — 111640 — LICENSED PROFESSIONAL ENGINEER

BRIGHTLAND HOMES, LTD. A TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY. STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

SANITARY SEWER LINE "E" PLAN & PROFILE

REV	DATE	DESCRIPTION	BY
1	02/18/25	MH E3 ELEVATIONS CORRECTED	GM

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C3.3

Date: Feb 18, 2025, 2:39pm User ID: gplr
File: U:_Projects_446 – Greyfern – 60 Acres (First American)\2446.2 – Prairie Green – UNIT 2\ACAD\Sheets\C3.3 SANITARY SEWER LINE "E" P&P.dwg

TRENCH EXCAVATION SAFETY PROTECTION

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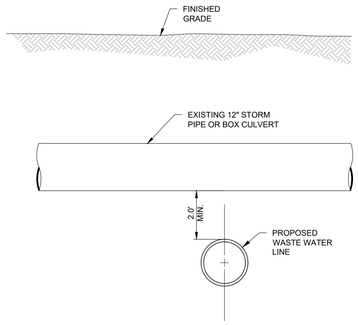
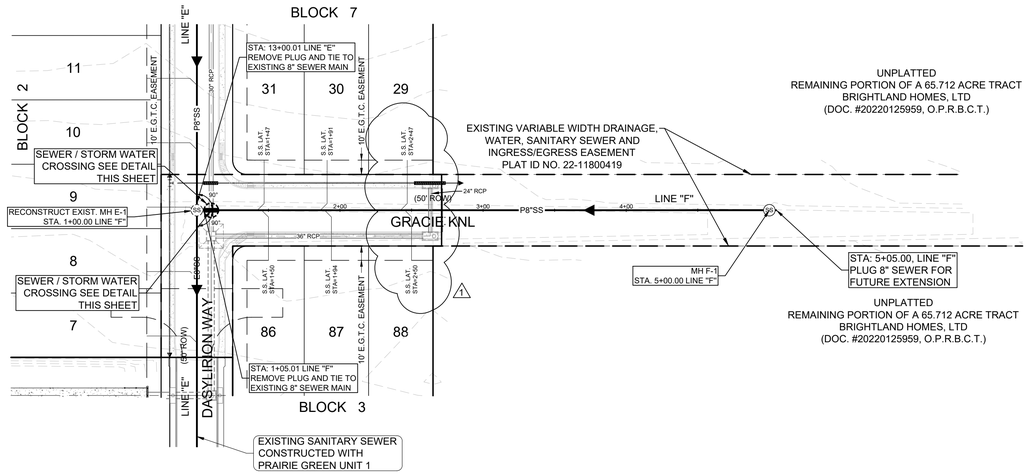


SEWER/ STORM CROSSING DETAIL

NOT TO SCALE



LEGEND

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- PROP. GRADE ELEVATIONS
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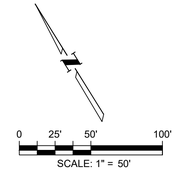
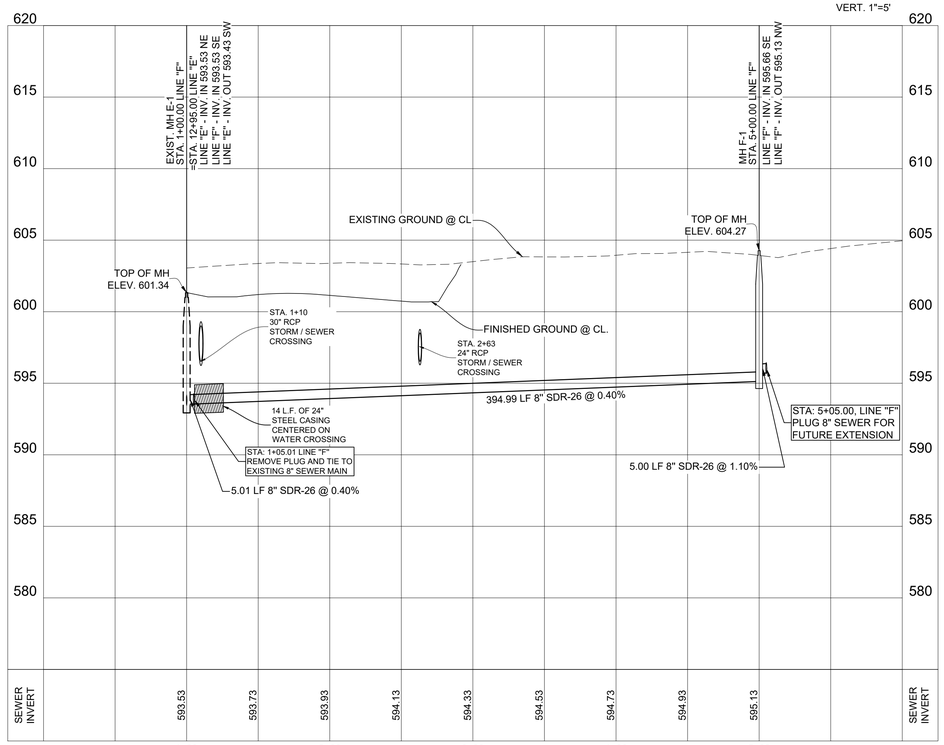
- EXISTING UTILITY POLE
- EXISTING SIGN
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- PROPOSED WATER METER
- EXISTING GUY WIRE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER LATERAL
- PROPOSED SANITARY SEWER LINE
- EXISTING SANITARY SEWER LINE

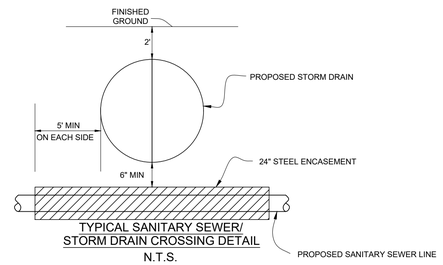


LINE "F"

STA. 1+05.00 TO STA. 5+05.00

SCALE:
HORIZ.1"=50'
VERT. 1"=5'





TYPICAL SANITARY SEWER/ STORM DRAIN CROSSING DETAIL

N.T.S.

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TBPELS F-10194605

2|3|25

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BRIGHTLAND HOMES, LTD. A TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

SANITARY SEWER LINE "F" PLAN & PROFILE

REV	DATE	DESCRIPTION	BY
1	02/11/25	S.S. LATERALS CORRECTED	GM

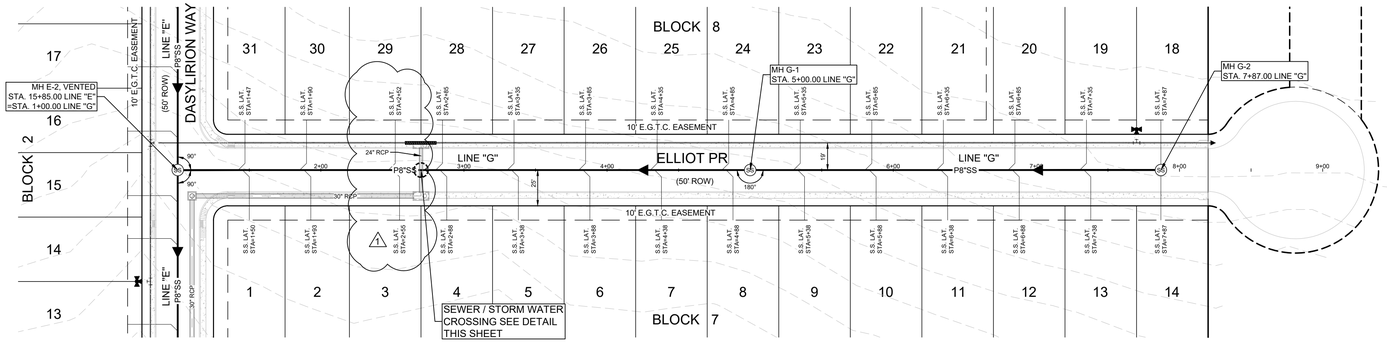
DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET

C3.4

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 EXCAVATION.



LEGEND

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- P8"SS — PROPOSED SANITARY SEWER LINE
- E12"SS — EXISTING SANITARY SEWER LINE

0 25' 50' 100'
SCALE: 1" = 50'

LINE "G"

STA. 1+00.00 TO STA. 7+87.00

SCALE:
HORIZ.1"=50'
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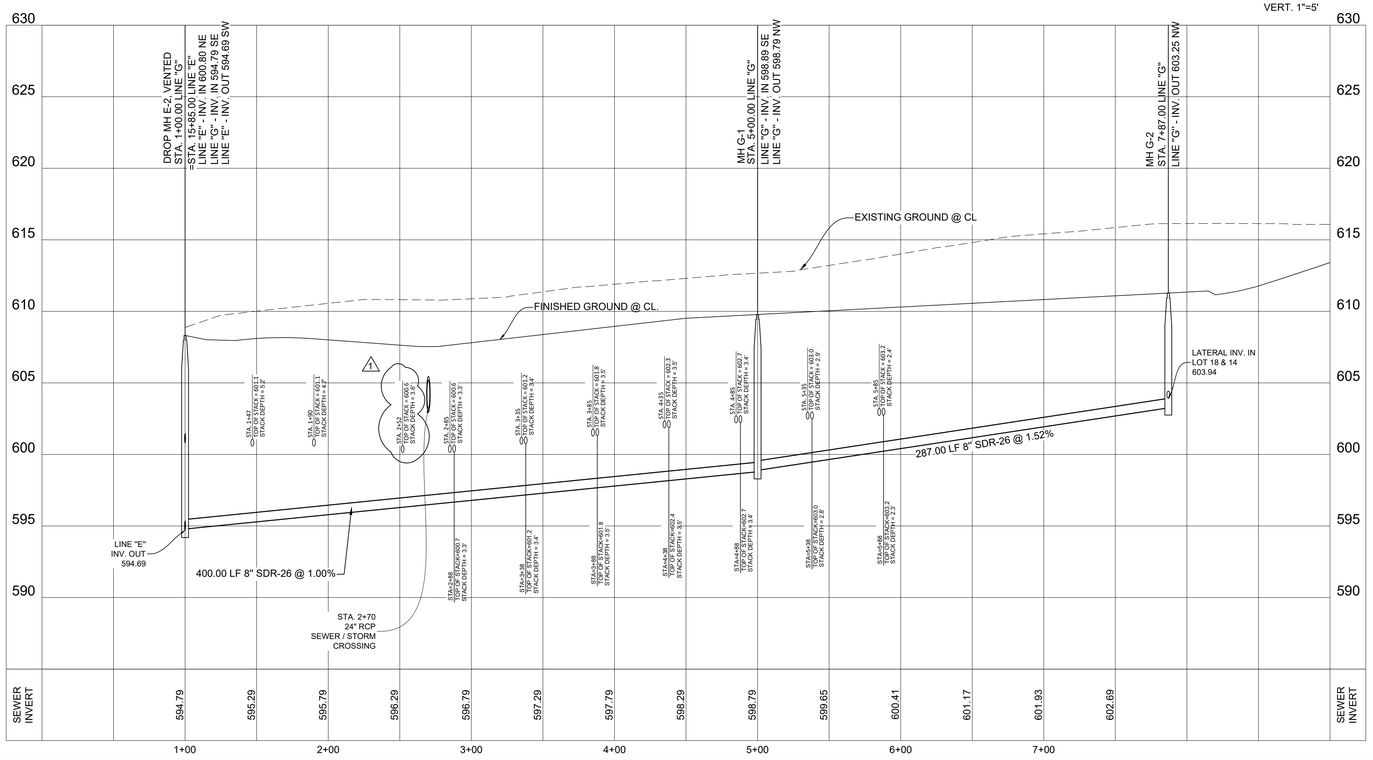

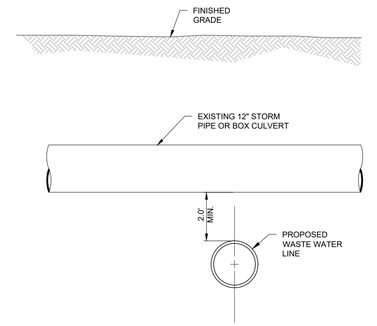

SEWER/ STORM CROSSING DETAIL

NOT TO SCALE

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2|3|25

STATE OF TEXAS — 111640 — RYAN R. PLAGENS — LICENSED PROFESSIONAL ENGINEER

BRIGHTLAND HOMES, LTD. A
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STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

SANITARY SEWER LINE "G"
PLAN & PROFILE

REV	DATE	DESCRIPTION	BY
1	02/11/25	S.S. LATERALS CORRECTED	GM

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C3.5

TRENCH EXCAVATION SAFETY PROTECTION

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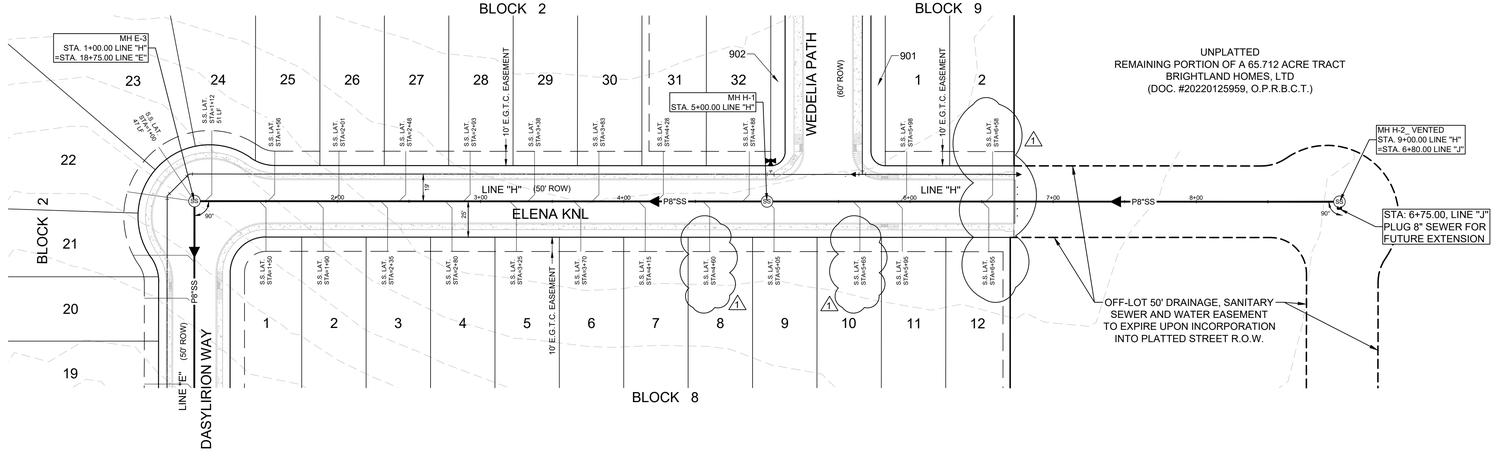

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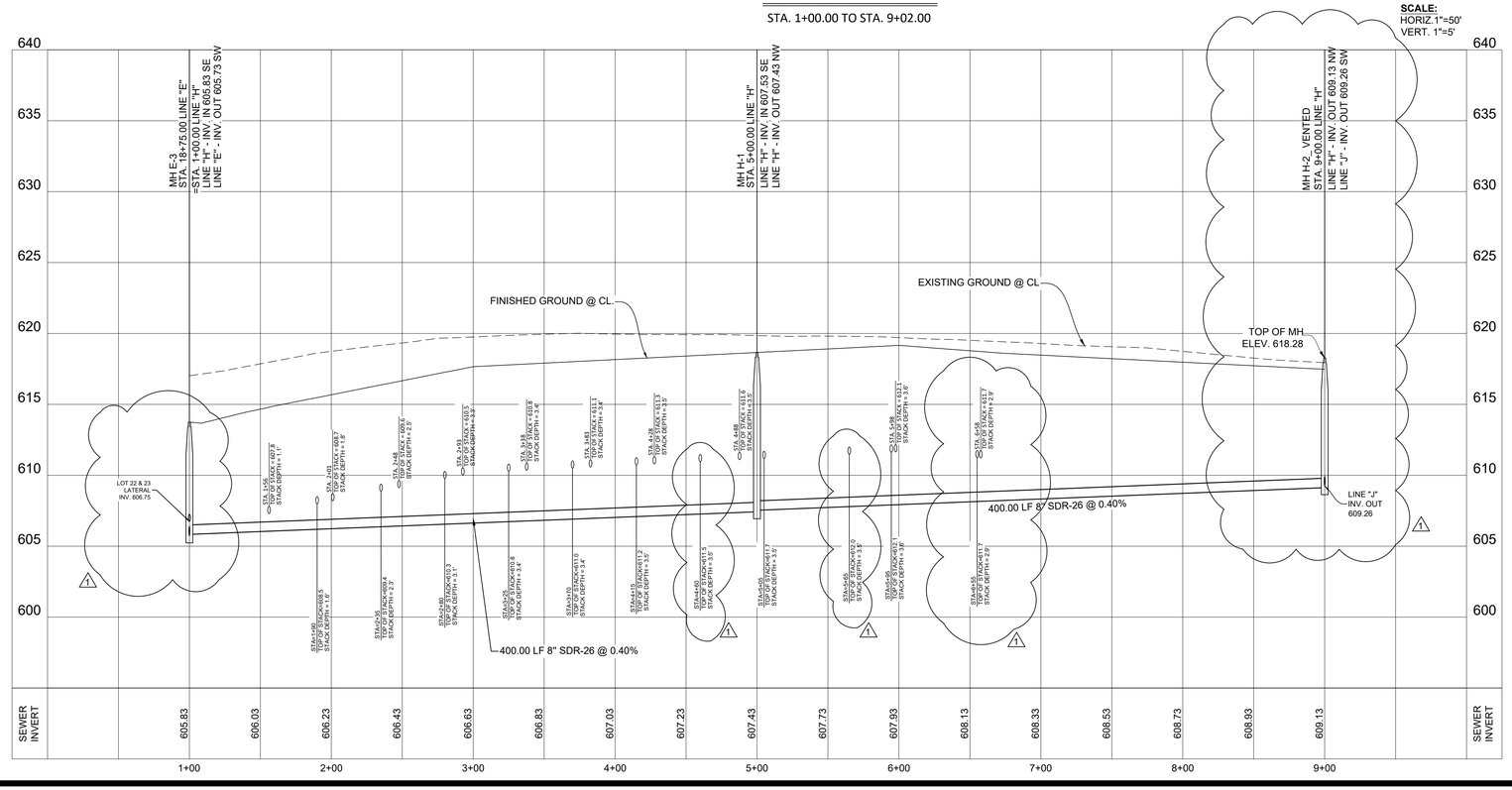
0 25' 50' 100'
SCALE: 1" = 50'

LINE "H"

STA. 1+00.00 TO STA. 9+02.00



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STATE OF TEXAS
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111640
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STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

SANITARY SEWER LINE "H"
PLAN & PROFILE

REV	DATE	DESCRIPTION	BY
1	02/18/25	MH H1 & H2 ELEVATIONS & S.S. LATERALS CORRECTED	GM

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

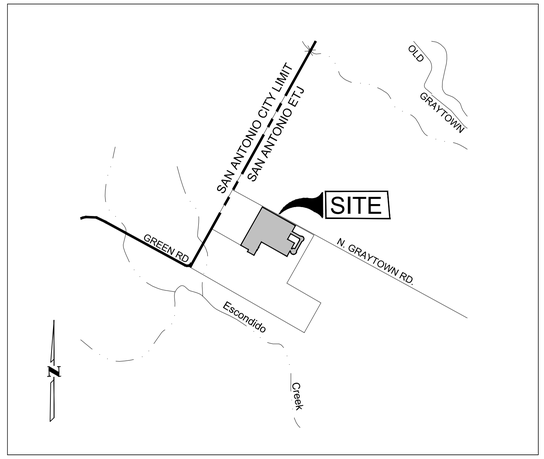
SHEET
C3.6

Date: Feb 18, 2025, 2:43pm User ID: gabri
File: I:_Projects\246 - Greyfawn - 60 Acres (First American)\246.2 - Prairie Green - UNIT 2\ACAD\Sheets\C3.6 SANITARY SEWER LINE "H" P&P.dwg

WATER CONSTRUCTION DOCUMENTS FOR

PRAIRIE GREEN - UNIT 2 SUBDIVISION

BEXAR COUNTY, TEXAS

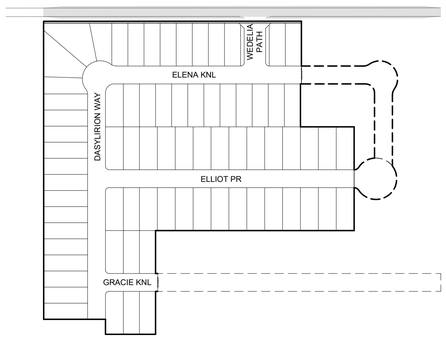


VICINITY MAP
NOT TO SCALE

SUBMITTAL DATE:
September, 2024

OWNER/DEVELOPER: BRIGHTLAND HOMES, LTD. A TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY. STE 275
AUSTIN, TX 78704

ENGINEER: UP ENGINEERING + SURVEYING
111 TOWER DR. SUITE 325
SAN ANTONIO, TEXAS 78232
(210) 774-5504
CONTACT: RYAN R. PLAGENS, P.E.



INDEX MAP

Sheet List Table	
Sheet Number	Sheet Title
C4.0	WATER COVER
C4.1	WATER OVERALL
C4.2	WATER DETAILS
C4.3	WATER DETAILS

WATER QUANTITIES

ITEM NO.	DESCRIPTION		QUANTITY		UNIT
1	12" Water Pipe (C900 PVC Class 235)(DR-18)		575		L.F.
2	8" Water Pipe (C900 PVC Class 235)(DR-18)		1,801		L.F.
3	12" Gate Valve w/Valve Box Complete		4		EA.
4	8" Gate Valve w/Valve Box Complete		5		EA.
5	Standard Fire Hydrant, Complete		3		EA.
6	Ductile Iron Fittings		1.4		TONS
7	3/4" Single Short w/ 5/8" Meter		5		EA.
8	3/4" Single Long w/ 5/8" Meter		3		EA.
9	1" Dual Short w/ 5/8" Meter		20		EA.
10	1" Dual Long w/ 5/8" Meter		13		EA.
11	1" Single Irrigation w/ 3/4" Meter		1		EA.
12	2" Temporary Blow off Complete		1		EA.
13	2" Permenant Blow off Complete		3		EA.
14	24" Steel Casing		53		L.F.
15	Chlorination		1		EA.
16	Hydrostatic Testing		1		EA.
17	Trench Excavation Protection		2,376		L.F.
ITEM NO.	DESCRIPTION		QUANTITY		UNIT
1	Meter Boxes		75		EA

UP ENGINEERING + SURVEYING
111 TOWER DR. SUITE 325
SAN ANTONIO, TX 78232 TEL 210-774-5504
WWW.UPENGINEERING.COM TBPE F-17992
TBPELS F-10194455

9/12/24

STATE OF TEXAS
RYAN R. PLAGENS
117640
LICENSED PROFESSIONAL ENGINEER

BRIGHTLAND HOMES, LTD. A
TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

WATER COVER

REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C4.0

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

RESTRAINT JOINTS

1. *ALL TEES RESTRAINT JOINT AS REQUIRED PER EAST CENTRAL SUD DET-839-04*
2. *ALL BENDS RESTRAINT JOINT AS REQUIRED PER EAST CENTRAL SUD DET-839-08*
3. *ALL VALVES/DEAD ENDS RESTRAINT JOINT AS REQUIRED PER EAST CENTRAL SUD DET-839-05*
4. *ALL VERTICAL BENDS RESTRAINT JOINT AS REQIRED PER EAST CENTRAL SUD DET-839-06*

LEGEND

- *FIRE HYDRANT*
- *EXISTING FIRE HYDRANT*
- *P8"W* — *WATER MAIN*
- *E8"W* — *EXISTING WATER MAIN*
- *DUAL WATER SERVICE*
- *SINGLE WATER SERVICE*
- *P8"SS* — *SANITARY SEWER PIPE*
- *E8"SS* — *EXISTING SANITARY SEWER PIPE*
- *EXISTING SANITARY SEWER MANHOLE*
- *PROPOSED SANITARY SEWER MANHOLE*
- *FLOW DIRECTION*
- *SANITARY SEWER LATERAL*
- *EXIST. SANITARY SEWER LATERAL*
- *OE* — *EXIST. OVERHEAD ELECTRIC*
- *E.G.T.C.* — *ELECTRIC, GAS, TELEPHONE AND CABLE TV*
- *VNAE* — *VEHICLE NON-ACCESS EASEMENT*
- *BSL* — *BUILDING SETBACK LINE*
- *ESMT.* — *EASEMENT*
- *1937/550* — *VOLUME/PAGE*
- *O.P.R.B.C.T.* — *OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY TEXAS*
- *D.P.R.* — *DEED AND PLAT RECORDS OF BEXAR COUNTY TEXAS*
- *POWER POLE*
- *EXISTING POWER POLE*
- *ELECTRIC TRANSFORMER*
- *TELEPHONE PEDESTAL*
- *CABLE T.V. PEDESTAL*
- *ELECTRIC RISER POLE*
- *EXISTING STREET LIGHT*
- *PROPOSED STREET LIGHT (100 WATT UG)*
- *250W* — *PROPOSED STREET LIGHT (250 WATT UG)*
- R.O.W. — *RIGHT-OF-WAY*
- *BLOWOFF*

UTILITY PROVIDER:

EAST CENTRAL SPECIAL UTILITY DISTRICT
P.O. BOX 570
ADKINS, TEXAS 78101
210-649-2383

CAUTION:
CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

NOTES:

1. FIRE LINE SHALL BE PVC C900 FOR PIPES < 12" AND SHALL CONFORM TO ASTM DESIGNATION D2241. ALL FIRE LINES AND APPURTENANCES SHALL BE PER EAST CENTRAL SPECIAL UTILITY DISTRICT SPECIFICATIONS.
2. ALL WATER LINE JOINTS ARE TO BE RESTRAINED PER MANUFACTURERS RECOMMENDATIONS.
3. REPAIR ASPHALT AS REQUIRED FOR INSTALLATION OF WATER LINES.
4. CONTRACTOR SHALL FURNISH & INSTALL ALL MATERIALS AND APPURTENANCES AS CALLED OUT ON PLANS.
5. THE GATE VALVES AT THE TIE-IN CONNECTION TO THE WATER MAIN SHALL BE AFC (SERIES 2500) OR MUELLER (SERIES 2360) OPEN RIGHT.

HYDRANT CURB SPACING DETAIL
NTS

TYPICAL WATER / STORM DRAIN CROSSING DETAIL
N.T.S.

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
NOT - TO - SCALE

WATER/STORM CROSSING
NOT TO SCALE

UP ENGINEERING + SURVEYING
111 TOWER DR. SUITE 535
SAN ANTONIO, TX 78232 TEL 210-774-5504
WWW.UPENGINEERING.COM TBPE F-17992
TBPELS F-10194455

11/13/24

RYAN R. PLAGENS 116400 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS

BRIGHTLAND HOMES, LTD. A TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

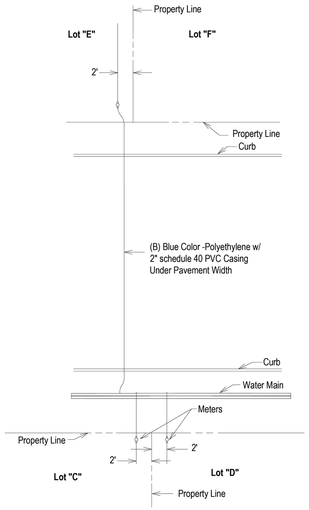
WATER OVERALL

REV	DATE	DESCRIPTION	BY
1	11/13/24	ADDED IRRIGATION SERVICE	WS

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C4.1

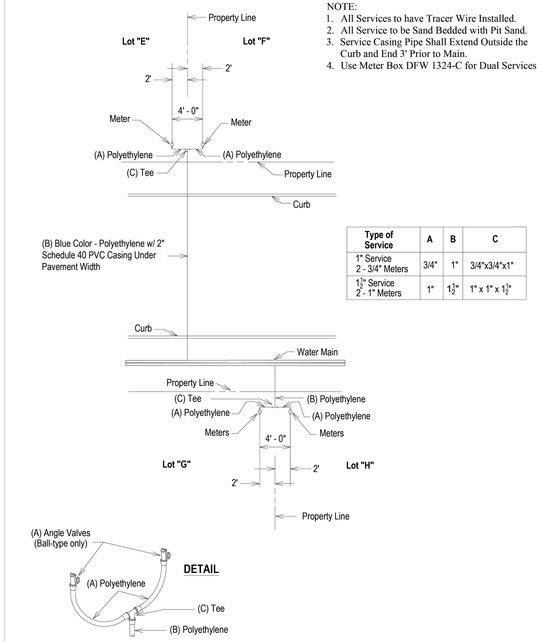
Date: Nov 13, 2024, 1:43pm User ID: cpm
File: G:_Projects\246 - Grayfawn - 65 Acres (First American)\246.2 - Prairie Green - UNIT 2\LACAD\Sheets\C4.1 WATER OVERALL.dwg



NOTE:
1. All Services to have Tracer Wire Installed.
2. All Service to be Sand Bedded with Pit Sand.
3. Service Casing Pipe Shall Extend Outside the Curb and End 3' Prior to Main.

