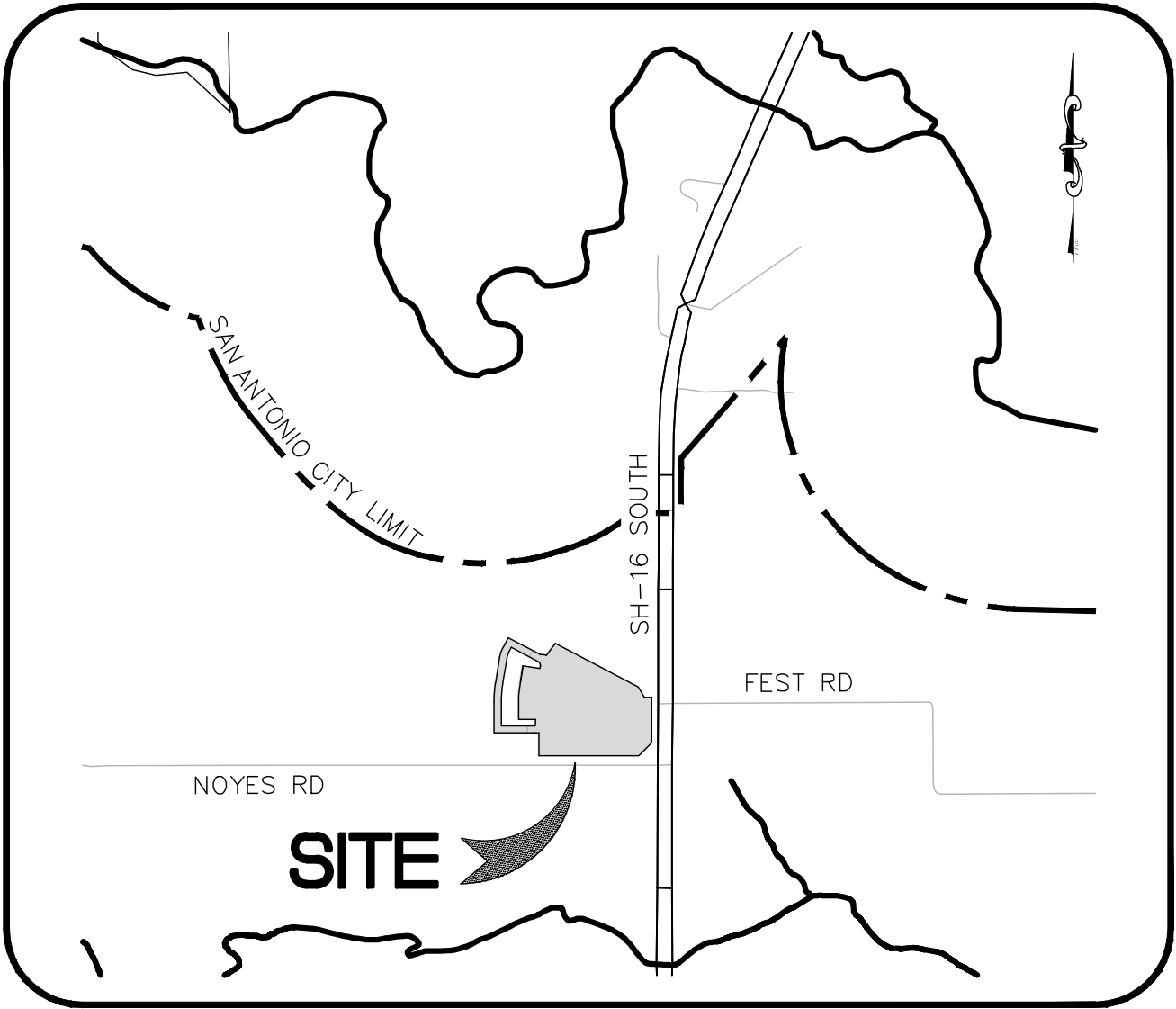


CONSTRUCTION PLANS FOR

VERDIN SUBDIVISION, UNIT 2

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



LEGAL DESCRIPTION:

BEING A 13.578 ACRE TRACT OF LAND BEING SITUATED IN THE
RUFENO RODRIGUEZ SURVEY NO. 49, ABSTRACT NO. 613, COUNTY
BLOCK NO. 4202, AS CONVEYED TO KING FISH DEVELOPMENT, LLC
BY WARRANTY DEED WITH VENDOR'S LIEN AS RECORDED IN
DOCUMENT NUMBER 20220169411, BEXAR COUNTY TEXAS.

SHEET INDEX

SHEET NO.	TITLE
COVER SHEET	
C0.0	OVERALL COVER
UTILITY PLANS	
C1.0	UTILITY COVER
C1.1	UTILITY OVERALL
SEWER PLANS	
C2.0	SEWER COVER
C2.1	SEWER OVERALL
C2.2	LINE J AND LINE L PLAN AND PROFILE
C2.3	LINE K PLAN AND PROFILE
C2.4	LINE M PLAN AND PROFILE
C2.5	LINE N PLAN AND PROFILE
C2.6	LINE P PLAN AND PROFILE
C2.7	SEWER DETAILS
WATER PLANS	
C3.0	WATER COVER & NOTES
C3.1	OVERALL WATER PLAN
C3.2	WATER DETAILS
C3.3	WATER DETAILS
STREET & DRAIN PLANS	
C4.0	STREET COVER
C4.1	TRAFFIC PLAN
C4.2	TRAFFIC DETAILS
C4.3	TRAFFIC DETAILS
C4.4	FLYCATCHER WAY PLAN AND PROFILE
C4.5	PINTAIL PLACE PLAN AND PROFILE
C4.6	WREN WAY PLAN AND PROFILE
C4.7	TERN TRACE & STILT STREET PLAN AND PROFILE
C4.8	DRAIN "A" PLAN AND PROFILE
C4.9	DRAIN "B" PLAN AND PROFILE
C4.10	TEMPORARY INTERCEPTOR DRAIN "C" PLAN AND PROFILE
C4.11	STANDARD DETAILS
C4.12	STANDARD DETAILS
C4.13	STANDARD STREET SECTIONS
GRADING PLANS	
C5.0	GRADING PLAN
SW3P PLANS	
C6.0	SW3P PLAN
C6.1	SW3P DETAILS

BEXAR COUNTY



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

- Engineers
- Surveyors
- Planners

SUBMITTAL SET

TEXAS C0.0

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

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.
- ALL EXCAVATION IS UNCLASSIFIED. THERE IS NO ADDITIONAL PAYMENT FOR ROCK EXCAVATION.
- ALL SPOIL AND UNUSABLE MATERIAL FROM THIS PROJECT SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THE PROJECT.
- CONSTRUCTION STAKING TO BE PROVIDED BY CONSULTANT IS AS FOLLOWS:
 - STREET CENTERLINE STAKING FOR CLEARING.
 - STREET STAKING (ONE SIDE) FOR STREET EXCAVATION AND WATER MAIN INSTALLATION.
 - 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:

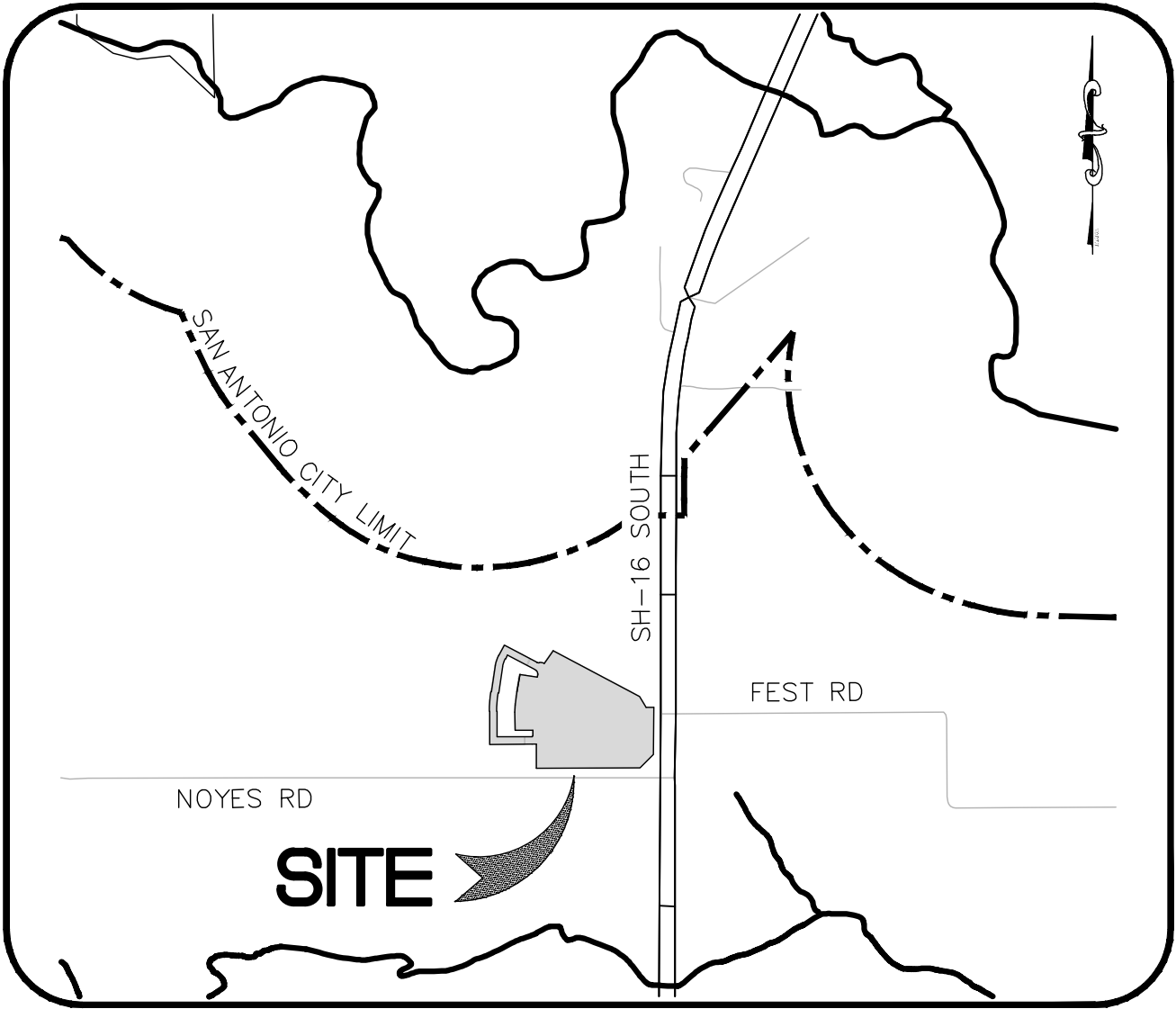
- CPS TO SUPPLY ALL ELECTRIC CONDUITS FOR TRENCH AS FOLLOWS:
PRIMARY - 2 1/2" HDPE SCHEDULE 40
SECONDARY - 3" PVC SCHEDULE 40
SERVICE STUBS - 2 1/2" PVC SCHEDULE 40
- 6" P.V.C. SCHEDULE 80 WILL BE REQUIRED FOR C.P.S. UTILITIES CROSSINGS WHEN DRAIN OR STREET CONSTRUCTION PRECEDES UTILITY INSTALLATION.
- 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 :

