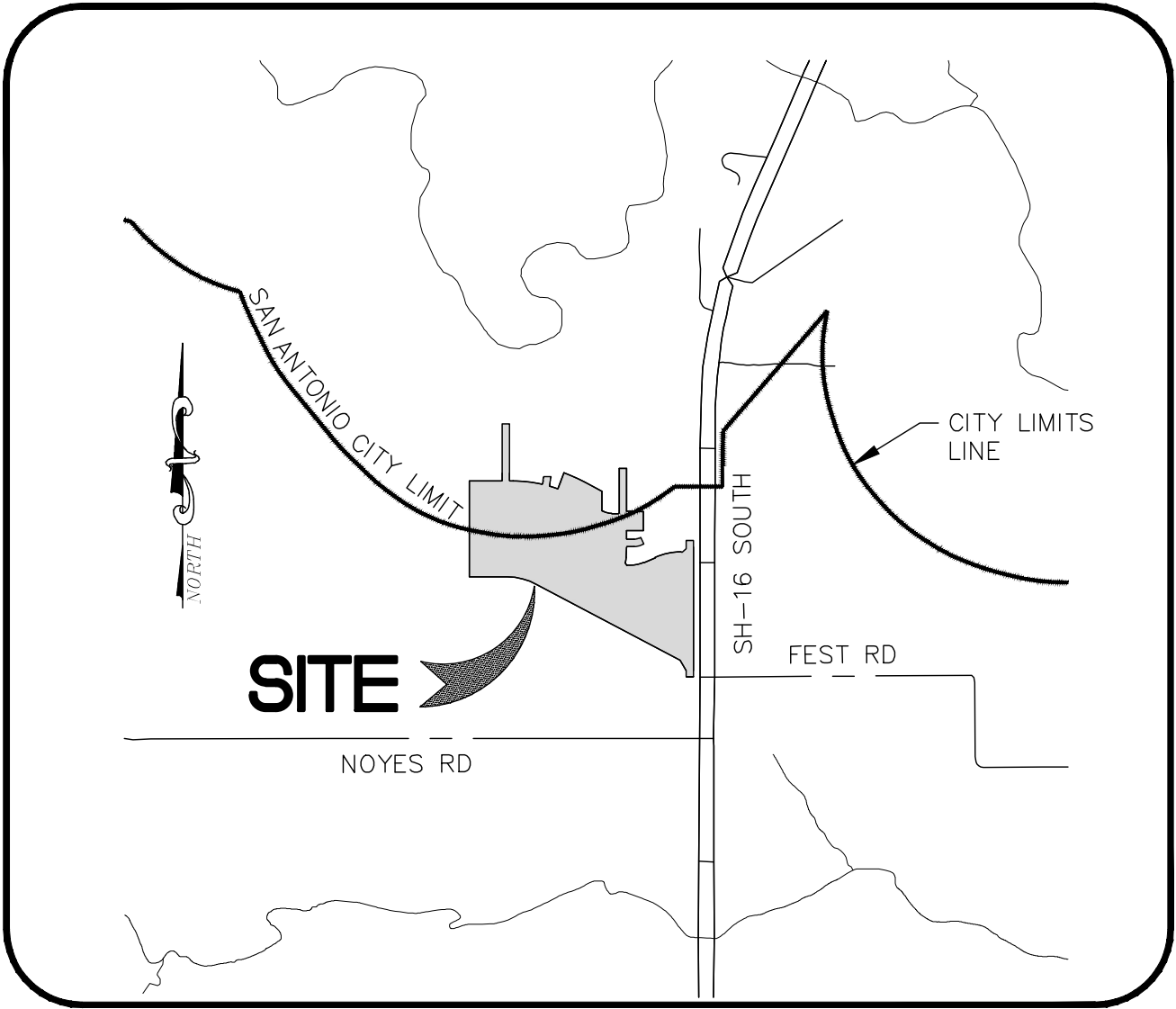


CONSTRUCTION PLANS FOR

VERDIN SUBDIVISION, UNIT 1

SUBMITTED BY:
MOY TARIN RAMIREZ ENGINEERS, LLC.
12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249
TEL: (210) 698-5051
FAX: (210) 698-5085

OWNER/DEVELOPER
KINGFISH DEVELOPMENT, LLC
2722 W. BITTERS RD. SUITE 106
SAN ANTONIO, TX 78248
210-882-6800



VICINITY MAP
N.T.S.

SUBMITTAL DATE:
SEPTEMBER 2022

RESUBMITTAL DATE:
DECEMBER 2022

LEGAL DESCRIPTION:

BEING A 27.677 TRACT OF LAND PARTIALLY WITHIN THE CITY OF SAN ANTONIO CITY LIMITS, BEXAR COUNTY, TEXAS, BEING SITUATED IN THE RUFENO RODRIGUEZ SURVEY NO. 49, ABSTRACT NO. 613, COUNTY BLOCK NO. 4202, AS CONVEYED TO KINGFISH DEVELOPMENT, LLC BY WARRANTY DEED WITH VENDOR'S LIEN AS RECORDED IN DOCUMENT NUMBER 20220169411, BEXAR COUNTY TEXAS.



• Engineers
• Surveyors
• Planners

Moy Tarin Ramirez Engineers, LLC

FIRM TBPELS ENG F-5297 SVY F-10131500
12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249
TEL: (210) 698-5051
FAX: (210) 698-5085

SHEET INDEX

SHEET NO.	TITLE
C0.0	OVERALL COVER
C1.0	UTILITY COVER
C1.1	OVERALL UTILITY IMPORVEMENTS
C1.2	OVERALL UTILITY IMPROVEMENTS
C2.0	SEWER COVER
C2.1	SEWER OVERALL
C2.2	SEWER OVERALL
C2.3	SEWER LINE B PLAN AND PROFILE
C2.4	SEWER LINE C PLAN AND PROFILE
C2.5	SEWER LINE C PLAN AND PROFILE
C2.6	SEWER LINE D PLAN AND PROFILE
C2.7	SEWER LINE E PLAN AND PROFILE
C2.8	SEWER LINE F PLAN AND PROFILE
C2.9	SEWER LINE G PLAN AND PROFILE
C2.10	SEWER DETAILS
C3.0	WATER COVER
C3.1	WATER OVERALL
C3.2	WATER OVERALL PLAN
C3.3	WATER DETAILS
C3.4	WATER DETAILS
C4.0	STREET COVER
C4.1	TRAFFIC PLAN
C4.2	TRAFFIC PLAN
C4.2A	TxDOT PAVEMENT MARKING DETAILS
C4.3	BEXAR TRAFFIC DETAILS
C4.4	BEXAR TRAFFIC DETAILS
C4.5	COSA TRAFFIC DETAILS
C4.6	KINGBIRD PATH PLAN AND PROFILE
C4.7	KINGBIRD PATH PLAN AND PROFILE
C4.8	GROSBEEK WAY PLAN AND PROFILE
C4.9	LONGSPUR DR PLAN AND PROFILE
C4.10	MURRE WAY PLAN AND PROFILE
C4.11	KINGLET WAY PLAN AND PROFILE
C4.12	STANDARD DETAILS
C4.13	STANDARD DETAILS
C4.14	STANDARD STREET SECTIONS
C4.15	DRAIN "A" PLAN AND PROFILE
C4.16	DRAIN "B" PLAN AND PROFILE
C4.17	DRAIN "C" PLAN AND PROFILE
C4.18	DRAIN "D" PLAN AND PROFILE
C4.19	DRAIN "D" PLAN AND PROFILE
C4.20	DRAIN "G" PLAN AND PROFILE
C4.21	DRAIN "G" DETAILS
C5.0	GRADING PLAN
C5.1	GRADING PLAN
C6.0	SW3P PLAN
C6.1	SW3P DETAILS

BEXAR COUNTY

SUBMITTAL SET

TEXAS C0.0

SUBMITTED BY:
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12770 CIMARRON PATH, SUITE 100
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OWNER/DEVELOPER
KINGFISH DEVELOPMENT, LLC
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SAN ANTONIO, TX 78248
210-882-6800

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.

UTILITY GENERAL NOTES

- 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.
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 - SEWER STAKING AT 100-FT INTERVALS.
 - STAKING FOR WATER SERVICES.
 - STAKING FOR DRAINAGE CHANNELS.
 - FINAL STREET STAKING.
 - METER BOX STAKING.
 - CPS STAKING.
 - SETTING OF LOT CORNERS.

CPS NOTES:

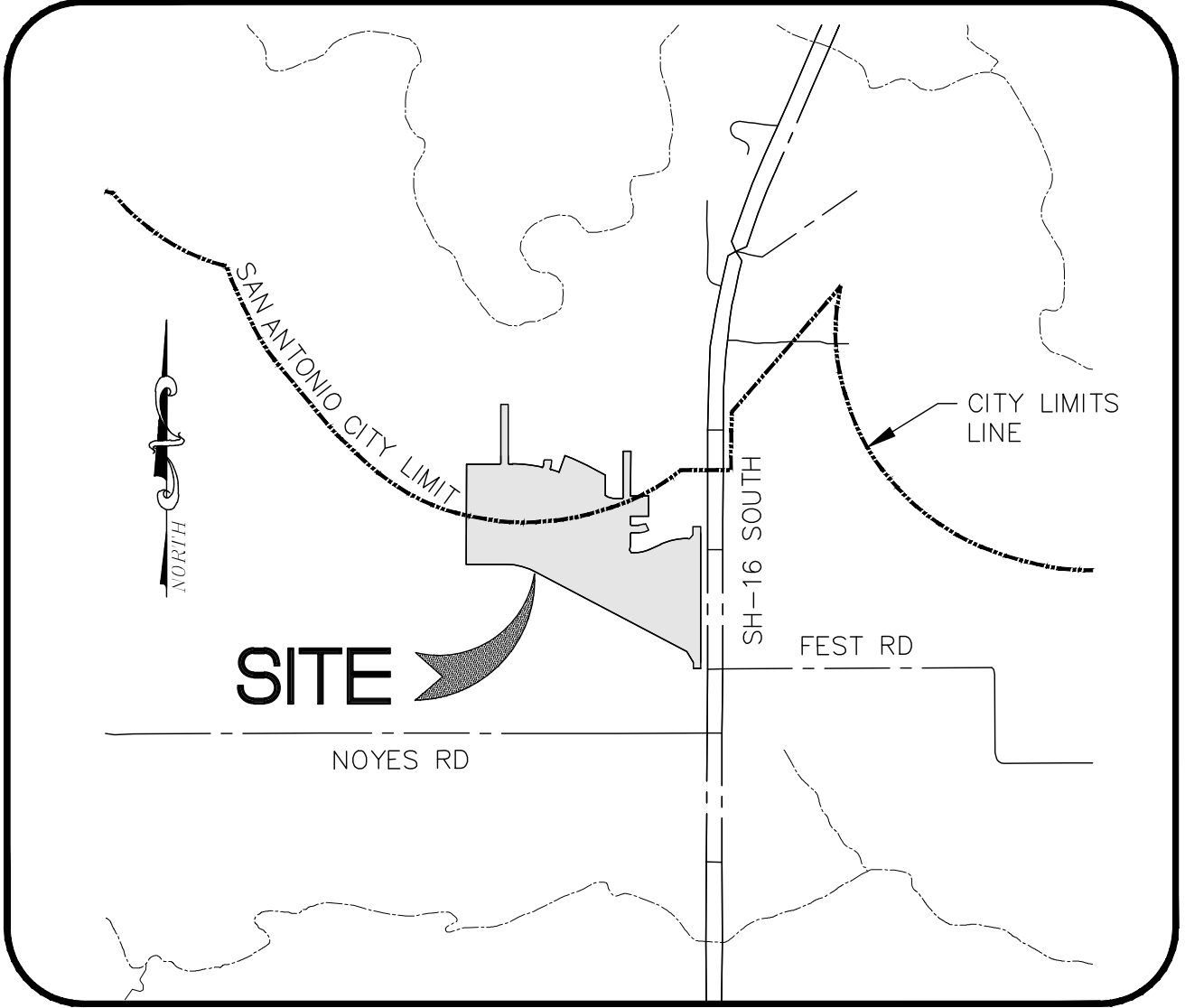
- CPS TO SUPPLY ALL ELECTRIC CONDUITS FOR TRENCH AS FOLLOWS:
PRIMARY - 2 1/2" HDPE SCHEDULE 40
SECONDARY - 3" PVC SCHEDULE 40
SERVICE STUBS - 2 1/2" PVC SCHEDULE 40
- 6" P.V.C. SCHEDULE 80 WILL BE REQUIRED FOR C.P.S. UTILITIES CROSSINGS WHEN DRAIN OR STREET CONSTRUCTION PRECEDES UTILITY INSTALLATION.
- 4" P.V.C. SCHEDULE 40 WILL BE REQUIRED FOR UNDERGROUND TELEPHONE AND CABLE T.V. IF ABOVE APPLIES.
- P.V.C. CONDUIT WITH 90° SWEEPS TO 6" ABOVE GRADE WITH CAP.

NOTE :

TELEPHONE AND CABLE LINES TO GO IN JOINT TRENCH WITH CITY PUBLIC SERVICE.

LEGEND

- | | |
|---|--------------|
| EXISTING WATER MAIN | 8"W |
| PROPOSED WATER MAIN | 8"W |
| PROPOSED FIRE HYDRANT | 8"SS |
| EXISTING FIRE HYDRANT | 8"SS |
| PROPOSED GATE VALVE | 8"SS |
| EXISTING GATE VALVE | 8"SS |
| PROPOSED SANITARY SEWER MAIN | 8"SS |
| EXISTING SANITARY SEWER MAIN | 8"SS |
| EXISTING OVERHEAD ELECTRIC | OHE |
| EXISTING UNDERGROUND ELECTRIC | UE |
| EXISTING UNDERGROUND TELEPHONE | UGT |
| EXISTING STREET LIGHT | D.P.R.B.C.T. |
| OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS | O.P.R.M.C.T. |
| OFFICIAL PUBLIC RECORDS OF MEDINA COUNTY, TEXAS | O.P.R.M.C.T. |
| PROPOSED STREET LIGHT UG, 100W AND SINGLE ARM | PP |
| PROPOSED STREET LIGHT UG, 250W AND SINGLE ARM | PP |
| EXISTING POWER POLE | PP |
| EXISTING SECONDARY ENCLOSURE | PP |
| PROPOSED SECONDARY ENCLOSURE | PP |
| PROPOSED POWER POLE | PP |
| PROPOSED TRANSFORMER | PP |
| PROPOSED WATER SERVICE | PP |
| PROPOSED SERVICE LATERAL WITH ONE-WAY CLEANOUT | PP |
| EXISTING TRANSFORMER | PP |
| EXISTING IRRIGATION CONTROL VALVE | PP |
| EXISTING WATER METER | PP |



VICINITY MAP
N.T.S.

SUBMITTAL DATE:
SEPTEMBER 2022

RESUBMITTAL DATE:
DECEMBER 2022

LEGAL DESCRIPTION:

BEING A 27.677 TRACT OF LAND PARTIALLY WITHIN THE CITY OF SAN ANTONIO, NEW CITY BLOCK 16595, BEXAR COUNTY, TEXAS, BEING SITUATED IN THE RUFENO RODRIGUEZ SURVEY NO. 49, ABSTRACT NO. 613, COUNTY BLOCK NO. 4202, BEING A PORTION OF A 131.81 ACRE TRACT, AS CONVEYED TO KINGFISH DEVELOPMENT, LLC BY WARRANTY DEED WITH VENDOR'S LIEN AS RECORDED IN DOCUMENT NUMBER 20220169411, BEXAR COUNTY TEXAS.

NOTE TO CONTRACTOR:

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

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



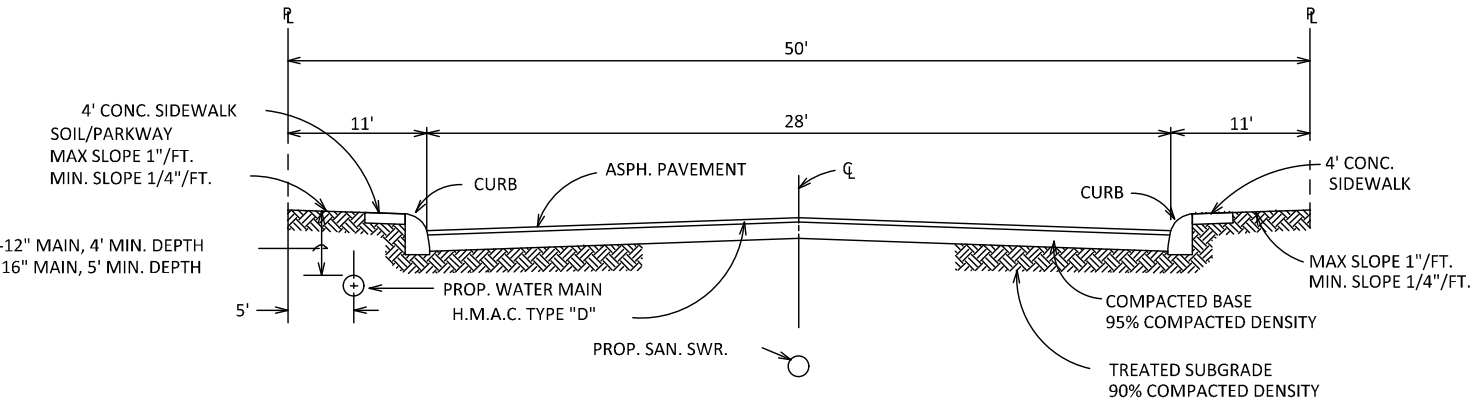
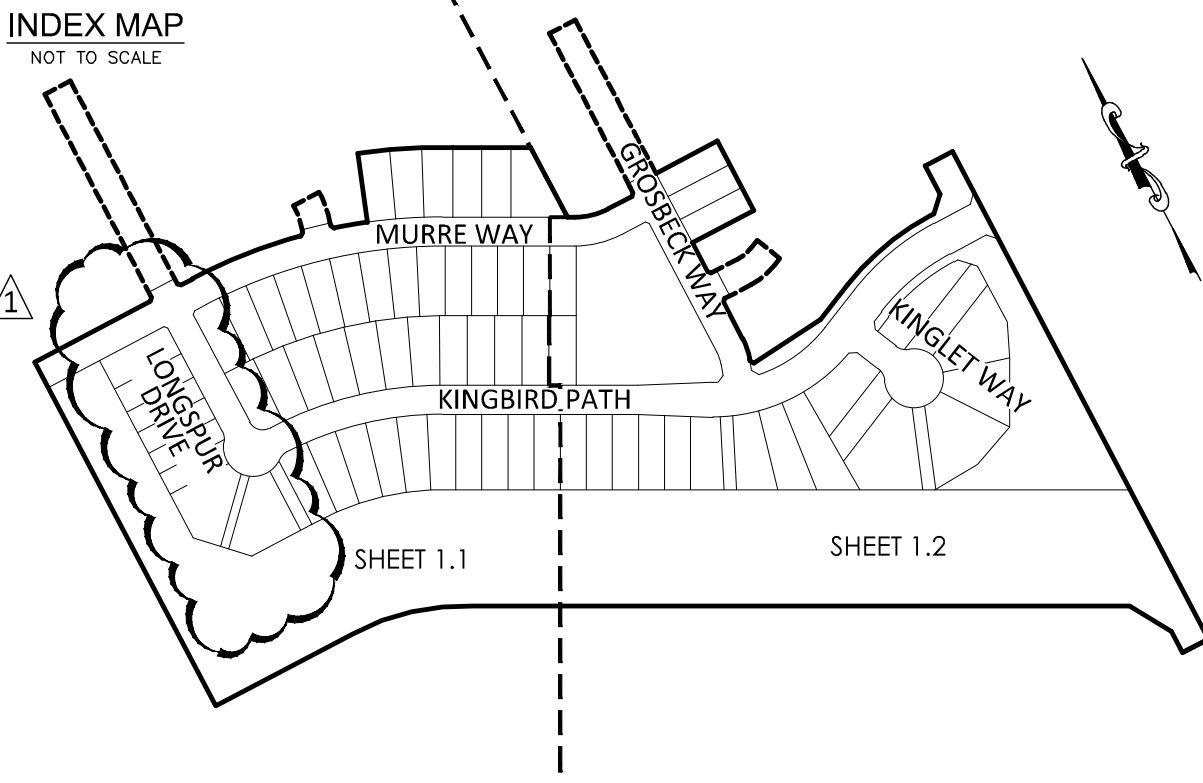
Moy Tarin Ramirez Engineers, LLC
FIRM TBPELS ENG F-5297 SVY F-10131500

12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249
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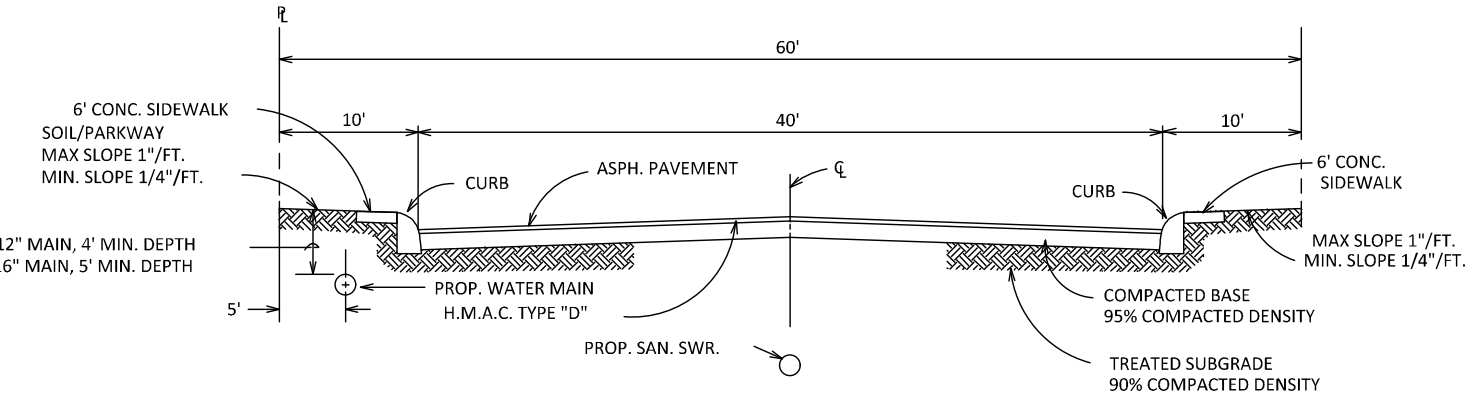
- Engineers
- Surveyors
- Planners

SHEET INDEX

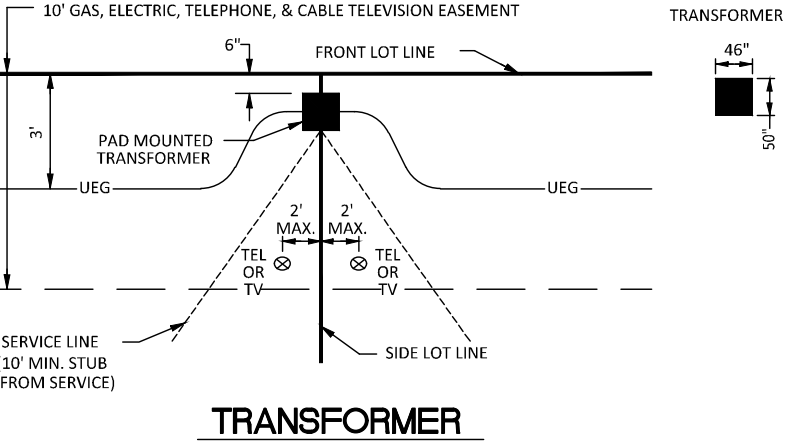
Sheet Number	Sheet Title
C1.0	UTILITY COVER
C1.1	OVERALL UTILITY IMPROVEMENTS
C1.2	OVERALL UTILITY IMPROVEMENTS



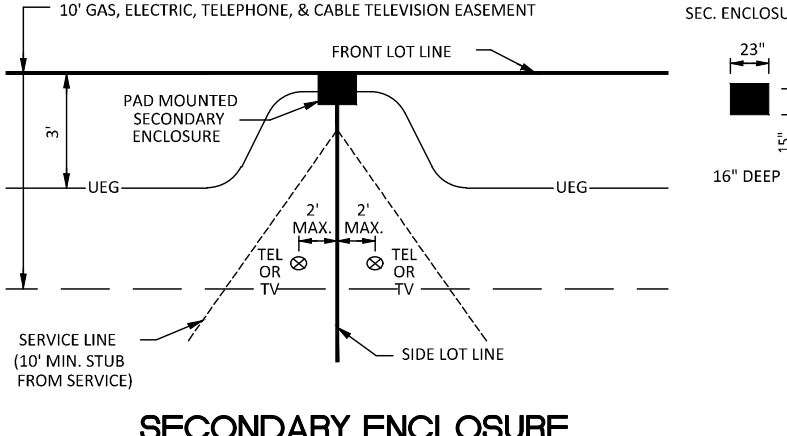
TYPICAL STREET CROSS-SECTION (28' PAVEMENT)
N.T.S.



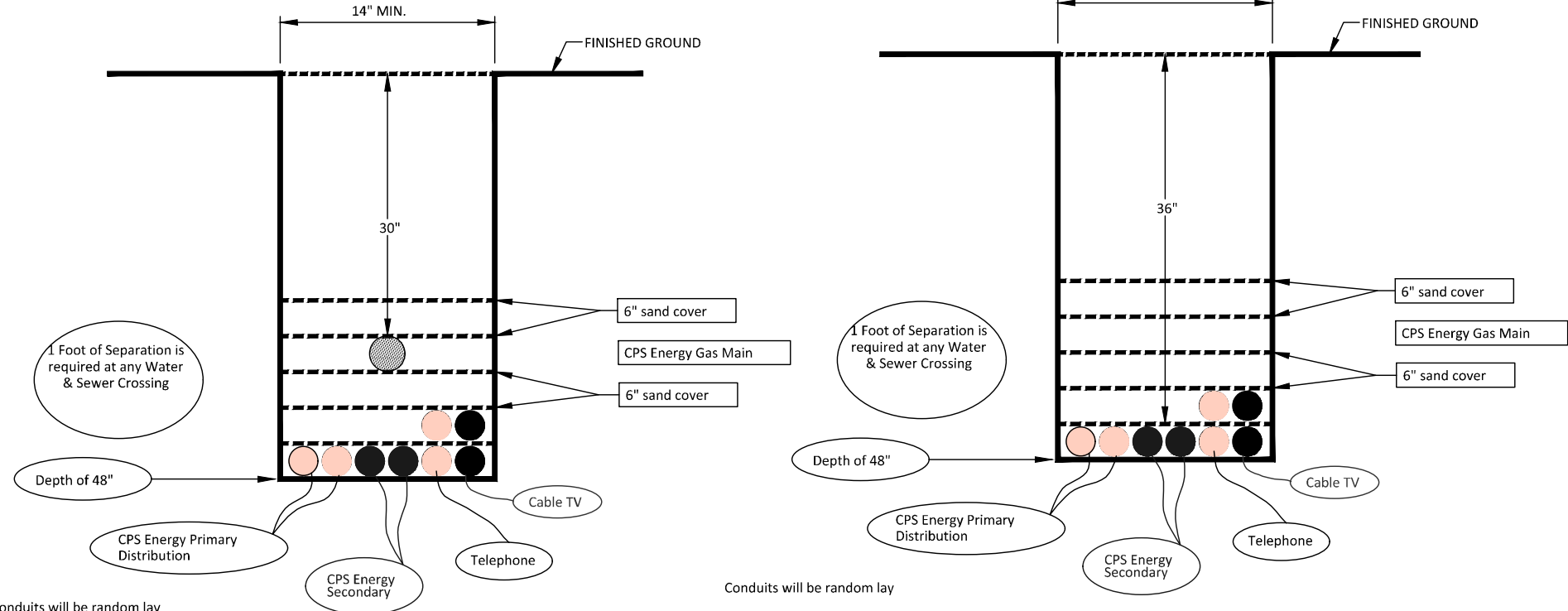
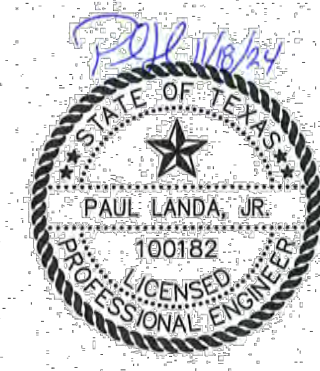
TYPICAL STREET CROSS-SECTION (40' PAVEMENT)
N.T.S.



TRANSFORMER



**SECONDARY ENCLOSURE
FRONT LOADED**



**Standards for Gas and Electric Trench
or Electric Trench with Joint Utilities**
NOT TO SCALE
Trench Diagram

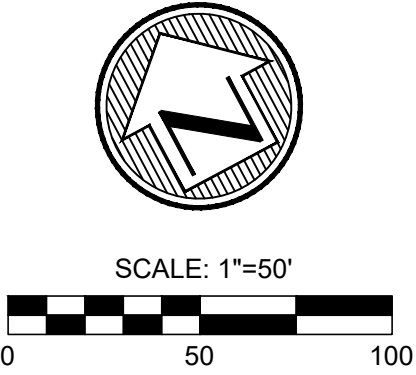
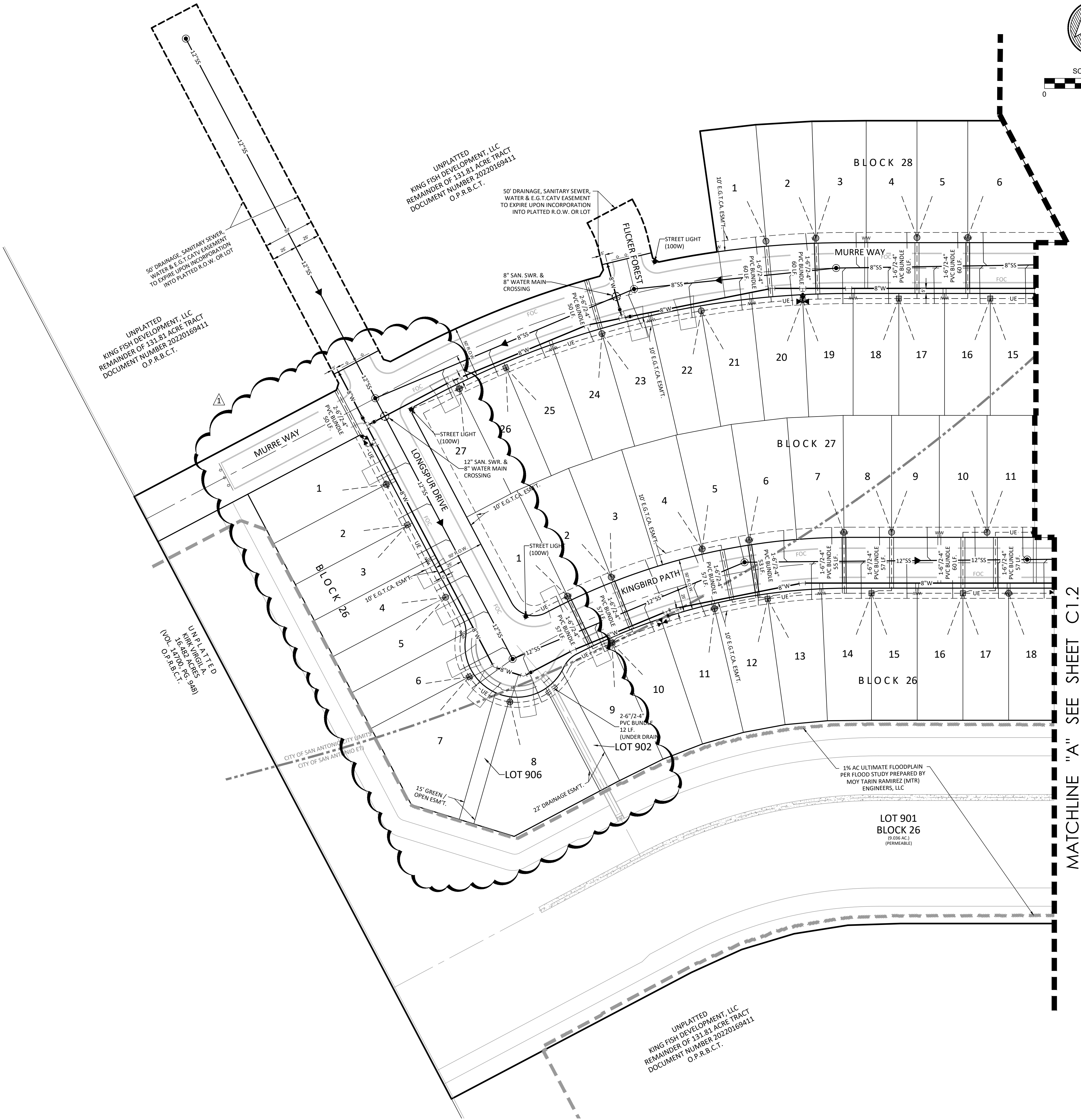
TRENCH DETAILS

**Standards for Electric Trench
or Electric Trench with Joint Utilities**
NOT TO SCALE
Trench Diagram

BEXAR COUNTY

SUBMITTAL SET

TEXAS C1.0



LEGEND

EXISTING WATER MAIN	8" W
PROPOSED WATER MAIN	8" W
PROPOSED FIRE HYDRANT	8" W
EXISTING FIRE HYDRANT	8" W
PROPOSED GATE VALVE	8" W
EXISTING GATE VALVE	8" W
PROPOSED SANITARY SEWER MAIN	8" SS
EXISTING SANITARY SEWER MAIN	8" SS
EXISTING OVERHEAD ELECTRIC	OHE
EXISTING UNDERGROUND ELECTRIC	UE
EXISTING UNDERGROUND TELEPHONE	UGT
EXISTING STREET LIGHT	STREET LIGHT (100W)
OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS	D.P.R.B.C.T.
OFFICIAL PUBLIC RECORDS OF MEDINA COUNTY, TEXAS	O.P.R.M.C.T.
PROPOSED STREET LIGHT UG, 100W AND SINGLE ARM	STREET LIGHT (100W)
PROPOSED STREET LIGHT UG, 250W AND SINGLE ARM	STREET LIGHT (250W)
EXISTING POWER POLE	PP
EXISTING SECONDARY ENCLOSURE	PP
PROPOSED SECONDARY ENCLOSURE	PP
PROPOSED POWER POLE	PP
PROPOSED TRANSFORMER	PP
PROPOSED WATER SERVICE	PP
PROPOSED IRRIGATION SERVICE	PP
PROPOSED SERVICE LATERAL WITH ONE-WAY CLEANOUT	PP
EXISTING TRANSFORMER	PP
EXISTING IRRIGATION CONTROL VALVE	PP
EXISTING WATER METER	PP

UTILITY GENERAL NOTES

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CPS NOTES:

- CPS TO SUPPLY ALL ELECTRIC CONDUITS FOR TRENCH AS FOLLOWS:

PRIMARY - 2 1/2" HDPE SCHEDULE 40
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NOTE :

TELEPHONE AND CABLE LINES TO GO IN JOINT TRENCH WITH CITY PUBLIC SERVICE.

CAUTION: EXISTING UNDERGROUND UTILITIES, CONTRACTOR TO VERIFY PRIOR TO START OF ANY CONSTRUCTION.

NOTE TO CONTRACTOR:

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TRENCH EXCAVATION SAFETY PROTECTION

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REVISIONS		BY	DATE
NO.	DESCRIPTION		
1	11/18/24 REVISED LOT LAYOUT		

Engineers
Surveyors
Planners

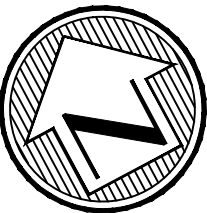
Moy Tarin Ramirez Engineers, LLC
TBEPLS: ENGINEERING F-5297 / SURVEYING: F-10131500
12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5065



VERDIN SUBDIVISION, UNIT 1
OVERALL UTILITY IMPROVEMENTS PLAN

UTILITY GENERAL NOTES

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 - F. FINAL STREET STAKING.
 - G. METER BOX STAKING.
 - H. CPS STAKING.
 - I. SETTING OF LOT CORNERS.



SCALE: 1"=50'

0 50 100

CAUTION!!!
EXISTING ELECTRIC MAIN, GRAY WATER MAIN, SANITARY SEWER MAIN, MANHOLES, DISCHARGE PIPE AND UTILITIES CROSSING. CONTRACTOR TO VERIFY LOCATION; VERTICAL AND HORIZONTAL OF EXISTING UTILITIES BEFORE CONSTRUCTION. IF ANY DISCREPANCY NOTIFY ENGINEER

LEGEND

- EXISTING WATER MAIN
PROPOSED WATER MAIN
PROPOSED FIRE HYDRANT
EXISTING FIRE HYDRANT
PROPOSED GATE VALVE
EXISTING GATE VALVE
PROPOSED SANITARY SEWER MAIN
EXISTING SANITARY SEWER MAIN
EXISTING OVERHEAD ELECTRIC
EXISTING UNDERGROUND ELECTRIC
EXISTING UNDERGROUND TELEPHONE
EXISTING STREET LIGHT
OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS
OFFICIAL PUBLIC RECORDS OF MEDINA COUNTY, TEXAS
PROPOSED STREET LIGHT UG, 100W AND SINGLE ARM
PROPOSED STREET LIGHT UG, 250W AND SINGLE ARM
EXISTING POWER POLE
EXISTING SECONDARY ENCLOSURE
PROPOSED SECONDARY ENCLOSURE
PROPOSED POWER POLE
PROPOSED TRANSFORMER
PROPOSED WATER SERVICE
PROPOSED IRRIGATION SERVICE
PROPOSED SERVICE LATERAL WITH ONE-WAY CLEANOUT
EXISTING TRANSFORMER
EXISTING IRRIGATION CONTROL VALVE
EXISTING WATER METER

NOTE TO CONTRACTOR:

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TRENCH EXCAVATION SAFETY PROTECTION

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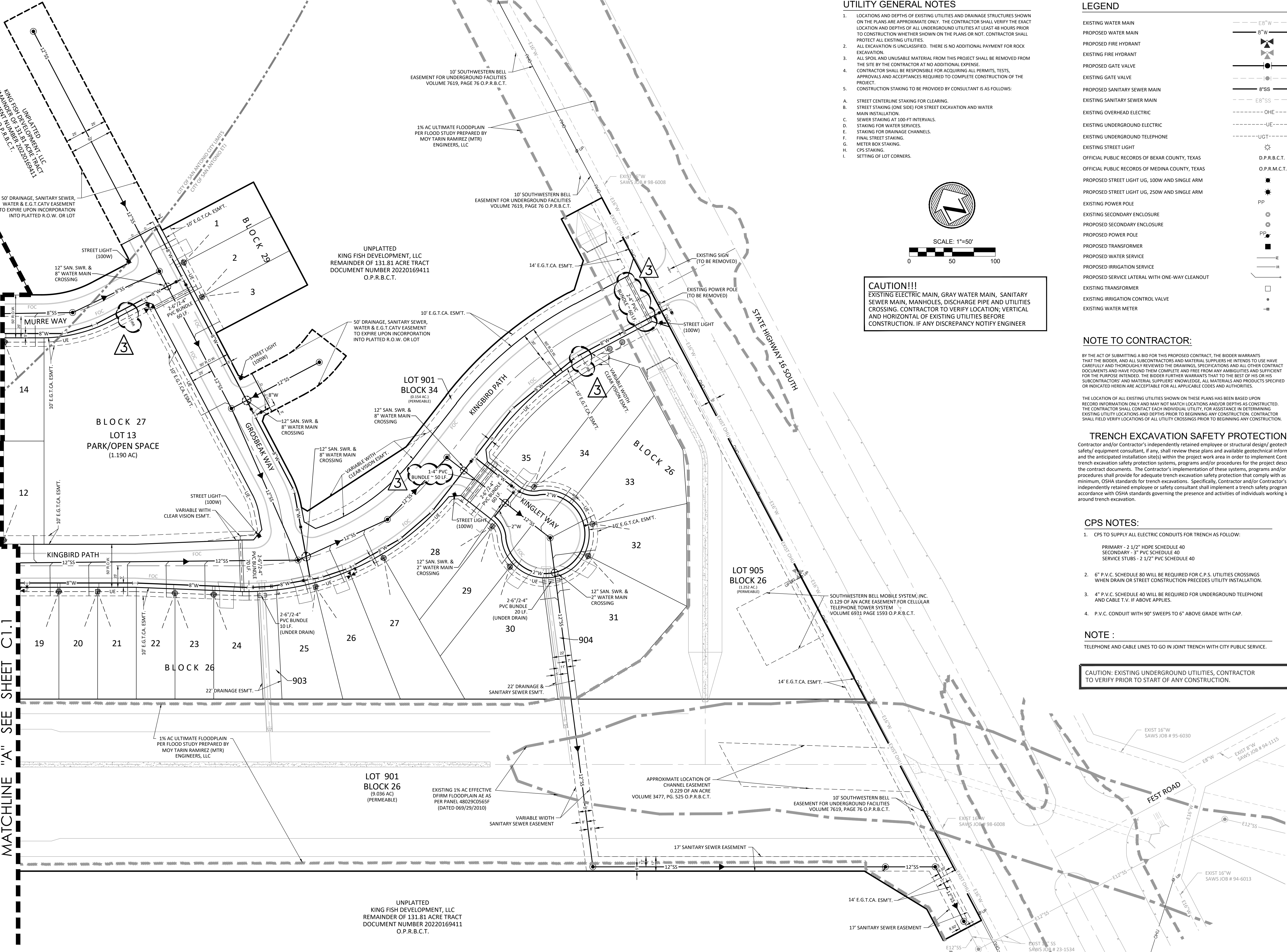
CPS NOTES:

1. CPS TO SUPPLY ALL ELECTRIC CONDUITS FOR TRENCH AS FOLLOW:
 - PRIMARY - 2 1/2" HDPE SCHEDULE 40
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2. 6" P.V.C. SCHEDULE 80 WILL BE REQUIRED FOR C.P.S. UTILITIES CROSSINGS WHEN DRAIN OR STREET CONSTRUCTION PRECEDES UTILITY INSTALLATION.
3. 4" P.V.C. SCHEDULE 40 WILL BE REQUIRED FOR UNDERGROUND TELEPHONE AND CABLE T.V. IF ABOVE APPLIES.
4. P.V.C. CONDUIT WITH 90° SWEEPS TO 6" ABOVE GRADE WITH CAP.

NOTE :

TELEPHONE AND CABLE LINES TO GO IN JOINT TRENCH WITH CITY PUBLIC SERVICE.

CAUTION: EXISTING UNDERGROUND UTILITIES, CONTRACTOR TO VERIFY PRIOR TO START OF ANY CONSTRUCTION.



REVISIONS		DESCRIPTION	BY	DATE
NO.	3	INCR. IRRIGATION SERV. SIZE + ADDED CONDUIT	DMC	03/10/25

Engineers
Surveyors
Planners

May Tarin Ramirez Engineers, LLC
TPEBLS: ENGINEERING F-5297 SURVEYING: F-10131500
12770 CHARRON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5055



VERDIN SUBDIVISION, UNIT 1
OVERALL UTILITY IMPROVEMENTS PLAN

SUBMITTED BY:
MOY TARIN RAMIREZ ENGINEERS, LLC.
12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249
TEL: (210) 698-5051
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CONSTRUCTION PLANS FOR

VERDIN SUBDIVISION, UNIT 1

SANITARY SEWER IMPROVEMENTS

SAWS CONSTRUCTION NOTES COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT JANUARY 2022

General Section

- All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:
 - Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.
 - Current TxDOT "Standard Specifications for Construction of Highways, Streets and Drainage".
 - Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".
 - Current City of San Antonio "Standard Specifications for Public Works Construction".
 - Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
- The contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and has been notified by SAWS Construction Inspection Division to proceed with the work and has arranged a meeting with the inspector and consultant for the work requirements. Work completed by the contractor without an approved Counter Permit and/or a GCP will be subject to removal and replacement at the expense of the contractors and/or the developer.
- The Contractor shall obtain the SAWS Standard Details from the SAWS website, http://www.saws.org/business_center/specs. Unless otherwise noted within the design plans.
- The Contractor is to make arrangements with the SAWS Construction Inspection Division at (210) 233-2973, on notification procedures that will be used to notify affected home residents and/or property owners 48 hours prior to beginning any work.
- Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor at least 1 week prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.
- The Contractor shall verify the exact location of underground utilities and drainage structures at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for locates requesting pipe location markers on SAWS facilities. The following contact information are supplied for verification purposes:
 - SAWS Utility Locates: <http://www.saws.org/Service/Locates>
 - COSA Drainage (210) 207-0724 or (210) 207-4026
 - COSA Traffic Signal Operators (210) 206-8480
 - COSA Traffic Signal Damages (210) 207-3951
 - Texas State Wide One Call Locator 1-800-545-6005 or 811
- The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if damages are made as a result of the project's construction.
- All work in Texas Department of Transportation (TxDOT) and/or Bexar County right-of-way shall be done in accordance with respective construction specifications and permit requirements.
- The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating near trees.
- The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.
- Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be sent to costworkreq@saws.org.
- Weekend Work: Contractors are required to notify the SAWS Inspection Construction Department 48 hours in advance to request weekend work. Request should be sent to costworkreq@saws.org.
- Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for proper inspection.
- Compaction note (Item 804): The contractor shall be responsible for meeting the compaction requirements on all trench backfill and for paying for the tests performed by a third party. Compaction tests will be done at one location point randomly selected, or as indicated by the SAWS Inspector and/or the test administrator, per each 12-inch loose lift per 400 linear feet at a minimum. This project will not be accepted and finalized by SAWS without this requirement being met and verified by providing all necessary documented test results.
- A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division.

Sewer Notes

- The Contractor is responsible for ensuring that no Sanitary Sewer Overflow (SSO) occurs as a result of their work. All contractor personnel responsible for SSO prevention and control shall be trained on proper response. Should an SSO occur, the contractor shall:
 - Identify the source of the SSO and notify SAWS Emergency Operations Center (EOC) immediately at (210) 233-2014. Provide the address of the spill and an estimated volume or flow.
 - Attempt to eliminate the source of the SSO.
 - Contain sewage from the SSO to the extent of preventing a possible contamination of waterways.
 - Clean up spill site (return contained sewage to the collection system if possible) and properly dispose of contaminated soil/materials.
 - Clean the affected sewer mains and remove any debris.
 - Meet all post-SSO requirements as per the EPA Consent Decree, including line cleaning and televising the affected sewer mains (at SAWS direction) within 24 hours.
- Should the Contractor fail to address an SSO immediately and to SAWS satisfaction, they will be responsible for all costs incurred by SAWS, including any fines from EPA, TCEQ and/or any other Federal, State or Local Agencies. No separate measurement or payment shall be made for this work. All work shall be done according to guidelines set by the TCEQ and SAWS.
- If bypass pumping is required, the Contractor shall perform such work in accordance with SAWS Standard Specification for Water and Sanitary Sewer Construction, Item No. 864, "Bypass Pumping".
- Prior to tie-ins, any shutdowns of existing force mains of any size must be coordinated with the SAWS Construction Inspection Division at (210) 233-2973 at least one week in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly.
- Sewer pipe where water line crosses shall be 160 psi and meet the requirements of ASTM D2241, TAC 217.53 and TCEQ 290.44(e)(4)(B). Contractor shall center a 20" joint of 160 psi pressure rated PVC at the proposed water crossing.
- ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: It shall be the responsibility of the Contractor to make allowances and adjustments for top of manholes to match the finished grade of the project's improvements. (NSPI)
- Spills, Overflows, or Discharges of Wastewater: All spills, overflows, or discharges of wastewater, recycled water, petroleum products, or chemicals must be reported immediately to the SAWS Inspector assigned to the Counter Permit or General Construction Permit (GCP). This requirement applies to every spill, overflow, or discharge regardless of size.

ADDITIONAL SEWER NOTES

- 98% COMPACTION NOTE:**
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND FOR PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED, OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12-INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

NOTES:

- SANITARY SEWER LATERALS TO BE LOCATED AS SHOWN ON THE SANITARY SEWER PLANS.
- PAY CUTS FOR SANITARY SEWERS LOCATED IN STREETS ARE ESTIMATED TO THE FINISHED SUBGRADE ELEVATION. PAY CUTS ARE TO EXISTING GROUND IN UNPAVED AREAS.
- EXTEND ALL SANITARY SEWER LATERALS TO THE PROPERTY LINE OR TO THE EASEMENT LINE AS INDICATED. ALL LATERALS ARE 35' LONG UNLESS OTHERWISE NOTED.
- SANITARY SEWER LINES AND LATERALS WILL BE PVC SDR 26 ASTM D 3034 UNLESS OTHERWISE NOTED ON PLAN AND PROFILE SHEETS.
- SDR FITTINGS WILL MATCH SDR SEWER MAIN, NO SEPARATE PAY ITEM.
- ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE UPGRADIENT SIDE OF THE SEWER TRENCH THUS ALLOWING THE TRENCH TO INTERCEPT ANY SILT CONTAMINATED RUNOFF.
- QUANTITIES ARE BASED ON CURRENT SAWS SPECIFICATIONS.
- ALL MANHOLES TO HAVE WATERTIGHT RING AND COVERS.
- ALL MANHOLES TO BE CONCRETE RING ENCASED.
- MANHOLES TO BE VENTED AS SHOWN ON THE SANITARY SEWER PLANS.
- AN *** DENOTES AN EXISTING TEE.
- ALL SANITARY SEWER LATERALS SHALL HAVE A MIN. 2.0 THE PROPERTY LINE.
- MINIMUM COVER FROM TOP OF SANITARY SEWER LATERALS TO TOP OF CURB WILL BE:

	WATER MAIN	COVER
6"	5.5'	
8"	5.7'	
12"	6.0'	
16"	7.4'	
- ALL MANHOLE OPENINGS SHALL BE 30".

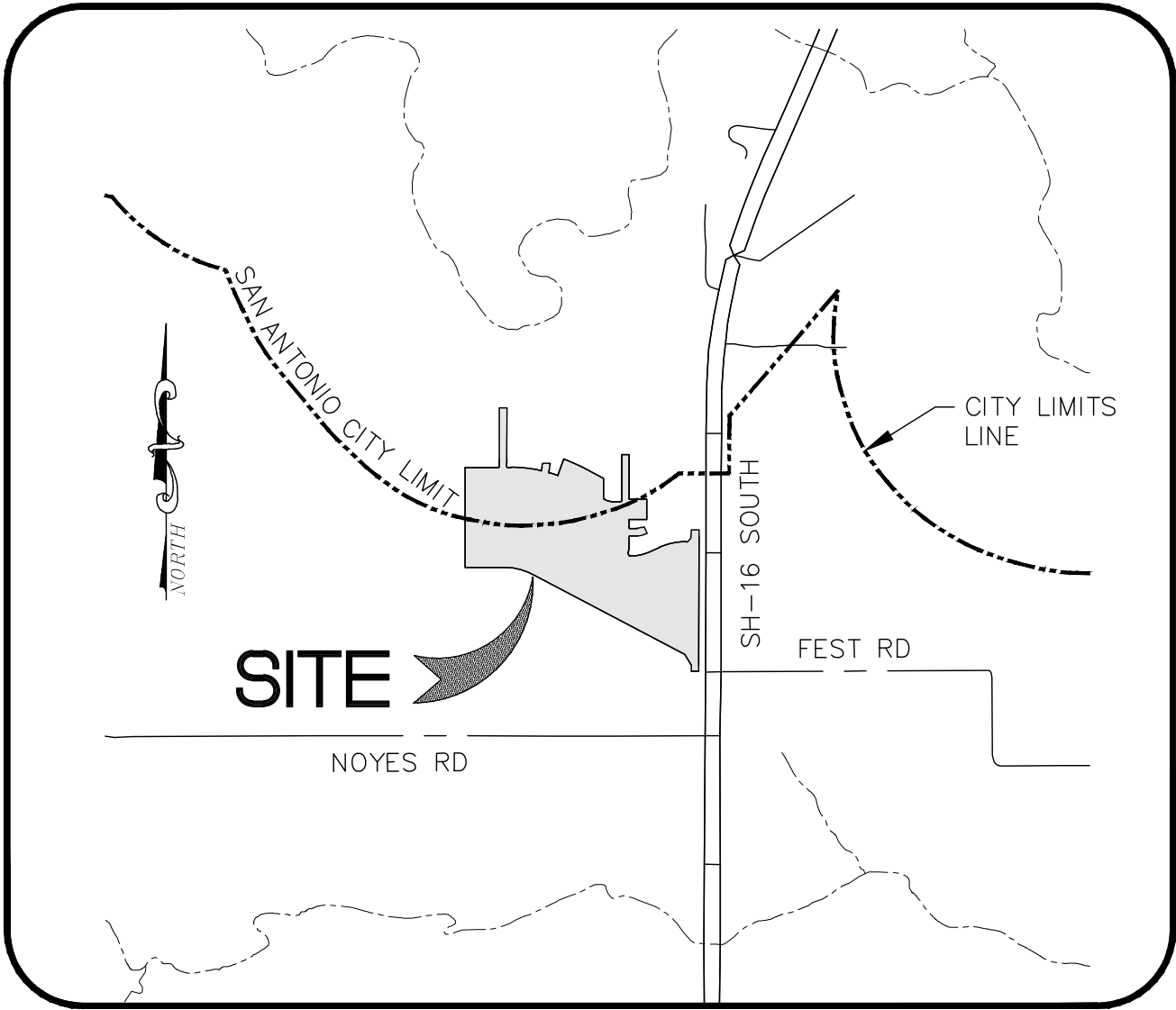
CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS

- WHERE A SEWER MAIN CROSSES OVER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE (9) FEET, ALL PORTIONS OF THE SEWER MAIN WITHIN NINE FEET (9) OF THE WATER LINE SHALL BE CONSTRUCTED USING 150 PSI PRESSURE RATED DUCTILE IRON, CAST IRON OR PVC PIPE AND JOINED WITH EQUALLY PRESSURE RATED PRESSURE RING GASKET CONNECTIONS OR CORROSION PROTECTED MECHANICAL COUPLING DEVICES OF A CAST IRON OR DUCTILE IRON MATERIAL. A SECTION OF 150 PSI PRESSURE RATED PIPE AT LEAST EIGHTEEN (18) FEET IN LENGTH MAY BE CENTERED ON THE WATER MAIN IN LIEU OF PIPE CONNECTION REQUIREMENTS. (NO SEPARATE PAY ITEM)
 - WHERE A SEMI-RIGID OR RIGID SEWER MAIN CROSSES UNDER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE FEET BUT GREATER THAN TWO FEET, THE INITIAL BACKFILL SHALL BE CEMENT STABILIZED SAND (TWO OR MORE BAGS OF CEMENT PER CUBIC YARD OF SAND) FOR ALL SECTIONS OF THE SEWER WITHIN NINE FEET OF THE WATER MAIN.
 - WHERE A SEWER MAIN CROSSES UNDER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN TWO FEET, THE SEWER MAIN SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI WITHIN NINE FEET OF THE WATER MAIN. SHALL HAVE A SECTION OF SEWER PIPE CENTERED ON THE WATER MAIN. SHALL BE PLACED NO CLOSER THAN SIX INCHES BETWEEN OUTER DIAMETERS, AND SHALL BE JOINED WITH PRESSURE RING GASKET CONNECTIONS OR CORROSION PROTECTED MECHANICAL COUPLING DEVICES OF A CAST IRON OR DUCTILE IRON MATERIAL. A SECTION OF 150 PSI PRESSURE RATED PIPE OF A LENGTH GREATER THAN EIGHTEEN (18) FEET MAY BE CENTERED ON THE WATER MAIN IN LIEU OF PIPE CONNECTION REQUIREMENTS. (NO SEPARATE PAY ITEM)
 - WHERE A SEWER MAIN PARALLELS A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE FEET, THE SEWER MAIN SHALL BE BELOW THE WATER MAIN, SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI FOR BOTH PIPE AND JOINTS FOR A DISTANCE OF NINE FEET BEYOND THE POINT OF CONFLICT, SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE BETWEEN OUTER DIAMETERS OF TWO FEET VERTICALLY AND FOUR FEET HORIZONTALLY, AND SHALL BE JOINED WITH PRESSURE RING GASKET CONNECTIONS OR CORROSION PROTECTED MECHANICAL COUPLING DEVICES OF A CAST IRON OR DUCTILE IRON MATERIAL.
- SANITARY SEWER MANHOLES SHALL NOT BE INSTALLED ANY CLOSER THAN NINE FEET TO WATER MAINS.

NOTE TO CONTRACTOR:

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

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



VICINITY MAP N.T.S.

SUBMITTAL DATE:
JULY 2022

REVISION DATE:
DECEMBER 2022

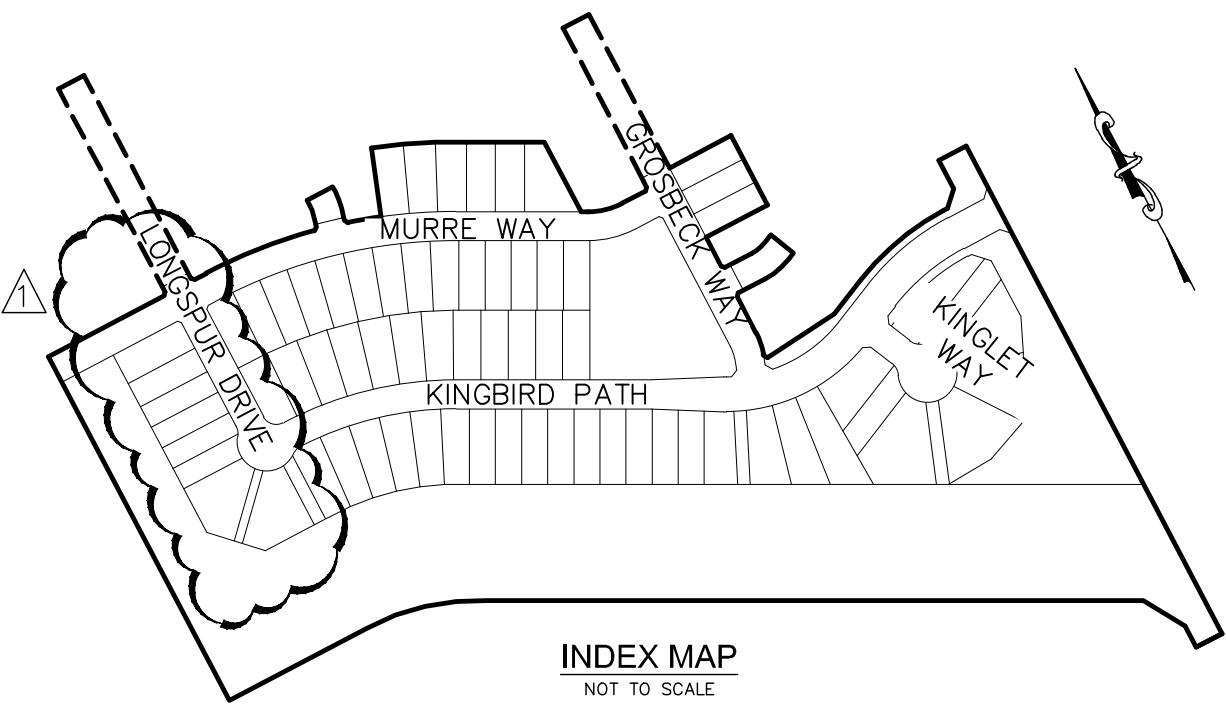
LEGAL DESCRIPTION:

BEING A 27.677 TRACT OF LAND PARTIALLY WITHIN THE CITY OF SAN ANTONIO, NEW CITY BLOCK 16595, BEXAR COUNTY, TEXAS, BEING SITUATED IN THE RUFINO RODRIGUEZ SURVEY NO. 49, ABSTRACT NO. 613, COUNTY BLOCK NO. 4202, BEING A PORTION OF A 131.81 ACRE TRACT, AS CONVEYED TO KINGFISH DEVELOPMENT, LLC BY WARRANTY DEED WITH VENDOR'S LIEN AS RECORDED IN DOCUMENT NUMBER 20220169411, BEXAR COUNTY TEXAS.