SINGLE SERVICE LINE - SINGLE METER

East Central SUD	TYPICAL SERVICE ARRANGEMENT	APPROVED JULY 2022	REVISED
		DET-824-Ø5	SHEET 1 OF 4



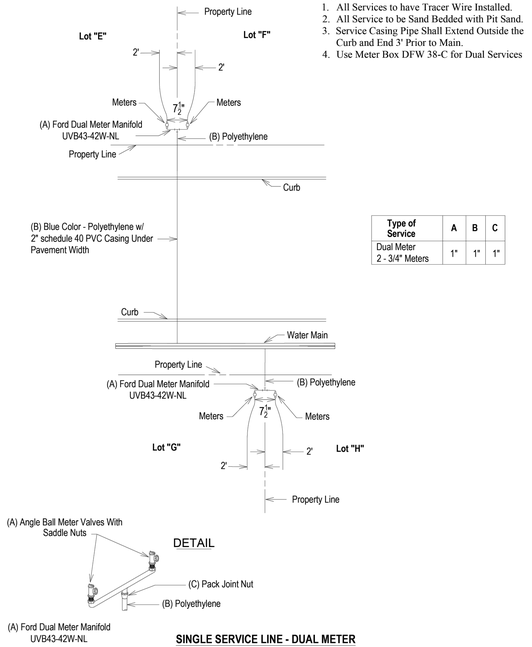
NOTE:
1. All Services to have Tracer Wire Installed.
2. All Service to be Sand Bedded with Pit Sand.
3. Service Casing Pipe Shall Extend Outside the Curb and End 3' Prior to Main.
4. Use Meter Box DFW 1324-C for Dual Services

Type of Service	A	B	C
1" Service 2 - 3/4" Meters	3/4"	1"	3/4"x3/4"x1"
1½" Service 2 - 1" Meters	1"	1½"	1" x 1" x 1½"

DETAIL

SINGLE SERVICE LINE - DUAL METER

East Central SUD	TYPICAL RURAL SERVICE ARRANGEMENT	APPROVED JULY 2022	REVISED
		DET-824-Ø5	SHEET 2 OF 4

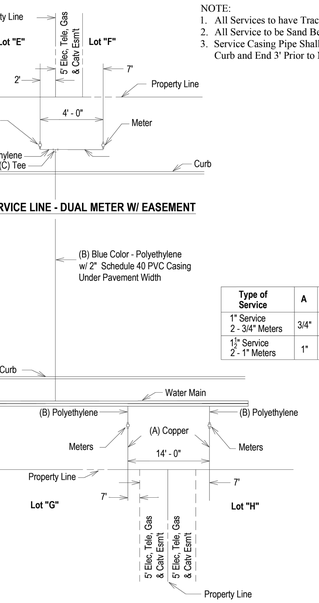


NOTE:
1. All Services to have Tracer Wire Installed.
2. All Service to be Sand Bedded with Pit Sand.
3. Service Casing Pipe Shall Extend Outside the Curb and End 3' Prior to Main.
4. Use Meter Box DFW 38-C for Dual Services

Type of Service	A	B	C
Dual Meter 2 - 3/4" Meters	1"	1"	1"

SINGLE SERVICE LINE - DUAL METER

East Central SUD	TYPICAL HIGH DENSITY RESIDENTIAL SERVICE ARRANGEMENT	APPROVED JULY 2022	REVISED
		DET-824-Ø5	SHEET 3 OF 4



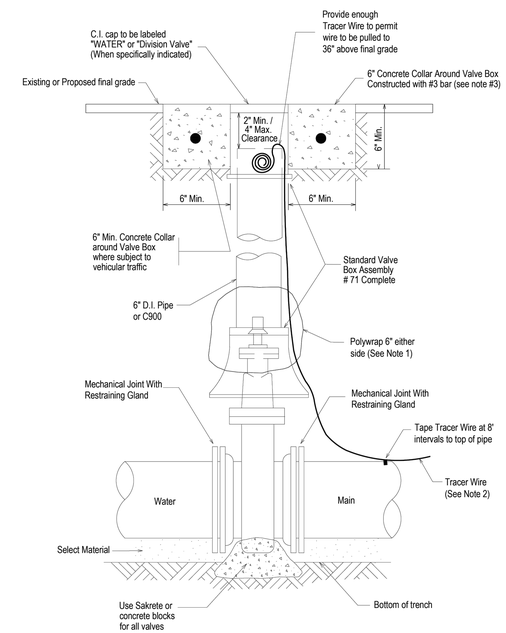
NOTE:
1. All Services to have Tracer Wire Installed.
2. All Service to be Sand Bedded with Pit Sand.
3. Service Casing Pipe Shall Extend Outside the Curb and End 3' Prior to Main.

SINGLE SERVICE LINE - DUAL METER W/ EASEMENT

Type of Service	A	B	C
1" Service 2 - 3/4" Meters	3/4"	1"	3/4"x3/4"x1"
1½" Service 2 - 1" Meters	1"	1½"	1" x 1" x 1½"

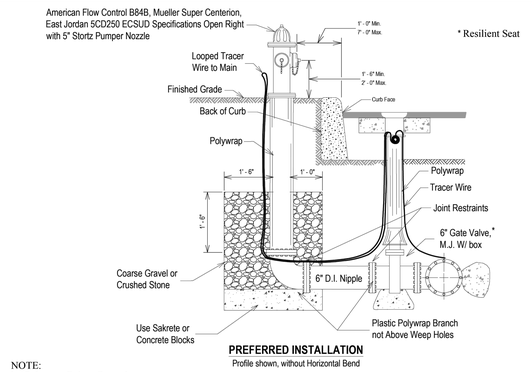
SINGLE SERVICE LINE W/ EASEMENT

East Central SUD	TYPICAL SERVICE ARRANGEMENT	APPROVED JULY 2022	REVISED
		DET-824-Ø5	SHEET 4 OF 4



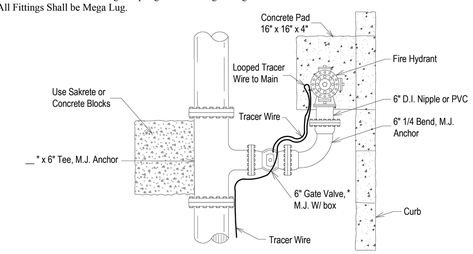
NOTE:
1. Polywrap C-900 or D.I. Pipe to Boot 6" on Either Side.
2. Tracer Wire to be Outside the Pipe Till Valve Box Top Section.
3. Min. 18" Concrete Form Tube Centered Around Valve Box for Concrete Collar W/ #3 Bar.

East Central SUD	INSTALLATION OF NON-GEARED GATE VALVE WITH VALVE BOX AND EXTENSION	APPROVED JULY 2022	REVISED
		DET-828-Ø1	SHEET 1 OF 1



PREFERRED INSTALLATION
Profile shown, without Horizontal Bend

NOTE:
1. Polywrap Below Ground
2. Use Anchoring Tee with M.J. Fitting or M.J. Valve
3. Std. M.J. Tee with Anchoring Coupling or Anchoring Fitting.
4. All Fittings Shall be Mega Lug.



ALTERNATE INSTALLATION
Plan shown, with Bend

East Central SUD	FIRE HYDRANT INSTALLATION	APPROVED JULY 2022	REVISED
		DET-834-Ø1	SHEET 1 OF 1

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TBPELS F-10194465

9/12/24

STATE OF TEXAS RYAN R. PLAGENS 111640 LICENSED PROFESSIONAL ENGINEER

BRIGHTLAND HOMES, LTD. A TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

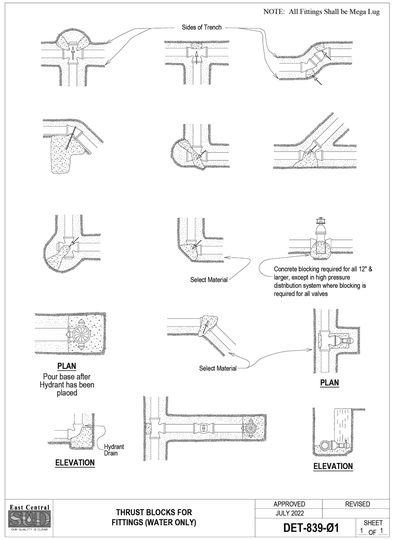
PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

WATER DETAILS

REV	DATE	DESCRIPTION	BY

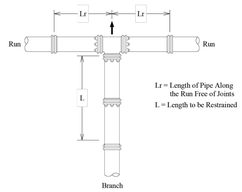
DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C4.2



THRUST BLOCKS FOR FITTINGS (WATER ONLY)

APPROVED	REVISED
JULY 2022	
DET-839-Ø1	SHEET 1 OF 1



RESTRAINED LENGTH FOR TEES				
PIPE SIZE (Inch)	BRANCH SIZE (Inch)	LENGTH OF RUN (Feet)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE=200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE=150 psi
6	4	0	42	31
6	4	5	7	1
6	4	10	1	1
6	6	0	59	44
6	6	5	35	20
6	6	10	11	1
8	4	0	42	31
8	4	5	1	1
8	6	0	59	44
8	6	5	28	13
8	6	10	1	1
8	8	0	77	58
8	8	5	53	34
8	8	10	30	11
8	8	15	6	1

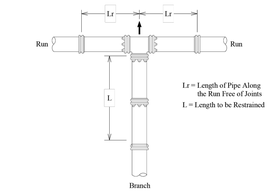
RESTRAINED LENGTH DESIGN

Restrained Length Calculations are for P.V.C. Pipe Bedded in Compacted Granular Material Extending to the Top of the Pipe. The Native Soil Material is Assumed to be Inorganic Clay of High Plasticity. Depth of Bury is Assumed to be 4 Feet.

NOTE:
1. These Calculations are Provided for Reference. The Restrained Length Shall be Designed Based Upon the Conditions Encountered During Installation.
2. All joints within the calculated length must be restrained.
3. If your distance between fittings is less than or equal to the calculated restraint length, restrain all joints between those fittings.

RESTRAINED LENGTHS FOR TEES

APPROVED	REVISED
MARCH 2020	
DET-839-04	SHEET 1 OF 2



RESTRAINED LENGTH FOR TEES				
PIPE SIZE (Inch)	BRANCH SIZE (Inch)	LENGTH OF RUN (Feet)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE=200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE=150 psi
12	4	0	42	31
12	4	5	1	1
12	6	0	59	44
12	6	5	13	1
12	6	10	1	1
12	8	0	77	58
12	8	5	42	23
12	8	10	7	1
12	8	15	1	1
12	12	0	109	82
12	12	5	86	59
12	12	10	63	35
12	12	15	39	12

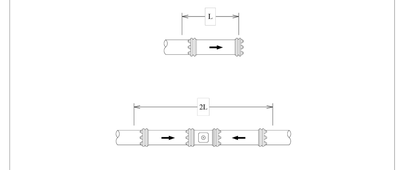
RESTRAINED LENGTH DESIGN

Restrained Length Calculations are for P.V.C. Pipe Bedded in Compacted Granular Material Extending to the Top of the Pipe. The Native Soil Material is Assumed to be Inorganic Clay of High Plasticity. Depth of Bury is Assumed to be 4 Feet.

NOTE:
1. These Calculations are Provided for Reference. The Restrained Length Shall be Designed Based Upon the Conditions Encountered During Installation.
2. All joints within the calculated length must be restrained.
3. If your distance between fittings is less than or equal to the calculated restraint length, restrain all joints between those fittings.

RESTRAINED LENGTHS FOR TEES

APPROVED	REVISED
MARCH 2020	
DET-839-04	SHEET 2 OF 2



L = Length to be Restrained

PIPE SIZE (Inch)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE=200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE=150 psi
6	59	44
8	77	58
10	93	69
12	109	82

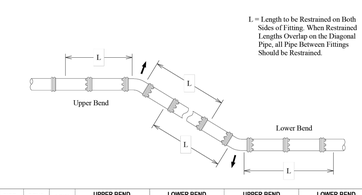
RESTRAINED LENGTH DESIGN

Restrained Length Calculations are for P.V.C. Pipe Bedded in Compacted Granular Material Extending to the Top of the Pipe. The Native Soil Material is Assumed to be Inorganic Clay of High Plasticity. Depth of Bury is Assumed to be 4 Feet.

NOTE:
1. These Calculations are Provided for Reference. The Restrained Length Shall be Designed Based Upon the Conditions Encountered During Installation.
2. All joints within the calculated length must be restrained.
3. If your distance between fittings is less than or equal to the calculated restraint length, restrain all joints between those fittings.

RESTRAINED LENGTHS FOR DEAD ENDS / INLINE VALVES

APPROVED	REVISED
JULY 2022	
DET-839-05	SHEET 1 OF 1



PIPE SIZE (Inch)	BEND ANGLE (deg.)	LOW SIDE DEPTH	UPPER BEND RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE=200 psi	LOWER BEND RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE=200 psi	UPPER BEND RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE=150 psi	LOWER BEND RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE=150 psi
6	45	5	24	8	18	6
6	22.5	5	12	4	9	3
6	11.25	5	6	2	4	1
6	45	10	24	5	18	4
6	22.5	10	12	2	9	2
6	11.25	10	6	1	4	1
8	45	5	32	11	24	8
8	22.5	5	15	5	11	4
8	11.25	5	8	3	6	2
8	45	10	32	7	24	5
8	22.5	10	15	3	11	2
8	11.25	10	8	2	6	1
12	45	5	45	16	34	12
12	22.5	5	22	7	16	6
12	11.25	5	11	4	8	3
12	45	10	45	10	34	7
12	22.5	10	22	5	16	3
12	11.25	10	11	2	8	2

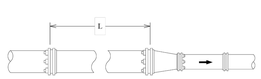
RESTRAINED LENGTH DESIGN

Restrained Length Calculations are for P.V.C. Pipe Bedded in Compacted Granular Material Extending to the Top of the Pipe. The Native Soil Material is Assumed to be Inorganic Clay of High Plasticity. Depth of Bury is Assumed to be 4 Feet.

NOTE:
1. These Calculations are Provided for Reference. The Restrained Length Shall be Designed Based Upon the Conditions Encountered During Installation.
2. All joints within the calculated length must be restrained.
3. If your distance between fittings is less than or equal to the calculated restraint length, restrain all joints between those fittings.

RESTRAINED LENGTHS VERTICAL OFFSETS

APPROVED	REVISED
JULY 2022	
DET-839-06	SHEET 1 OF 1



L = Length to be Restrained

PIPE SIZE (Inch)	SMALL SIZE (Inch)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE=200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE=150 psi
6	4	30	23
8	4	55	42
8	6	32	24
12	4	95	71
12	6	80	60
12	8	58	43

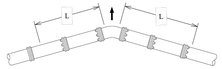
RESTRAINED LENGTH DESIGN

Restrained Length Calculations are for P.V.C. Pipe Bedded in Compacted Granular Material Extending to the Top of the Pipe. The Native Soil Material is Assumed to be Inorganic Clay of High Plasticity. Depth of Bury is Assumed to be 4 Feet.

NOTE:
1. These Calculations are Provided for Reference. The Restrained Length Shall be Designed Based Upon the Conditions Encountered During Installation.
2. All joints within the calculated length must be restrained.
3. If your distance between fittings is less than or equal to the calculated restraint length, restrain all joints between those fittings.

RESTRAINED LENGTHS FOR REDUCERS

APPROVED	REVISED
JULY 2022	
DET-839-07	SHEET 1 OF 1



L = Length to be Restrained on Both Sides of Fitting

PIPE SIZE (Inch)	BEND ANGLE (deg)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE=200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE=150 psi
6	90	23	17
6	45	9	7
6	22.5	5	3
6	11.25	2	2
8	90	30	22
8	45	12	9
8	22.5	6	4
8	11.25	3	2
12	90	43	32
12	45	18	13
12	22.5	8	6
12	11.25	4	3

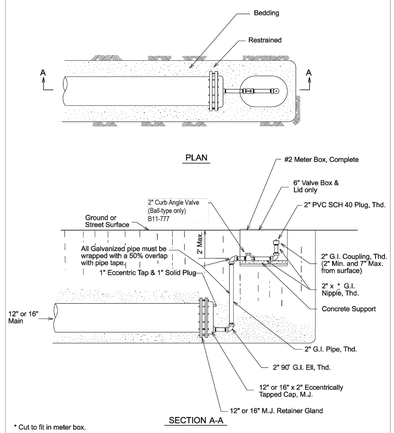
RESTRAINED LENGTH DESIGN

Restrained Length Calculations are for P.V.C. Pipe Bedded in Compacted Granular Material Extending to the Top of the Pipe. The Native Soil Material is Assumed to be Inorganic Clay of High Plasticity. Depth of Bury is Assumed to be 4 Feet.

NOTE:
1. These Calculations are Provided for Reference. The Restrained Length Shall be Designed Based Upon the Conditions Encountered During Installation.
2. All joints within the calculated length must be restrained.
3. If your distance between fittings is less than or equal to the calculated restraint length, restrain all joints between those fittings.

RESTRAINED LENGTHS FOR HORIZONTAL BENDS

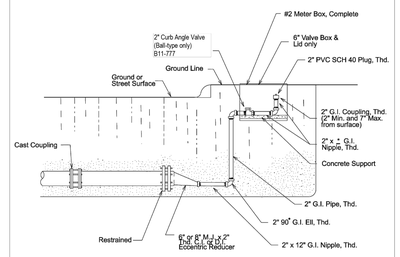
APPROVED	REVISED
JULY 2022	
DET-839-08	SHEET 1 OF 1



* Cut to fit in meter box.

2" PERMANENT BLOW-OFF ASSEMBLY ON 12" & 16" MAINS

APPROVED	REVISED
JULY 2022	
DET-844-02	SHEET 1 OF 2



* Cut to fit in meter box.

2" PERMANENT BLOW-OFF ASSEMBLY ON 6" & 8" MAINS

APPROVED	REVISED
JULY 2022	
DET-844-02	SHEET 2 OF 2

UP ENGINEERING + SURVEYING
111 TOWER DR. SUITE 525
SAN ANTONIO, TX 78232 TEL 210-774-5504
WWW.UPENGINEERING.COM TBPE F-17992
TBPELS F-10194465

9/12/24

STATE OF TEXAS · RYAN R. PLAGENS · 111640 · LICENSED PROFESSIONAL ENGINEER

BRIGHTLAND HOMES, LTD. A
TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

WATER DETAILS

REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C4.3

STREET & DRAIN CONSTRUCTION DOCUMENTS FOR

PRAIRIE GREEN - UNIT 2 SUBDIVISION

BEXAR COUNTY, TEXAS

GENERAL NOTES

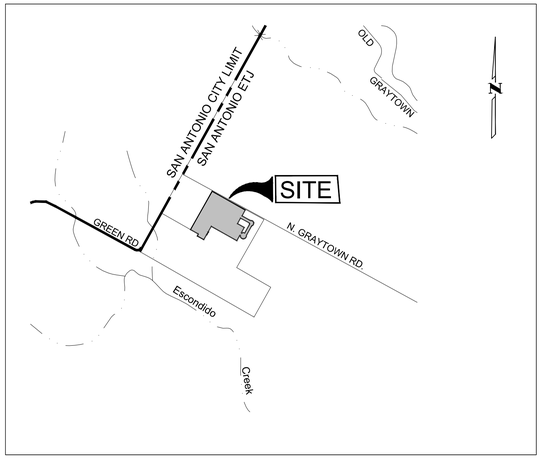
1. ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION JUNE 2008, OR LATEST.
2. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS, BUT NOT INCLUDED IN THE BID PROPOSAL. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED IN THE PAY ITEM TO WHICH IT RELATES.
3. THE CONTRACTOR SHALL PROVIDE ACCESS FOR THE DELIVERY OF MAIL BY THE U.S. POSTAL SERVICE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES OR DRIVEWAYS. (NO SEPARATE PAY ITEM).
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL SIGNS AND BARRICADES ARE PROPERLY INSTALLED AND MAINTAINED. ALL LOCATIONS AND DISTANCES WILL BE DECIDED UPON IN THE FIELD BY THE CONTRACTOR, USING THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". THE CITY'S CONSTRUCTION INSPECTOR AND TRAFFIC ENGINEERING REPRESENTATIVE WILL ONLY BE RESPONSIBLE TO INSPECT BARRICADES AND SIGNS. IF, IN THE OPINION OF THE TRAFFIC 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.
6. IF THE NEED ARISES, ADDITIONAL BARRICADES AND DIRECTIONAL DEVICES MAY BE ORDERED BY THE TRAFFIC ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
7. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181 C.P.S. 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.
8. CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.
9. CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
10. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO EXCAVATION OPERATION:

SAN ANTONIO WATER SYSTEM (SAWS)	210-233-2009
WATER & SEWER EMERGENCIES	210-704-7297
STORM DRAINAGE (CITY OF SAN ANTONIO)	210-207-8022
SIGNAL OPERATIONS (CITY OF SAN ANTONIO)	210-207-8022
TEXAS STATE WIDE ONE CALL LOCATOR	811
CPS ENERGY (GAS & ELECTRIC)	210-353-2000
CPS ELECTRIC/GAS ISSUES OR EMERGENCIES	210-353-4357
TIME WARNER	210-244-0500
AT&T	972-742-5892

11. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED, BUT SHALL BE INVESTIGATED AND VERIFIED BY THE CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR THE MAINTENANCE AND PROTECTION OF THE EXISTING UTILITIES EVEN IF THEY ARE NOT SHOWN ON THE PLANS. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND HE SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION.
12. ALL WASTE MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.
13. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.
14. THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND / OR TRACKED CONSTRUCTION MATERIALS AND / OR DEBRIS.
15. IF THE CONTRACTOR ENCOUNTERS ANY ARCHAEOLOGICAL DEPOSITS DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR MUST STOP EXCAVATION IMMEDIATELY, CONTACT THE CITY INSPECTOR, AND CALL THE CITY HISTORIC PRESERVATION OFFICE AT 210-215-9274 FOR AN ARCHAEOLOGICAL INVESTIGATION. THE CONTRACTOR CANNOT BEGIN EXCAVATION AGAIN WITHOUT WRITTEN PERMISSION FROM THE CITY.

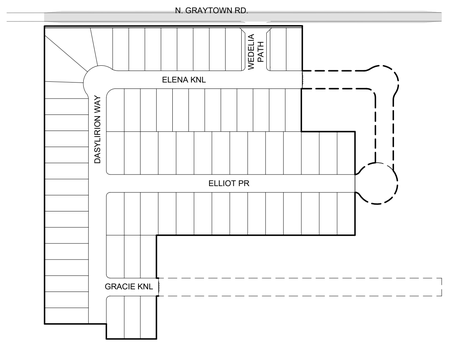
    IF MORE THAN THREE (3) DAYS ARE REQUIRED FOR INVESTIGATION (NOT INCLUDING HOLIDAY AND WEEKENDS) AND IF THE CONTRACTOR IS UNABLE TO WORK IN OTHER AREAS, THEN THE CONTRACTOR WILL BE ALLOWED TO NEGOTIATE FOR ADDITIONAL CONSTRUCTION TIME UPON WRITTEN REQUEST WITHIN TEN (10) DAYS AFTER THE FIRST NOTICE TO THE CITY OF ARCHAEOLOGICAL INVESTIGATION FOR EACH EVENT.

    IF THE TIME REQUIRED FOR INVESTIGATION IS LESS THAN OR EQUAL TO THREE (3) DAYS FOR EACH EVENT, CONTRACT DURATION WILL NOT BE EXTENDED.
16. IF SUSPECTED CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION OPERATIONS, C.O.S.A. SHALL BE NOTIFIED IMMEDIATELY WHEN CONTAMINATED SOILS AND / OR GROUNDWATER ARE ENCOUNTERED AT LOCATIONS NOT IDENTIFIED IN THE PLANS. THE NOTIFICATION SHOULD INCLUDE THE STATION NUMBER, TYPE OF CONTAMINATED MEDIA, EVIDENCE OF CONTAMINATION AND MEASURES TAKEN TO CONTAIN THE CONTAMINATED MEDIA AND PREVENT PUBLIC ACCESS. THE CONTAMINATED SOIL AND / OR GROUNDWATER SHALL NOT BE REMOVED FROM THE LOCATION WITHOUT PRIOR C.O.S.A. APPROVAL. THE CONTRACTOR MUST STOP THE EXCAVATION IMMEDIATELY AND CONTACT THE C.O.S.A. INSPECTOR. THE CONTRACTOR CANNOT BEGIN EXCAVATION ACTIVITIES WITHOUT WRITTEN PERMISSION FROM THE CITY.



VICINITY MAP
NOT TO SCALE

SUBMITTAL DATE:
September, 2024



INDEX MAP

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C5.2	TRAFFIC DETAILS
C5.2A	TRAFFIC DETAILS
C5.3	GRACIE KNL & WEDELIA PATH PLAN & PROFILE
C5.4	ELENA KNL PLAN & PROFILE
C5.5	ELLIOT PR PLAN & PROFILE
C5.6	DASYLIRION WAY PLAN & PROFILE
C5.7	NORTH GRAYTOWN RD
C5.8	STREET DETAILS
C5.9	TYPICAL STREET SECTIONS
C5.10	STORM DRAIN B-3 PLAN & PROFILE
C5.11	STORM DRAIN B-5 PLAN & PROFILE
C5.12	TEMPORARY INTERCEPTOR
C5.13	DRAIN DETAILS
C5.14	DRAIN DETAILS

BENCHMARK:

TBM 1: COTTON SPINDLE SET IN POWER POLE
NORTHING: 13713572.6800
EASTING: 2202854.2280
ELEVATION: 621.67

TBM 2: COTTON SPINDLE SET IN POWER POLE
NORTHING: 13713667.0100
EASTING: 2202687.0380
ELEVATION: 623.27

OWNER/DEVELOPER: BRIGHTLAND HOMES, LTD. A TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY. STE 275
AUSTIN, TX 78704

ENGINEER: UP ENGINEERING + SURVEYING
111 TOWER DR. SUITE 325
SAN ANTONIO, TEXAS 78232
(210) 774-5504
CONTACT: RYAN R. PLAGENS, P.E.

SURVEYOR: UP ENGINEERING + SURVEYING
111 TOWER DR. SUITE 325
SAN ANTONIO, TEXAS 78232
(210) 774-5504
CONTACT: RYAN R. PLAGENS, P.E.