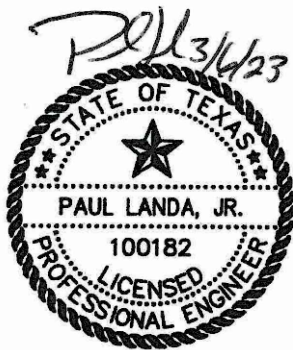
TELEPHONE AND CABLE LINES TO GO IN JOINT TRENCH WITH CITY PUBLIC SERVICE.

LEGEND

- EXISTING WATER MAIN
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 SERVICE LATERAL WITH ONE-WAY CLEANOUT
EXISTING TRANSFORMER
EXISTING IRRIGATION CONTROL VALVE
EXISTING WATER METER



SUBMITTAL DATE:
MARCH 2021



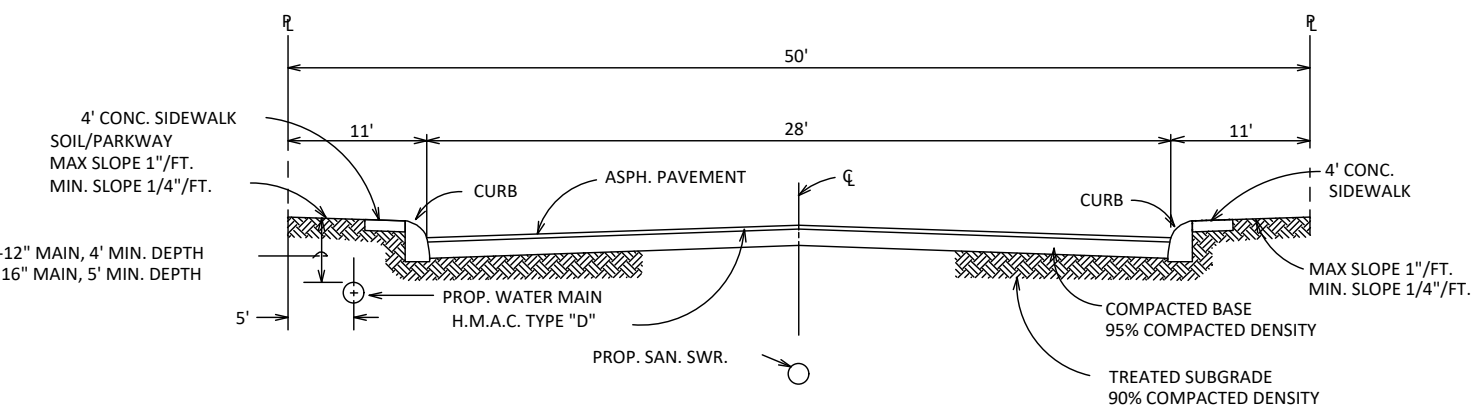
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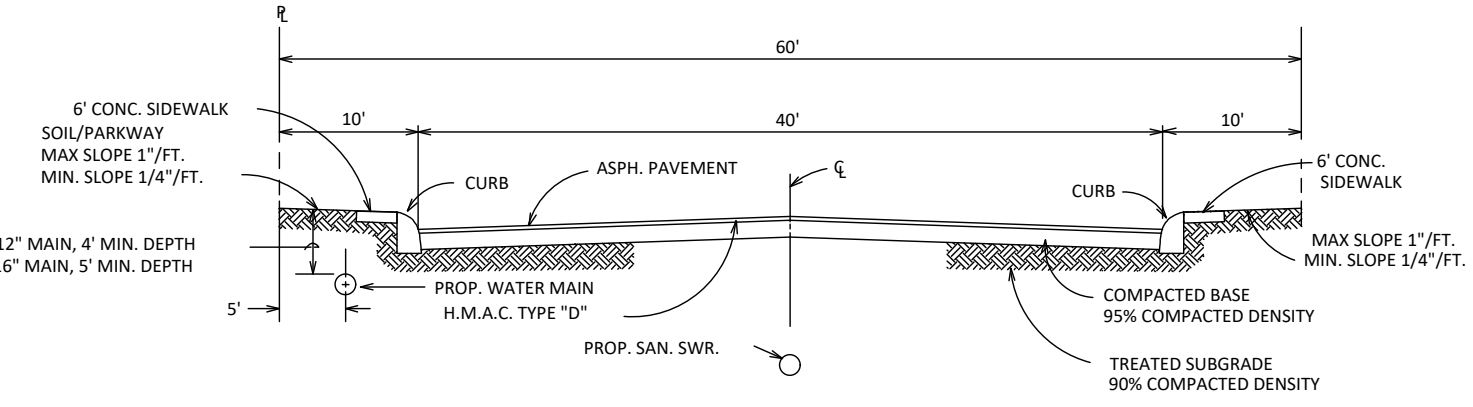
NOTE TO CONTRACTOR:

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 PURPOSES 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.

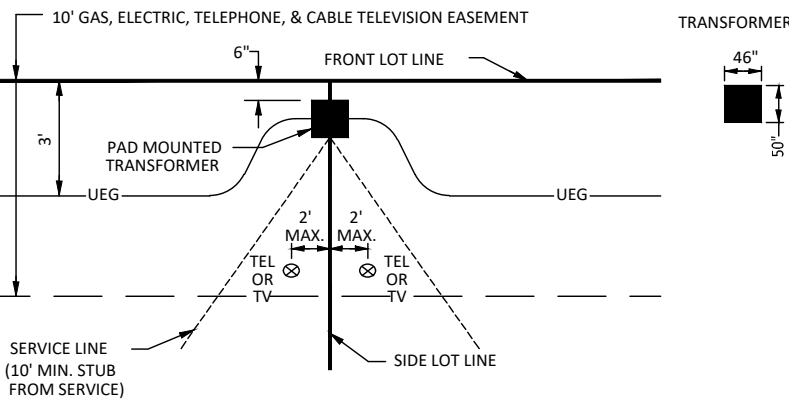
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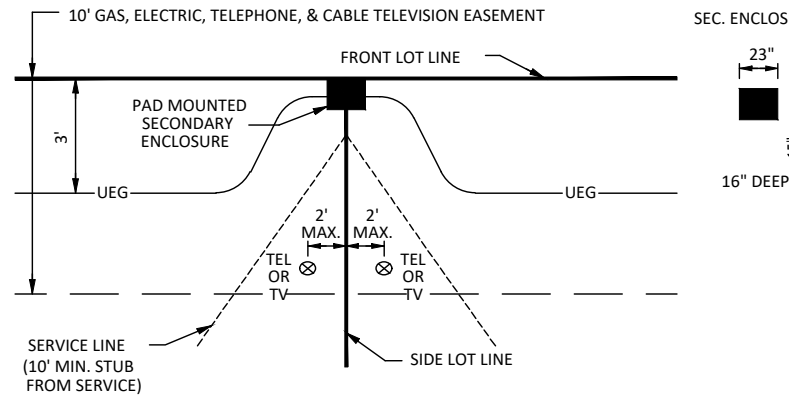
TYPICAL STREET CROSS-SECTION (28' PAVEMENT)