SHEET INDEX

SHEET NO.	TITLE
C2.0	SEWER COVER
C2.1	SEWER OVERALL
C2.2	SEWER OVERALL
C2.3	SEWER LINE B PLAN AND PROFILE
C2.4	SEWER LINE C PLAN AND PROFILE
C2.5	SEWER LINE C PLAN AND PROFILE
C2.6	SEWER LINE D PLAN AND PROFILE
C2.7	SEWER LINE E PLAN AND PROFILE
C2.8	SEWER LINE F PLAN AND PROFILE
C2.9	SEWER LINE G PLAN AND PROFILE
C2.10	SEWER DETAILS



ESTIMATED SANITARY SEWER QUANTITIES

ITEM	DESCRIPTION	UNIT	EST/QT
1	TIE INTO EXISTING SANITARY SEWER MAIN	E.A.	1
2	TRENCH EXCAVATION SAFETY PROTECTION	L.F.	7,133
3	8" SANITARY SEWER PIPE, SDR-26 (6'-10')	L.F.	864
4	12" SANITARY SEWER PIPE, SDR-26 (0'-6')	L.F.	482
5	12" SANITARY SEWER PIPE, SDR-26 (6'-10')	L.F.	3,108
6	STANDARD SANITARY SEWER MANHOLE	EA.	19
7	DROP SANITARY SEWER MANHOLE	EA.	1
8	EXTRA DEPTH MANHOLE	V.F.	70
9	VERTICAL STACK	V.F.	79
10	CONCRETE ENCASEMENT	C.Y.	23
11	6" SANITARY SEWER LATERALS, SDR-26	L.F.	2,632
12	8" SEWER MAIN TELEVISION INSPECTION	L.F.	864
13	12" SEWER MAIN TELEVISION INSPECTION	L.F.	3,590

CAUTION!

THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITIES THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

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.

SEWER: LOWER MEDINA RIVER WATERSHED - DOS RIOS W.R.C.

Developer's Name	KINGFISH DEVELOPMENT, LLC
Developer's Address	2722 W. BITTERS RD. SUITE 106
City	SAN ANTONIO
State	TX
Zip	78248
Phone #	210-882-6800
Fax #	
SAWS Block Map #	132-514
Total EDU's	70
Total Acreage	27.677
Total Linear Footage of Pipe 12" ~ 3,590 L.F. AND 8" ~ 864 L.F.	
Plat No.	22-11800357
Number of Lots	70
SAWS Job No.	22-1650



Moy Tarin Ramirez Engineers, LLC

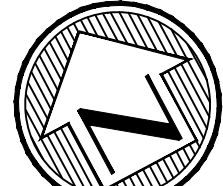
FIRM TBPELS ENG F-5297 SVY F-10131500

12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085

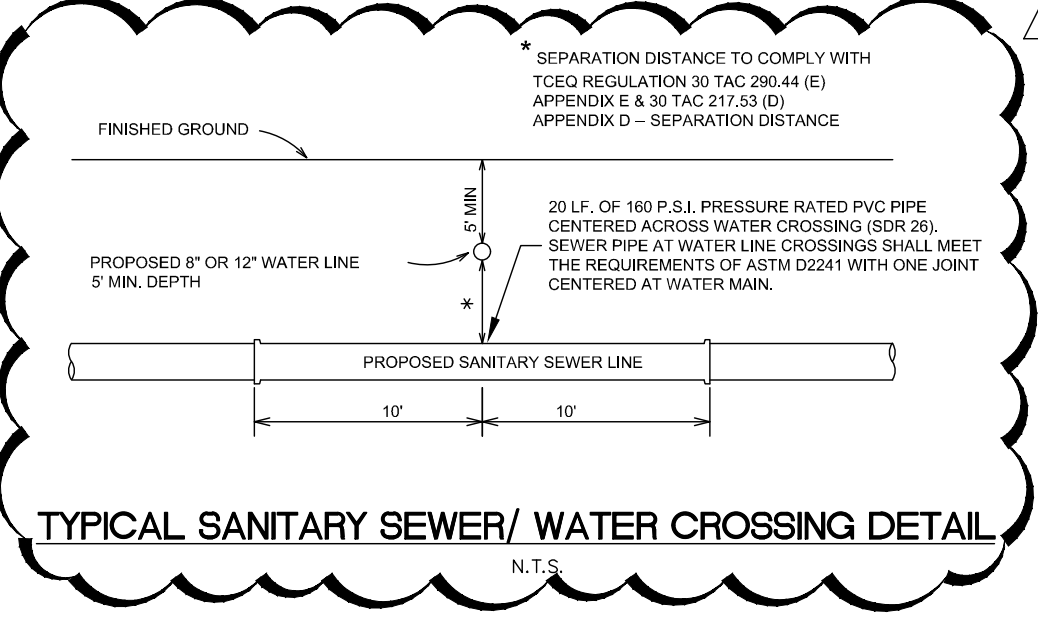
- Engineers
- Surveyors
- Planners

LEGEND

EXISTING WATER MAIN	---
PROPOSED WATER MAIN	---
PROPOSED FIRE HYDRANT	---
EXISTING FIRE HYDRANT	---
PROPOSED GATE VALVE	---
EXISTING GATE VALVE	---
PROPOSED SANITARY SEWER MAIN & MANHOLE	---
EXISTING SANITARY SEWER MAIN & MANHOLE	---
PROPOSED SERVICE LATERAL WITH ONE-WAY CLEAN-OUT	---
VERTICAL STACK	---
ELECTRIC, GAS, TELEPHONE & CABLE TV EASEMENT	---
TEMPORARY BENCHMARK	---
PROPOSED MINIMUM FINISH FLOOR ELEVATION	---
SANITARY SEWER/WATER CROSSING LOCATION	---
OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS	---
OFFICIAL PUBLIC RECORDS OF MEDINA COUNTY, TEXAS	---



SCALE: 1"=50'



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CAUTION:

- EXISTING UTILITIES:
1. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY CONTRACTOR PRIOR TO THE CONSTRUCTION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF SAME DURING CONSTRUCTION.
 2. IT IS ESSENTIAL THAT 48 HOURS PRIOR TO CONSTRUCTION ALL UTILITY COMPANIES BE NOTIFIED TO LOCATE AND TAG THEIR UNDERGROUND FACILITIES PRIOR TO EXCAVATION.
 3. THE CONTRACTOR NEEDS TO ALLOW FOR THE POSSIBILITY OF UNDETECTED UNDERGROUND UTILITIES. ALSO, THE CONTRACTOR MUST ALLOW FOR CHANGES DUE TO UTILITIES BEING IN LOCATIONS DIFFERENT FROM THOSE SHOWN ON THE UTILITY RECORD DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND EXPOSING CONFLICTS PRIOR TO CONSTRUCTION.

SEWER: LOWER MEDINA RIVER WATERSHED - DOS RIOS W.R.C.

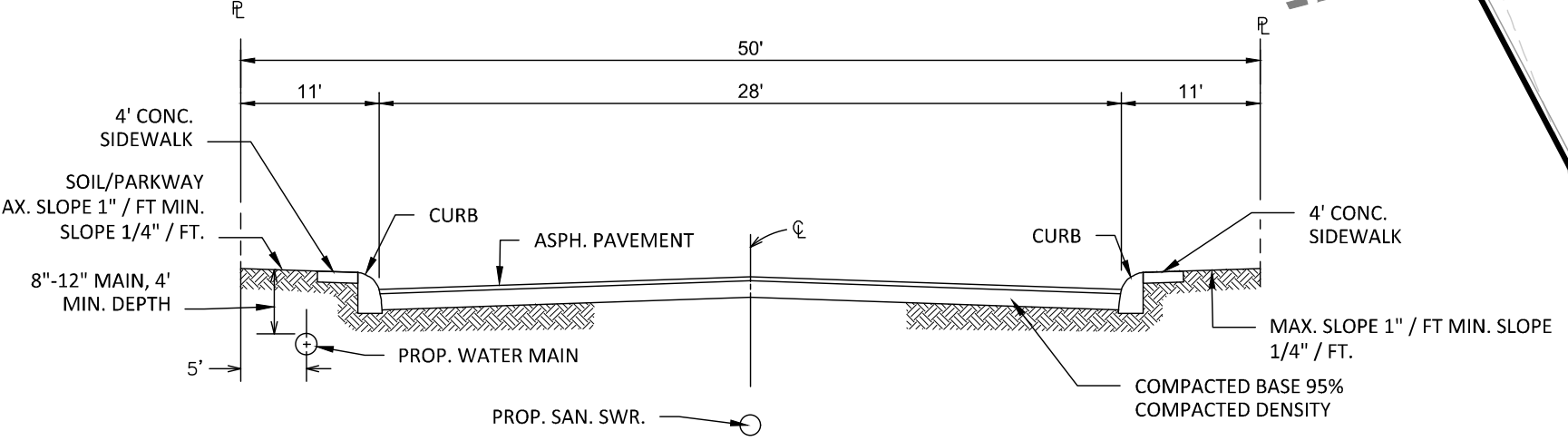
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Plat No.	22-11800357
Number of Lots	70
SAWS Job No.	22-1650

OPEN SPACE NOTE:

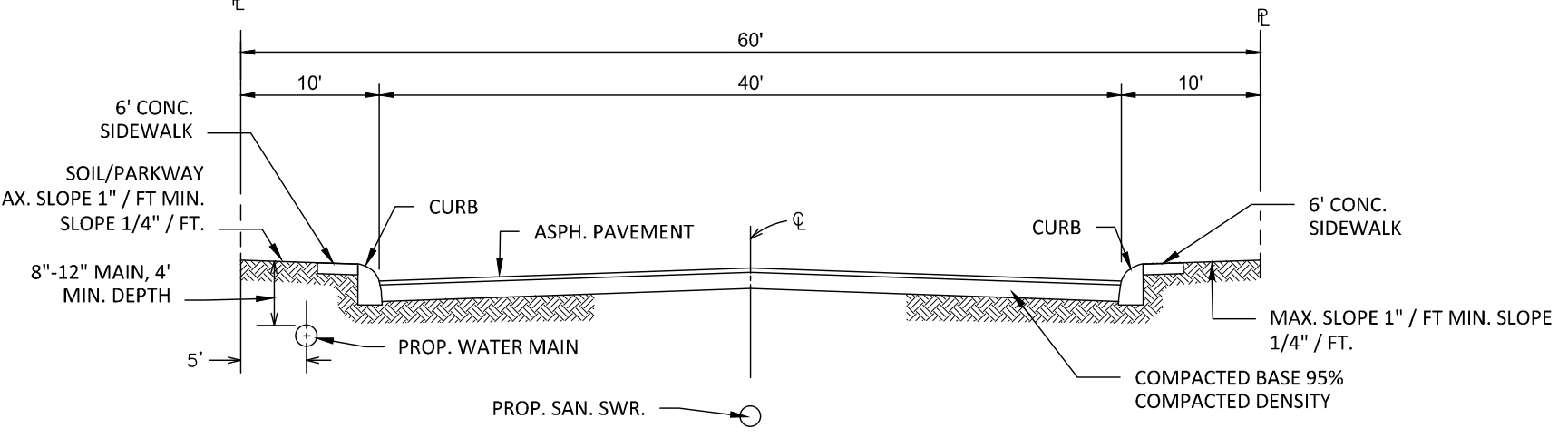
LOTS 901-906, BLOCK 5 AND LOT 901, BLOCK 6, IS DESIGNATED AS OPEN SPACE AND AS COMMON AREA AND A DRAINAGE, PUBLIC SEWER, PUBLIC WATER, ELECTRIC, GAS, TELEPHONE AND CABLE TV EASEMENT.

MATCHLINE "A" SEE SHEET C2.2

TYPICAL STREET CROSS-SECTION (28' PAVEMENT)



TYPICAL STREET CROSS-SECTION (40' PAVEMENT)



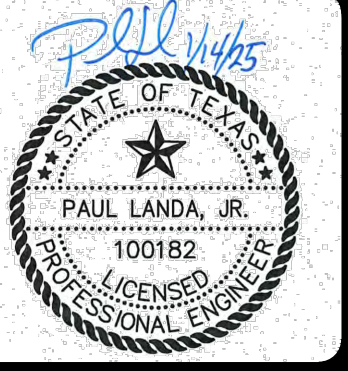
NO.	DATE	DESCRIPTION	BY
1	11/18/24	REVISED LOT LAYOUT	PAUL LANDA JR
2	1/14/25	REVISED DETAIL	

Engineers
Surveyors
Planners

MTR

Moy Tarin Ramirez Engineers, LLC

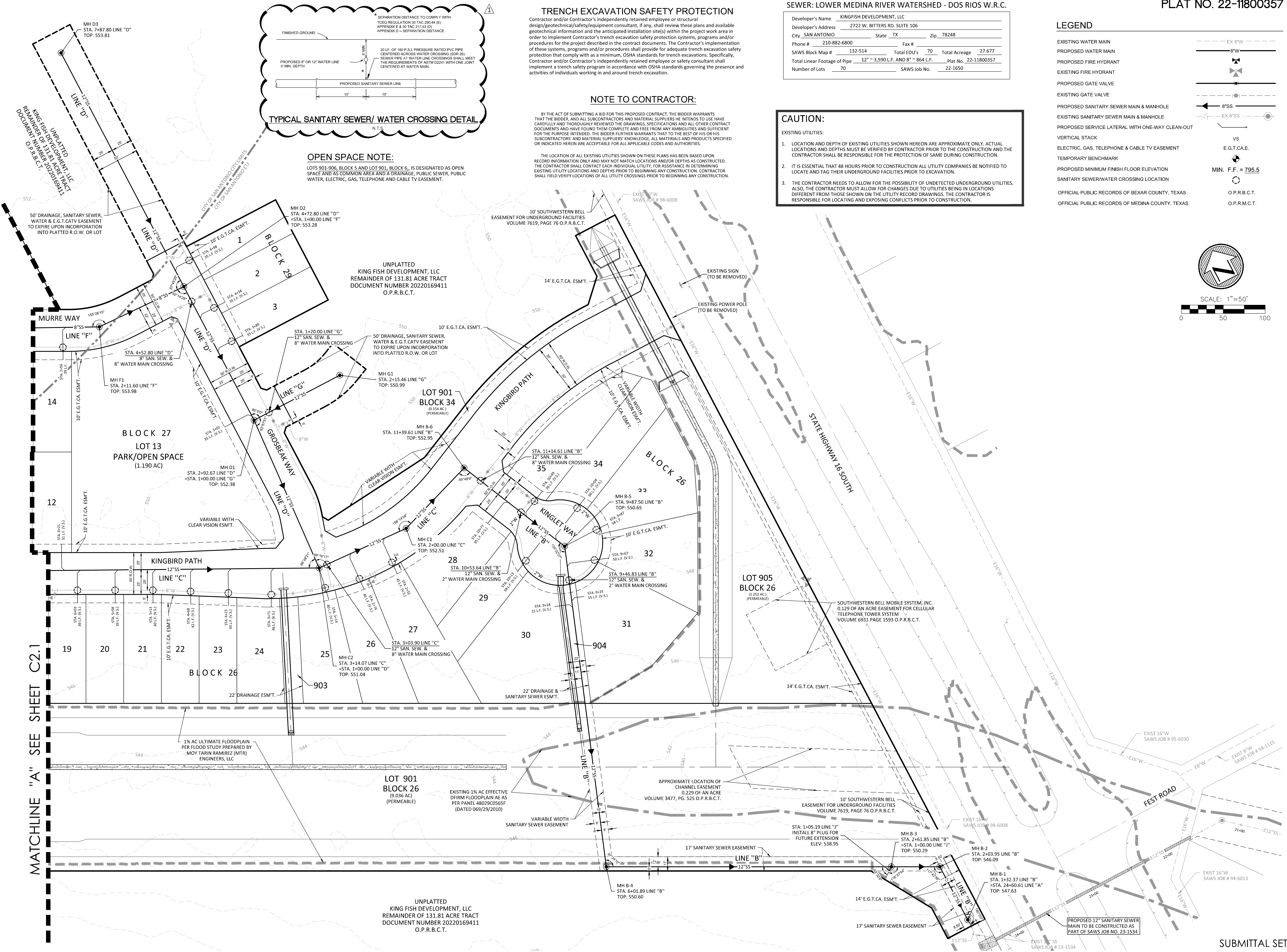
TEBLES: ENGINEERING F-5297/SURVEYING: F-10131500
12770 CHARRON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5065



VERDIN SUBDIVISION UNIT 1
SANITARY SEWER OVERALL PLAN

Plot Date: January 14, 2025 User: ID: Deline_Garibay
R: Mdelatorre_Trois Unit: 1 Drawings: 202501_C2.1 - Sewer Overall Date:

MATCHLINE "A" SEE SHEET C2.1



TRENCH EXCAVATION SAFETY PROTECTION

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SEWER: LOWER MEDINA RIVER WATERSHED - DOS RIOS W.R.C.

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SAWS Block Map #	132-514	Total EDU's	70	Total Acreage 27.677
Total Linear Footage of Pipe	12" ~ 3,590 L.F. AND 8" ~ 864 L.F.	Plat No.	22-11800357	
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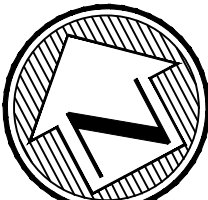
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PLAT NO. 22-11800357

LEGEND

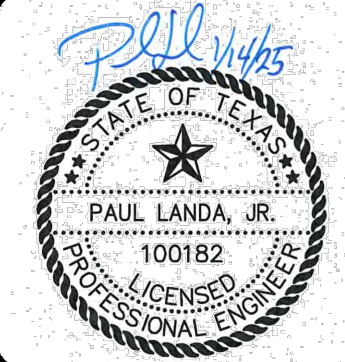
EXISTING WATER MAIN	EX 8"W
PROPOSED WATER MAIN	8"W
PROPOSED FIRE HYDRANT	
EXISTING FIRE HYDRANT	
PROPOSED GATE VALVE	
EXISTING GATE VALVE	
PROPOSED SANITARY SEWER MAIN & MANHOLE	8"SS
EXISTING SANITARY SEWER MAIN & MANHOLE	EX 8"SS
PROPOSED SERVICE LATERAL WITH ONE-WAY CLEAN-OUT	
VERTICAL STACK	VS
ELECTRIC, GAS, TELEPHONE & CABLE TV EASEMENT	E.G.T.C.A.E.
TEMPORARY BENCHMARK	MIN. F.F. = 795.5
PROPOSED MINIMUM FINISH FLOOR ELEVATION	
SANITARY SEWER/WATER CROSSING LOCATION	
OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS	O.P.R.B.C.T.
OFFICIAL PUBLIC RECORDS OF MEDINA COUNTY, TEXAS	O.P.R.M.C.T.



SCALE: 1"=50'

REVISIONS	DESCRIPTION	DATE	BY
NO.	DATE	1/14/25	
1			
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• Engineers
• Surveyors
• Planners
MTR
Moy Tarin Ramirez Engineers, LLC
TBEPLS: ENGINEERING F-5297/SURVEYING: F-10131500
12770 OMARON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5051



VERDIN SUBDIVISION, UNIT 1
SANITARY SEWER OVERALL PLAN

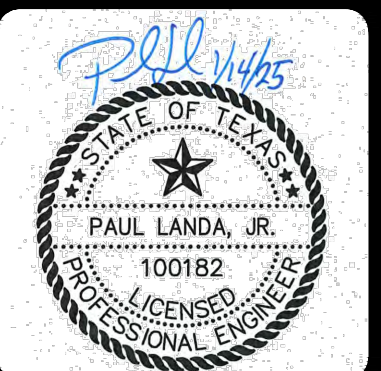
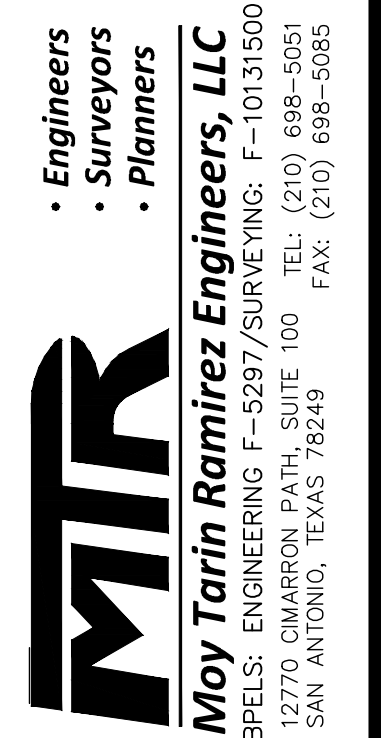
SHEET

C2.2

SUBMITTAL SET

[illegible]

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



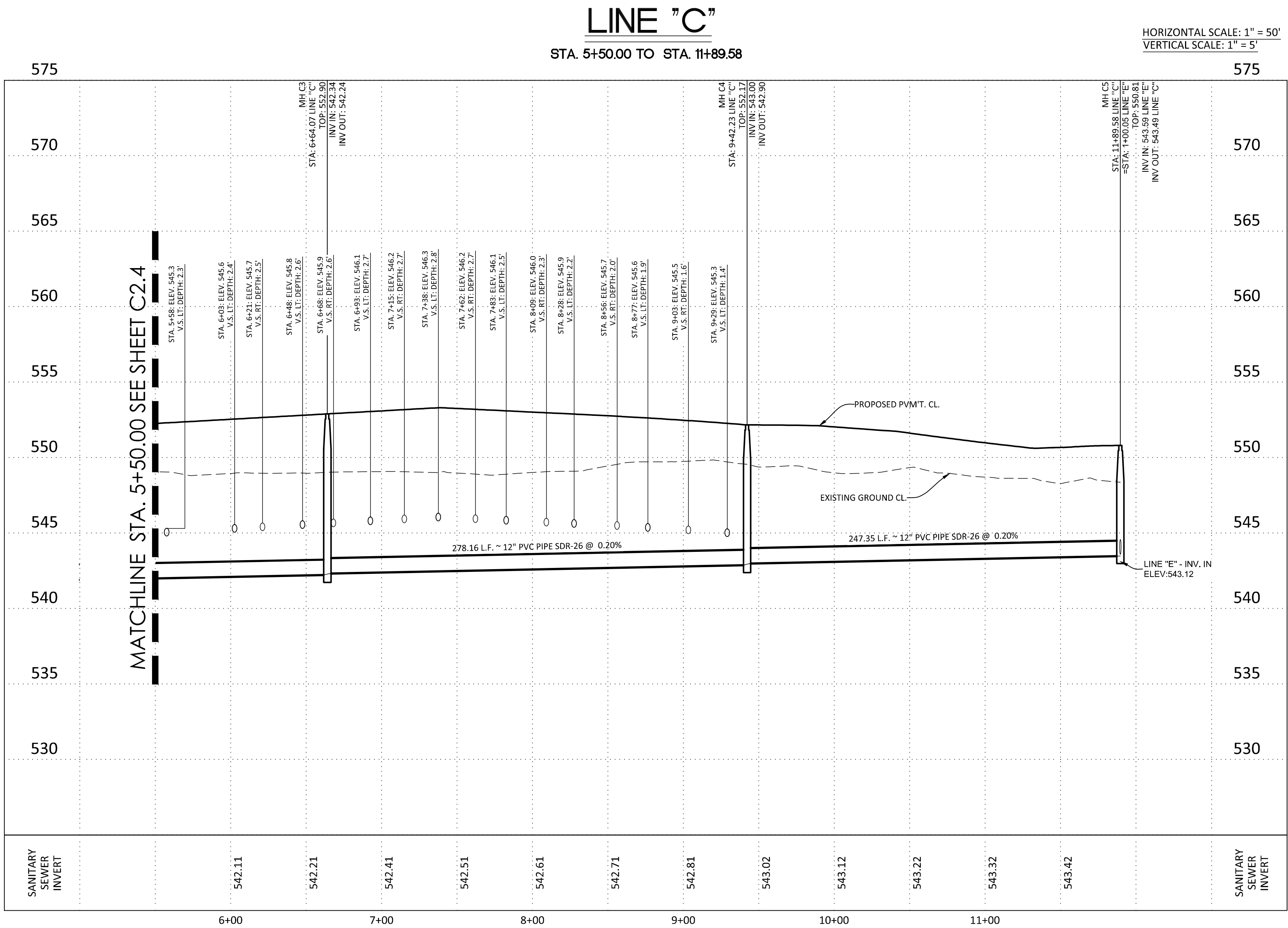
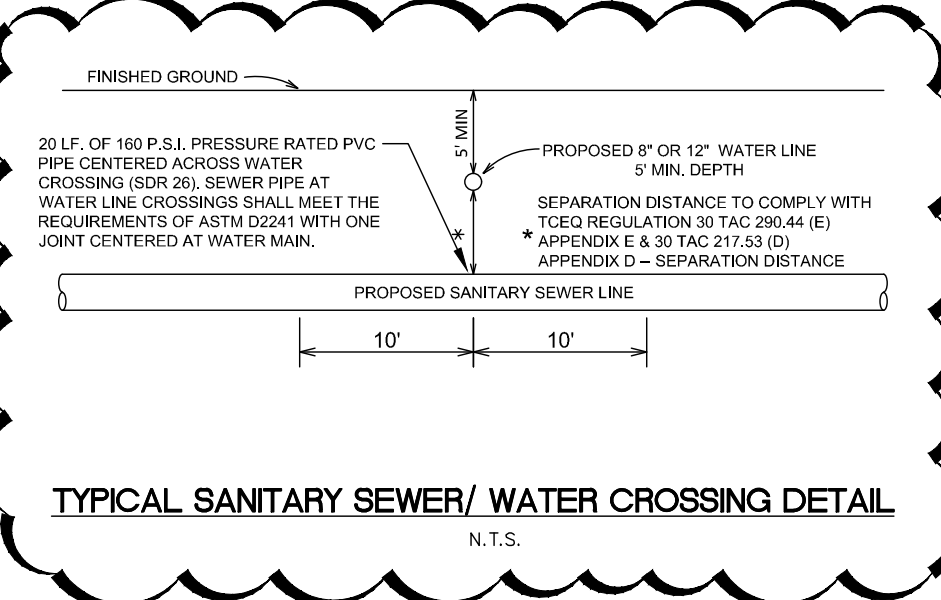
SHEET

C2.3

CAUTION:
EXISTING UTILITIES:
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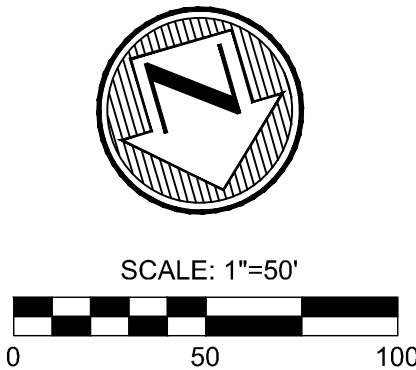
TRENCH EXCAVATION SAFETY PROTECTION

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OPEN SPACE NOTE:
LOTS 901-906, BLOCK 5 AND LOT 901, BLOCK 6, IS DESIGNATED AS OPEN SPACE AND AS COMMON AREA AND A DRAINAGE, PUBLIC SEWER, PUBLIC WATER, ELECTRIC, GAS, TELEPHONE AND CABLE TV EASEMENT.

LEGEND		
EXISTING WATER MAIN	---	EX 8" W
PROPOSED WATER MAIN	---	8" W
PROPOSED FIRE HYDRANT	⊕	
EXISTING FIRE HYDRANT	⊕	
PROPOSED GATE VALVE	⊕	
EXISTING GATE VALVE	⊕	
PROPOSED SANITARY SEWER MAIN & MANHOLE	⊕	8" SS
EXISTING SANITARY SEWER MAIN & MANHOLE	⊕	EX 8" SS
PROPOSED SERVICE LATERAL WITH ONE-WAY CLEAN-OUT	⊕	
VERTICAL STACK	VS	
ELECTRIC, GAS, TELEPHONE & CABLE TV EASEMENT	E.G.T.C.A.E.	
TEMPORARY BENCHMARK	⊕	MIN. F.F. = 795.5
PROPOSED MINIMUM FINISH FLOOR ELEVATION	⊕	
SANITARY SEWER/WATER CROSSING LOCATION	⊕	O.P.R.B.C.T.
OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS	⊕	O.P.R.B.C.T.
OFFICIAL PUBLIC RECORDS OF MEDINA COUNTY, TEXAS	⊕	O.P.R.M.C.T.



SEWER: LOWER MEDINA RIVER WATERSHED - DOS RIOS W.R.C.

Developer's Name	KINGFISH DEVELOPMENT, LLC		
Developer's Address	2722 W. BITTERS RD, SUITE 106		
City	SAN ANTONIO	State	TX
Zip	78248		
Phone #	210-882-6800	Fax #	
SAWS Block Map #	132-514	Total EDU's	70
Total Acreage	27.677		
Total Linear Footage of Pipe 12" ~	3,590 L.F. AND 8" ~	864 L.F.	
Plat No.	22-11800357		
Number of Lots	70	SAWS Job No.	22-1650

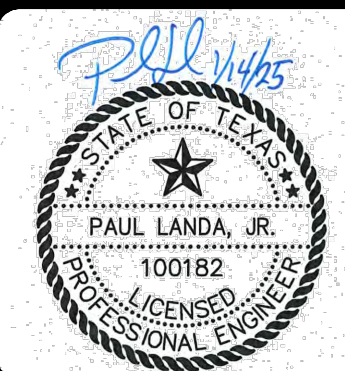
REVISIONS		NO.	DATE	DESCRIPTION	BY
		1	1/14/25	REVISED DETAIL	
PROJ. # DGN. BY: DWG. BY: CHKD. BY: DATE:					

• Engineers
• Surveyors
• Planners

MTR

May Tarin Ramirez Engineers, LLC

12770 CARMON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5065



VERDIN SUBDIVISION UNIT 1

SANITARY SEWER PLAN & PROFILE

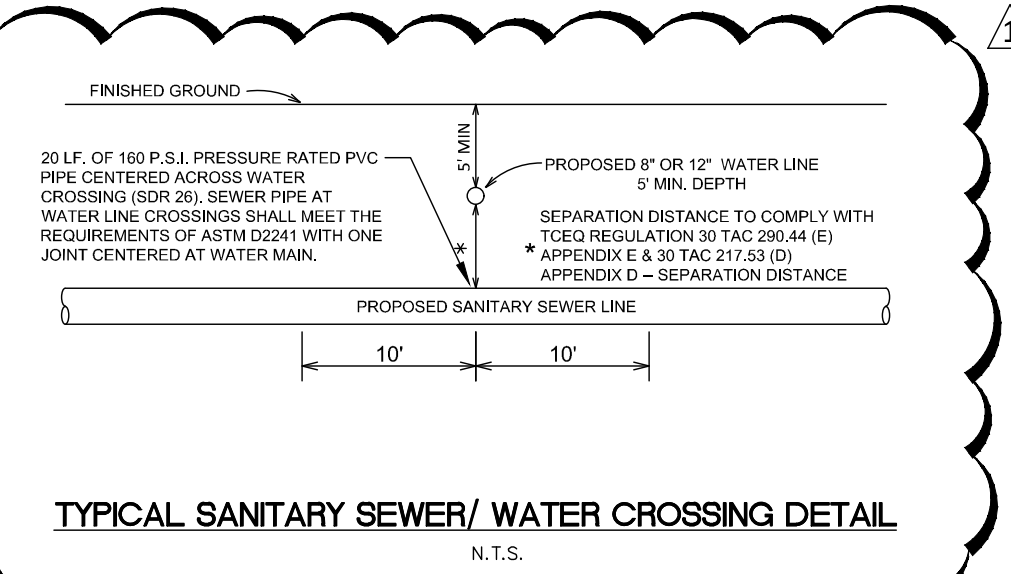
LINE "C"

STA. 5+50.00 TO STA. 11+89.58

CAUTION:
EXISTING UTILITIES:
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TRENCH EXCAVATION SAFETY PROTECTION

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OPEN SPACE NOTE:

LOTS 901-906, BLOCK 5 AND LOT 901, BLOCK 6, IS DESIGNATED AS OPEN SPACE AND AS COMMON AREA AND A DRAINAGE, PUBLIC SEWER, PUBLIC WATER, ELECTRIC, GAS, TELEPHONE AND CABLE TV EASEMENT.

LEGEND

EXISTING WATER MAIN	--- EX 8"W ---
PROPOSED WATER MAIN	--- 8"W ---
PROPOSED FIRE HYDRANT	--- 8"SS ---
EXISTING FIRE HYDRANT	--- EX 8"SS ---
PROPOSED GATE VALVE	VS
EXISTING GATE VALVE	E.G.T.C.A.E.
PROPOSED SANITARY SEWER MAIN & MANHOLE	8"SS
EXISTING SANITARY SEWER MAIN & MANHOLE	EX 8"SS
PROPOSED SERVICE LATERAL WITH ONE-WAY CLEAN-OUT	VS
VERTICAL STACK	E.G.T.C.A.E.
ELECTRIC, GAS, TELEPHONE & CABLE TV EASEMENT	MIN. F.F. = 795.5
TEMPORARY BENCHMARK	O.P.R.B.C.T.
PROPOSED MINIMUM FINISH FLOOR ELEVATION	O.P.R.M.C.T.
SANITARY SEWER/WATER CROSSING LOCATION	
OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS	
OFFICIAL PUBLIC RECORDS OF MEDINA COUNTY, TEXAS	



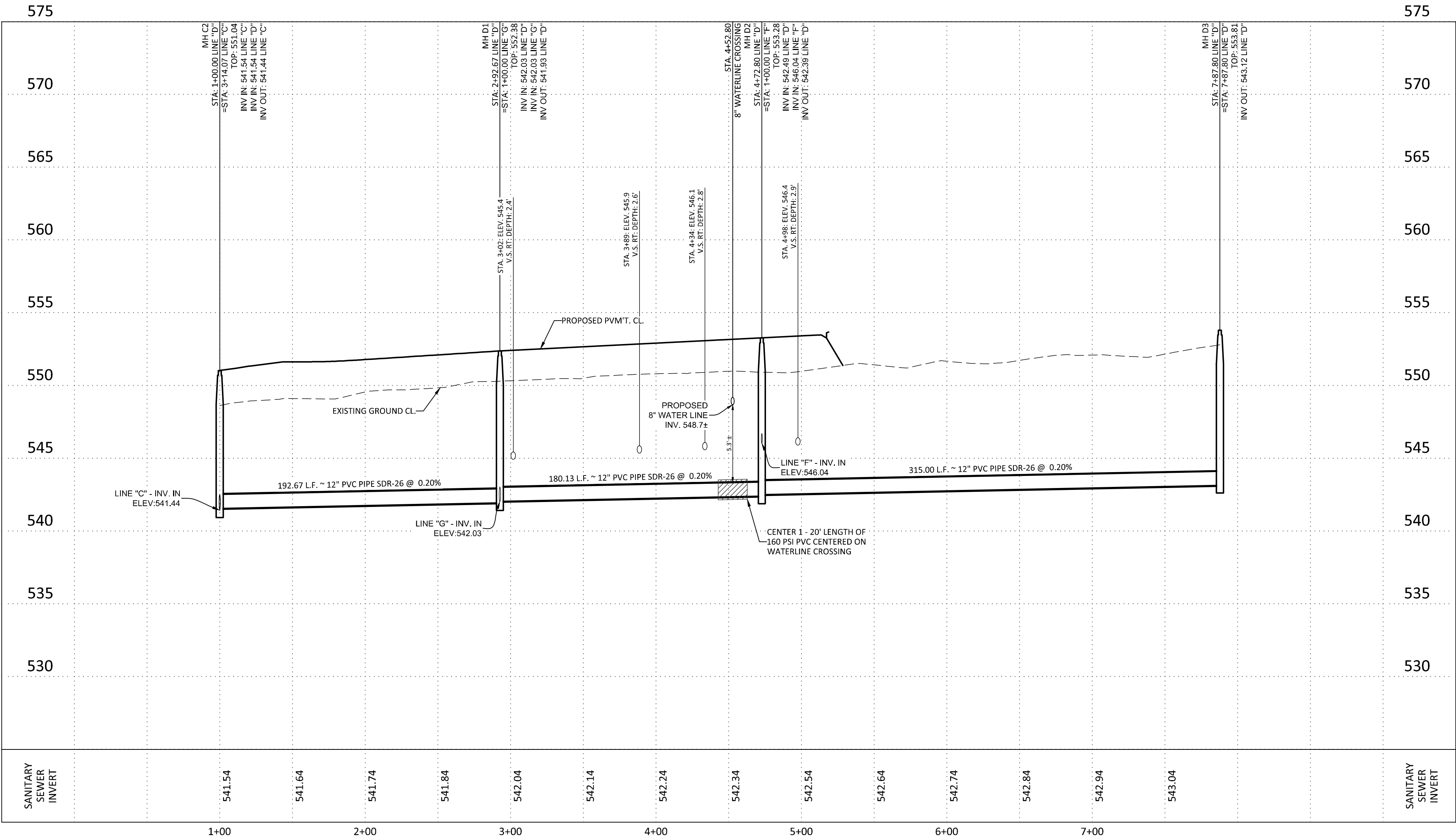
SCALE: 1"=50'
0 50 100

SEWER: LOWER MEDINA RIVER WATERSHED - DOS RIOS W.R.C.

Developer's Name	KINGFISH DEVELOPMENT, LLC
Developer's Address	2722 W. BITTERS RD, SUITE 106
City	SAN ANTONIO
State	TX
Zip	78248
Phone #	210-882-6800
Fax #	
SAWS Block Map #	132-514
Total EDU's	70
Total Acreage	27.677
Total Linear Footage of Pipe 12" ~ 3,590 L.F. AND 8" ~ 864 L.F.	
Plat No.	22-11800357
Number of Lots	70
SAWS Job No.	22-1650

LINE "D"
STA. 1+00.00 TO STA. 7+87.80

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

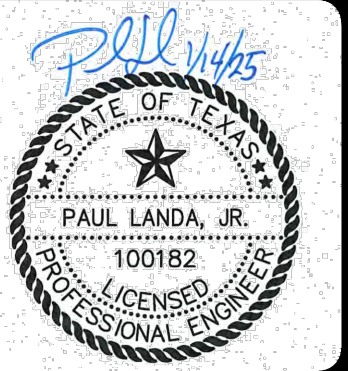


NO.	DATE	DESCRIPTION	BY
1	1/14/25	REVISED DETAIL	

Engineers
Surveyors
Planners

MTR

Moy Tarin Ramirez Engineers, LLC
TBPELS: ENGINEERING F-5297/SURVEYING: F-10131500
12770 OMARON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5055



VERDIN SUBDIVISION UNIT 1
SANITARY SEWER PLAN & PROFILE
LINE "D"
STA. 1+00.00 TO STA. 7+87.80

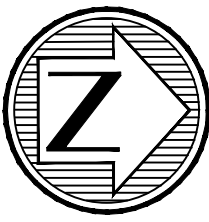
SHEET

C2.6

SUBMITTAL SET

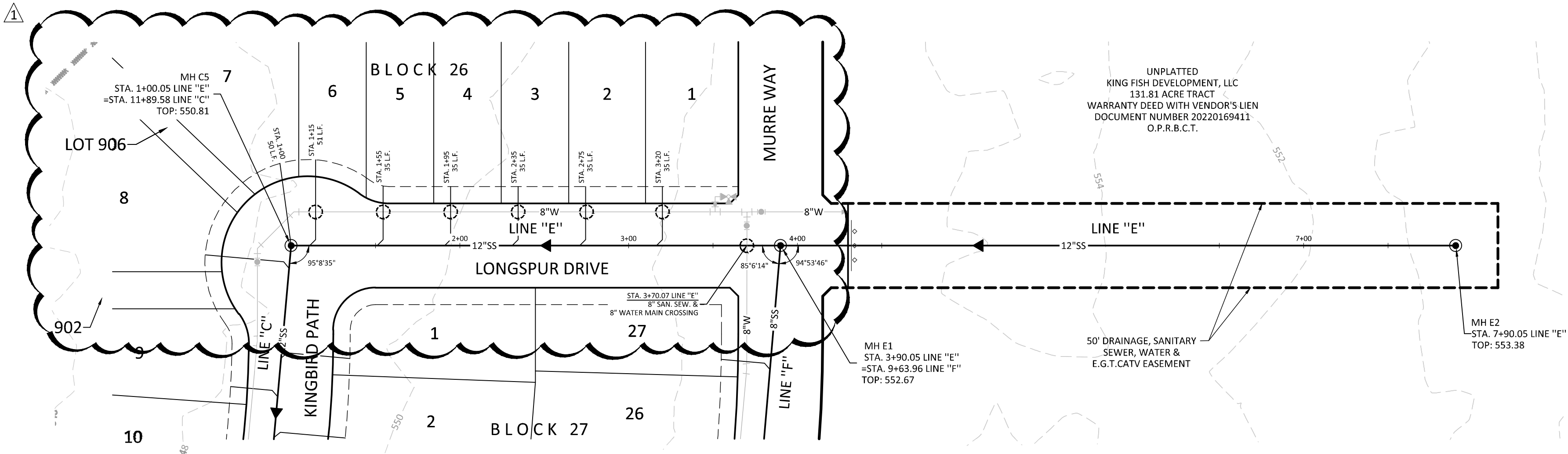
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LEGEND

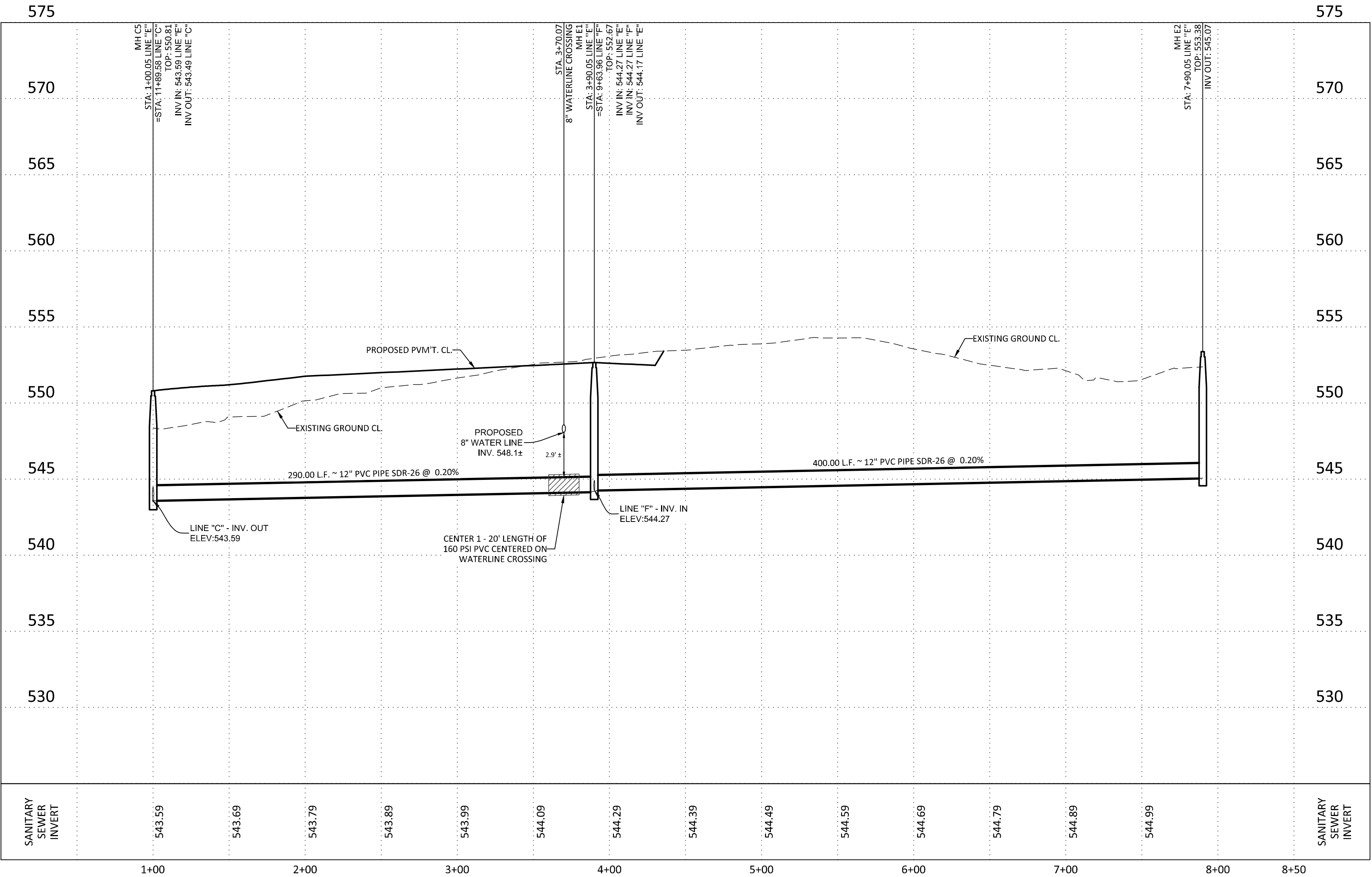
EXISTING WATER MAIN	EX 8"W
PROPOSED WATER MAIN	8"W
PROPOSED FIRE HYDRANT	
EXISTING FIRE HYDRANT	
PROPOSED GATE VALVE	
EXISTING GATE VALVE	
PROPOSED SANITARY SEWER MAIN & MANHOLE	8"SS
EXISTING SANITARY SEWER MAIN & MANHOLE	EX 8"SS
PROPOSED SERVICE LATERAL WITH ONE-WAY CLEAN-OUT VERTICAL STACK	VS
ELECTRIC, GAS, TELEPHONE & CABLE TV EASEMENT	E.G.T.C.A.E.
TEMPORARY BENCHMARK	
PROPOSED MINIMUM FINISH FLOOR ELEVATION	MIN. F.F. = 795.5
SANITARY SEWER/WATER CROSSING LOCATION	
OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS	O.P.R.B.C.T.
OFFICIAL PUBLIC RECORDS OF MEDINA COUNTY, TEXAS	O.P.R.M.C.T.



LINE "E"

STA. 1+00.00 TO STA. 4+30.05

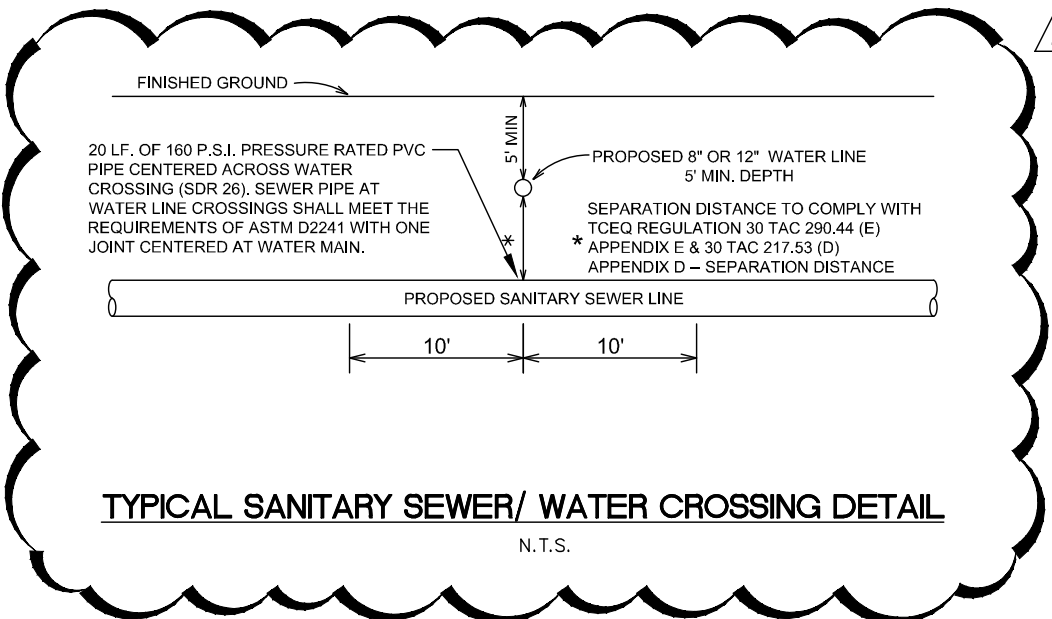
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



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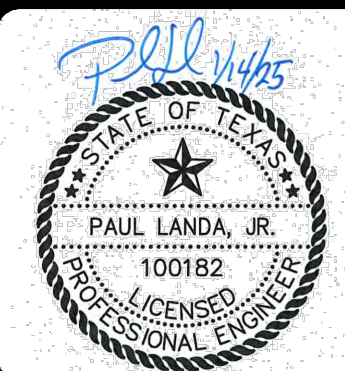
SEWER: LOWER MEDINA RIVER WATERSHED - DOS RIOS W.R.C.

Developer's Name	KINGFISH DEVELOPMENT, LLC
Developer's Address	2722 W. BITTERS RD. SUITE 106
SAN ANTONIO	State TX Zip 78248
Phone #	210-882-6800 Fax #
SAWS Block Map #	132-514 Total EDU's 70 Total Acreage 27.677
Total Linear Footage of Pipe 12" ~ 3,590 L.F. AND 8" ~ 864 L.F.	Plat No. 22-11800357
Number of Lots	70 SAWS Job No. 22-1650

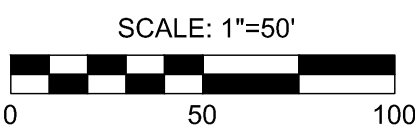
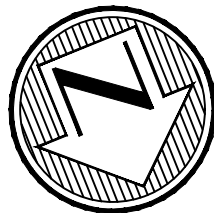
NO.	DATE	DESCRIPTION	BY
1	11/18/24	REVISED LOT LAYOUT	PAUL LANDA
2	1/14/25	REVISED DETAIL	PAUL LANDA

Engineers
Surveyors
Planners

Moy Tarin Ramirez Engineers, LLC
TBEPLS: ENGINEERING F-5297/SURVEYING: F-10131500
12770 CHARRON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5065



VERDIN SUBDIVISION UNIT 1
SANITARY SEWER PLAN & PROFILE
LINE "B"
STA. 1+00.00 TO STA. 4+30.05

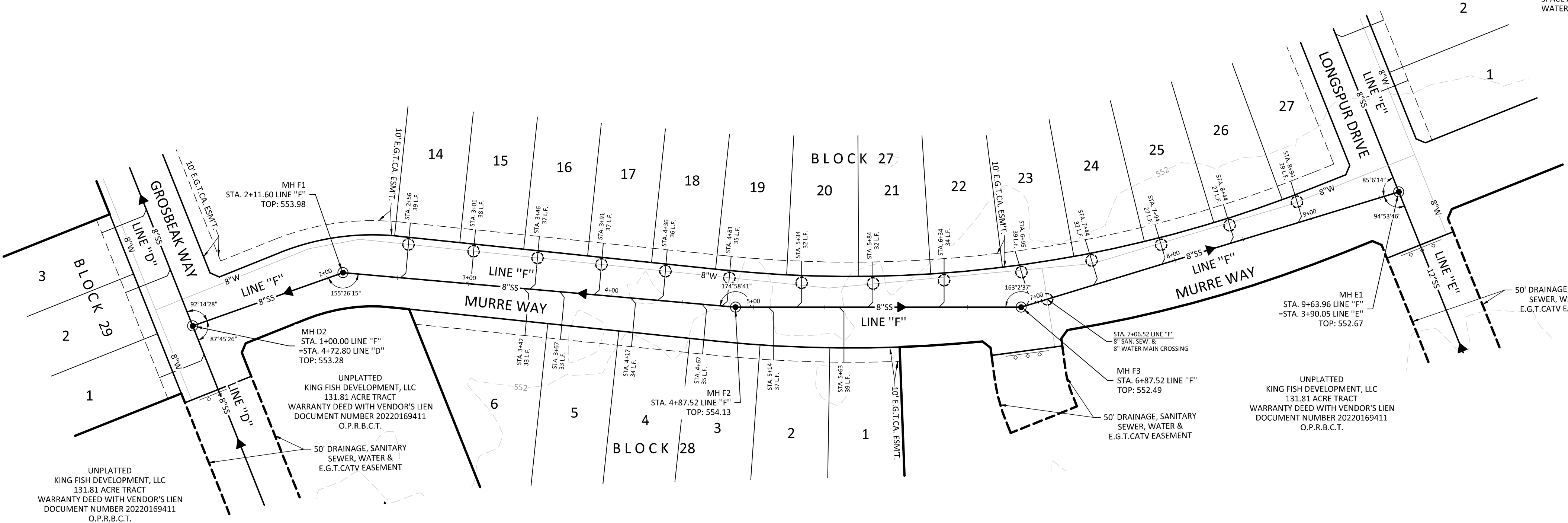


LEGEND

EXISTING WATER MAIN	---	EX 8"W
PROPOSED WATER MAIN	---	8"W
PROPOSED FIRE HYDRANT	⊕	
EXISTING FIRE HYDRANT	⊕	
PROPOSED GATE VALVE	⊕	
EXISTING GATE VALVE	⊕	
PROPOSED SANITARY SEWER MAIN & MANHOLE	⊕	8"SS
EXISTING SANITARY SEWER MAIN & MANHOLE	⊕	EX 8"SS
PROPOSED SERVICE LATERAL WITH ONE-WAY CLEAN-OUT	⊕	
VERTICAL STACK	VS	
ELECTRIC, GAS, TELEPHONE & CABLE TV EASEMENT	E.G.T.C.A.E.	
TEMPORARY BENCHMARK	⊕	
PROPOSED MINIMUM FINISH FLOOR ELEVATION	MIN. F.F. = 795.5	
SANITARY SEWER/WATER CROSSING LOCATION	⊕	
OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS	O.P.R.B.C.T.	
OFFICIAL PUBLIC RECORDS OF MEDINA COUNTY, TEXAS	O.P.R.M.C.T.	

OPEN SPACE NOTE:

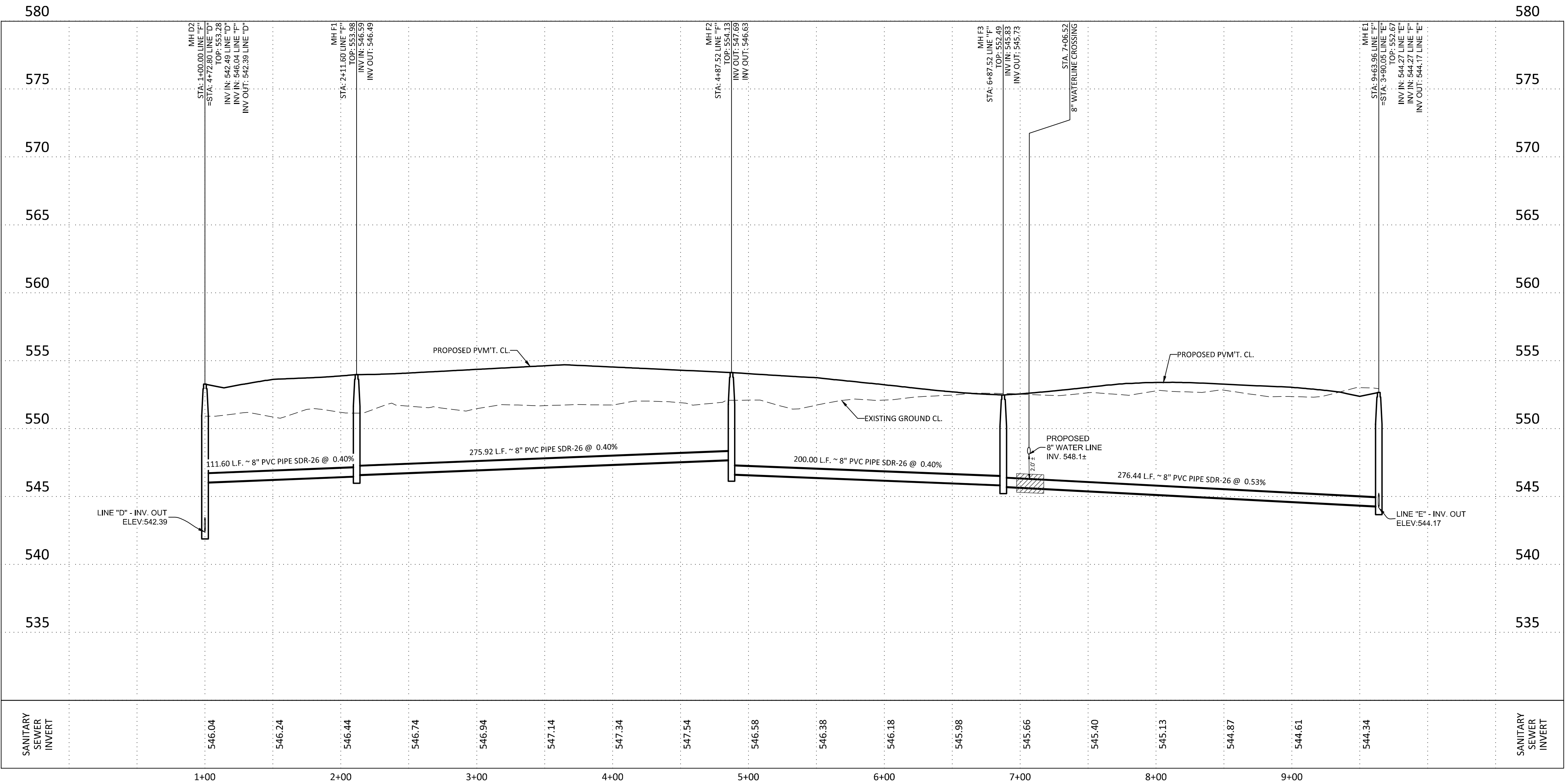
LOTS 901-906, BLOCK 5 AND LOT 901, BLOCK 6, IS DESIGNATED AS OPEN SPACE AND AS COMMON AREA AND A DRAINAGE, PUBLIC SEWER, PUBLIC WATER, ELECTRIC, GAS, TELEPHONE AND CABLE TV EASEMENT.



LINE "F"

STA. 1+00.00 TO STA. 9+63.96

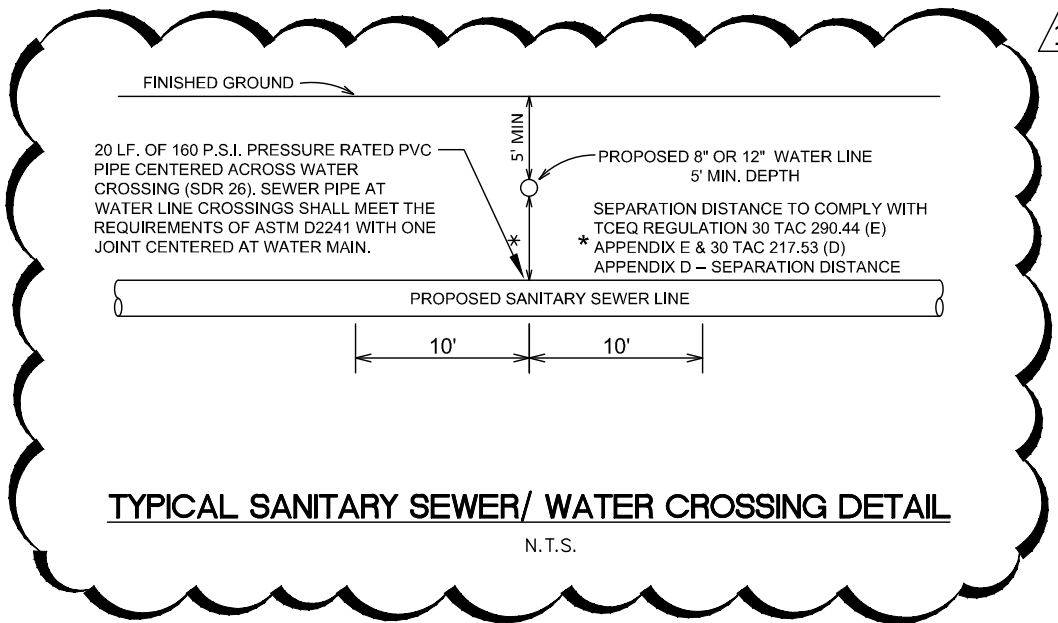
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



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TRENCH EXCAVATION SAFETY PROTECTION

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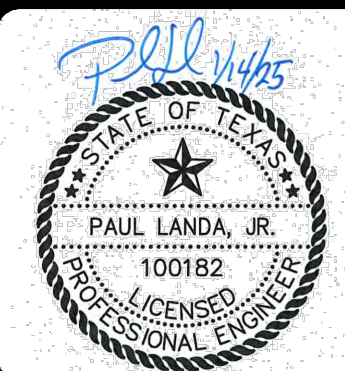
SEWER: LOWER MEDINA RIVER WATERSHED - DOS RIOS W.R.C.