GEOTECHNICAL ENGINEER: InTEC OF SAN ANTONIO, L.P.
12028 RADIUM
SAN ANTONIO, TX 78216
(210) 525-9033

UP ENGINEERING + SURVEYING
111 TOWER DR. SUITE 325
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TBPELS F-10194608

9/12/24

STATE OF TEXAS
RYAN R. PLAGENS
111640
LICENSED PROFESSIONAL ENGINEER

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TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

STREET COVER

REV	DATE	DESCRIPTION	BY

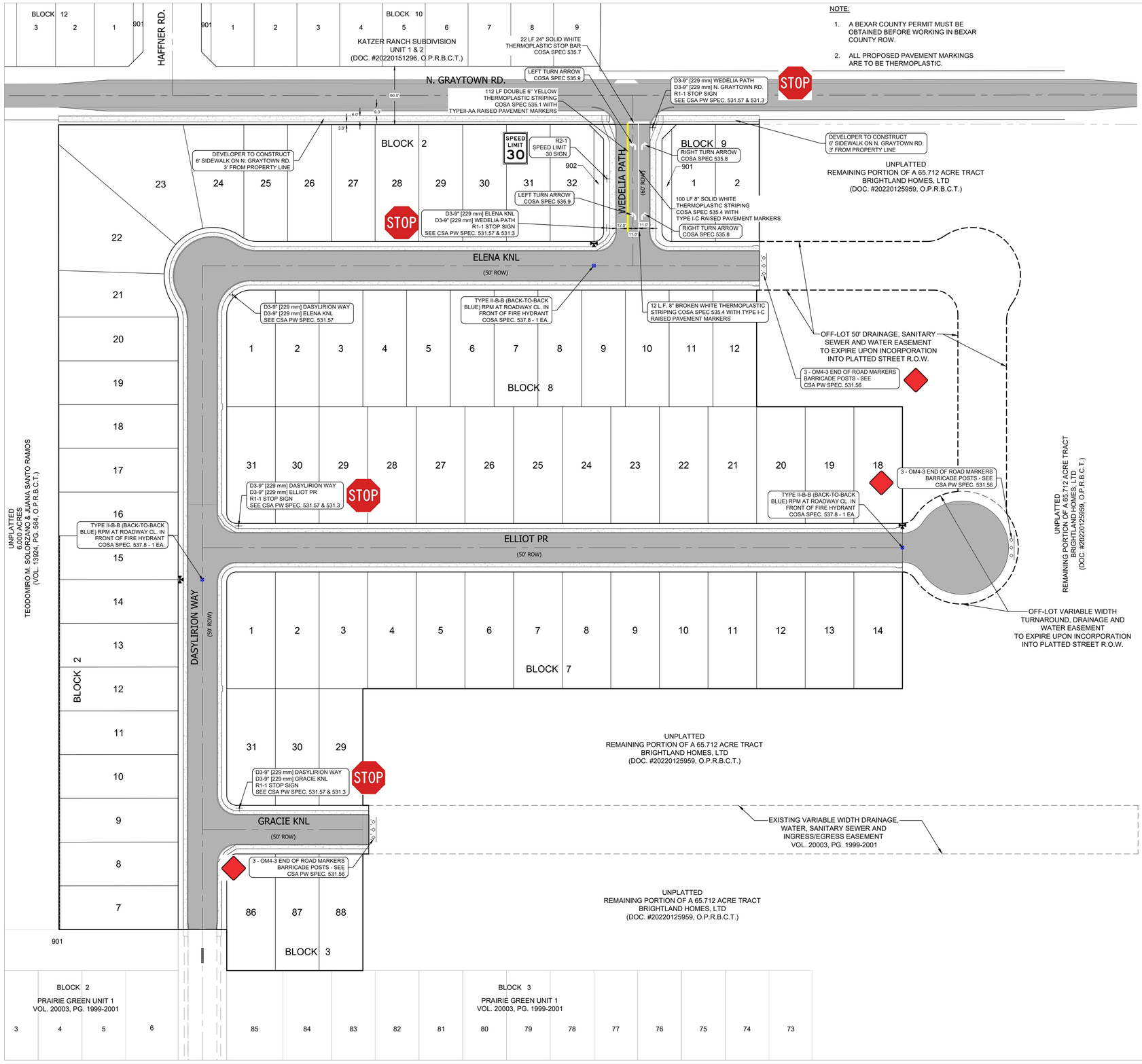
DESIGNED BY:
DRAFTED BY:
CHECKED BY:

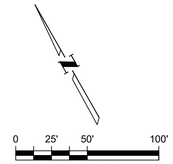
SHEET
C5.0

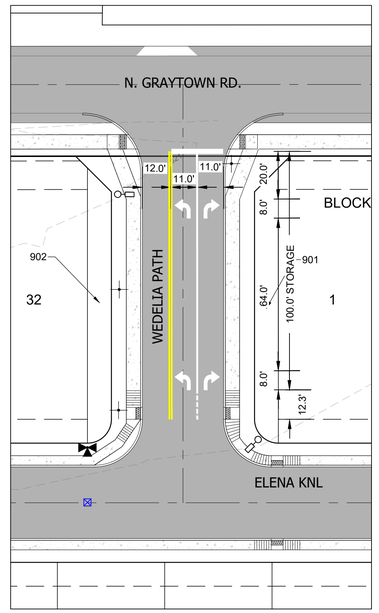
Date: Sep 12, 2024, 2:54pm User ID: LJ Ramirez
File: G:_Projects\246 - Graytown - 65 Acres (First American)\246.2 - Prairie Green - UNIT 2\CAD\Sheets\C5.0 STREET COVER.dwg

NOTE:

1. A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW.
2. ALL PROPOSED PAVEMENT MARKINGS ARE TO BE THERMOPLASTIC.







WEDELIA PATH
LANE AND STRIPING DIMENSION DETAIL
1" = 30'

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3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

TRAFFIC PLAN

REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C5.1

Date: Sep 13, 2024, 2:54pm User ID: LJ Barrones
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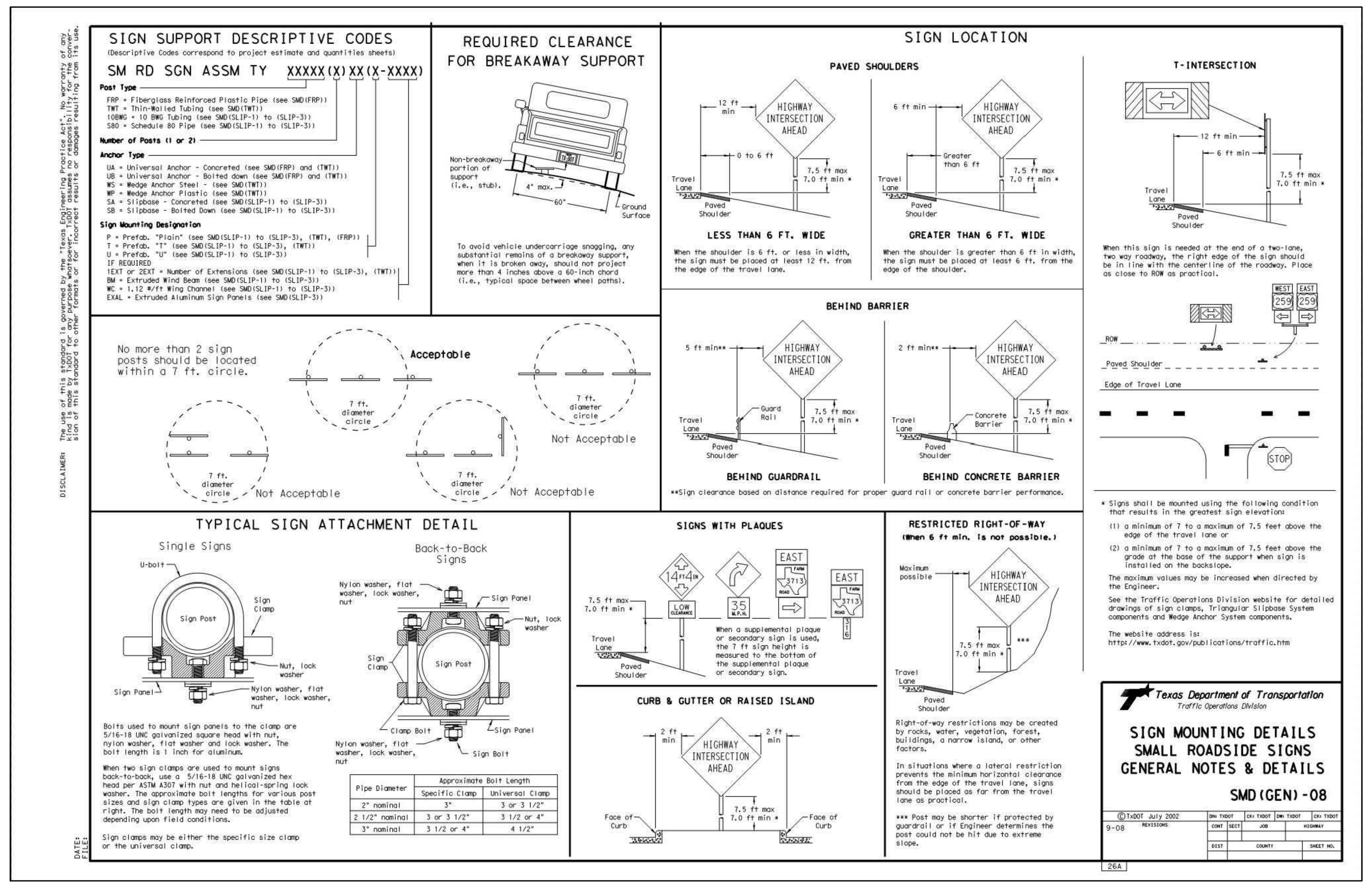
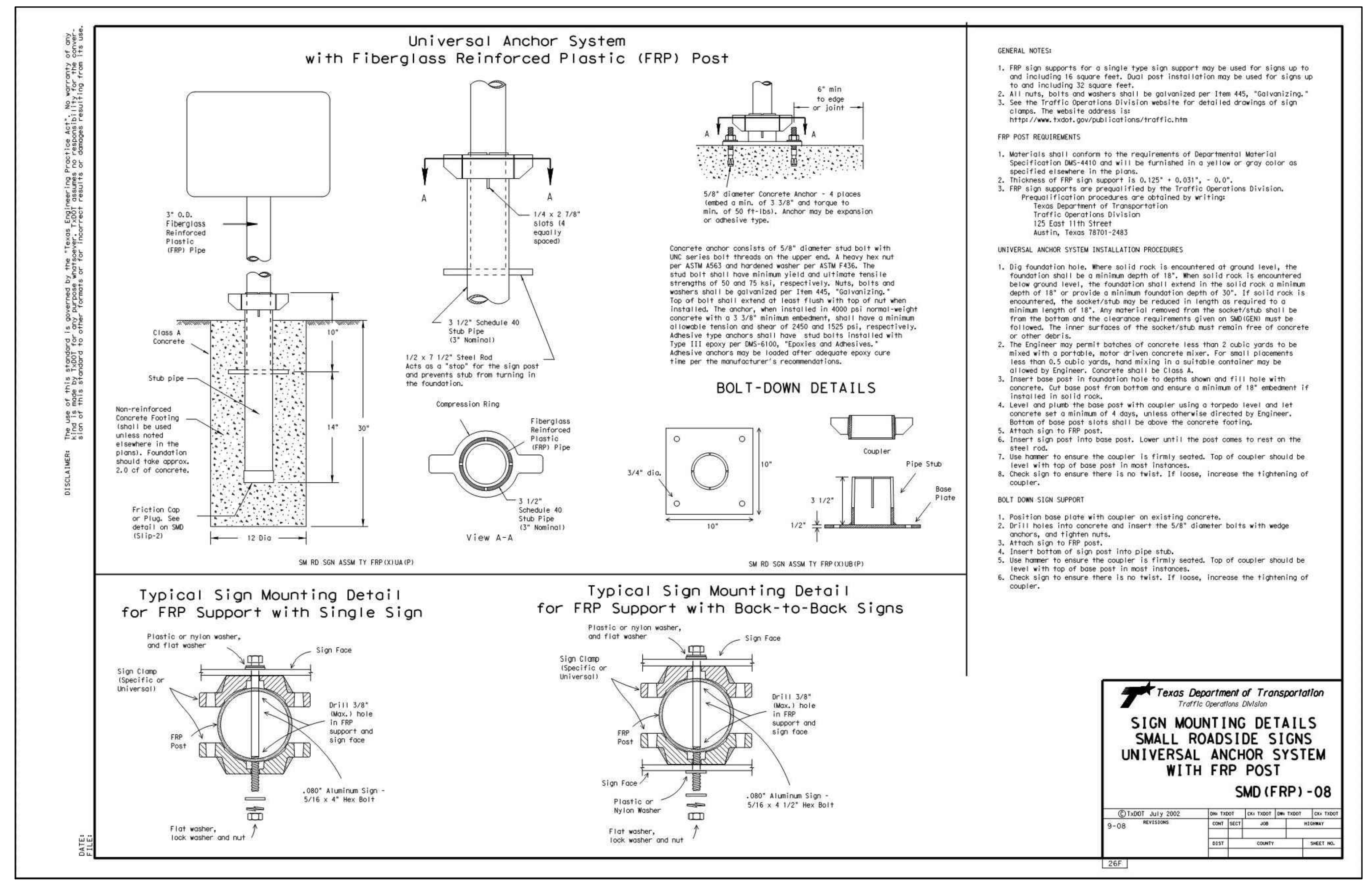
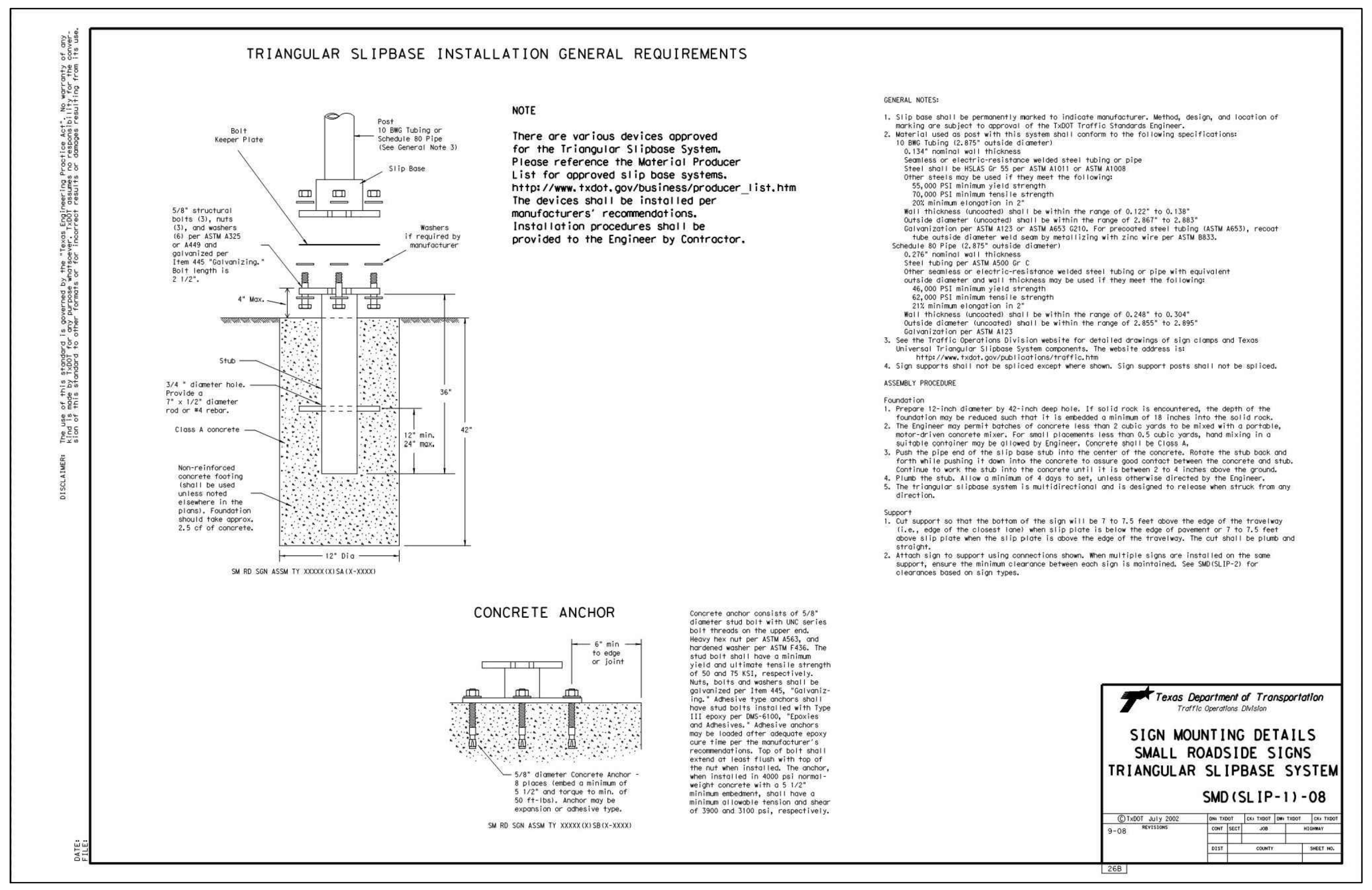
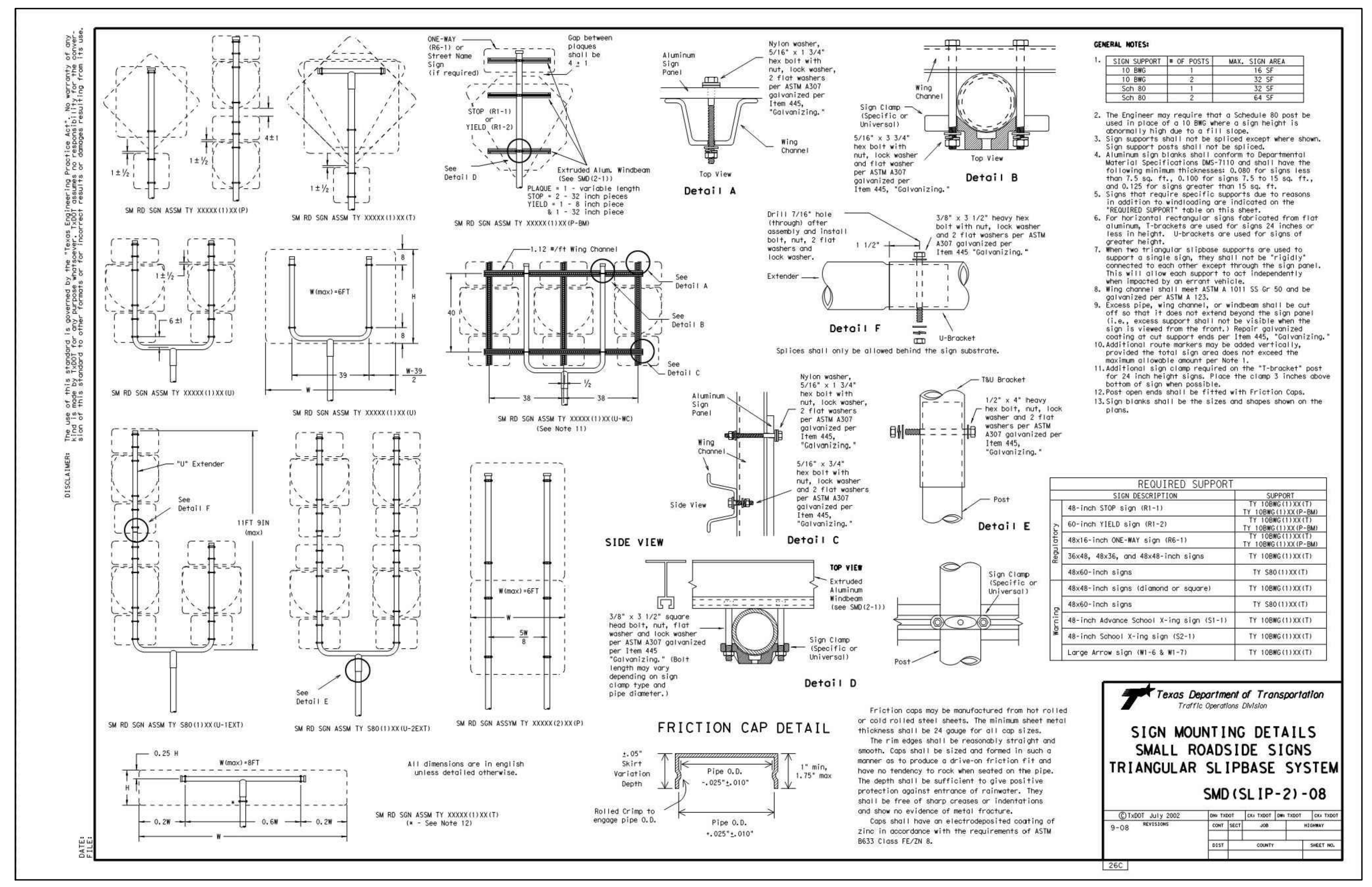
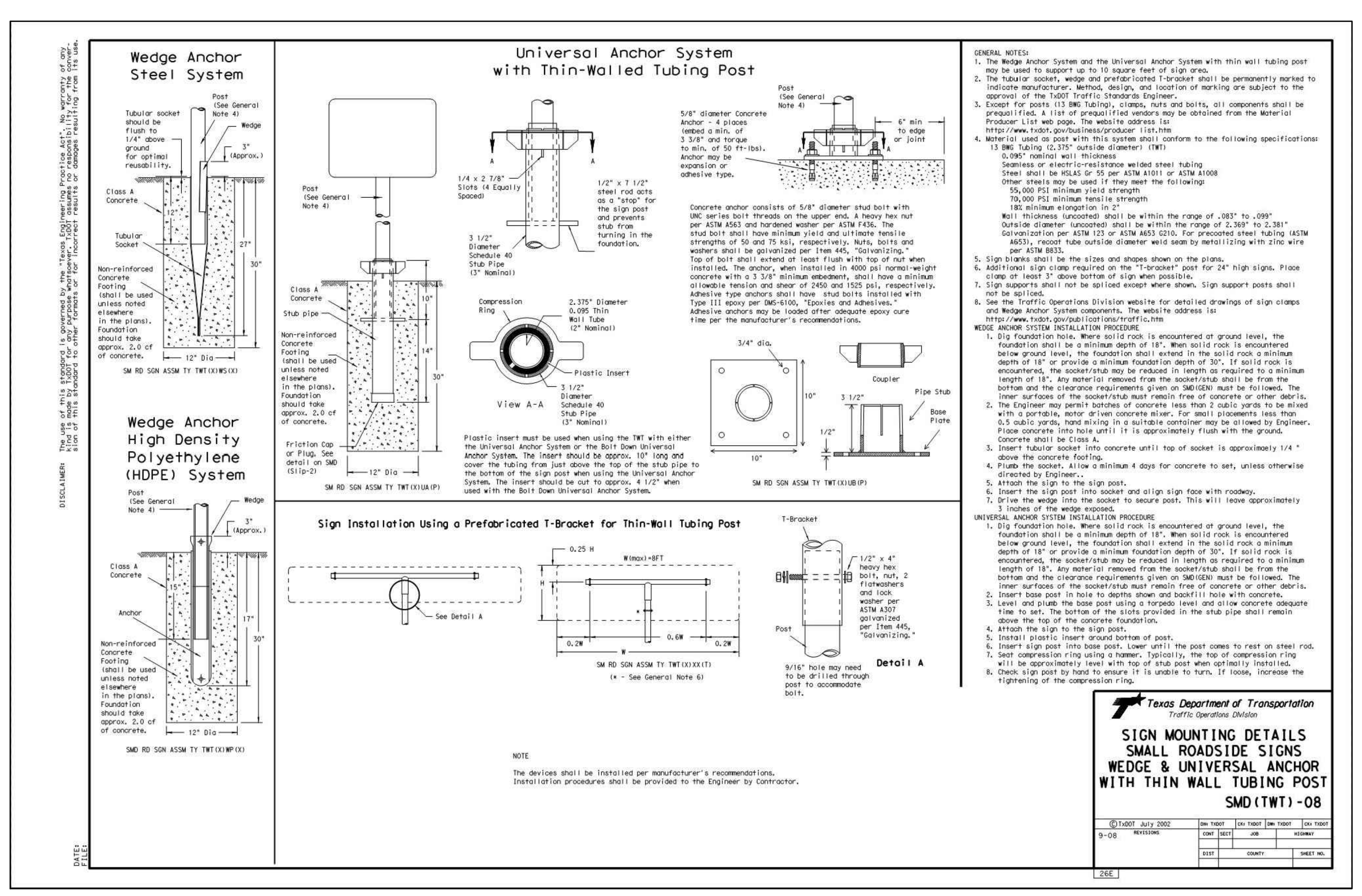
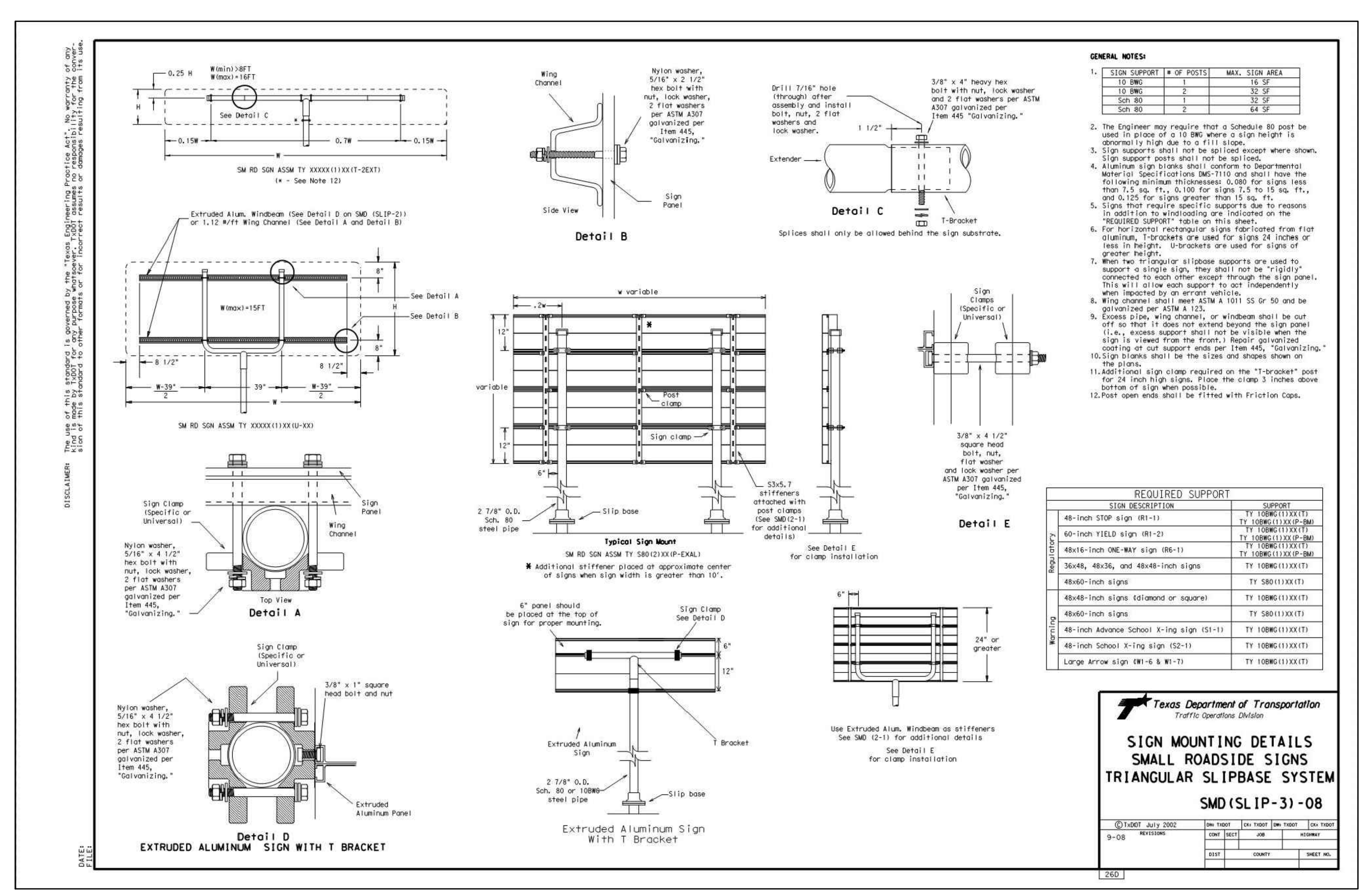












INFRASTRUCTURE SERVICES DEPARTMENT
233 North Pecos La Trinidad, Suite 420
San Antonio, Texas 78207

(210) 335-6700 Office
(210) 335-6713 Fax

COUNTY STANDARDS
Traffic Control Devices (TCD)
REQUIREMENTS FOR SUBDIVISIONS

EFFECTIVE 9-7-10

GROUND SIGN MOUNTING

TxDOT Wedge Anchor Steel System with Thin Wall Tubing
TxDOT SMD (TWT)-08 for signs under 15 SQ FT &
SMD(SLIP-2) -08 for signs that meet area criteria and required supports.

SIGN INSTALLATION, SIZE, LOCATION

Compliant with FHWA MUTCD 2009 or TMUTCD 2006 rev which ever is more restrictive.

REGULATORY SIGN RETROREFLECTIVE SHEETING

TxDOT Type C-ASTM D4956-09$^{\varepsilon 1}$ IV—High Intensity Prismatic

WARNING SIGN RETROREFLECTIVE SHEETING

TxDOT Type E-ASTM D 4956-09$^{\varepsilon 1}$ XI—Diamond Grade-Fluorescent

STREET NAME SIGNS

Lettering will be composed of combination of lower-case with initial upper case letters.

Post Mounted – TxDOT Type C-ASTM D4956-09$^{\varepsilon 1}$ IV—High Intensity Prismatic

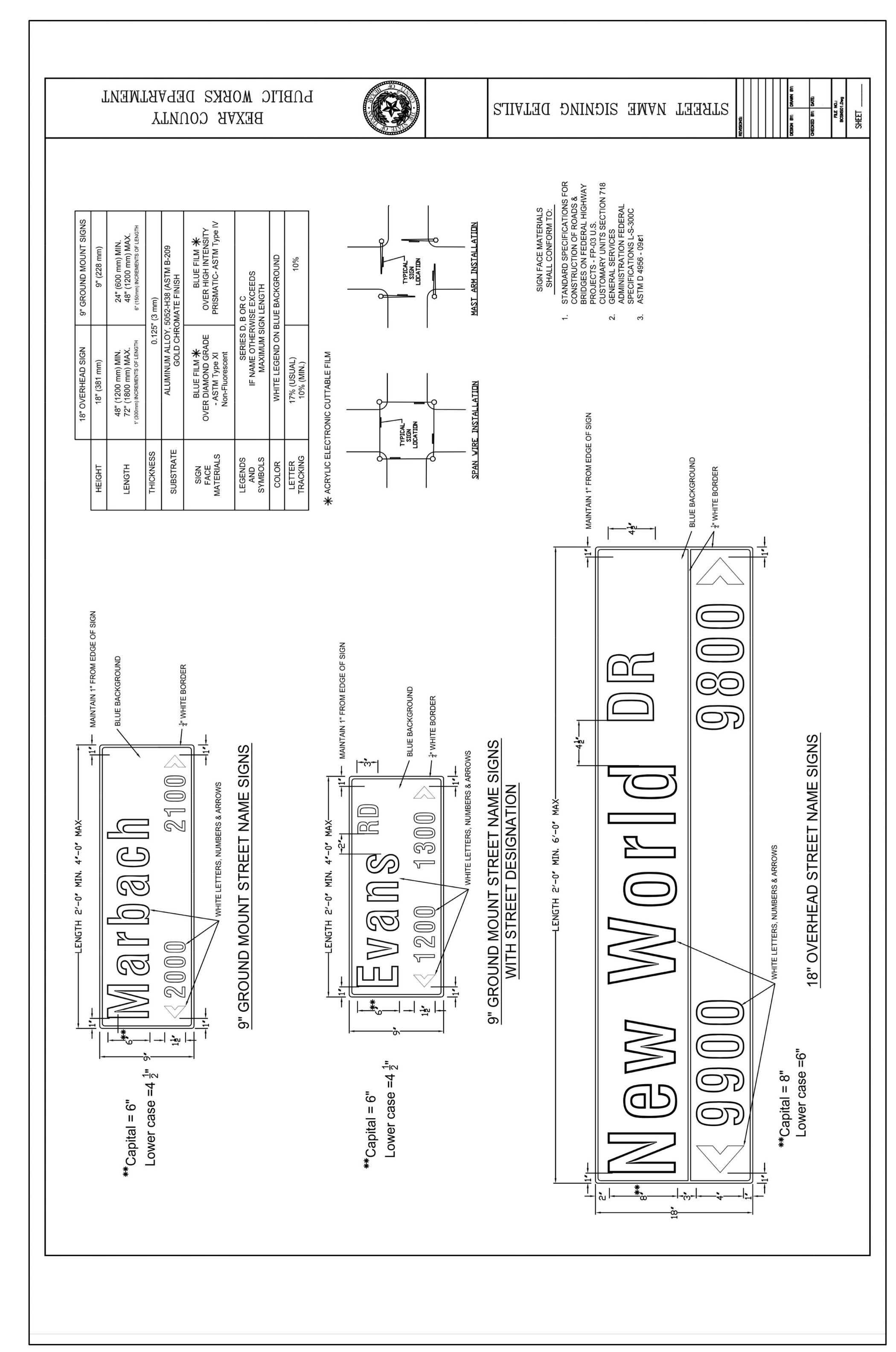
Overhead – TxDOT Type D-ASTM D4956-09$^{\varepsilon 1}$ XI—Diamond Grade–NonF

County Standard Detail is under revision.