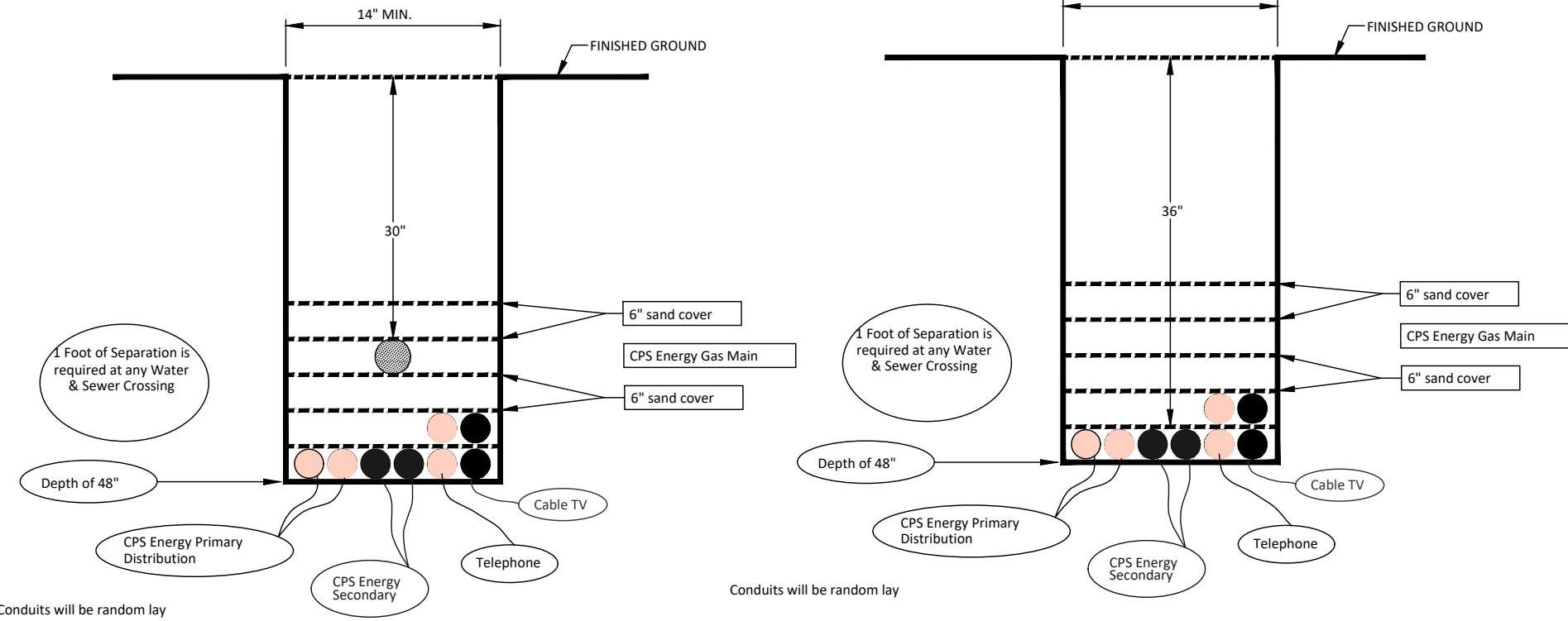
TYPICAL STREET CROSS-SECTION (40' PAVEMENT)



TRANSFORMER



**SECONDARY ENCLOSURE
FRONT LOADED**



**Standards for Gas and Electric Trench
or Electric Trench with Joint Utilities**

TRENCH DETAILS



Moy Tarin Ramirez Engineers, LLC

FIRM TBPELS ENG F-5297 SVY F-10131500

12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249

- Engineers
- Surveyors
- Planners

TEL: (210) 698-5051
FAX: (210) 698-5085

BEXAR COUNTY

SUBMITTAL SET

TEXAS C1.0

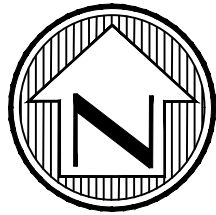
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LEGEND

EXISTING WATER MAIN	--- E8" 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	--- E8" SS ---
EXISTING OVERHEAD ELECTRIC	--- OHE ---
EXISTING UNDERGROUND ELECTRIC	--- UE ---
EXISTING UNDERGROUND TELEPHONE	--- UGT ---
EXISTING 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	--- 100W ---
PROPOSED STREET LIGHT UG, 250W AND SINGLE ARM	--- 250W ---
EXISTING POWER POLE	PP
EXISTING SECONDARY ENCLOSURE	--- 100W ---
PROPOSED SECONDARY ENCLOSURE	--- 100W ---
PROPOSED POWER POLE	PP
PROPOSED TRANSFORMER	--- 100W ---
PROPOSED WATER SERVICE	--- 100W ---
PROPOSED IRRIGATION SERVICE	--- 100W ---
PROPOSED SERVICE LATERAL WITH ONE-WAY CLEANOUT	--- 100W ---
EXISTING TRANSFORMER	--- 100W ---
EXISTING IRRIGATION CONTROL VALVE	--- 100W ---
EXISTING WATER METER	--- 100W ---

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CPS NOTES:

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

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- 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.

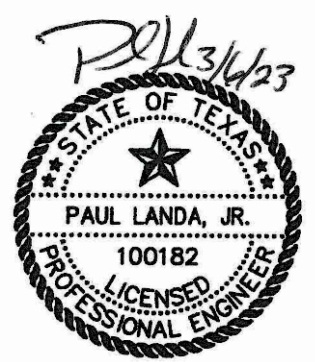
REVISIONS	DESCRIPTION	DATE	NO.

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 2
OVERALL UTILITY IMPROVEMENTS PLAN

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

CONSTRUCTION PLANS FOR

VERDIN SUBDIVISION, UNIT 2

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) 207-6026
 - COSA Traffic Signal Operators (210) 306-8480
 - 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 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.

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:
 - IF LATERALS DO NOT CROSS WATER MAINS, 5' COVER
 - IF LATERALS CROSS WATER MAIN,

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

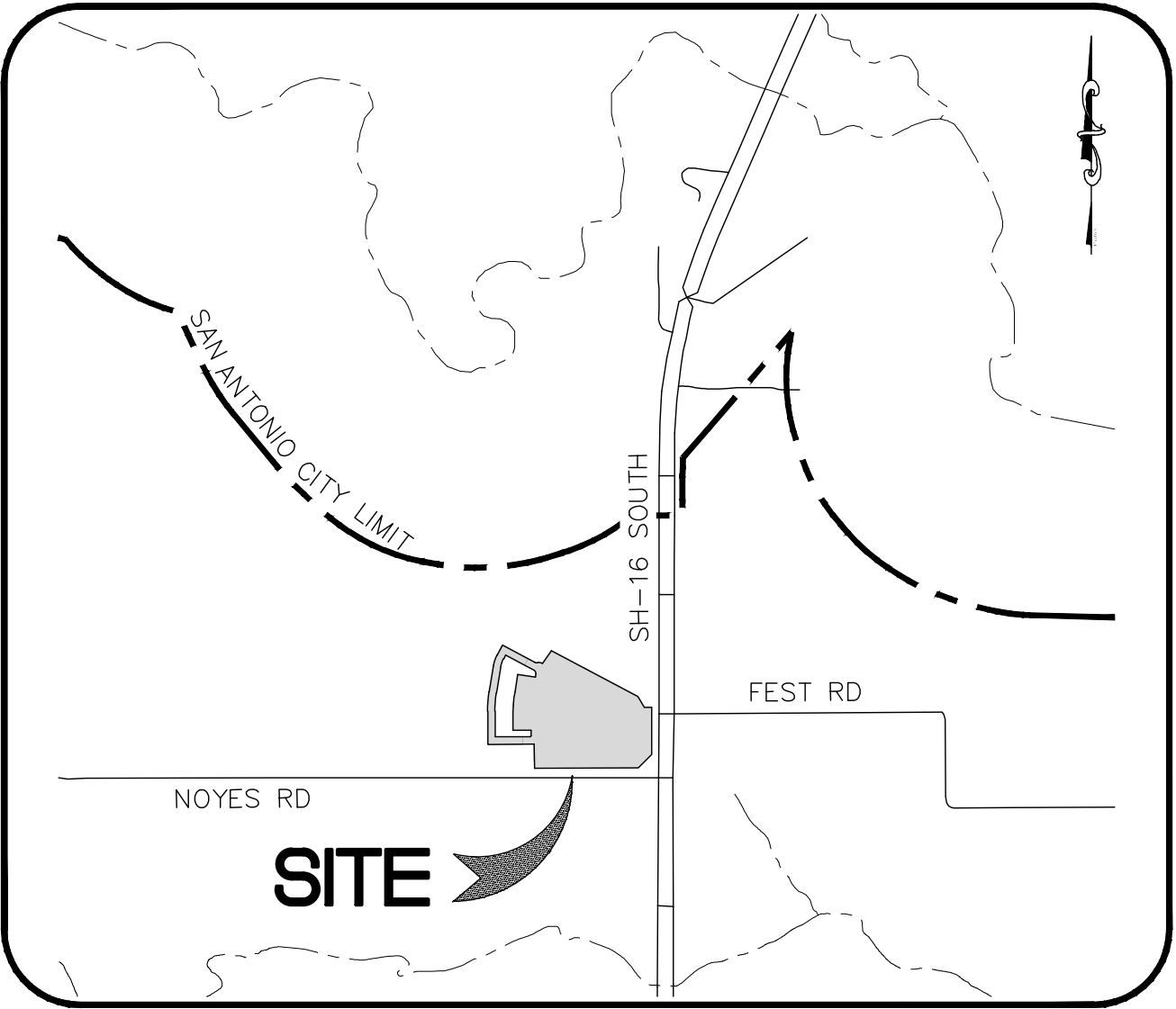
- WHERE A SEWER MAIN CROSSES OVER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE (9) FEET, ALL PORTIONS OF THE SEWER MAIN WITHIN NINE FEET (9') OF THE WATER LINE SHALL BE CONSTRUCTED USING 150 PSI PRESSURE RATED DUCTILE IRON, CAST IRON OR PVC PIPE AND JOINED WITH EQUALLY PRESSURE RATED PRESSURE 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 PROJECT, THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS, 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:

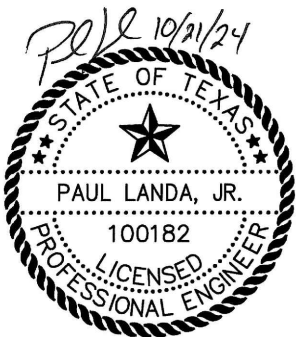
JULY 2022

REVISION DATE:

OCTOBER 2024

LEGAL DESCRIPTION:

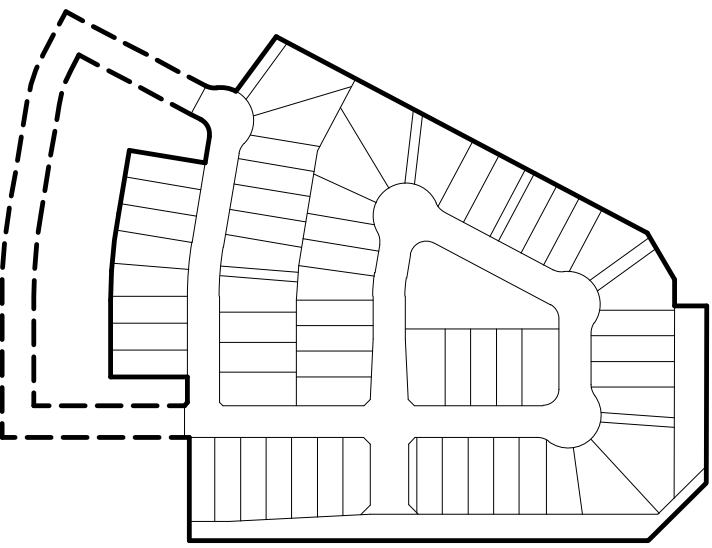
BEING A TOTAL OF 13.578 ACRES, INCLUSIVE OF A 0.675 OF AN ACRE VARIABLE WIDTH RIGHT OF WAY DEDICATION, SITUATED IN THE RUENO RODRIGUEZ SURVEY NO. 49, ABSTRACT NO. 613, COUNTY BLOCK NO. 4202, BEING A PORTION OF A 131.81 ACRE TRACT AS CONVEYED TO KING FISH DEVELOPMENT, LLC BY WARRANTY DEED WITH VENDOR'S LIEN AS RECORDED IN DOCUMENT NUMBER 20220169411, OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS.



SHEET INDEX

SHEET NO. TITLE

- | | |
|------|------------------------------------|
| C2.0 | SEWER COVER |
| C2.1 | SEWER OVERALL |
| C2.2 | LINE J AND LINE L PLAN AND PROFILE |
| C2.3 | LINE K PLAN AND PROFILE |
| C2.4 | LINE M PLAN AND PROFILE |
| C2.5 | LINE N PLAN AND PROFILE |
| C2.6 | LINE P PLAN AND PROFILE |
| C2.7 | SEWER DETAILS |



INDEX MAP
NOT TO SCALE

ESTIMATED SEWER QUANTITIES

ITEM	DESCRIPTION	UNIT	EST/QTY
1	TIE INTO EXISTING SANITARY SEWER MAIN	E.A.	1
2	TRENCH EXCAVATION SAFETY PROTECTION	L.F.	4,844
3	8" SANITARY SEWER PIPE, SDR-26 (0'-6")	L.F.	10
4	8" SANITARY SEWER PIPE, SDR-26 (6'-10")	L.F.	1,201
5	8" SANITARY SEWER PIPE, SDR-26 (10'-14")	L.F.	1,378
6	STANDARD SANITARY SEWER MANHOLE	EA	7
7	DROP SANITARY SEWER MANHOLE	EA	3
8	EXTRA DEPTH MANHOLE	V.F.	33.6
9	VERTICAL STACK	V.F.	108.9
10	6" SANITARY SEWER LATERALS, SDR-26	L.F.	2,255
11	8" SEWER MAIN TELEVISION INSPECTION	L.F.	2,589

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.

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	60
Total Acreage	13.578
Total Linear Footage of Pipe	8" ~ 2,589 L.F.
Plat No.	22-11800352
Number of Lots	60
SAWS Job No.	22-1649

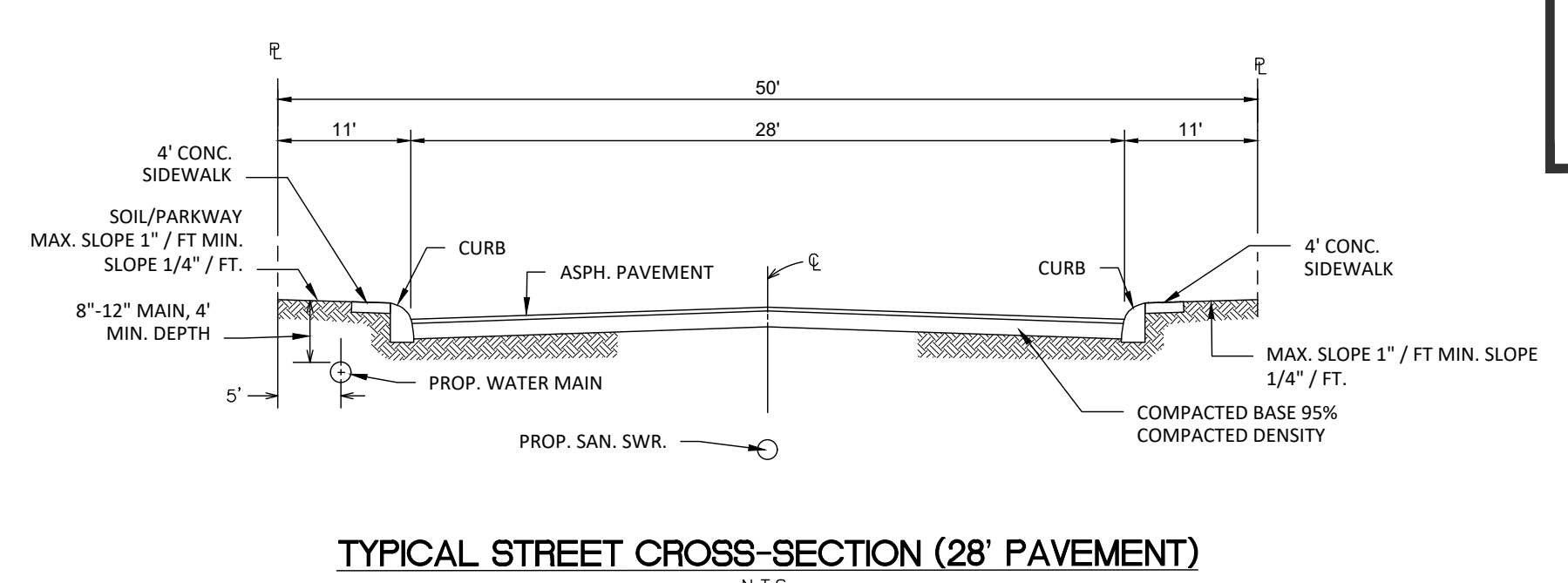
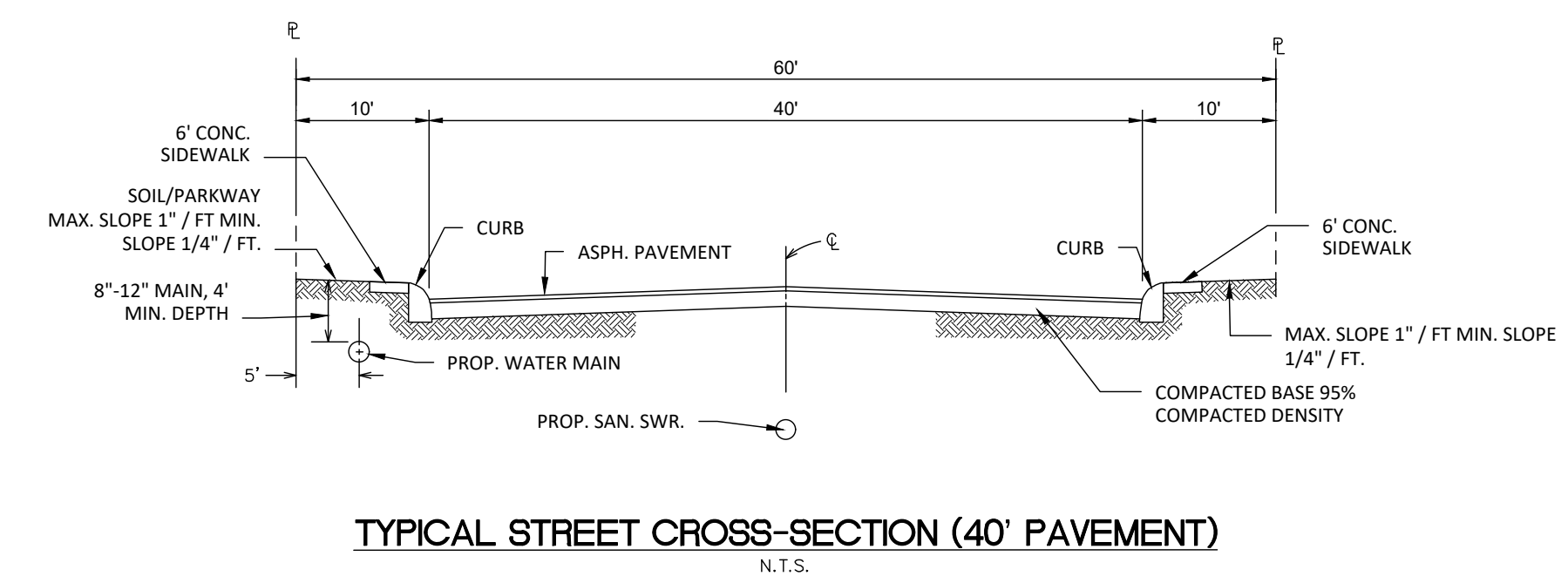
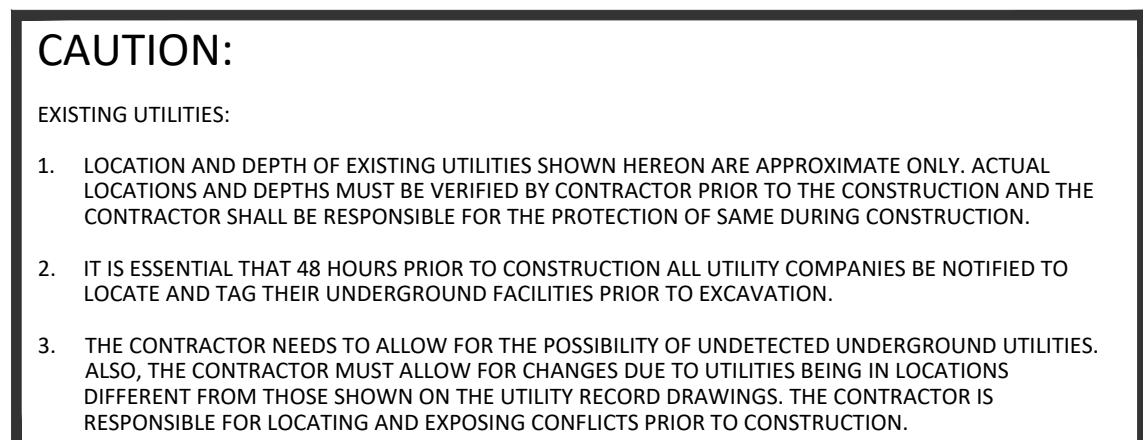