Developer's Name	KINGFISH DEVELOPMENT, LLC		
Developer's Address	2722 W. BITTERS RD. SUITE 106		
SAN ANTONIO	State	TX	Zip 78248
Phone #	210-882-6800	Fax #	
SAWS Block Map #	132-514	Total EDU's	70
Total Linear Footage of Pipe 12" ~ 3,590 L.F. AND 8" ~ 864 L.F.	Plat No. 22-11800357		
Number of Lots	70	SAWS Job No.	22-1650

REVISIONS		BY	DATE	DESCRIPTION
1			1/14/25	REVISED DETAIL

Engineers
Surveyors
Planners

Moy Tarin Ramirez Engineers, LLC
TBPELS: ENGINEERING F-5297/SURVEYING: F-10131500
12770 OMARON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5055



VERDIN SUBDIVISION UNIT 1
SANITARY SEWER PLAN & PROFILE
LINE "F"

STA. 1+00.00 TO STA. 9+63.96

STA. 1+00.00 TO STA. 2+15.46

EXISTING WATER MAIN

PROPOSED WATER MAIN

PROPOSED FIRE HYDRANT

EXISTING FIRE HYDRANT

PROPOSED GATE VALVE

EXISTING GATE VALVE

PROPOSED SANITARY SEWER MAIN & MANHOLE

EXISTING SANITARY SEWER MAIN & MANHOLE

PROPOSED SERVICE LATERAL WITH ONE-WAY CLEAN-OUT

VERTICAL STACK

ELECTRIC, GAS, TELEPHONE & CABLE TV EASEMENT

TEMPORARY BENCHMARK

PROPOSED MINIMUM FINISH FLOOR ELEVATION

SANITARY SEWER/WATER CROSSING LOCATION

OFFICIAL PUBLIC RECORDS OF BEAR COUNTY, TEXAS

OFFICIAL PUBLIC RECORDS OF MEDINA COUNTY, TEXAS

EX 8" W

8" W

8" SS

VS

E.G.T.C.A.E.

MIN. F.F. = 795.5

O.P.R.B.C.T.

O.P.R.M.C.T.

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 the safety of all workers and shall be in full compliance with 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.

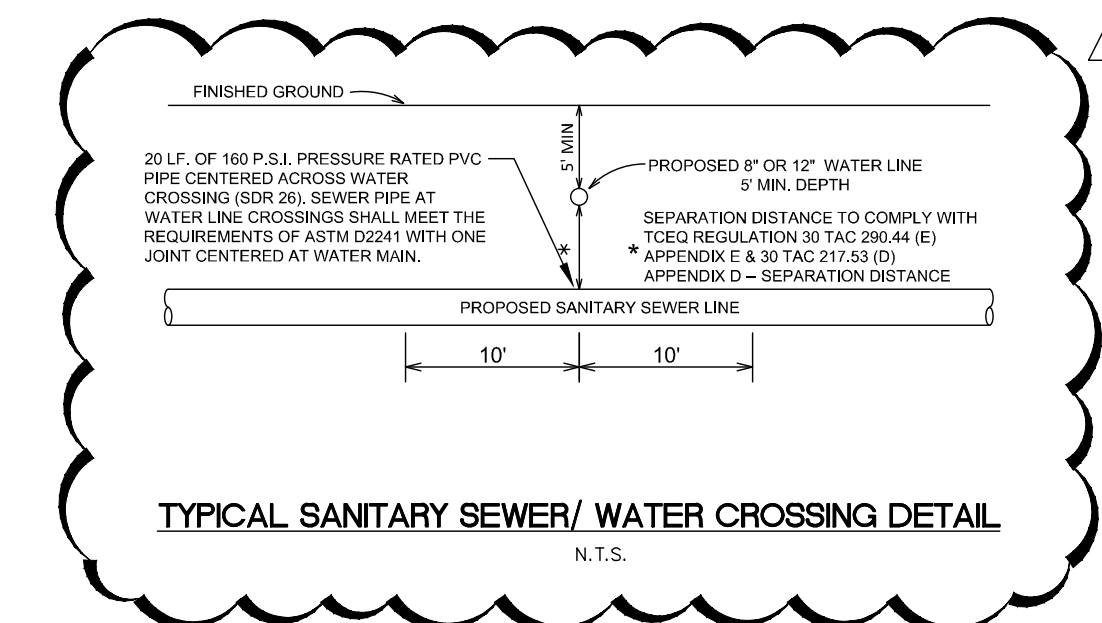
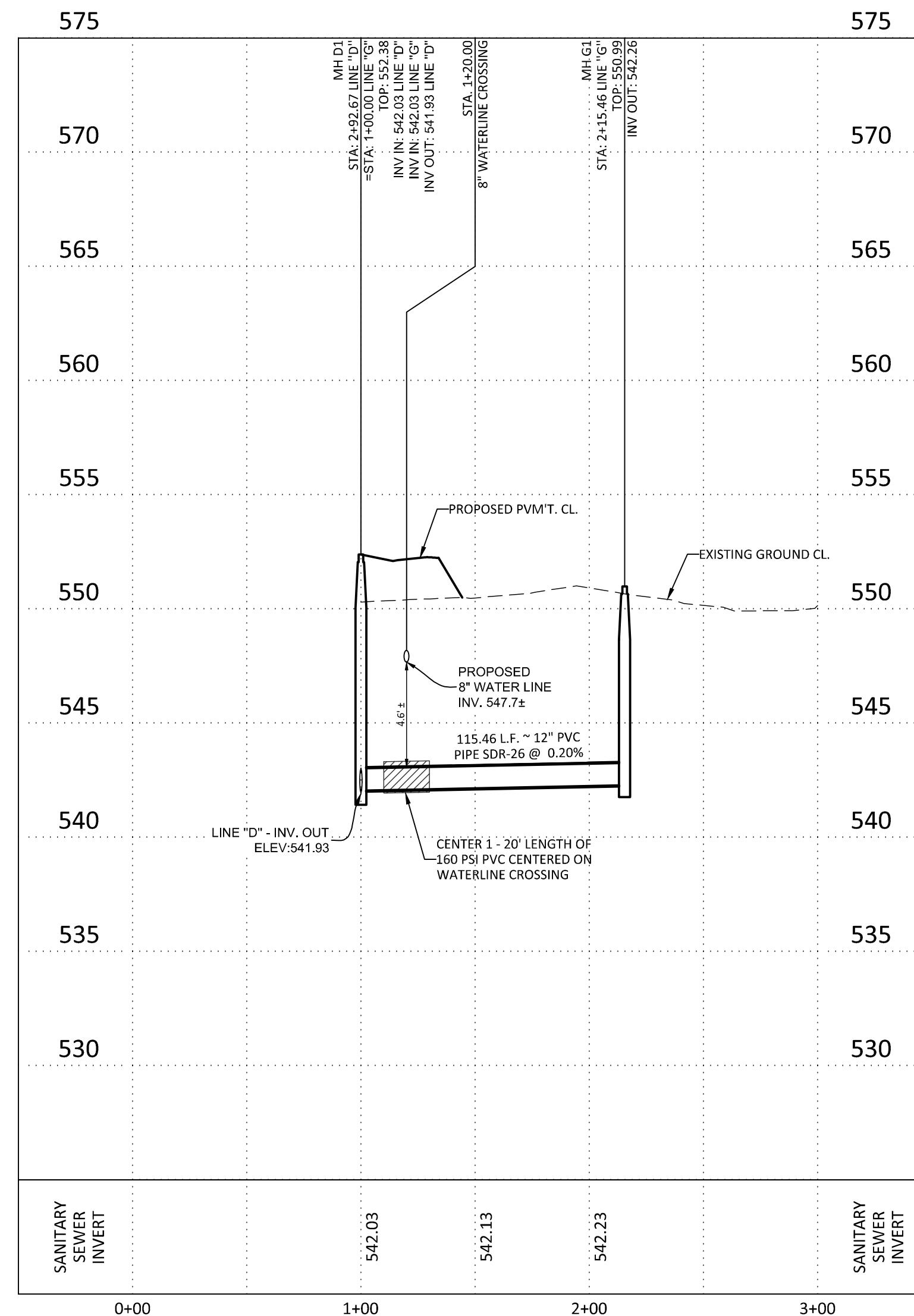
N.T.

Developer's Name	KINGFISH DEVELOPMENT, LLC		
Developer's Address	2722 W. BITTERS RD. SUITE 106		
	SAN ANTONIO	State TX	Zip 78248
Phone #	210-882-6800	Fax #	
SAWS Block Map #	132-514	Total EDU's	70
		Total Acreage	27.677
Total Linear Footage of Pipe 12" ~ 3,590 L.F. AND 8" ~ 864 L.F.		Plat No.	22-11800357
Number of Lots	70	SAWS Job No.	22-1650

SCALE: 1"=50'



A horizontal graphic scale bar with alternating black and white segments. It is marked with '0' at the left end, '50' in the middle, and '100' at the right end.



Plot Date: January 14, 2025 User ID: Dallas Gardea
 Path: \\McOsker Troct\\Unit 1\\Drawings\\22091_C2.9-Line G Plan & Profile.dwg

SUBMITTED BY:
MOY TARIN RAMIREZ ENGINEERS, LLC.
12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249
TEL: (210) 698-5051
FAX: (210) 698-5085

OWNER/DEVELOPER

KINGFISH DEVELOPMENT, LLC
2722 W. BITTERS RD. SUITE 106
SAN ANTONIO, TX. 78233
210-882-6800

SAWS CONSTRUCTION NOTES
COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT
JANUARY 2022

General Section

- All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:
 - Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.
 - Current TXDOT "Standard Specifications for Construction of Highways, Streets and Drainage".
 - Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".
 - Current City of San Antonio "Standard Specifications for Public Works Construction".
 - Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
- The contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and has been notified by SAWS Construction Inspection Division to proceed with the work and has arranged a meeting with the inspector and consultant for the work requirements. Work completed by the contractor without an approved Counter Permit and/or a GCP will be subject to removal and replacement at the expense of the contractors and/or the developer.
- The Contractor shall obtain the SAWS Standard Details from the SAWS website, http://www.saws.org/business_center/specs. Unless otherwise noted within the design plans.
- The Contractor is to make arrangements with the SAWS Construction Inspection Division at (210) 233-2973, on notification procedures that will be used to notify affected home residents and/or property owners 48 hours prior to beginning any work.
- Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor at least 1 week prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.
- The Contractor shall verify the exact location of underground utilities and drainage structures at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for locates requesting pipe location markers on SAWS facilities. The following contact information are supplied for verification purposes:
 - SAWS Utility Locates: <http://www.saws.org/Service/Locates>
 - COSA Drainage (210) 207-0724 or (210) 207-6026
 - COSA Traffic Signal Operations (210) 206-6480
 - COSA Traffic Signal Damages (210) 207-3951
 - Texas State Wide One Call Locator 1-800-545-6005 or 811
- The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if damages are made as a result of the project's construction.
- All work in Texas Department of Transportation (TXDOT) and/or Bexar County right-of-way shall be done in accordance with respective construction specifications and permit requirements.
- The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating near trees.
- The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.
- Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be sent to constworkreq@saws.org.
Weekend Work: Contractors are required to notify the SAWS Inspection Construction Department 48 hours in advance to request weekend work. Request should be sent to constworkreq@saws.org.
Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for proper inspection.
- Compaction note (Item 804): The contractor shall be responsible for meeting the compaction requirements on all trench backfill and for paying for the tests performed by a third party. Compaction tests will be done at one location point randomly selected, or as indicated by the SAWS Inspector and/or the test administrator, per each 12-inch loose lift per 400 linear feet at a minimum. This project will not be accepted and finalized by SAWS without this requirement being met and verified by providing all necessary documented test results.
- A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division.

Water Section

- Prior to tie-ins, any shutdowns of existing mains of any size must be coordinated with the SAWS Construction Inspection Division at least one week in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly.
 - For water mains 12" or higher: SAWS Emergency Operations Center (210) 233-2014
- Asbestos Cement (AC) pipe, also known as transite pipe which is known to contain asbestos-containing material (ACM), may be located within the project limits. Special waste management procedures and health and safety requirements will be applicable when removal and/or disturbance of this pipe occurs. Such work is to be made under Special Specification Item No. 3000, "Special Specification for Handling Asbestos Cement Pipe".
- Valve removal: Where the contractor is to abandon a water main, the control valve located on the abandoning branch will be removed and replaced with a cap/plug. (NSPI)
- Suitable anchorage/thrust blocking or joint restraint shall be provided at all of the following main locations: dead ends, plugs, caps, tees, crosses, valves, and bends, in accordance with the Standard Drawings DD-839 Series and Item No. 839, in the SAWS Standard Specifications for Construction.
- All valves shall read "open right".
- PRVs Required: Contractor to verify that no portion of the tract is below ground elevation of 750 feet where the static pressure will normally exceed 80 PSI. At all such locations where the ground level is below 750 feet, the Developer or Builder shall install at each lot, on the customer's side of the meter, an approved type pressure regulator in conformance with the Plumbing Code of the City of San Antonio. No dual services allowed for any lot(s) if
 - *PRV is/are required for such lot(s), only single service connections shall be allowed.
 - *Note: A pressure regulator is also known as a pressure reducing valve (PRV).
- Pipe Disinfection with Dry HTH for Projects less than 800 linear feet. (Item No. 847.3): Mains shall be disinfected with dry HTH where shown in the contract documents or as directed by the Inspector, and shall not exceed a total length of 800 feet. This method of disinfection will also be followed for main repairs. The Contractor shall utilize all appropriate safety measure to protect his personnel during disinfection operations.
- Backflow Prevention Devices:
 - All irrigation services within residential areas are required to have backflow prevention devices.
 - All commercial backflow prevention devices must be approved by SAWS prior to installation.
- Final connection to the existing water main shall not be made until the water main has been pressure tested, chlorinated, and SAWS has released the main for tie-in and use.
- Division Valves: Division Valves shown on plans or not shown on plans but found in the field shall only be operated by SAWS Distribution and Collection staff and only with prior written approval of the SAWS Director of Production and Operations and proper coordination with all SAWS departments. Contractor shall provide written notification to the inspector a minimum of two weeks in advance to start the coordination process and will be informed by the Inspector when the division valve will be operated by the SAWS Distribution and Collection staff. The Division Valve can only be operated by SAWS Distribution and Collection staff member not the inspector or the contractor. Operation of a Division Valve without the express prior written approval of the SAWS Distribution and Collection staff will constitute a material breach of any written SAWS contract or permit in addition to subjecting the Contractor to liability for any and all fines, fees, or other damages, direct or consequential, that may arise from or be caused by the operation of the valve without prior written permission. Please be informed that the approval of the operation or opening or closing of a division valve can take several weeks for approval. Division Valves will also have a valve lid labeled Division Valve and a locking mechanism installed with a key. The lock and key mechanism will be paid for by the contractor but will be installed by SAWS Distribution and Collection staff.

NOTE TO CONTRACTOR:

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

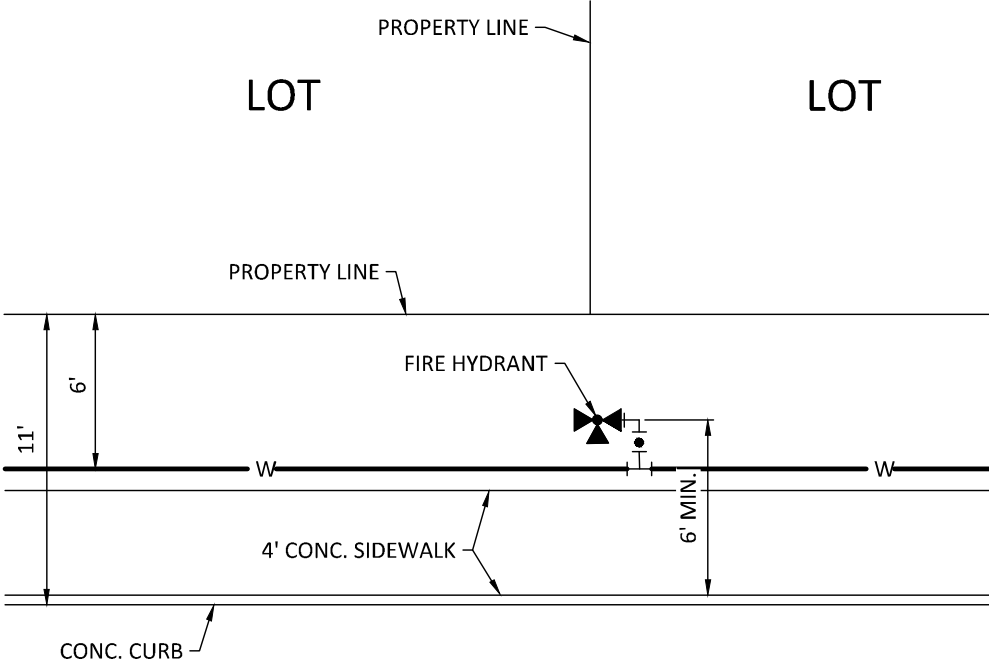
THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT EACH INDIVIDUAL UTILITY FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING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

TRAFFIC CONTROL NOTE:

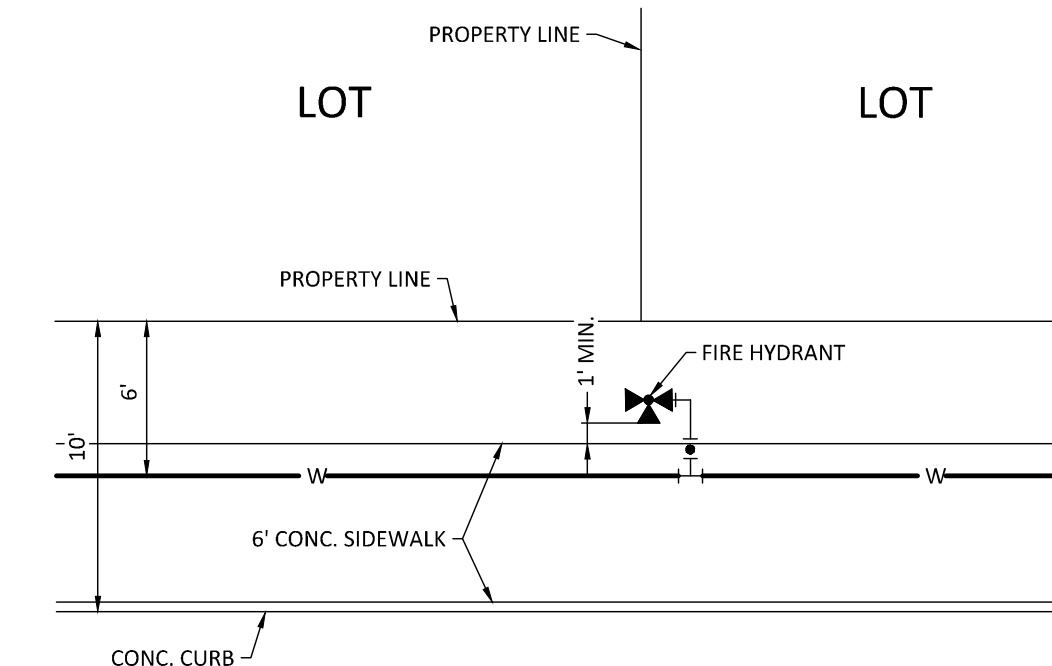
NECESSARY TRAFFIC CONTROL, FLAGMEN, DETOUR ROUTING AROUND WORK ACTIVITIES AND MAINTENANCE OF DETOUR SIGNS ARE THE CONTRACTOR'S RESPONSIBILITY, UNLESS DIRECTED OTHERWISE BY THE PLANS. IN ALL AREAS WHERE WORK IS ADJACENT TO OR CROSSING ROADWAYS, THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE OPEN TRAFFIC LANE (12 FT.), CONTROLLED WITH FLAGMEN, DURING WORKING HOURS. DURING ALL NON-WORKING HOURS A MINIMUM OF TWO TRAFFIC LANES (24 FT.) SHALL BE OPEN TO TRAFFIC. CONTRACTOR WILL FURNISH AND MAINTAIN ALL REQUIRED TRAFFIC CONTROL DEVICES PER TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD), TO PROPERLY WARN, GUIDE AND CONTROL TRAFFIC AT ALL TIMES DURING CONSTRUCTION.

MISCELLANEOUS GENERAL NOTES

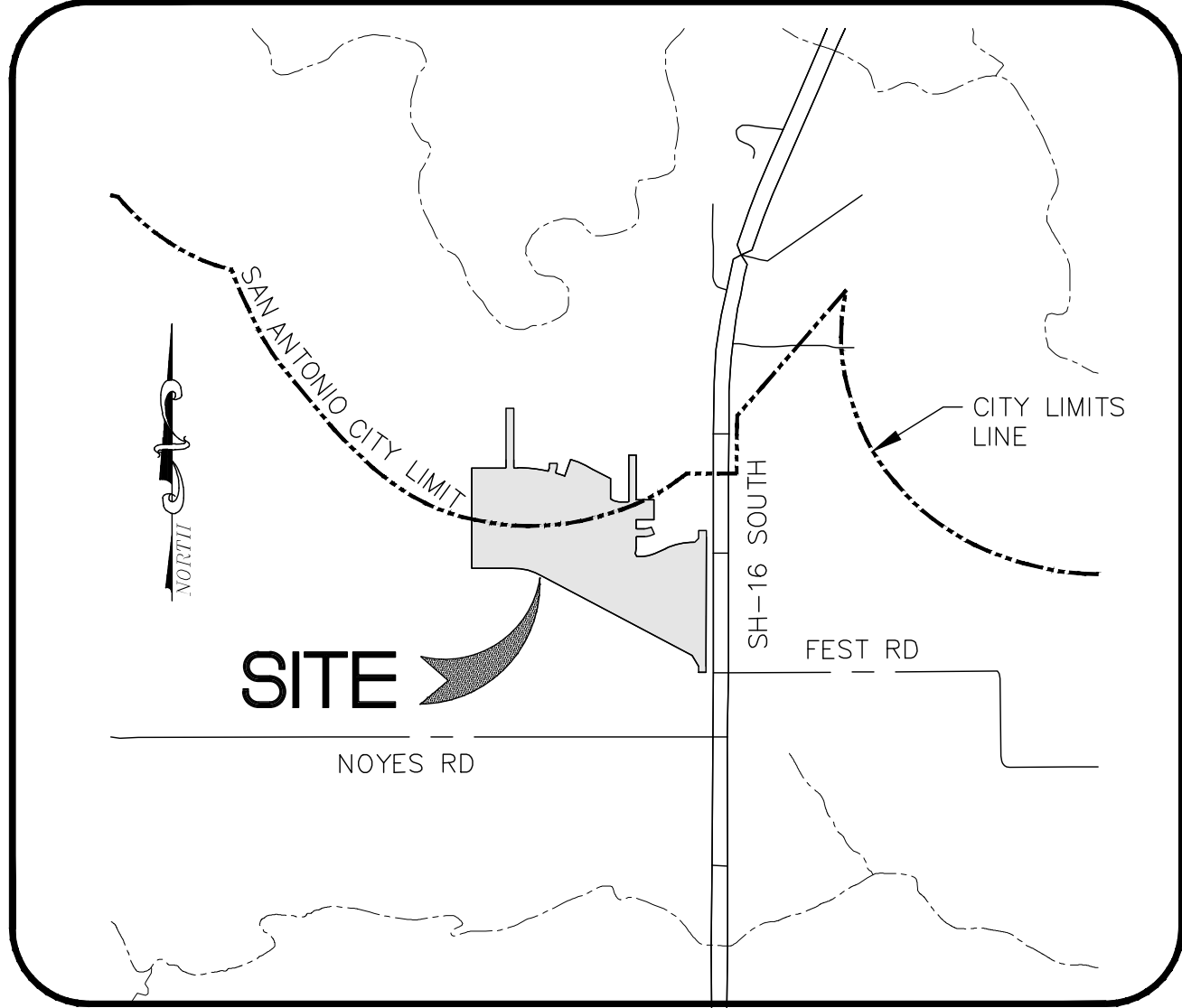
- MACHINE CHLORINATION BY THE SAN ANTONIO WATER SYSTEM FOR NEW WATER MAINS GREATER THAN 800 FEET. CONTRACTOR SHALL CHLORINATE NEW MAINS WITH HTH FOR NEW WATER MAINS 750 FEET AND LESS.
- JUMPER CONNECTIONS TO EXISTING WATER SERVICE TO BE PROVIDED AS REQUIRED OR DIRECTED BY THE SAWS INSPECTOR.
- ALL MAINS ARE ON-SITE.
- FITTINGS WEIGHT IS BASED ON M.J. DUCTILE IRON FITTINGS (COMPACT).
- CONTRACTOR TO OBTAIN STREET CUT PERMITS AS NECESSARY FOR WATER MAIN INSTALLATION, REPLACEMENT OF CURB, SIDEWALKS, BASE AND PAVEMENT WILL BE SUBSIDIARY TO THE ITEMS THAT THE STREET CUT WAS NEEDED FOR.
- MINIMUM COVER OVER WATER MAIN BASED ON FINISHED GROUND.
WATER LINE DIA. MIN. DEPTH
8"-12" 4'
≥16" 5'



TYPICAL FIRE HYDRANT DETAIL FOR LOCAL A
N.T.S.



TYPICAL FIRE HYDRANT DETAIL FOR LOCAL B
N.T.S.



VICINITY MAP
N.T.S.

SUBMITTAL DATE:

LEGAL DESCRIPTION:

BEING A 27.677 TRACT OF LAND PARTIALLY WITHIN THE CITY OF SAN ANTONIO, NEW CITY BLOCK 16595, BEXAR COUNTY, TEXAS, BEING SITUATED IN THE RUFENO RODRIGUEZ SURVEY NO. 49, ABSTRACT NO. 613, COUNTY BLOCK NO. 4202, BEING A PORTION OF A 131.81 ACRE TRACT, AS CONVEYED TO KINGFISH DEVELOPMENT, LLC BY WARRANTY DEED WITH VENDOR'S LIEN AS RECORDED IN DOCUMENT NUMBER 20220169411, BEXAR COUNTY TEXAS.



Moy Tarin Ramirez Engineers, LLC

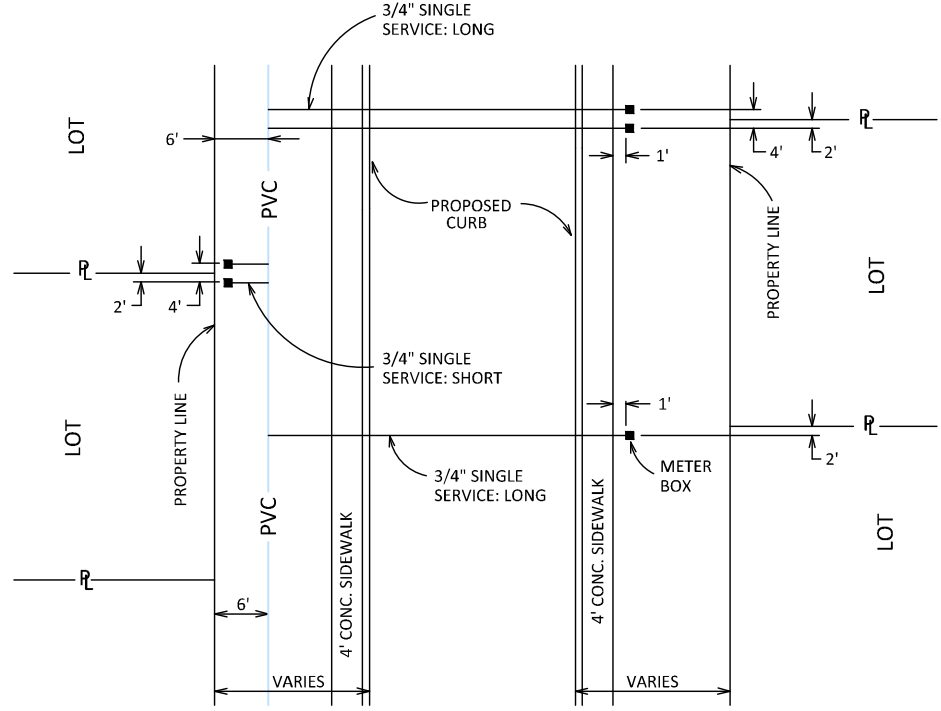
FIRM TBPELS ENG F-5297 SVY F-10131500

12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085

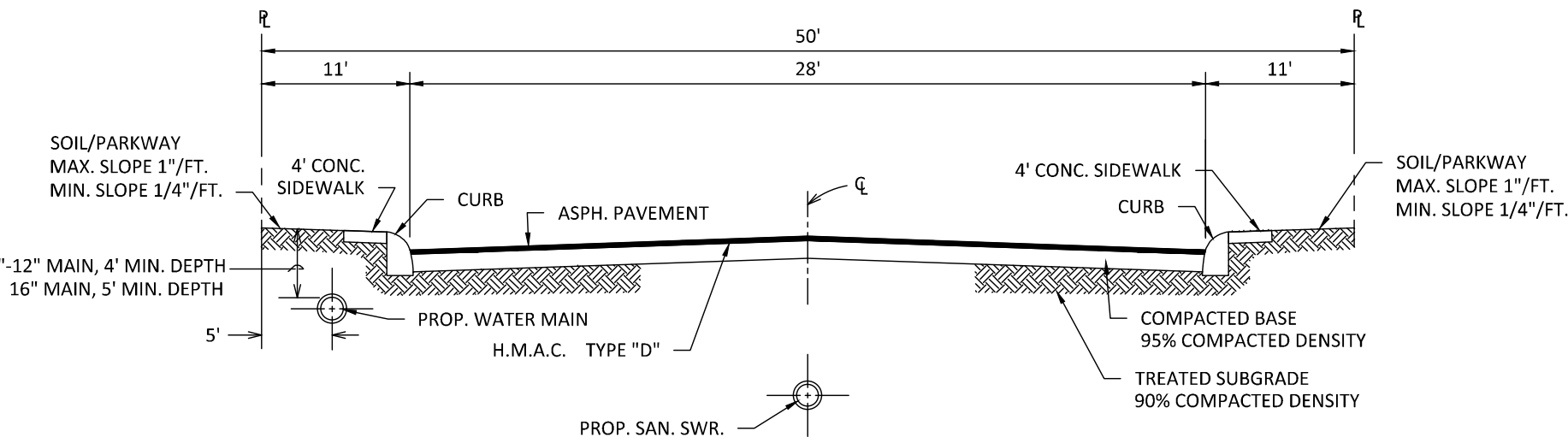
- Engineers
- Surveyors
- Planners

SHEET INDEX

SHEET NO.	TITLE
C3.0	WATER COVER
C3.1	WATER OVERALL
C3.2	WATER OVERALL PLAN
C3.3	WATER DETAILS
C3.4	WATER DETAILS



TYPICAL METER BOX DETAIL
N.T.S.

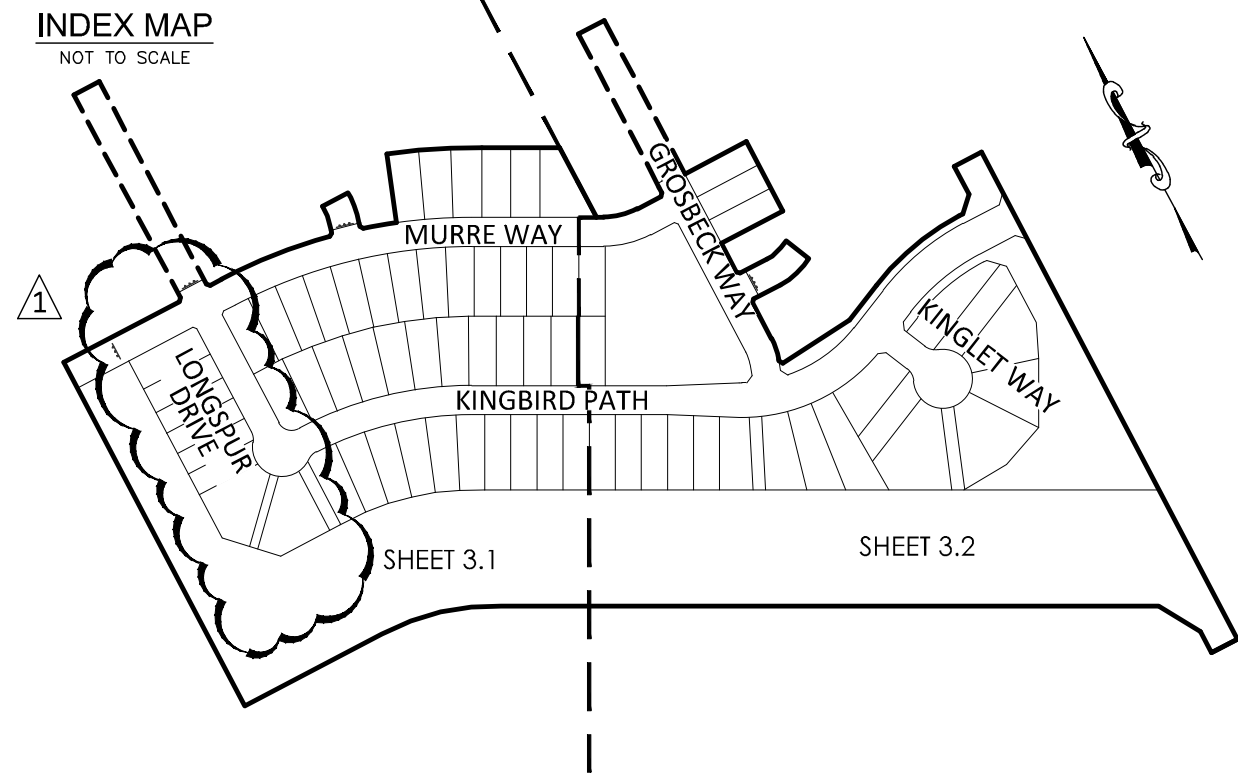


TYPICAL STREET CROSS-SECTION (28' PAVEMENT)
N.T.S.

CAUTION!
THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING, ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

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.

11/18/24 REVISED LOT LAYOUT



ESTIMATED WATER QUANTITIES

ITEM	DESCRIPTION	UNIT	EST/ITY
1	Trench Excavation Protection	L.F.	3,570
2	Water Main Tie-In	EA.	1
3	8" Pipe, C900 DR 18 PVC Class 235 (Incl. Restraints)	L.F.	3,173
4	8" Pipe, D.I.	L.F.	75
5	2" Pipe, HDPE, DR 9	L.F.	322
6	8" Gate Valve, M.J.	EA.	13
7	16" Gate Valve, M.J.	EA.	1
8	Standard Fire Hydrant	EA.	6
9	2" Permanent Blow-off	EA.	5
10	2" Temporary Blow-off	EA.	1
11	3/4" Single Service: Short	EA.	51
12	3/4" Single Service: Long	EA.	19
13	Irrigation Service: Short	EA.	2
14	D.I. Fittings	TON	4.37
15	Hydrostatic Testing	EA.	1
16	16" x 8" Cut-In Tee	EA.	1
17	Meter Boxes	EA.	72

TXDOT PERMIT NO. SAT20221017115626

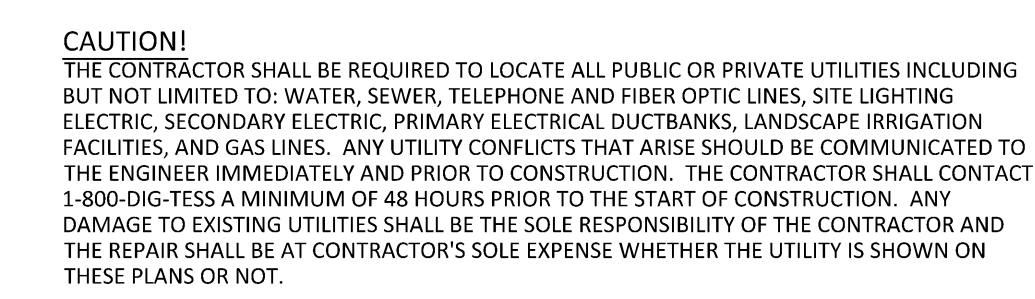
PRESSURE ZONE 2

Developer's Name	KINGFISH DEVELOPMENT, LLC
Developer's Address	2722 W. BITTERS RD. SUITE 106
City	SAN ANTONIO
State	TX
Zip	78248
Phone #	210-882-6800
Fax #	
SAWS Block Map #	132-514
Total EDU's	72
Total Acreage	27.677
Total Linear Footage of Pipe	8" ~ 3263 L.F. / 2" ~ 322 L.F.
Plat No.	22-11800357
Number of Lots	70
SAWS Job No.	22-1156

SUBMITTAL SET

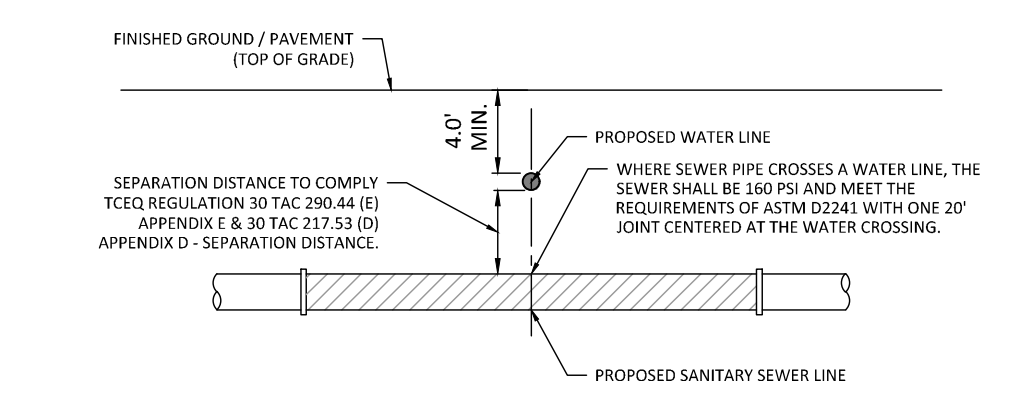
TEXAS C3.0

BEXAR COUNTY

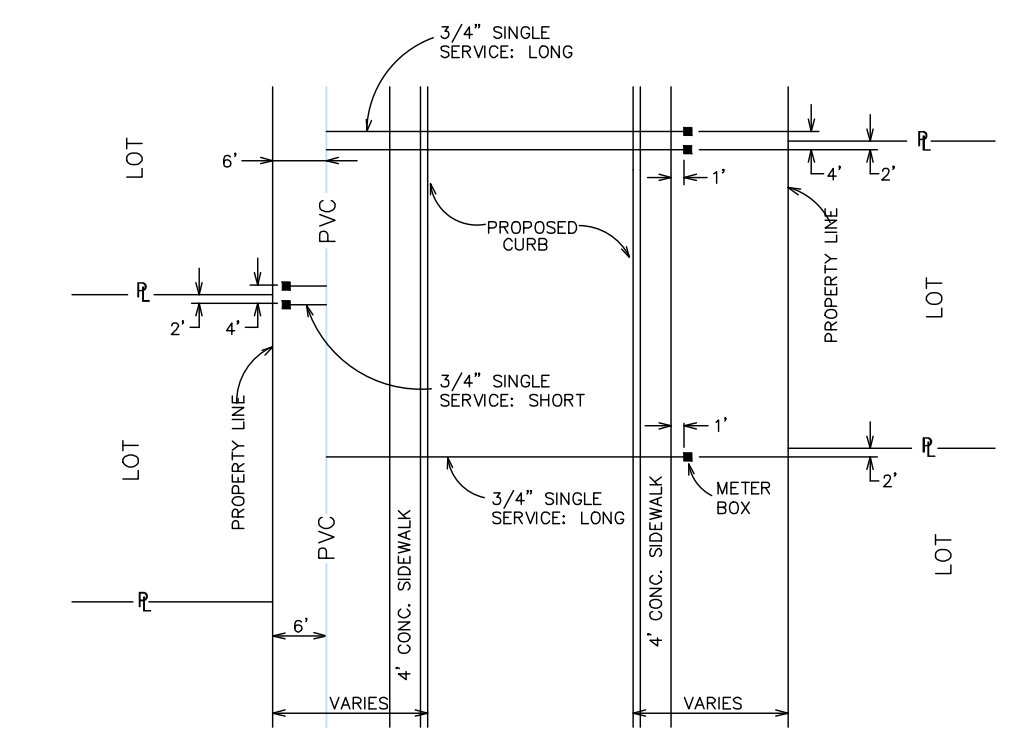


TRENCH EXCAVATION SAFETY PROTECTION

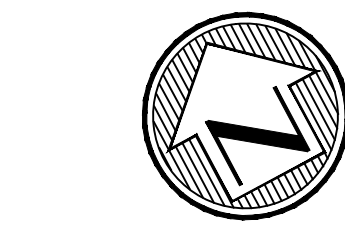
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TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL
N.T.S.



TYPICAL METER BOX DETAIL
N.T.S.



SCALE: 1"=50'



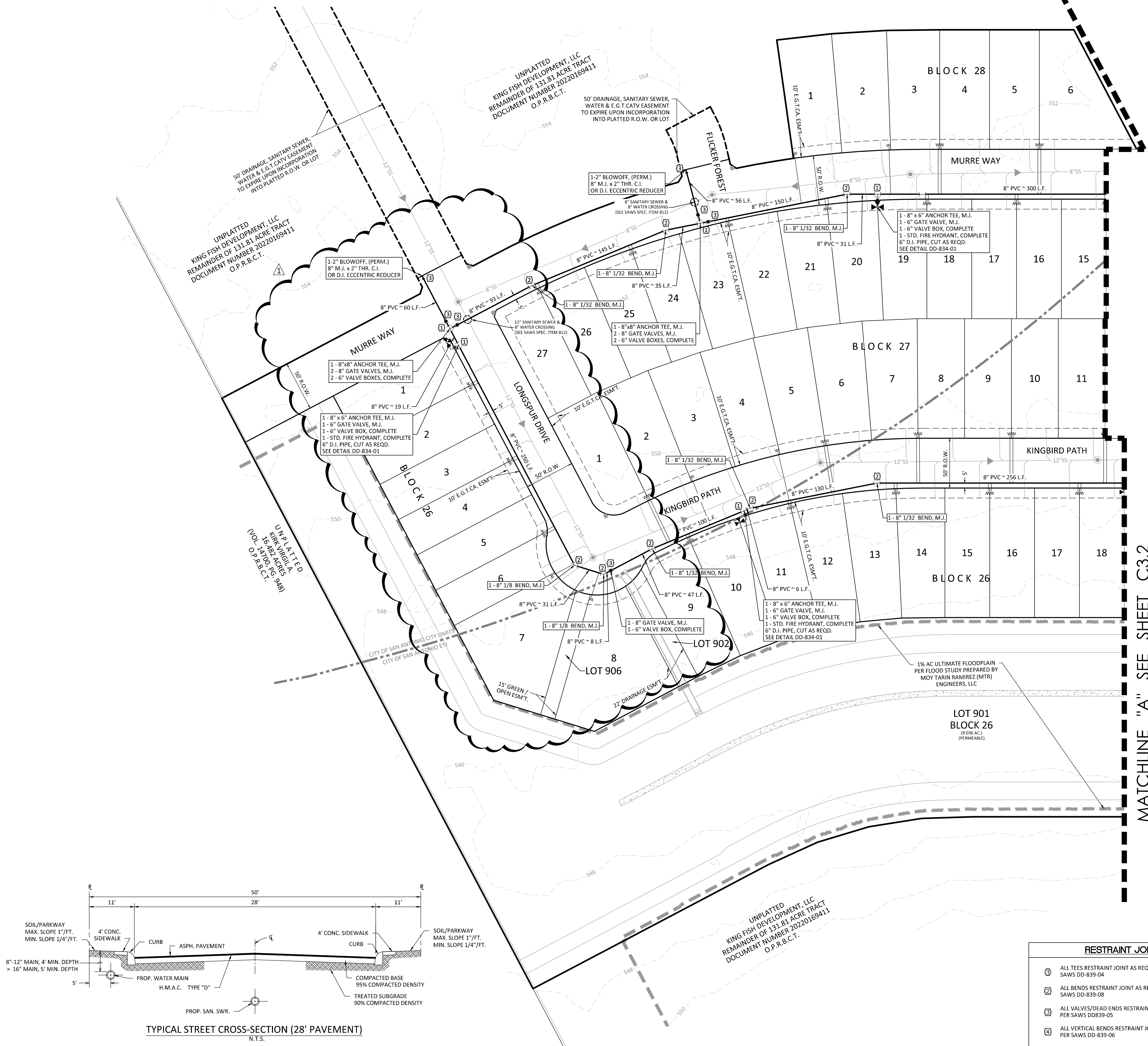
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TXDOT PERMIT NO. SAT20221017115626

PRESSURE ZONE 2

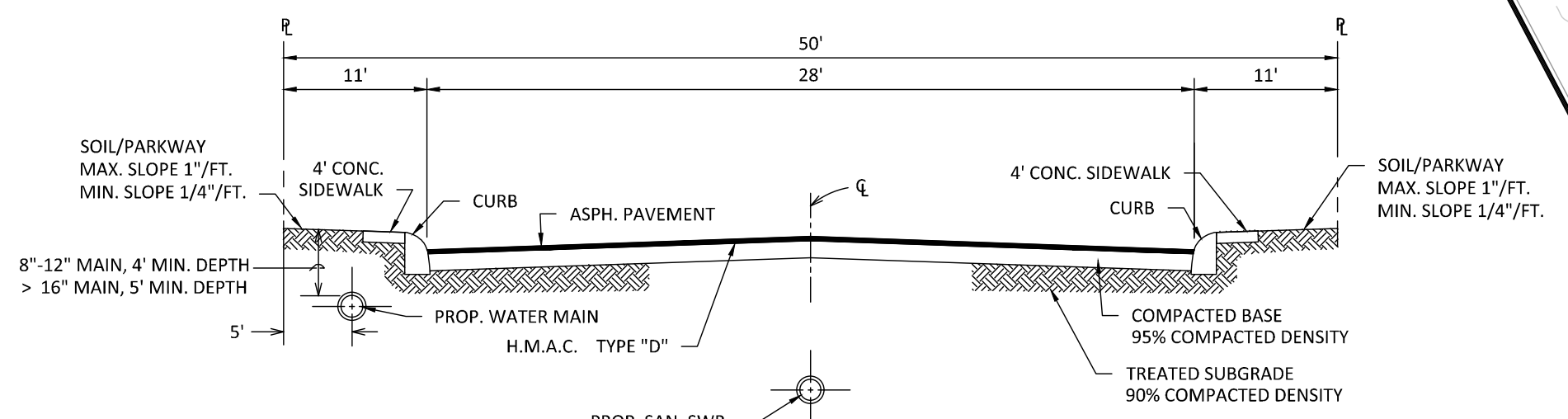
Developer's Name KINGFISH DEVELOPMENT, LLC
Developer's Address 2722 W. BITTERS RD. SUITE 106
City SAN ANTONIO State TX Zip 78248
Phone 210-882-6800 Fax
SAWS Block Map 132-514 Total Udu's 72 Total Acreage 27.677
Total Linear Footage of Pipe 8"=3263 LF, 12"=322 LF. Plat No. 22-11800357
Number of Lots 70 SAWS Job No. 22-1156

SUBMITTAL SET



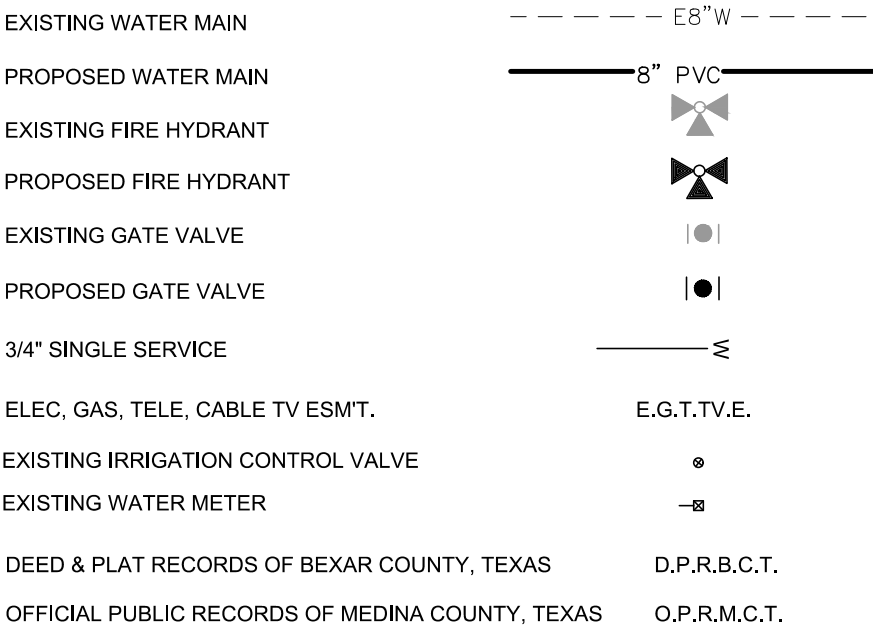
MATCHLINE "A" SEE SHEET C3.2

TYPICAL STREET CROSS-SECTION (28' PAVEMENT)



<u>RESTRAINT JOINTS</u>	
①	ALL TEES RESTRAINT JOINT AS REQUIRED PER SAWS DD-839-04
②	ALL BENDS RESTRAINT JOINT AS REQUIRED PER SAWS DD-839-08
③	ALL VALVES/DEAD ENDS RESTRAINT JOINT AS REQUIRED PER SAWS DD839-05
④	ALL VERTICAL BENDS RESTRAINT JOINT AS REQUIRED PER SAWS DD-839-06

LEGEND



CAUTION!
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TRENCH EXCAVATION SAFETY PROTECTION

Contractor and/or Contractor's independently retained employee or structural design/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.

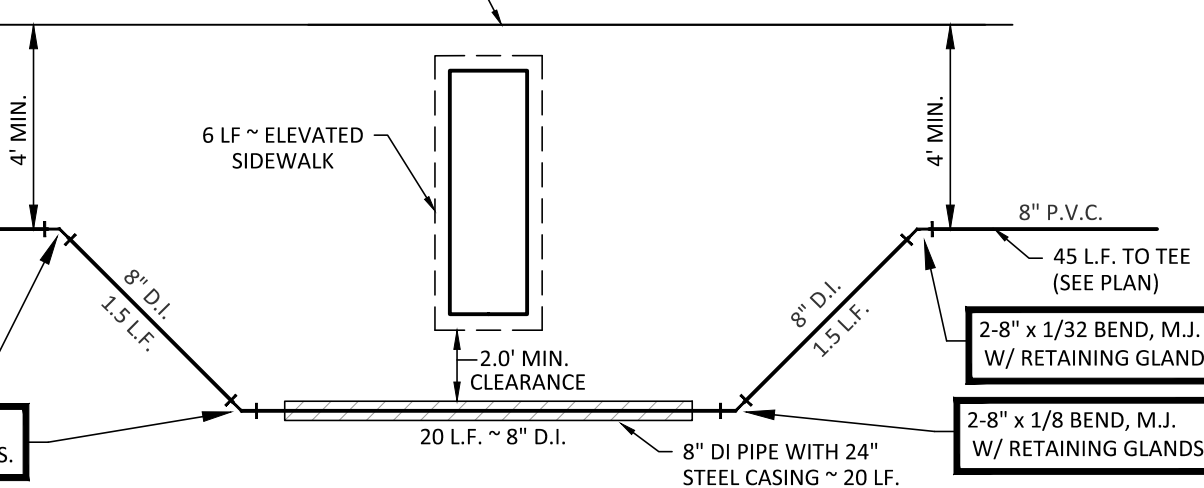
RESTRAINT JOINTS

- ALL TEES RESTRAINT JOINT AS REQUIRED PER SAWS DD-839-04
- ALL BENDS RESTRAINT JOINT AS REQUIRED PER SAWS DD-839-08
- ALL VALVES/DEAD ENDS RESTRAINT JOINT AS REQUIRED PER SAWS DD-839-05
- ALL VERTICAL BENDS RESTRAINT JOINT AS REQUIRED PER SAWS DD-839-06

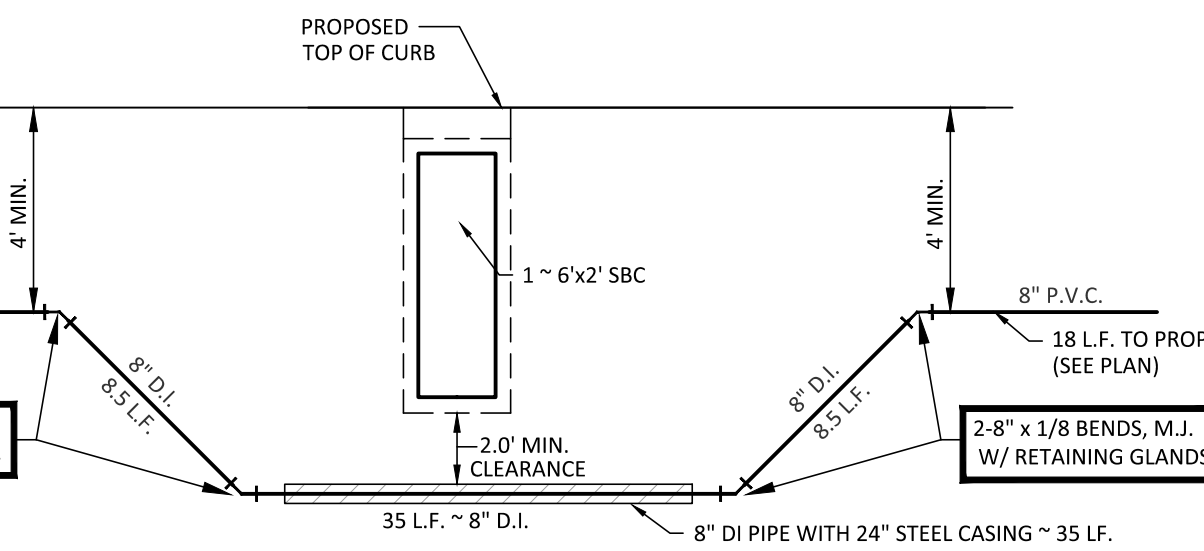
TXDOT PERMIT NO. SAT20221017115626

PRESSURE_ZONE_2

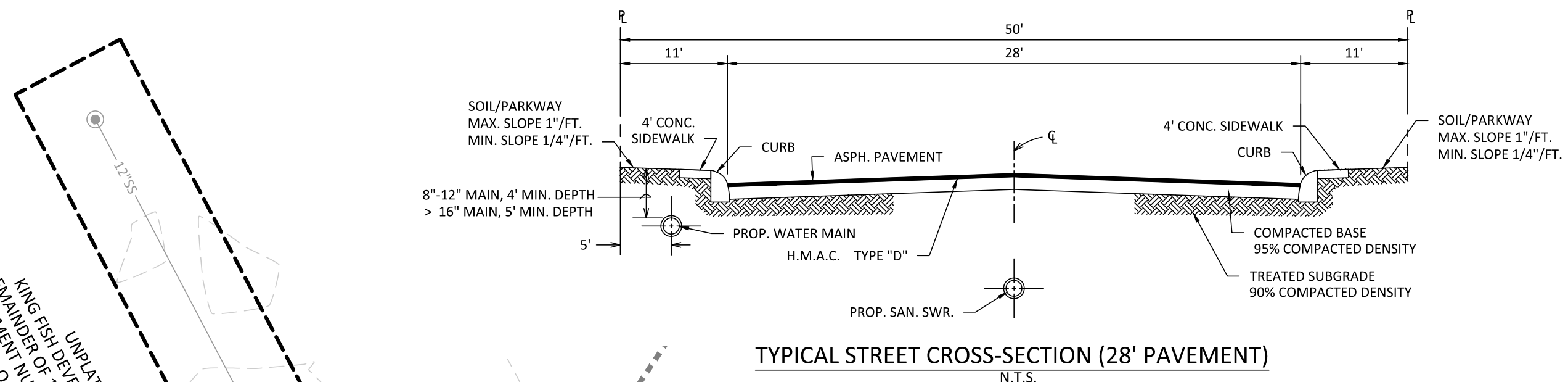
Developer's Name KINGFISH DEVELOPMENT, LLC
Developer's Address 2722 W. BITTERS RD. SUITE 106
City SAN ANTONIO State TX Zip 78248
Phone # 210-882-6800 Fax #
SAWS Block Map # 132-514 Total EDU's 73.5 Total Acreage 27.677
Total Linear Footage of Pipe 8" ~ 3263 L.F. / 2" ~ 322 Plot No. 22-11800357
Number of Lots 70 SAWS Job No. 22-1156



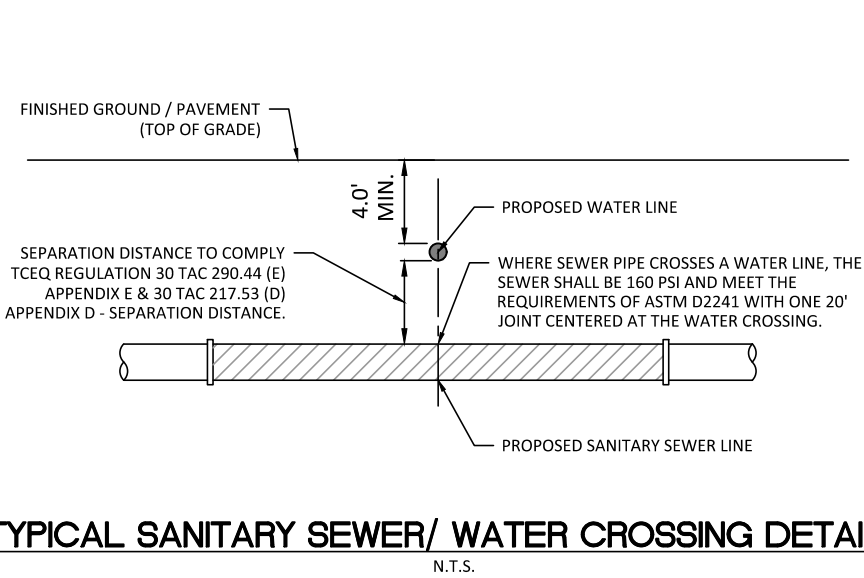
DETAIL "A" - DRAIN AND WATER CROSSING



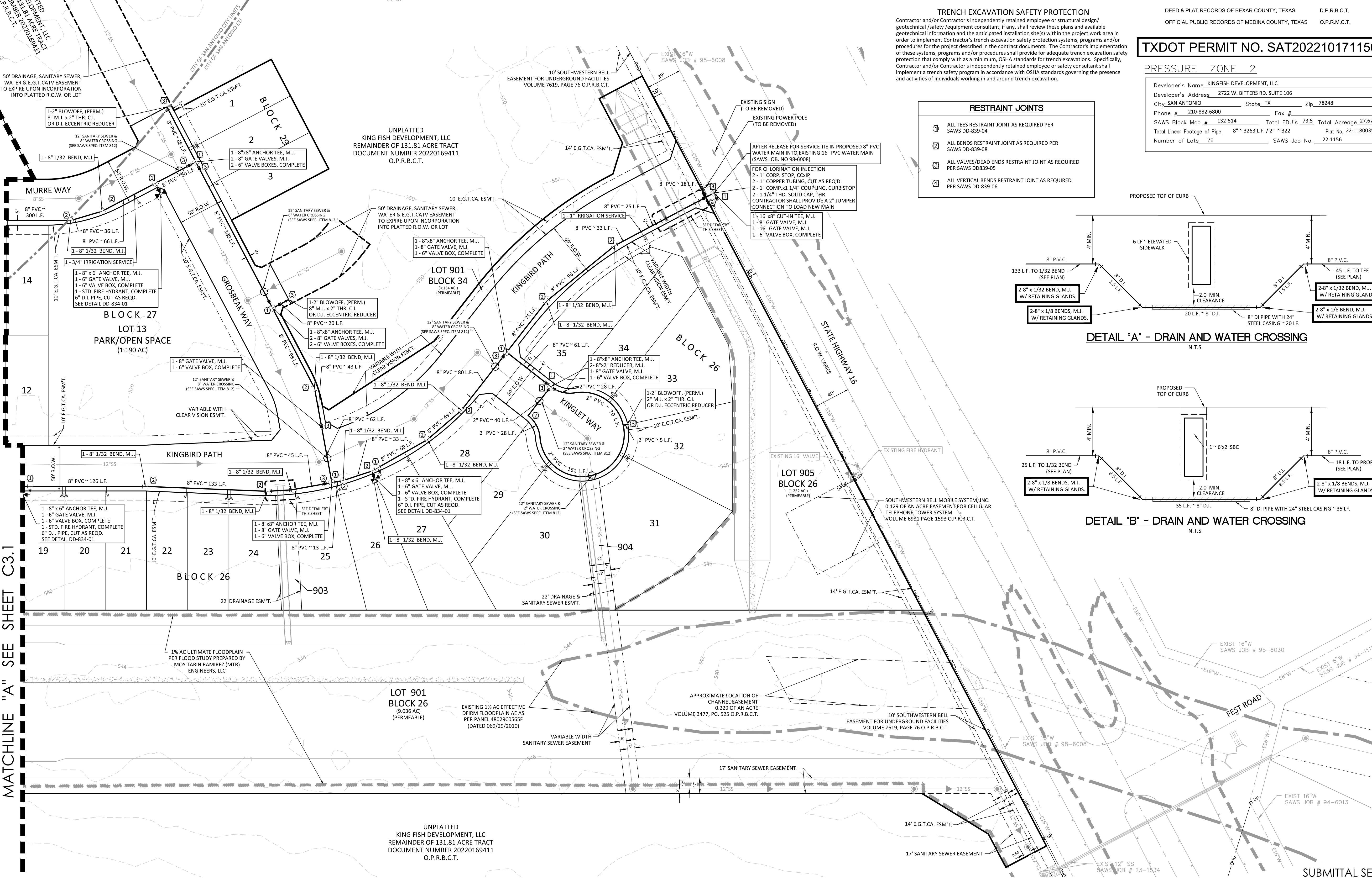
DETAIL "B" - DRAIN AND WATER CROSSING



TYPICAL STREET CROSS-SECTION (28' PAVEMENT)