INSTALLATION

Developer's Engineer meets specifications and requirements & submits TCD. as part of construction plans for review and approval.
Developer's contractor <u>no longer pays</u> County to furnish and install signs.
Developer's contractor furnishes and installs signs.
County inspects at final.

Henceforth if contractor has paid for signs, County will furnish those signs but will not install after 9-7-10.



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STATE OF TEXAS — RYAN R. PLAGENS — 111640 — LICENSED PROFESSIONAL ENGINEER — 9/12/24

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STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

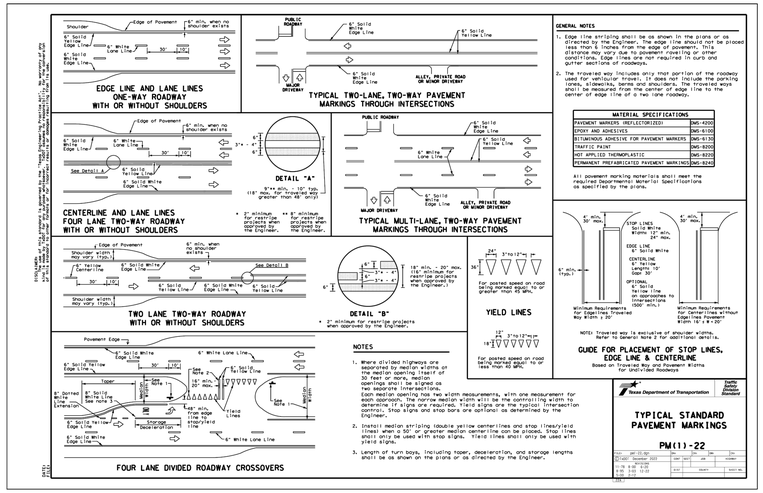
TRAFFIC DETAILS

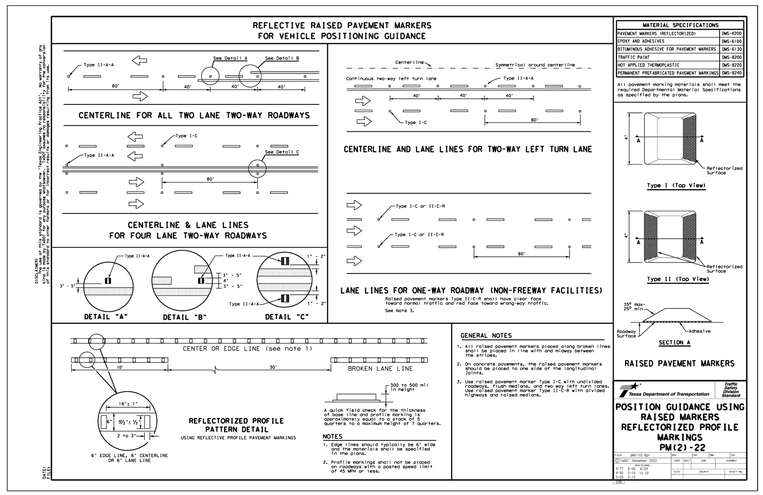
REV	DATE	DESCRIPTION	BY

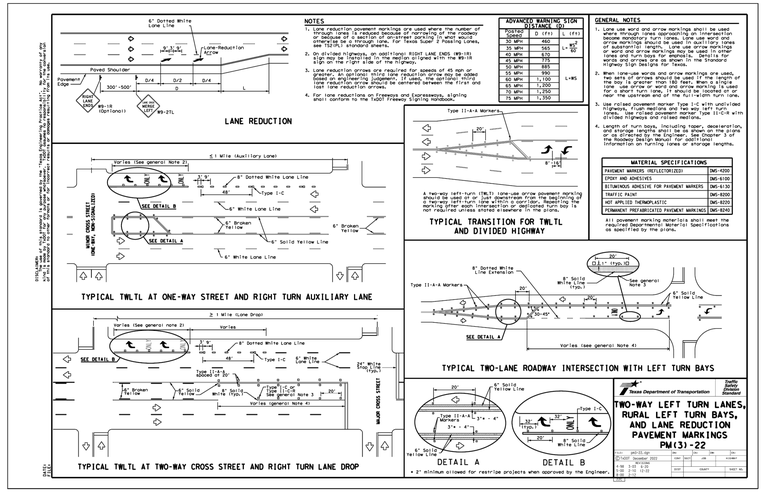
DESIGNED BY:
DRAFTED BY:
CHECKED BY:

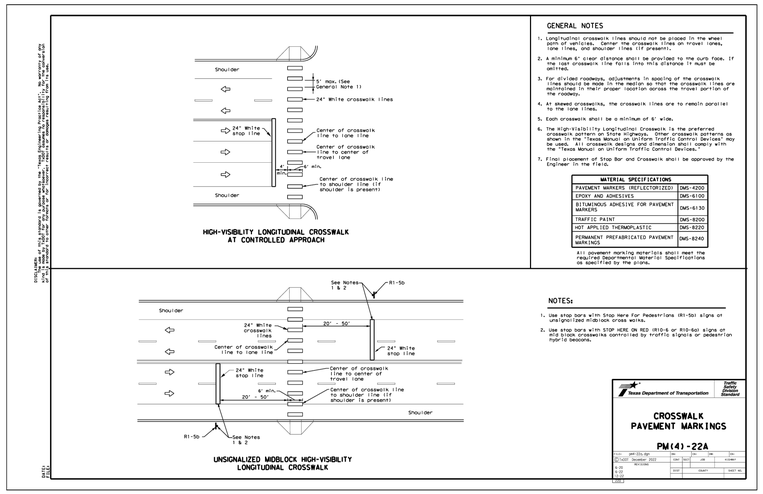
SHEET
C5.2

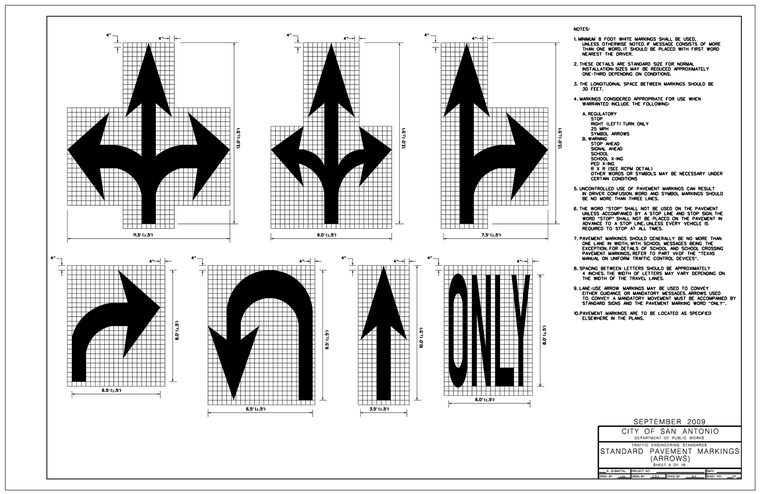
Date: Sep 12, 2024, 2:54pm User ID: LJ Ramones
File: U:_Projects\246 – Graytown – 60 Acres (First American)\246.2 – Prairie Green – UNIT 2\ACAD\Sheets\C5.2 TRAFFIC DETAILS.dwg











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9/12/24

STATE OF TEXAS
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111640
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AUSTIN, TX 78704

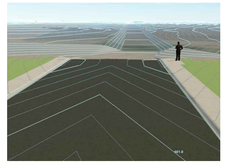
PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

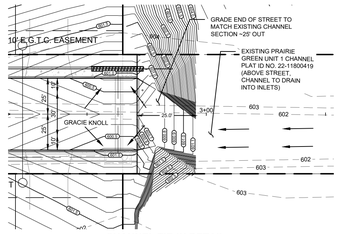
TRAFFIC DETAILS

REV	DATE	DESCRIPTION	BY

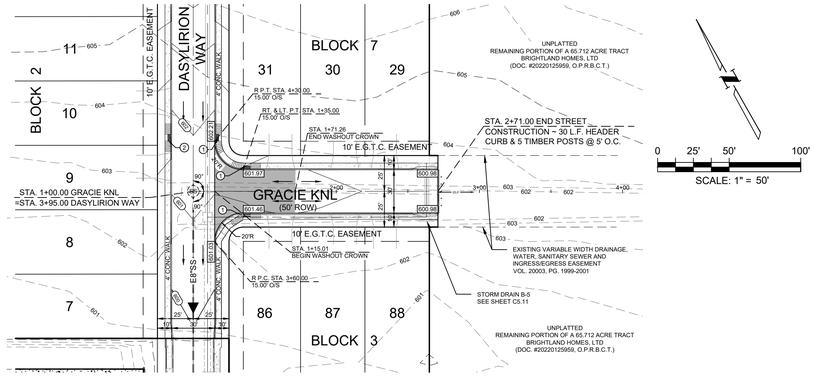
DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C5.2A





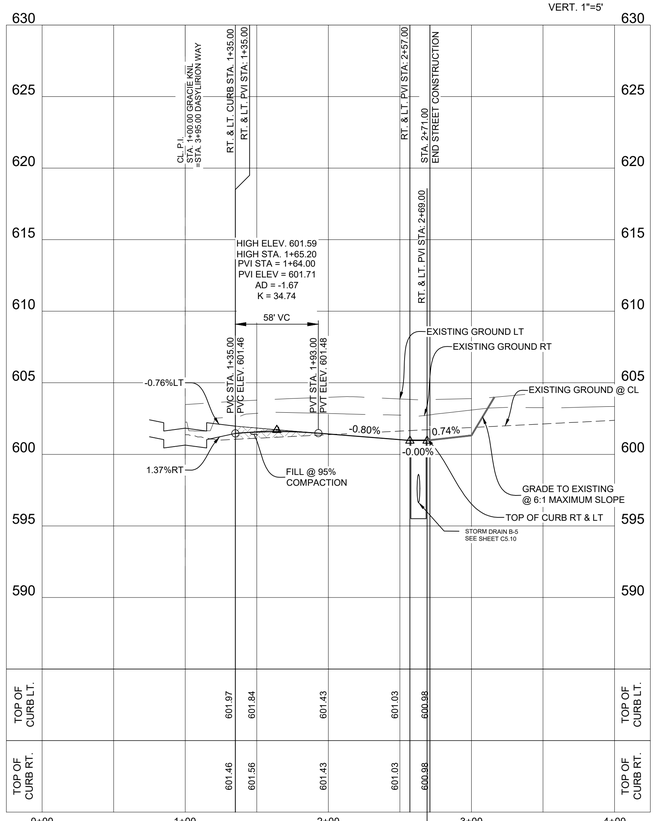
CHANNEL TIE-IN DETAIL
0.10' PROPOSED CONTOUR INTERVALS SHOWN TIES INTO EXISTING CONTOURS AT 1' INTERVALS
1" = 30'



GRACIE KNL

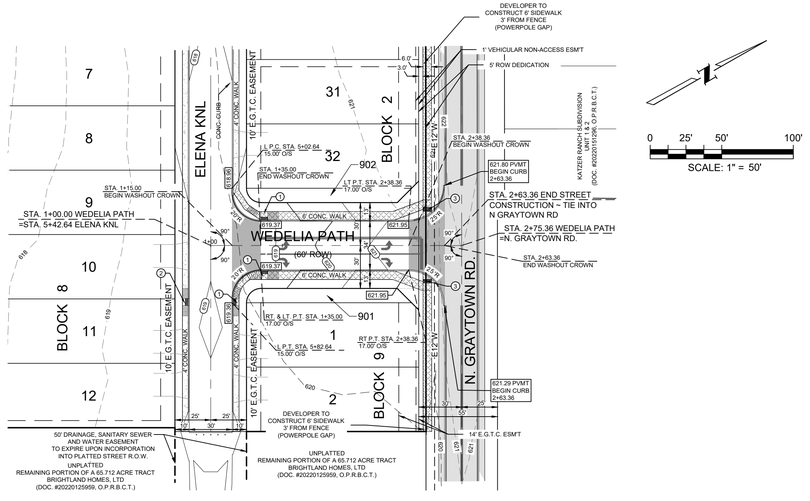
STA. 1+00.00 TO STA. 2+71.00

SCALE:
HORIZ.1"=50'
VERT. 1"=5'



NOTE:

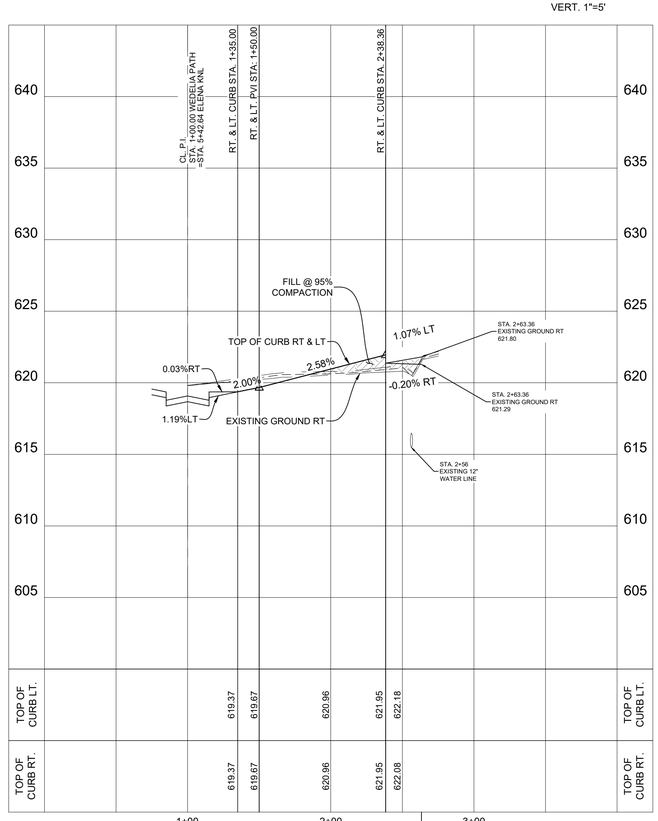
1. A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW.



WEDELIA PATH

STA. 1+00.00 TO STA. 2+63.36

SCALE:
HORIZ.1"=50'
VERT. 1"=5'



LEGEND

- BOUNDARY / RIGHT OF WAY
- EASEMENT / SETBACK
- CURB / EDGE OF PAVEMENT
- 102 EXIST. GRADE ELEVATIONS
- (102) PROP. GRADE ELEVATIONS
- DIRECTION OF FLOW
- TC TOP OF CURB ELEVATION
- G GUTTER ELEVATION
- FL FLOW LINE ELEVATION
- HP HIGH POINT ELEVATION
- LP LOW POINT ELEVATION
- ME MATCH EXISTING ELEVATION
- ROW RIGHT OF WAY
- BSL BUILDING SETBACK LINE
- FC FACE OF CURB
- LT LEFT
- RT RIGHT
- WASHOUT CROWN
- HANDICAP RAMP
- CROSSWALK STRIPING
- SIDEWALK (HOME BUILDER'S RESPONSIBILITY)
- SIDEWALK (DEVELOPER'S RESPONSIBILITY)
- (1) COSA TYPE I SIDEWALK RAMP
- (2) COSA TYPE II SIDEWALK RAMP
- (3) DIRECTIONAL SIDEWALK RAMP
- (4) SIDEWALK PASSING SPACE

!! CAUTION !!

CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AVOIDING ALL EXISTING UTILITIES BY CALLING DIGTESS @ 1-800-DIG-TESS FOR LOCATION OF ALL UTILITIES, AT LEAST 2 WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION.

UP ENGINEERING + SURVEYING
1111 TOWER DR. SUITE 325
SAN ANTONIO, TX 78232 TEL. 210-774-5504
WWW.UPENGINEERING.COM TBPE F-17992

9/12/24

STATE OF TEXAS — LICENSED PROFESSIONAL ENGINEER — RYAN R. PLAGENS — 117640 — 09-12-24

BRIGHTLAND HOMES, LTD. A
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3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

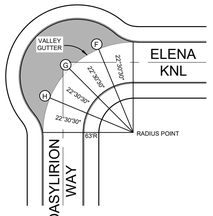
GRACIE KNL & WEDELIA PATH PLAN & PROFILE

REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C5.3

Date: Sep 12, 2024, 2:55pm User ID: J.Simmons
File: U:_Projects\246 - Grayfern - 60 Acres (First American)\246.2 - Prairie Green - UNIT 2\CAD\Sheets\C5.3 GRACIE KNL & WEDELIA PATH.dwg



VALLEY GUTTER DETAIL

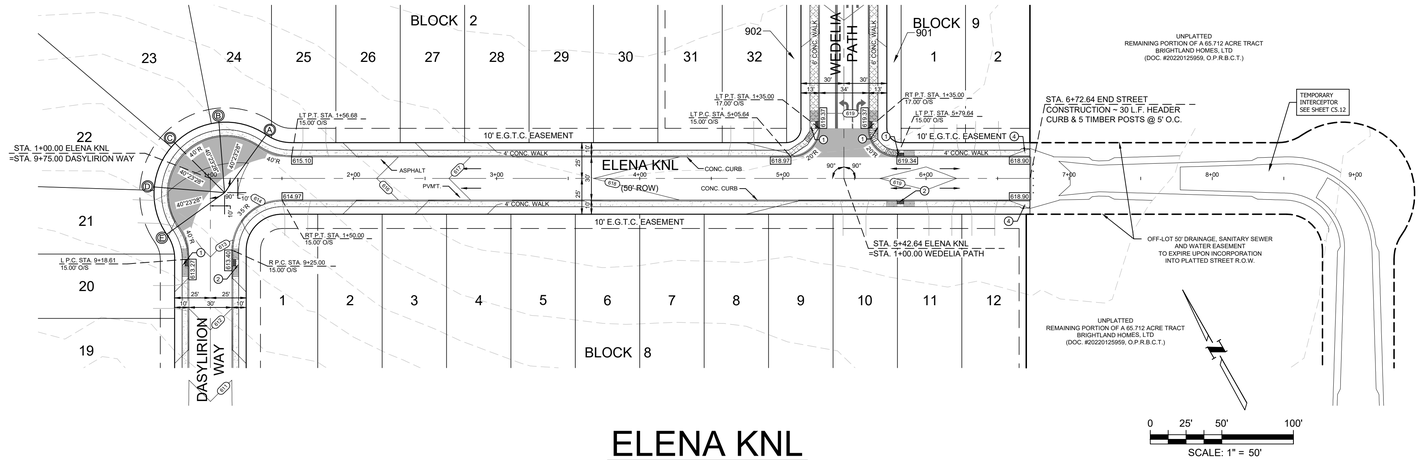
VALLEY GUTTER TABLE		
POINT	TOP OF CURB	GUTTER
LT P.T. STA. 1+56.68	615.10	614.52
A	614.42	613.84
B	614.65	614.07
C	614.50	613.92
D	614.06	613.48
E	613.32	612.74
F	--	614.57
G	--	614.19
H	--	613.80
LT P.C. STA. 9+18.61	613.27	612.69

NOTE:

1. A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW.

LEGEND

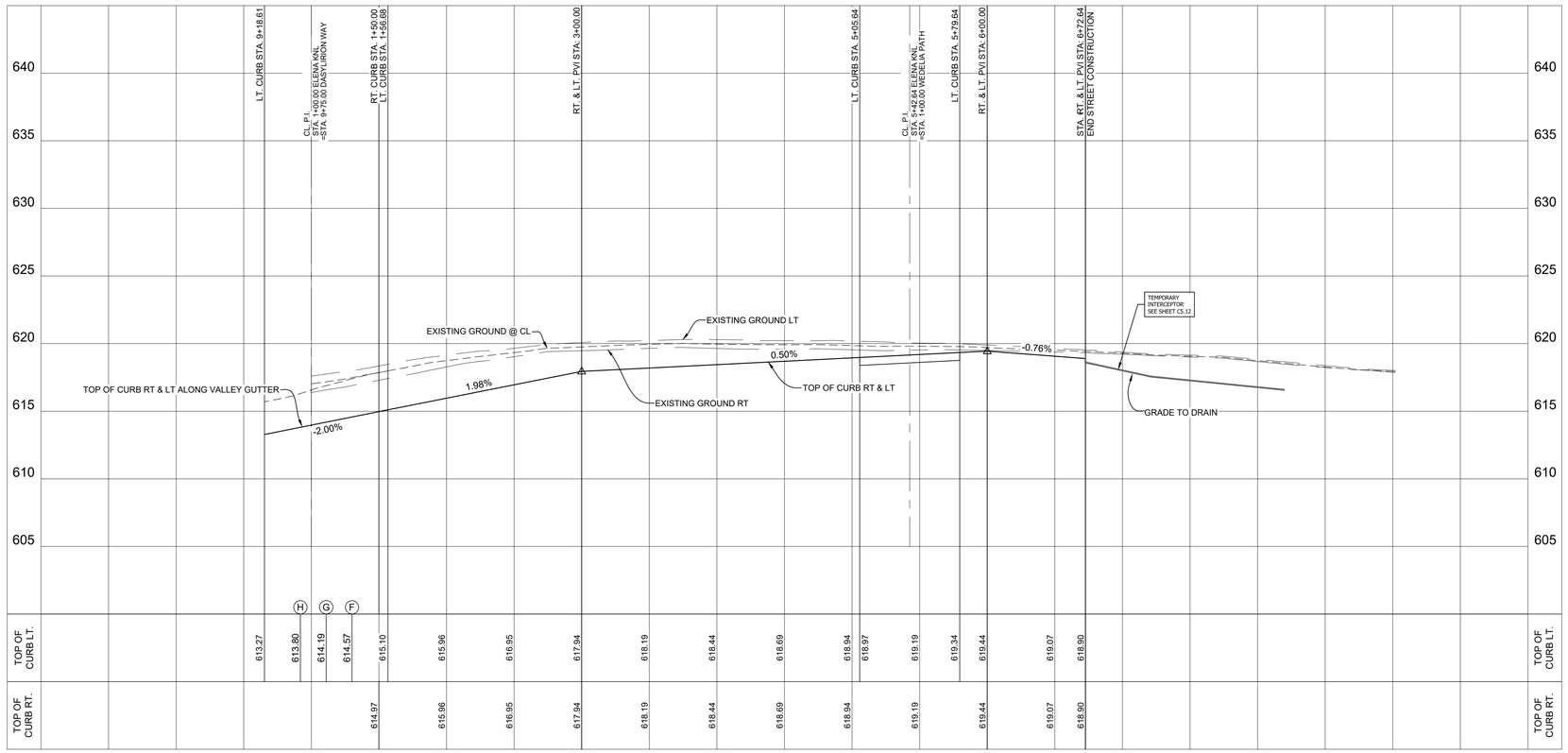
- BOUNDARY / RIGHT OF WAY
- EASEMENT / SETBACK
- CURB / EDGE OF PAVEMENT
- 102 EXIST. GRADE ELEVATIONS
- (102) PROP. GRADE ELEVATIONS
- DIRECTION OF FLOW
- TC TOP OF CURB ELEVATION
- G GUTTER ELEVATION
- FL FLOW LINE ELEVATION
- HP HIGH POINT ELEVATION
- LP LOW POINT ELEVATION
- ME MATCH EXISTING ELEVATION
- ROW RIGHT OF WAY
- BSL BUILDING SETBACK LINE
- FC FACE OF CURB
- LT LEFT
- RT RIGHT
- WASHOUT CROWN
- HANDICAP RAMP
- CROSSWALK STRIPING
- SIDEWALK (HOME BUILDER'S RESPONSIBILITY)
- SIDEWALK (DEVELOPER'S RESPONSIBILITY)
- (1) COSA TYPE I SIDEWALK RAMP
- (2) COSA TYPE II SIDEWALK RAMP
- (3) DIRECTIONAL SIDEWALK RAMP
- (4) SIDEWALK PASSING SPACE



ELENA KNL

STA. 1+00.00 TO STA. 6+72.64

SCALE:
HORIZ.1"=50'
VERT. 1"=5'



UP ENGINEERING + SURVEYING
111 TOWER DR. SUITE 325
SAN ANTONIO, TX 78232 TEL 210-774-5504
WWW.UPENGINEERING.COM TBPE F-17992
TBPELS F-10194608

9/12/24

STATE OF TEXAS · LICENSED PROFESSIONAL ENGINEER · RYAN R. PLAGENS · 117640 · 9-12-24

BRIGHTLAND HOMES, LTD. A
TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

ELENA KNL PLAN & PROFILE

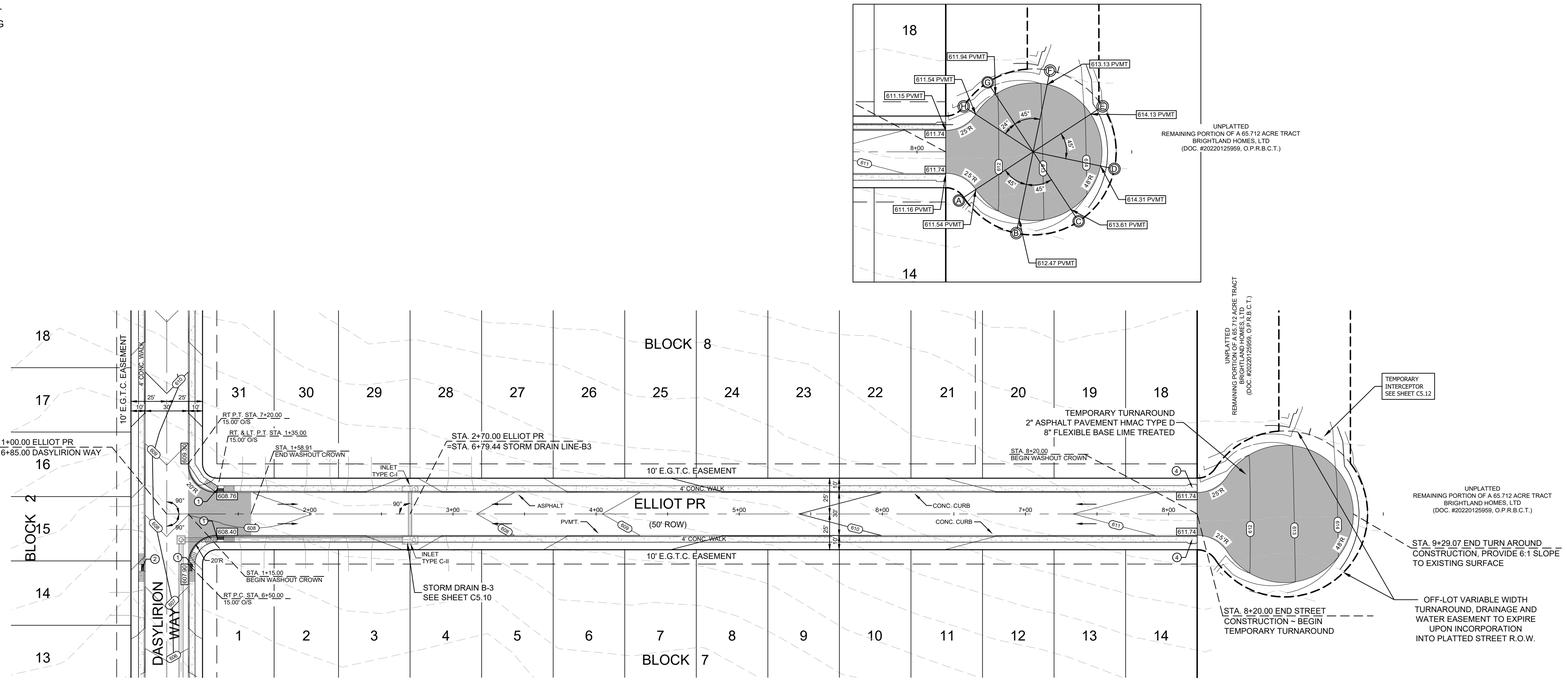
REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C5.4

NOTE:

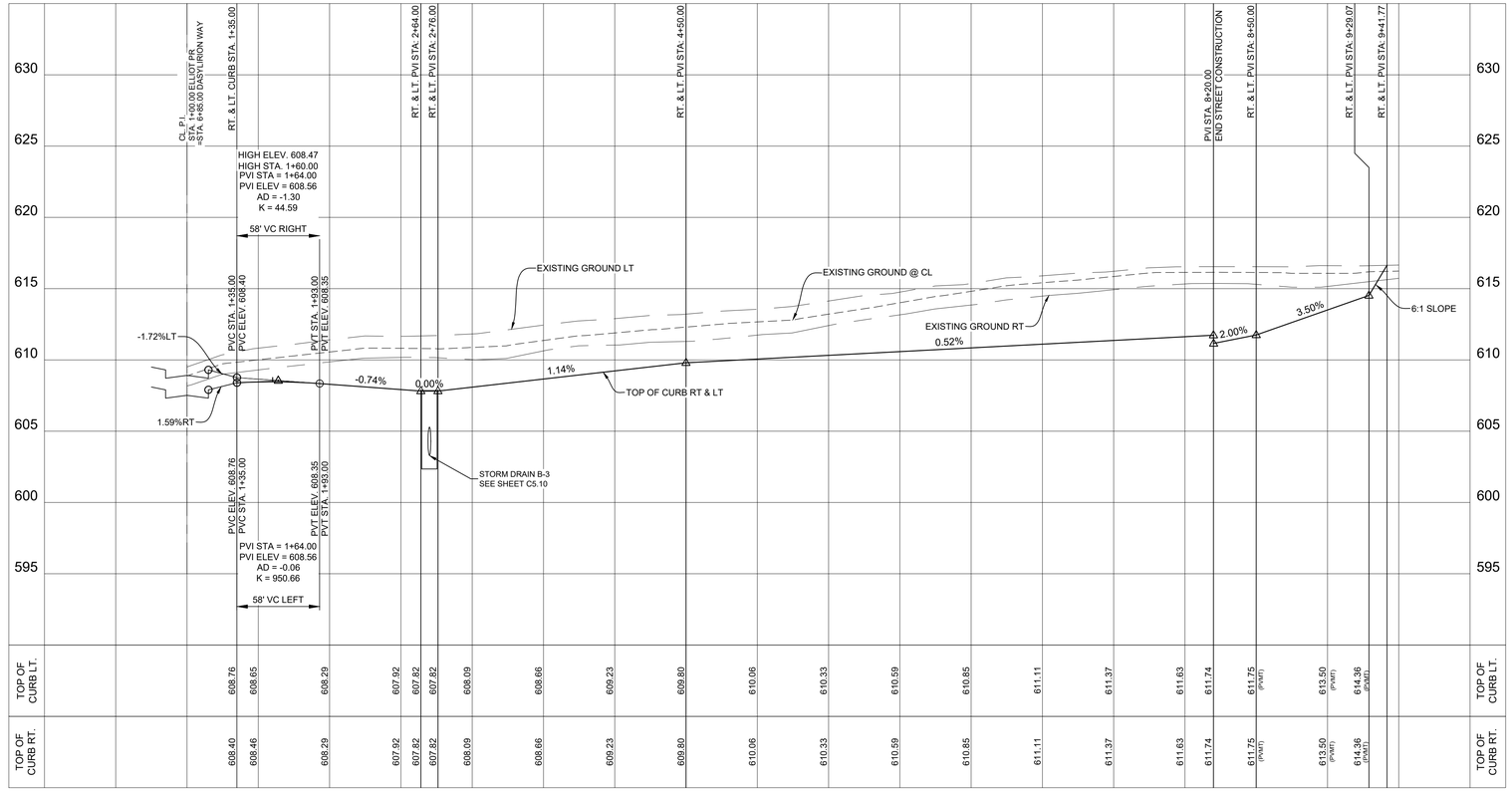
1. A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW.