Moy Tarin Ramirez Engineers, LLC

FIRM TBPELS ENG F-5297 SVY F-10131500

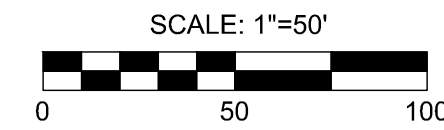
12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085

- Engineers
- Surveyors
- Planners



SUBMITTAL SET

N.T.S.
REFERENCE SAWS SPEC. ITEM 812



MTR

- Engineers
- Surveyors
- Planners

Moy Tarin Ramirez Engineers, LLC

ENGINEERING F-5297/SURVEYING: F-101315000
12770 CHARRON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085





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



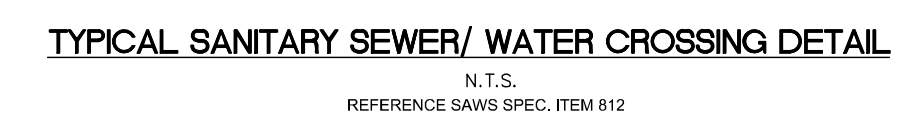
CAUTION:
EXISTING UTILITIES:

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.

Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and approve geotechnical information and the anticipated installation site(s) within the project work area in order to implement Contractor's trench excavation safety protection systems and programs and/or procedures for the project work area. 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.



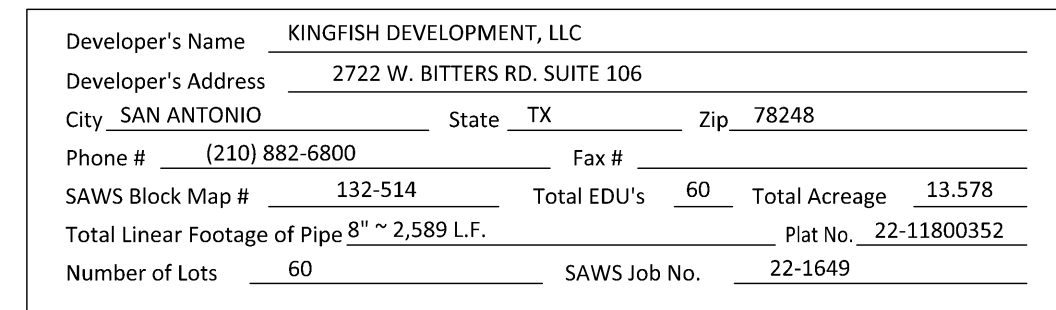
Developer's Name KINGFISH DEVELOPMENT, LLC
Developer's Address 2722 W. BITTERS RD. SUITE 106
SAN ANTONIO State TX Zip 78248
Phone # (210) 882-6800 Fax # _____
SAWS Block Map # 132-514 Total EDU's 60 Total Acreage 13.578
Total Linear Footage of Pipe 8" ~ 2,589 L.F. Plot No. 22-11800352
Number of Lots 60 SAWS Job No. 22-1649

[illegible]

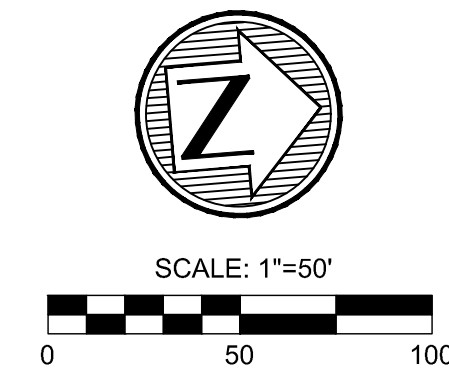
PLE 10/24/24
 STATE OF TEXAS
 ★
 PAUL LANDA, JR.
 100182
 LICENSED
 PROFESSIONAL ENGINEER

IN SUBDIVISION
SEWER PLAN
LINE "M"

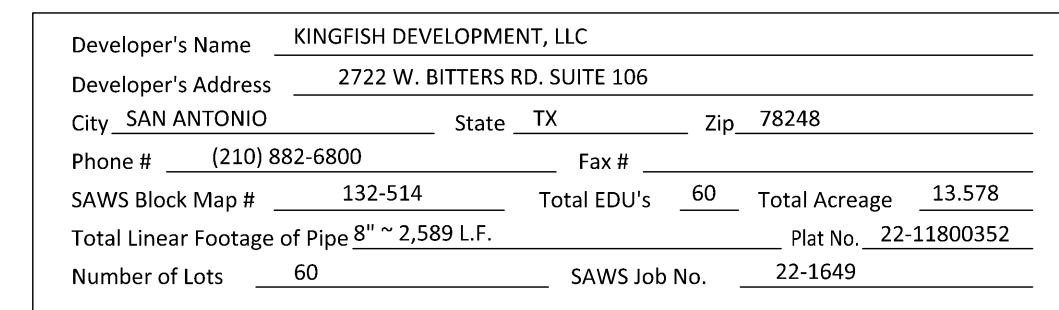
C2.4



N.T.S.
REFERENCE SAWS SPEC. ITEM 812

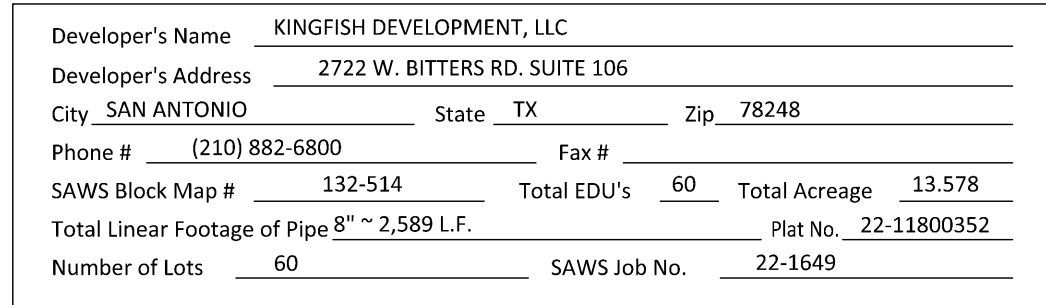


HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



TRENCH EXCAVATION SAFETY PROTECTION

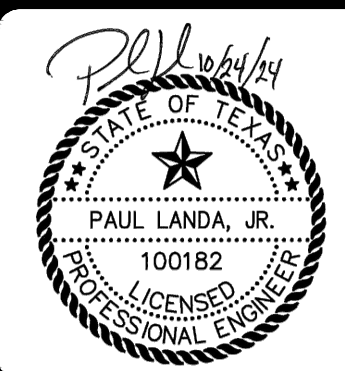
Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order to implement Contractor's trench excavation safety protection systems, plans, and procedures. Contractor shall prepare and submit to the City all 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 independent employee or structural design/geotechnical/safety/equipment consultant shall implement a trench safety program in accordance with OSHA standards governing the nature and activities of individuals working in and around trench excavation.