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL



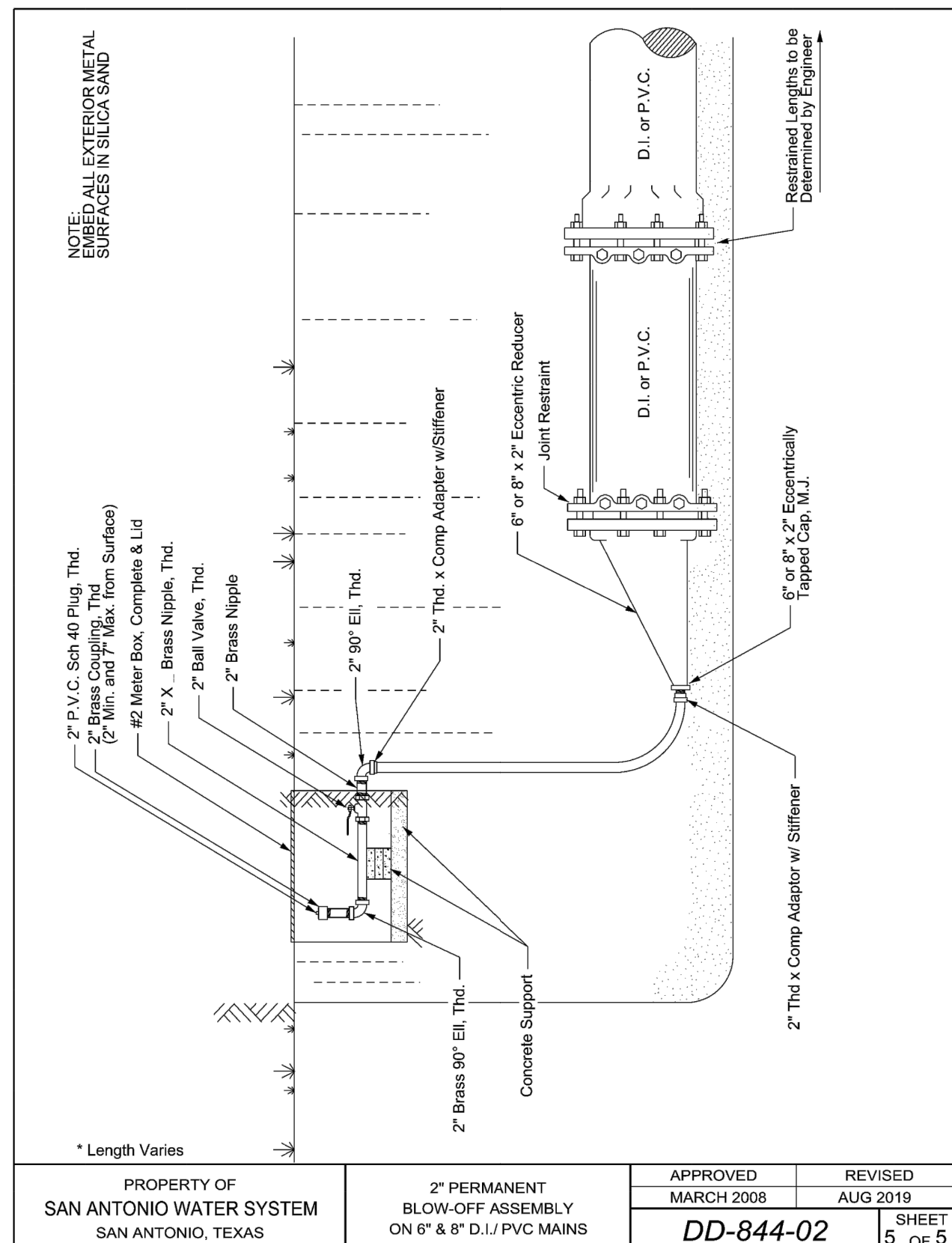
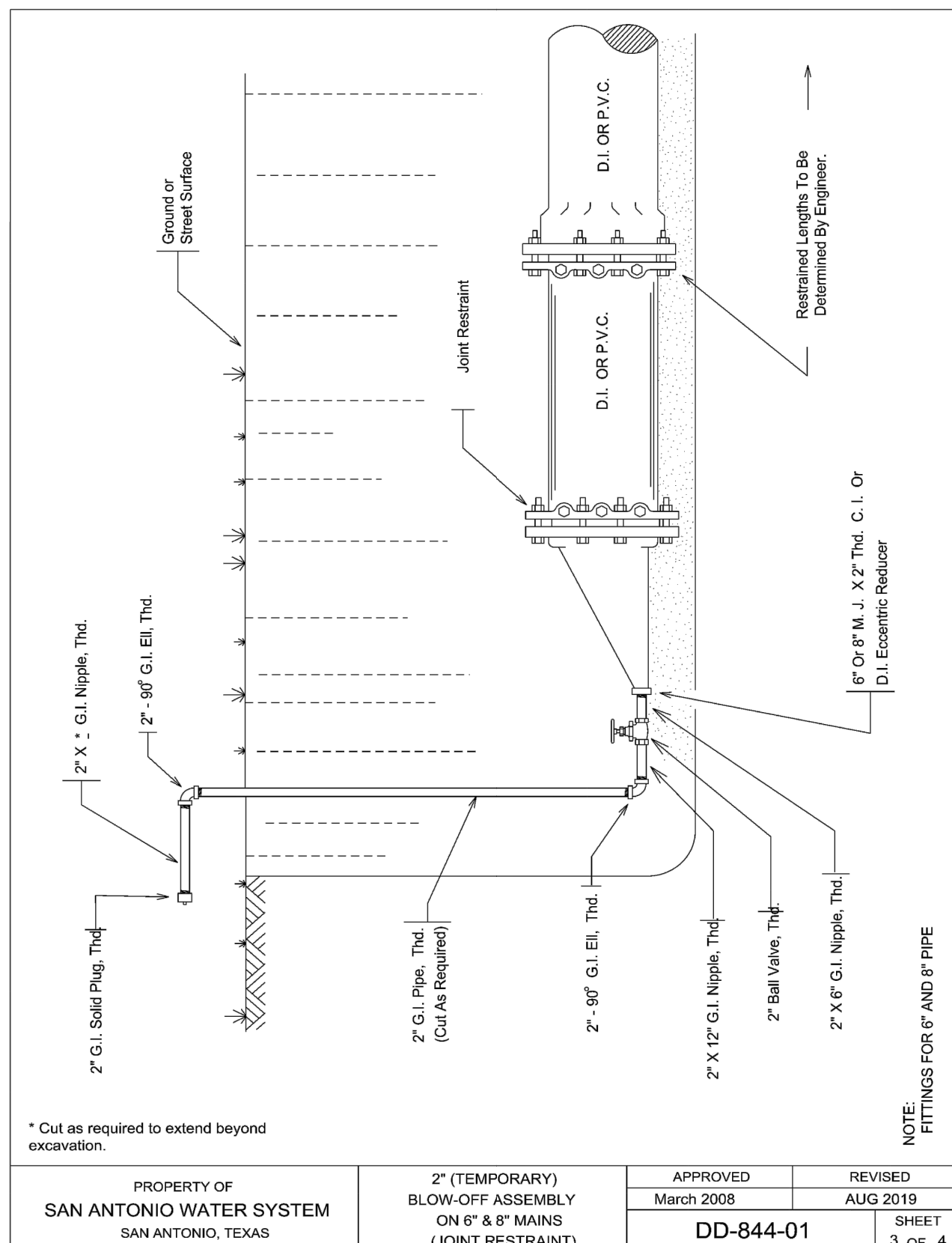
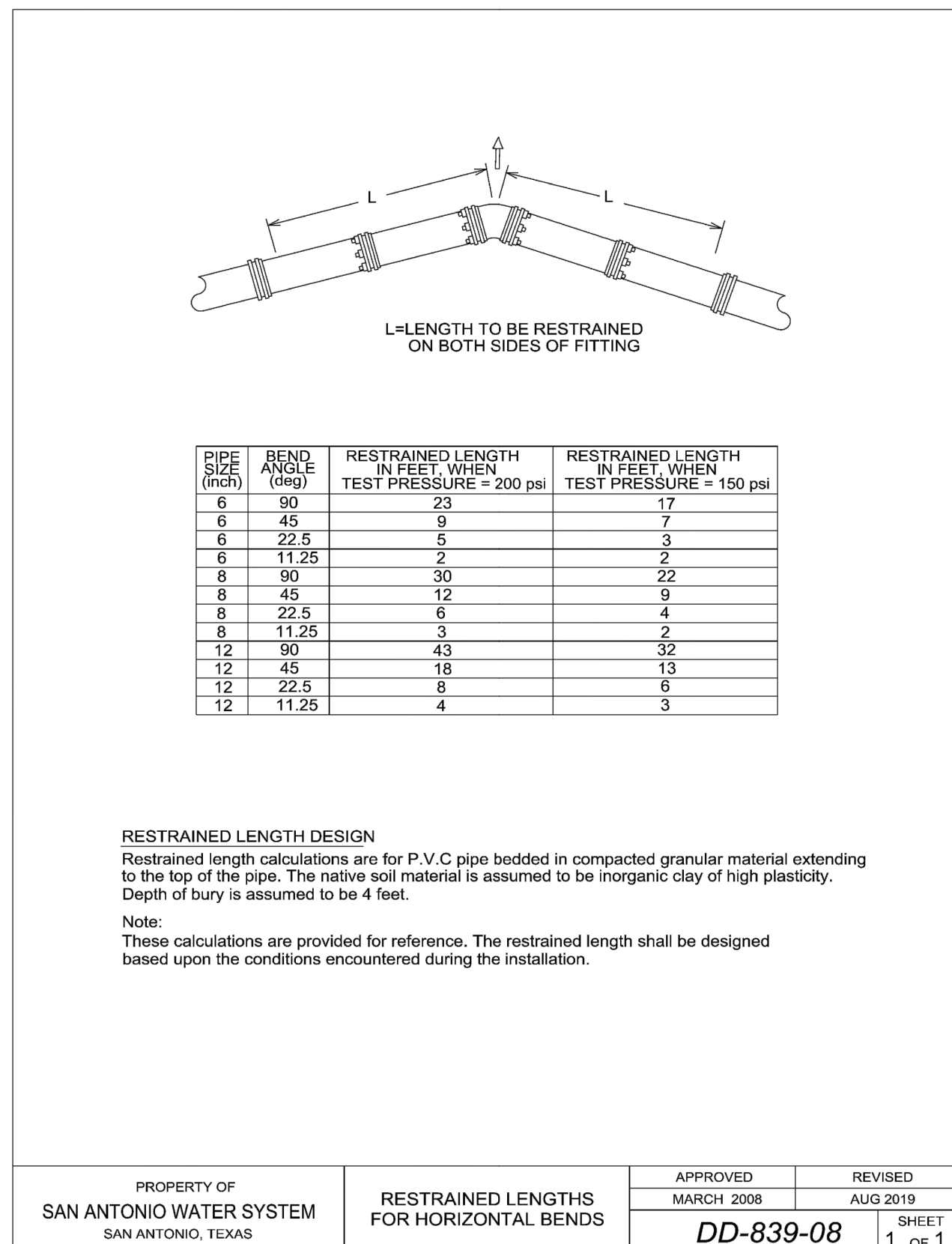
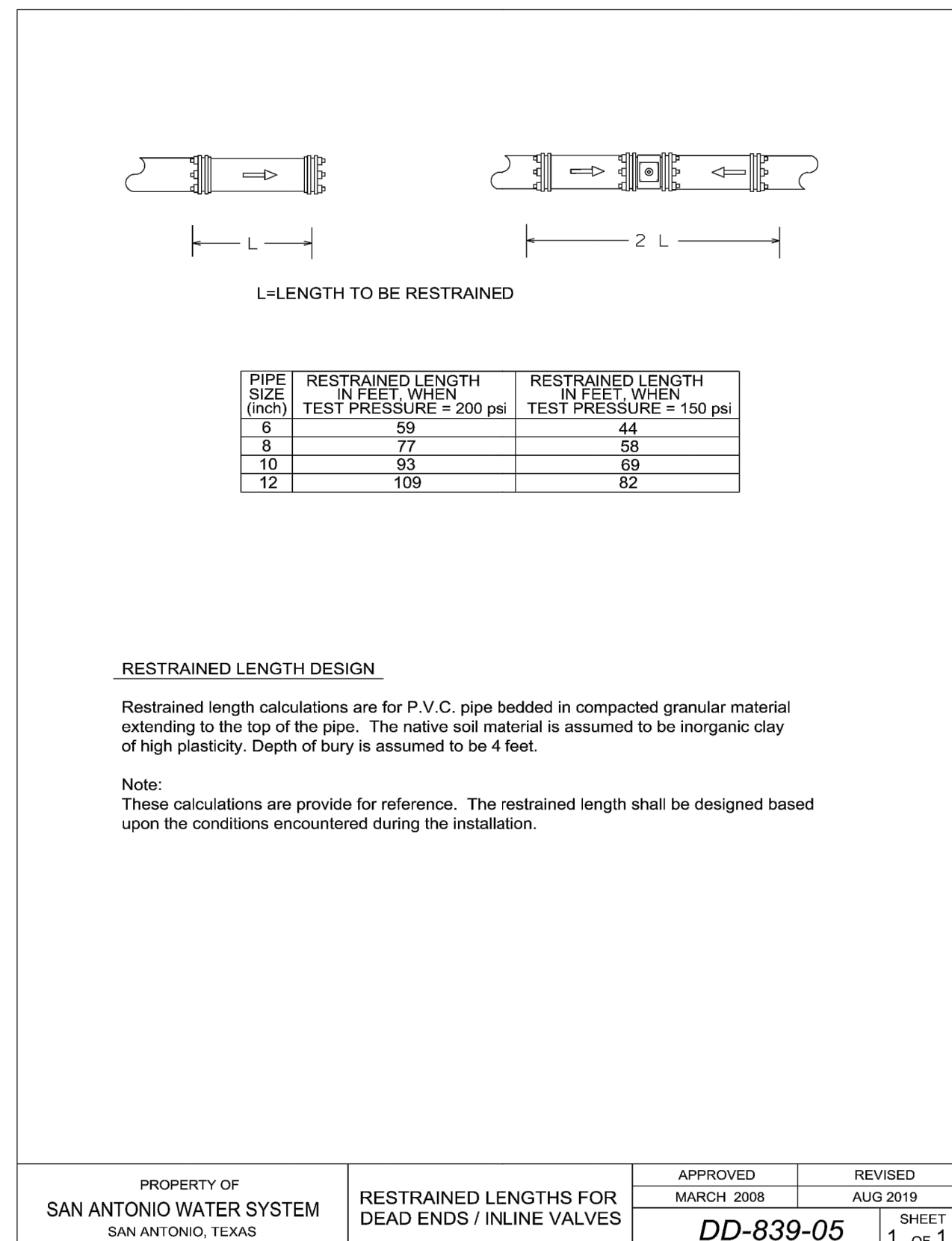
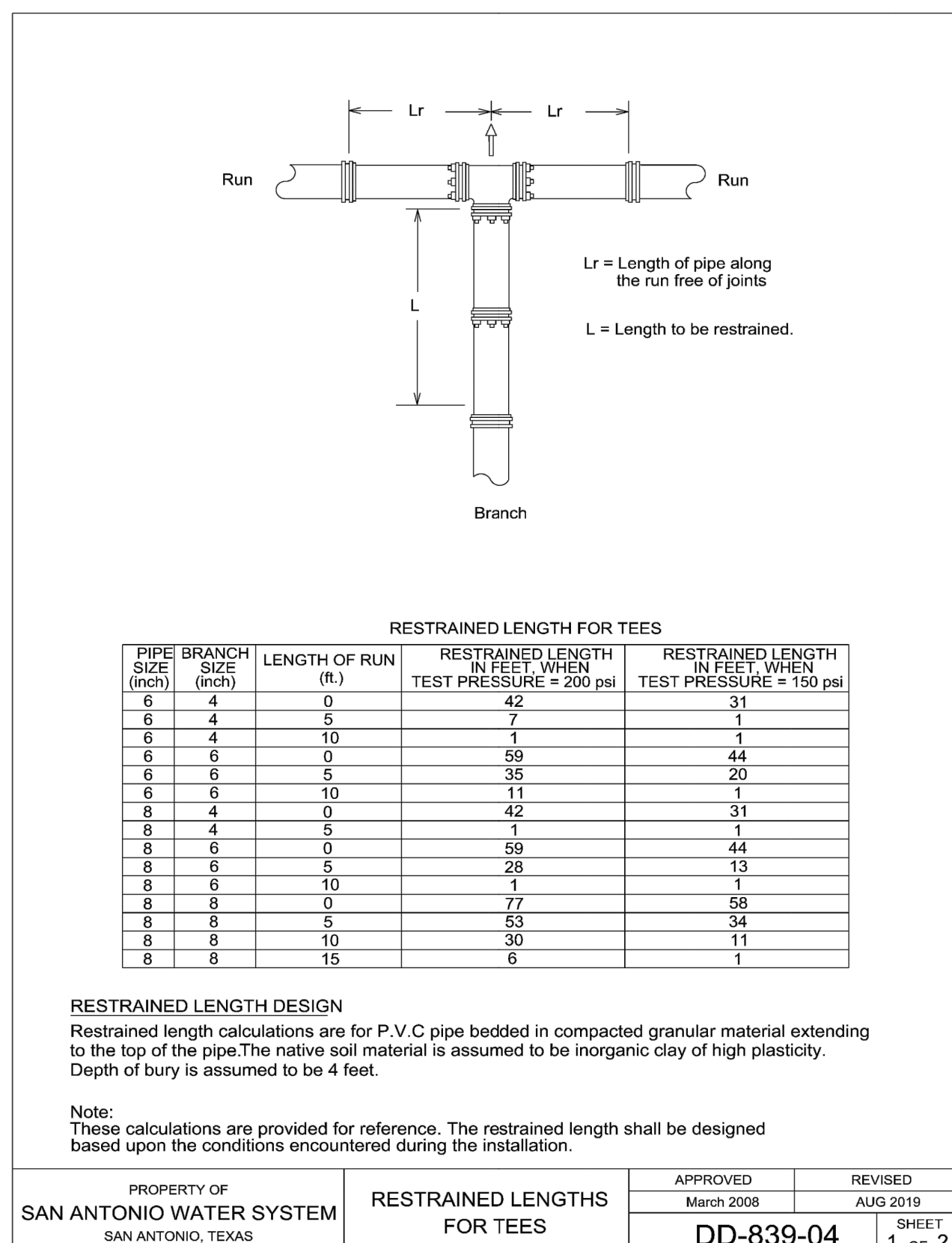
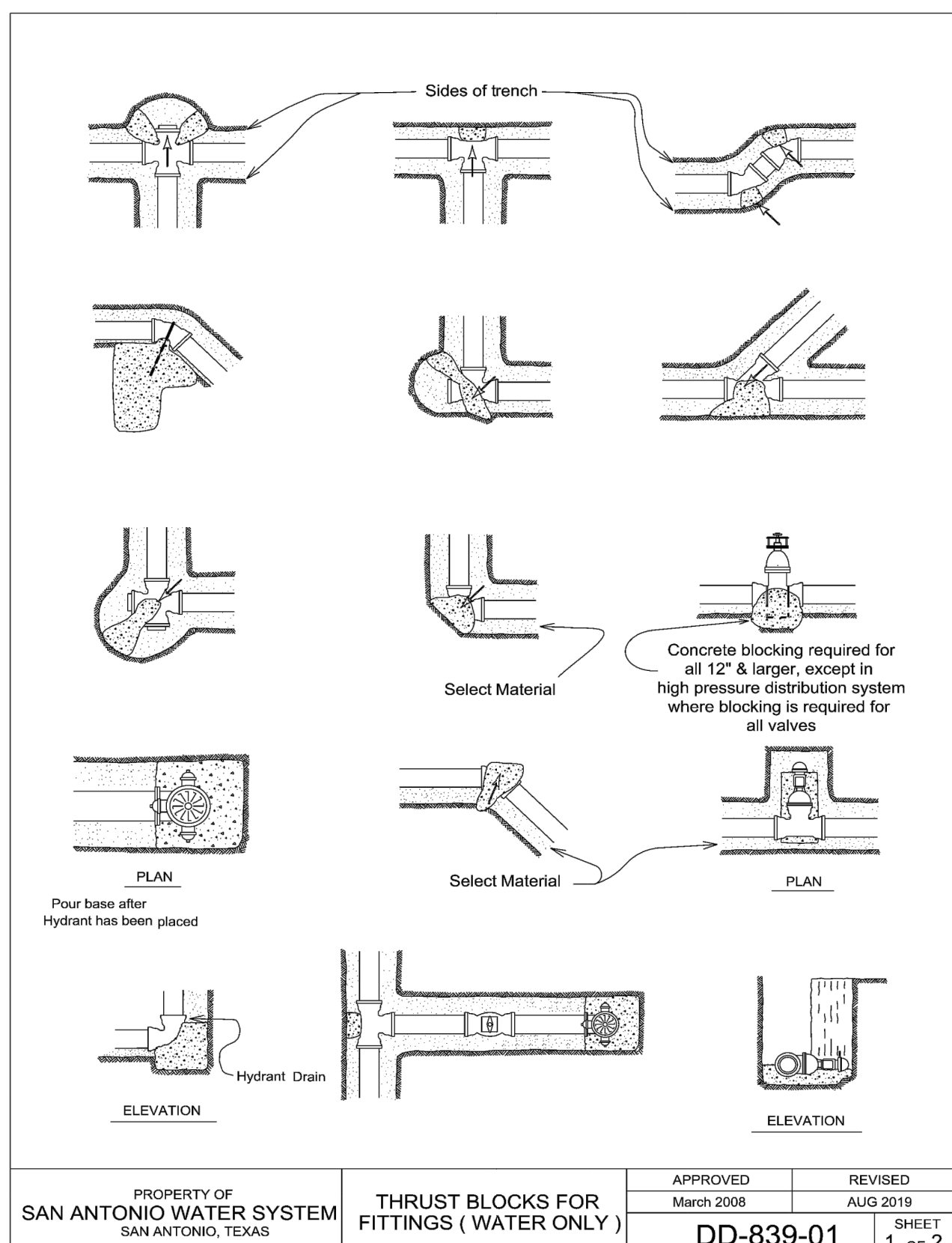
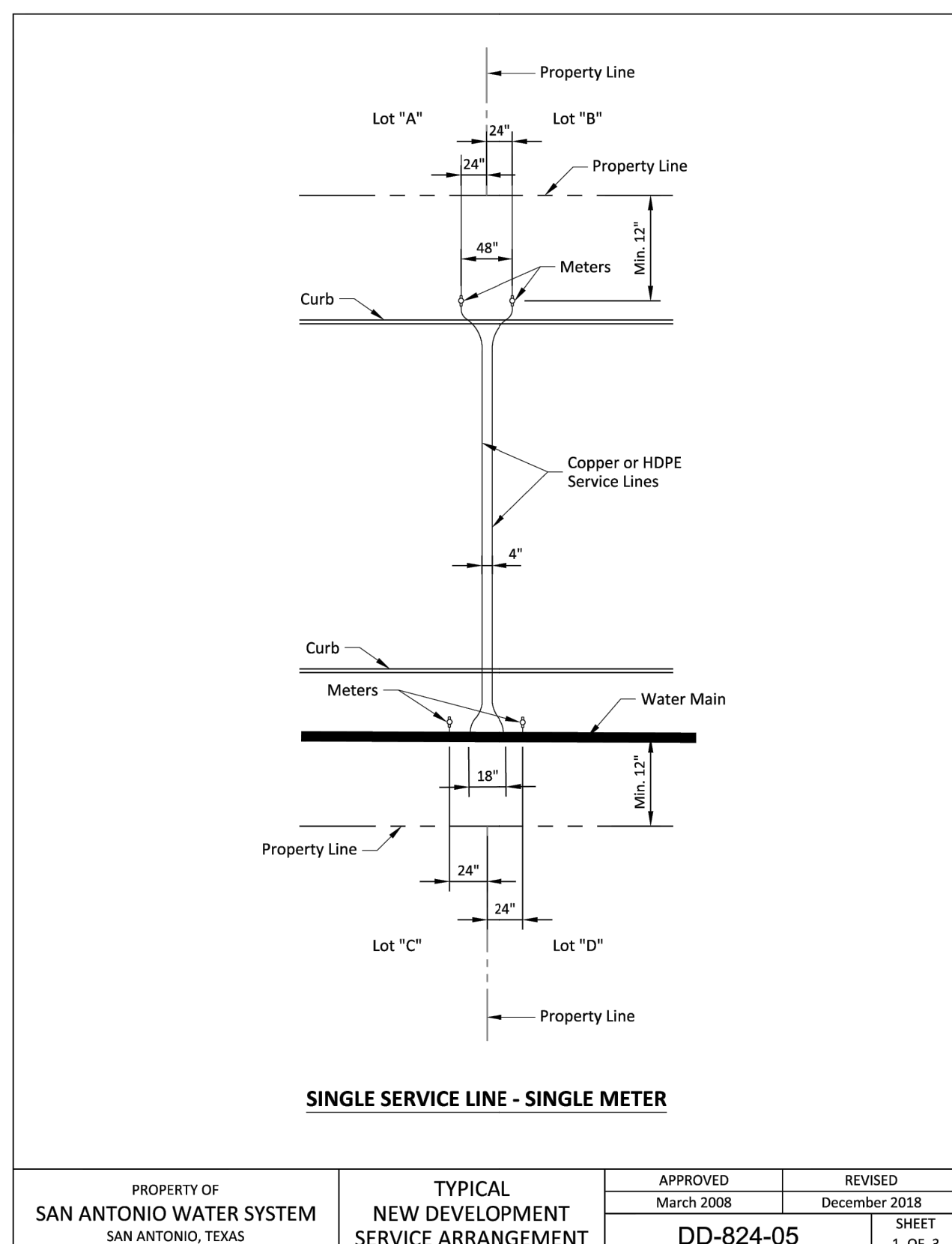
MATCHLINE "A" SEE SHEET C3.1

VERDIN SUBDIVISION, UNIT 1
WATER OVERALL DISTRIBUTION PLAN

SHEET

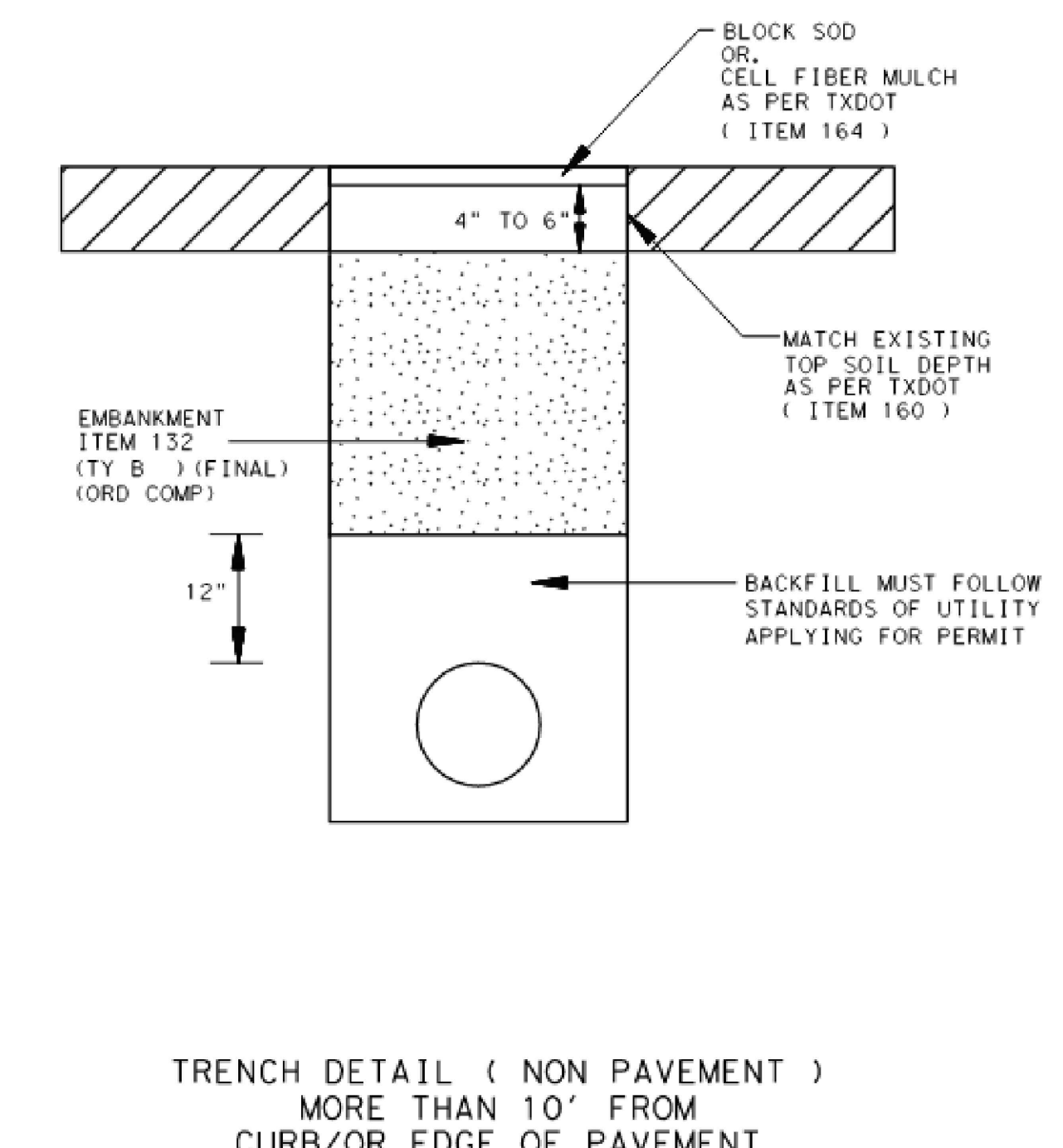
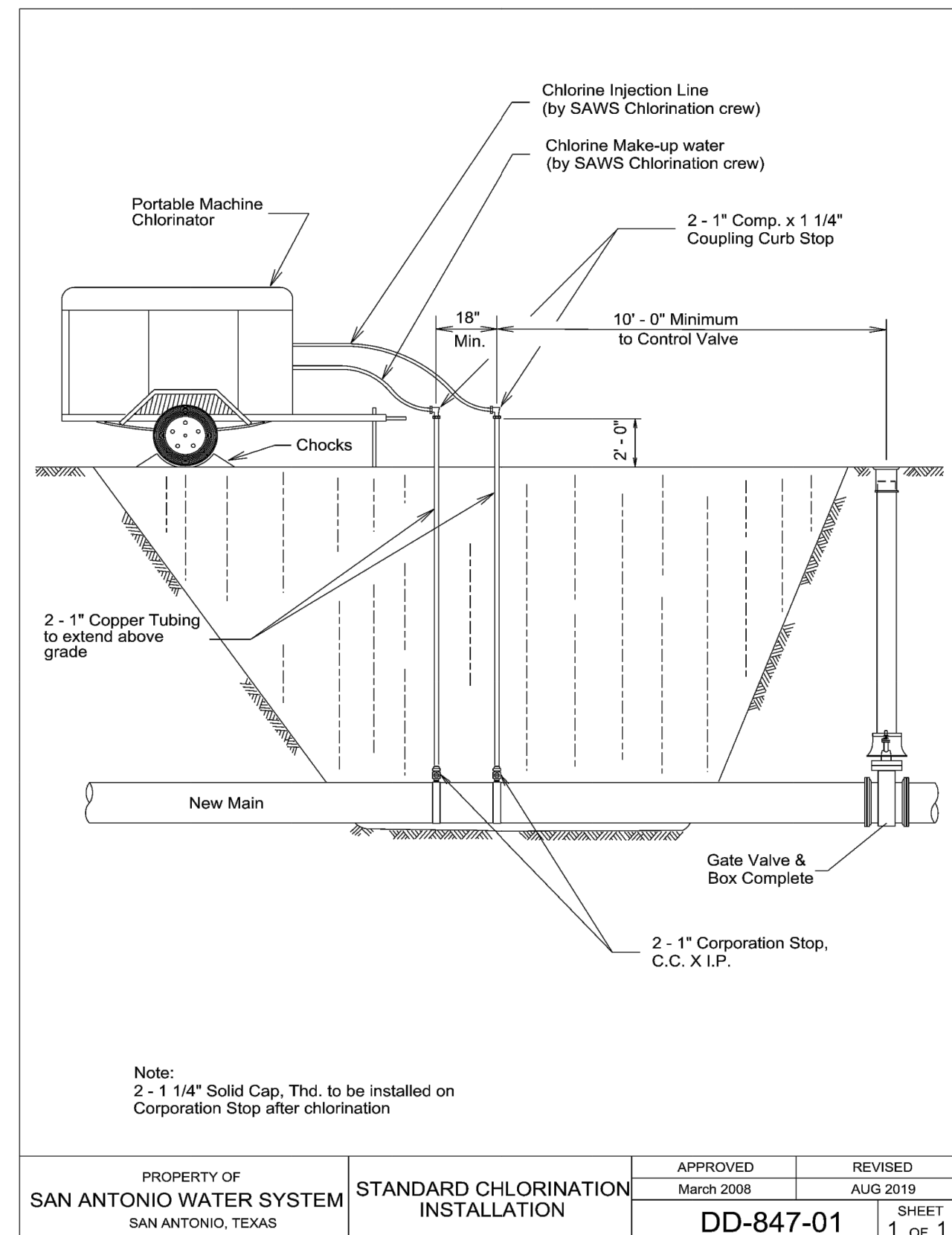
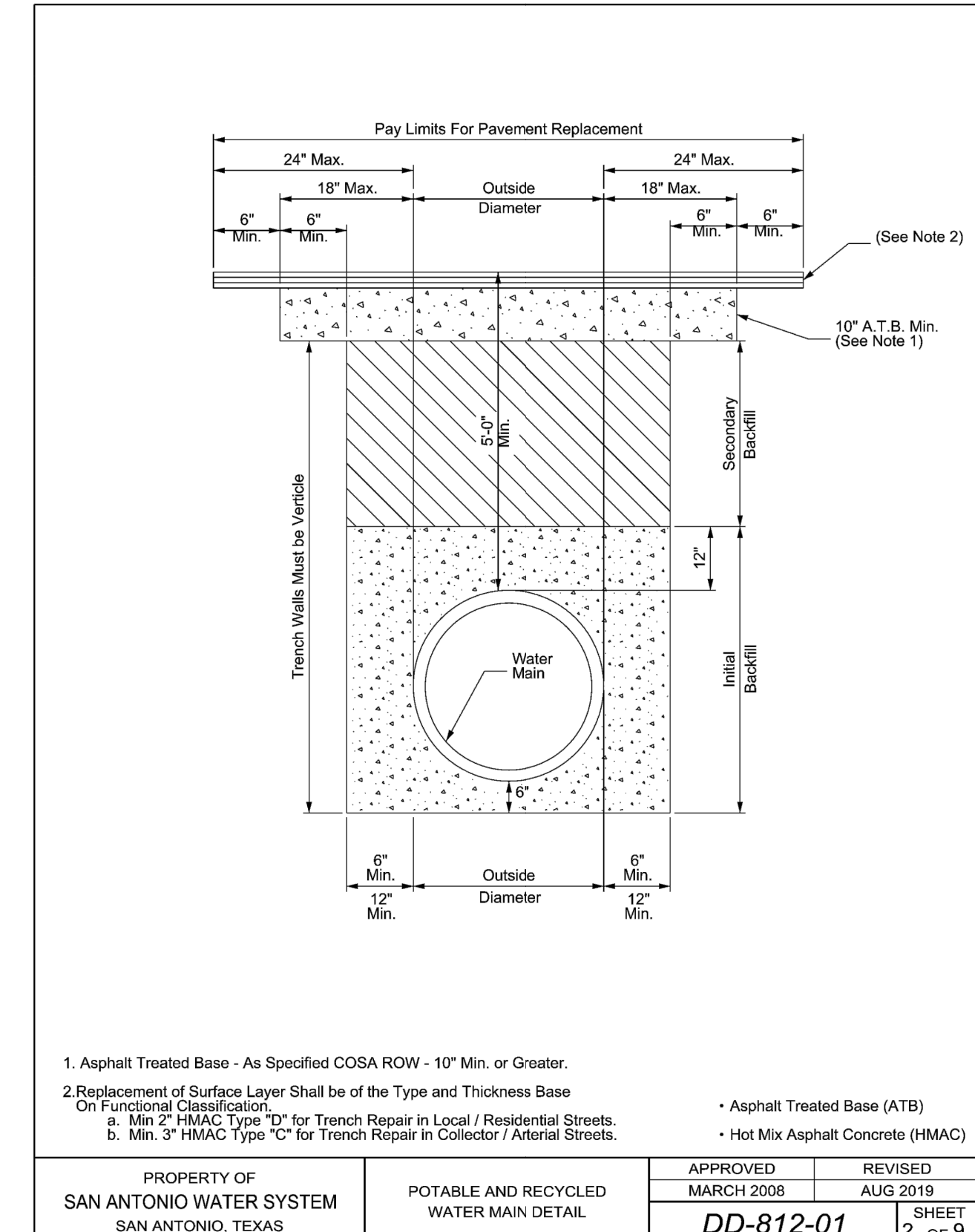
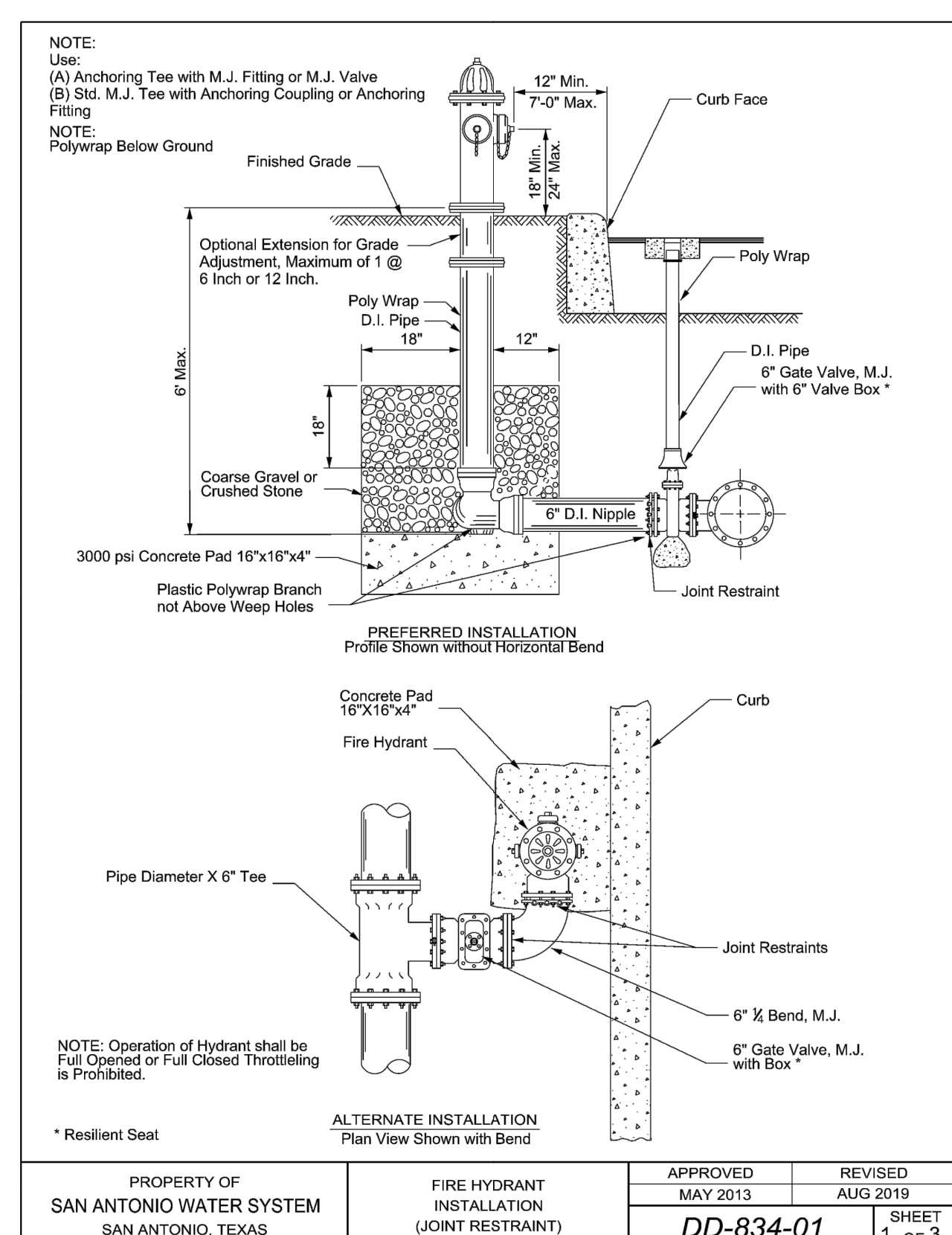
C3.2

SUBMITTAL SET



PRESSURE ZONE 2

Developer's Name KINGFISH DEVELOPMENT, LLC
Developer's Address 2722 W. BITTERS RD, SUITE 106
City SAN ANTONIO State TX Zip 78248
Phone # 210-882-6800 Fax # _____
SAWS Block Map # 132-514 Total EDU's 73.5 Total Acreage 27.677
Total Linear Footage of Pipe 8" ~ 3263 L.F. / 2" ~ 322 Plat No. 22-11800357
Number of Lots 70 SAWS Job No. 22-1156



TX-DOT SAN ANTONIO DISTRICT
TRENCH BACKFILL DETAIL
NON PAVEMENT

PRESSURE ZONE 2

Developer's Name KINGFISH DEVELOPMENT, LLC

Developer's Address 2722 W. BITTERS RD. SUITE 106

City SAN ANTONIO State TX Zip 78248

Phone # 210-882-6800 Fax # _____

SAWS Block Map # 132-514 Total EDU's 73.5 Total Acreage 27.677

Total Linear Footage of Pipe 8" ~ 3263 LF. / 2" ~ 322 Plat No. 22-11800357

Number of Lots 70 SAWS Job No. 22-1156

SUBMITTED BY:
MOY TARIN RAMIREZ ENGINEERS, LLC.
12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249
TEL: (210) 698-5051
FAX: (210) 698-5085

OWNER/DEVELOPER
KINGFISH DEVELOPMENT, LLC
2722 W. BITTERS RD. SUITE 106
SAN ANTONIO, TX 78248
210-882-6800

NOTES:

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE TO THE CITY OF SAN ANTONIO SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- ALL CONSTRUCTION IS SUBJECT TO INSPECTION AND APPROVAL BY THE CITY OF SAN ANTONIO.
- THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES DURING CONSTRUCTION. THE LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.

SAN ANTONIO WATER SYSTEM
TEXAS STATE WIDE ONE CALL LOCATOR
CITY PUBLIC SERVICE
AT&T
TIME WARNER CABLE

TELE. NO.: 210-704-7109
TELE. NO.: 800-545-6005
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS 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.
- THE CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT THE TELEPHONE COMPANY DURING CONSTRUCTION.
- THE CONTRACTOR HAS THE RESPONSIBILITY OF RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DAMAGE DONE TO THE EXISTING PAVEMENT, STRUCTURES OR FENCES (NO SEPARATE PAY ITEM).
- MATERIAL SPECIFICATIONS:

CONCRETE/CONCRETE RIPRAP: CLASS A 3000 PSI IN 28 DAYS UNLESS OTHERWISE NOTED ON PLANS

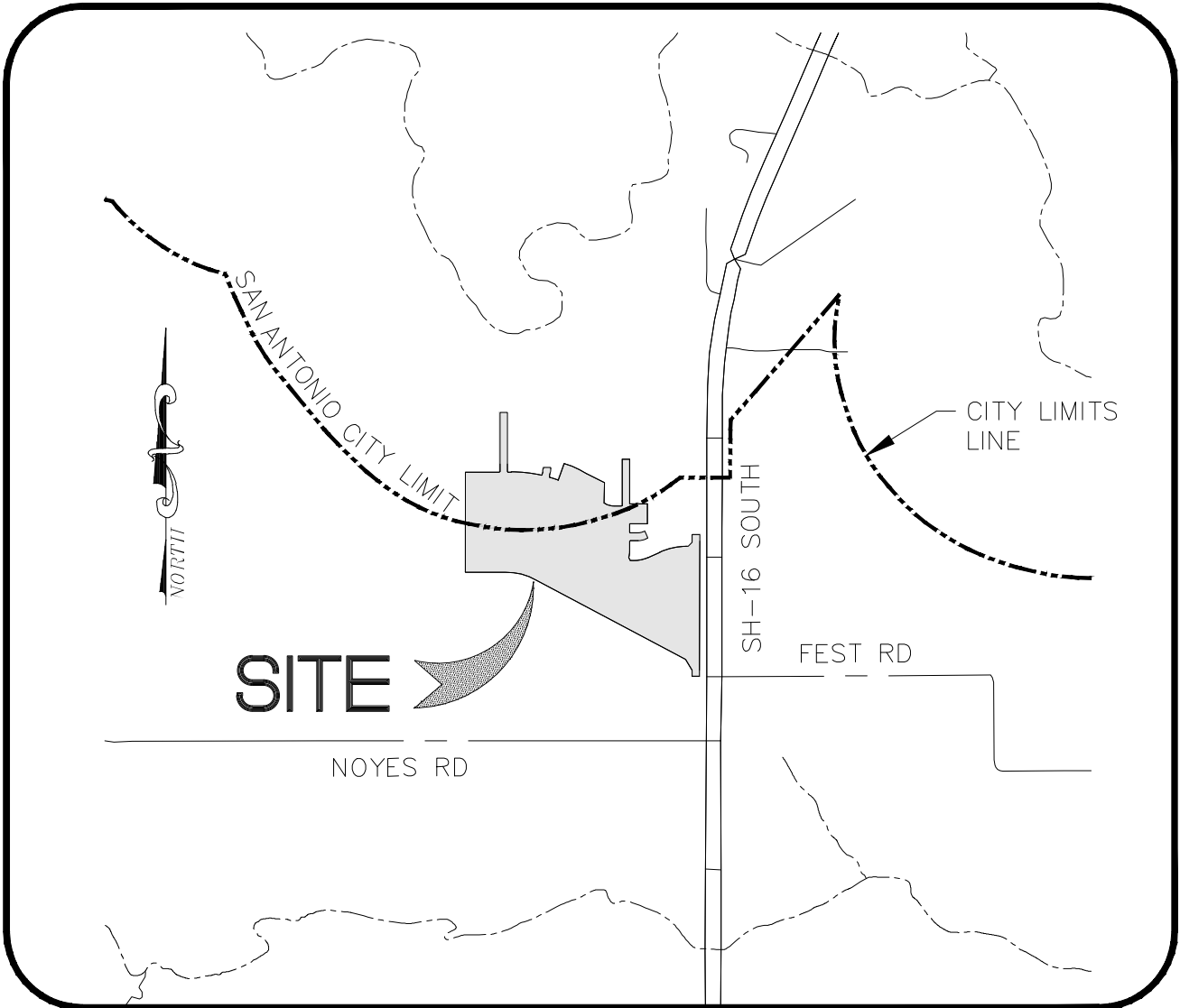
REINFORCING STEEL: CONFORM TO A.S.T.M. A-615, GRADE 60
(2" COVER UNLESS OTHERWISE NOTED ON PLANS)

PIPE RAILING: CONFORM TO A.S.T.M. A-53, GRADE B, OR A-501

STRUCTURAL STEEL: CONFORM TO A.S.T.M. A-36
- CONTRACTOR TO COORDINATE CONCRETE CURB DEPRESSIONS WITH THE DEVELOPER (NO SEPARATE PAY ITEM).
- TRANSITION TO/FROM WASHOUT CROWNS IN TWENTY-FIVE FEET (25').
- IMPROVED EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE CHANNEL SUBGRADE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CHANNEL IS ACCEPTED FOR MAINTENANCE. REFER TO APPENDIX H, CHAPTER 16, SECTION 2.1 - GRASSES OF THE CITY OF SAN ANTONIO UDC. NO EXTRA PAY ITEM.

LEGEND

CONTRACTOR TO TIE EXISTING AND PROPOSED CURB/SIDEWALK. PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY ELEVATIONS.	①
SIDEWALK WHEELCHAIR RAMP - TYPE 10 DIRECTIONAL RAMPS (SINGLE)	(A)
SIDEWALK WHEELCHAIR RAMP - TYPE 10 DIRECTIONAL RAMPS (DUAL)	(B)
SIDEWALK WHEELCHAIR RAMP - TYPE II	(C)
EXISTING TOP OF CURB ELEVATION	805.811C
PROPOSED TOP OF CURB ELEVATION	805.81
HOME BUILDER INSTALLED 4' SIDEWALK	
DEVELOPER INSTALLED 4' SIDEWALK	
EXISTING SIDEWALK	
SIDEWALK WHEEL CHAIR RAMP	
WASH-OUT CROWN	
FILL @ 95% COMPACTION	
POSSIBLE DRIVEWAY LOCATION	
PROPERTY LINE	---
EXISTING CONTOUR	--- 1120 ---
PROPOSED CONTOUR	--- 1120 ---
PROPOSED CONCRETE CURB	=====
FLOW ARROW	→

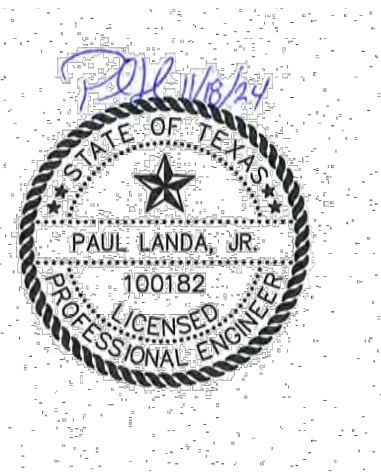


VICINITY MAP
N.T.S.

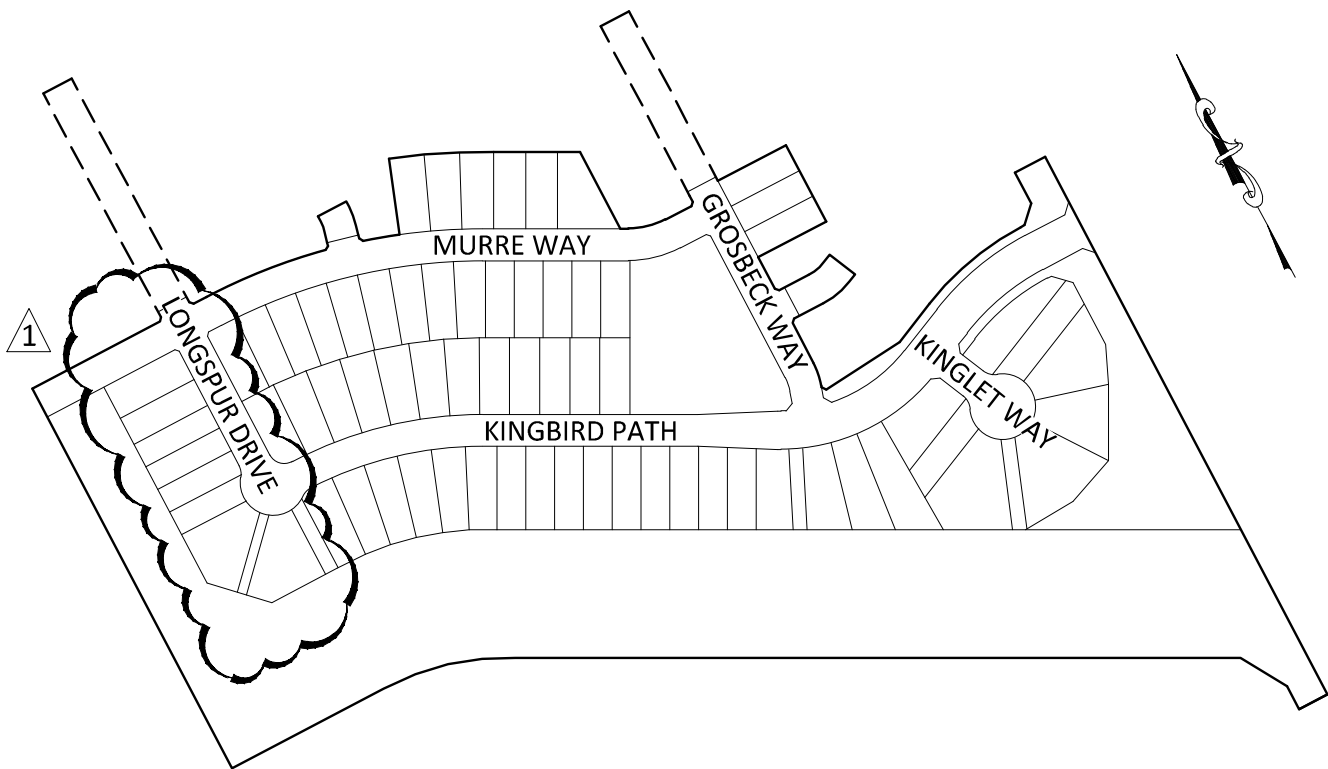
SUBMITTAL DATE:
SEPTEMBER 2, 2022

LEGAL DESCRIPTION:

BEING A 27.677 TRACT OF LAND PARTIALLY WITHIN THE CITY OF SAN ANTONIO, NEW CITY BLOCK 16595, BEXAR COUNTY, TEXAS, BEING SITUATED IN THE RUFENO RODRIGUEZ SURVEY NO. 49, ABSTRACT NO. 613, COUNTY BLOCK NO. 4202, BEING A PORTION OF A 131.81 ACRE TRACT, AS CONVEYED TO KINGFISH DEVELOPMENT, LLC BY WARRANTY DEED WITH VENDOR'S LIEN AS RECORDED IN DOCUMENT NUMBER 20220169411, BEXAR COUNTY TEXAS.



11/18/24 REVISED LOT LAYOUT

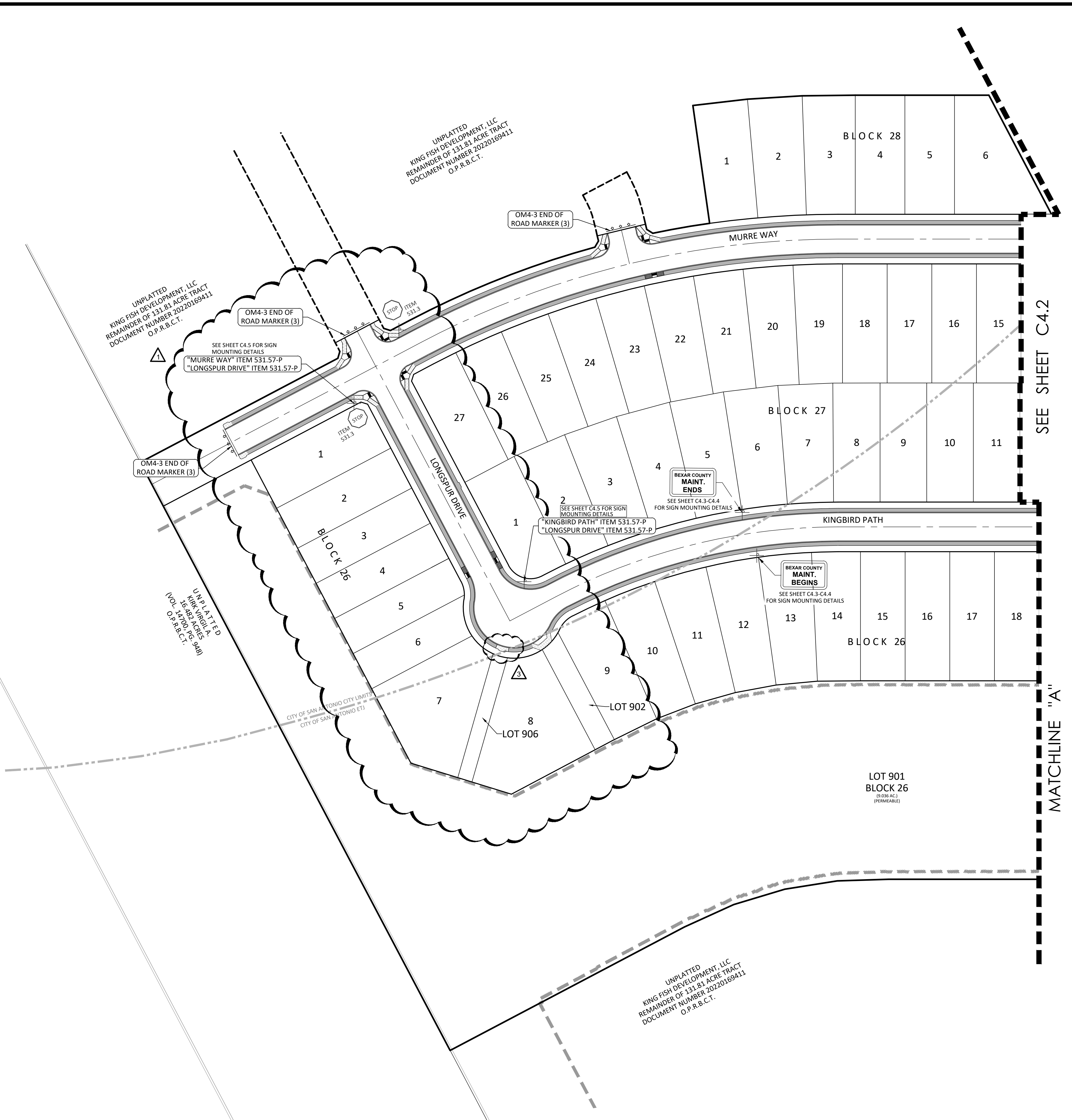


INDEX MAP
NOT TO SCALE

SHEET INDEX

SHEET NO.	TITLE
C4.0	STREET COVER
C4.1	TRAFFIC PLAN
C4.2	TRAFFIC PLAN
C4.2A	TXDOT PAVEMENT MARKING DETAILS
C4.3	BEXAR TRAFFIC DETAILS
C4.4	BEXAR TRAFFIC DETAILS
C4.5	COSA TRAFFIC DETAILS
C4.6	KINGBIRD PATH PLAN AND PROFILE
C4.7	KINGBIRD PATH PLAN AND PROFILE
C4.8	GROSBEAK WAY PLAN AND PROFILE
C4.9	LONGSPUR DR PLAN AND PROFILE
C4.10	MURRE WAY PLAN AND PROFILE
C4.11	KINGLET WAY PLAN AND PROFILE
C4.12	STANDARD DETAILS
C4.13	STANDARD DETAILS
C4.14	STANDARD STREET SECTIONS
C4.15	DRAIN "A" PLAN AND PROFILE
C4.16	DRAIN "B" PLAN AND PROFILE
C4.17	DRAIN "C" PLAN AND PROFILE
C4.18	DRAIN "D" PLAN AND PROFILE
C4.19	DRAIN "D" PLAN AND PROFILE
C4.20	DRAIN "G" PLAN AND PROFILE
C4.21	DRAIN "G" DETAILS

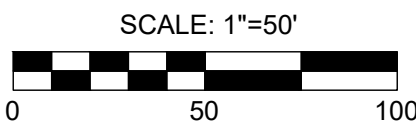
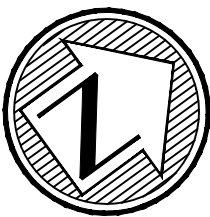
Plot Date: March 11, 2025, User: D. Donald McCraken
R:\McCraken\Traffic\Unit 1\Drawings\2025\C4.1-C4.5-Traffic-Plan.dwg



PLAT NO. 22-11800357

BEXAR COUNTY R.O.W. NOTE:

BEXAR COUNTY PERMIT REQUIRED FOR STREET TIE-IN & INTERSECTION PAVEMENT REPLACEMENT AND/OR ANY WORK BEING DONE IN BEXAR COUNTY R.O.W.