ELLIOT PR

STA. 1+00.00 TO STA. 8+20.00

SCALE:
HORIZ. 1"=50'
VERT. 1"=5'



LEGEND

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- SIDEWALK (DEVELOPER'S RESPONSIBILITY)
- 1 COSA TYPE I SIDEWALK RAMP
- 2 COSA TYPE II SIDEWALK RAMP
- 3 DIRECTIONAL SIDEWALK RAMP
- 4 SIDEWALK PASSING SPACE

0 25' 50' 100'
SCALE: 1" = 50'

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9/12/24

STATE OF TEXAS · LICENSED · PROFESSIONAL ENGINEER · RYAN R. PLAGENS · 116940 · 9/12/2024

BRIGHTLAND HOMES, LTD. A
TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

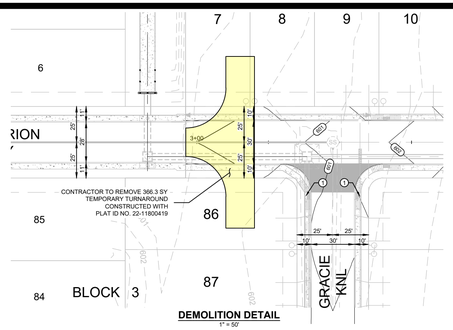
PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

ELLIOT PR PLAN & PROFILE

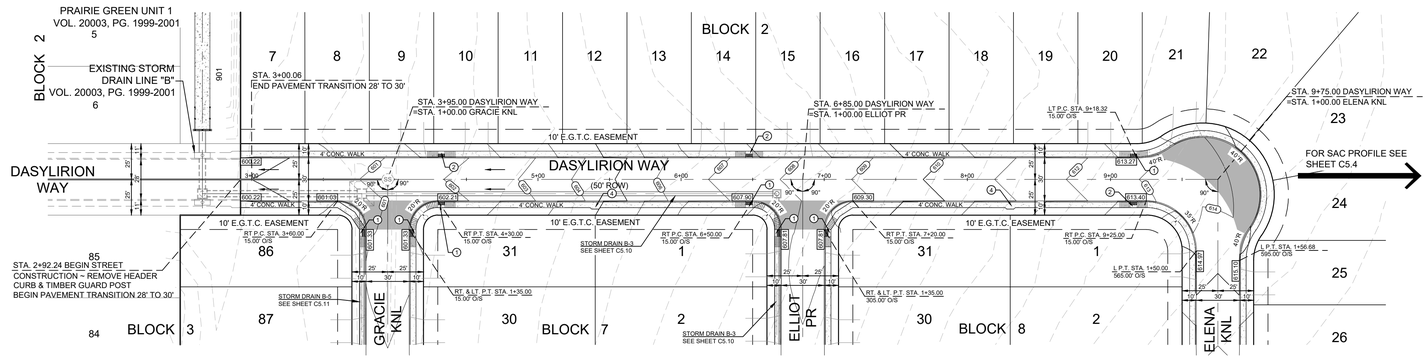
REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C5.5



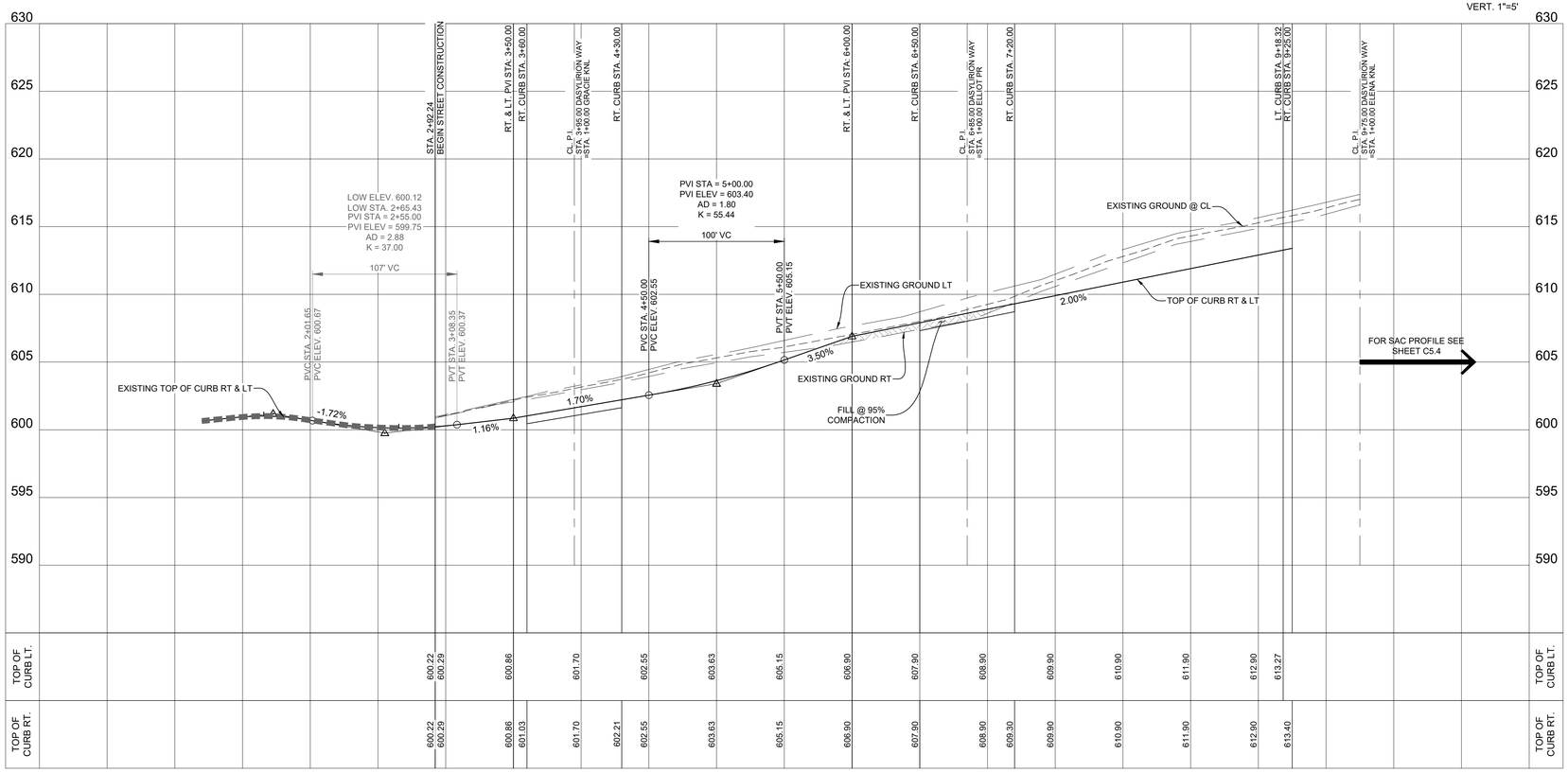
DEMOLITION DETAIL
1" = 50'



DASYLIRION WAY

STA. 2+92.24 TO STA. 9+75.00

SCALE:
HORIZ. 1"=50'
VERT. 1"=5'



LEGEND

- BOUNDARY / RIGHT OF WAY
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- CURB / EDGE OF PAVEMENT
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- (2) COSA TYPE II SIDEWALK RAMP
- (3) DIRECTIONAL SIDEWALK RAMP
- (4) SIDEWALK PASSING SPACE

0 25' 50' 100'
SCALE: 1" = 50'

NOTE:

1. A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW.

UP ENGINEERING + SURVEYING
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TBPELS F-10194605

9/12/24

STATE OF TEXAS · LICENSED PROFESSIONAL ENGINEER · RYAN R. PLAGENS · 116440 · PROFESSIONAL ENGINEER

BRIGHTLAND HOMES, LTD. A TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

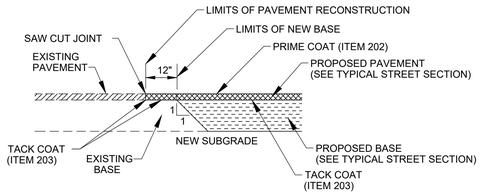
DASYLIRION WAY PLAN & PROFILE

REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

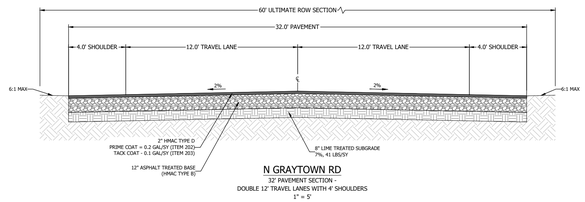
SHEET
C5.6

Date: Sep 12, 2024, 2:53pm User ID: LJ Ramirez
File: U:_Projects\246 - Graytown - 60 Acres (First American)\246.2 - Prairie Green - UNIT 2\ACAD\Sheets\C5.6 DASYLIRION WAY.dwg



PAVEMENT JUNCTION DETAIL

NTS



N GRAYTOWN RD

- 32' PAVEMENT SECTION -
DOUBLE 12' TRAVEL LANES WITH 4' SHOULDERS

1" = 5'

LEGEND

	BOUNDARY / RIGHT OF WAY
	EASEMENT / SETBACK
	CURB / EDGE OF PAVEMENT
102	EXIST. GRADE ELEVATIONS
(102)	PROP. GRADE ELEVATIONS
	DIRECTION OF FLOW
TC	TOP OF CURB ELEVATION
G	GUTTER ELEVATION
FL	FLOW LINE ELEVATION
HP	HIGH POINT ELEVATION
LP	LOW POINT ELEVATION
ME	MATCH EXISTING ELEVATION
ROW	RIGHT OF WAY
BSL	BUILDING SETBACK LINE
FC	FACE OF CURB
LT	LEFT
RT	RIGHT
	WASHOUT CROWN
	HANDICAP RAMP
	CROSSWALK STRIPING
	SIDEWALK (HOME BUILDER'S RESPONSIBILITY)
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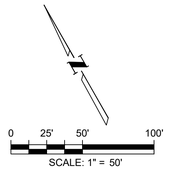
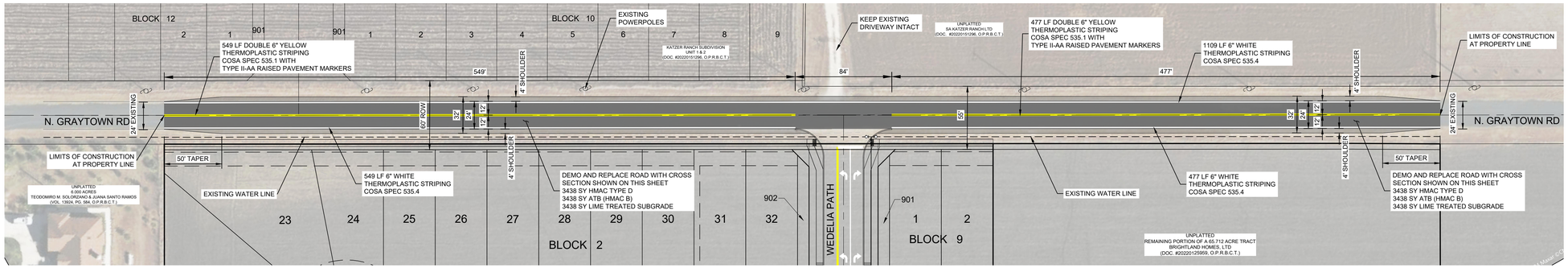


SCALE: 1" = 50'



N. GRAYTOWN RD REHABILITATION

(REMOVE AND REPLACE EXISTING ROAD SECTION
WITH CROSS SECTION SHOWN ON THIS SHEET
MATCH ROAD TO EXISTING GRADE AT CENTERLINE)

NOTE:

1. A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE WITH BEXAR COUNTY INSPECTOR DURING CONSTRUCTION.
2. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL FOR WIDENING OF N. GRAYTOWN RD.

UP ENGINEERING + SURVEYING
1111 TOWER DR. SUITE 325
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9/12/24

STATE OF TEXAS · RYAN R. PLAGENS · 116440 · LICENSED PROFESSIONAL ENGINEER

BRIGHTLAND HOMES, LTD. A
TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

NORTH GRAYTOWN RD
FOR BEXAR COUNTY R.O.W PERMIT ONLY

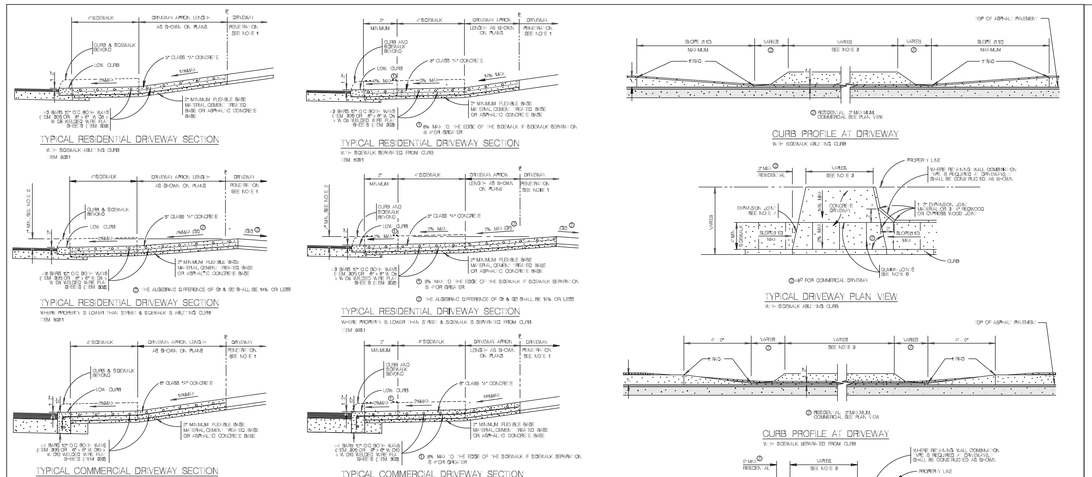
REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET

C5.7

Date: Sep 12, 2024, 2:55pm User ID: Li Romones
File: c:\...Projects\146 - Grayton~ 60 Acres (First American)\146.2 - Prairie Green ~ UNIT 2\ACAD\Sheets\C5.7 N.Grayton RD.dwg



CONCRETE DRIVEWAY NOTES

1 DRIVEWAY PENETRATION REFERS TO A PORTION OF THE DRIVEWAY THAT MAY BE NECESSARY TO REDUCE RUNOFF WITHIN PRIVATE PROPERTY TO COMPLY WITH A MAXIMUM DRIVEWAY SLOPE. THIS PORTION SHALL BE INCLUDED FOR UNDER THE FOLLOWING ITEMS (AS MAY APPLY):
A) CONCRETE DRIVEWAY PAD FOR UNDER ITEM NO 9081 OR 9082.
B) ASPHALT OR CONCRETE DRIVEWAY PAD UNDER ITEM NO 9081 AND SHALL INCLUDE A MINIMUM OF 6" ASPHALT, 1" OF 6" OF FLEXIBLE BASE
C) SMALL DRIVEWAY PAD FOR UNDER ITEM NO 9081 AND SHALL INCLUDE A MINIMUM OF 6" OF FLEXIBLE BASE

2 A MINIMUM HEIGHT WILL NOT NECESSARILY OCCUR AT THE PROPERTY LINE. IT MAY OCCUR WITHIN THE RIGHT OF WAY OR WITHIN THE DRIVEWAY PENETRATION ON PRIVATE PROPERTY.

3 THE PROPOSED DRIVEWAY SHOULD MEET THE DESIGN INTENT AT THE PROPERTY LINE BUT UNLESS AUTHORIZED BY THE CITY TRAFFIC ENGINEER, THE WIDTH SHALL BE WITHIN THE FOLLOWING VALUES:

USE	MINIMUM	MAXIMUM
RESIDENTIAL	10'	25'
COMMERCIAL (OUT SVC)	10'	30'
COMMERCIAL (NO SVC)	20'	30'

4 FOR LOCAL TYPE "A" STREETS, SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 8' FROM THE BACK OF CURB.

5 FOR OTHER THAN LOCAL TYPE "A" STREETS, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND SEPARATED A MINIMUM OF 8' FROM THE BACK OF CURB OR AS PER CITY, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF WHICH LOCATED AT THE BACK OF CURB.

6 EXPANSION JOINTS PARALLEL TO THE CURB SHALL BE PLACED WHERE THE SIDEWALK MEETS THE DRIVEWAY EXPANSION JOINTS PERPENDICULAR TO THE CURB AND WITH THE BOUNDARIES OF THE PARALLEL EXPANSION JOINTS SHALL BE PLACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK.

7 A MINIMUM OF TWO MOLDED AND SMOOTH BOWEL BARS 8" IN DIAMETER AND 18" IN LENGTH SHALL BE PLACED AT EACH EXPANSION JOINT.

8 SIDEWALK RAMP LEGS AND SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 2.00% (1:50) MAXIMUM SLOPE WHERE SIDEWALKS CROSS DRIVEWAYS. SIDEWALK GRADES SLOPE SHALL NOT EXCEED 2%

9 SIDEWALK RAMP SURFACE SHALL BE BRUSH- FINISHED

NOTE
1 CODE OF REINFORCEMENT TO BE INCLUDED IN UNIT CODE OF ITEM 301.1
2 CONCRETE RETAINING WALL DOMINATION TYPE SHALL BE USED FOR DRIVEWAYS.

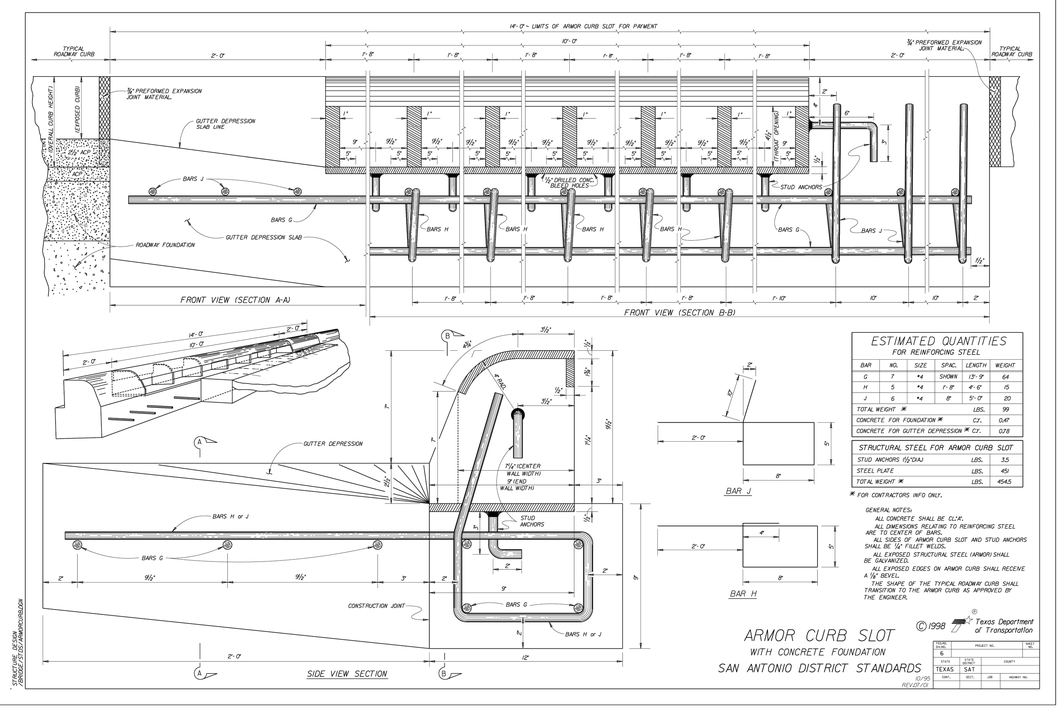
DRIVEWAY - CONCRETE RETAINING WALL
ON COMPACTED SUBGRADE
ITEM 301.1

MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

CONCRETE DRIVEWAY STANDARDS

N. SUBMIT TO:	PROJECT NO:	DATE:
DRAN. BY: L. VASQUEZ	DESN. BY:	CHECKED BY: S. HOSSEIN, P.E.
SHEET NO.	OF	



ESTIMATED QUANTITIES
FOR REINFORCING STEEL

BAR	NO.	SIZE	SPAC.	LENGTH	WEIGHT
G	7	#4	SHOWN	12'-3"	64
H	5	#4	1'-8"	4'-6"	15
J	6	#4	8"	5'-0"	20
TOTAL WEIGHT *				LBS.	99
CONCRETE FOR FOUNDATION *				CY.	0.47
CONCRETE FOR GUTTER DEPRESSION *				CY.	0.78

STRUCTURAL STEEL FOR ARMOR CURB SLOT

STUD ANCHORS 5/8"DIA)	LBS.	35
STEEL PLATE	LBS.	451
TOTAL WEIGHT *	LBS.	4545

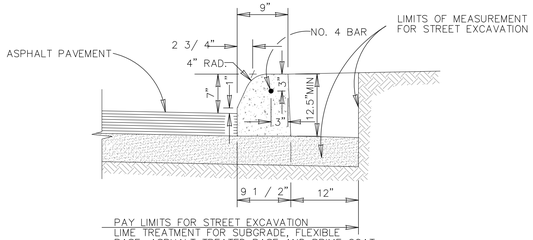
* FOR CONTRACTORS INFO ONLY.

GENERAL NOTES:
ALL CONCRETE SHALL BE CLASS "A".
ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
ALL SIDES OF ARMOR CURB SLOT AND STUD ANCHORS SHALL BE 1/4" FILLET WELDS.
ALL EXPOSED STRUCTURAL STEEL (ARMOR) SHALL BE GALVANIZED.
ALL EXPOSED EDGES ON ARMOR CURB SHALL RECEIVE A 1/8" BEVEL.
THE SHAPE OF THE TYPICAL ROADWAY CURB SHALL TRANSITION TO THE ARMOR CURB AS APPROVED BY THE ENGINEER.

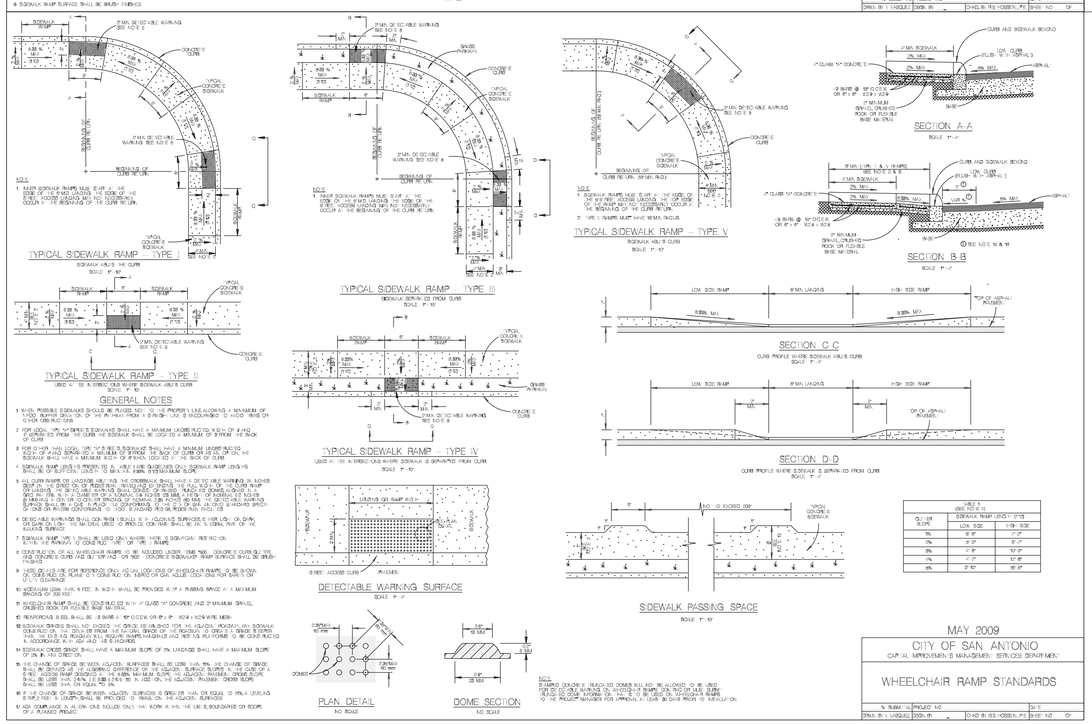
ARMOR CURB SLOT
WITH CONCRETE FOUNDATION
SAN ANTONIO DISTRICT STANDARDS

STATE	DISTRICT	COUNTY		PROJECT NO.	SHEET NO.
TEXAS	SAT				
DSN.	DET.	QUANTITY	JOB	HIGHWAY NO.	

10/95
REVISED 7/01



CITY OF SAN ANTONIO
MACHINE LAID CURB
SCALE: N.T.S.



GENERAL NOTES

1 WHEN POSSIBLE SIDEWALKS SHOULD BE PLACED NOT TO USE PROPERTY LINE ALLOWING A MINIMUM OF 4'-00" BUFFER ZONE OUT OF THE PATHWAY FROM A STRAIGHT LINE IS ENCOURAGED TO AVOID TRIPS ON OTHER OBSTRUCTIONS.

2 FOR LOCAL "A" AS STREETS SIDEWALKS SHALL HAVE A MINIMUM WIDTH OF 4' AND SEPARATED FROM THE CURB THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 8' FROM THE BACK OF CURB.