MTR

- Engineers
- Surveyors
- Planners

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



STA. 1+00.00 TO STA. 3+77.18

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

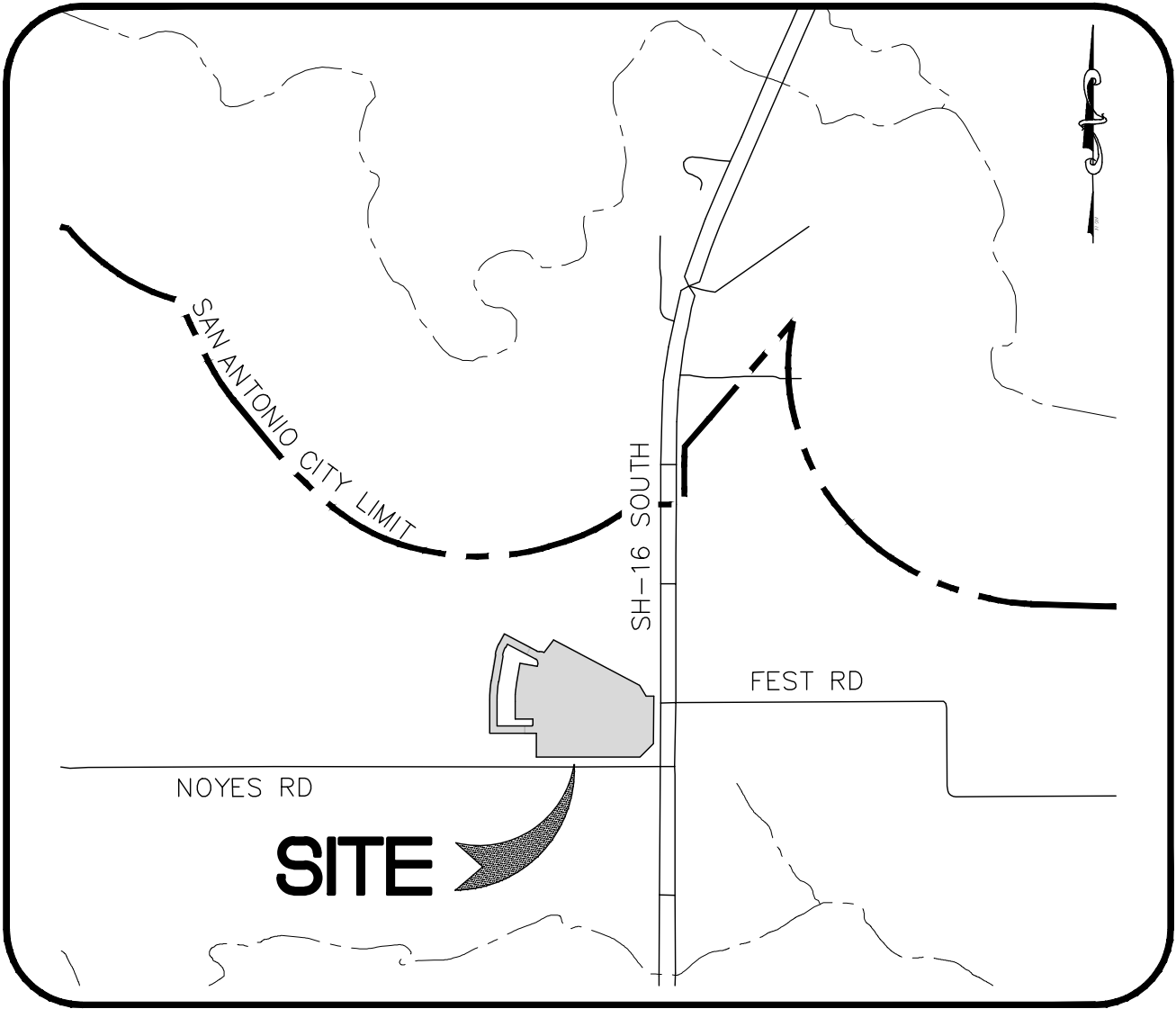
- All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:
 - Current Texas Commission on Environmental Quality (TCEQ) "Design 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 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) 206-8480
 - 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 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 paving 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 565 feet where the static pressure will normally exceed 80 PSI. At all such locations where the ground level is below 565 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.

CONSTRUCTION PLANS FOR

VERDIN SUBDIVISION, UNIT 2 WATER IMPROVEMENTS



VICINITY MAP

N.T.S.

SUBMITTAL DATE:

DECEMBER 2022

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'
24"	5'



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

THIS DEVELOPMENT IS ENTIRELY IN PRESSURE ZONE 2

FIRE HYDRANT LEAD FREE NOTE:
"SAWS REQUIRES GCPs AND COUNTER PERMITS TO USE LEAD FREE (<25% LEAD) FIRE HYDRANTS."

SHEET INDEX

SHEET NO. TITLE

C3.0	WATER COVER & NOTES
C3.1	OVERALL WATER PLAN
C3.2	SAWS WATER DETAILS
C3.3	SAWS WATER DETAILS

ESTIMATED WATER QUANTITIES

ITEM	DESCRIPTION	UNIT	EST/QTY
1	12" WATER MAIN TIE-IN	L.S.	1
2	TRENCH EXCAVATION PROTECTION	L.F.	2,686
3	12" PIPE, C900 DR 18 PVC CLASS 235 (INCL. RESTRAINTS)	L.F.	928
4	8" PIPE, C900 DR 18 PVC CLASS 235 (INCL. RESTRAINTS)	L.F.	1,758
5	12" GATE VALVE, M.J.	EA.	4
6	8" GATE VALVE, M.J.	EA.	6
7	STANDARD FIRE HYDRANT (COMPLETE)	EA.	3
8	2" PERMANENT BLOW-OFF	EA.	2
9	2" TEMPORARY BLOW-OFF	EA.	1
10	3/4" IRRIGATION SERVICE: LONG	EA.	1
11	3/4" SINGLE SERVICE: SHORT	EA.	41
12	3/4" SINGLE SERVICE: LONG	EA.	19
13	D.I. FITTINGS (RESTRAINED)	TON	1.7
14	HYDROSTATIC TESTING	EA.	1
15	12"x16" CUT-IN TEE	EA.	1
16	METER BOXES	EA.	61

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 ELECTRICAL, 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.

TXDOT PERMIT NO. SAT20221017153623

PRESSURE ZONE 2

Developer's Name	KINGFISH DEVELOPMENT, LLC		
Developer's Address	2722 W. BITTERS RD. SUITE 106		
City	SAN ANTONIO	State	TX
Phone #	(210) 882-6800	Fax #	
SAWS Block Map #	132-514	Total EDU's	61
Total Linear Footage of Pipe	8" ~ 1,758 L.F. - 12" ~ 928 L.F.	Plot No.	22-11800352
Number of Lots	60	SAWS Job No.	22-1155

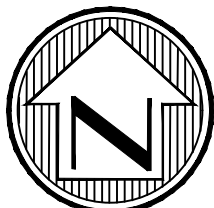
BEXAR COUNTY

SUBMITTAL SET

TEXAS C3.0

LEGEND

EXISTING WATER MAIN	8" PVC
PROPOSED WATER MAIN	8" PVC
EXISTING FIRE HYDRANT	EXISTING FIRE HYDRANT
PROPOSED FIRE HYDRANT	PROPOSED FIRE HYDRANT
EXISTING GATE VALVE	EXISTING GATE VALVE
PROPOSED GATE VALVE	PROPOSED GATE VALVE
3/4" SINGLE SERVICE	3/4" SINGLE SERVICE
ELEC. GAS, TELE. CABLE TV ESMT.	E.G.T.V.E.
EXISTING IRRIGATION CONTROL VALVE	EXISTING IRRIGATION CONTROL VALVE
EXISTING WATER METER	EXISTING WATER METER
DEED & PLAT 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'