LEGEND

- R1-1 STOP SIGN (30" X 30")
- D-3 STREET NAME
- R2-1 SPEED LIMIT SIGN
- DOUBLE LINE
- PROPOSED SIGN LOCATION
- PROPERTY LINE
- TYPE II BLUE RAISED PAVEMENT MARKERS
- EXISTING SIGN LOCATION
- EXISTING STREET NAME SIGN
- EXISTING STOP SIGN
- EXISTING SIDEWALK
- HOME BUILDER INSTALLED SIDEWALK
- DEVELOPER INSTALLED SIDEWALK
- ADA RAMP- DEVELOPER INSTALLED
- POSSIBLE DRIVEWAY LOCATION

NOTE:

ALL PERMANENT REGULATORY, WARNING, AND STREET NAME SIGNS ARE TO BE PROVIDED AND INSTALLED BY THE DEVELOPER TO COUNTY SPECIFICATIONS.

GENERAL NOTES:

- ALL TRAFFIC SIGNS SHALL BE MANUFACTURED AND INSTALLED ACCORDING TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICE (T.M.U.T.C.D.).
- INSTALL SIGNS SUCH THAT THEIR VIEW IS NOT BLOCKED BY LOW HANGING VEGETATION, UTILITY POLES, OTHER TRAFFIC SIGNS, ETC... REFER TO CITY OF SAN ANTONIO TRAFFIC SIGNAL DETAILS.
- ALL PAVEMENT MARKINGS SHALL COMPLY WITH THE T.M.U.T.C.D. REFER TO CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- "DEAD END" WITH ARROW AND "NO OUTLET" WITH ARROW SHALL BE ON BOTH SIDES OF SIGN WHICH IS MOUNTED ABOVE STREET NAMES.
- FINAL SIGN INSTALLATION LOCATIONS TO BE DETERMINED BY CITY OF SAN ANTONIO (INSIDE CITY LIMITS) AND/OR BEXAR COUNTY. CONTRACTOR TO COORDINATE WITH SAME. PROPOSED SIGN LOCATIONS ARE FOR REFERENCE ONLY.

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	11/18/24	REVISED LOT LAYOUT	DMC
3	3/04/25	ADD DEV. SW AND PASSING SPACE AT LOT 906 BLOCK 26	DMC
PROJ. # DGN. BY: DMK. BY: CHKD. BY: DATE:			

Engineers
Surveyors
Planners

MTR

Moy Tarin Ramirez Engineers, LLC
TBPELS: ENGINEERING F-5297 / SURVEYING: F-10131500
12770 CINTRON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5055



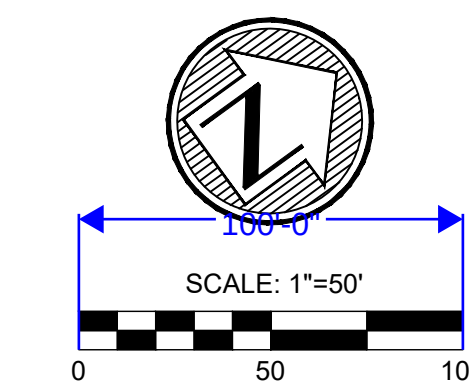
VERDIN SUBDIVISION, UNIT 1
OVERALL TRAFFIC PLAN

SHEET

C4.1

SUBMITTAL SET

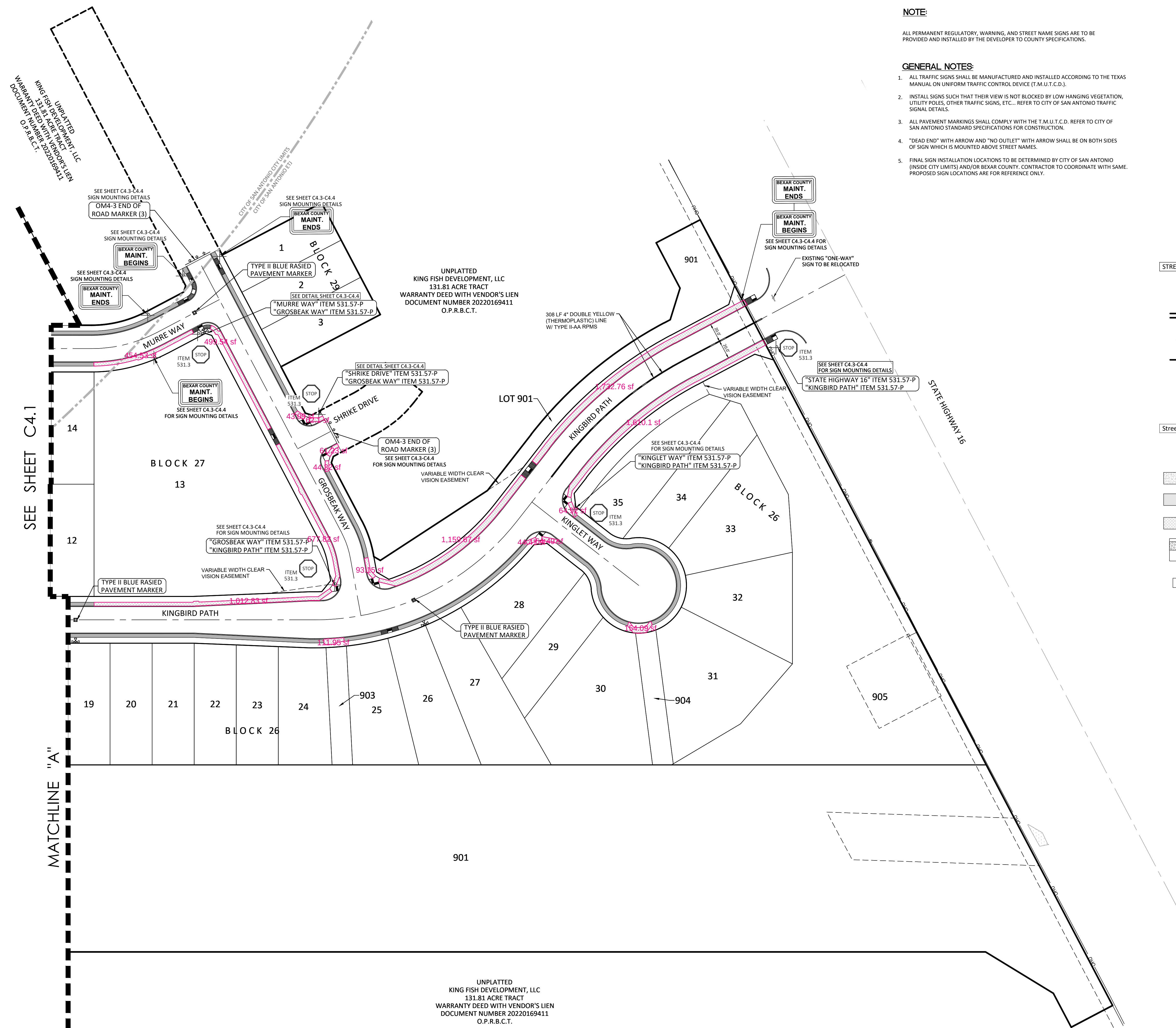
BEXAR COUNTY PERMIT REQUIRED FOR STREET
TIE-IN & INTERSECTION PAVEMENT
REPLACEMENT AND/OR ANY WORK BEING
DONE IN BEXAR COUNTY R.O.W.



	R1-1 STOP SIGN (30" x 30")
R1-1	
	D-3 STREET NAME
	R2-1 SPEED LIMIT SIGN
R2-1	
	DOUBLE LINE
	PROPOSED SIGN LOCATION
	PROPERTY LINE
	TYPE II BLUE RAISED PAVEMENT MARKERS
	EXISTING SIGN LOCATION
	EXISTING STREET NAME SIGN
	EXISTING STOP SIGN
	EXISTING SIDEWALK
	HOME BUILDER INSTALLED SIDEWALK
	DEVELOPER INSTALLED SIDEWALK
	ADA RAMP - DEVELOPER INSTALLED
	POSSIBLE DRIVEWAY LOCATION

ALL PERMANENT REGULATORY, WARNING, AND STREET NAME SIGNS ARE TO BE PROVIDED AND INSTALLED BY THE DEVELOPER TO COUNTY SPECIFICATIONS.

1. ALL TRAFFIC SIGNS SHALL BE MANUFACTURED AND INSTALLED ACCORDING TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICE (T.M.U.T.C.D.).
2. INSTALL SIGNS SUCH THAT THEIR VIEW IS NOT BLOCKED BY LOW HANGING VEGETATION, UTILITY POLES, OTHER TRAFFIC SIGNS, ETC.... REFER TO CITY OF SAN ANTONIO TRAFFIC SIGNAL DETAILS.
3. ALL PAYEMENT MARKINGS SHALL COMPLY WITH THE T.M.U.T.C.D. REFER TO CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION.
4. "DEAD END" WITH ARROW AND "NO OUTLET" WITH ARROW SHALL BE ON BOTH SIDES OF SIGN WHICH IS MOUNTED ABOVE STREET NAMES.
5. FINAL SIGN INSTALLATION LOCATIONS TO BE DETERMINED BY CITY OF SAN ANTONIO (INSIDE CITY LIMITS) AND/OR BEYAR COUNTY. CONTRACTOR TO COORDINATE WITH SAME. PROPOSED SIGN LOCATIONS ARE FOR REFERENCE ONLY.

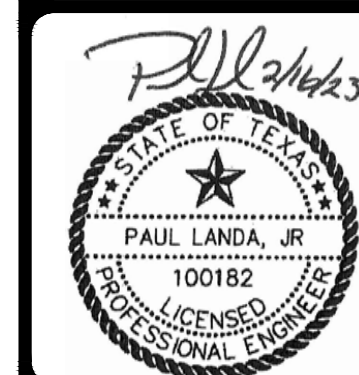


UNPLATTED
KING FISH DEVELOPMENT, LLC
131.81 ACRE TRACT
WARRANTY DEED WITH VENDOR'S LIEN
DOCUMENT NUMBER 20220169411
O.P.R.B.C.T.

MTK

- Engineers
- Surveyors
- Planners

Moy Tarin Ramirez Engineering, LLC
PIPELINES; ENGINEERING F-5297 (SURVEYING: F-10131500)
1212770 COWBOY PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085



VERDIN SUBDIVISION, UNIT 1
OVERALL TRAFFIC PLAN

C4.2

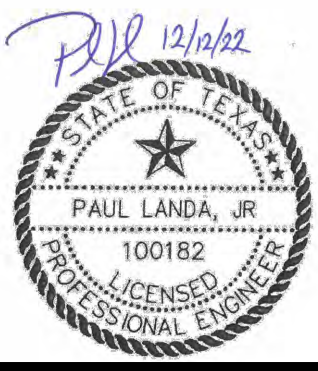
SUBMITTAL SET

BY	
NO.	
DATE	
DESCRIPTION	
REVISIONS	
PROJ. #	DKN. BY: DMK. BY: CHKD. BY: DATE:

Engineers
Surveyors
Planners

MIR

Moy Tarin Ramirez Engineers, LLC
TBEPLS: ENGINEERING F-5297/SURVEYING: F-10131500
12770 CHARRON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5055



VERDIN SUBDIVISION, UNIT 1
BEXAR TRAFFIC PLAN DETAILS

DISCLAIMER: This drawing is prepared by the Engineer, and it is the responsibility of the Engineer to ensure that the design complies with the applicable laws, rules, and regulations. The Engineer does not warrant the accuracy or completeness of the information provided, and the user assumes all liability for any errors or omissions. This drawing is not to be used for any purpose other than that for which it was prepared.

DATE: 12/12/2023

EDGE LINE AND LANE LINES ONE-WAY ROADWAY WITH OR WITHOUT SHOULDERS

TYPICAL TWO-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS

CENTERLINE AND LANE LINES FOUR LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS

TYPICAL MULTI-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS

TWO LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS

YIELD LINES

FOUR LANE DIVIDED ROADWAY CROSSOVERS

GENERAL NOTES

- Edgeline striping shall be as shown in the plans or as directed by the Engineer. The edgeline should not be placed less than 6 inches from the edge of pavement. This distance may vary due to pavement leveling or other conditions. Edgelines are not required in curb and gutter sections of roadways.
- The traveled way includes only that portion of the roadway used for vehicular travel. It does not include the parking lanes, sidewalks, berms and shoulders. The traveled way shall be measured from the inside of edgeline to the inside of edgeline of a two-lane roadway.

MATERIAL SPECIFICATIONS

PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-6200
HOT APPLIED THERMOPLASTIC	DMS-6220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-6240

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

GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE

Based on Traveled Way and Pavement Widths for Individual Highways

TYPICAL STANDARD PAVEMENT MARKINGS

PM(1) - 20

FILE	PM(1) - 20	DATE	12/12/2023	BY	DMK	CHKD	DMK
REV	1	DATE	12/12/2023	BY	DMK	CHKD	DMK
REV	2	DATE	12/12/2023	BY	DMK	CHKD	DMK
REV	3	DATE	12/12/2023	BY	DMK	CHKD	DMK

DISCLAIMER: This drawing is prepared by the Engineer, and it is the responsibility of the Engineer to ensure that the design complies with the applicable laws, rules, and regulations. The Engineer does not warrant the accuracy or completeness of the information provided, and the user assumes all liability for any errors or omissions. This drawing is not to be used for any purpose other than that for which it was prepared.

DATE: 12/12/2023

REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE

CENTERLINE FOR ALL TWO LANE ROADWAYS

CENTERLINE & LANE LINES FOR FOUR LANE TWO-WAY HIGHWAYS

LANE LINES FOR ONE-WAY ROADWAY (NON-FREWAY FACILITIES)

GENERAL NOTES

- All raised pavement markers placed in broken lines shall be placed in line with and midway between the 45° tapers.
- On concrete pavements the raised pavement markers should be placed to one side of the longitudinal joints.

MATERIAL SPECIFICATIONS

PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-6200
HOT APPLIED THERMOPLASTIC	DMS-6220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-6240

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

POSITION GUIDANCE USING RAISED MARKERS REFLECTORIZED PROFILE MARKINGS PM(2) - 20

GENERAL NOTES

- When one-use words and arrow markings are used, two sets of arrows should be used if the length of the arrow is greater than 180 feet. When a single arrow is used, the arrow and arrow marking is used for a short turn lane. It should be located at or near the upstream end of the full-width turn lane.
- Use raised pavement marker Type I-C with undivided highways, flush medians and two-way left turn lanes. Use raised pavement marker Type II-C-R with divided highways and raised medians.
- Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer.

MATERIAL SPECIFICATIONS

PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-6200
HOT APPLIED THERMOPLASTIC	DMS-6220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-6240

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

TYPICAL STANDARD PAVEMENT MARKINGS

PM(2) - 20

FILE	PM(2) - 20	DATE	12/12/2023	BY	DMK	CHKD	DMK
REV	1	DATE	12/12/2023	BY	DMK	CHKD	DMK
REV	2	DATE	12/12/2023	BY	DMK	CHKD	DMK
REV	3	DATE	12/12/2023	BY	DMK	CHKD	DMK

DISCLAIMER: This drawing is prepared by the Engineer, and it is the responsibility of the Engineer to ensure that the design complies with the applicable laws, rules, and regulations. The Engineer does not warrant the accuracy or completeness of the information provided, and the user assumes all liability for any errors or omissions. This drawing is not to be used for any purpose other than that for which it was prepared.

DATE: 12/12/2023

LANE REDUCTION

TYPICAL TWLTL AT ONE-WAY STREET AND RIGHT TURN AUXILIARY LANE

TYPICAL TWLTL AT TWO-WAY CROSS STREET AND RIGHT TURN LANE DROP

TYPICAL TWO-LANE HIGHWAY INTERSECTION WITH LEFT TURN BAYS

GENERAL NOTES

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

MATERIAL SPECIFICATIONS

PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-6200
HOT APPLIED THERMOPLASTIC	DMS-6220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-6240

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

TYPICAL STANDARD PAVEMENT MARKINGS

PM(3) - 20

FILE	PM(3) - 20	DATE	12/12/2023	BY	DMK	CHKD	DMK
REV	1	DATE	12/12/2023	BY	DMK	CHKD	DMK
REV	2	DATE	12/12/2023	BY	DMK	CHKD	DMK
REV	3	DATE	12/12/2023	BY	DMK	CHKD	DMK

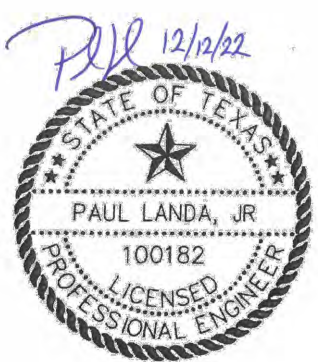
REASON	DESCRIPTION	DATE	NO.
BY			
CHKD. BY			
DATE			
NO.			
PROJ. #			
DGN. BY			
CHKD. BY			
DATE			

• Engineers
• Surveyors
• Planners

MIR

May Tarin Ramirez Engineers, LLC

TBPELS: ENGINEERING F-5297/SURVEYING: F-10131500
12770 CHAMBERLAIN PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5051



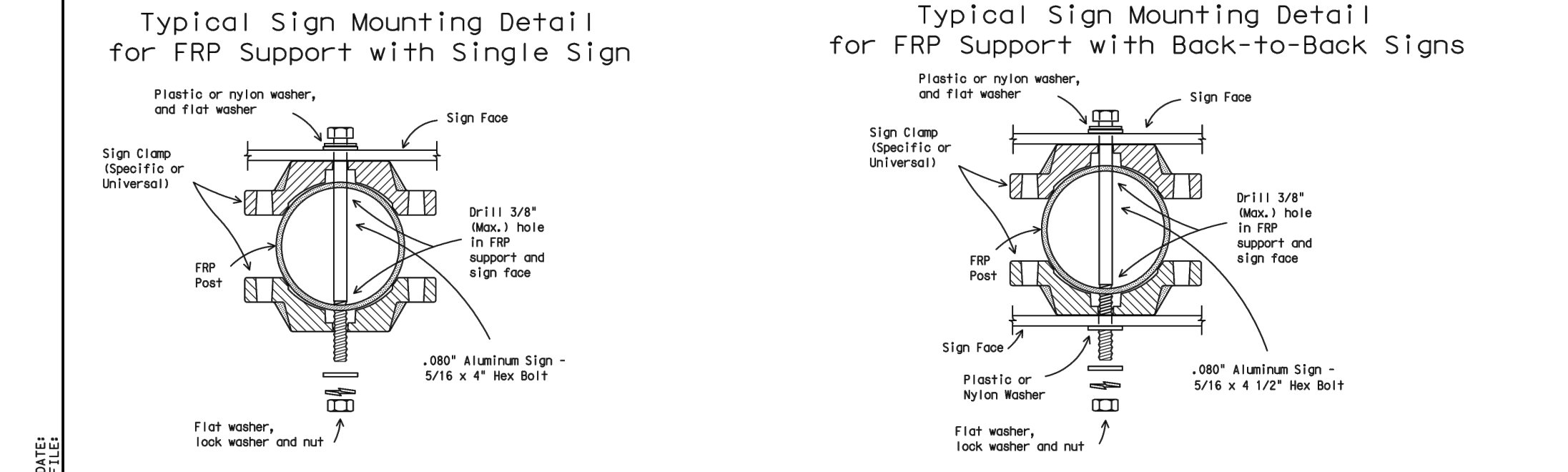
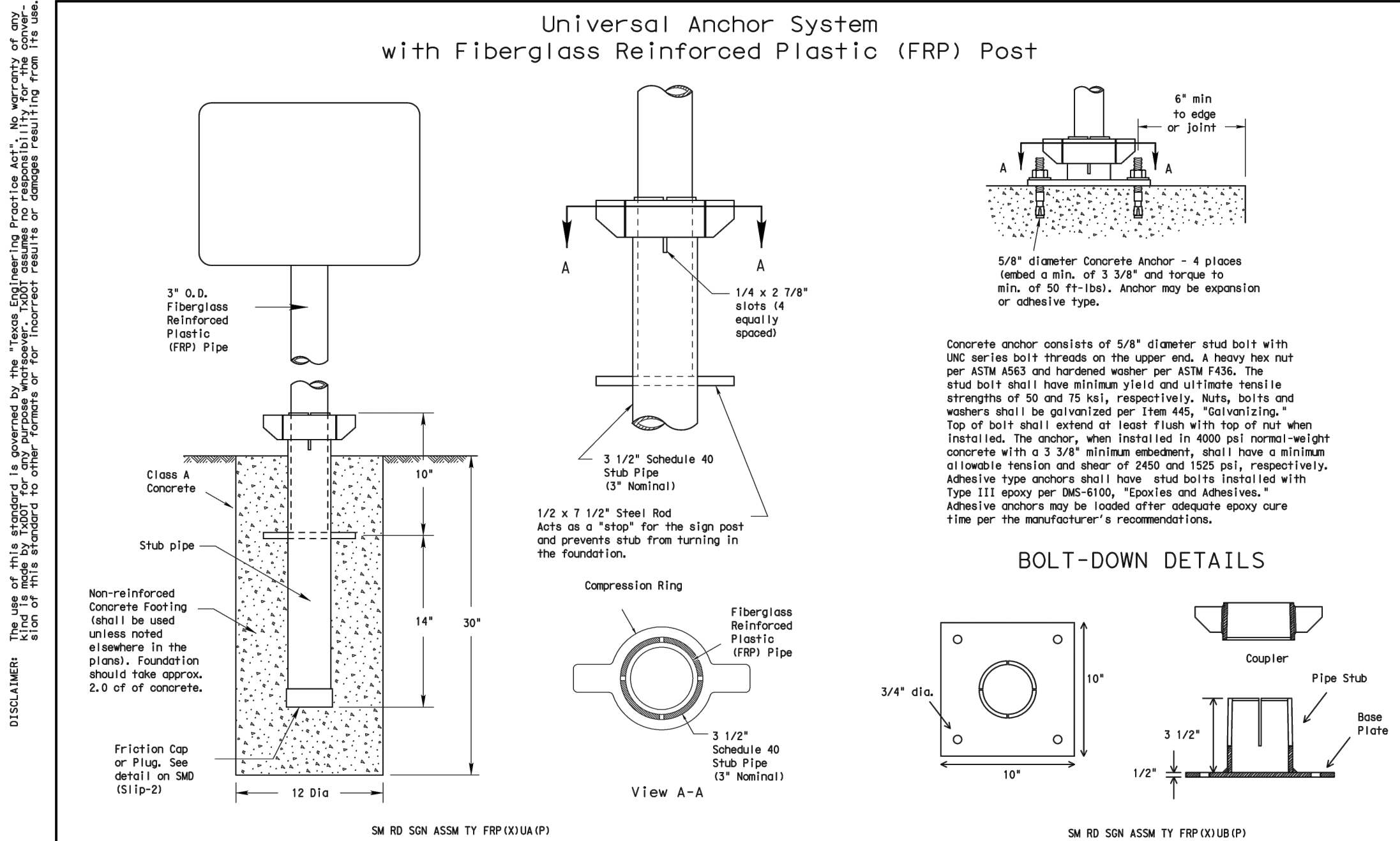
VERDIN SUBDIVISION, UNIT 1

BEXAR TRAFFIC PLAN DETAILS

SHEET

C4.4

SUBMITTAL SET



- GENERAL NOTES:
- FRP sign supports for a single type sign support may be used for signs up to and including 16 square feet. Dual post installation may be used for signs up to and including 32 square feet.
 - All nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing."
 - See the Traffic Operations Division website for detailed drawings of sign clamps. The website address is: <https://www.txdot.gov/publications/traffic.htm>

- FRP POST REQUIREMENTS
- Materials shall conform to the requirements of Departmental Material Specification 306-4410 and will be furnished in a yellow or gray color as specified elsewhere in the plans.
 - Thickness of FRP sign support is 0.125" ± 0.031", ± 0.01".
 - FRP sign supports are prequalified by the Traffic Operations Division. Prequalification procedures are obtained by writing: Texas Department of Transportation Traffic Operations Division 125 East 11th Street Austin, Texas 78701-2483

- UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURES
- Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
 - The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Concrete shall be Class A.
 - Insert base post in foundation hole to depths shown and fill hole with concrete. Cut base post from bottom and ensure a minimum of 18" embedment if installed in solid rock.
 - Level and plumb the base post with coupler using a torpedo level and let concrete set a minimum of 4 days, unless otherwise directed by Engineer. Bottom of base post slots shall be above the concrete footing.
 - Attach sign to FRP post.
 - Insert sign post into base post. Lower until the post comes to rest on the steel rod.
 - Use hammer to ensure the coupler is firmly seated. Top of coupler should be level with top of base post in most instances.
 - Check sign to ensure there is no twist. If loose, increase the tightening of coupler.

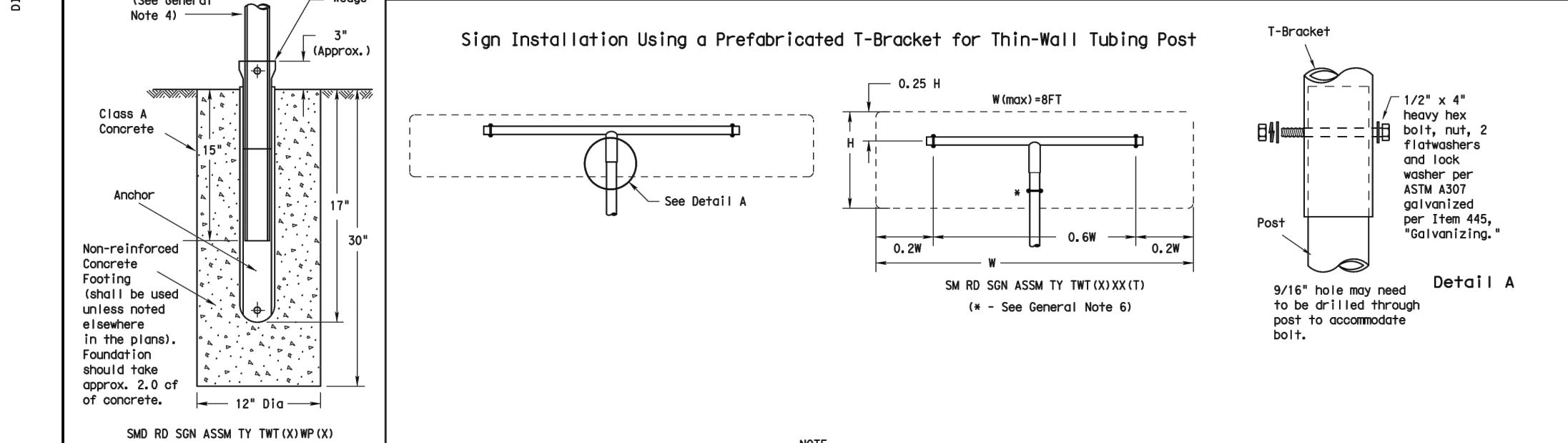
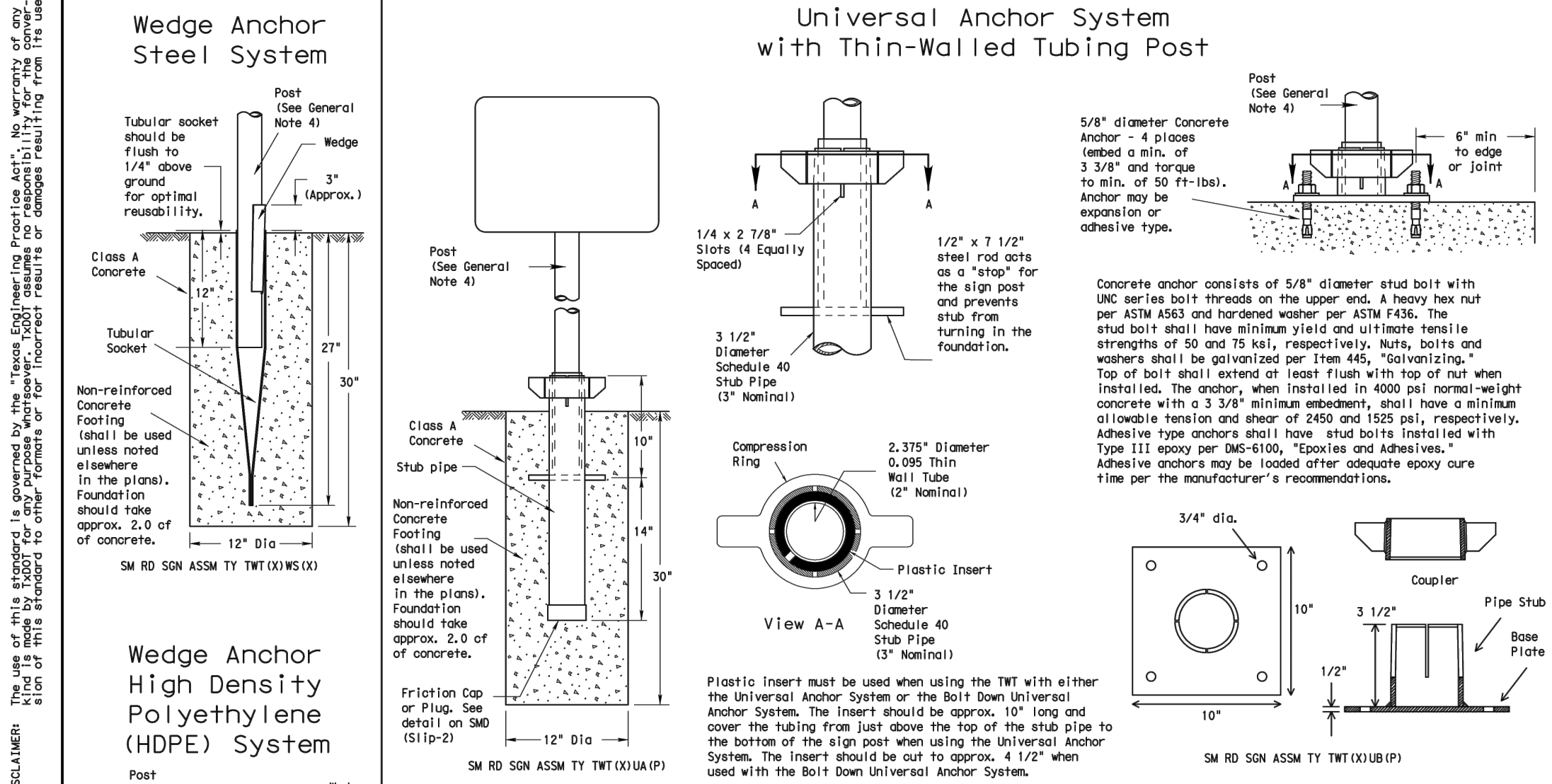
- BOLT-DOWN SIGN SUPPORT
- Position base plate with coupler on existing concrete.
 - Drill holes into concrete and insert the 5/8" diameter bolts with wedge anchors, and tighten nuts.
 - Attach sign to FRP post.
 - Insert bottom of sign post into pipe stub.
 - Use hammer to ensure the coupler is firmly seated. Top of coupler should be level with top of base post in most instances.
 - Check sign to ensure there is no twist. If loose, increase the tightening of coupler.

Texas Department of Transportation
Traffic Operations Division

**SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
UNIVERSAL ANCHOR SYSTEM
WITH FRP POST**

SMD (FRP) -08

DATE	REVISION	BY	CHKD.	APP'D.
9-08	REVISED	DAW	DET	JAW
		DET	DET	DET
		DET	DET	DET
		DET	DET	DET



- GENERAL NOTES:
- The Wedge Anchor System and the Universal Anchor System with thin wall tubing post may be used to support up to 10 square feet of sign area.
 - The tubular socket, wedge and prefabricated T-bracket shall be permanently marked to indicate manufacturer, method, design, and location of marking are subject to the approval of the TxDOT Traffic Standards Engineer.
 - Socket for posts (13 B&E tubing), clamps, nuts and bolts, all components shall be prequalified. A list of prequalified vendors may be obtained from the Material Producer List web page. The website address is: https://www.txdot.gov/business/producer_list.htm
 - Material used as post with this system shall conform to the following specifications:
13 B&E tubing (12.375" outside diameter) (TWT)
0.095" nominal wall thickness
Seamless or electric-resistance welded steel tubing
Steel shall be A501 or 55 per ASTM A1011 or ASTM A1008
Other steels may be used if they meet the following:
55,000 PSI minimum yield strength
18% minimum elongation in 2"
Wall thickness (uncoated) shall be within the range of 0.083" to 0.095"
Outside diameter (uncoated) shall be within the range of 2.369" to 2.381"
Galvanization per ASTM 123 or ASTM A653 (G16). For pre-painted steel tubing (ASTM A653), recoat tube outside diameter weld seam by metalizing with zinc wire per ASTM B933.
 - Sign clamps shall be the sizes and shapes shown on the plans.
 - Additional sign clamp required on the "T-bracket" post for 24" high signs. Place clamp at least 3" above bottom of sign when possible.
 - Sign supports shall not be applied except where shown. Sign support posts shall not be applied.
 - See the Traffic Operations Division website for detailed drawings of sign clamps and Wedge Anchor System components. The website address is: <https://www.txdot.gov/publications/traffic.htm>

- WEDGE ANCHOR SYSTEM INSTALLATION PROCEDURE
- Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
 - The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Place concrete into hole until it is approximately flush with the ground. Concrete shall be Class A.
 - Insert tubular socket into concrete until top of socket is approximately 1/4" above the concrete footing.
 - Plumb the socket. Allow a minimum 4 days for concrete to set, unless otherwise directed by Engineer.
 - Insert the sign post into socket and align sign face with roadway.
 - Drive the wedge into the socket to secure post. This will leave approximately 1/2" of the wedge exposed.

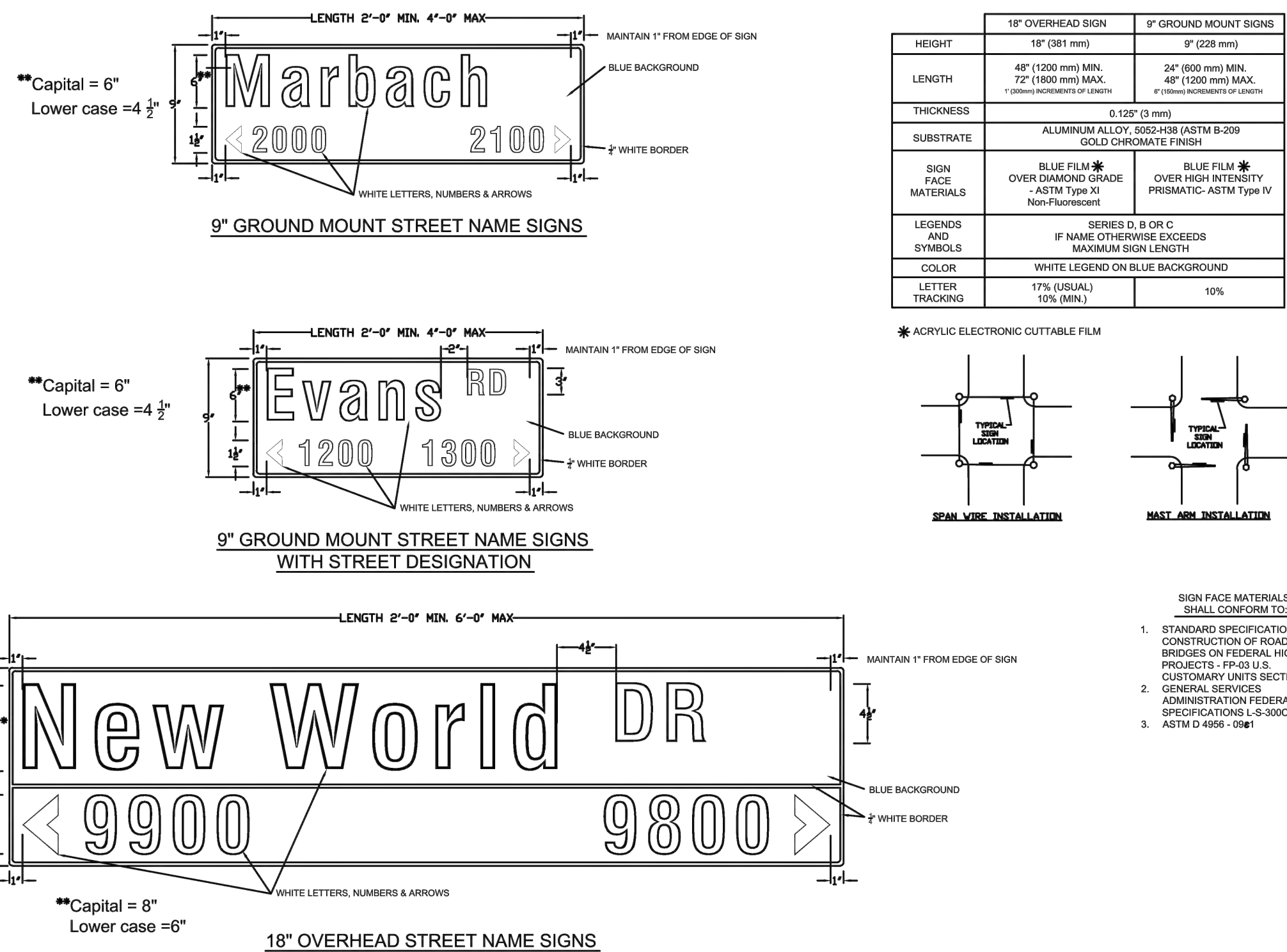
- UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURE
- Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
 - The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Place concrete into hole until it is approximately flush with the ground. Concrete shall be Class A.
 - Insert tubular socket into concrete until top of socket is approximately 1/4" above the concrete footing.
 - Plumb the socket. Allow a minimum 4 days for concrete to set, unless otherwise directed by Engineer.
 - Insert the sign post into socket and align sign face with roadway.
 - Drive the wedge into the socket to secure post. This will leave approximately 1/2" of the wedge exposed.

Texas Department of Transportation
Traffic Operations Division

**SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
WEDGE & UNIVERSAL ANCHOR
WITH THIN WALL TUBING POST**

SMD (TWT) -08

DATE	REVISION	BY	CHKD.	APP'D.
9-08	REVISED	DAW	DET	JAW
		DET	DET	DET
		DET	DET	DET
		DET	DET	DET

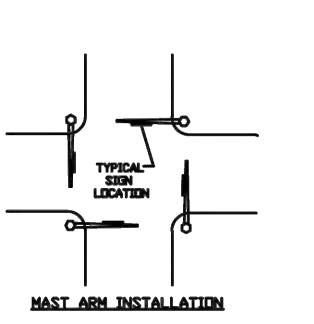
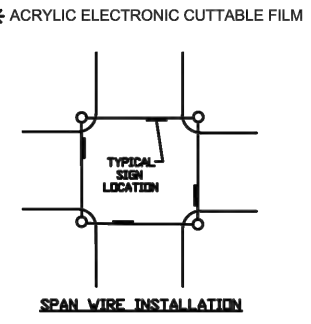


Bexar County Public Works



Street Name Sign Details

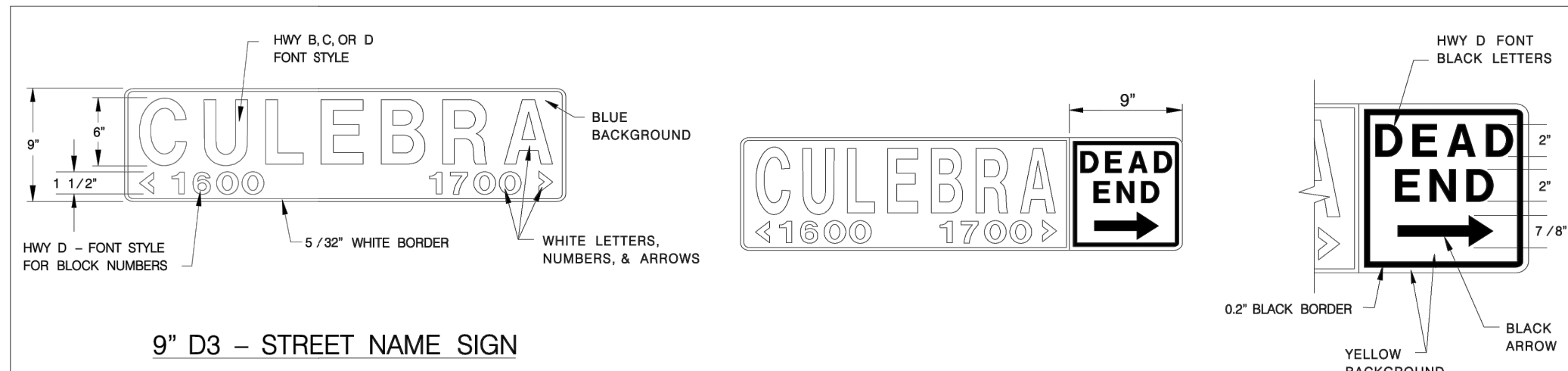
- SIGN FACE MATERIALS SHALL CONFORM TO:
- STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS & BRIDGES ON FEDERAL HIGHWAY PROJECTS - FH-403 U.S. CUSTOMARY UNITS SECTION 718
 - GENERAL SERVICES ADMINISTRATION FEDERAL SPECIFICATIONS L-5-300C
 - ASTM D-4469 - 1996



*ACRYLIC ELECTRONIC CUTTABLE FILM

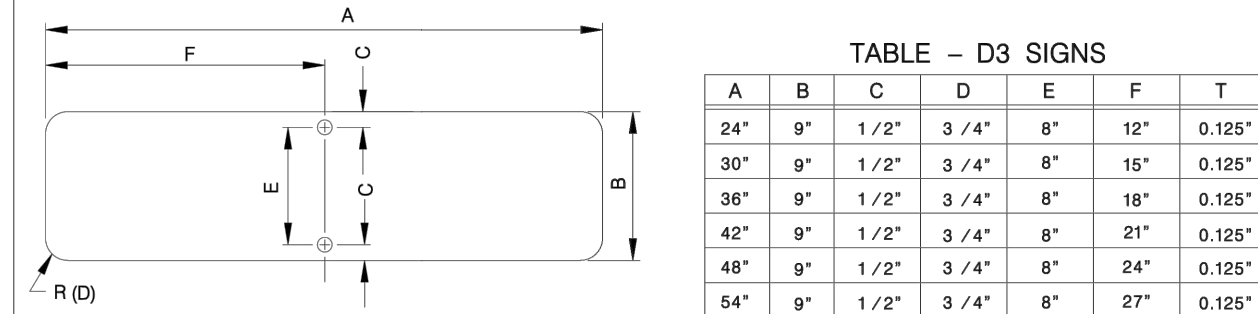
TYPICAL INSTALLATION

TYPICAL INSTALLATION



9" D3 - STREET NAME SIGN

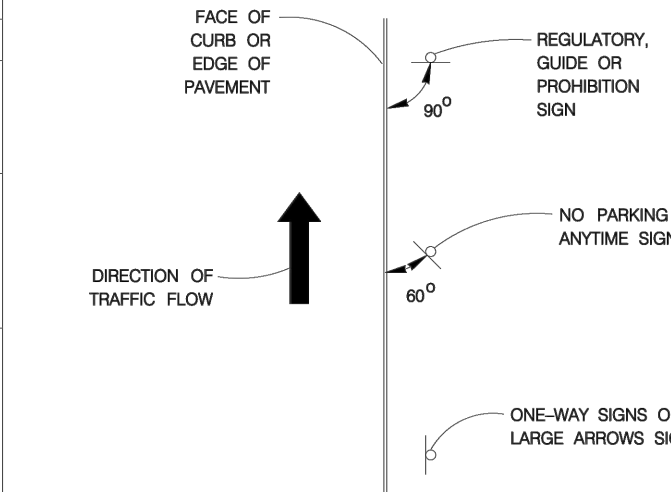
NEW 9" D3 W / DEAD END OR NO OUTLET SIGNAGE



A	B	C	D	E	F	T
24"	9"	1 1/2"	3 1/4"	8"	12"	0.125"
30"	9"	1 1/2"	3 1/4"	8"	15"	0.125"
36"	9"	1 1/2"	3 1/4"	8"	18"	0.125"
42"	9"	1 1/2"	3 1/4"	8"	21"	0.125"
48"	9"	1 1/2"	3 1/4"	8"	24"	0.125"
54"	9"	1 1/2"	3 1/4"	8"	27"	0.125"

NOTE: A 30" LONG OR GREATER PLATE SHALL BE USED WHEN A "DEAD END" OR "NO OUTLET" SUPPLEMENT IS REQUIRED.

HEIGHT	9" (228 mm)
LENGTH	24" (600 MM) MIN. 54" (1350 MM) MAX. 6" (150 MM) INCREMENTS OF LENGTH
THICKNESS	0.125" (3MM)
SUBSTRATE	ALUMINUM ALLOY, 5052-H38 (ASTM B-209) GOLD CHROMATE FINISH
SIGN FACE MATERIALS	BLUE FILM OVER HIGH INTENSITY FP-85, SECTION 718 AND L-S-300C
LEGENDS AND SYMBOLS	SERIES D (USUAL) SERIES C OR B FOR MAXIMUM LENGTH SIGN BLANK, IF NECESSARY
COLOR	WHITE LEGEND ON BLUE BACKGROUND
LETTER TRACKING	10%



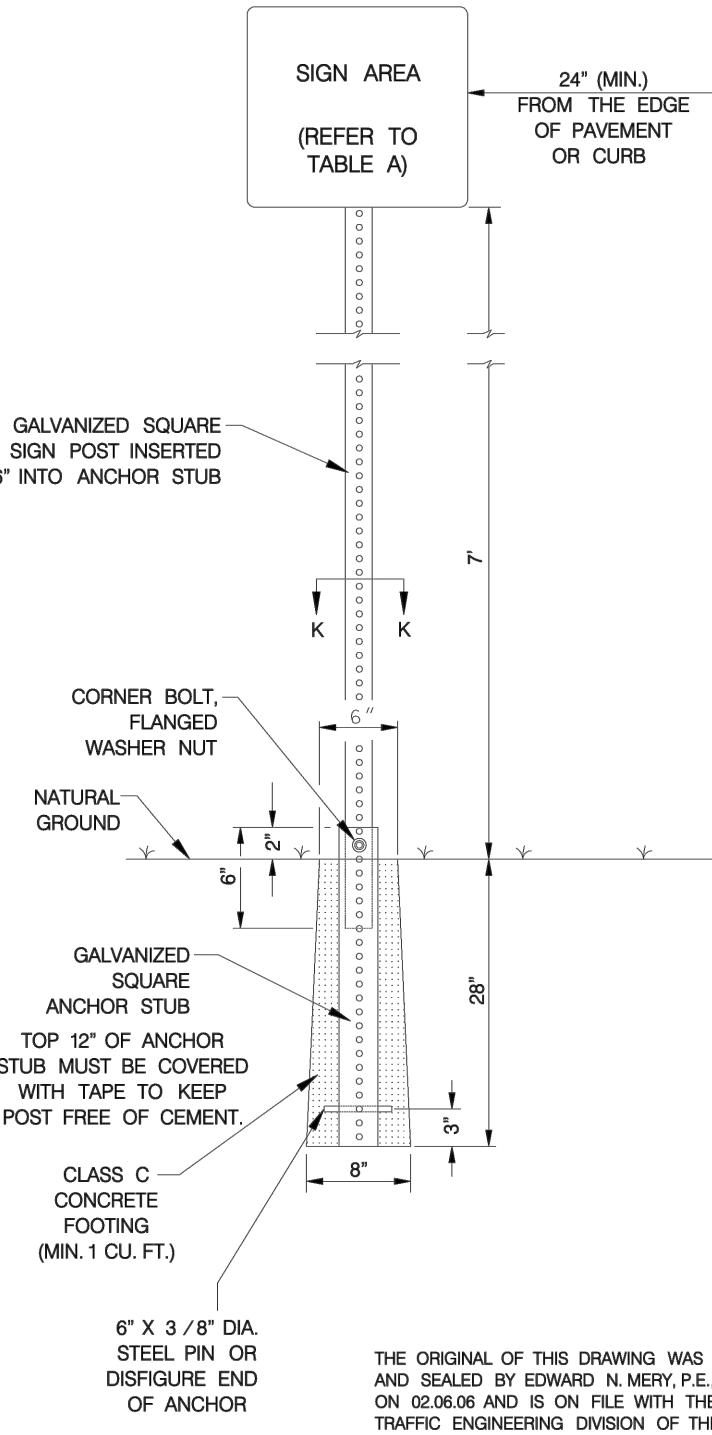
TYPICAL GROUND MOUNTED SIGN PLACEMENT

GENERAL NOTES

- 1.) THE EXISTING SIGNS LOCATED ON THE JOBSITE ARE THE PROPERTY OF THE CITY OF SAN ANTONIO. THROUGHOUT THE PERIOD OF THE CONTRACT, THE CONTRACTOR SHALL PROTECT THESE SIGNS SUCH THAT THEY ARE NOT DAMAGED IN THE COURSE OF CONSTRUCTION ACTIVITY. SUCH PROTECTION SHALL INCLUDE THE PERIOD AFTER SIGNS ARE REMOVED FROM INSTALLATION AND STORED BY THE CONTRACTOR OR DELIVERED TO TRAFFIC OPERATIONS. THE ASSISTANT TRAFFIC SUPERINTENDENT (207-7765) MUST BE NOTIFIED 48 HOURS IN ADVANCE PRIOR TO DELIVERY.
- 2.) AFTER SIGNS ARE REMOVED FROM INSTALLATION AND ARE BEING STORED BY THE CONTRACTOR, THE CONTRACTOR SHALL CONTACT THE TRAFFIC OPERATIONS SECTION OF THE PUBLIC WORKS DEPARTMENT (207-7765) AND ARRANGE FOR A CONVENIENT TIME TO DELIVER CITY SIGNS AND POLES.
- 3.) PRIOR TO THE START OF CONSTRUCTION, ALL EXISTING SIGNS WITHIN THE AREA OF CONSTRUCTION WILL BE INVENTORIED AND DOCUMENTED JOINTLY BY THE TRAFFIC ENGINEERING (207-7720) CONSTRUCTION INSPECTION AND THE CONTRACTOR. THIS DOCUMENT WILL BE JOINTLY SIGNED BY BOTH PARTIES REFLECTING THE SIGN TYPE, SIGN SIZE, SIGN CONDITION, SIGN LOCATION, REFLECTIVITY ADEQUACY, ETC. THE CONTRACTOR IS HELD ACCOUNTABLE FOR THESE SIGNS THROUGHOUT THE PROJECT AND AT THE PROJECTS COMPLETION.
- 4.) ALL GROUND MOUNTED SIGNS SHALL USE HIGH INTENSITY REFLECTIVE SHEETING.
- 5.) ALL OVERHEAD SIGNS SHALL USE DIAMOND GRADE REFLECTIVE SHEETING.
- 6.) ALL BLANKS TO BE ALUMINUM ALLOY NO. 5052-H38.
- 7.) "T" DENOTES THICKNESS OF SIGN BLANKS.
- 8.) ALL HOLES SHALL BE 3/8" DIAMETER DRILLED OR PUNCHED AS SHOWN ON EACH BLANK DETAIL AND SHALL BE FREE OF BURRS AND /OR ROUGH EDGES.
- 9.) SIGN BLANK CORNERS TO BE ROUNDED AS SHOWN ON EACH DETAIL.
- 10.) ALL SIGN BLANK TO BE ETCHED, DEGREASED, AND HAVE AN ALODINE FINISH PRIOR TO APPLICATION OF LEGENDS.
- 11.) ALL DETAILS ARE NOT TO SCALE.
- 12.) ALL DIMENSIONS ARE IN INCHES.
- 13.) ALL SIGNS SHALL BE MANUFACTURED AND INSTALLED IN CONFORMANCE TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND STANDARD HIGHWAY SIGNS (FHWA) LATEST EDITION.
- 14.) REINSTALLATION OF PREVIOUSLY EXISTING SIGNS, WHERE REQUIRED BY THE CITY TRAFFIC ENGINEER, SHALL BE AT THE CONTRACTOR'S EXPENSE.

TYPICAL GROUND SIGN INSTALLATION

TYPE "U" MOUNT PERFORATED SQUARE METAL TUBING (DRIVEABLE)



STREET SIGN ASSEMBLY EXAMPLES	ITEM	UNIT	DESCRIPTION	QUANTITY
STOP SIGN WITH 2 STREET NAMES	531.3	EA.	R1-1 STOP	1
YIELD SIGN WITH 1 STREET NAME	531.57-P	EA.	R1-2 YIELD	1
2 STREET SIGNS	531.57	EA.	9-IN STREET NAME PLATE (4 PLATES)	2
	531.57-P	EA.	9-IN STREET NAME PLATE (2 PLATES)	1
	531.57-P	EA.	9-IN STREET NAME PLATE (2 PLATES)	1

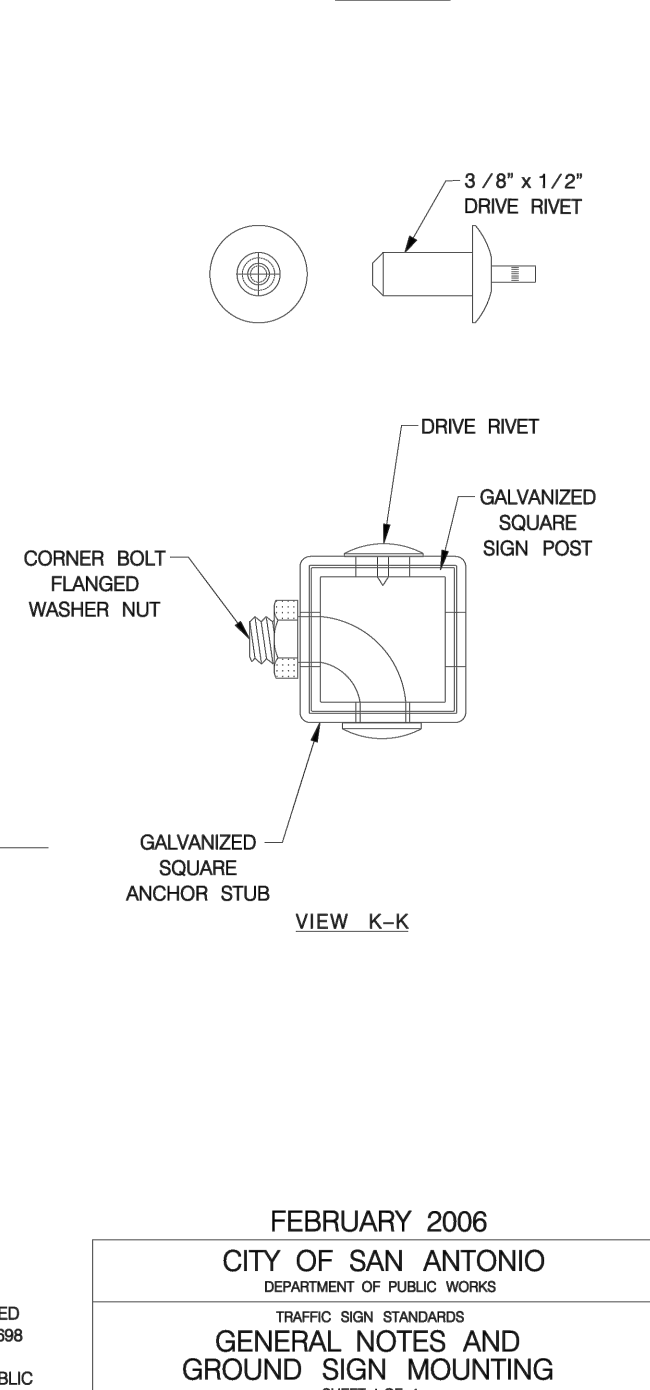
NOTE: * ITEM 531.57 "9-INCH STREET NAME" SIGN (1-EA) INCLUDES THE INSTALLATION OF (2) ONE-SIDED D3 SIGNS. THIS SHALL BE FULL COMPENSATION FOR MATERIALS AND LABOR AS DESCRIBED IN C.O.S.A. STANDARD SPECIFICATIONS AND GROUND SIGN MOUNTING STANDARD DETAIL.

* ITEM 531.57-P "9-INCH STREET NAME PLATE" (1-EA) INCLUDES THE INSTALLATION OF (2) ONE-SIDED D3 SIGNS ON TOP OF EXISTING SIGN (I.E. STOP SIGN OR YIELD SIGN). EXTRA LENGTH POLE AND APPURTENANCES REQUIRED TO MEET SPECIFICATIONS.