3 FOR OTHER THAN LOCAL "A" STREETS, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND SEPARATED A MINIMUM OF 8' FROM THE BACK OF CURB OR AS PER CITY, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF WHICH LOCATED AT THE BACK OF CURB.

4 ALL CURB RAMPS OR LANDINGS WHICH HAVE THE SIDEWALK SHALL HAVE A DETECTABLE WARNING (AS INDICATED BELOW) ON THE SIDEWALK OR OF PROPERTIES INCLUDING AT ON GRADE, ALL NON-DEPRESSED CURB RAMP SHALL BE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB IS 6" TO 8" FROM THE BACK OF CURB. THE DETECTABLE WARNING SURFACE SHALL CONSIST OF A PATTERN OF TRUNCATED DOMES WITH A DIAMETER OF NOMINALLY 0.9 INCHES (23 MM) AT THE BASE, A HEIGHT OF NOMINALLY 0.2 INCHES (5 MM), AND A CENTER-TO-CENTER SPACING OF NOMINALLY 2.35 INCHES (60 MM). THE DETECTABLE WARNING SURFACE SHALL CONTRAST VISUALLY WITH ADJACENT SURFACES, EITHER LIGHTER OR DARKER, OR BOTH. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.

5 TERRAIN RAMP TYPE I SHALL BE USED ONLY WHERE THERE IS SUFFICIENT RESTRICTION WITHIN THE RAMPING TO CONSTRUCT TYPE I OR TYPE II RAMPS.

6 CONSTRUCTION OF A WHEELCHAIR RAMPS TO BE INCLUDED UNDER ITEM 9600 - CONCRETE CURB, GUTTER, AND CONCRETE CURBS AND GUTTER AND ITEM 9600 - CONCRETE SIDEWALK. RAMP SURFACE SHALL BE BRUSH-FINISHED.

7 WHERE ON-LINE FOR REFERENCE ONLY, AS ALL LOCATIONS OF EXISTING CURB RAMPS, OR BE SHOWN ON CONSTRUCTION PLANS. IT IS CONSTRUCTED ON EXISTING OR CAN ALLOW SIDEWALK GRADE AND RUN SLOPE TO BE 5% OR LESS.

8 SIDEWALK LEVEL AREA, 5 FEET BY 5 FEET, SHALL BE PROVIDED WITH A PARKING SPACE AT A MAXIMUM GRADING OF 2% FREE.

9 SIDEWALK RAMP SHALL BE CONSTRUCTED WITH 4" CLASS "A" CONCRETE AND 3" MINIMUM SHALL CRUSHED ROCK ON FLEXIBLE BASE MATERIAL.

10 REINFORCING STEEL SHALL BE #3 BARS @ 18" O.C.E.W. OR #4 @ 24" O.C.E.W. WIRE MESH.

11 SIDEWALK GRADES SHALL NOT EXCEED 2% GRADE AS MEASURED FOR THE ADJACENT ROADWAY. SIDEWALK RAMPS SHALL NOT EXCEED 8.33% GRADE AS MEASURED FOR THE ADJACENT ROADWAY. WHERE THE SIDEWALK RAMP HAS TO BE PERPENDICULAR TO THE CURB AND IN ACCORDANCE WITH ADA AND TAS STANDARDS.

12 SIDEWALK CROSS SLOPE SHALL HAVE A MINIMUM SLOPE OF 1% LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.

13 THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 11% THE CHANGE OF GRADE SHALL BE DETERMINED AS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES IN THE DIRECTION OF TRAVEL. WHERE THE CHANGE OF GRADE EXCEEDS 11% MINIMUM SLOPE, THE ADJACENT SURFACES SHALL BE CONNECTED BY A RAMP WITH A SLOPE NOT TO EXCEED 11% AND A LENGTH EQUAL TO 13 TIMES THE CHANGE OF GRADE. THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN OR EQUAL TO 6%.

14 IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 6% A LEVELING STRIP, 5 FEET IN LENGTH SHALL BE PROVIDED TO RAMP ON THE ADJACENT SURFACE.

15 ADA COMPLIANCE IS ALSO ONE INCLUDE ONLY THE WORK WITHIN THE LIMITS BOULEVARDS OR ROOMS OF A PLANNED PROJECT.

RAMP SLOPE	SIDEWALK RAMP LENGTH (FEET)	
	LOW SIDE	HIGH SIDE
5%	8'-0"	7'-0"
6%	9'-0"	8'-0"
7%	11'-0"	10'-0"
8%	12'-0"	10'-6"
9%	13'-0"	11'-6"

NOTE
1 RAMP CONCRETE SHALL BE DOMES SHALL NOT BE ALLOWED TO BE USED FOR SIDEWALK RAMPS ON INTERSECTIONS WHERE ONE TRAFFIC IS CONTROLLED BY A TRAFFIC SIGNAL OR STOP SIGN. IF THE PROJECT MANAGER HAS APPROVAL IT SHALL BE DONE PRIOR TO INSTALLATION.

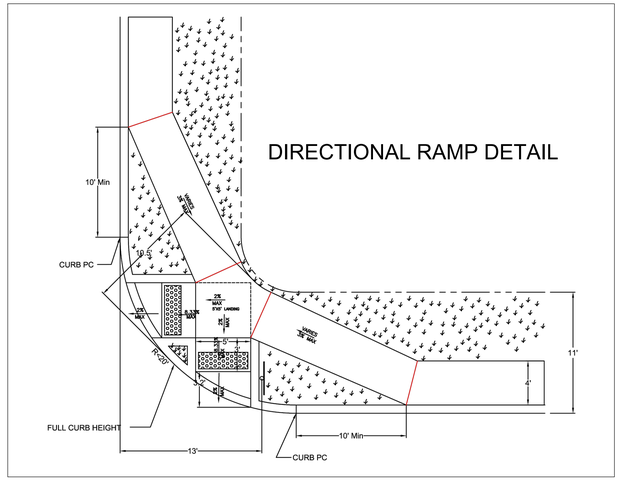
MAY 2009

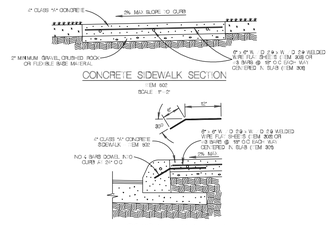
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

WHEELCHAIR RAMP STANDARDS

N. SUBMIT TO:	PROJECT NO:	DATE:
DRAN. BY: L. VASQUEZ	DESN. BY:	CHECKED BY: S. HOSSEIN, P.E.
SHEET NO.	OF	

DIRECTIONAL RAMP DETAIL





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9/12/24

STATE OF TEXAS
RYAN R. PLASENS
117640
LICENSED PROFESSIONAL ENGINEER

BRIGHTLAND HOMES, LTD. A
TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

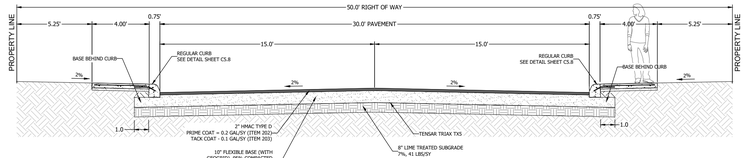
PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

STREET DETAILS

REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

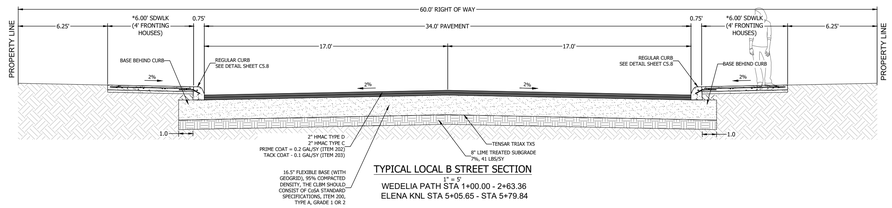
SHEET
C5.8



TYPICAL LOCAL A STREET SECTION

1" = 5'

DASYLIRION WAY STA 2+92.24 - 9+75.00
ELLIOT PR STA 1+00.00 - 8+20.00
ELENA KNL STA 1+00.00 - 5+05.65
ELENA KNL STA 5+79.84 - 6+72.64
GRACIE KNL STA 1+00.00 - 2+71.00



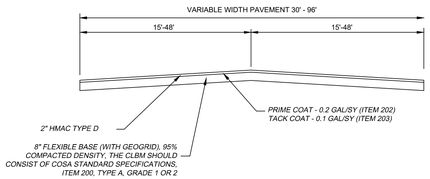
TYPICAL LOCAL B STREET SECTION

1" = 5'

WEDELIA PATH STA 1+00.00 - 2+63.36
ELENA KNL STA 5+05.65 - STA 5+79.84

STREET SECTION TABLE		
DESCRIPTION	LOCAL A	LOCAL B
RIGHT OF WAY WIDTH	50'	60'
PAVEMENT WIDTH	30'	34'
PARKWAY WIDTH	10'	13'
PAVEMENT SECTION	SEE STREET SECTION	SEE STREET SECTION
STRUCTURAL NUMBER	3.19	4.97
HOT MIX ASPHALT CONCRETE TYPE "D" DEPTH	2"	2"
HOT MIX ASPHALT CONCRETE TYPE "C" DEPTH	-	2"
HOT MIX ASPHALT CONCRETE TYPE "B" DEPTH	-	-
AGGREGATE BASE DEPTH	10"	16.5"
BASE DEPTH UNDER CURB	-	-
GEOGRID TENSAR TRIAX TX5	YES	YES
LIME TREATED SUBGRADE*	8"	8"

*REFERENCE GEOTECHNICAL REPORT FOR SUBGRADE REQUIREMENTS



TEMPORARY TURNAROUND SECTION

NTS

ELLIOT PR STA 8+20.00 - 9+24.56

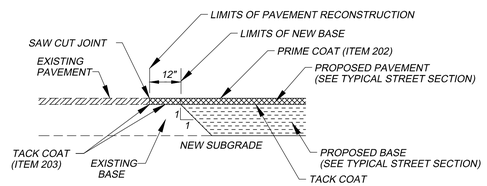
NOTES:

1. *SYMBOL DESIGNATION IS FROM 2011 TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.*
2. *STREETS AND DRAINS SHALL BE CONSTRUCTED ACCORDING TO CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION.*
3. *SEE THIS SHEET FOR STANDARD DETAILS AND PAVEMENT SECTIONS.*
4. *A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW.*
5. *ALL SIGNS CALLED OUT WITHIN BEXAR COUNTY RIGHT OF WAY ARE EXISTING UNLESS OTHERWISE NOTED.*
6. *ALL SIGNS, EXISTING OR PROPOSED, ARE TO BE RELOCATED IF IN THE SIDEWALK RECONSTRUCTION AREA.*

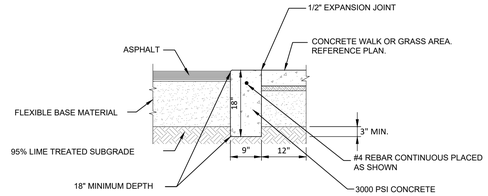
1. A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW.

NOTE:

1. *A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW.*



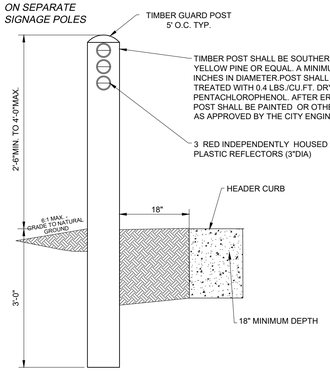
PAVEMENT JUNCTION DETAIL



HEADER CURB

NTS

BOLLARDS FOLLOWED BY OM4-3 MARKERS ON SEPARATE SIGNAGE POLES



END OF ROADWAY

CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT PREPARED BY INTEGRATED TESTING AND ENGINEERING COMPANY OF SAN ANTONIO, L.P., PROJECT NO. S211381-R1, DATED JULY 12, 2023 FOR PAVEMENT RECOMMENDATIONS.

GEOTECHNICAL ENGINEERS NOTES

SUBGRADE NOTES

1. CUT AND FILL DATA ARE NOT AVAILABLE AT THIS TIME
2. BASED ON THE THICKNESS OF THE CLAYS ENCOUNTERED IN THE BORINGS, WE ANTICIPATE THE FINAL PAVEMENT SUBGRADE PLASTICITY INDEX VALUES TO BE GREATER THAN 20.
3. THE SUBGRADE SHOULD BE PROOF ROLLED TO IDENTIFY SOFT AREAS
4. AS PER COUNTY PAVEMENT DESIGN GUIDELINES, SUBGRADE TREATMENT IS REQUIRED. THE SUBGRADE MAY BE TREATED USING LIME. AN APPLICATION RATE OF (7%) 41 LBS PER SQ YARD FOR 8 INCH DEPTH IS RECOMMENDED.
A. THE PAVEMENT SUBGRADE SOILS SHOULD BE TESTED FOR SOLUBLE SULFATE CONTENT. IF ELEVATED SULFATE LEVELS ARE ENCOUNTERED, ALTERNATE METHODS OF TREATMENT MAY BE NECESSARY.
5. IF FILL IS USED TO RAISE THE GRADE, APPROVED FILL MATERIAL UNDERNEATH THE PAVEMENT SHOULD BE USED. THE FILL SHOULD BE FREE OF DELETERIOUS MATERIAL WITH THE MINIMUM CBR VALUE OF 2.0 AND MAXIMUM PLASTICITY INDEX VALUE OF 50. THE LIME APPLICATION RATE SHOULD BE RE-EVALUATED FOR THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.

GENERAL NOTES

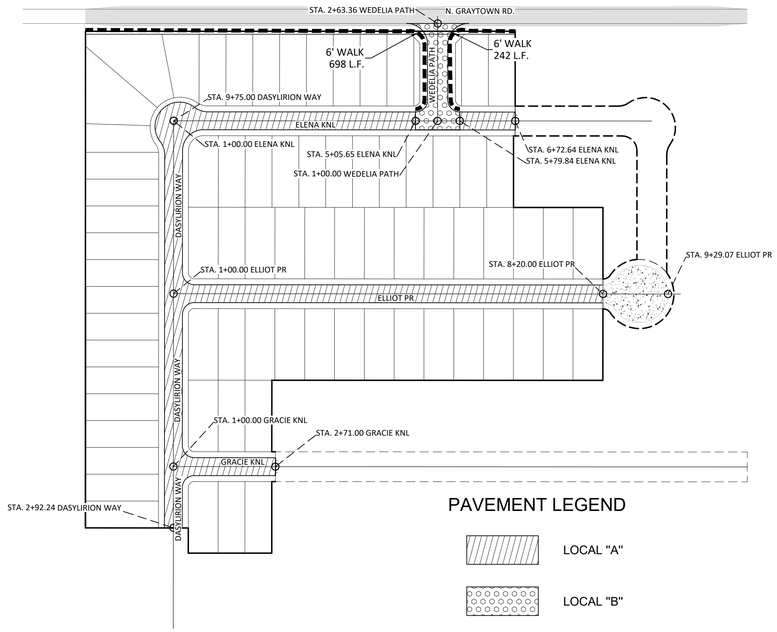
1. INPUT PARAMETERS ARE SHOWN IN SUMMARY TABLE B (REPORT S211381-R1). PLEASE CALL InTEC TO PROVIDE PAVEMENT RECOMMENDATIONS, IF NEEDED FOR DIFFERENT INPUT VALUES.
2. IF REPETITIVE TRUCK OR HEAVY TRUCK TRAFFIC IS ANTICIPATED, PLEASE CONTACT US FOR REVISED PAVEMENT RECOMMENDATIONS.
3. PAVEMENT SECTION RECOMMENDATIONS ARE BASED ON A CBR VALUE OF 2.0. THE PAVEMENT RECOMMENDATIONS PRESENTED ABOVE ARE NOT BASED ON THE SHRINK/ SWELL CHARACTERISTICS OF THE UNDERLYING SOILS. THE PAVEMENT CAN EXPERIENCE CRACKING AND DEFORMATION DUE TO SHRINKAGE AND SWELLING CHARACTERISTICS OF THE SOILS AS DESCRIBED IN THE VERTICAL MOVEMENTS SECTION OF THIS REPORT. USE OF GEOGRID HELPS REDUCE CRACKING DUE TO SHRINK/ SWELL CHARACTERISTICS OF THE UNDERLYING CLAYS.
4. SIGNIFICANT PAVEMENT DISTRESS HAS BEEN OBSERVED DURING CONSTRUCTION PHASE WITH THE COMBINATION OF CONSTRUCTION TRAFFIC AND IRRIGATION WATER/ RAIN-WATER GETTING UNDERNEATH THE ASPHALT.
5. IF WATER IS ALLOWED TO GET UNDERNEATH THE ASPHALT OR IF MOISTURE CONTENT TO THE BASE OR SUBGRADE CHANGES SIGNIFICANTLY, THEN PAVEMENT DISTRESS WILL OCCUR. EXTERIOR MOISTURE BARRIER, SUCH AS CURBS EXTENDING A MINIMUM OF 6 INCHES INTO SUBGRADE, WILL HELP REDUCE MOISTURE GETTING UNDERNEATH THE PAVEMENT.

GEOGRID

1. ONE LAYER OF GEOGRID, TENSAR TRIAX TX5 OR TRIAX HX5.5 (IF APPROVED BY BEXAR COUNTY) OR A COUNTY APPROVED EQUIVALENT, INSTALLED AS PER MANUFACTURER'S GUIDELINES ON TOP OF TREATED SUBGRADE.

SUBGRADE VERIFICATION

1. AT THE TIME OF CONSTRUCTION, THE FINAL PAVEMENT SUBGRADE SHOULD BE OBSERVED AND VERIFIED BY A REPRESENTATIVE OF Intec.



PAVEMENT INDEX MAP

NTS

PAVEMENT LEGEND

- LOCAL "A"
- LOCAL "B"
- TEMPORARY TURN AROUND
- ---- DEVELOPER INSTALLED SIDEWALK

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9/12/24

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3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

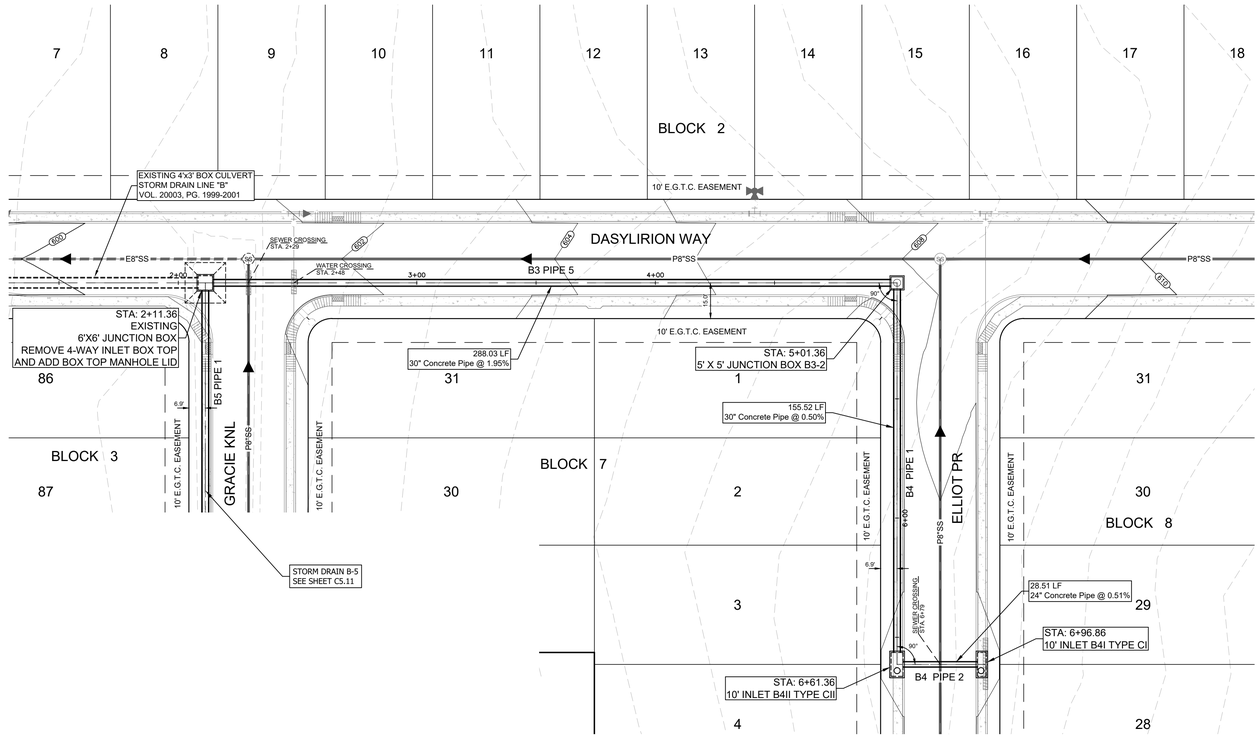
TYPICAL STREET SECTIONS

REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C5.9

Date: Sep 12, 2024, 2:56pm User ID: LJ Romanes
File: G:_Projects\246 - Grayhawk - 60 Acres (First American)\246.2 - Prairie Green - Unit 2\ACAD\Sheets\C5.9 TYPICAL STREET SECTIONS.dwg



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 EXCAVATION.

10' INLET B4i (Ultimate B4 = 28.05 cfs) *(Prop B4 = 20.08 cfs)*

$Q = CL(h)^{3/2}$ 8.3.2.a

Amount of flow in CFS =	**Q (cfs)25**	**14.03**	ft^3/sec
The Weir coefficient 3.087 =	C	3.087	
The length of drop curb opening required in feet =	L_R	6.47	ft
Length Provided (1x 10')=	L_P	10.00	ft
The head or depth of water at the opening in feet =	h	0.79	ft
	h^(3/2)	0.70	ft^2
	CHECK	14.03	ft^3/sec

10' INLET B4ii (Ultimate B4 = 28.05 cfs) *prop B4 = 20.08 cfs*

$Q = CL(h)^{3/2}$ 8.3.2.a

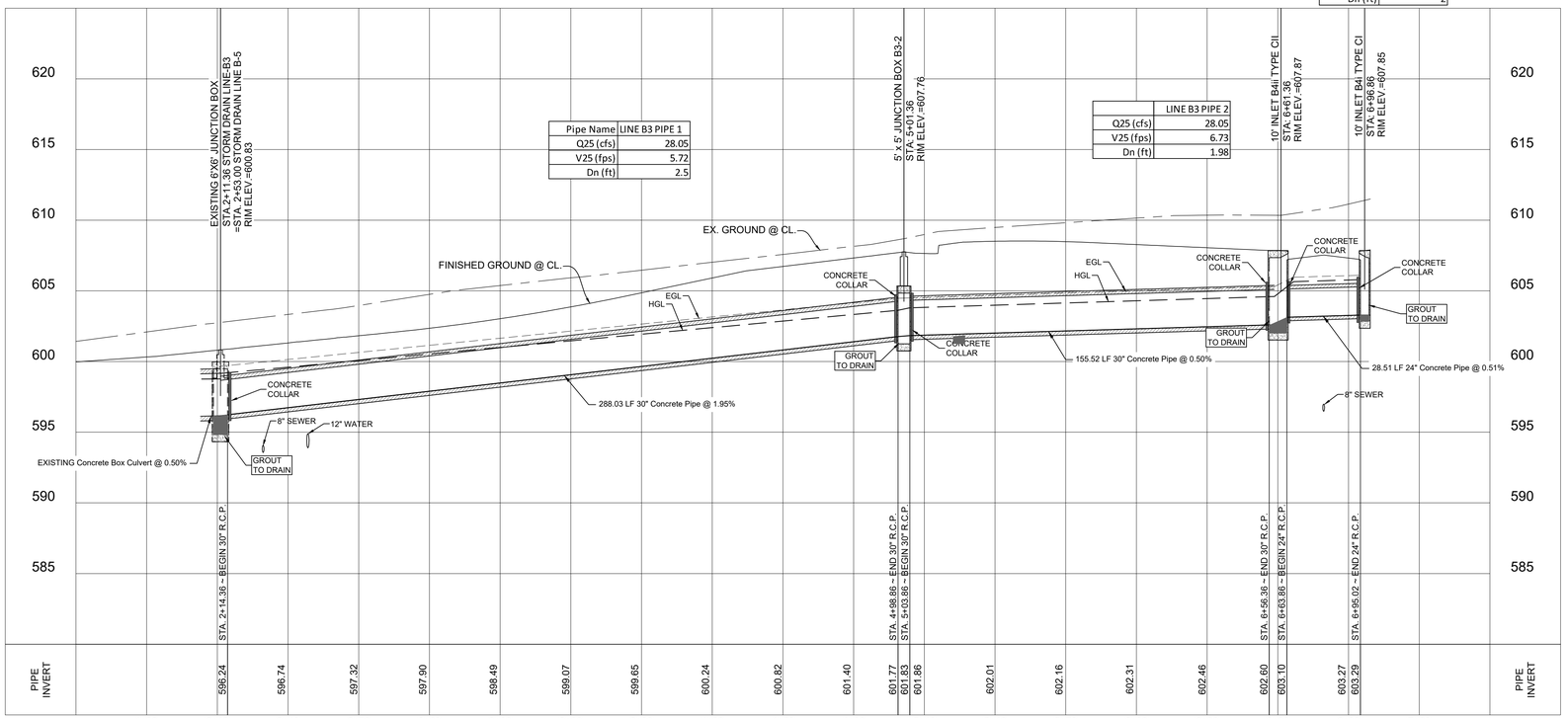
Amount of flow in CFS =	**Q (cfs)25**	**14.02**	ft^3/sec
The Weir coefficient 3.087 =	C	3.087	
The length of drop curb opening required in feet =	L_R	6.47	ft
Length Provided (1x 10')=	L_P	10.00	ft
The head or depth of water at the opening in feet =	h	0.79	ft
	h^(3/2)	0.70	ft^2
	CHECK	14.02	ft^3/sec

STORM DRAIN "B-3"

STA. 2+11.36 TO STA. 6+96.86

	LINE B3 PIPE 3
Q25 (cfs)	14.03
V25 (fps)	4.47
Dn (ft)	2

HORIZONTAL SCALE 1" = 30'
VERTICAL SCALE 1" = 5'



NOTES:

1. IMPROVED EARTHEN CHANNELS AND DETENTION PONDS SHALL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE CHANNEL OR POND SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE FINAL ACCEPTANCE.
2. ALL ITEMS ARE TO BE FURNISHED & INSTALLED BY CONTRACTOR. REFERENCE CONSTRUCTION DETAILS SHEETS FOR ADDITIONAL INFORMATION.
3. ALL STORM DRAINAGE PIPE WITHIN PUBLIC ROW SHALL BE MIN RCP (REINFORCED CONCRETE PIPE)
4. REFERENCE CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION.
5. CONCRETE SHALL BE A MINIMUM OF 3000 PSI IN 28 DAYS WITH #4 BARS @ 12" O.C.E.W. UNLESS OTHERWISE SPECIFIED.
6. CONTRACTOR SHALL GROUT TO DRAIN AT ALL CURB INLETS AND JUNCTION BOXES. REFERENCE CONCRETE COLLAR DETAIL SHEET C5.14.