NO.	DATE	DESCRIPTION	BY

PROJ. #	CHK. BY	DATE
22092	CHKD. BY	

Engineers
Surveyors
Planners

MTR

May 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) 698-5065

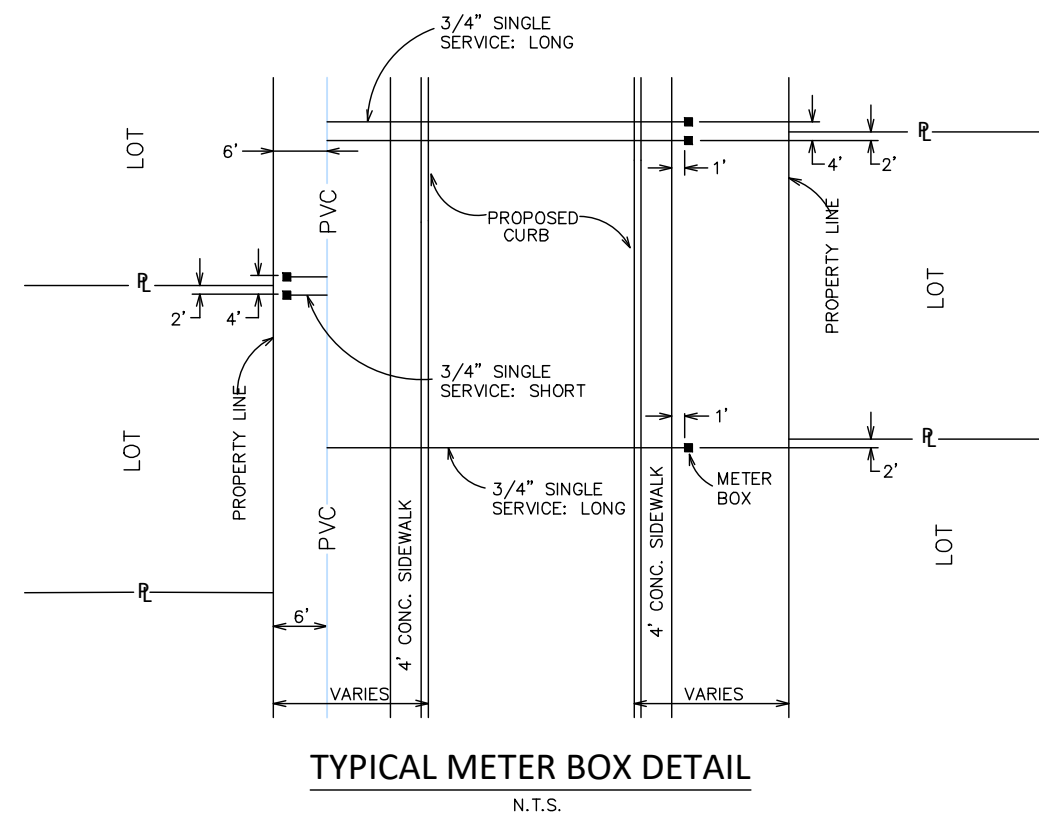


VERDIN SUBDIVISION, UNIT 2

WATER OVERALL DISTRIBUTION PLAN

SHEET

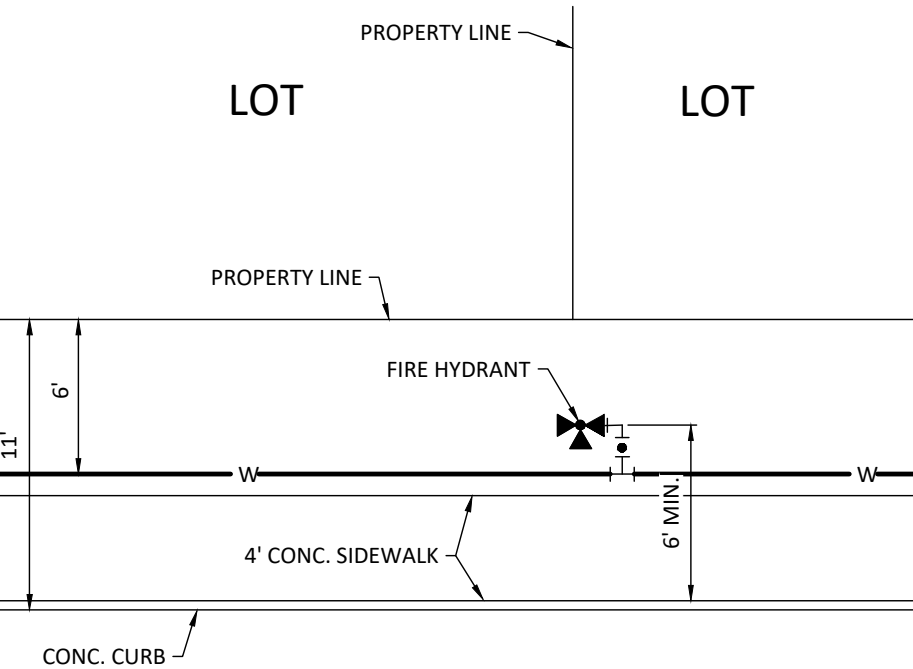
C3.1



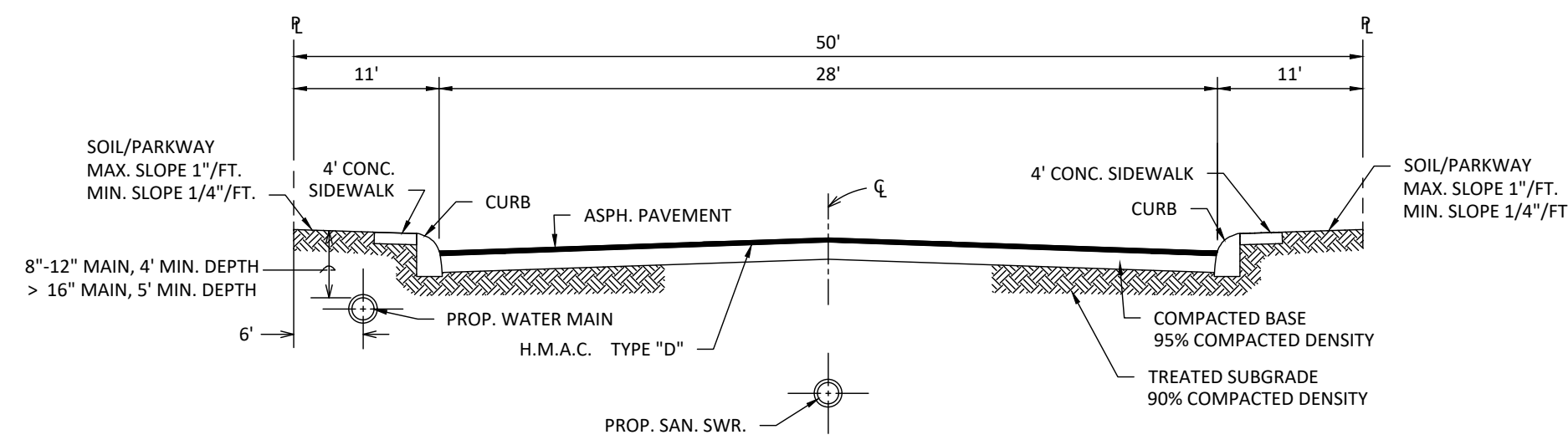
RESTRAINT JOINTS	
①	ALL TEES RESTRAINT JOINT AS REQUIRED PER SAWS DD-839-04
②	ALL BENDS RESTRAINT JOINT AS REQUIRED PER SAWS DD-839-08
③	ALL VALVES/DEAD ENDS RESTRAINT JOINT AS REQUIRED PER SAWS DD-839-05
④	ALL VERTICAL BENDS RESTRAINT JOINT AS REQUIRED PER SAWS DD-839-06

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 DUCTBANKS, 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.

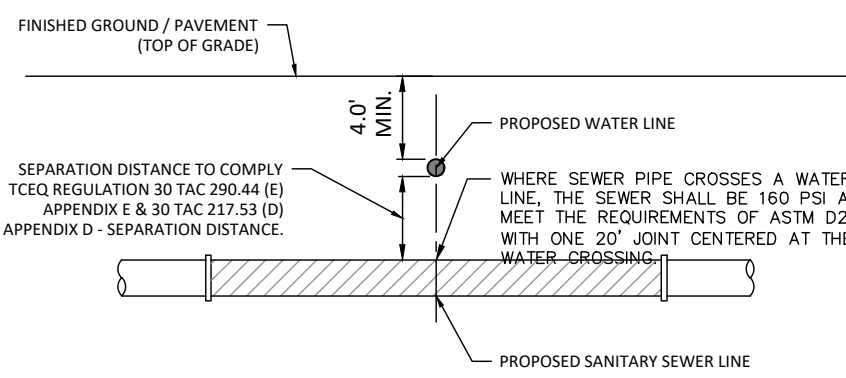
TRENCH EXCAVATION SAFETY PROTECTION
Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area 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.



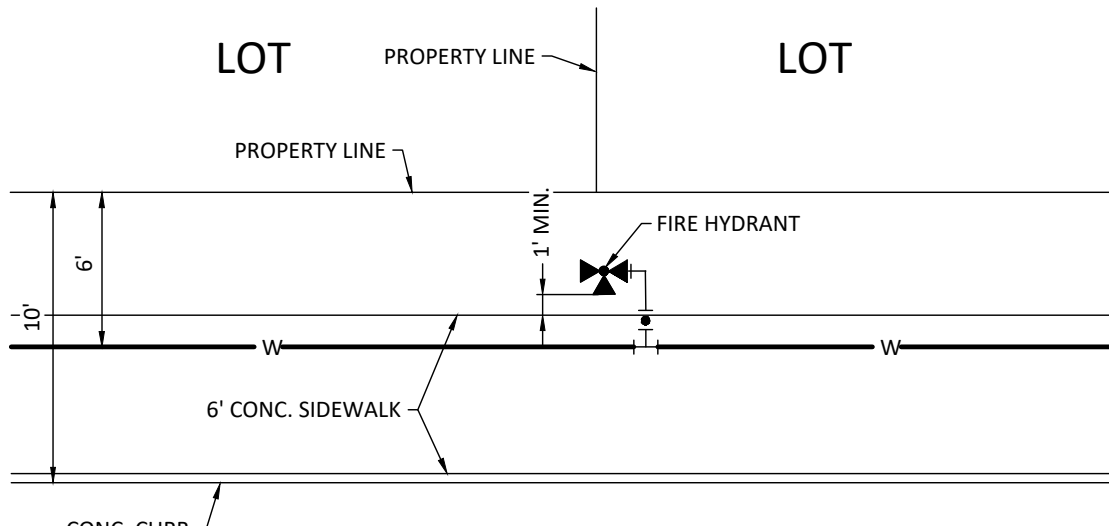
TYPICAL FIRE HYDRANT DETAIL FOR LOCAL A
N.T.S.