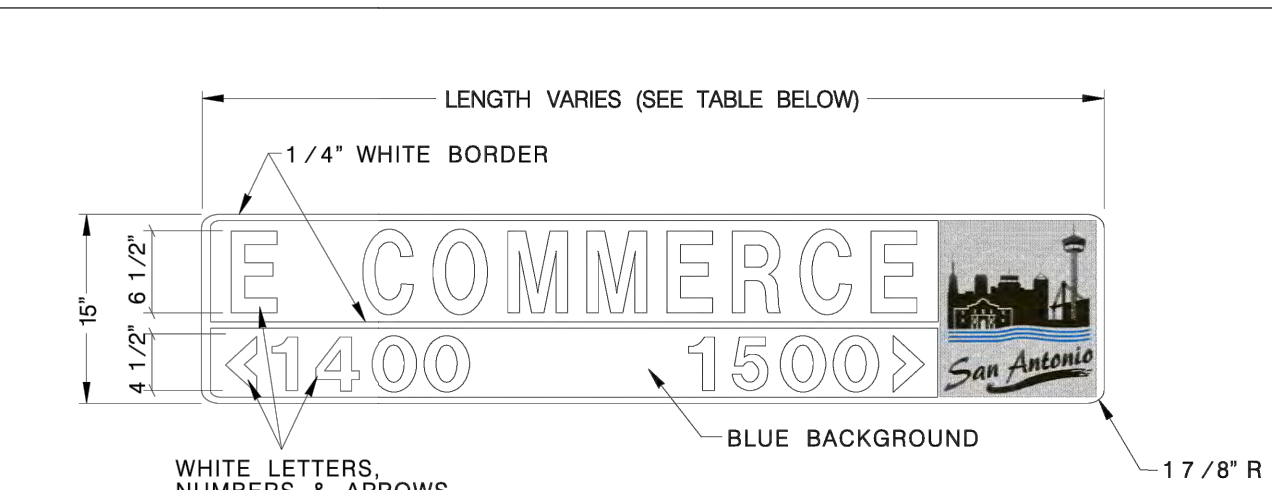
JULY 2010	
CITY OF SAN ANTONIO	
DEPARTMENT OF PUBLIC WORKS	
TRAFFIC SIGN STANDARDS	
D3 STREET NAME SIGN AND SIGN MOUNTING	
SHEET 2 OF 4	

METAL TUBING	SIGN AREA
GALVANIZED SQUARE SIGN POST (PERFORATED)	1-3/4" x 1-3/4" (14 GAUGE)
GALVANIZED SQUARE ANCHOR STUB (PERFORATED)	2" x 2" (14 GAUGE)

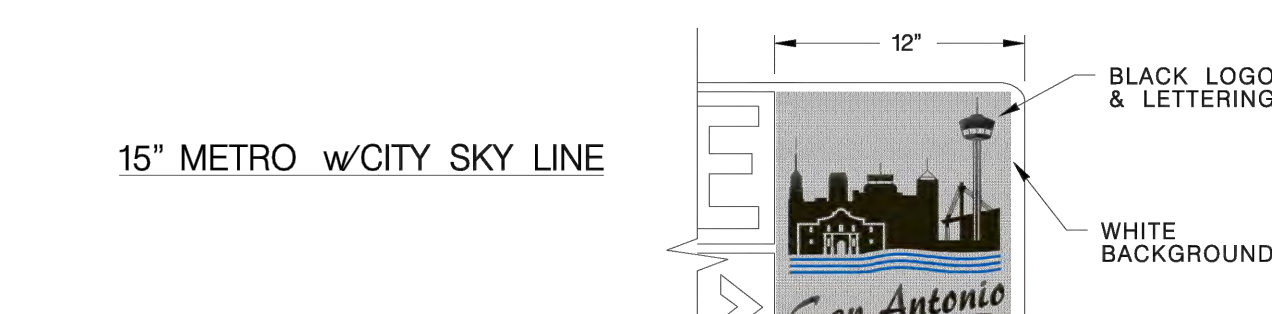
TABLE A



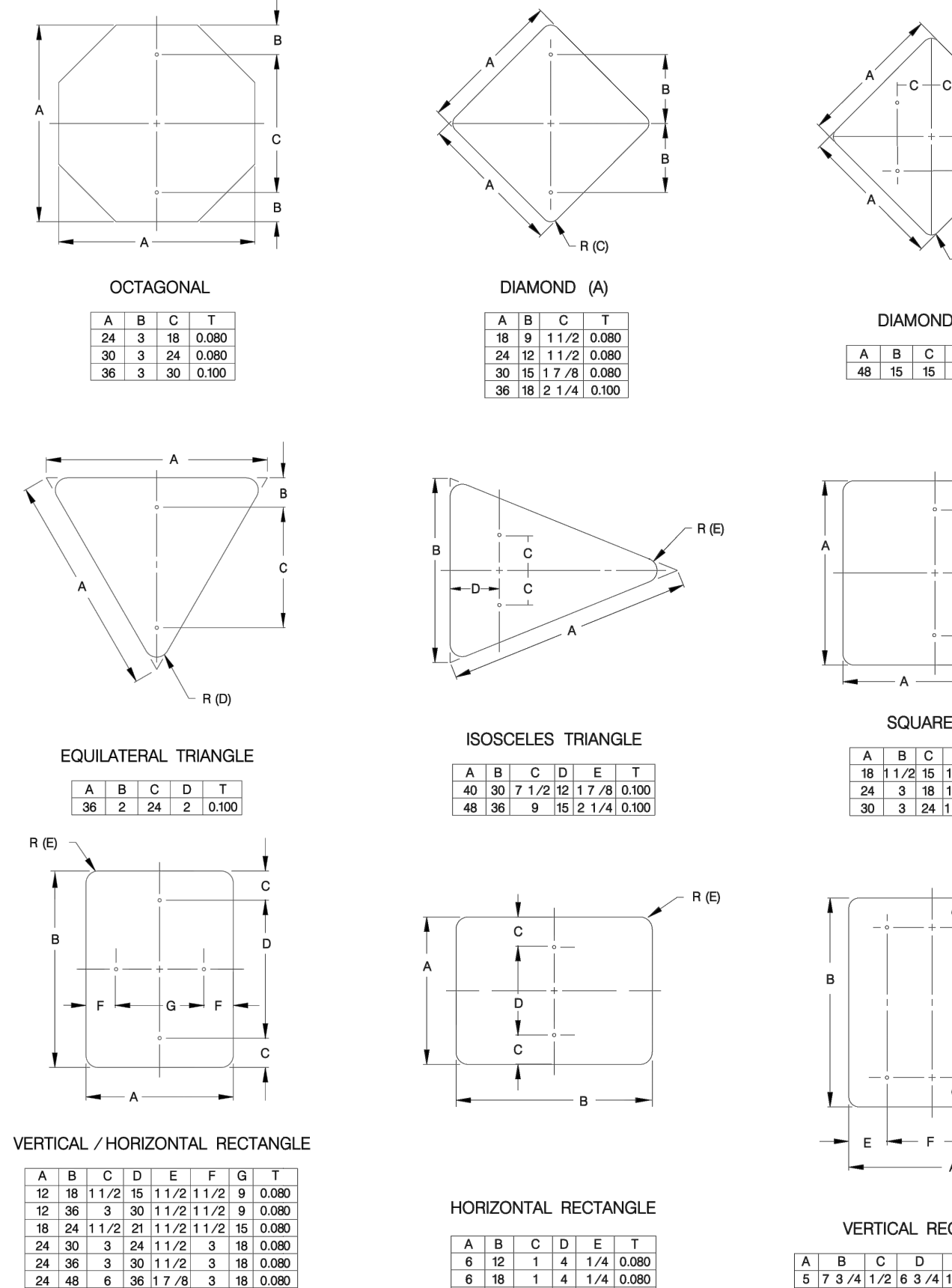
FEBRUARY 2006	
CITY OF SAN ANTONIO	
DEPARTMENT OF PUBLIC WORKS	
TRAFFIC SIGN STANDARDS	
GENERAL NOTES AND GROUND SIGN MOUNTING	
SHEET 1 OF 4	



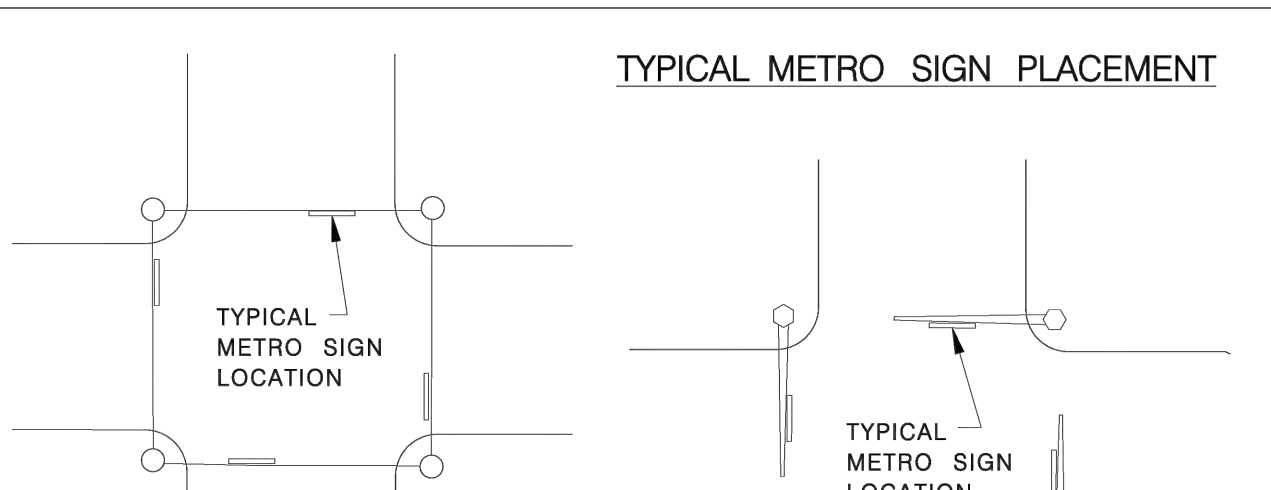
15" METRO - STREET NAME SIGNS



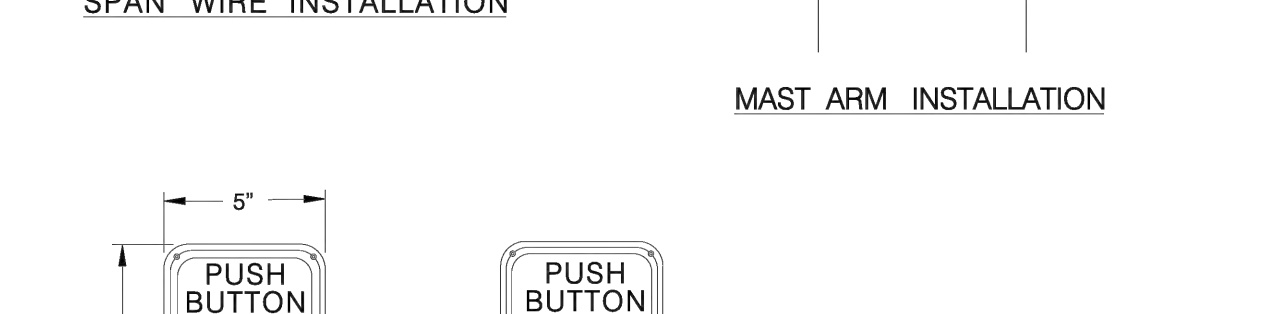
HEIGHT	15" (381 MM)
LENGTH	48" (1200 MM) MIN. 72" (1800 MM) MAX. 1" (250 MM) INCREMENTS OF LENGTH
THICKNESS	0.125" (3 MM)
SUBSTRATE	ALUMINUM ALLOY, 5052-H38 (ASTM B-209) GOLD CHROMATE FINISH
SIGN FACE MATERIALS	BLUE FILM OVER DIAMOND GRADE FP-85, SECTION 718 AND L-S-300C
LEGENDS AND SYMBOLS	SERIES D (USUAL) SERIES C OR B FOR MAXIMUM LENGTH SIGN BLANK, IF NECESSARY
COLOR	WHITE LEGEND ON BLUE BACKGROUND
LETTER TRACKING	17% (USUAL) 10% (MIN.)



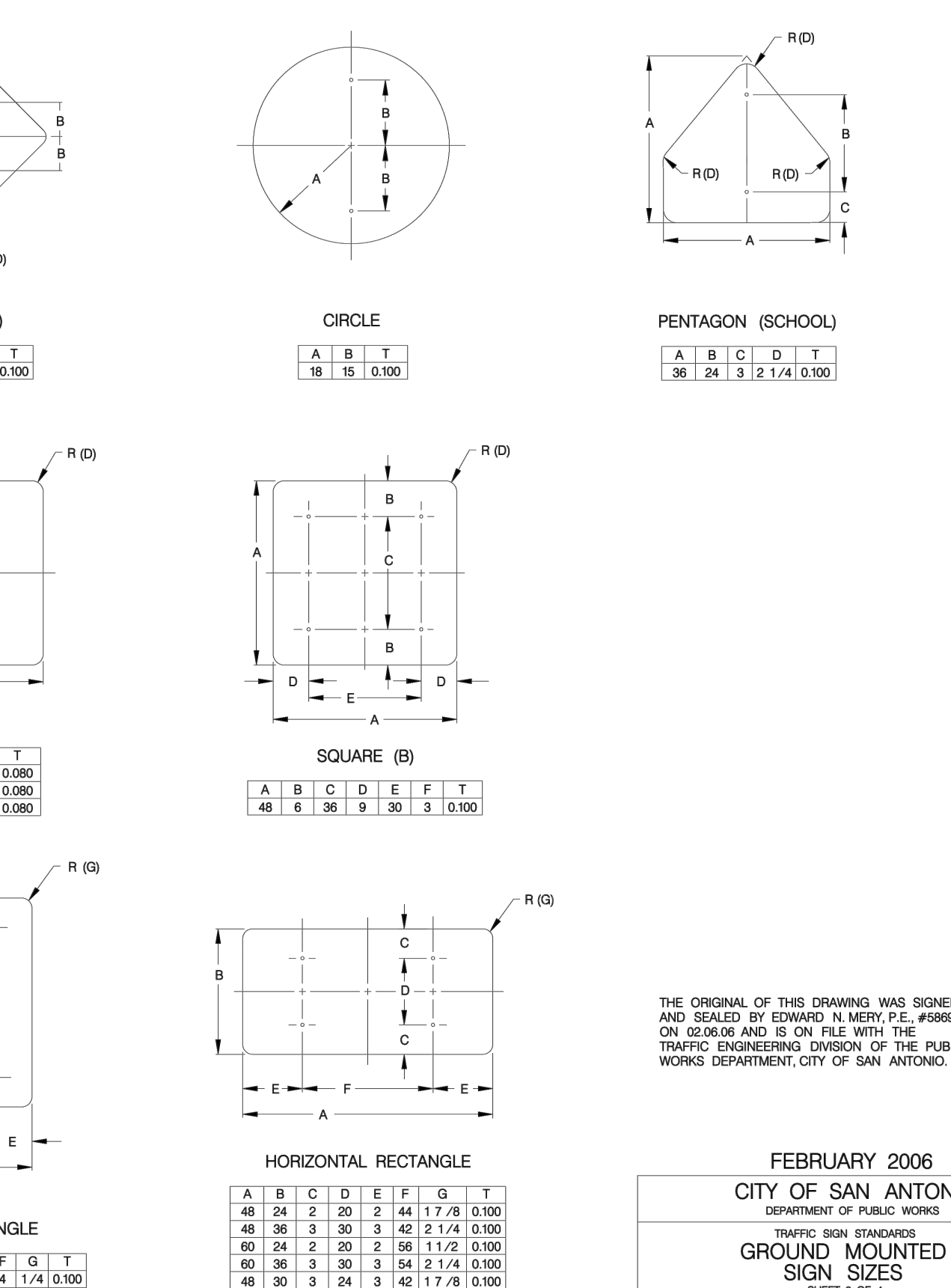
FEBRUARY 2006	
CITY OF SAN ANTONIO	
DEPARTMENT OF PUBLIC WORKS	
TRAFFIC SIGN STANDARDS	
GROUND MOUNTED SIGN SIZES	
SHEET 3 OF 4	



15" METRO w/CITY SKY LINE



HEIGHT	15" (381 MM)
LENGTH	48" (1200 MM) MIN. 72" (1800 MM) MAX. 1" (250 MM) INCREMENTS OF LENGTH
THICKNESS	0.125" (3 MM)
SUBSTRATE	ALUMINUM ALLOY, 5052-H38 (ASTM B-209) GOLD CHROMATE FINISH
SIGN FACE MATERIALS	BLUE FILM OVER DIAMOND GRADE FP-85, SECTION 718 AND L-S-300C
LEGENDS AND SYMBOLS	SERIES D (USUAL) SERIES C OR B FOR MAXIMUM LENGTH SIGN BLANK, IF NECESSARY
COLOR	WHITE LEGEND ON BLUE BACKGROUND
LETTER TRACKING	17% (USUAL) 10% (MIN.)

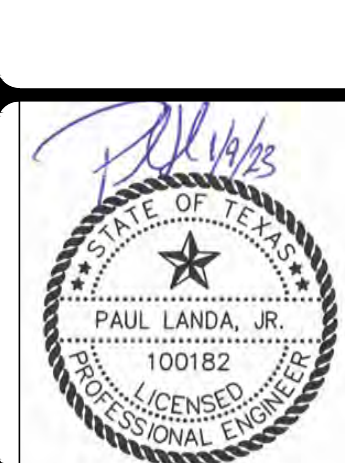


FEBRUARY 2006	
CITY OF SAN ANTONIO	
DEPARTMENT OF PUBLIC WORKS	
TRAFFIC SIGN STANDARDS	
GROUND MOUNTED SIGN SIZES	
SHEET 3 OF 4	

REVISIONS	DESCRIPTION	DATE	BY
NO.			

Engineers
Surveyors
Planners

May Tarin Ramirez Engineers, LLC
TBEPLS: ENGINEERING F-5297/SURVEYING: F-10131500
12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5055



VERDIN SUBDIVISION, UNIT 1

SAN ANTONIO TRAFFIC PLAN DETAILS

LINE TABLE		
LINE	LENGTH	BEARING
L1	14.00'	S45°02'28"W



CONTRACTOR TO TIE EXISTING AND PROPOSED CURB/SIDEWALK. PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY ELEVATIONS.

COSA CITY, LI

CONTRACTOR TO VERIFY EXISTING
CONDITIONS BEFORE CONSTRUCTION.
IF ANY DISCREPANCIES NOTIFY
ENGINEER

BEXAR COUNTY PERMIT REQUIRED FOR
STREET TIE-IN & INTERSECTION
PAVEMENT REPLACEMENT AND/OR ANY
WORK BEING DONE IN BEXAR COUNTY
R.O.W.



- * ITEM IS SUBSIDIARY TO 4" D-GR HMA
(SQ) TY-B PG64-22

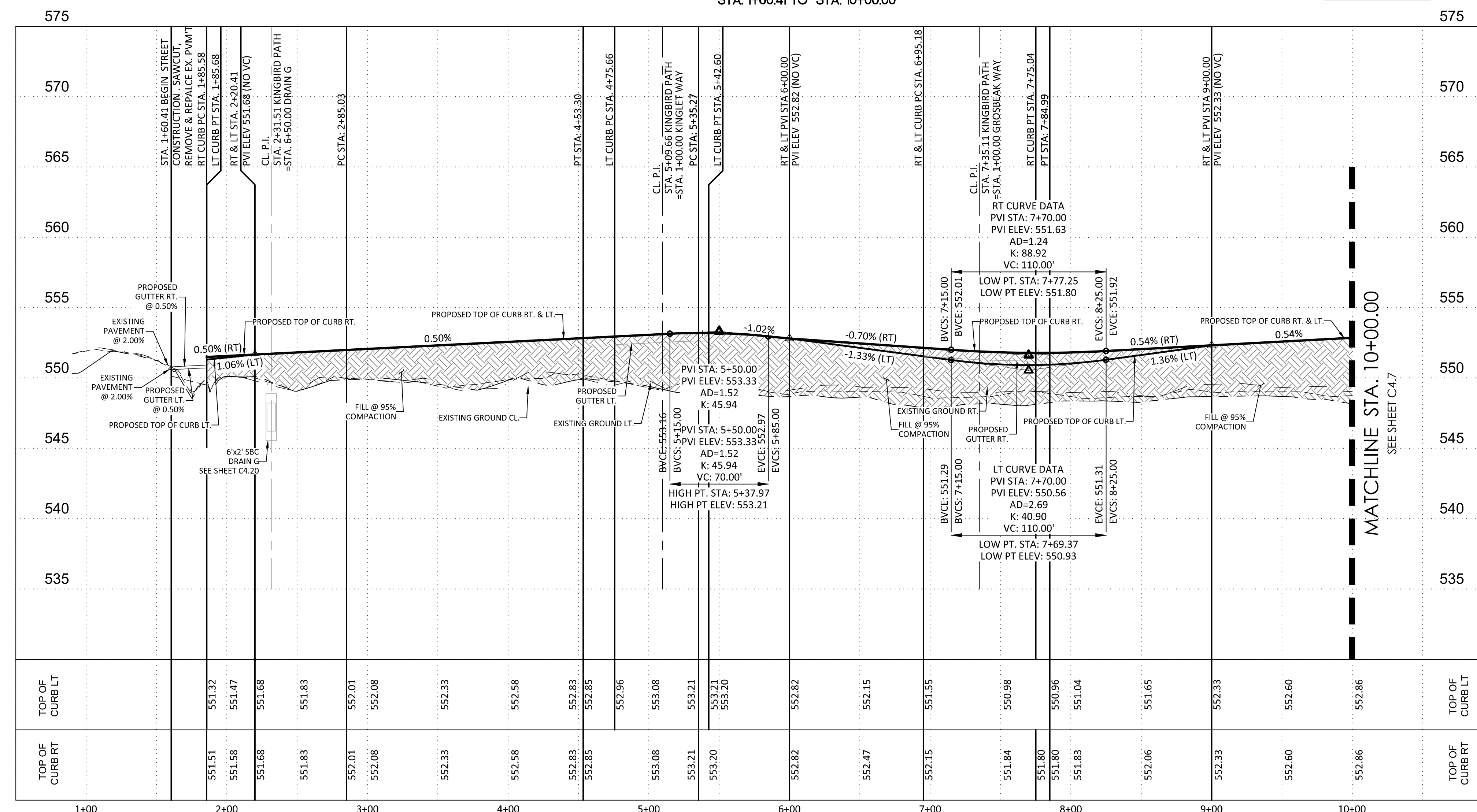
SHEET

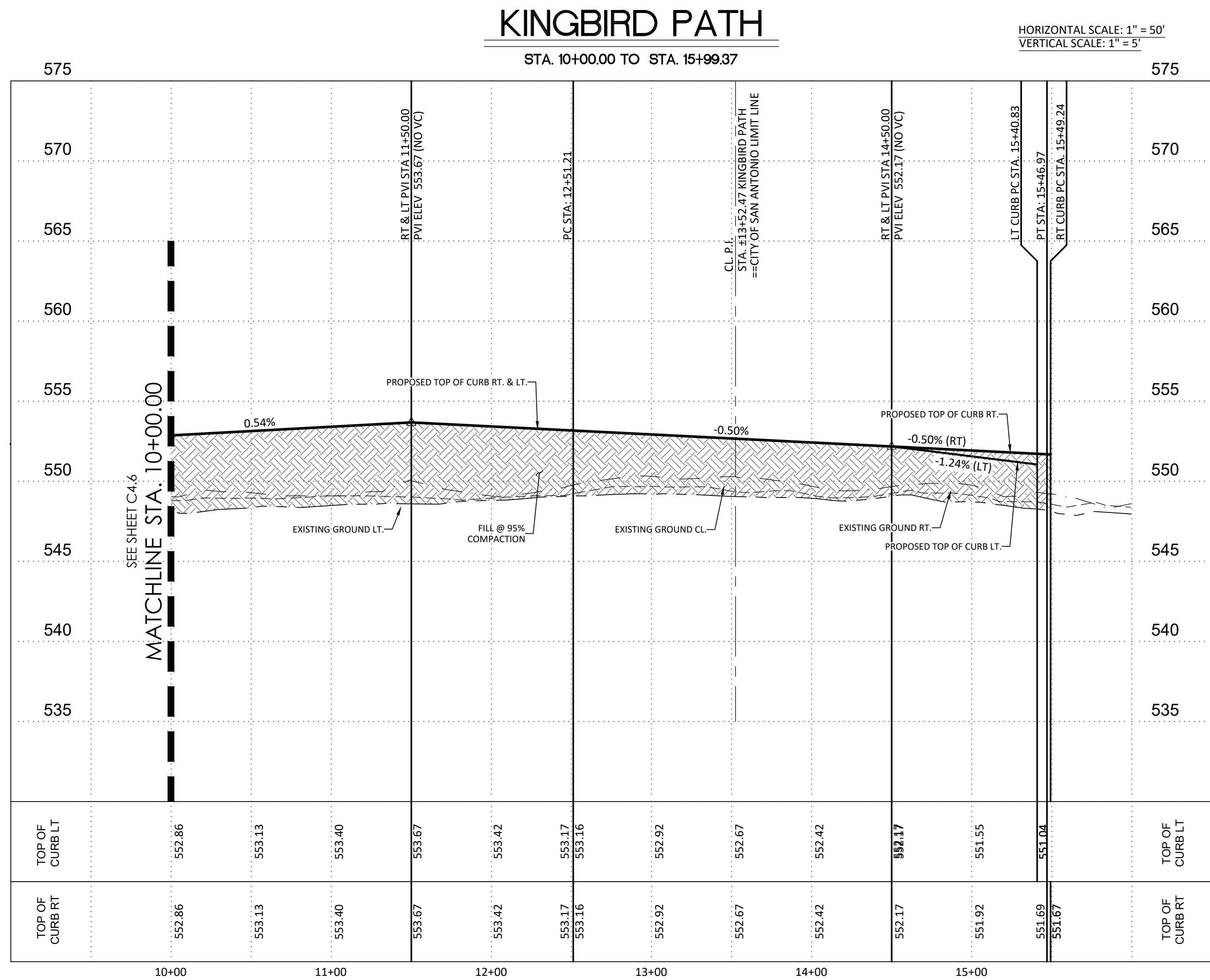
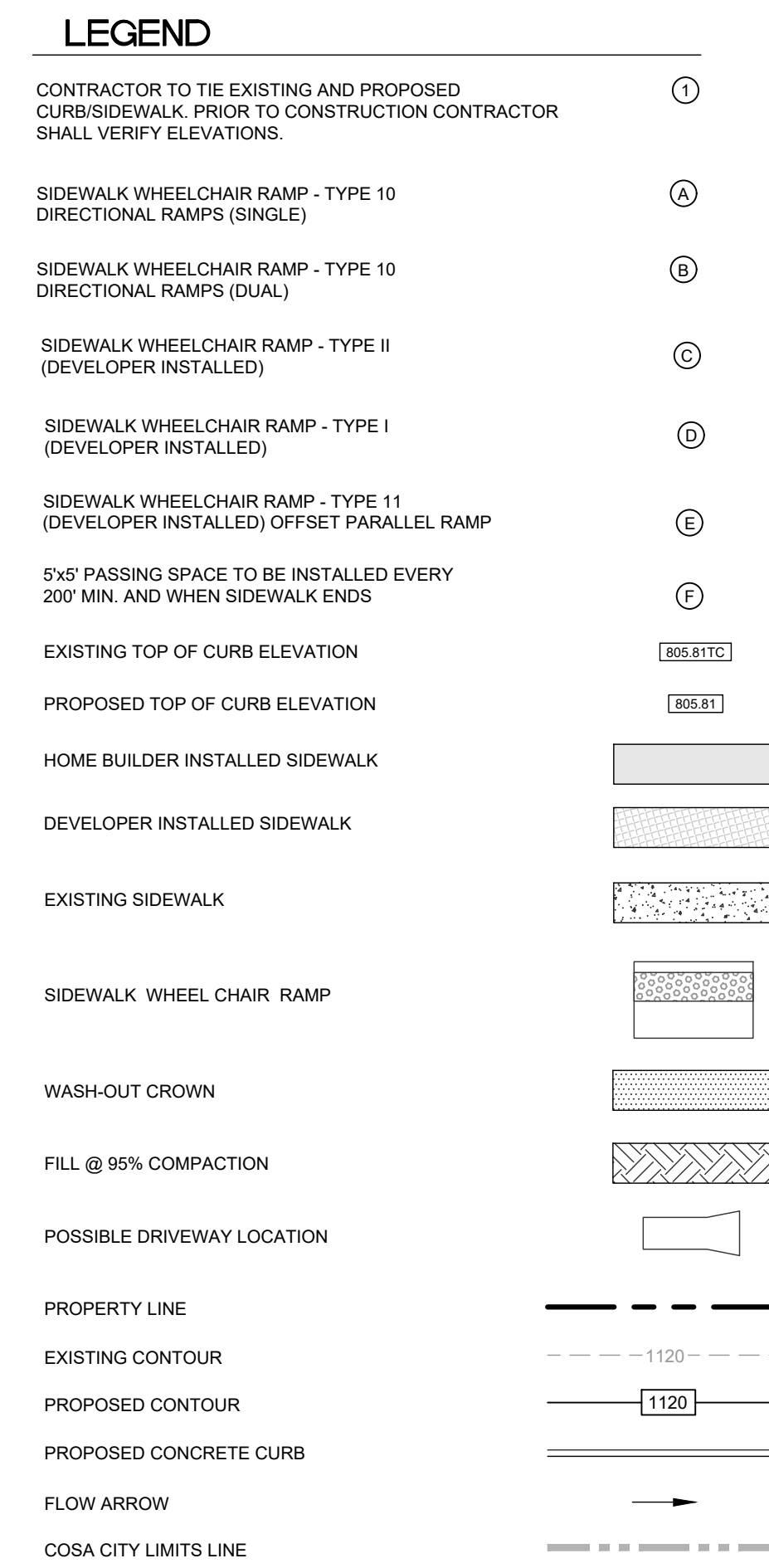
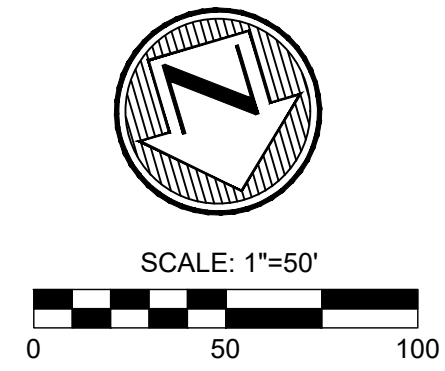
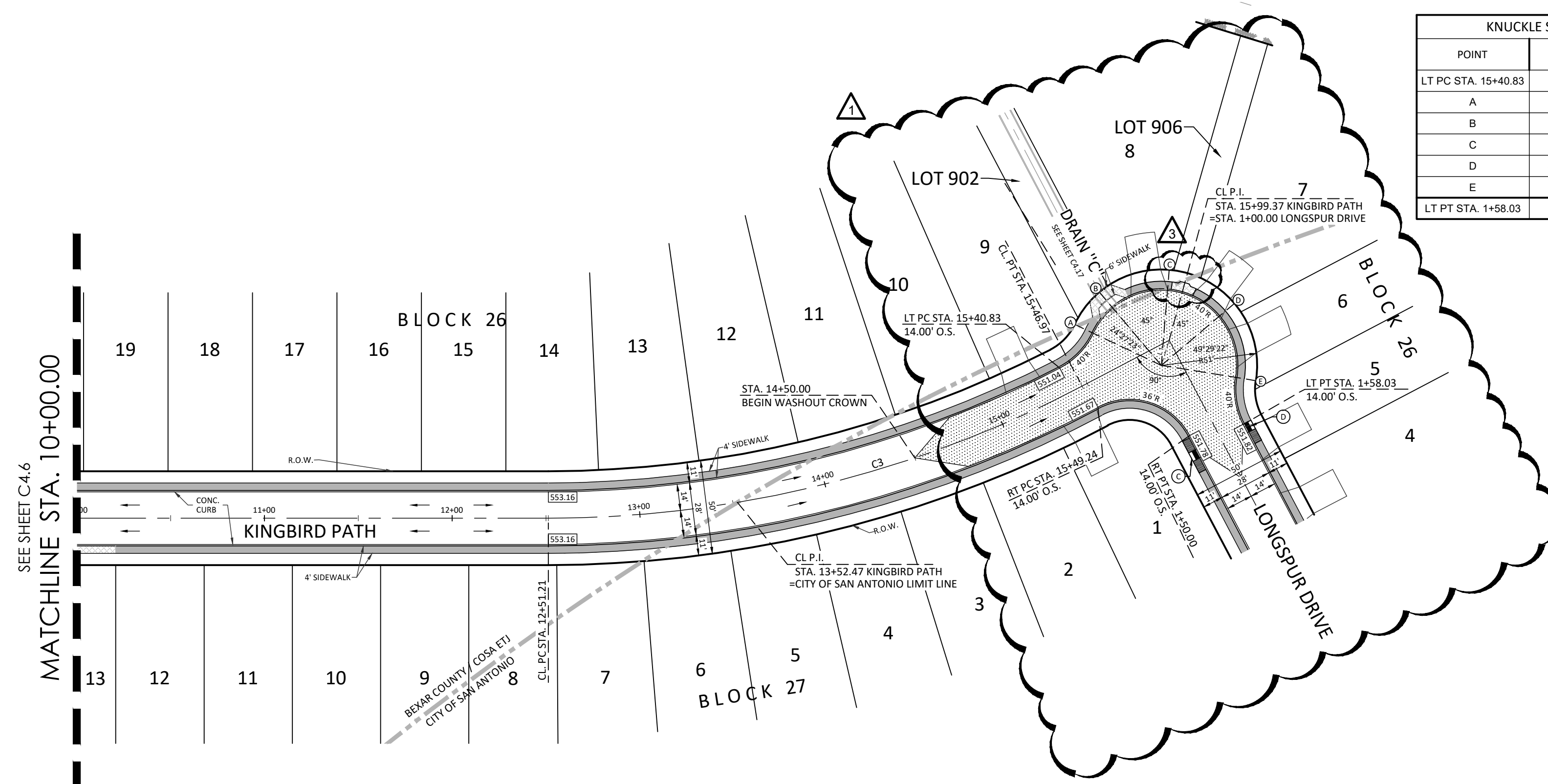
C4.6



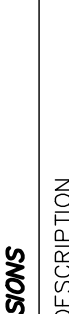
STA. 1+60.41 TO STA. 10+00.00

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





PLAT NO. 22-11800357



Moy Tarin Ramirez Engineers, LLC
 TPEELS: ENGINEERING F-5297/SURVEYING: F-10131500
 12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051
 SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085

- **Engineers**
- **Surveyors**
- **Planners**

REVISIONS				
NO.	DATE	DESCRIPTION	BY	DATE
1	11/18/24	REVISED LOT LAYOUT	DMC	
3	3/04/25	ADD DEV. SW AND PASSING SPACE AT LOT 906 BLOCK 26	DMC	
PROJ. # DGN. BY: DWN. BY: CHKD. BY:			DATE:	

3/10/25



A circular professional engineer seal for the State of Texas. The outer ring contains the text "STATE OF TEXAS" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by two stars on each side. The inner circle features a five-pointed star at the top, the name "PAUL LANDA, JR." in the center, and the number "100182" below it. The word "LICENSED" is written in a smaller font between the name and the number.

VERDIN SUBDIVISION UNIT 1
STREET PLAN & PROFILE
KINGBIRD PATH
STA. 10+00.00 TO STA. 15+99.37

SHEET

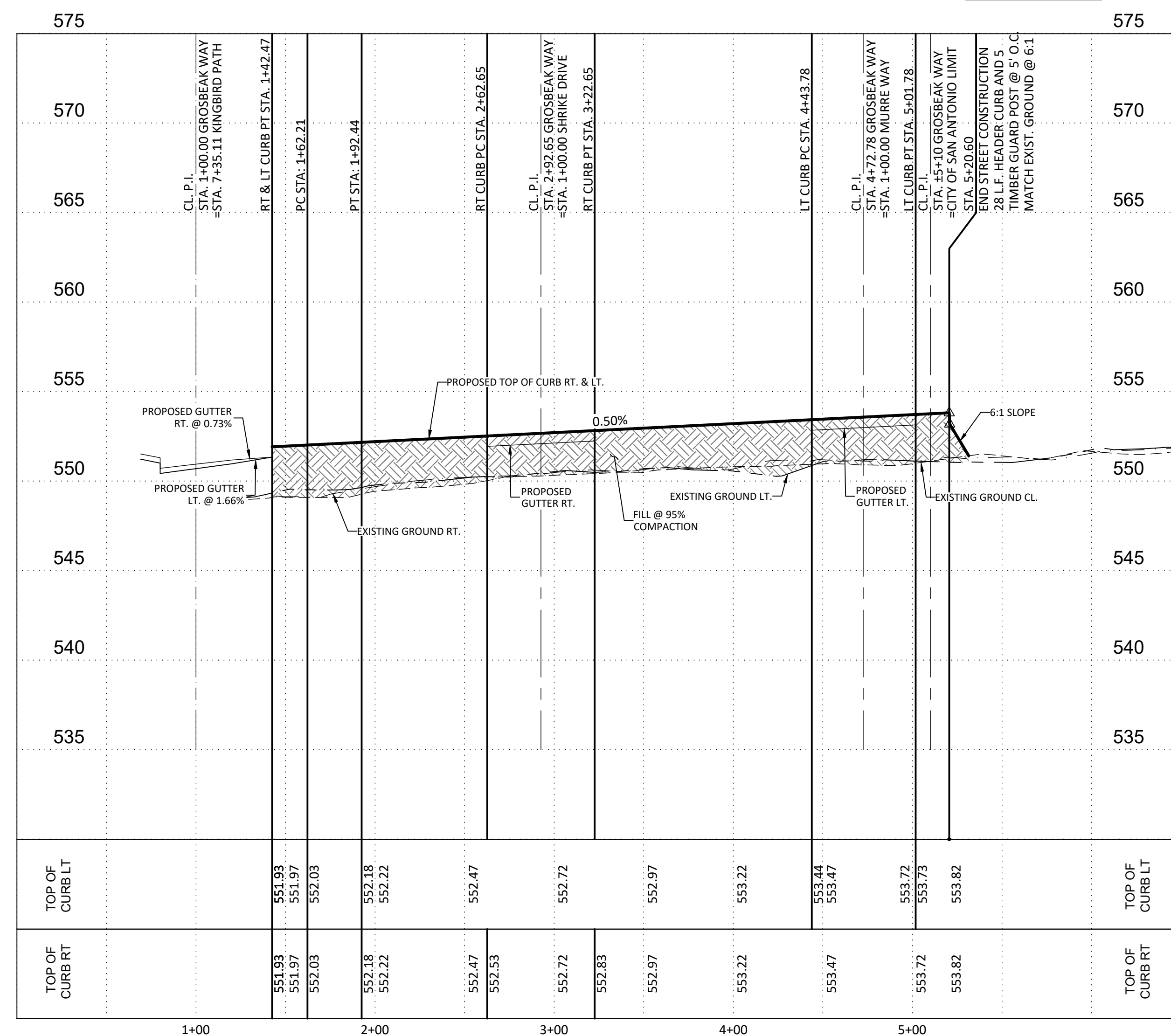
C4.7



CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD
C1	30.22'	100.00'	17°19'03"	15.23'	30.11'



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



CAUTION!!!
CONTRACTOR TO VERIFY EXISTING
CONDITIONS BEFORE CONSTRUCTION.
IF ANY DISCREPANCIES NOTIFY
ENGINEER

BEXAR COUNTY R.O.W. NOTE:
BEXAR COUNTY PERMIT REQUIRED FOR
STREET TIE-IN & INTERSECTION
PAVEMENT REPLACEMENT AND/OR ANY
WORK BEING DONE IN BEXAR COUNTY
R.O.W.

LEGEND

CONTRACTOR TO TIE EXISTING AND PROPOSED CURB/SIDEWALK. PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY ELEVATIONS.

SIDEWALK WHEELCHAIR RAMP - TYPE 10
DIRECTIONAL RAMPS (SINGLE)

SIDEWALK WHEELCHAIR RAMP - TYPE 10
DIRECTIONAL RAMPS (DUAL)

SIDEWALK WHEELCHAIR
(DEVELOPER INSTALLED)

SIDEWALK WHEELCHAIR
(DEVELOPER INSTALLED)

SIDEWALK WHEELCHAIR RAMP - TYPE 11
(DEVELOPER INSTALLED) OFFSET PARALLEL RAMP

5'x5' PASSING SPACE TO BE INSTALLED EVERY
200' MIN. AND WHEN SIDEWALK ENDS

EXISTING TOP OF CURB ELEVATION

PROPOSED TOP OF CURB ELEVATION

HOME BUILDER INSTALLED SIDEWALK

DEVELOPER INSTALLED SIDEWALK

SIDEWALK WHEEL CHAIR RAMP

WASH-OUT CROWN

FILL @ 95% COMPACTION

POSSIBLE DRIVEWAY LOCATION

PROPERTY LINE

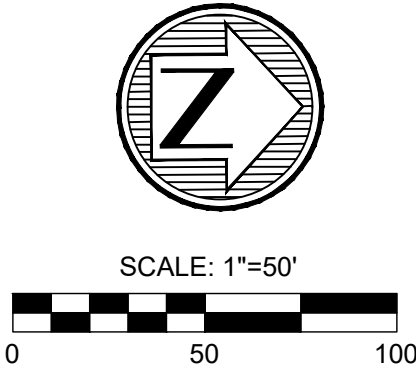
PROPOSED CONTOUR

PROPOSED CONCRETE CURB

FLOW ARROW

COSA CITY LIMITS LINE

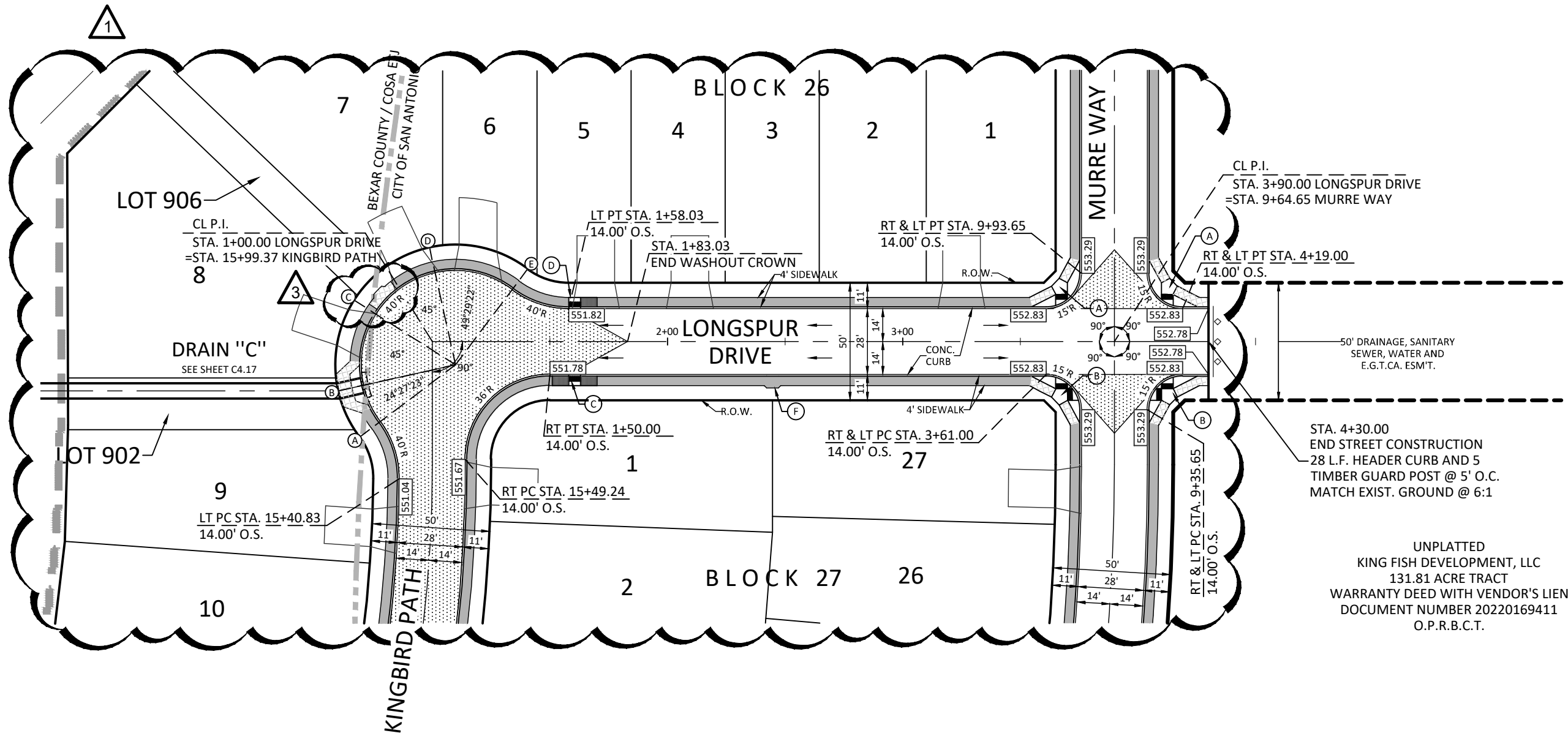
SUBMITTAL SET



LEGEND

- CONTRACTOR TO TIE EXISTING AND PROPOSED CURB/SIDEWALK. PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY ELEVATIONS.
- SIDEWALK WHEELCHAIR RAMP - TYPE 10 DIRECTIONAL RAMPS (SINGLE)
- SIDEWALK WHEELCHAIR RAMP - TYPE 10 DIRECTIONAL RAMPS (DUAL)
- SIDEWALK WHEELCHAIR RAMP - TYPE II (DEVELOPER INSTALLED)
- SIDEWALK WHEELCHAIR RAMP - TYPE I (DEVELOPER INSTALLED)
- SIDEWALK WHEELCHAIR RAMP - TYPE 11 (DEVELOPER INSTALLED) OFFSET PARALLEL RAMP
- 5'x5' PASSING SPACE TO BE INSTALLED EVERY 200' MIN. AND WHEN SIDEWALK ENDS
- EXISTING TOP OF CURB ELEVATION
- PROPOSED TOP OF CURB ELEVATION
- HOME BUILDER INSTALLED SIDEWALK
- DEVELOPER INSTALLED SIDEWALK
- EXISTING SIDEWALK
- SIDEWALK WHEEL CHAIR RAMP
- WASH-OUT CROWN
- FILL @ 95% COMPACTION
- POSSIBLE DRIVEWAY LOCATION
- PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED CONCRETE CURB
- FLOW ARROW
- COSA CITY LIMITS LINE

KNUCKLE SAC TABLE		
POINT	TOP OF CURB	GUTTER
LT PC STA. 15+40.83	551.04	550.46
A	550.90	550.32
B	550.88	550.30
C	551.05	550.47
D	5531.32	5530.74
E	551.60	551.02
LT PT STA. 1+58.03	551.82	551.24

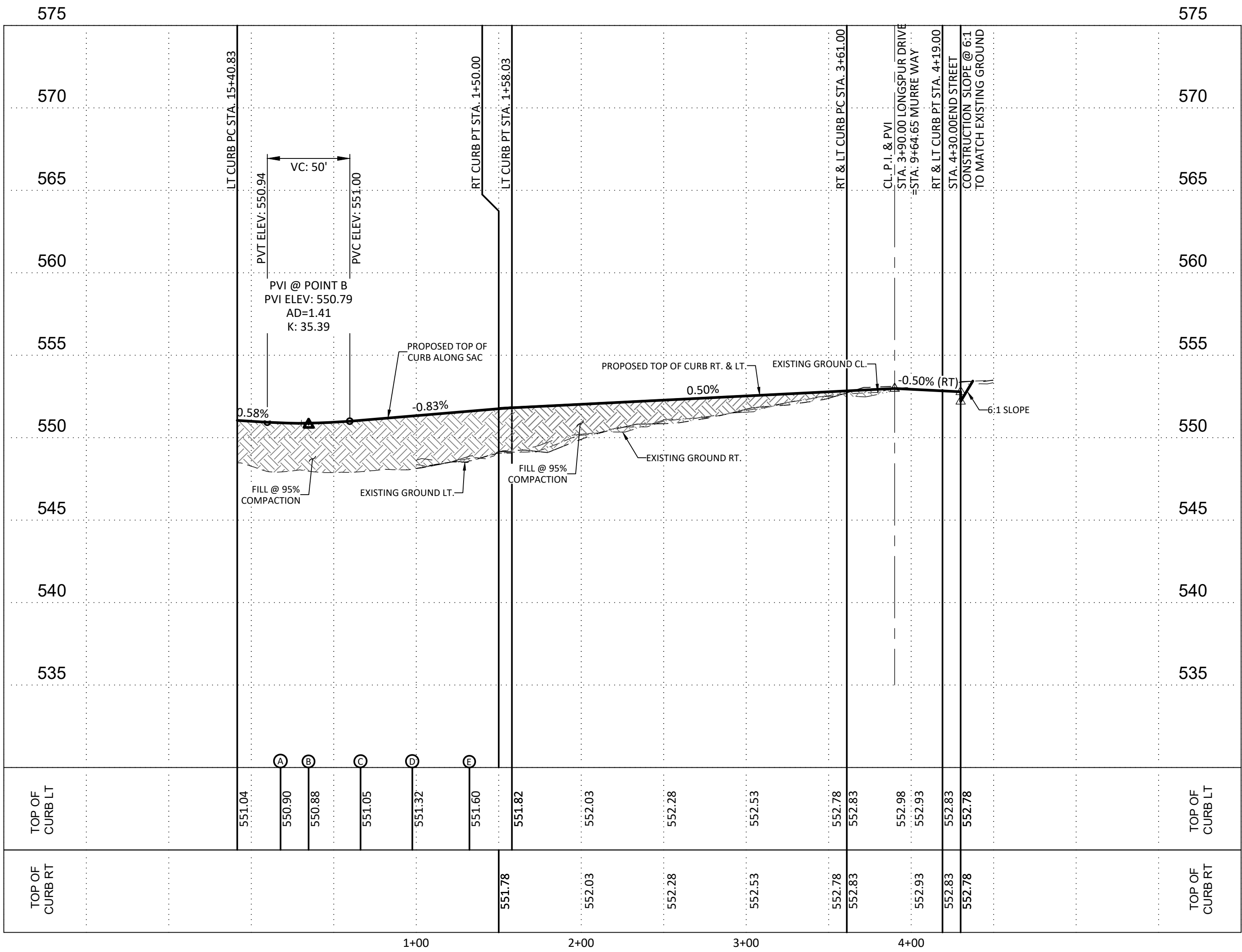


LONGSPUR DR

CITY OF SAN ANTONIO

STA. 1+00.00 TO STA. 4+30.00

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



CAUTION!!!
CONTRACTOR TO VERIFY EXISTING CONDITIONS BEFORE CONSTRUCTION. IF ANY DISCREPANCIES NOTIFY ENGINEER

REVISIONS		DATE	DESCRIPTION	BY
NO.	1	11/18/24	REVISED LOT LAYOUT	DG
2	3	3/3/25	ADD DEV. SW AND PASSING SPACE AT LOT 906 BLOCK 26	DG

Engineers
Surveyors
Planners

MTR

Moy Tarin Ramirez Engineers, LLC
TBPELS: ENGINEERING F-5297 / SURVEYING: F-10131500
12770 EMARRON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5055



VERDIN SUBDIVISION UNIT 1
STREET PLAN & PROFILE
LONGSPUR DR
CITY OF SAN ANTONIO
STA. 1+00.00 TO STA. 4+30.00

SHEET

C4.9

SUBMITTAL SET

CONTRACTOR TO THE EXISTING AND PROPOSED CURB/SIDEWALK PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY ELEVATIONS.

SIDEWALK WHEELCHAIR RAMP - TYPE 10
(DIRECTIONAL) RAMPS (SINGLE) (A)

SIDEWALK WHEELCHAIR RAMP - TYPE 10
(DIRECTIONAL) RAMPS (DUAL) (B)

SIDEWALK WHEELCHAIR RAMP - TYPE II
(DEVELOPER INSTALLED) (C)

SIDEWALK WHEELCHAIR RAMP - TYPE I
(DEVELOPER INSTALLED) (D)

SIDEWALK WHEELCHAIR RAMP - TYPE 11
(DEVELOPER INSTALLED) OFFSET PARALLEL RAMP (E)

5'x5' PASSING SPACE TO BE INSTALLED EVERY
200' MIN. WHEN SIDEWALK ENDS (F)

EXISTING TOP OF CURB ELEVATION 805.8

PROPOSED TOP OF CURB ELEVATION 805

HOME BUILDER INSTALLED SIDEWALK

DEVELOPER INSTALLED SIDEWALK

EXISTING SIDEWALK

SIDEWALK WHEEL CHAIR RAMP

WASH-OUT CROWN

FILL @ 95% COMPACTION

POSSIBLE DRIVEWAY LOCATION

PROPERTY LINE

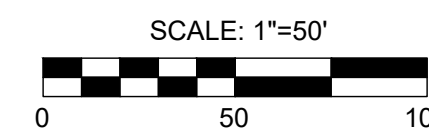
EXISTING CONTOUR

PROPOSED CONTOUR

PROPOSED CONCRETE CURB

FLOW ARROW

COSA CITY LIMITS LINE



CAUTION!!!
CONTRACTOR TO VERIFY EXISTING
CONDITIONS BEFORE CONSTRUCTION.
IF ANY DISCREPANCIES NOTIFY
ENGINEER

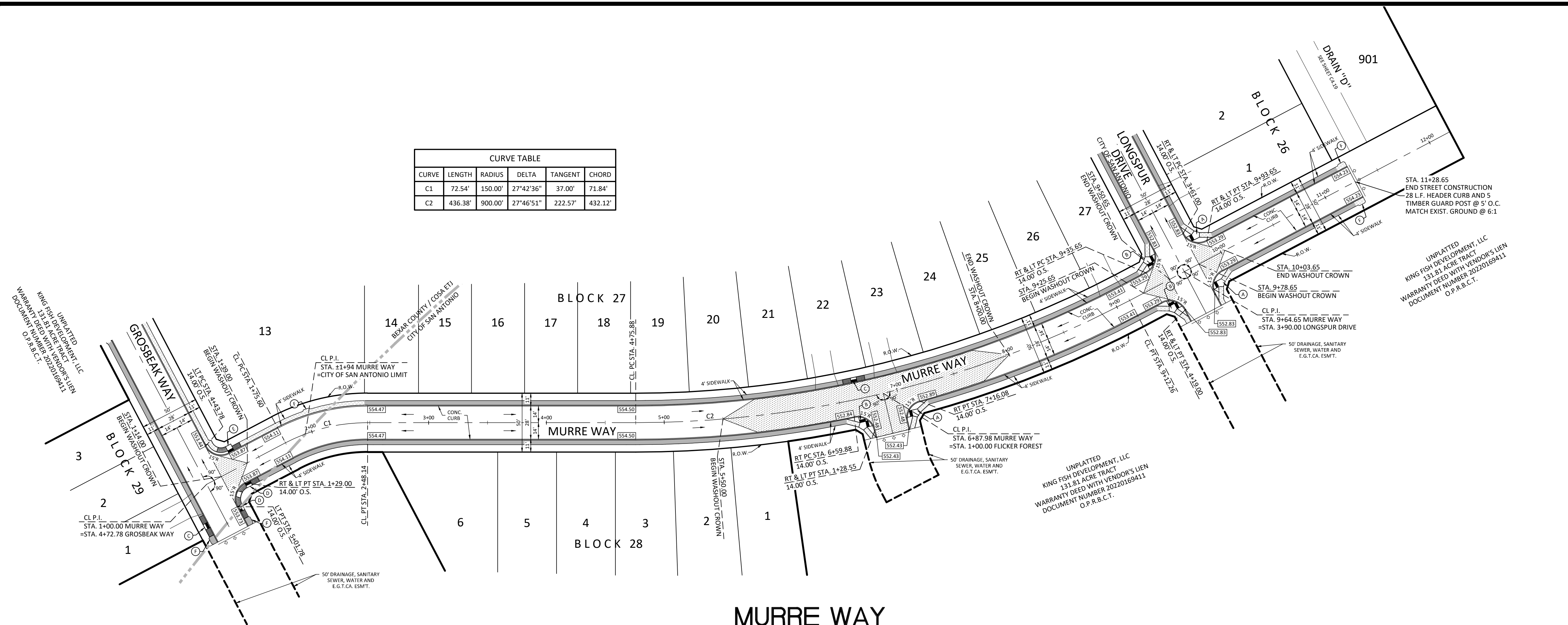


VERDIN SUBDIVISION UNIT 1
STREET PLAN & PROFILE
MURRE WAY
CITY OF SAN ANTONIO
SECTION 01000

C4.10

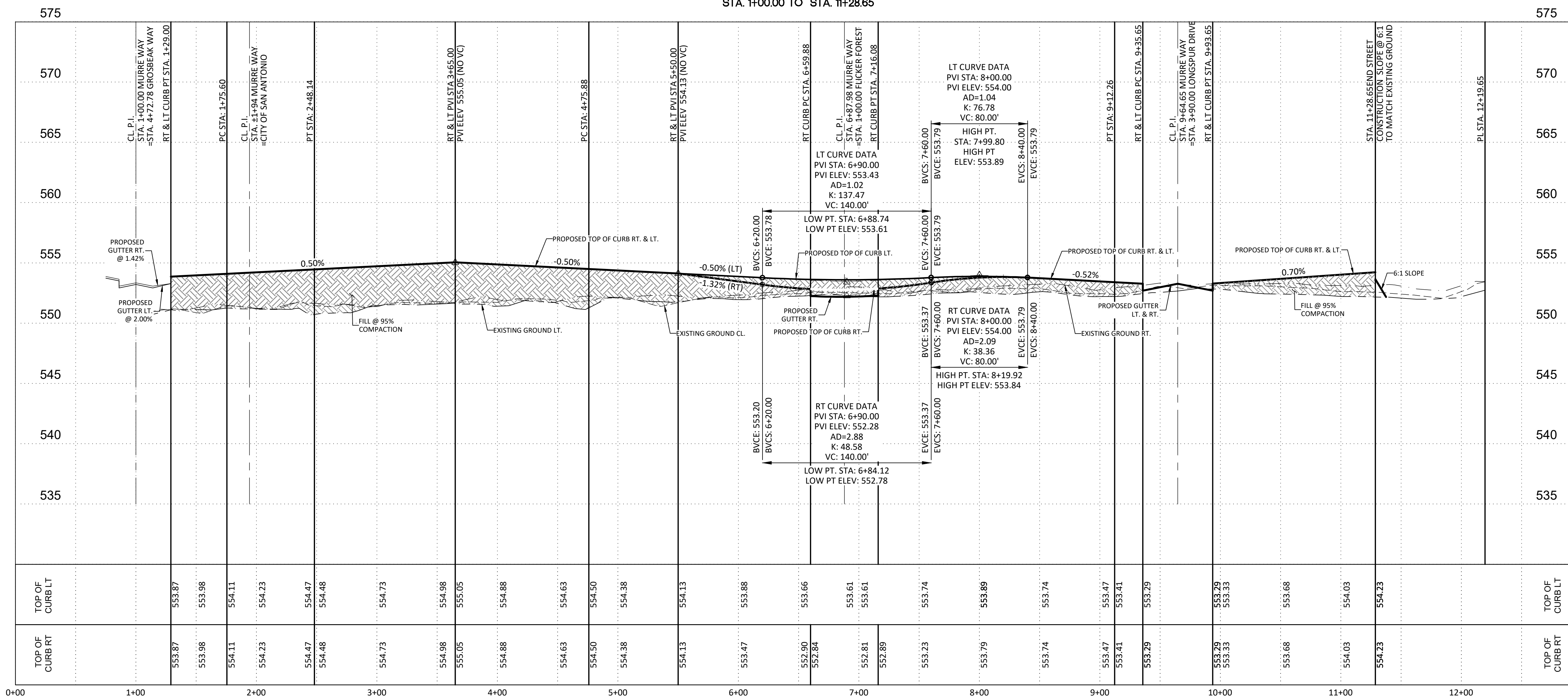
Plot Date: February 16, 2023 User ID: Alyssa Ramones
e:\McOsker Tract\Unit 1\Drawings\22091_C4.10-Murre Way.dwg

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD
C1	72.54'	150.00'	27°42'36"	37.00'	71.84'
C2	436.38'	900.00'	27°46'51"	222.57'	432.12'



MURRE WAY
CITY OF SAN ANTONIO
STA. 1+00.00 TO STA. 11+28.65

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



CONTRACTOR TO TIE EXISTING AND PROPOSED CURB/SIDEWALK. PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY ELEVATIONS. (1)

Ⓐ

(B)

©

©



805.8

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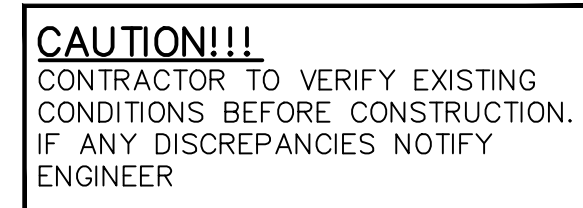
11/11/2019

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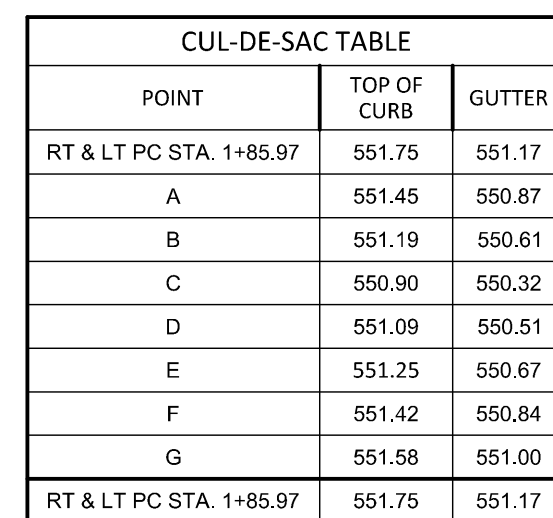
— 1120 —

1120

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BEXAR COUNTY PERMIT REQUIRED FOR
STREET TIE-IN & INTERSECTION
PAVEMENT REPLACEMENT AND/OR ANY
WORK BEING DONE IN BEXAR COUNTY
R.O.W.