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STATE OF TEXAS — 11640 — RYAN R. PLAGENS — LICENSED PROFESSIONAL ENGINEER

BRIGHTLAND HOMES, LTD. A
TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

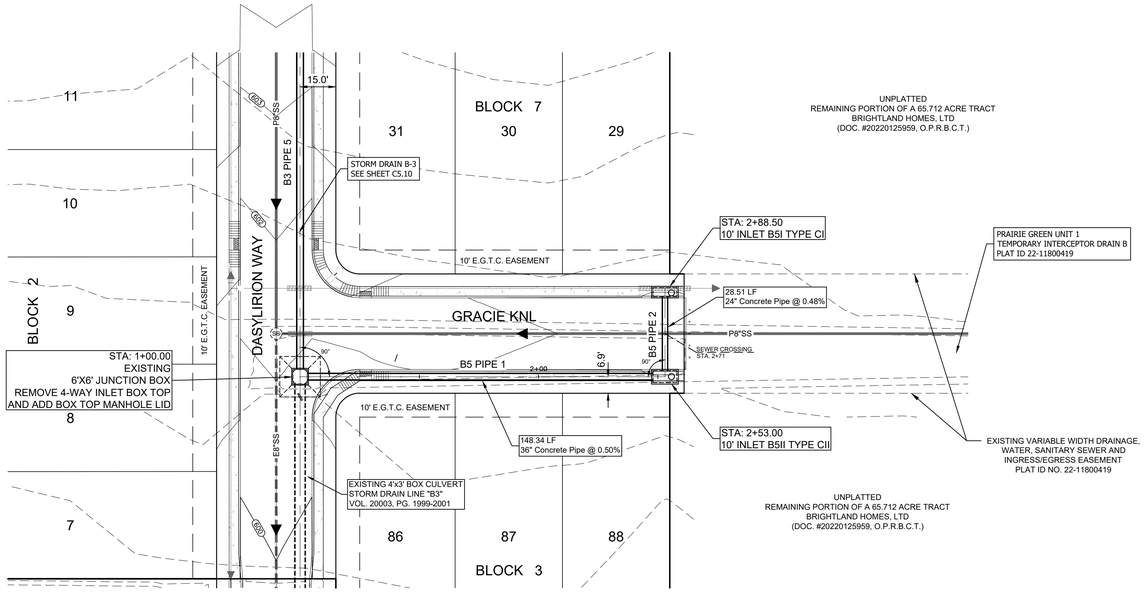
PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

STORM DRAIN B-3 PLAN & PROFILE

REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C5.10



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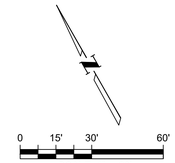
10' INLET ULT B5i Q = 25.45 cfs *(prop B5 = 19.96 cfs)*		
$Q = CL(h)^{3/2}$ 8.3.2.a		
Amount of flow in CFS =	**Q (cfs)25**	**12.73** ft^3/sec
The Weir coefficient 3.087 =	C	3.087
The length of drop curb opening required in feet =	L_R	5.87 ft
Length Provided (1x 10')=	L_P	10.00 ft
The head or depth of water at the opening in feet =	h	0.79 ft
	h^(3/2)	0.70 ft^2
	CHECK	12.73 ft^3/sec

10' INLET ULT B5ii = 25.45 cfs *(prop B5 = 19.96 cfs)*		
$Q = CL(h)^{3/2}$ 8.3.2.a		
Amount of flow in CFS =	**Q (cfs)25**	**12.72** ft^3/sec
The Weir coefficient 3.087 =	C	3.087
The length of drop curb opening required in feet =	L_R	5.87 ft
Length Provided (1x 10')=	L_P	10.00 ft
The head or depth of water at the opening in feet =	h	0.79 ft
	h^(3/2)	0.70 ft^2
	CHECK	12.72 ft^3/sec

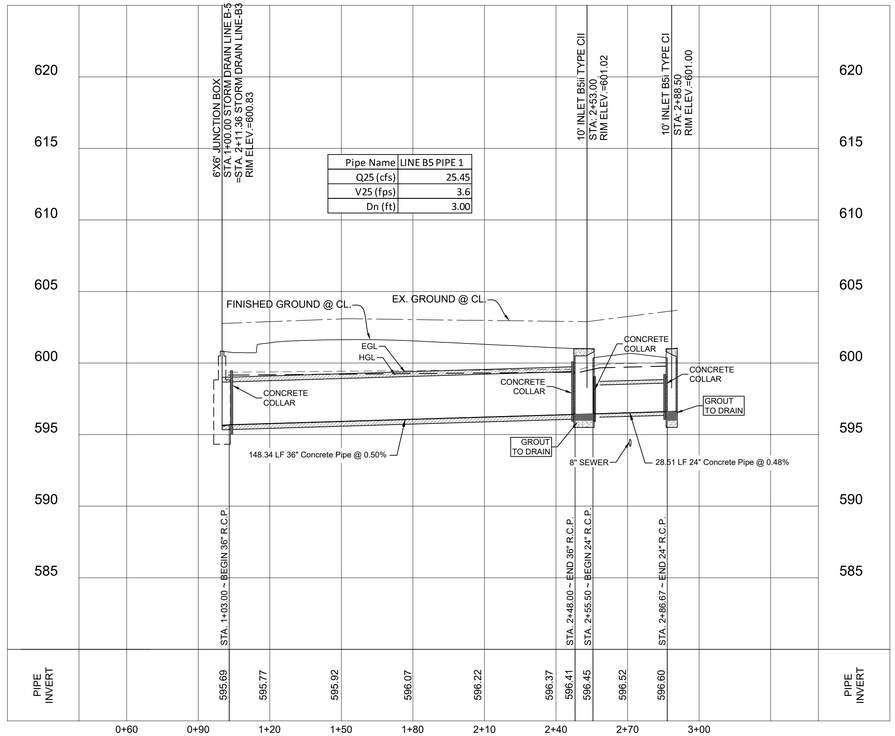


STORM DRAIN "B-5"

STA. 1+00.00 TO STA. 2+88.50

Pipe Name	LINE B5 PIPE 2
Q25 (cfs)	12.73
V25 (fps)	4..05
Dn (ft)	2.00

HORIZONTAL SCALE 1" = 30'
VERTICAL SCALE 1" = 5'



NOTES:

1. IMPROVED EARTHEN CHANNELS AND DETENTION PONDS SHALL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE CHANNEL OR POND SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE FINAL ACCEPTANCE.
2. ALL ITEMS ARE TO BE FURNISHED & INSTALLED BY CONTRACTOR. REFERENCE CONSTRUCTION DETAILS SHEETS FOR ADDITIONAL INFORMATION.
3. ALL STORM DRAINAGE PIPE WITHIN PUBLIC ROW SHALL BE MIN RCP (REINFORCED CONCRETE PIPE)
4. REFERENCE CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION.
5. CONCRETE SHALL BE A MINIMUM OF 3000 PSI IN 28 DAYS WITH #4 BARS @ 12" O.C.E.W. UNLESS OTHERWISE SPECIFIED.
6. CONTRACTOR SHALL GROUT TO DRAIN AT ALL CURB INLETS AND JUNCTION BOXES. REFERENCE CONCRETE COLLAR DETAIL SHEET C5.14.

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9/12/24

BRIGHTLAND HOMES, LTD. A
TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

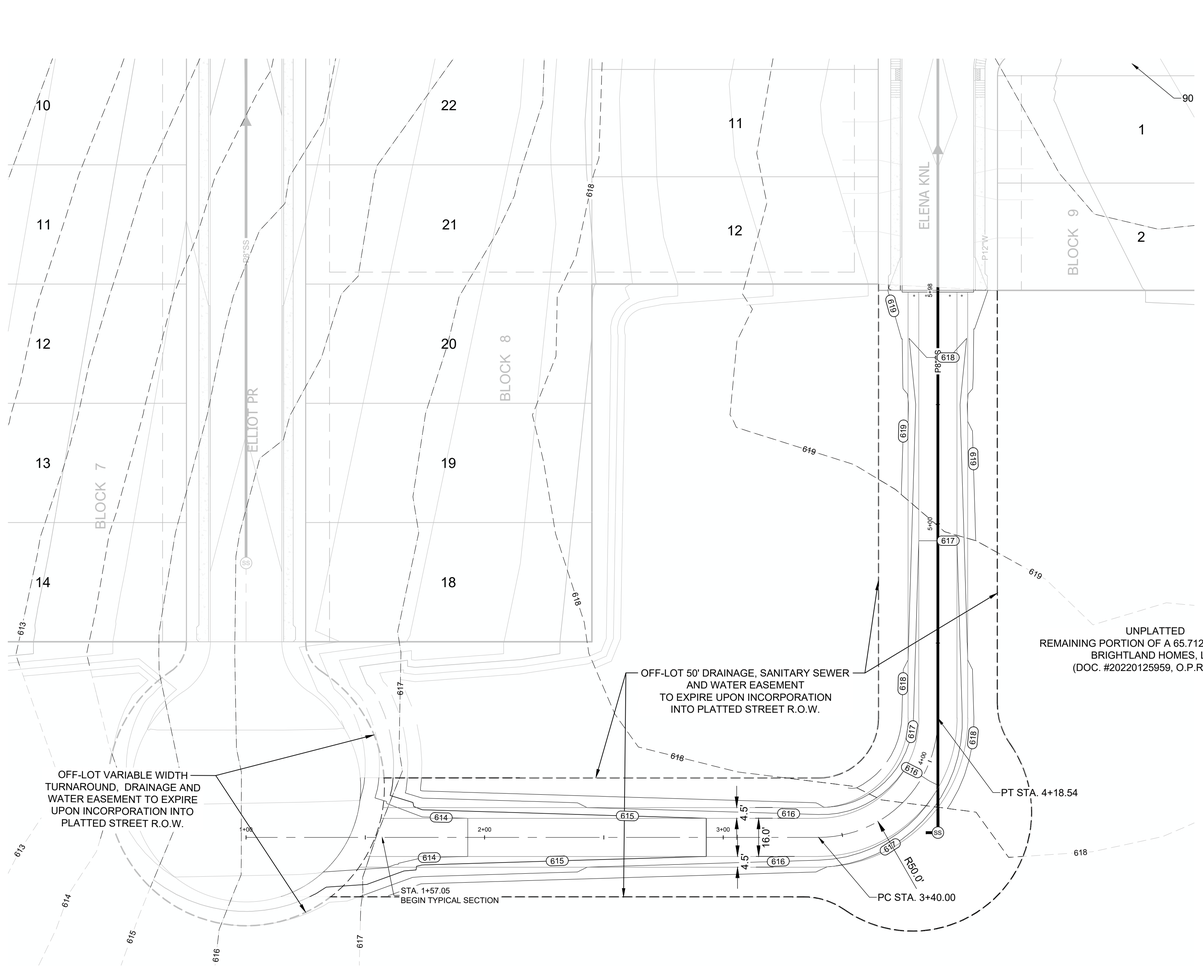
PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

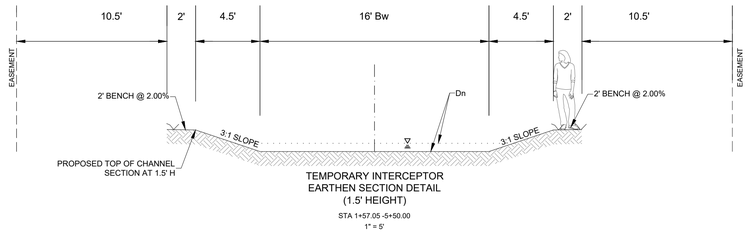
STORM DRAIN B-5 PLAN & PROFILE

REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C5.11





TEMPORARY INTERCEPTOR
EARTHEN SECTION DETAIL
(1.5' HEIGHT)

STA 1+57.05 -5+50.00
1" = 5'

Name	$Q25_{PRDCP\,B4}$	$Q100_{PRDCP\,B4}$
BEGIN STA	1+57.05	1+57.05
END STA	5+50.00	5+50.00
Q (cfs)	20.08	24.88
h (ft)	1.50'	1.50'
b_w (ft)	16.00'	16.00'
z (_):1 left	3	3
z (_):1 right	3	3
t_w (ft)	25	25
n	0.035	0.035
Slope (%)	1.00%	1.00%
d_n (ft)	0.47'	0.54'
V (fps)	2.44	2.63

NOTES:

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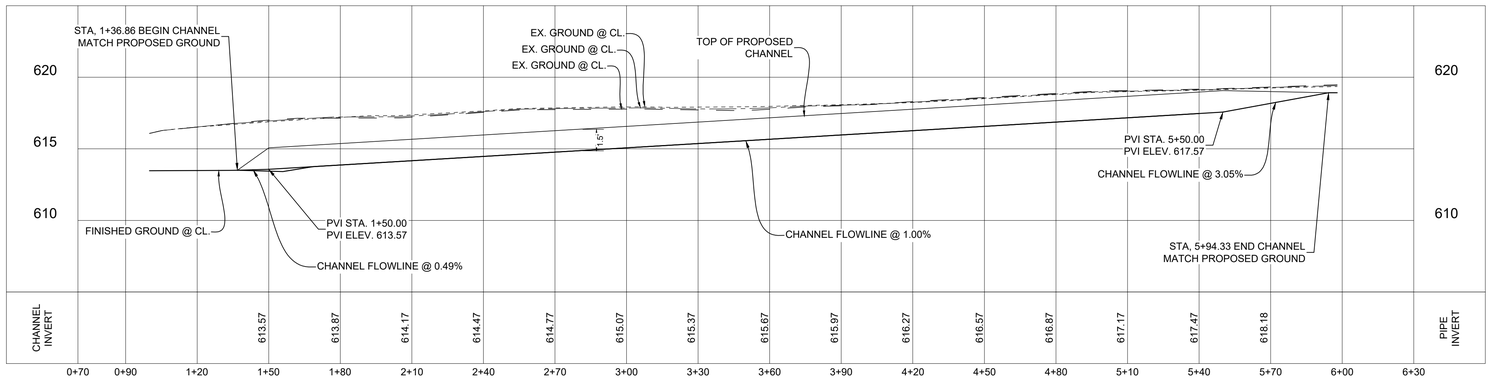
TEMPORARY INTERCEPTOR

STA. 1+00.00 TO STA. 5+94.33

HORIZONTAL SCALE 1" = 30'
VERTICAL SCALE 1" = 5'



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9/12/24

STATE OF TEXAS
RYAN R. PLAGENS
111640
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STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

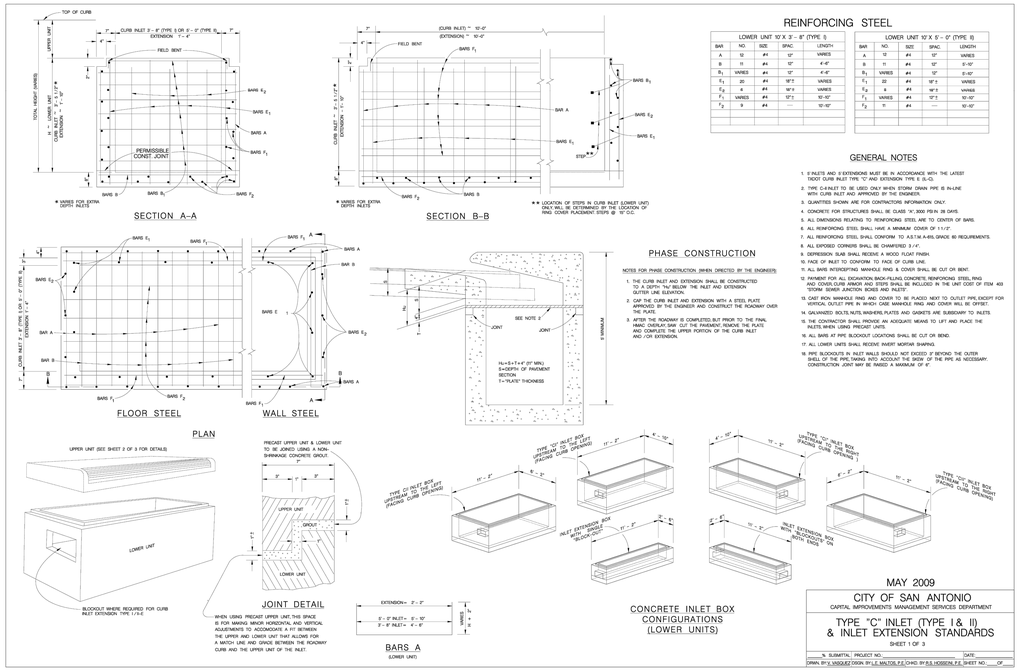
TEMPORARY INTERCEPTOR

REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C5.12

Date: Sep 12, 2024, 2:50pm User ID: LJ Ramone
File: U:_Projects\246 – Grayfoam – 60 Acres (First American)\246.2 – Prairie Green – UNIT 2\4CAD\Sheets\C5.12 TEMPORARY INTERCEPTOR.dwg



UP ENGINEERING + SURVEYING
111 TOWER DR. SUITE 325
SAN ANTONIO, TX 78232
TEL 210-774-5504
WWW.UPENGINEERING.COM
TBPE F-17992

9/12/24

STATE OF TEXAS
RYAN R. PLAGENS
111640
LICENSED PROFESSIONAL ENGINEER

SAN ANTONIO LD, LLC
4058 N. COLLEGE AVE. STE 300, BOX 9
FAYETTEVILLE, AR. 72703

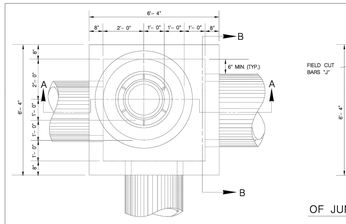
PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

DRAIN DETAILS

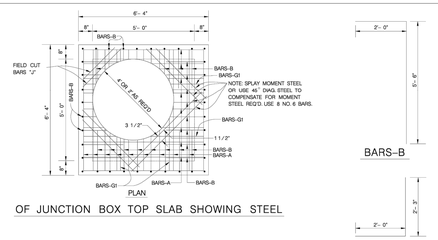
REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C5.13



PLAN



OF JUNCTION BOX TOP SLAB SHOWING STEEL

BARS-B

BARS-C

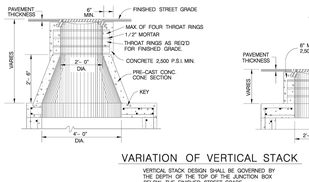
SCHEDULE FOR REINFORCING STEEL

SHAPE	BAR	NO.	SIZE	SPACING	LENGTH	WEIGHT
STRAIGHT	A	18	4	9" O.C.	6'- 1"	73
	B	36	5	8" O.C.	7'- 6"	282
	C	36	5	8" O.C.	4'- 3"	160
STRAIGHT	D	18	4	9" O.C.	6'- 1"	73
STRAIGHT	E	20	3	12" O.C.	4'- 11"	37
STRAIGHT	G	20	4	12" O.C.	6'- 1"	81
STRAIGHT	G_1	8	4	AS SHOWN	6'- 1"	33
STRAIGHT	H	24	3	12" O.C.	5'- 5"	49
STRAIGHT	J	8	6	3 1/2" O.C.	4'- 11"	59
					TOTAL	847 lbs.

CLASS "A" CONCRETE - 5.03 CU. YDS.
(DOES NOT EXCLUDE MANHOLE OPENINGS OR PIPE OPENING)

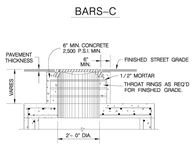
★ NOTE: BAR SIZE AND SPACING BASED ON SPANS AS SHOWN - ANY REVISIONS TO THESE SPANS SHALL INCLUDE A RE-DESIGN ON STEEL REQ'D.

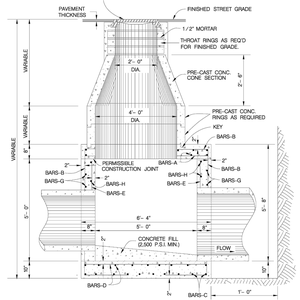
1. CONCRETE FOR STRUCTURE SHALL BE CLASS "A" 3,000 P.S.I. AT 28 DAYS.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
3. REINFORCING STEEL SHALL BE NEW BILLET STEEL, INTERMEDIATE GRADE, ASTM A-15. THE DEFORMATION SHALL CONFORM TO ASTM A-305.
4. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
5. ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD-CUT.
6. WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 33 DIAMETERS SHALL BE USED.
7. INVERT OF JUNCTION BOX TO BE SHAPED WITH CONCRETE FILL (2,000 P.S.I. MIN.) TO EFFECT DRAINAGE TO OUTLET PIPE. COST SUBSIDIARY TO CLASS "A" CONCRETE (JUNCTION BOXES).
8. PAYMENT FOR ALL EXCAVATION, BACKFILLING, CONCRETE, REINFORCING STEEL, VERTICAL STACK, RING AND COVER SHALL BE INCLUDED IN THE UNIT COST OF ITEM 403 - "STORM SEWER JUNCTION BOXES AND INLETS".



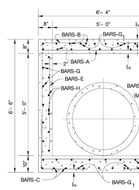
VARIATION OF VERTICAL STACK

VERTICAL STACK DESIGN SHALL BE GOVERNED BY THE DEPTH OF THE TOP OF THE JUNCTION BOX BELOW THE FINISHED STREET GRADE.





SECTION A-A



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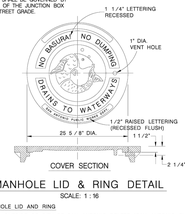


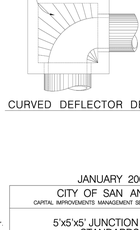
COVER SECTION

MANHOLE LID & RING DETAIL

SCALE: 1 : 16

NOTES FOR MANHOLE LID AND RING

1. FOR LID DESIGN OUTSIDE OF CITY OF SAN ANTONIO, DELETE "SAN ANTONIO PUBLIC WORKS DEPT."
2. CASTING NUMBER AND MANUFACTURER'S I.D. ON LID AND RING.
3. LOAD BEARING CAPABILITY OF HS-20 MINIMUM.
4. THE LOAD BEARING SURFACES SHALL BE MACHINE GROUND.
5. THE COMBINED WEIGHT OF THE MANHOLE RING AND COVER MUST BE AT LEAST 260 LBS.



CURVED DEFLECTOR DETAIL

JANUARY 2005

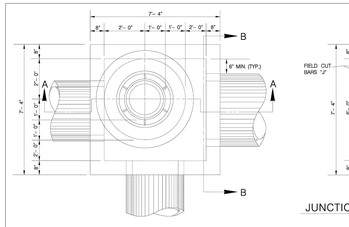
CITY OF SAN ANTONIO

CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

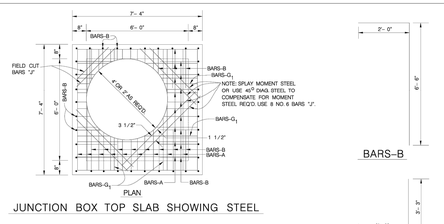
5'x5'x5' JUNCTION BOX STANDARDS

% SUBMITTAL	PROJECT NO.:	DATE:
DRAWN BY:	DESIGN BY:	CHKD BY:

SHEET NO.: OF



PLAN



JUNCTION BOX TOP SLAB SHOWING STEEL

BARS-B

BARS-C

SCHEDULE FOR REINFORCING STEEL

SHAPE	BAR	NO.	SIZE	SPACING	LENGTH	WEIGHT
STRAIGHT	A	21	4	9" O.C.	7'- 1"	99
	B	46	5	8" O.C.	8'- 6"	408
	C	46	5	8" O.C.	5'- 3"	252
STRAIGHT	D	21	4	9" O.C.	7'- 1"	99
STRAIGHT	E	28	3	12" O.C.	5'- 11"	62
STRAIGHT	G	20	4	12" O.C.	7'- 1"	95
STRAIGHT	G_1	8	4	AS SHOWN	6'- 1"	33
STRAIGHT	H	27	3	12" O.C.	7'- 1"	72
STRAIGHT	J	8	6	3 1 / 2" O.C.	4'- 11"	59
					TOTAL	1,179 LBS.

CLASS "A" CONCRETE - 6.84 CU. YDS.
(DOES NOT EXCLUDE MANHOLE OPENINGS OR PIPE OPENING)

★ NOTE: BAR SIZE AND SPACING BASED ON SPANS AS SHOWN - ANY REVISIONS TO THESE SPANS SHALL INCLUDE A RE-DESIGN ON STEEL REQ'D.

1. CONCRETE FOR STRUCTURE SHALL BE CLASS "A" 3,000 P.S.I. AT 28 DAYS.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3 /4".
3. REINFORCING STEEL SHALL BE NEW BILLET STEEL, INTERMEDIATE GRADE, ASTM A-15. THE DEFORMATION SHALL CONFORM TO ASTM A-305.
4. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
5. ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD-CUT.
6. WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 33 DIAMETERS SHALL BE USED.
7. INVERT OF JUNCTION BOX TO BE SHAPED WITH CONCRETE FILL (2,500 P.S.I. MIN.) TO EFFECT DRAINAGE TO OUTLET PIPE. COST SUBSIDIARY TO CLASS "A" CONCRETE (JUNCTION BOXES).
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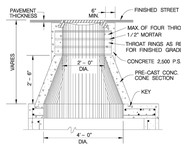
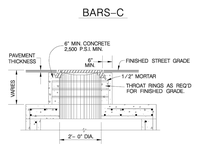
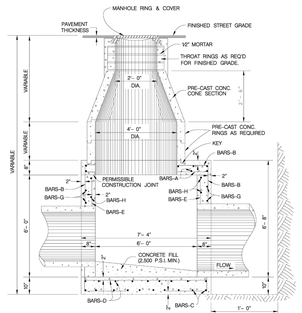


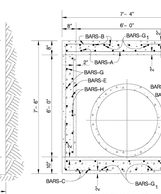
VARIATION OF VERTICAL STACK

VERTICAL STACK DESIGN SHALL BE GOVERNED BY THE DEPTH OF THE TOP OF THE JUNCTION BOX BELOW THE FINISHED STREET GRADE.

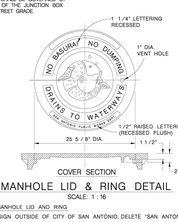




SECTION A-A



SECTION B-B



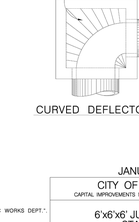
COVER SECTION

MANHOLE LID & RING DETAIL

SCALE: 1 : 16

NOTES FOR MANHOLE LID AND RING

1. FOR LID DESIGN OUTSIDE OF CITY OF SAN ANTONIO, DELETE "SAN ANTONIO PUBLIC WORKS DEPT."
2. CASTING NUMBER AND MANUFACTURER'S I.D. ON LID AND RING.
3. LOAD BEARING CAPABILITY OF HS-20 MINIMUM.
4. THE LOAD BEARING SURFACES SHALL BE MACHINE GROUND.
5. THE COMBINED WEIGHT OF THE MANHOLE RING AND COVER MUST BE AT LEAST 260 LBS.



CURVED DEFLECTOR DETAIL

JANUARY 2005

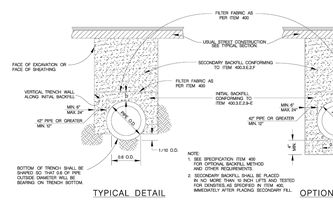
CITY OF SAN ANTONIO

CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

6'x6'x6' JUNCTION BOX STANDARDS

% SUBMITTAL	PROJECT NO.:	DATE:
DRAWN BY:	DESIGN BY:	CHKD BY:

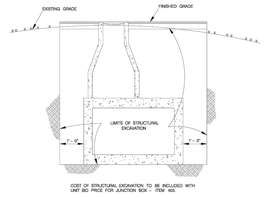
SHEET NO.: OF



TYPICAL DETAIL

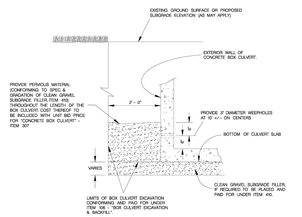
OPTIONAL DETAIL

PIPE BEDDING & BACKFILL DETAILS

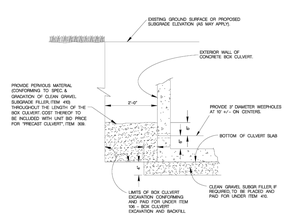


STRUCTURAL EXCAVATION AT JUNCTION BOXES

NO SCALE

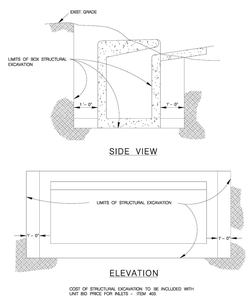


CAST-IN-PLACE BOX CULVERT



PRECAST BOX CULVERT

CONCRETE BOX CULVERT



STRUCTURAL EXCAVATIONS AT DRAINAGE INLETS

NO SCALE

MAY 2009

CITY OF SAN ANTONIO

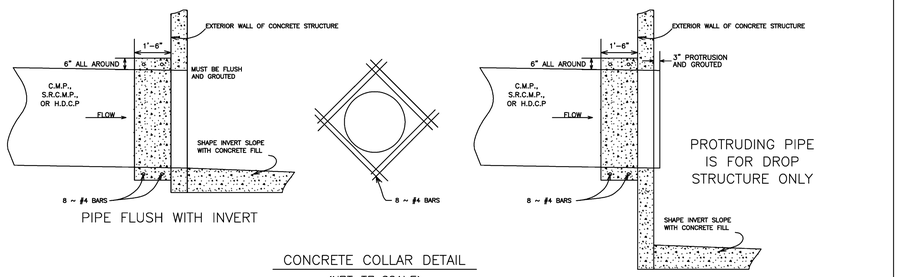
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

PIPE BEDDING & MISCELLANEOUS DRAINAGE DETAILS

% SUBMITTAL	PROJECT NO.:	DATE:
DRAWN BY:	DESIGN BY:	CHKD BY:

SHEET NO.: OF

1. CONCRETE FOR STRUCTURE SHALL BE CLASS "A," 3,000 P.S.I. AT 28 DAYS.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
3. REINFORCING STEEL SHALL BE NEW BILLET STEEL, INTERMEDIATE GRADE, ASTM. A-15. THE DEFORMATION SHALL CONFORM TO ASTM. A-305.
4. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
5. ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD-CUT.
6. WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 33 DIAMETERS SHALL BE USED.
7. INVERT OF JUNCTION BOX TO BE SHAPED WITH CONCRETE FILL (3,000 P.S.I. MIN.) TO EFFECT DRAINAGE TO OUTLET PIPE. COST SUBSIDIARY TO CLASS "A" CONCRETE (JUNCTION BOXES).



JANUARY 2006

STANDARD PLANS
CITY OF SAN ANTONIO, TEXAS
DEVELOPMENT SERVICES

CONCRETE COLLAR DETAIL

DRAWN BY: ANDREW WINTER, P.E.	DATE:	REVISIONS	SCALE: SEE ABOVE
CHECKED BY: SAM BENT, P.E.			DATED: 01 JANUARY 2006
			SHEET: 1 OF 1

UP ENGINEERING + SURVEYING
111 TOWER DR. SUITE 325
SAN ANTONIO, TX 78232 TEL. 210-774-5504
WWW.UPENGINEERING.COM TBPE F-17992

9/12/24

STATE OF TEXAS · LICENSED PROFESSIONAL ENGINEER · RYAN R. PLASENS · 117640

SAN ANTONIO LD, LLC
4058 N. COLLEGE AVE. STE 300, BOX 9
FAYETTEVILLE, AR. 72703

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

DRAIN DETAILS

REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET

C5.14

Date: Sep 12, 2024, 2:57pm User ID: LJ Barrones
File: c:_Projects\246 - Greyfarm - 60 Acres (First American)\246.2 - Prairie Green - UNIT 2\ACAD\Sheets\C5.13 DRAIN DETAILS.dwg

BLOCK 12
4 3 2 1 901

HAFFNER RD.