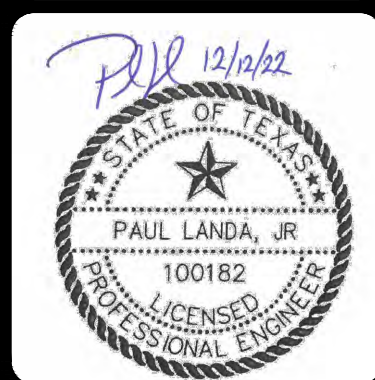
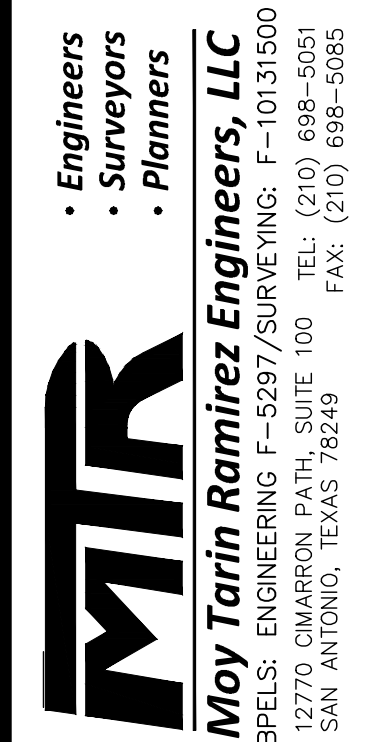


STA. 1+00.00 TO STA. 2+45.00

SCALE: 1"=50'



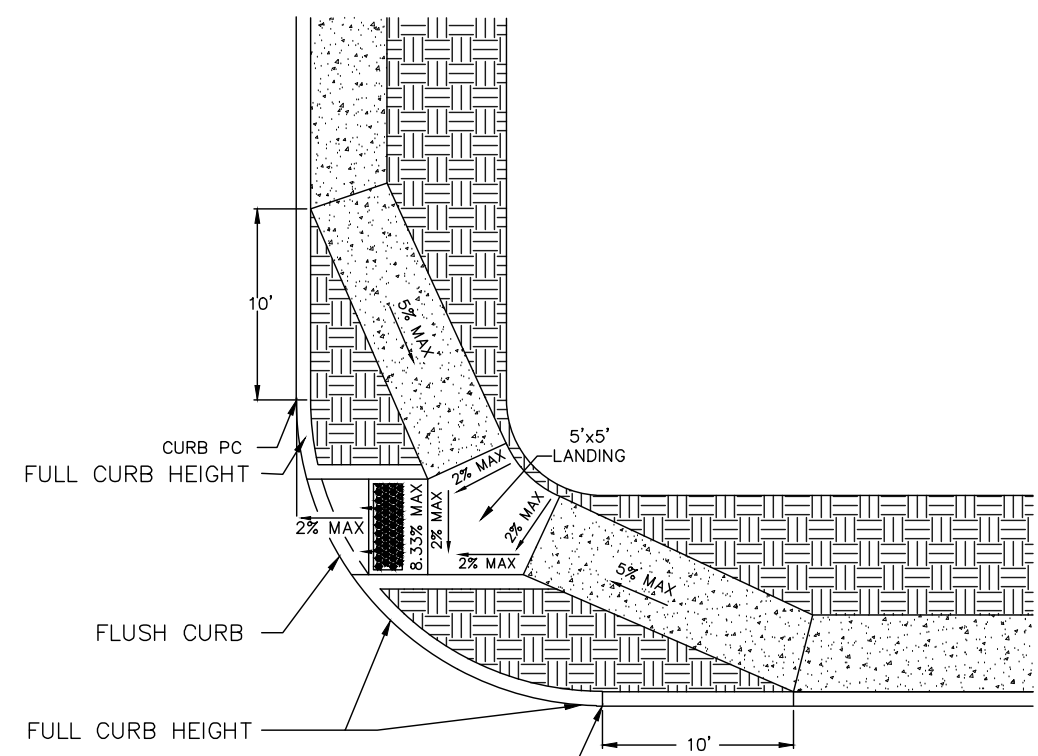
A graphic scale bar with alternating black and white segments. It is marked with '0' at the left end, '50' in the middle, and '100' at the right end.



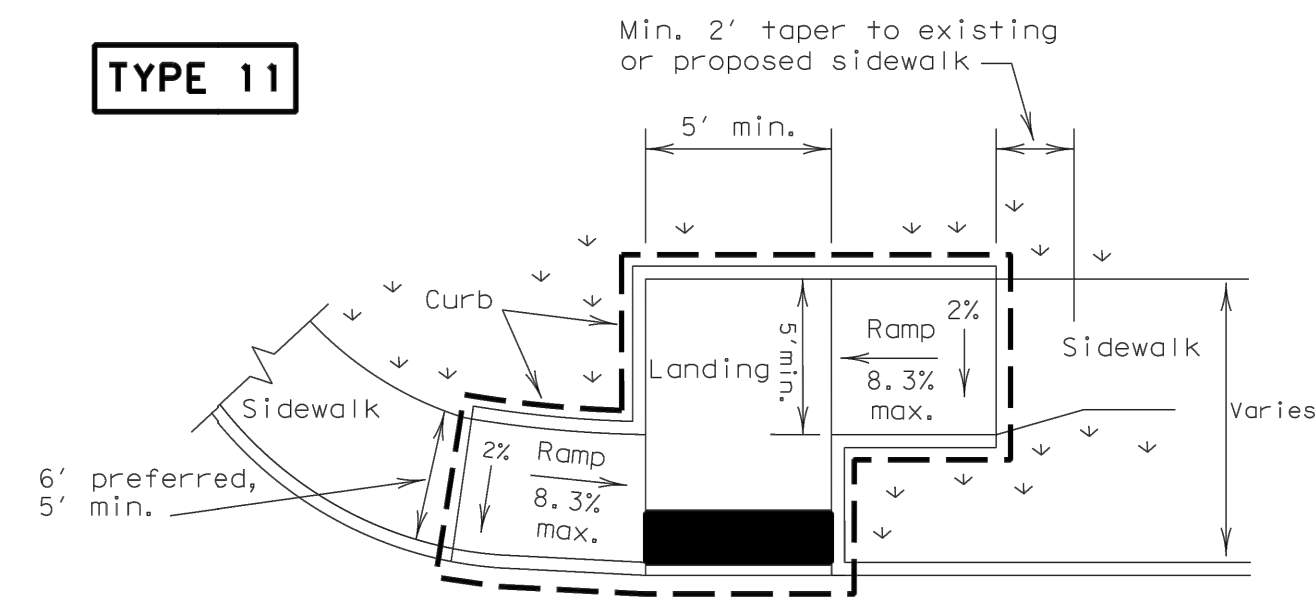
VERDIN SUBDIVISION UNIT 1
STREET PLAN & PROFILE
KINGLET WAY
STA. 1+00.00 TO STA. 2+45.00

C4.11

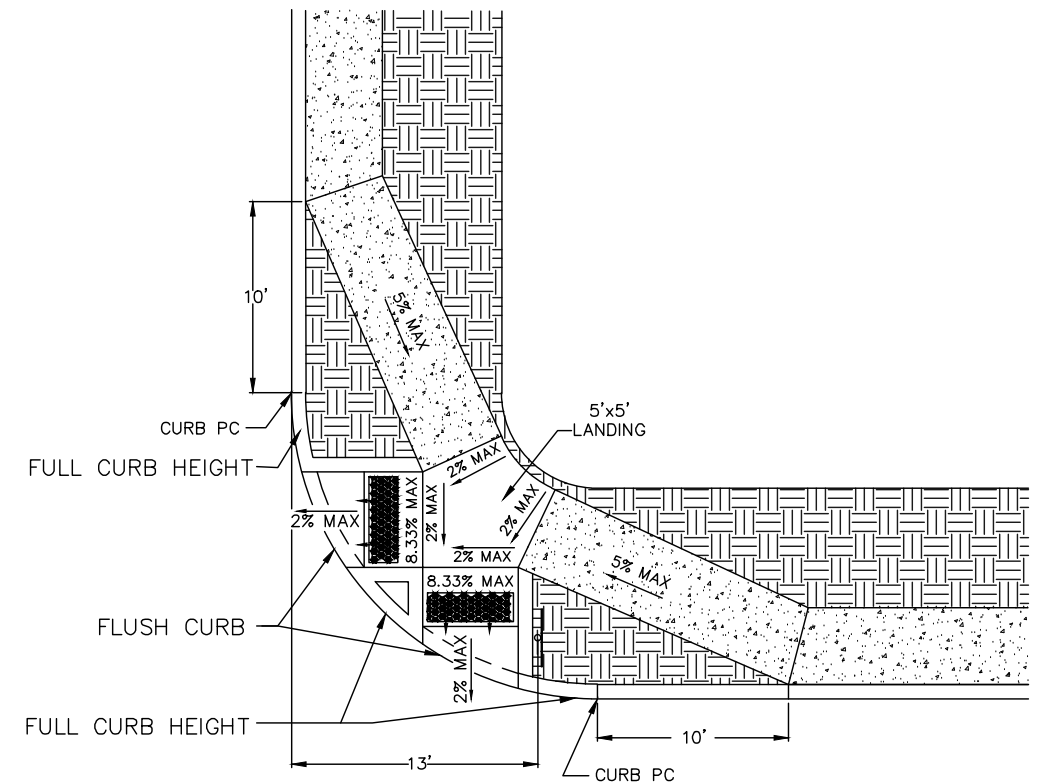
SUBMITTAL SET



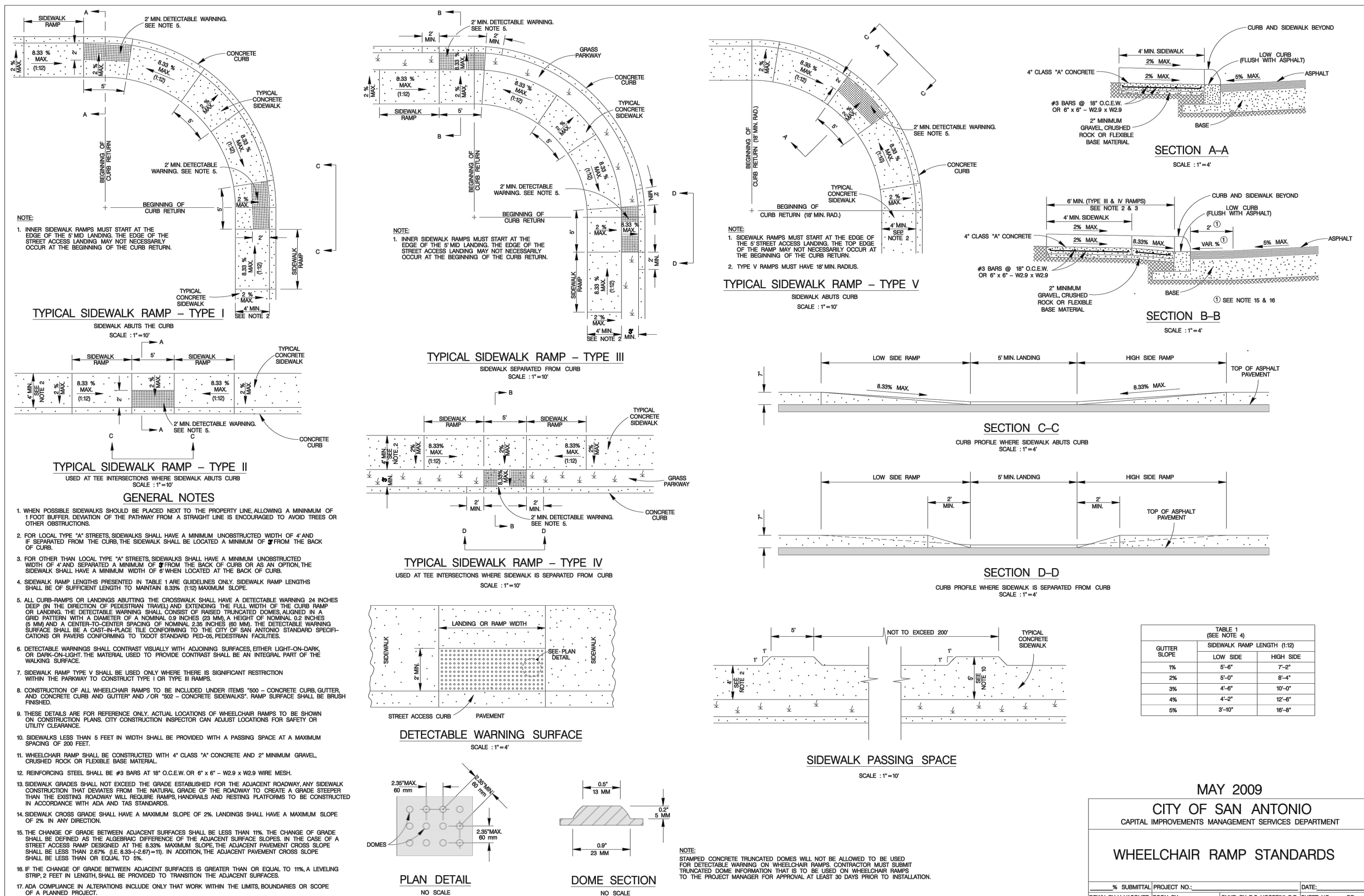
TYPE 11



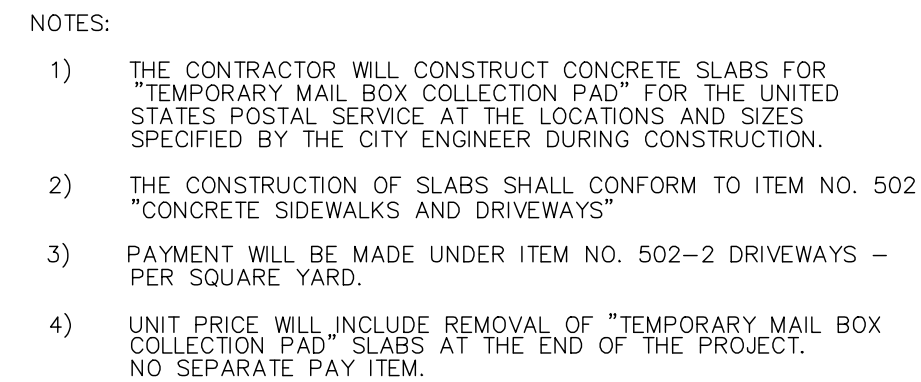
OFFSET PARALLEL CURB RAMP (TYPE 11)



DUAL ADA RAMP INTERSECTION LAYOUT DETAIL
(TYPE 10 DIRECTIONAL RAMPS)



MAY 2009		
CITY OF SAN ANTONIO		
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT		
WHEELCHAIR RAMP STANDARDS		
% SUBMITTAL	PROJECT NO.:	DATE:



CONCRETE DRIVEWAY NOTES:

1. THE PROPOSED DRIVEWAY SHOULD MATCH THE EXISTING WIDTH AT THE PROPERTY LINE BUT UNLESS AUTHORIZED BY THE CITY TRAFFIC ENGINEER, THE WIDTH SHALL BE WITHIN THE FOLLOWING VALUES:

TYPE	MINIMUM	MAXIMUM
RESIDENTIAL	10'	20'
COMMERCIAL – ONE WAY	12'	20'
COMMERCIAL – TWO WAY	24'	30'

-
- CLASS "A" CONCRETE
- 2% SLOPE TO CURB
- 4"
- 2" GRAVEL, CRUSHED ROCK, OR FLEX BASE MATERIAL
- 6"X6" W2.9 X W2.9 WELDED WIRE FLAT SHEETS (ITEM 303) OR #3 BARS AT 18" O.C. EACH WAY CENTERED IN SLAB (ITEM 301)

CONCRETE SIDEWALK DETAIL
N.T.S.



MACHINE LAID CURB
N.T.S. ITEM 500



* A NEAT END SECTION, SATISFACTORY TO THE ENGINEER, FROM SUBMITTED SHOP DRAWINGS, MAY BE USED IN LIEU OF THE 90° WELDING ELBOW SHOWN.

SCALE : 1" = 8'



SCALE : 1" = 6'



SCALE : 1" = 4'

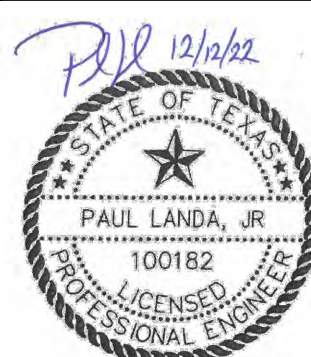
<i>REVISIONS</i>					
NO.	DATE	DESCRIPTION	BY		
			PROJ. #	DGN. BY:	DWN. BY:
			CHECKED BY:	DATE:	

- **Engineers**
- **Surveyors**
- **Planners**



Moy Tarin Ramirez Engineers, LLC

PELS: ENGINEERING F-5297/SURVEYING: F-10131500
12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051

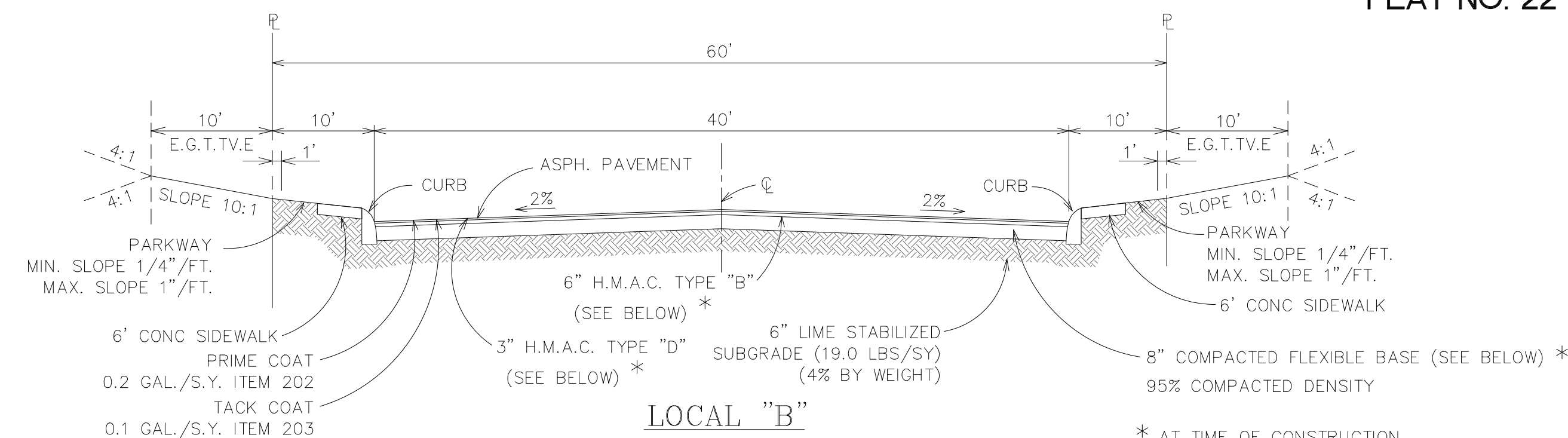


VERDIN SUBDIVISION UNIT 1
STREET PLAN & PROFILE
STANDARD DETAILS

SHEET

C4.13

SUBMITTAL SET



TYPICAL STREET CROSS-SECTION (40' PAVEMENT)

* AT TIME OF CONSTRUCTION,
PAVEMENT SECTION TO BE
DETERMINED BY ENGINEER
AFTER INSPECTION OF SUBGRADE

NOTE:
SELECT FILL MATERIAL SHALL HAVE
A PLASTICITY INDEX OF LESS THAN
20 AND A CALIFORNIA BEARING
RATIO (CBR) OF AT LEAST 3.0

GEOTECHNICAL REPORT::
FROST GEOSCIENCES, INC.

VERDIN SUBDIVISION, UNIT 1, BEXAR COUNTY, TEXAS PAVEMENT DESIGN

FROST GEOSCIENCES, INC. PROJECT NO. FGS-G 22122-1 REVISED (DECEMBER 13, 2022)

N.T.S.

KINGBIRD PATH ~ STA. 7+89.76 TO STA. 15+99.37
GROSBEEK WAY ~ STA. 1+20.00 TO STA. 5+20.60
LONGSPUR DR ~ 1+00.00 TO STA. 4+30.00
MURRE WAY ~ STA. 1+00.00 TO STA. 11+28.65
KINGLET WAY ~ STA. 1+00.00 TO STA. 2+45.00
SHRIKE DRIVE ~ STA. 1+00.00 TO STA. 1+40.00
FLICKER FOREST ~ STA. 1+00.00 TO STA. 1+35.00

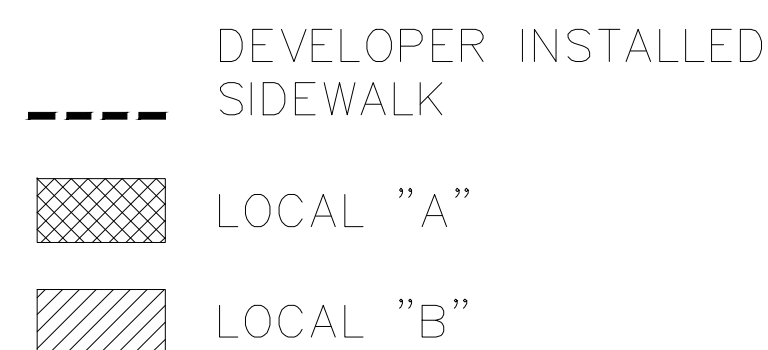
<u>PAVEMENT MATERIAL</u>	<u>CLAY SUBGRADE (CBR 3.0)</u>	<u>LOCAL A</u>	<u>LOCAL B</u>
TYPE D ASPHALTIC CONCRETE	2.0 IN.		3.0 IN.
TYPE B ASPHALTIC CONCRETE	---		6.0 IN.
FLEXIBLE BASE (TxDOT ITEM 247 TYPE A GRADE 2)	8.25 IN.		8.0 IN.
LIME STABILIZED SUBGRADE (19.0 LBS/SY) (4% BY WEIGHT)	6.0 IN.		6.0 IN.

1. APPLICABLE SPECIFICATIONS FROM "CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION"- JUNE 2008
200 - FLEXIBLE BASE
202 - PRIME COAT
203 - TACK COAT
205 - HOT MIX ASPHALT CONCRETE PAVEMENT
2. REFER TO INTEC GEOTECHNICAL REPORTS FOR ADDITIONAL PAVEMENT CONSTRUCTION INFORMATION A. "VERDIN SUBDIVISION UNIT 1, BEXAR COUNTY, TEXAS, PAVEMENT DESIGN, FROST GEOSCIENCES, INC. PROJECT NO.: FGS-G 22122-1, AUGUST 11, 2022.
3. CONTRACTOR TO COORDINATE ALL MATERIAL TESTING
4. CONTRACTOR SHALL FILL ANY GAPS BETWEEN THE EXISTING LIMESTONE SUBGRADE AND THE BOTTOM OF THE FLEXIBLE BASE WITH EITHER SELECT FILL (ITEM 410-2) GRAVEL, OR WITH LIMESTONE MILLINGS.

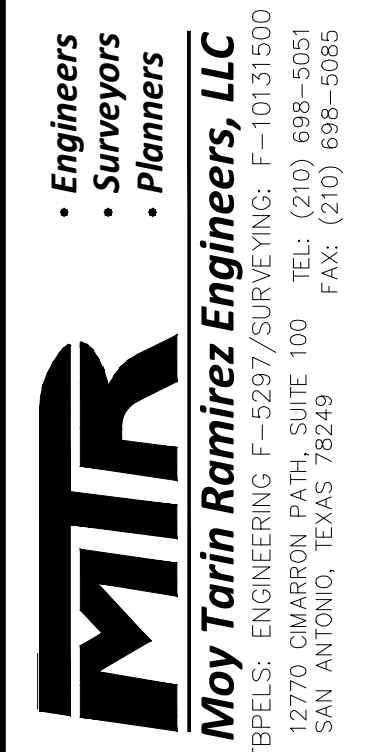
FOR CONSTRUCTION VERIFICATION THE FOLLOWING SHALL BE CONDUCTED IN THE FIELD:

- AFTER INITIAL MIXING THE SOIL-LIME MIXTURE SHALL MELLOW FOR A PERIOD OF TWO TO THREE (2-3) DAYS. MAINTAIN MOISTURE DURING MELLOWING.
- AFTER MELLOWING AND BEFORE PULVERIZATION, THE PULVERIZATION SHALL BE CHECKED USING THE FOLLOWING CRITERIA (REMOVE NON-SLAGGING AGGREGATES RETAINED ON THE 1/4 INCH SIEVE FROM THE SAMPLE):

• MINIMUM PASSING 1/4" SIEVE	100
• MINIMUM PASSING 3/8" SIEVE	100
• MINIMUM PASSING NO. 4 SIEVE	80
- AFTER PULVERIZATION, THE LIME CONTENT FOR DETERMINATION OF MAXIMUM DRY DENSITY (MDD). IN THE LABORATORY, MOLD SPECIMENS TO 95% OF MDD AT OPTIMUM MOISTURE CONTENT AND VERITY UCS TO BE AT LEAST 160 PSF IN ACCORDANCE WITH THE FOLLOWING OUTLINE:
- THE SPECIMENS SHALL BE CURED FOR A PERIOD OF 28 DAYS AT A MINIMUM OF 100% RELATIVE HUMIDITY AND 70°F TO 80°F.
- COMPACT AND CHECK FIELD DENSITY (MINIMUM OF 95% OF MDD REQUIRED);
- CURE FOR AN ADDITIONAL 2 TO 5 DAYS (TOTAL MELLOWING AND CURING TIME SHOULD TOTAL AT LEAST 5 DAYS).
- DEPTH OF CURE SHALL BE DETERMINED BY DRILLING AND TESTING AT A MINIMUM OF 10 INCH.



PAVEMENT INDEX MAP

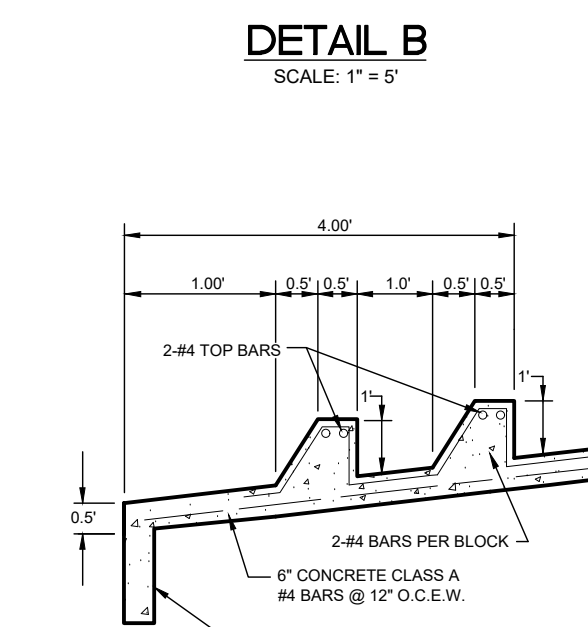
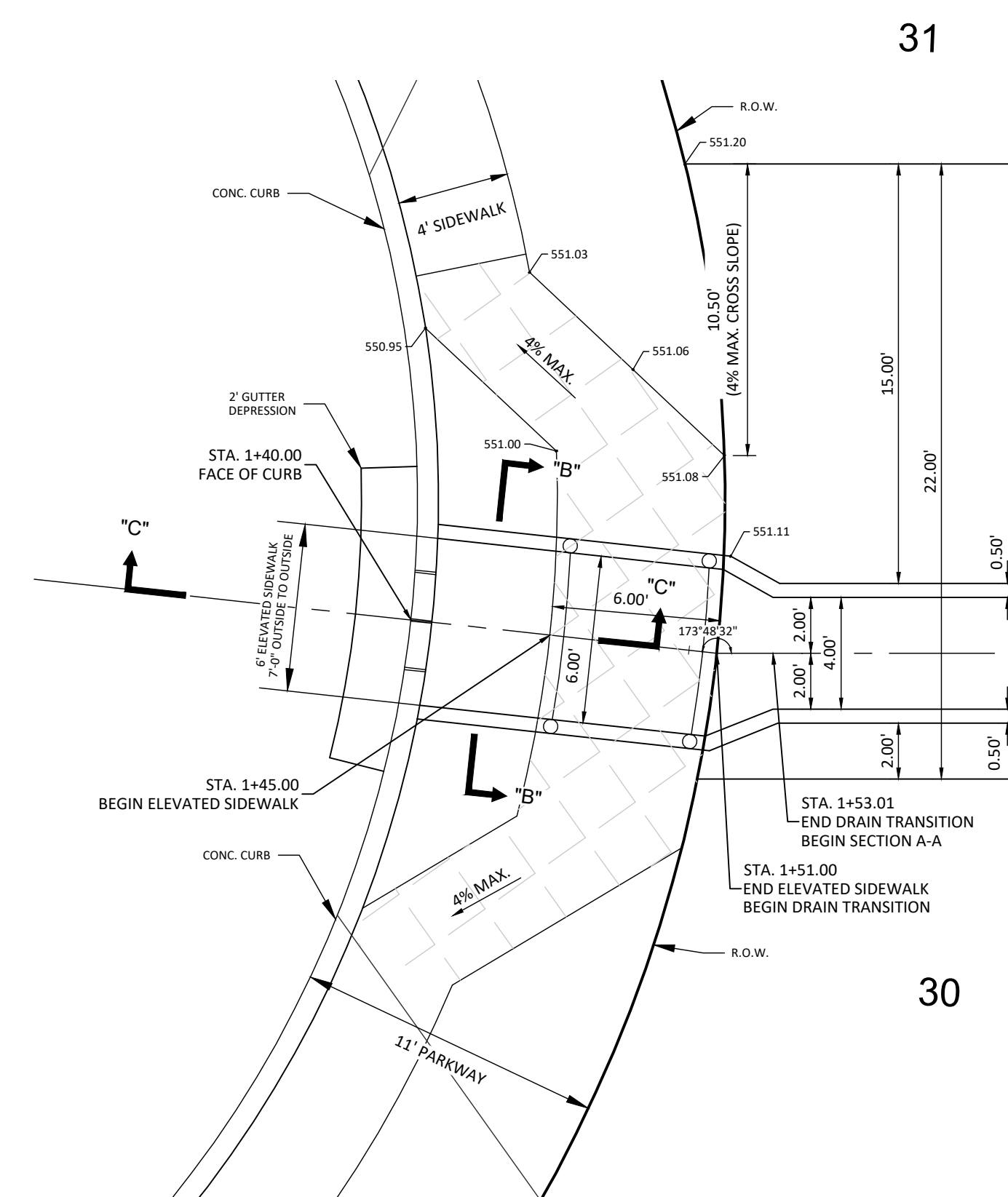


VERDIN SUBDIVISION UNIT 1

SHEET

C4.14

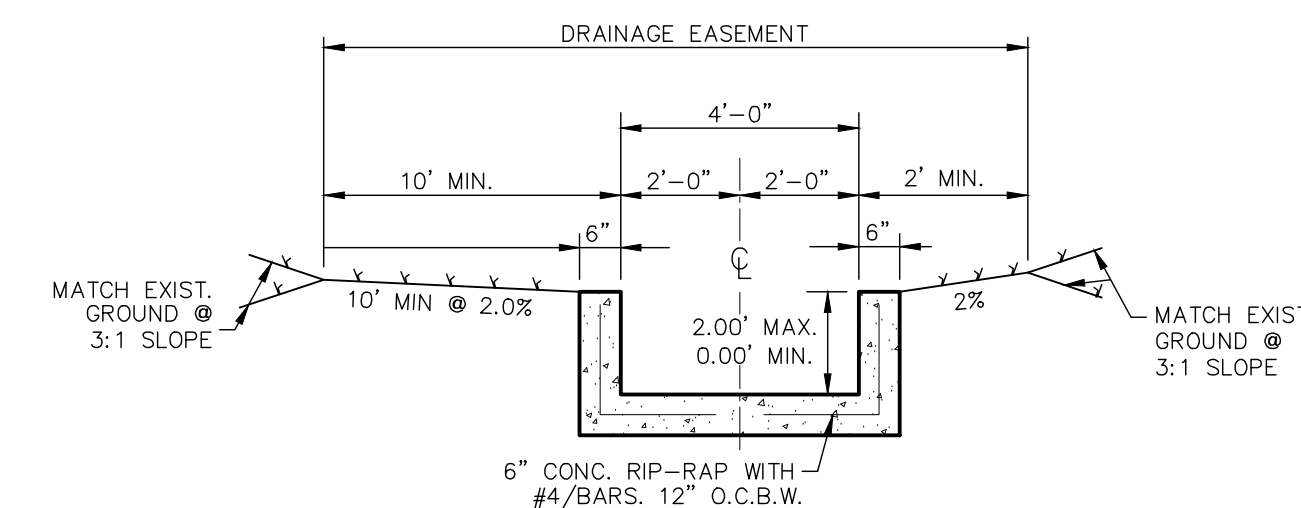
SUBMITTAL SET



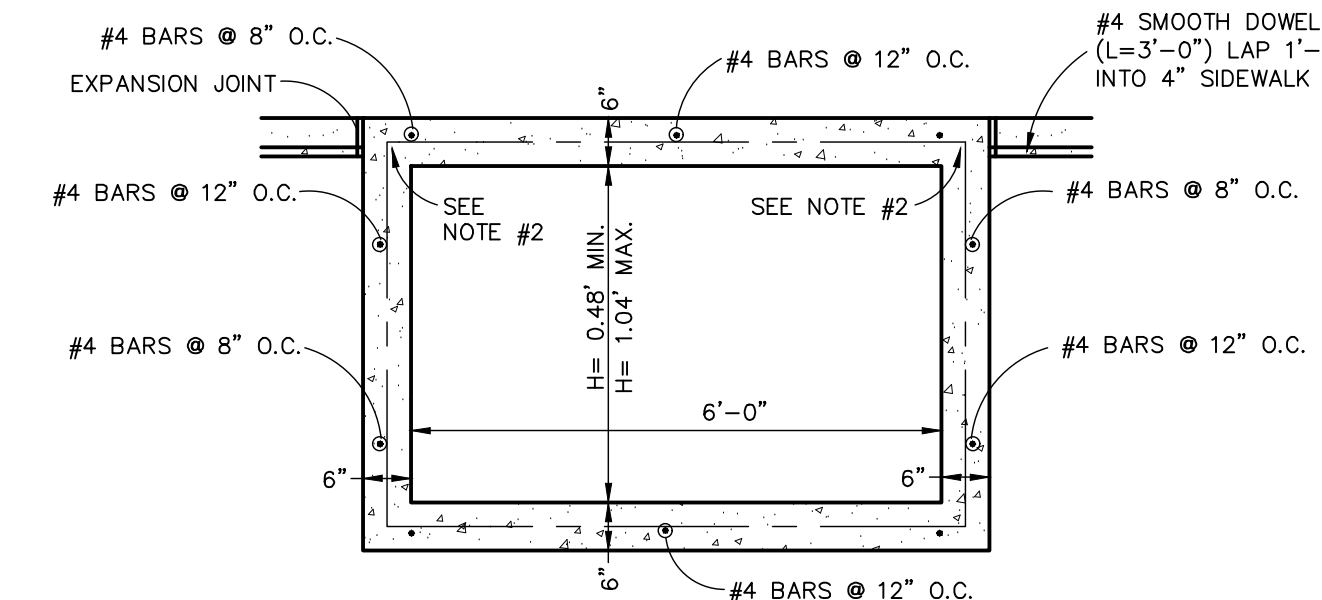
DETAIL A
SCALE: 1" = 5'

- DRAIN "A"
STA. 1+40.00 TO STA. 3+26.77

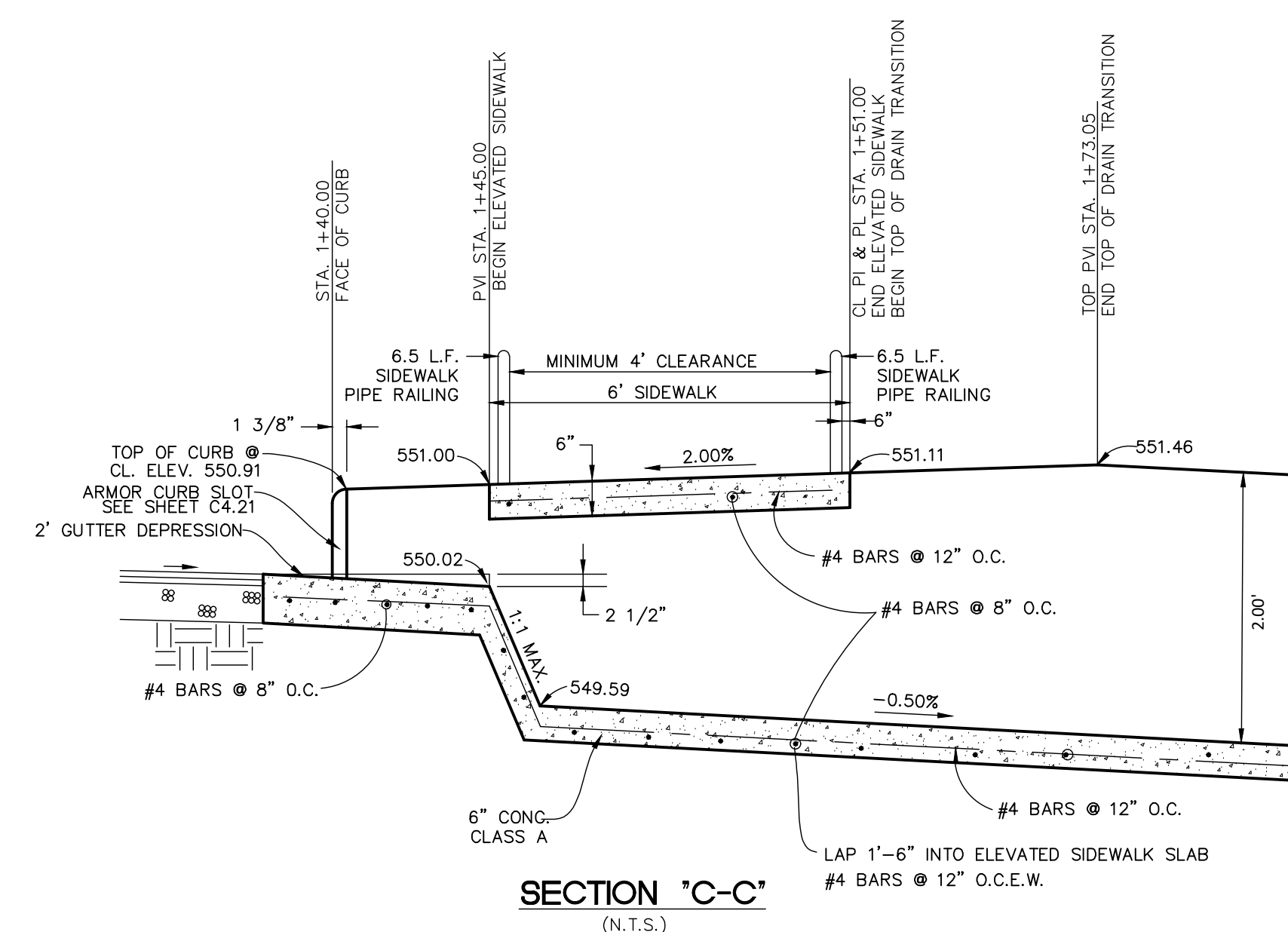
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'



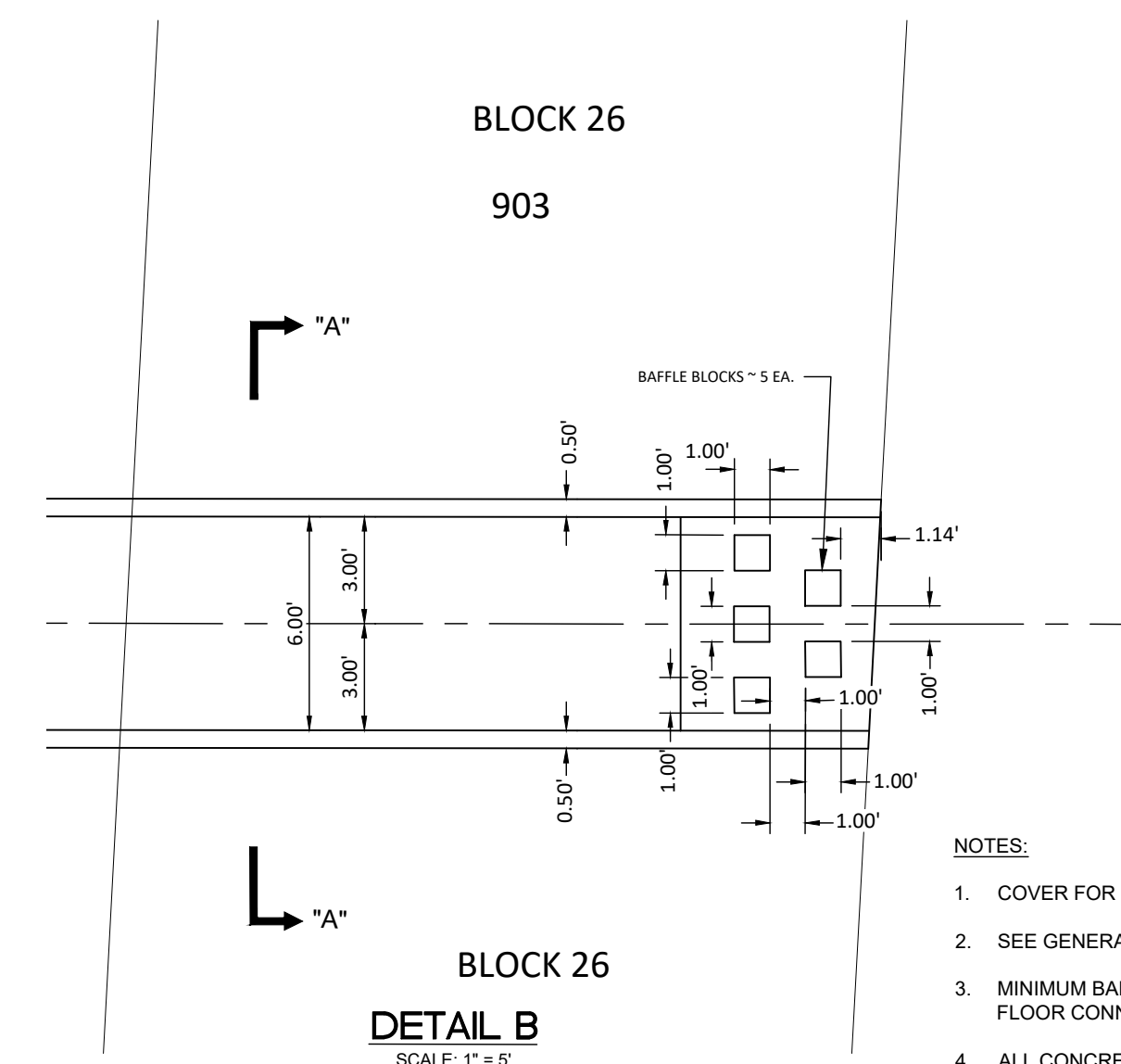
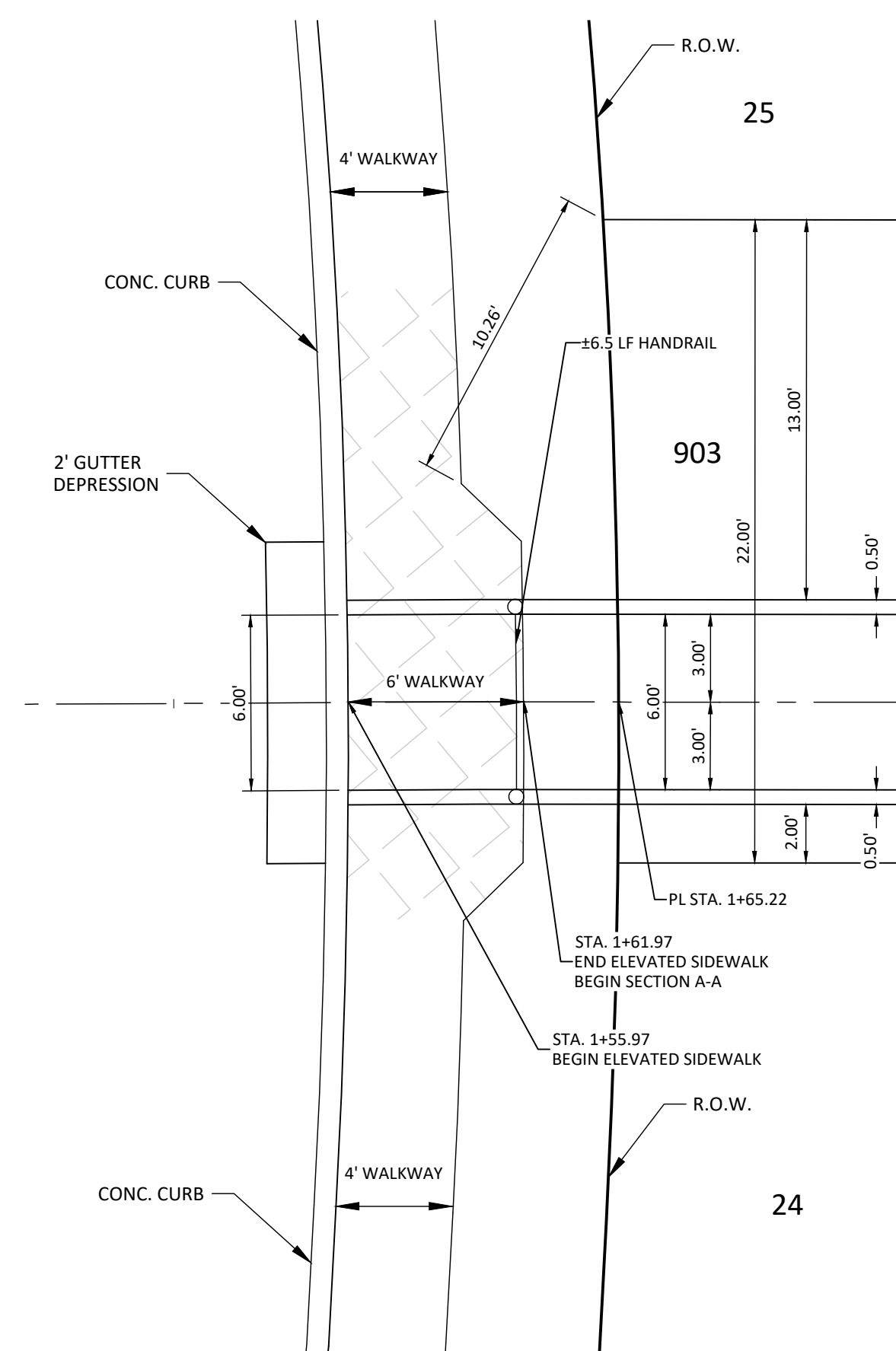
SECTION "A-A"
(N.T.S.)
STA. 1+53.01 TO STA. 3+26.77



SECTION "B-B"
(N.T.S.)

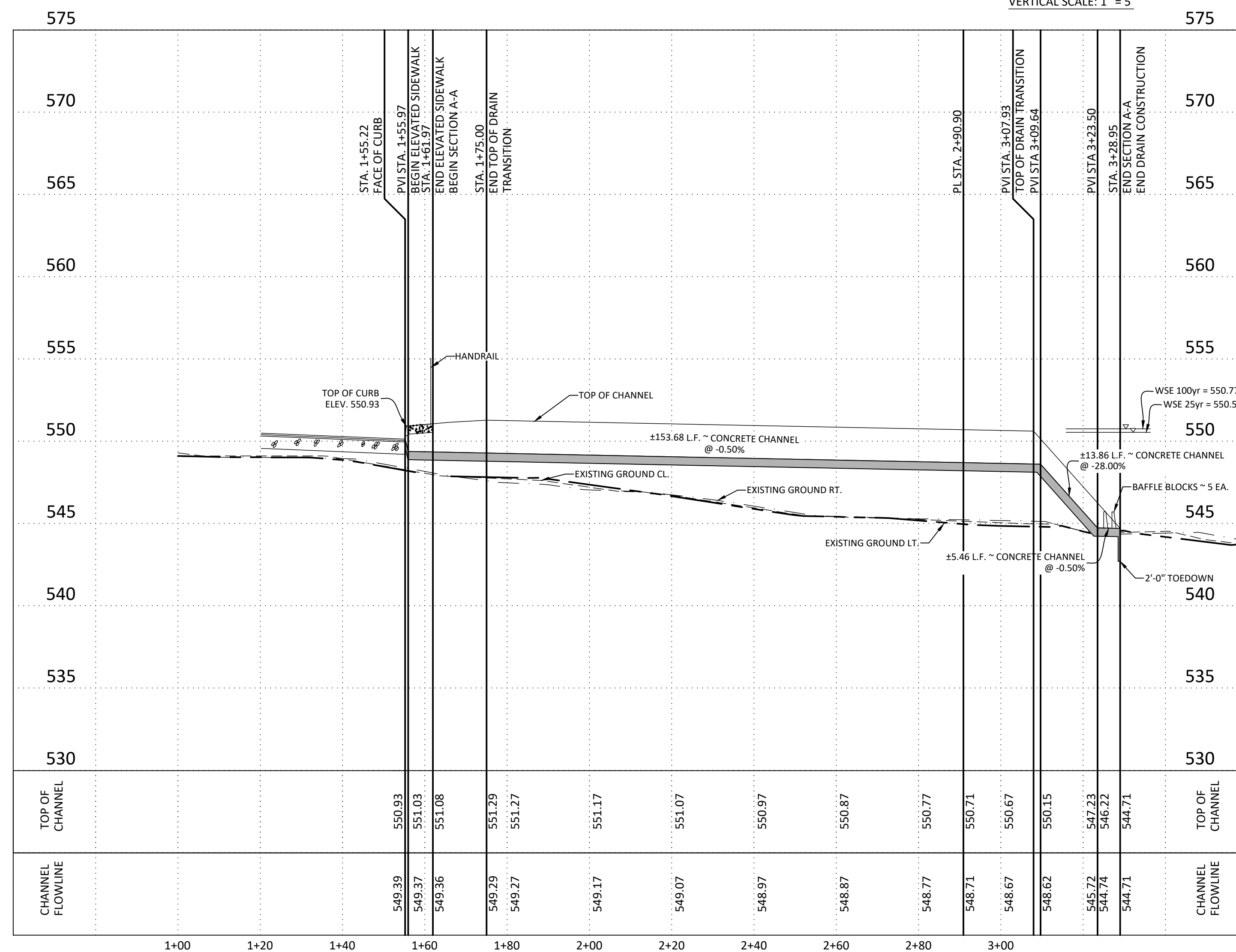
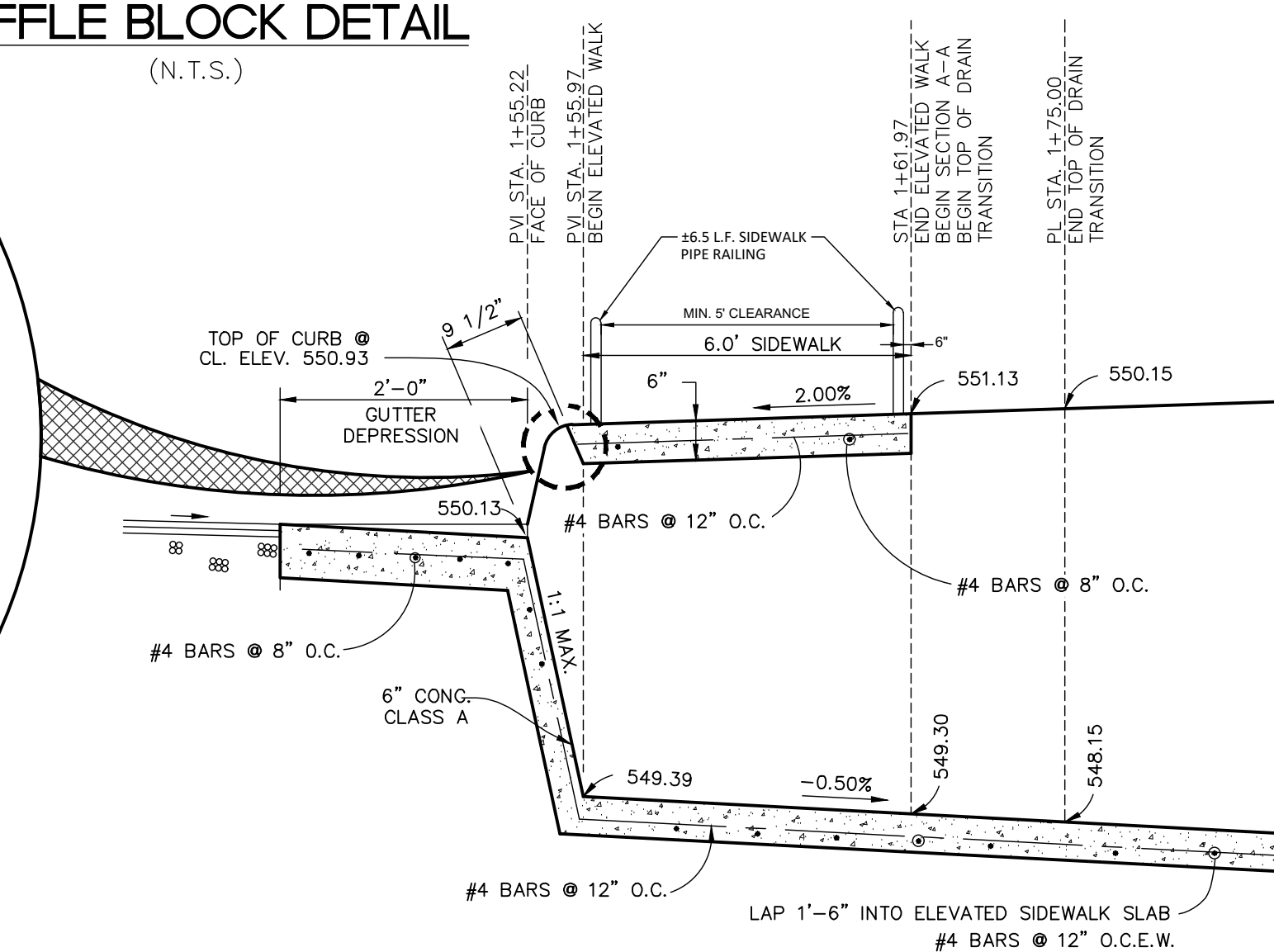
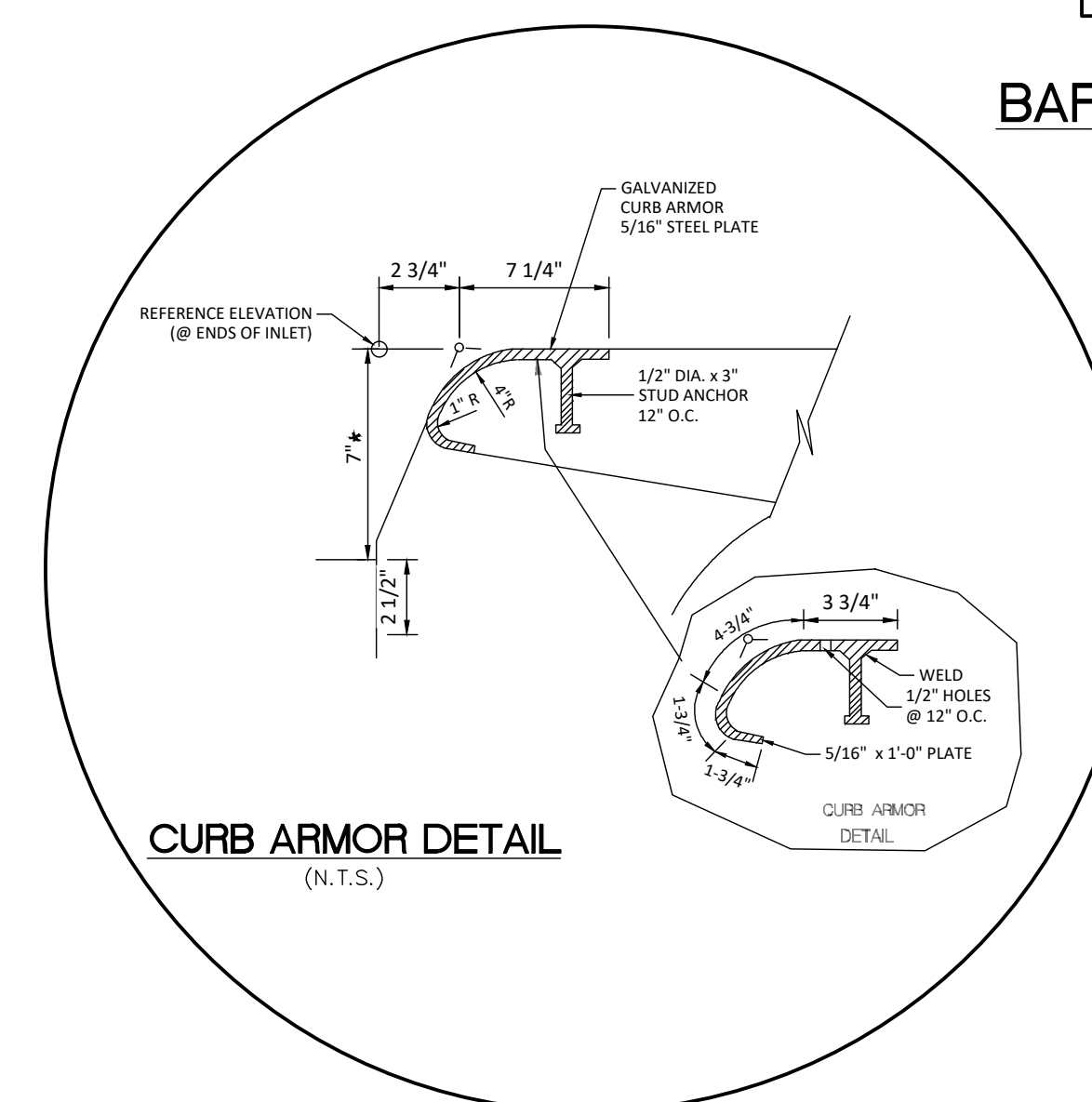
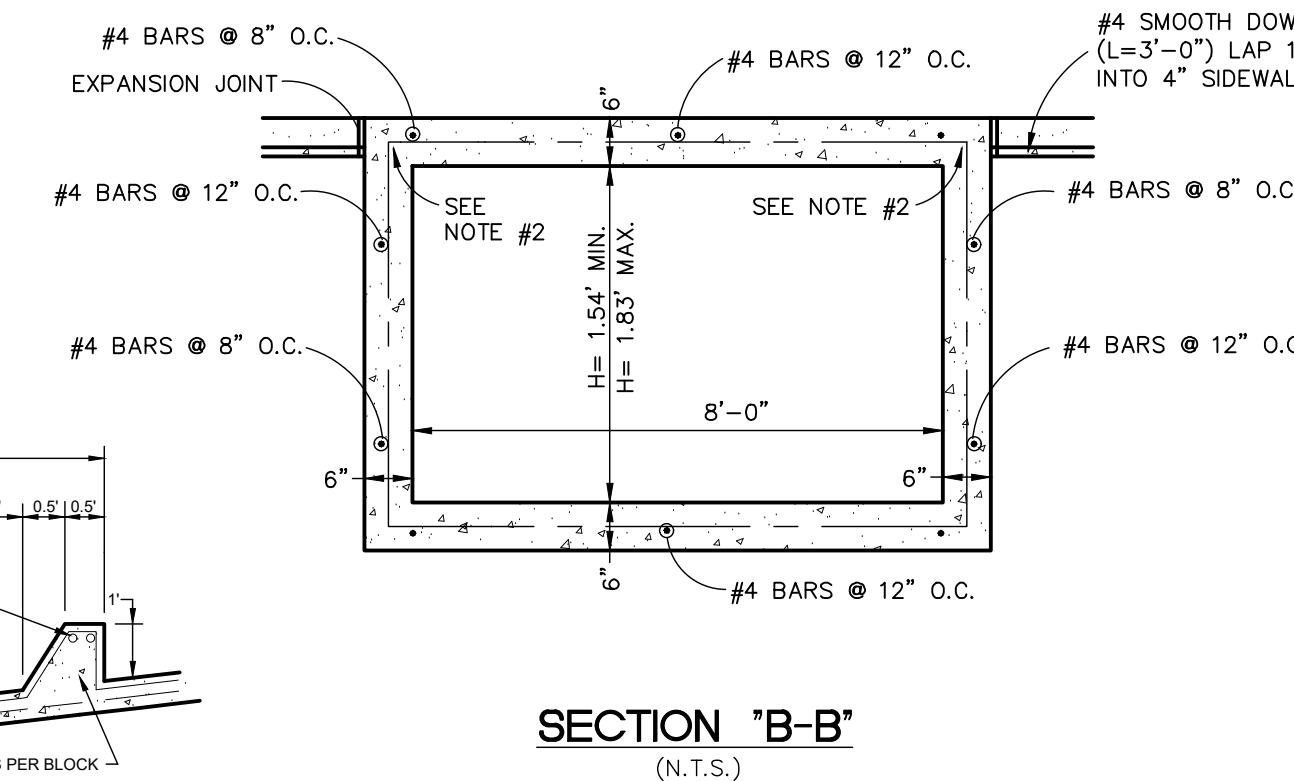
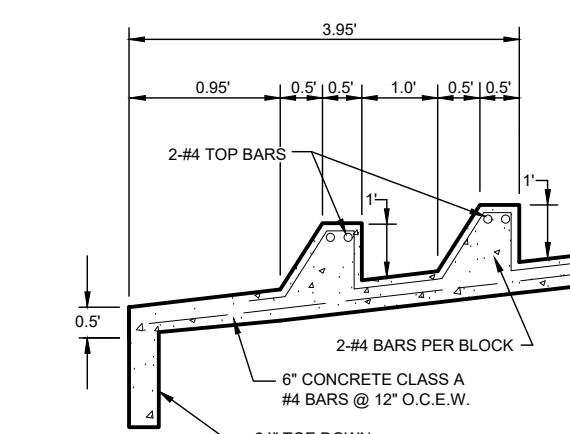
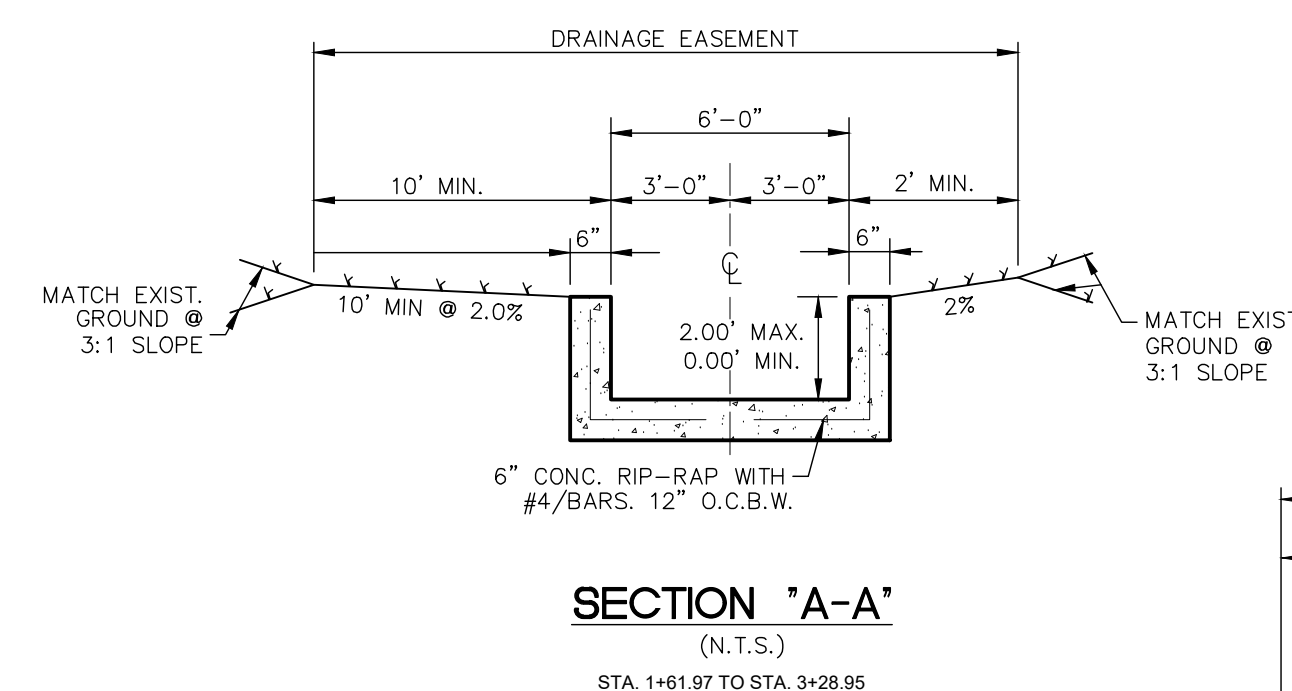


SECTION "C-C"
(N.T.S.)