901 1 2 3 4 5 6 7 8 9
BLOCK 10

KATZER RANCH SUBDIVISION
UNIT 1 & 2
(DOC. #20220151296, O.P.R.B.C.T.)

N. GRAYTOWN RD.

BLOCK 2

WEDELIA PATH

BLOCK 9

UNPLATTED
REMAINING PORTION OF A 65.712 ACRE TRACT
BRIGHTLAND HOMES, LTD
(DOC. #20220125959, O.P.R.B.C.T.)

ELENA KNL

LIMITS OF GRADING

OFF-LOT 50' DRAINAGE, SANITARY SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED STREET R.O.W.

BLOCK 8

DASYLIRION WAY

UNPLATTED
6.000 ACRES
TEODOMIRO M. SOLORZANO & JUANA SANTO RAMOS
(VOL. 13924, PG. 584, O.P.R.B.C.T.)

ELLIOT PR

OFF-LOT VARIABLE WIDTH TURNAROUND, DRAINAGE AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED STREET R.O.W.

BLOCK 7

BLOCK 2

UNPLATTED
REMAINING PORTION OF A 65.712 ACRE TRACT
BRIGHTLAND HOMES, LTD
(DOC. #20220125959, O.P.R.B.C.T.)

LIMITS OF GRADING

GRACIE KNL

EXISTING VARIABLE WIDTH DRAINAGE, WATER, SANITARY SEWER AND INGRESS/EGRESS EASEMENT VOL. 20003, PG. 1999-2001

UNPLATTED
REMAINING PORTION OF A 65.712 ACRE TRACT
BRIGHTLAND HOMES, LTD
(DOC. #20220125959, O.P.R.B.C.T.)

BLOCK 3

BLOCK 2
PRAIRIE GREEN UNIT 1
VOL. 20003, PG. 1999-2001

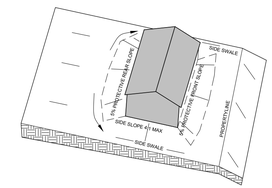
BLOCK 3
PRAIRIE GREEN UNIT 1
VOL. 20003, PG. 1999-2001

0 25' 50' 100'
SCALE: 1" = 50'

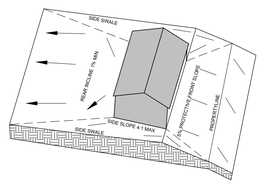
BOUNDARY / RIGHT OF WAY
EASEMENT / SETBACK
CURB / EDGE OF PAVEMENT
102 EXIST. GRADE ELEVATIONS
102 PROP. GRADE ELEVATIONS

A DRAINS TO FRONT
B DRAINS 1/2 TO FRONT & 1/2 TO REAR
C DRAINS TO REAR

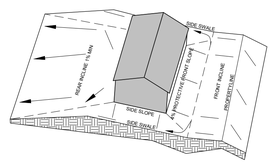
ToW TOP OF WALL
BoW BOTTOM OF WALL



TYPE 'A' LOT GRADING



TYPE 'B' LOT GRADING



TYPE 'C' LOT GRADING

UP ENGINEERING + SURVEYING
111 TOWER DR. SUITE 325
SAN ANTONIO, TX 78232 TEL 210-774-5504
WWW.UPENGINEERING.COM TBPE F-17992
TBPELS F-10194608

9/12/24

STATE OF TEXAS RYAN R. PLAGENS 116940 LICENSED PROFESSIONAL ENGINEER

BRIGHTLAND HOMES, LTD. A
TEXAS LIMITED PARTNERSHIP
3815 S. CAPITAL OF TEXAS HWY.
STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

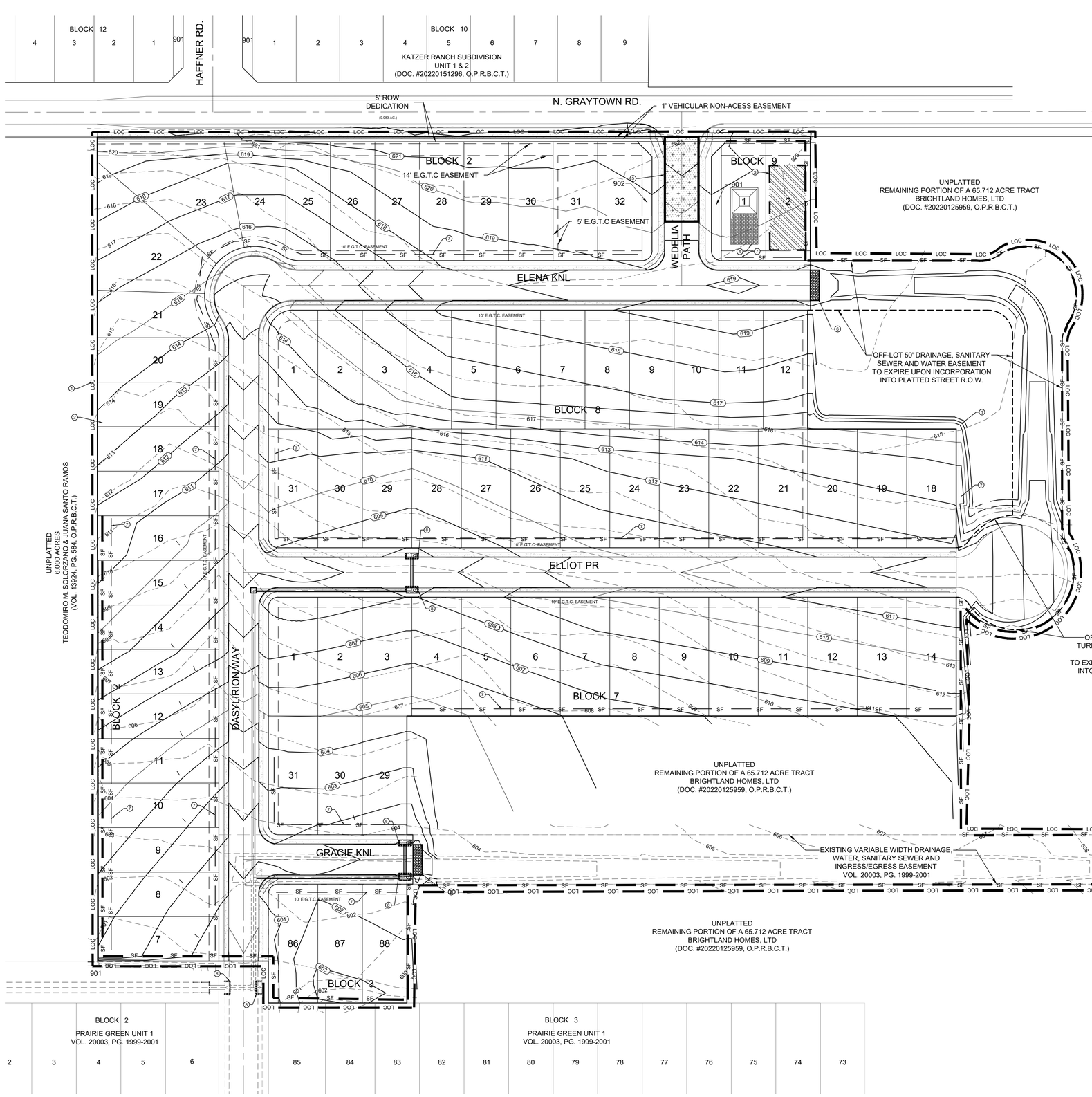
GRADING PLAN

REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C6.0

Date: Sep 12, 2024, 2:57pm User ID: LJ Ramirez
File: U:_Projects_146 - Graytown – 60 Acres (First American)\146.2 – Prairie Green – UNIT 2\ACAD\Sheets\C6.0 GRADING PLAN.dwg



0 30' 60' 120'

SCALE: 1" = 60'

LEGEND

- BOUNDARY / RIGHT OF WAY
- XXXX EXIST. GRADE ELEVATIONS
- SF SF TEMPORARY SILT FENCE
- LOC LOC LIMITS OF CONSTRUCTION / DISTURBANCE
- LIMITS OF TEMPORARY PARKING, STORAGE, SPOILS, AND STAGING AREA.
- STABILIZED CONSTRUCTION ENTRANCE
- ROCK FILTER DAM
- CONCRETE WASHOUT
- CUB INLET GRAVEL FILTER

EROSION CONTROL MEASURES	
1	LIMITS OF CONSTRUCTION
2	INSTALL SILT FENCE (2' FROM PROPERTY LINE, REFERENCE SHEET C7.1)
3	STAGING AREA
4	CONCRETE WASHOUT PIT (REFERENCE SHEET C7.1)
5	STABILIZED CONSTRUCTION ENTRANCE (REFERENCE SHEET C7.1)
6	ROCK FILTER DAM (REFERENCE SHEET C7.1)
7	INSTALL SECONDARY SILT FENCE (2' FROM ROW LINE, REFERENCE SHEET C7.1)
8	INSTALL CURB INLET GRAVEL FILTER (REFERENCE SHEET C7.1)

AREA DISTURBED (ACRES)	AREA UNDISTURBED (ACRES)	TOTAL AREA (ACRES)
14.3	0.00	14.3

SEQUENCE OF CONSTRUCTION ACTIVITIES

* INSTALLATION OF TEMPORARY BEST MANAGEMENT PRACTICES (13.90 ACRES)
* SITE CLEARING (13.90 ACRES)
* MASS GRADING (13.90 ACRES)
* FINAL SITE GRADING (13.90ACRES)
* FINAL PAVING OF DRIVE LANES (1.81 ACRES)

NOTES:

1. FOR THE PROTECTION OF NATURAL AREAS, NO EXCEPTIONS TO INSTALLING FENCES AT THE LIMIT OF CONSTRUCTION LINE WILL BE PERMITTED (SEE NOTE #6).
2. INSPECTOR HAS THE AUTHORITY TO ADD AND OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN COMPLIANCE WITH CITY RULES AND REGULATIONS.
3. THE CONTRACTOR MAY NOT BLOCK, DIRECT, IMPEDE, OR REROUTE PEDESTRIAN AND VEHICULAR TRAFFIC, NOR PLACE A BARRICADE OR OTHER TRAFFIC CONTROL DEVICE IN A RIGHT-OF-WAY, WITHOUT FIRST OBTAINING A TEMPORARY USE OF RIGHT-OF-WAY PERMIT FROM THE DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS THAT ARE REQUIRED TO COMPLY WITH THE CITY OR COUNTY CODE REGARDING EXCAVATION IN PUBLIC RIGHT-OF-WAY.
5. CONTRACTOR SHALL CLEAN UP SPOILS THAT MIGRATE INTO EXISTING RIGHT-OF-WAY A MINIMUM OF ONCE PER DAY.
6. CONTRACTOR TO INSTALL CHAIN LINK FENCE AT ALL POINTS WHERE LIMITS OF CONSTRUCTION IS SHOWN.
7. ALL STORM WATER LEAVING THE SITE DURING CONSTRUCTION ACTIVITIES MUST PASS THROUGH THE SILT FENCE OR ROCK BERMS.
8. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP OR REVEGETATION MATTING.
9. CONTRACTOR IS RESPONSIBLE FOR THE TIMELY REMOVAL OF TEMPORARY BMP'S ONCE CONSTRUCTION IS COMPLETE.
10. NO MORE THAN 10 ACRES SHALL BE DISTURBED AT ONCE UNLESS PROPER MEASURES ARE TAKEN TO MEET TCEQ NPDES REQUIREMENTS.
11. CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND INSPECTION OF ALL BMPs. CONTRACTOR SHALL REFERENCE THE SWPPP BOOKLET AND RESPECTIVE NOI PERMIT FOR FURTHER DETAILS.

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9/12/24

STATE OF TEXAS — RYAN R. PLAGENS — 116440 — LICENSED PROFESSIONAL ENGINEER

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AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

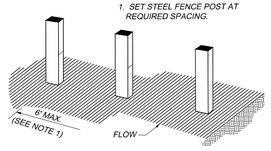
STORM WATER POLLUTION PREVENTION PLAN

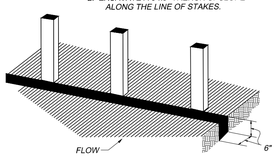
REV	DATE	DESCRIPTION	BY

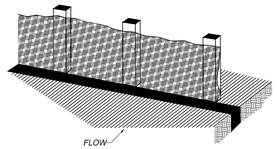
DESIGNED BY:
DRAFTED BY:
CHECKED BY:

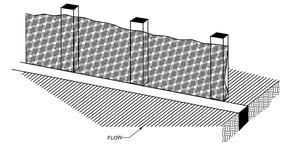
SHEET
C7.0

Date: Sep 12, 2024, 2:57pm User ID: LJ Romero
File: U:_Projects\246 – Grayfoam – 60 Acres (First American)\246.2 – Prairie Green – UNIT 2\ACAD\Sheets\C7.0 SWPPP.dwg



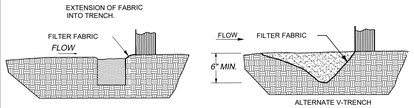




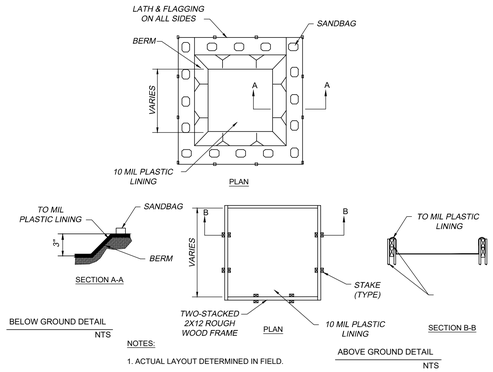


GENERAL NOTES:

1. *STEEL POSTS TO BE SET AT 3-FOOT MAXIMUM SPACING WITH MINIMUM EMBEDMENT OF 1-FOOT. IF FACTORY PREASSEMBLE FENCE WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAXIMUM.*
2. *WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 3 FEET AND SECURELY FASTENED WHEN ENDS OF FABRIC MEET.*

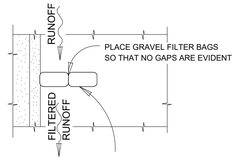


1 SILT FENCE
N.T.S.



NOTES:
1. ACTUAL LAYOUT DETERMINED IN FIELD.

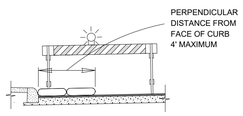
4 CONCRETE WASHOUT AREA



3 / 4" GRAVEL CONTAINED IN PERVIOUS BURLAP BAGS OR SYNTHETIC NET BAGS (1 / 8" MESH) APPROX. 24" LONG, 12" WIDE AND 6" HIGH

PLAN

SCALE : 1" = 5'

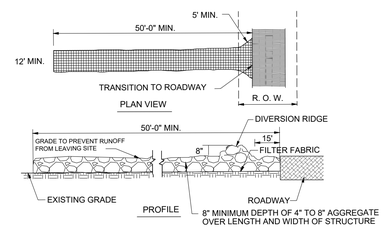


ELEVATION

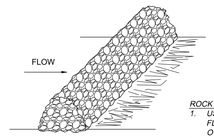
SCALE : 1" = 5'

NOTE:
STRADDLE GRAVEL FILTER BAGS WITH TYPE 1 BARRICADES MOUNTED WITH TYPE "A" FLASHING WARNING LIGHT. SEE BARRICADE CONSTRUCTION SIGN DETAILS. PLACE FLASHING LIGHTS AWAY FROM GUTTER, FLUSH WITH OUTSIDE EDGE OF BAG CONFIGURATION.

GRAVEL FILTER BAGS

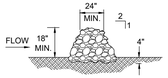


5 STABILIZED CONSTRUCTION EXIT
N.T.S.

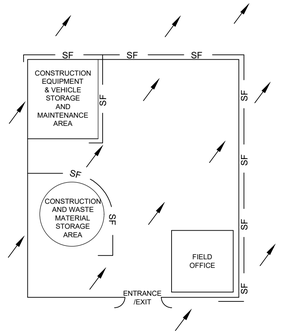


ROCK BERM NOTES:

1. *USE ONLY OPEN GRADED ROCK 100 to 200 mm (4 to 8") DIAMETER FOR STREAM FLOW CONDITIONS. USE OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR OTHER CONDITIONS.*
2. *THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE). ROCK BERMS IN CHANNEL APPLICATIONS SHALL BE ANCHORED FIRMLY INTO THE SUBSTRATE A MINIMUM OF 150 mm (6 ") WITH T-POSTS OR WITH 15M OR 20M (#5 OR #6) REBAR, WITH MAXIMUM SPACING APART OF 1.2 m (48") ON CENTER.*
3. *THE ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.*
4. *WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SILTATION PROBLEM.*
5. *DAILY INSPECTION SHALL BE MADE ON SEVERE-SERVICE ROCK BERMS; SILT SHALL BE REMOVED WHEN ACCUMULATION REACHES 150 mm (6").*
6. *WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.*



5 ROCK FILTER DAM
NTS

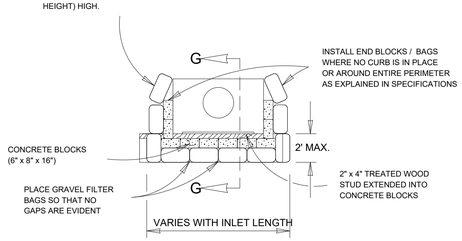


STAGING AREA NOTES:

1. *SEE PLAN VIEW FOR LOCATION OF STAGING AREA(S). CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. AREA SHALL BE ENLARGED, IF NECESSARY, TO CONTAIN PARKING STORAGE, AND UNLOADING/LOADING OPERATIONS.*
2. *STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE*
3. *THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.*
4. *ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.*
5. *THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISED STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.*

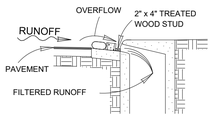
3 STAGING AREA

3 / 4" GRAVEL CONTAINED IN PERVIOUS SYNTHETIC NET BAGS (1 / 8" MESH) APPROX. 24" LONG, 12" WIDE AND 6" (I.E. BLOCK HEIGHT) HIGH.



PLAN

SCALE : 1" = 5'



SECTION G-G

SCALE : 1" = 5'

NOTE:
GRAVEL FILTERS CAN BE USED ON PAVEMENT OR BARE GROUND.

CURB INLET GRAVEL FILTER

2 CURB INLET PROTECTION
N.T.S.

SEDIMENTATION AND EROSION CONTROLS

A. DESIGN CRITERIA
(1) FENCES ARE TO BE CONSTRUCTED ALONG LEVEL CONTOURS.
(2) THE ENDS OF THE FENCE SHALL BE TURNED UPSTREAM TO PREVENT BYPASS OF STORMWATER.
(3) STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
(4) THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT). WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
(5) THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
(6) SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE. WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 6" DOUBLE OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
(7) INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
(8) ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO THE ADDITIONAL SILTATION.

B. TEMPORARY DIVERSION DIKE
(1) MAXIMUM DEPTH OF FLOW AT THE DIKE SHALL BE 1 FOOT.
(2) SIDE SLOPES OF THE DIVERSION DIKE SHALL BE 3:1 OR FLATTER.
(3) MINIMUM WIDTH OF THE EMBANKMENT AT THE TOP SHALL BE 2 FEET.
(4) MINIMUM EMBANKMENT HEIGHT SHALL BE 18 INCHES AS MEASURED FROM THE TOE OF SLOPE ON THE UPGRADE SIDE OF THE BERM. (5) THE DIKES SHALL REMAIN IN PLACE UNTIL ALL DISTURBED AREAS WHICH ARE PROTECTED BY THE DIKE ARE PERMANENTLY STABILIZED UNLESS OTHER CONTROLS ARE PUT INTO PLACE TO PROTECT THE SITE.
(6) COMPACTED EARTH DIKES REQUIRE STABILIZATION IMMEDIATELY UPON PLACEMENT SO AS NOT TO CONTRIBUTE TO THE PROBLEM THEY ARE ADDRESSING.
(7) ALL DIVERSION DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
(8) DIKES MUST BE INSPECTED ON A REGULAR BASIS TO DETERMINE IF SILT IS BUILDING UP BEHIND THE DIKE, OR IF EROSION IS OCCURRING ON THE FACE OF THE DIKE. SILT SHALL BE REMOVED IN A TIMELY MANNER. IF EROSION IS OCCURRING ON THE FACE OF THE DIKE, THE SLOPES OF THE FACE SHALL BE STABILIZED.

C. INTERCEPTOR SWALE
(1) MAXIMUM DEPTH OF FLOW IN THE SWALE SHALL BE 1 FOOT.
(2) THE MINIMUM BOTTOM WIDTH OF THE SWALE SHALL BE 2 FEET.
(3) SIDE SLOPES OF THE SWALE SHALL BE 3:1 OR FLATTER.
(4) MINIMUM DESIGN CHANNEL FREEBOARD SHALL BE 6 INCHES.
(5) SWALES MUST MAINTAIN POSITIVE GRADE TO AN ACCEPTABLE OUTLET.
(6) INTERCEPTOR SWALES MUST BE STABILIZED IMMEDIATELY UPON EXCAVATION SO AS NOT TO CONTRIBUTE TO THE EROSION PROBLEM THEY ARE ADDRESSING.
(7) ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS AND OTHER MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
(8) ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE DISPOSED OF IN AN APPROVED SPOILS SITE.
(9) INSPECTION MUST BE MADE AFTER EACH RAIN EVENT TO LOCATE AND REPAIR ANY DAMAGE TO THE CHANNEL OR TO CLEAR DEBRIS OR OTHER OBSTRUCTIONS SO AS NOT TO DIMINISH FLOW CAPACITY. DAMAGES WHICH RESULT FROM NORMAL CONSTRUCTION ACTIVITIES SHALL BE REPAIRED AT THE END OF EACH WORK DAY.

D. HAY BALE DIKE
(1) EACH HAY BALE SHALL BE PLACED INTO AN EXCAVATED TRENCH HAVING A DEPTH OF 4 INCHES AND A WIDTH JUST WIDE ENOUGH TO ACCOMMODATE THE BALES THEMSELVES.
(2) HAY BALES SHALL BE INSTALLED IN SUCH A WAY THAT THERE IS NO SPACE BETWEEN TO ALLOW FOR ANY KIND OF SEEPAGE.
(3) INDIVIDUAL BALES SHALL BE HELD IN PLACE BY NO LESS THAN TWO WOOD OR STEEL STAKES DRIVEN A MINIMUM DISTANCE OF 6 INCHES INTO UNDISTURBED GROUND, WITH THE FIRST STAKE DRIVEN AT AN ANGLE TOWARD THE PREVIOUSLY INSTALLED BALE.
(4) THE ENDS OF THE DIKE SHALL BE TURNED UPGRADE TO PREVENT BYPASS OF STORMWATER.
(5) INSPECTION SHALL BE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
(6) WHEN SILT REACHES A DEPTH OF 6 INCHES, IT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED SIT.
(7) HAY BALES SHALL BE REPLACED IF THERE ARE SIGNS OF DEGRADATION SUCH AS STRAW LOCATED DOWNSTREAM FROM THE BALES, STRUCTURAL DEFICIENCIES DUE TO ROTTING STRAW IN THE BALE OR OTHER SIGNS OF DETERIORATION. SEDIMENT SHOULD BE REMOVED FROM BEHIND THE BALES WHEN IT REACHES A DEPTH OF APPROXIMATELY 6 INCHES. IF THE BALES BECOME CLOGGED, THEY SHOULD BE REPLACED IMMEDIATELY.

E. SANDBAG BERM
(1) MINIMUM HEIGHT SHALL BE 18 INCHES.
(2) MINIMUM WIDTH OF THE BERM SHALL BE 18 INCHES AT THE TOP AND 48 INCHES MEASURED AT THE BOTTOM.
(3) MAXIMUM SIDE SLOPES SHALL BE 2:1.
(4) THE ENDS OF THE BERM SHALL BE TURNED UPGRADE OR SHALL TIE INTO NATURAL GRADES TO PREVENT BYPASS OF STORMWATER.
(5) SANDBAGS SHOULD BE STACKED IN AT LEAST THREE ROWS ABUTTING EACH OTHER, AND IN STAGGERED ARRANGEMENT.
(6) INSPECTIONS SHOULD BE MADE ON A DAILY BASIS AND AFTER EACH RAIN EVENT. THE SANDBAGS SHALL BE RESHAPED OR REPLACED AS NEEDED DURING THE INSPECTION. SILT SHOULD BE REMOVED WHEN IT REACHES A DEPTH OF SIX (6) INCHES.

F. STONE OUTLET SEDIMENT TRAP
(1) MINIMUM WIDTH OF THE EMBANKMENT AT THE TOP SHALL BE 3 FEET PERPENDICULAR TO THE FLOW.
(2) MINIMUM EMBANKMENT SLOPE SHALL BE 3:1.
(3) MAXIMUM EMBANKMENT HEIGHT SHALL BE 2 FEET AS MEASURED FROM THE TOE OF SLOPE TO THE CREST OF THE STONE OUTLET. THE HEIGHT OF THE COMPACTED EARTH EMBANKMENT SHALL BE ONE FOOT HIGHER THAN THE CREST OF THE OUTLET.
(4) SEDIMENT SHALL BE REMOVED AND THE AREA DIRECTLY BEHIND THE BERM SHALL BE REGRADED TO ITS ORIGINAL DIMENSIONS AT SUCH POINT WHEN THE CAPACITY OF IMPOUNDMENT HAS BEEN REDUCED TO ONE-HALF OF ITS ORIGINAL STORAGE CAPACITY.
(5) THE STONE OUTLET STRUCTURE SHOULD BE INSPECTED FREQUENTLY AND AFTER EACH MAJOR RAIN EVENT TO CHECK FOR CLOGGING OF THE VOID SPACES BETWEEN STONES. IF THE AGGREGATE APPEARS TO BE SILTED IN SUCH THAT EFFICIENCY IS DIMINISHED, THE STONE SHOULD BE REPLACED.

G. SEDIMENT BASIN
(1) MAXIMUM DRAINAGE AREA CONTRIBUTING TO THE BASIN SHALL BE 100 ACRES.
(2) DEPOSITED SEDIMENT SHALL BE REMOVED WHEN THE STORAGE CAPACITY OF THE BASIN HAS BEEN DEPLETED BY ONE-HALF.
(3) MINIMUM WIDTH OF THE EMBANKMENT AT THE TOP SHALL BE 8 FEET.
(4) MINIMUM EMBANKMENT SLOPE SHALL BE 3:1.
(5) SEDIMENT SHALL BE REMOVED AND THE BASIN SHALL BE REGRADED TO ITS ORIGINAL DIMENSIONS. THE REMOVED SEDIMENT SHALL BE STOCKPILED OR REDISTRIBUTED IN AREAS WHICH ARE PROTECTED FROM EROSION.
(6) THE BASIN OUTLET STRUCTURE AND EMERGENCY SPILLWAY (IF PRESENT) SHOULD BE CHECKED FREQUENTLY AND AFTER EACH MAJOR RAIN EVENT TO CHECK FOR DAMAGE.

H. STABILIZED CONSTRUCTION EXIT
(1) STONE SIZE - 3 TO 5 INCHES CRUSHED ROCK.
(2) LENGTH - AS EFFECTIVE, BUT NOT LESS THAN 50 FEET, UNLESS DEPTH OF LOT IS LESS THAN 150 FEET FROM EDGE OF PAVEMENT WHERE LENGTH MUST ONLY BE 30 FEET.
(3) THICKNESS - NOT LESS THAN 8 INCHES.
(4) WIDTH - NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
(5) WASHING - WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
(6) MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY, MUST BE REMOVED IMMEDIATELY.
(7) DRAINAGE - ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

ADDITIONAL NOTES: ADDITIONAL NOTES:
(1) UPON COMPLETION OF CONSTRUCTION ALL DISTURBED AREAS SHALL BE REVEGETATED TO 85% OF EXISTING CONDITIONS IN ACCORDANCE WITH THE SWPPP AND TPDES REQUIREMENTS.
(2) THIS PROJECT WILL NOT USE ANY OFF-SITE MATERIAL, WASTE/BORROW/FILL, OR EQUIPMENT STORAGE AREAS.
(3) THIS SITE IS NOT LOCATED ADJACENT TO ANY SURFACE WATERS.
(4) THIS SITE WILL NOT HAVE ANY LOCATIONS WHERE STORM WATER DISCHARGES DIRECTLY TO A SURFACE WATER BODY.

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9/12/24

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3815 S. CAPITAL OF TEXAS HWY. STE 275
AUSTIN, TX 78704

PRAIRIE GREEN - UNIT 2
PLAT NO. 23-11800525

STORM WATER POLLUTION PREVENTION PLAN DETAILS

REV	DATE	DESCRIPTION	BY

DESIGNED BY:
DRAFTED BY:
CHECKED BY:

SHEET
C7.1

Date: Sep 12, 2024, 2:57pm User ID: Li Ramcone
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