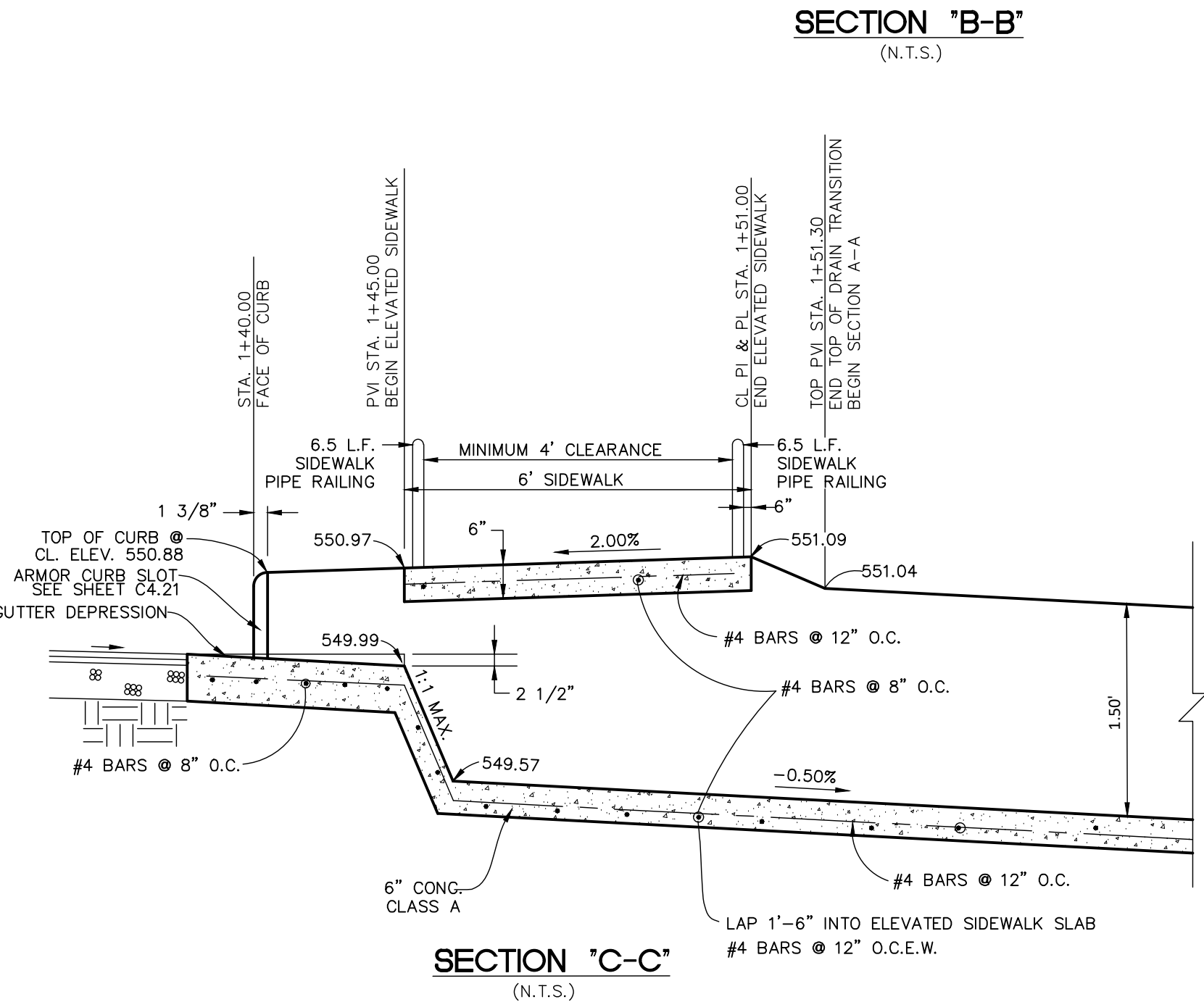
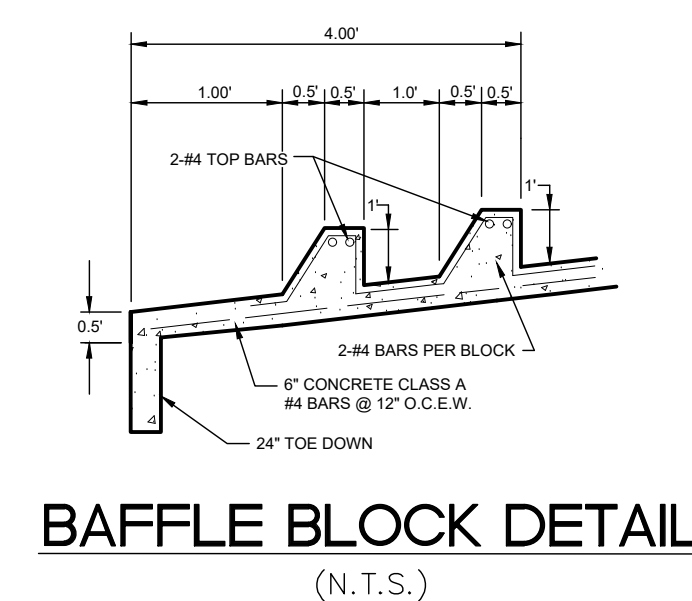
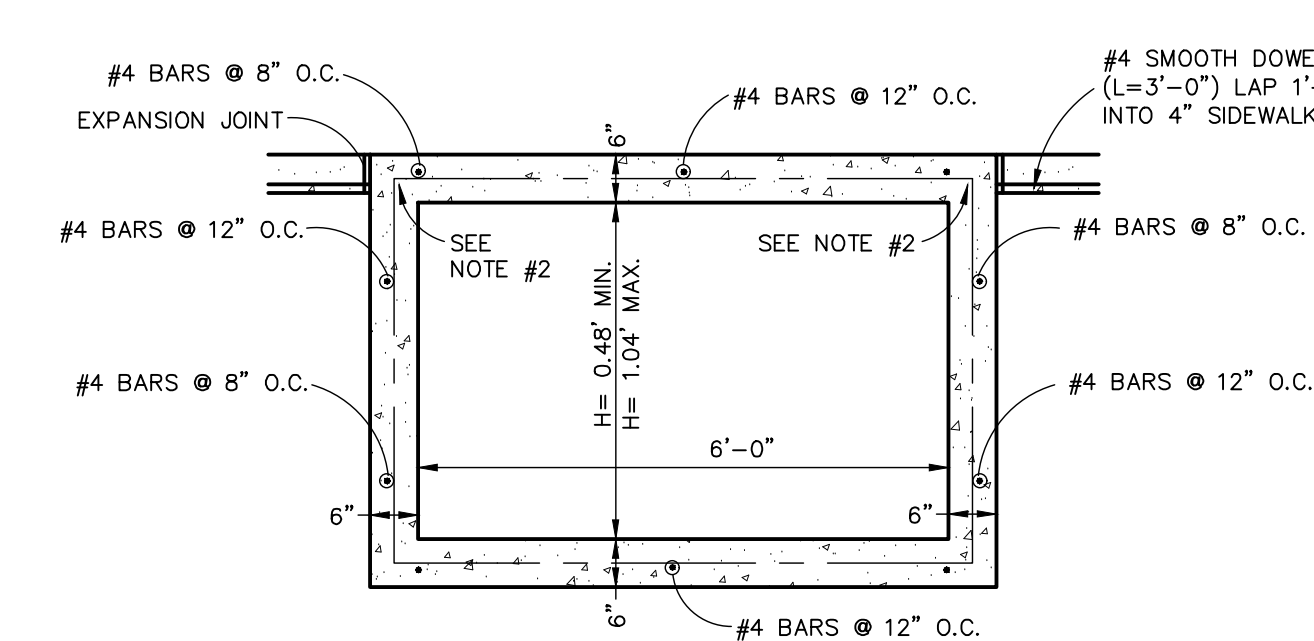
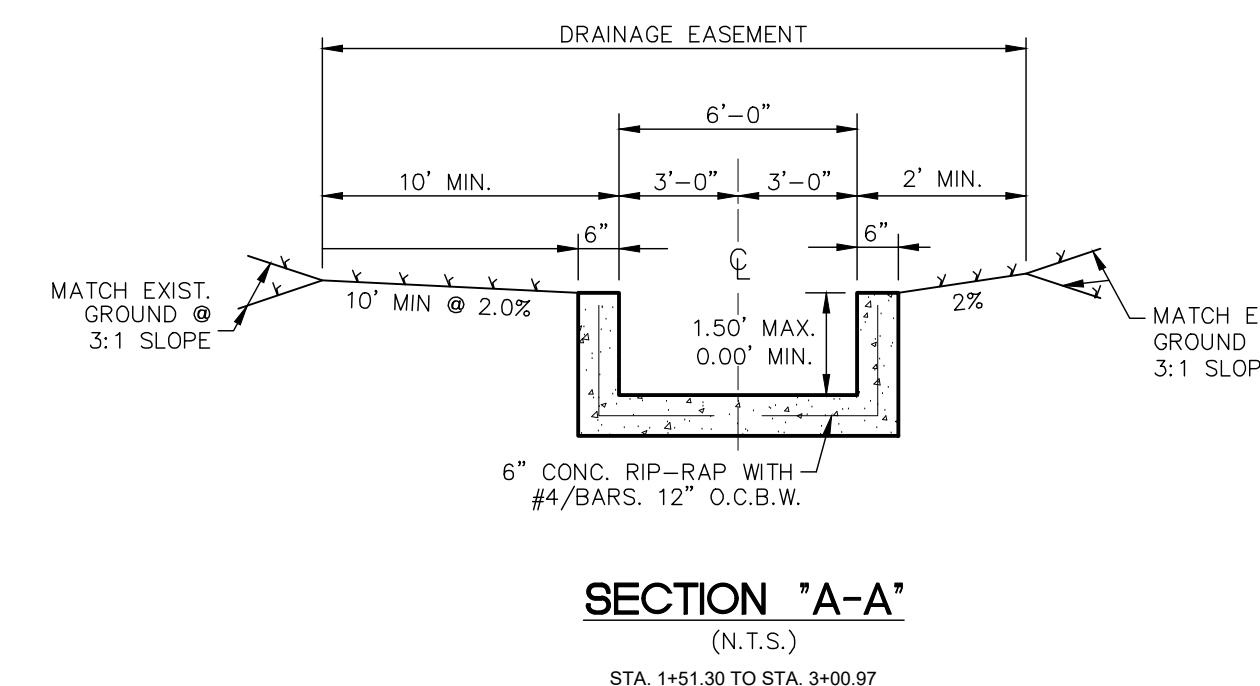
- NOTES:**
1. COVER FOR REINFORCING STEEL IS 2" UNLESS OTHERWISE NOTED.
 2. SEE GENERAL NOTES ON SHEET C4.0 FOR MATERIAL SPECIFICATIONS.
 3. MINIMUM BAR DEVELOPMENT LENGTH FOR SPLICE AND BENDS AT WALL AND FLOOR CONNECTIONS SHALL BE 30 INCHES.
 4. ALL CONCRETE SHALL RESIST A MINIMUM 3000 PSI 28 DAY BREAK, UNLESS OTHERWISE NOTED.
 5. PROVIDE CONCRETE APRONS ON ALL INLETS, REFERENCE DETAILS FOR CONSTRUCTION REQUIREMENTS.
 6. 3/4" CHAMFER ON ALL EXPOSED CONCRETE EDGES.
 7. ALL STORM PIPE MATERIAL IS CONCRETE REINFORCEMENT PIPE, UNLESS NOTED OTHERWISE.
 8. IMPROVED EARTHEN CHANNELS AND DETENTION PONDS WILL BE VEGETATED BY SEEDING OR SODDING, EIGHTY-FIVE PERCENT OF THE CHANNEL SURFACE AREA WILL HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE. REFER TO SECTION 16.2.1 OF THE STORM WATER DESIGN CRITERIA MANUAL.

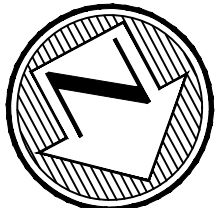
STA. 1+55.22 TO STA. 3+28.95



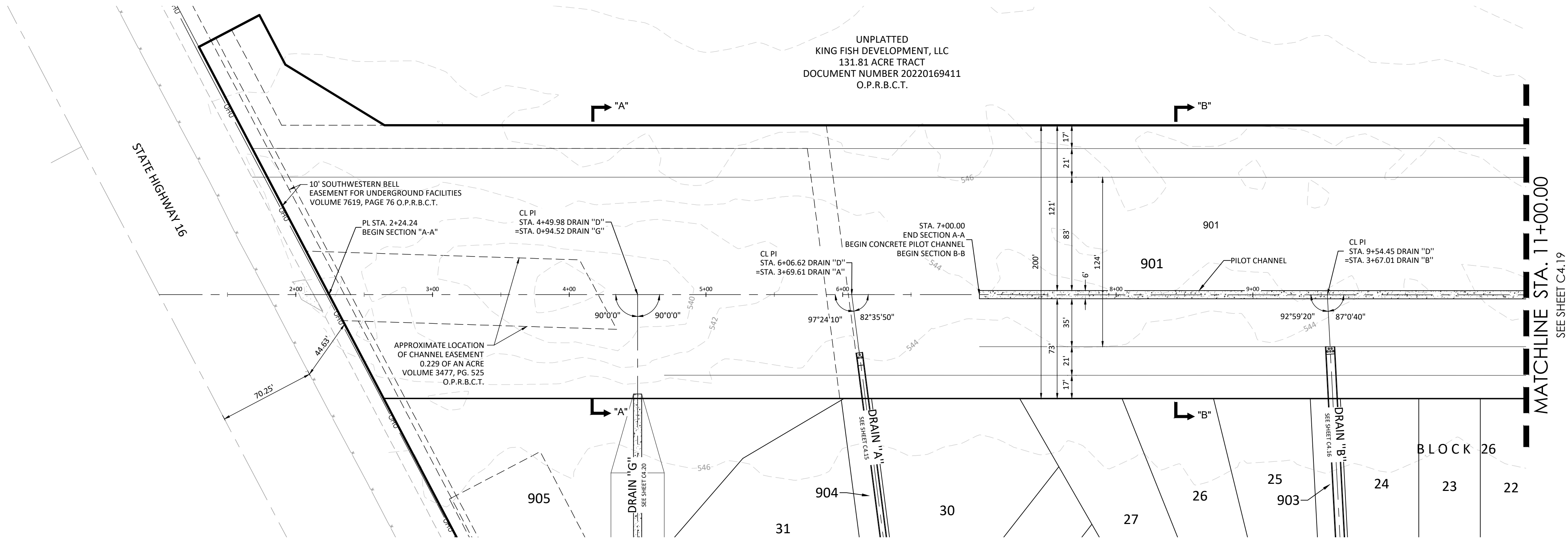
Plot Date: February 16, 2023 User ID: Alyssa Ramones
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SUBMITTAL SET





UNPLATTED
KING FISH DEVELOPMENT, LLC
131.81 ACRE TRACT
DOCUMENT NUMBER 20220169411
O.P.R.B.C.T.



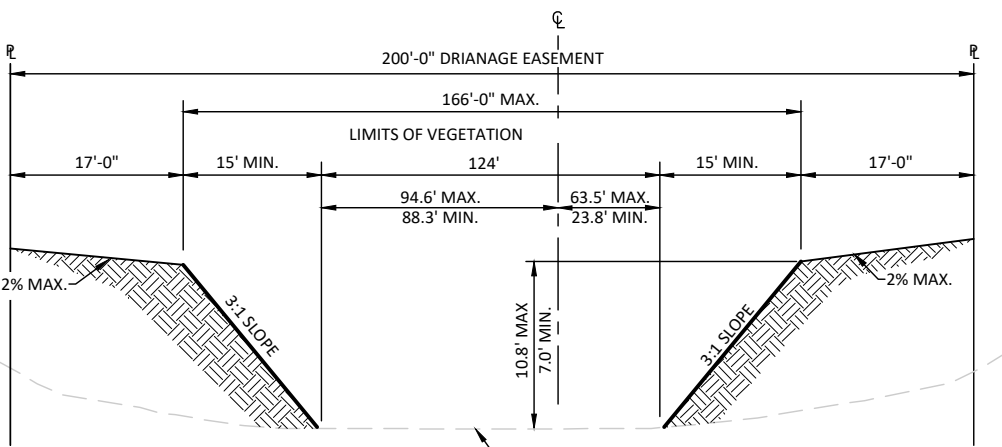
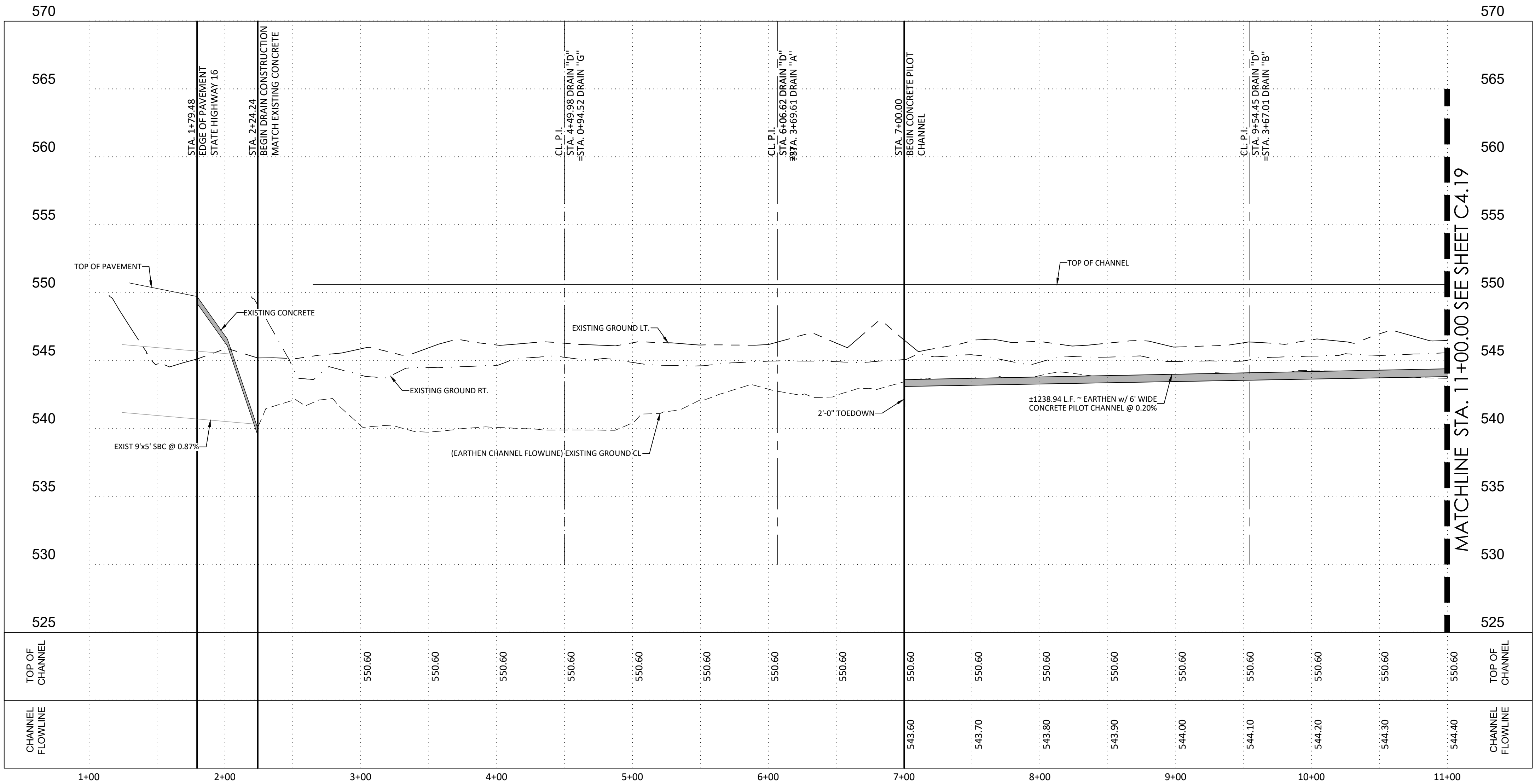
- NOTES:
- COVER FOR REINFORCING STEEL IS 2" UNLESS OTHERWISE NOTED.
 - SEE GENERAL NOTES ON SHEET C4.0 FOR MATERIAL SPECIFICATIONS.
 - MINIMUM BAR DEVELOPMENT LENGTH FOR SPLICE AND BENDS AT WALL AND FLOOR CONNECTIONS SHALL BE 30 INCHES.
 - ALL CONCRETE SHALL RESIST A MINIMUM 3000 PSI 28 DAY BREAK, UNLESS OTHERWISE NOTED.
 - PROVIDE CONCRETE APRONS ON ALL INLETS, REFERENCE DETAILS FOR CONSTRUCTION REQUIREMENTS.
 - 3/4" CHAMFER ON ALL EXPOSED CONCRETE EDGES.
 - ALL STORM PIPE MATERIAL IS CONCRETE REINFORCEMENT PIPE, UNLESS NOTED OTHERWISE.
 - IMPROVED EARTHEN CHANNELS AND DETENTION PONDS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT (85%) OF THE CHANNEL SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE. REFER TO SECTION 16.2.1 OF THE STORM WATER DESIGN CRITERIA MANUAL.

NOTE: IMPROVED EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT (85%) OF THE CHANNEL SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO OR BEXAR COUNTY WILL ACCEPT THE CHANNEL FOR MAINTENANCE.

DRAIN "D"

STA. 7+00.00 TO STA. 11+00.00

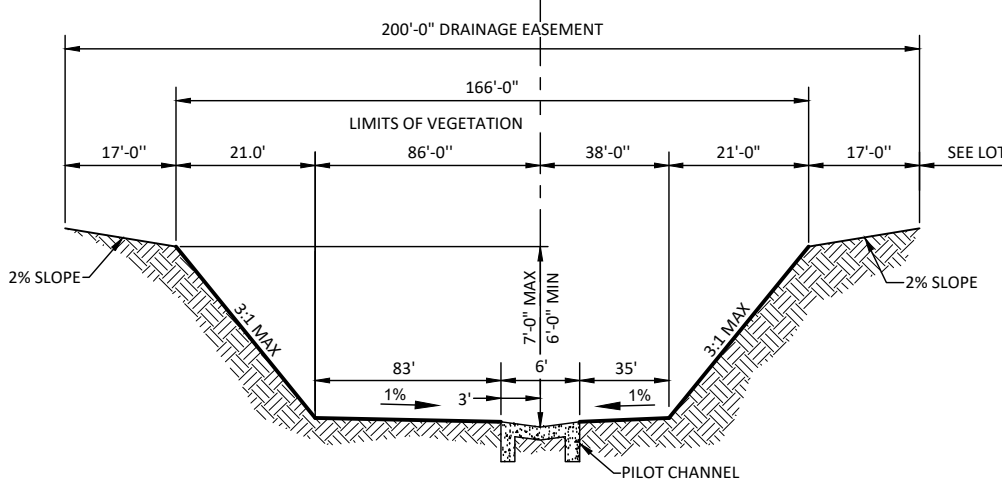
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



SECTION "A-A"

(N.T.S.)

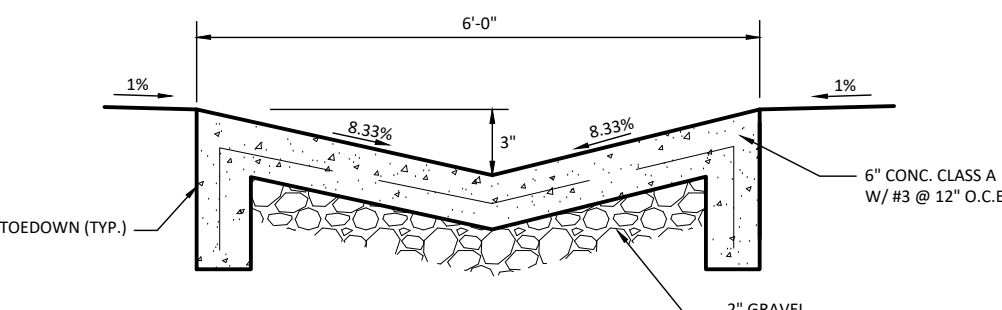
STA. 2+24.24 TO STA. 7+00.00



SECTION "B-B"

(N.T.S.)

STA. 7+00.00 TO STA. 11+00.00



PILOT CHANNEL

(N.T.S.)

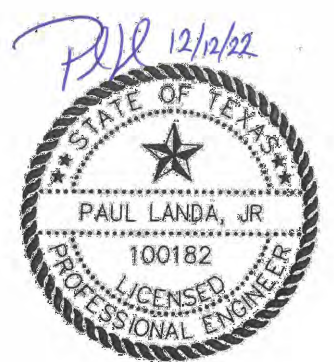
REVISIONS		NO.	DATE	DESCRIPTION	BY

Engineers
Surveyors
Planners

MTR

Moy Tarin Ramirez Engineers, LLC

ENGINEERING F-5297 / SURVEYING: F-10131500
12770 CARRON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5055



VERDIN SUBDIVISION UNIT 1 DRAIN PLAN & PROFILE DRAIN "D"

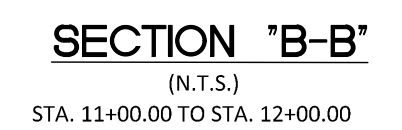
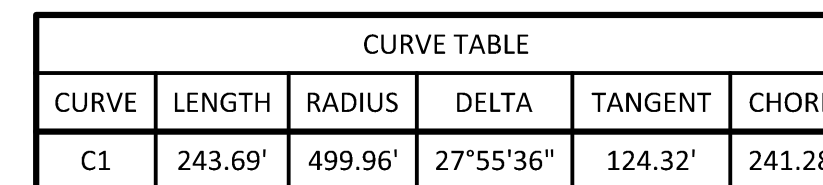
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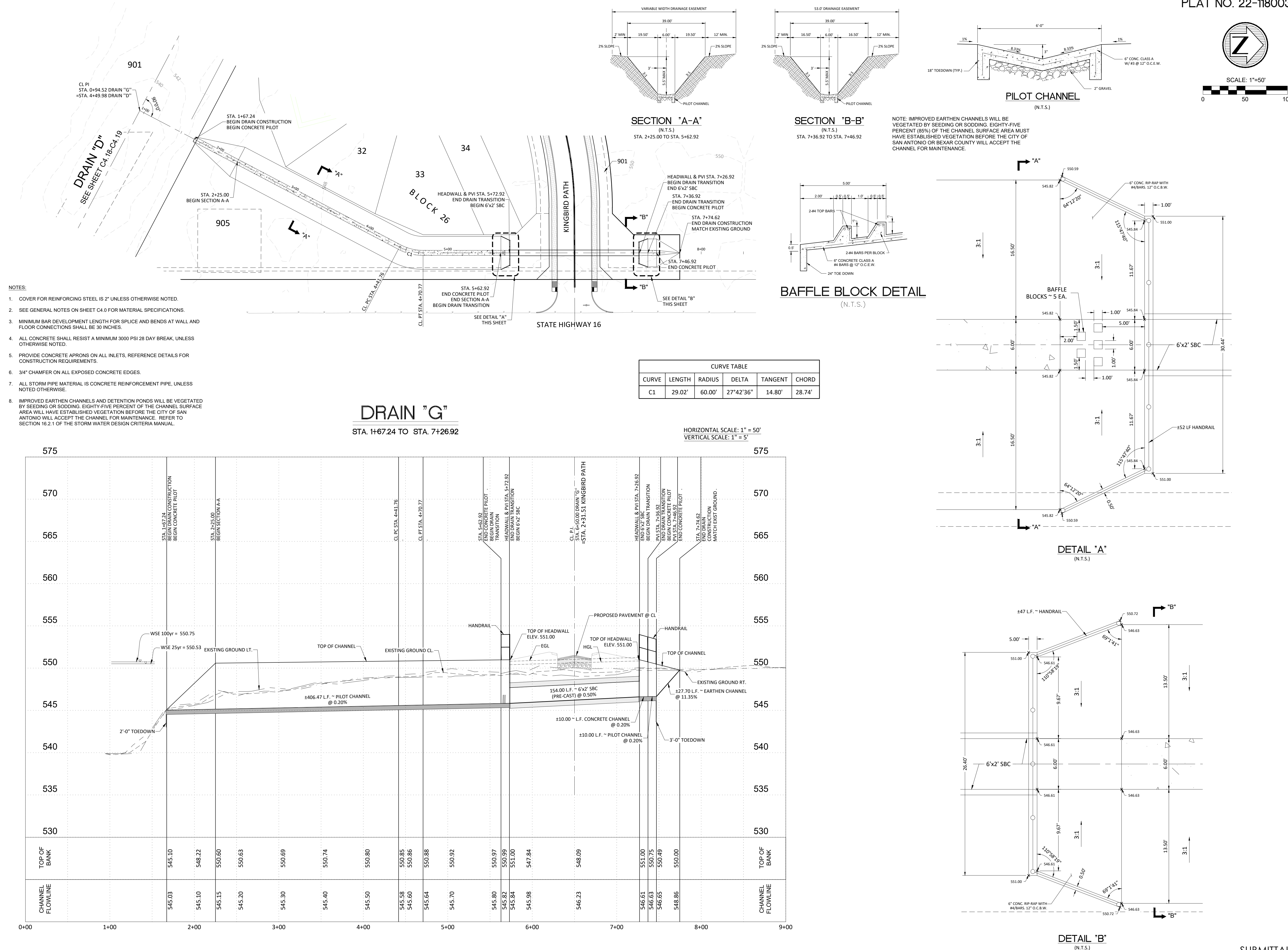
SHEET

C4.18

SUBMITTAL SET

- NOTE: IMPROVED EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT (85%) OF THE CHANNEL SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO OR BEXAR COUNTY WILL ACCEPT THE CHANNEL FOR MAINTENANCE.





GENERAL SPECIFICATIONS FOR SITE PREPARATION

1. GENERAL DESCRIPTION

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

ALL LOT GRADING MUST MEET REQUIREMENTS OF FHA/HUD HANDBOOK 4140.3, SPECIFICATIONS FOR LAND DEVELOPMENTS ON CONTROLLED EARTHWORK, DATASHEET 79g, HUD 79g REQUIREMENTS FOR FILL MATERIAL OF 6 INCHES AND MORE WILL BE CONDUCTED. ALL CUT AREAS WILL ALSO MEET THE REQUIREMENTS FOR HUD 79g COMPACTION TESTING. IN ADDITION, ENGINEERS MUST PROVIDED VERIFICATION OF ALL AREAS WHICH DO NOT REQUIRE HUD 79g.

2. CLEARING THE AREA TO BE FILLED

ALL TIMBER, LOGS, TREES, BRUSH AND RUBBISH SHALL BE REMOVED FROM THE SITE.

3. SCARIFYING THE AREA TO BE FILLED

ALL ORGANIC MATTER SHALL BE REMOVED FROM THE SURFACE UPON WHICH THE FILL IS TO BE PLACED, AND THE SURFACE SHALL THEN BE DISKED OR SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES (6"). ALL SURFACE RUTS OR OTHER UNEVEN FEATURES WILL BE FIELDED PRIOR TO FIELD DENSITY TESTING. WHERE FILLS ARE MADE ON HILLSIDES OR SLOPES, THE SLOPE OF THE ORIGINAL GROUND UPON WHICH THE FILL IS TO BE PLACED SHALL BE DISKED OR SCARIFIED. WHERE THE SLOPE RATIO OF THE ORIGINAL GROUND IS STEEPER THAN 5 HORIZONTAL TO 1 VERTICAL, THE BANK SHALL BE STEPPED OR BENCHED. GROUND SLOPES WHICH ARE FLATTER THAN 5 TO 1 SHALL BE BENCHED WHEN CONSIDERED NECESSARY BY THE GEOTECHNICAL ENGINEER.

4. COMPACTING THE AREA TO BE FILLED

FOLLOWING THE CLEARING AND DISKING OR SCARIFYING OF THE FILL AREA, IT SHALL BE BLADED UNTIL IT IS UNIFORM AND FREE FROM LARGE CLODS. THE AREA SHALL BE BROUGHT TO THE ADEQUATE MOISTURE CONTENT AND COMPACTED (TYPICALLY) TO NOT LESS THAN NINETY PERCENT (90%) OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT ASTM D 1557 COMPACTION PROCEDURE, OR 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT TxDOT--TEX--113--E COMPACTION PROCEDURE.

5. FILL MATERIALS

THE MATERIALS USED SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELTERIOUS SUBSTANCES, SUCH AS TREES, BRUSH AND RUBBISH, AND SHALL NOT CONTAIN ROCKS OR LUMPS HAVING A DIAMETER OF MORE THAN SIX INCHES (6").

6. DEPTH AND MIXING OF FILL LAYERS

THE SELECTED FILL MATERIAL SHALL BE PLACED IN LEVEL, UNIFORM LAYERS WHICH, WHEN COMPACTED, SHALL HAVE A DENSITY CONFORMING TO THAT STIPULATED ABOVE. EACH LAYER SHALL BE THOROUGHLY MIXED DURING THE SPREADING TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER. COMPACTED LAYER THICKNESS MAY VARY DEPENDING ON EQUIPMENT OF DEMONSTRATED CAPABILITY. THE MAXIMUM LOOSE DEPTH FOR ANY MATERIAL SHALL NOT EXCEED TWELVE INCHES (12"). FOR TESTING REQUIREMENTS OF FILL MATERIAL, SEE DENSITY TESTING.

7. ROCK

WHEN FILL MATERIAL INCLUDES ROCK, THE MAXIMUM ROCK SIZE SHALL BE AS APPROVED BY THE GEOTECHNICAL ENGINEER. NO LARGE ROCKS SHALL BE ALLOWED TO NEST AND ALL VOIDS MUST BE FILLED WITH SMALL STONES OR SOIL AND ADEQUATELY COMPACTED. NO LARGE ROCKS WILL BE PERMITTED WITHIN EIGHTEEN INCHES (18") OF THE FINISHED GRADE.

8. COMPACTION OF FILL LAYER

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

9. COMPACTION OF SLOPES

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

10. MOISTURE CONTENT

THE FILL MATERIAL SHALL BE COMPACTED AT THE APPROPRIATE MOISTURE CONTENT SPECIFIED BY THE GEOTECHNICAL ENGINEER. APPROPRIATE MOISTURE CONTENT IS DEFINED, TYPICALLY, AS OPTIMUM MOISTURE CONTENT; HOWEVER, FOR EXPANSIVE SOILS IT MAY BE GREATER THAN OPTIMUM MOISTURE CONTENT, AND OTHER MOISTURE CONTENTS MAY BE NECESSARY TO PRODUCE THE DESIRED RESULTS WITH CERTAIN SOILS.

11. DENSITY TESTS

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

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

12. CUT/FILL LOTS

AREAS INVOLVING CUT ON ONE PORTION AND FILL ON ANOTHER PORTION OF A SPECIFIC LOT SHALL BE PREPARED TO A MINIMUM DEPTH OF 6-IN. AND WILL BE THE SAME MATERIAL CLASSIFICATION AT THE SAME COMPACTION AND MOISTURE CONTENT. A MINIMUM OF TWO (2) FIELD DENSITY TESTS SHALL BE REQUIRED ON EACH CUT/FILL LOT FOR THE PURPOSE OF DETERMINING UNIFORMITY OF THE AREA SUPPORTING THE PROPOSED STRUCTURES.

NOTES:

MINIMUM SLAB EXPOSURE IS 1.0'.

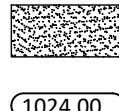
ALL ELEVATIONS AT FRONT PROPERTY LINE ARE 0.18' ABOVE CURB ELEVATION.

CONTRACTOR TO VERIFY 1.5% MINIMUM SLOPE ON LOTS AND REGRADE TO MEET MINIMUM PROPOSED ELEVATIONS IF NECESSARY.

CONTRACTOR TO CLEAR ALL RIGHT OF WAY, EASEMENTS AND PRESERVE ANY TREE 10" AND LARGER OUTSIDE OF THESE AREAS.

LEGEND

A
B
C



1024.00E

1024

PROPERTY LINE

= DRAINAGE TO FRONT OF LOT
= DRAINAGE TO BOTH FRONT AND REAR LOT
= DRAINAGE TO REAR OF LOT

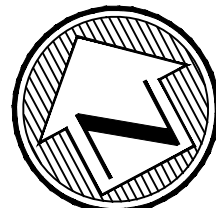
= CLEARING AND/OR GRADING OF UTILITY EASEMENTS
= PROPOSED ELEVATION

= EXISTING ELEVATION

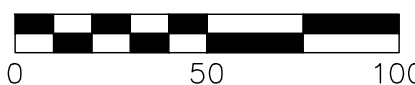
= EXISTING CONTOUR

= PROPOSED CONTOUR

= PROPERTY LINE



SCALE: 1"=50'



SUBMITTAL SET

VERDIN SUBDIVISION, UNIT 1

GRADING PLAN

SHEET

C5.0

Engineers

Surveyors

Planners

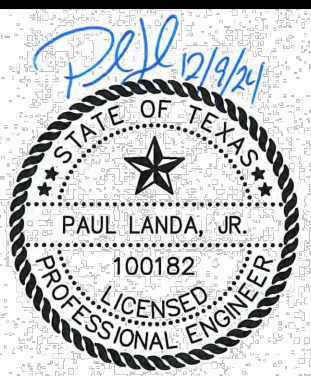
MTR

Moy Tarin Ramirez Engineers, LLC

TBPELS: ENGINEERING F-5297/SURVEYING: F-10131500

12770 CHARRON PATH, SUITE 100 TEL: (210) 698-5051

SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5055



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

ALL TIMBER, LOGS, TREES, BRUSH AND RUBBISH SHALL BE REMOVED FROM THE SITE.

ALL ORGANIC MATTER SHALL BE REMOVED FROM THE SURFACE UPON WHICH THE FILL IS TO BE PLACED, AND THE SURFACE SHALL THEN BE DISKED OR SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES (6"). ALL SURFACE RUTS OR OTHER UNEVEN FEATURES WILL BE REMOVED PRIOR TO ANY DEPOSIT OF FILL. WHERE THE FILL IS TO BE DEPOSITED ON AREAS WHERE FILL IS TO BE PLACED ON HILLSIDES OR SLOPES, THE SLOPE OF THE ORIGINAL GROUND UPON WHICH THE FILL IS TO BE PLACED SHALL BE DISKED OR SCARIFIED. WHERE THE SLOPE RATIO OF THE ORIGINAL GROUND IS STEEPER THAN 5 HORIZONTAL TO 1 VERTICAL, THE SLOPE SHALL BE STEPPED OR BENCHED. WHERE THE GROUND OPENS WHICH ARE FLAT OR LESS THAN 5 TO 1 SHALL BE BENCHMARKED WHEN CONSIDERED NECESSARY BY THE GEOTECHNICAL ENGINEER.

FOLLOWING THE CLEARING AND DISKING OR SCARIFYING OF THE FILL AREA, IT SHALL BE BLADED UNTIL IT IS UNIFORM AND FREE FROM LARGE CLOUDS. THE AREA SHALL BE BROUGHT TO THE ADEQUATE MOISTURE CONTENT AND COMPACTED (TYPICALLY) TO NOT LESS THAN NINETY PERCENT (90%) OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT ASTM D 1557 COMPACTION PROCEDURE, OR 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT THD--TEX--113--E COMPACTION PROCEDURE.

THE MATERIALS USED SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES, SUCH AS TREES, BRUSH AND RUBBISH, AND SHALL NOT CONTAIN ROCKS OR LUMPS HAVING A DIAMETER OF MORE THAN SIX INCHES (6").

THE SELECTED FILL MATERIAL SHALL BE PLACED IN LEVEL, UNIFORM LAYERS WHICH, WHEN COMPACTED, SHALL HAVE A DENSITY CONFORMING TO THAT STIPULATED ABOVE. EACH LAYER SHALL BE THOROUGHLY MIXED DURING THE SPREADING TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER. COMPACTED LAYER THICKNESS MAY VARY DEPENDING ON THE COMPACTION EQUIPMENT OF DEMONSTRATED CAPABILITY. THE MAXIMUM LOOSE DEPTH FOR ANY MATERIAL SHALL NOT EXCEED TWELVE INCHES (12"). FOR TESTING REQUIREMENTS OF FILL MATERIAL, SEE DENSITY TESTING.

WHEN FILL MATERIAL INCLUDES ROCK, THE MAXIMUM ROCK SIZE SHALL BE AS APPROVED BY THE GEOTECHNICAL ENGINEER. NO LARGE ROCKS SHALL BE ALLOWED TO NEST AND ALL VOIDS MUST BE FILLED WITH SMALL STONES OR SOIL AND ADEQUATELY COMPACTED. NO LARGE ROCKS WILL BE PERMITTED WITHIN EIGHTEEN INCHES (18") OF THE FINISHED GRADE.

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

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

THE FILL MATERIAL SHALL BE COMPACTED AT THE APPROPRIATE MOISTURE CONTENT, SPECIFIED FOR THE SOILS BEING USED. APPROPRIATE MOISTURE CONTENT IS DEFINED, TYPICALLY, AS OPTIMUM MOISTURE CONTENT; HOWEVER, FOR EXPANSIVE SOILS IT MAY BE GREATER THAN OPTIMUM MOISTURE CONTENT, AND OTHER MOISTURE CONTENTS MAY BE NECESSARY TO PRODUCE THE DESIRED RESULTS WITH CERTAIN SOILS.

FIELD DENSITY TESTS SHALL BE PERFORMED ON LAYERS OF FILL WHEN THE FILL IS BEING PLACED AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE MAXIMUM FILL DEPTH FOR EACH TEST SHALL BE 12 INCHES (305 MM) (27 INCHES (686 MM) BY GEOTECHNICAL ENGINEER. ALL TESTING SHALL BE REQUESTED BY THE CONTRACTOR TO MEET THE CONTRACTOR'S CONSTRUCTION SCHEDULE. NOTIFICATION BY THE CONTRACTOR FOR GEOTECHNICAL ENGINEERING FIELD TESTS SHALL BE GIVEN ONE DAY BEFORE. THIS NOTIFICATION SHALL INCLUDE THE FILL AREA LOCATION (LOT AND BLOCK), THE LIFT OR HEIGHT OF FILL AND APPROXIMATE DESIRED TIME OF TESTING. WHEN THESE TESTS INDICATE THAT THE DENSITY OF ANY LAYER OF FILL OR PORTION THEREOF IS NOT SUFFICIENT TO MEET THE SPECIFICATIONS, THE ENTIRE PORTION SHALL BE REWORKED AND RETESTED AT THE EXPENSE OF THE CONTRACTOR UNLESS THE CONTRACTOR CAN SHOW EVIDENCE THAT CIRCUMSTANCES BEYOND HIS CONTROL CAUSED THE DEFICIENCY. THE CONTRACTOR SHALL FOLLOW THE SAME PROCEDURE FOR FILLWORKS THAT ARE NOT SPECIFIC TESTING WILL BE FOLLOWED AND CONDUCTED BY GEOTECHNICAL ENGINEER.

1. THE LAND TO BE FILLED (PREPARED SUBGRADE) SHALL BE PREPARED AND TESTED AT A FREQUENCY AS DETERMINED BY THE GEOTECHNICAL ENGINEER.

2. THE FIRST LIFT OF COMPACTED FILL (GENERALLY 8 TO 12-IN) SHALL BE TESTED AS DETERMINED BY THE GEOTECHNICAL ENGINEER. ANY AREAS IDENTIFIED AS NOT MEETING THE PROPOSED STRUCTURES REQUIREING FILL SHALL BE TESTED FOR DENSITY COMPLIANCE.

3. FILLS SHALL BE TESTED A MAXIMUM OF EACH TWELVE INCHES (12") AND AS SPECIFIED BY GEOTECHNICAL ENGINEER, OF FILL.

4. TEST RESULTS WILL BE PROVIDED BY THE FIELD TECHNICIAN TO THE CONTRACTOR FOR REVIEW. IF POSSIBLE, ALL TEST RESULTS ARE TO BE REVIEWED BY THE GEOTECHNICAL ENGINEER FOR COMPLIANCE. THE ENGINEER WILL NOTIFY THE CONTRACTOR OF ALL TEST RESULTS.

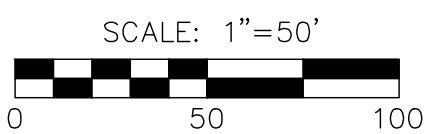
AREAS INVOLVING CUT ON ONE PORTION AND FILL ON ANOTHER PORTION OF A SPECIFIC LOT SHALL BE PREPARED TO A MINIMUM DEPTH OF 6-IN. AND WILL BE THE SAME MATERIAL CLASSIFICATION AT THE SAME COMPACTION AND MOISTURE CONTENT. A MINIMUM OF TWO (2) FIELD DENSITY TESTS SHALL BE REQUIRED ON EACH CUT/FILL LOT FOR THE PURPOSE OF DETERMINING UNIFORMITY OF THE AREA SUPPORTING THE PROPOSED STRUCTURES.

MINIMUM SLAB EXPOSURE IS 1.0'.

ALL ELEVATIONS AT FRONT PROPERTY LINE ARE 0.18' ABOVE CURB ELEVATION.

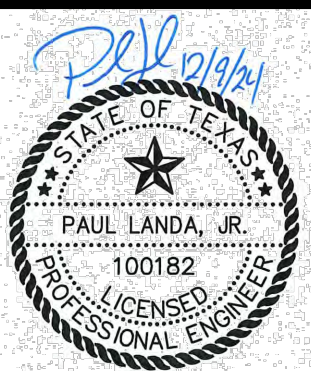
CONTRACTOR TO VERIFY 1.5% MINIMUM SLOPE ON LOTS AND REGRADE TO MEET MINIMUM PROPOSED ELEVATIONS IF NECESSARY.

CONTRACTOR TO CLEAR ALL RIGHT OF WAY, EASEMENTS AND PRESERVE ANY TREE 10" AND LARGER OUTSIDE OF THESE AREAS.



SUBMITTAL SET

MTR
Moy Tarin Ramirez

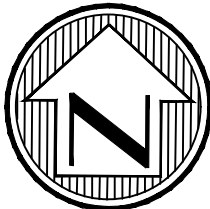


VERDIN SUBDIVISION, UNIT 1

GRADING PLAN

SHEET

C5.1



SCALE: 1"=80'
0 80 160

GENERAL NOTES:

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 STRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE USING APPROVED METHODS.

MAINTENANCE - THE ENTRANCE/EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. THIS MAY REQUIRE PERIODIC DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.

DRAINAGE - ENTRANCE/EXIT MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

ALL CPS ENERGY WORK IS INCLUDED AS PART OF THE CONSTRUCTION OF THE SUBDIVISION AND HAS BEEN CONSIDERED IN THIS STORM WATER POLLUTION PREVENTION PLAN (SWPPP).

CONTRACTOR TO INSTALL AND MAINTAIN THE EROSION AND SEDIMENTATION CONTROLS AS DESIGNED AND SHALL INSPECT THE CONTROLS BI-WEEKLY (14 DAYS) AND AFTER EVERY SIGNIFICANT RAINFALL (0.5 INCHES OR GREATER) TO ENSURE SIGNIFICANT DISTURBANCE HAS NOT OCCURRED. SEDIMENT DEPOSITED AFTER A SIGNIFICANT RAINFALL SHALL BE REMOVED AND PLACED IN A DESIGNATED SOIL DISPOSAL AREA. CONTRACTOR TO ENGAGE A THIRD PARTY FIRM TO PROVIDE A DETAILED STORM WATER POLLUTION PREVENTION PLAN (SWPPP) WHICH INCLUDES INSPECTION AND REPORTING PROCEDURES.

CONTRACTOR WILL INSPECT BMP'S AT LEAST TWICE A WEEK (EVERY 14 DAYS) AS WELL AS AFTER EVERY HALF INCH OR MORE OF RAINFALL. CONTROLS WILL BE REPAIRED, REPLACED, AND/OR REVISED AS NECESSARY.

CONTRACTOR TO PLACE TRENCH EXCAVATION MATERIAL ON THE UPGRADIENT (HIGH) SIDE OF THE TRENCH.

ALL SOIL, SAND, GRAVEL, AND EXCAVATED MATERIALS STOCKPILED ON-SITE WILL HAVE APPROPRIATELY SIZED SILT FENCE PLACED UPGRADIENT AND DOWN GRADIENT.

FEMA 100-YEAR FLOODPLAIN MUST BE STAKED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

PHASE I LEGEND

- EXISTING CONTOUR 548
- PROPOSED CONTOUR 548
- DRAINAGE FLOW DIRECTION →
- SILT FENCE (PHASE I) - - -
- SILT FENCE (PHASE II) - - -
- ROCK BERM ①
- CONSTRUCTION STAGING ②
- AREA STABILIZED CONSTRUCTION ENTRANCE/EXIT ③
- CONCRETE WASHOUT PIT ④
- BAGGED GRAVEL INLET FILTER ⑤
- EXISTING 1% AC EFFECTIVE DFIRM FLOODPLAIN ZONE AE
- EXISTING WETLAND: CLASSIFICATION CODE "PUSCH" AS IDENTIFIED ON F&WS NATIONAL WETLANDS INVENTORY

BEXAR COUNTY R.O.W. NOTE:

BEXAR COUNTY PERMIT REQUIRED FOR STREET TIE-IN & INTERSECTION PAVEMENT REPLACEMENT AND/OR ANY WORK BEING DONE IN BEXAR COUNTY R.O.W.

PHASE II LEGEND

- EXISTING CONTOUR 548
- PROPOSED CONTOUR 548
- DRAINAGE FLOW DIRECTION →
- SILT FENCE (PHASE II) - - -
- ROCK BERM ①
- BAGGED GRAVEL INLET FILTER A
- EXISTING 1% AC EFFECTIVE DFIRM FLOODPLAIN ZONE AE
- EXISTING WETLAND: CLASSIFICATION CODE "PUSCH" AS IDENTIFIED ON F&WS NATIONAL WETLANDS INVENTORY

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
1.	STABILIZED CONSTRUCTION ENT./EXIT	L.S.	1
2.	SILT FENCE (PHASE I)	L.F.	5,934
3.	SILT FENCE (PHASE II)	L.F.	4,440
4.	ROCK BERM - TYPE II	L.F.	90
5.	BAGGED GRAVEL INLET FILTER (PHASE I)	L.F.	1,200
6.	BAGGED GRAVEL INLET FILTER (PHASE II)	L.F.	90
7.	CONSTRUCTION STAGING AREA	L.S.	1
8.	CONCRETE WASHOUT PIT	L.S.	1

REVISIONS		NO.	DATE	DESCRIPTION	BY
		A	11/18/24	REVISED LOT LAYOUT	

• Engineers
• Surveyors
• Planners

MTR

Moy Tarin Ramirez Engineers, LLC

TBPELS: ENGINEERING F-5297/SURVEYING: F-10131500
12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5065



VERDIN SUBDIVISION, UNIT 1

OVERALL STORM WATER POLLUTION PREVENTION PLAN



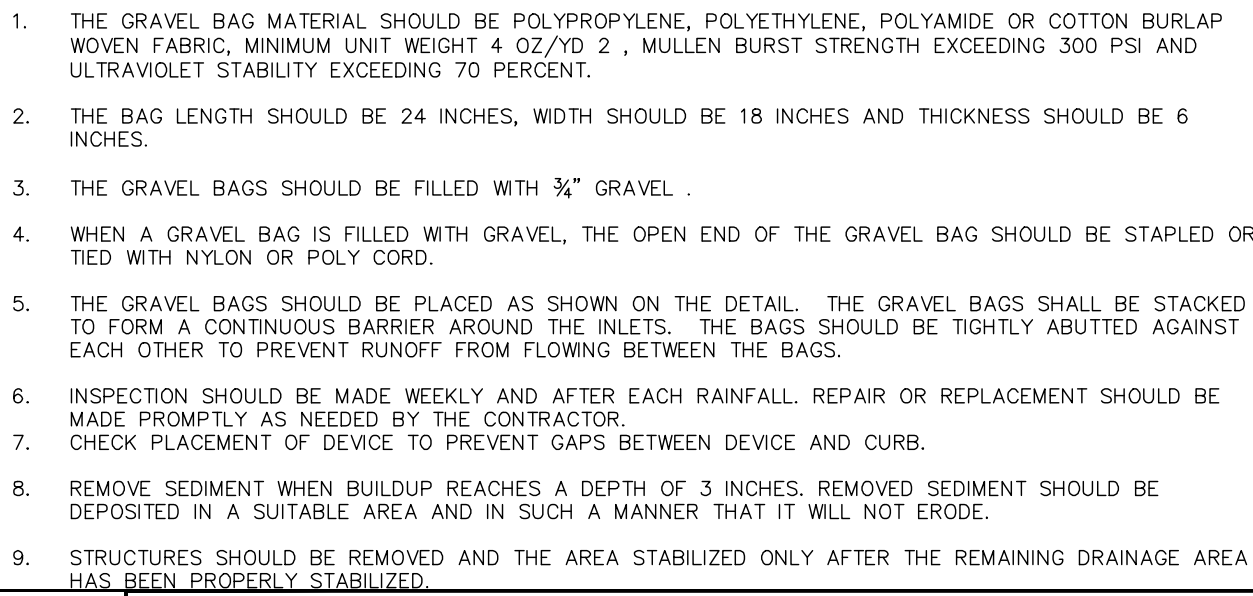
1. SILT FENCE MATERIAL SHOULD POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC WIDTH SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.52 OZ/ SQ YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN 2, ULTRAVIOLET STABILITY OF 10 YEARS AND A TENSILE STRENGTH OF 100 LB/INCH.
2. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TIE OR BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM NOMINAL WEIGHT 1.25 LB/FT, AND BRINELL HARDNESS EXCEEDING 140.
3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED "2 X 4" WELDED WIRE, 12.5 GAUGE MINIMUM.
4. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF 1 FEET DEEP AND SPACED NOT MORE THAN 5 FEET ON CENTER.
5. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FABRIC SHOULD BE SIFTED SO THAT THE MAXIMUM DRAINAGE AREA IS 5% ACRE/100 FEET OF FENCE.
6. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE FENCE IS FLAT AND BUILT UP TO A MINIMUM OF 6 INCHES DEEP. NOCHES OR DIPS SHOULD BE TRENCHED IN (E.G., PAYMENT OR ROCK OUTCROPS). WEIGHT FABRIC FLAP WITH A MINIMUM OF 3 INCHES DEEP GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
7. 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.
8. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE WHICH IS IN TENSION ATTACHED TO THE STEEL POSTS BY FLAP AND BUILT UP TO A 3-FOOT OVERLAP, SECURELY FASTENING WHERE DIPS OF FABRIC MEET.
9. SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPIDE STORM FLOW OR DRAINAGE.
10. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES, OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE OLD FENCE.
11. REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.
12. REPLACE OR REPAIR ANY CRACKS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY, IF A SECTION OF FENCE IS DESTROYED OR DAMAGED TO THE POINT OF BEING UNRELIABLE TO PROVIDE EROSION PROTECTION, BUT WILL NOT DESTROY VEHICLES. A TRIANGULAR FILTER DITCH MAY BE PREFERABLE TO A SILT FENCE AT COMMON VEHICLE ACCESS POINTS.



2. THE AGGREGATE SHOULD CONSIST OF 4 TO 8 INCH WASHED STONE OVER A STABLE FOUNDATION.
3. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8 INCHES.
4. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD² TO 2. A MULLEN BURST RATING OF 140 LB/IN² AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
5. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
6. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
7. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
8. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
9. PLACE STONE TO DIMENSIONS AND GRADE SHOWN. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
10. THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ON PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANUP OF ANY MEASURES USED TO TRAP SEDIMENT.
11. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON TO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
12. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
13. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
14. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE.



1. THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED STEEL. THE BERM STRUCTURE SHOULD BE SECURED WITH SLOTTED RINGS.
2. CLEAN, OPEN GRADED 3-TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-TO 8-INCH DIAMETER ROCKS MAY BE USED.
3. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE.
4. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
5. PLACE THE ROCK ALONG THE SHEATHING TO A HEIGHT NOT LESS THAN 18".
6. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH THE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
7. BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.
8. THE ENDS OF THE BERM SHOULD BE TIED TO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.
9. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
10. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER AND REPAIR ANY LOOSE WIRE SHEATHING.
11. THE BERM STRUCTURE BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
12. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSLOPE AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.



1. THE GRAVEL BAG MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, POLYAMIDE OR COTTON BURLAP WOVEN FABRIC, MINIMUM UNIT WEIGHT 4 OZ/YOZ 2, MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70 PERCENT.
2. THE BAG LENGTH SHOULD BE 24 INCHES, WIDTH SHOULD BE 18 INCHES AND THICKNESS SHOULD BE 6 INCHES.
3. THE GRAVEL BAGS SHOULD BE FILLED WITH 3/4" GRAVEL.
4. WHEN A GRAVEL BAG IS FILLED WITH GRAVEL, THE OPEN END OF THE GRAVEL BAG SHOULD BE STAPLED OR TIED WITH NYLON OR POLY CORD.
5. THE GRAVEL BAGS SHOULD BE PLACED AS SHOWN ON THE DETAIL. THE GRAVEL BAGS SHALL BE STACKED TO FORM A CONTINUOUS BARRIER AROUND THE INLETS. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.
6. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
7. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
8. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
9. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

SCALE: NONE

SCALE: NONE