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



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

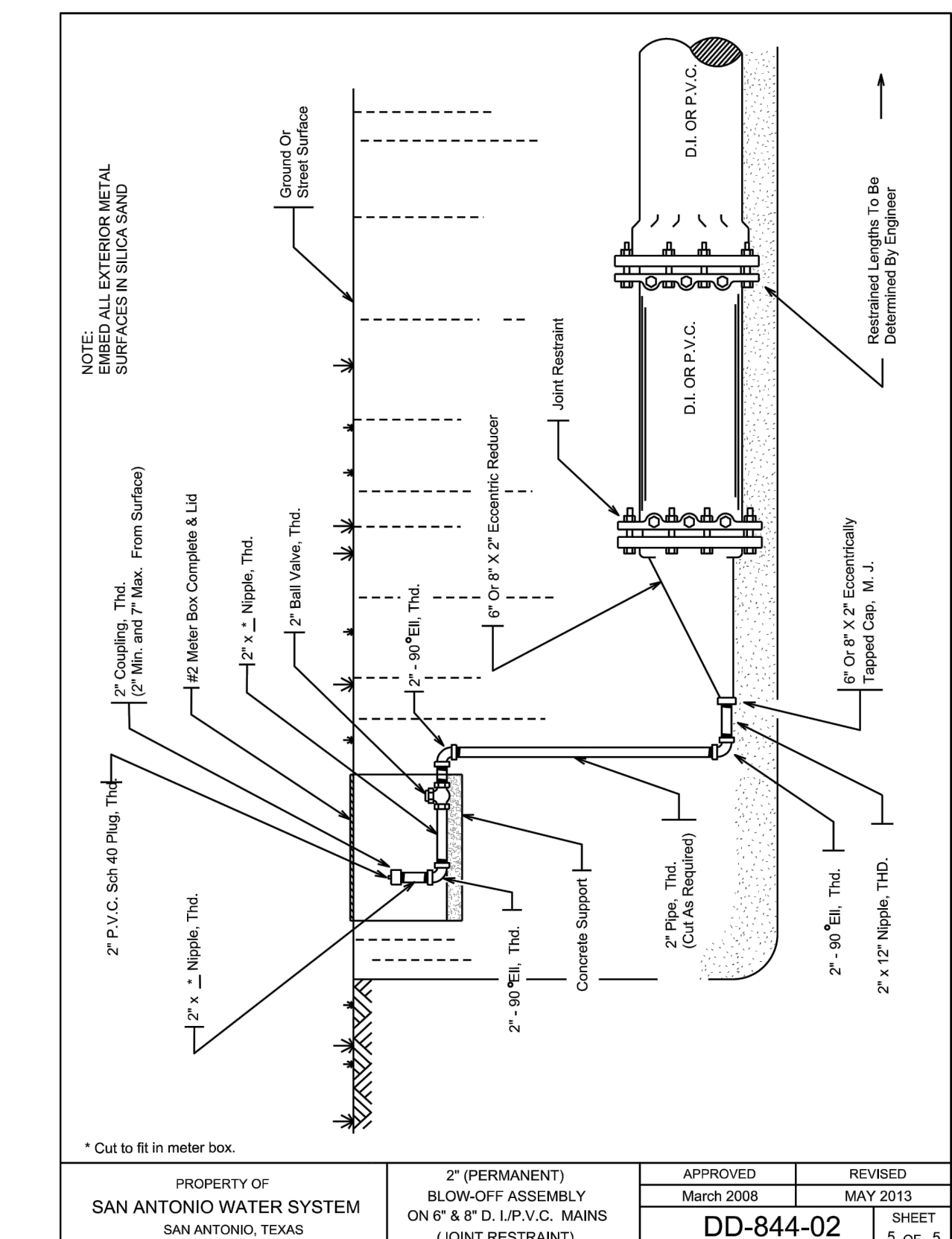
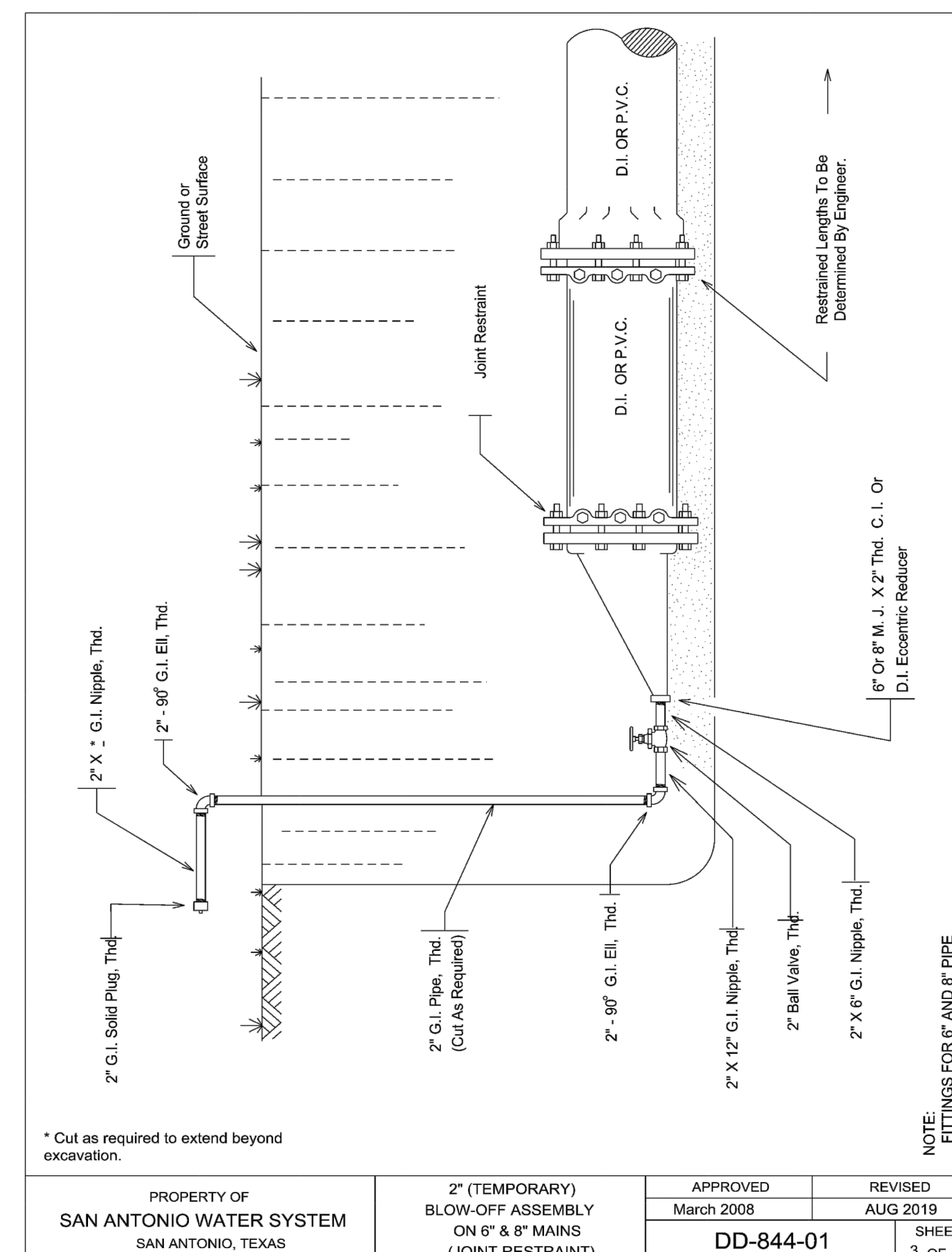
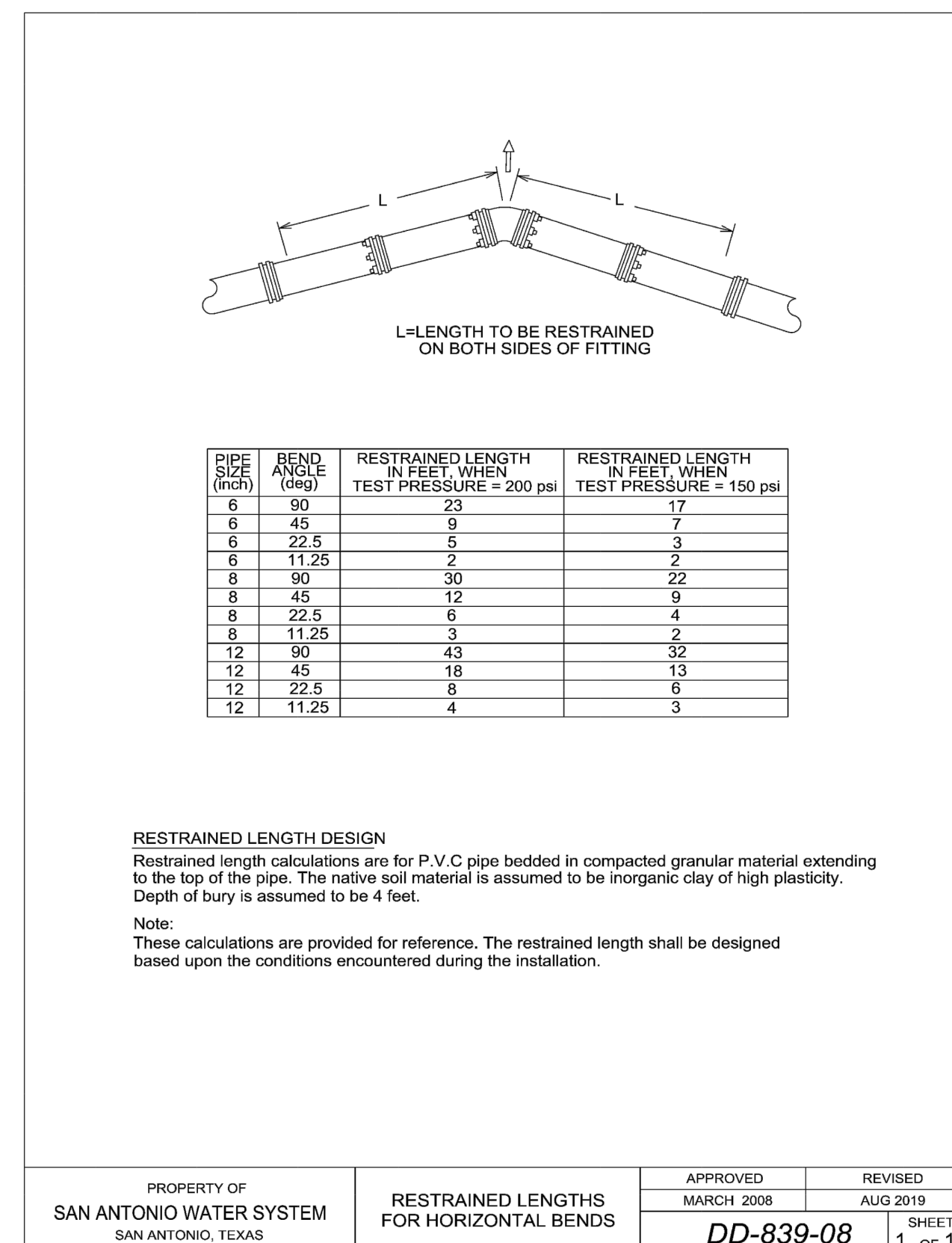
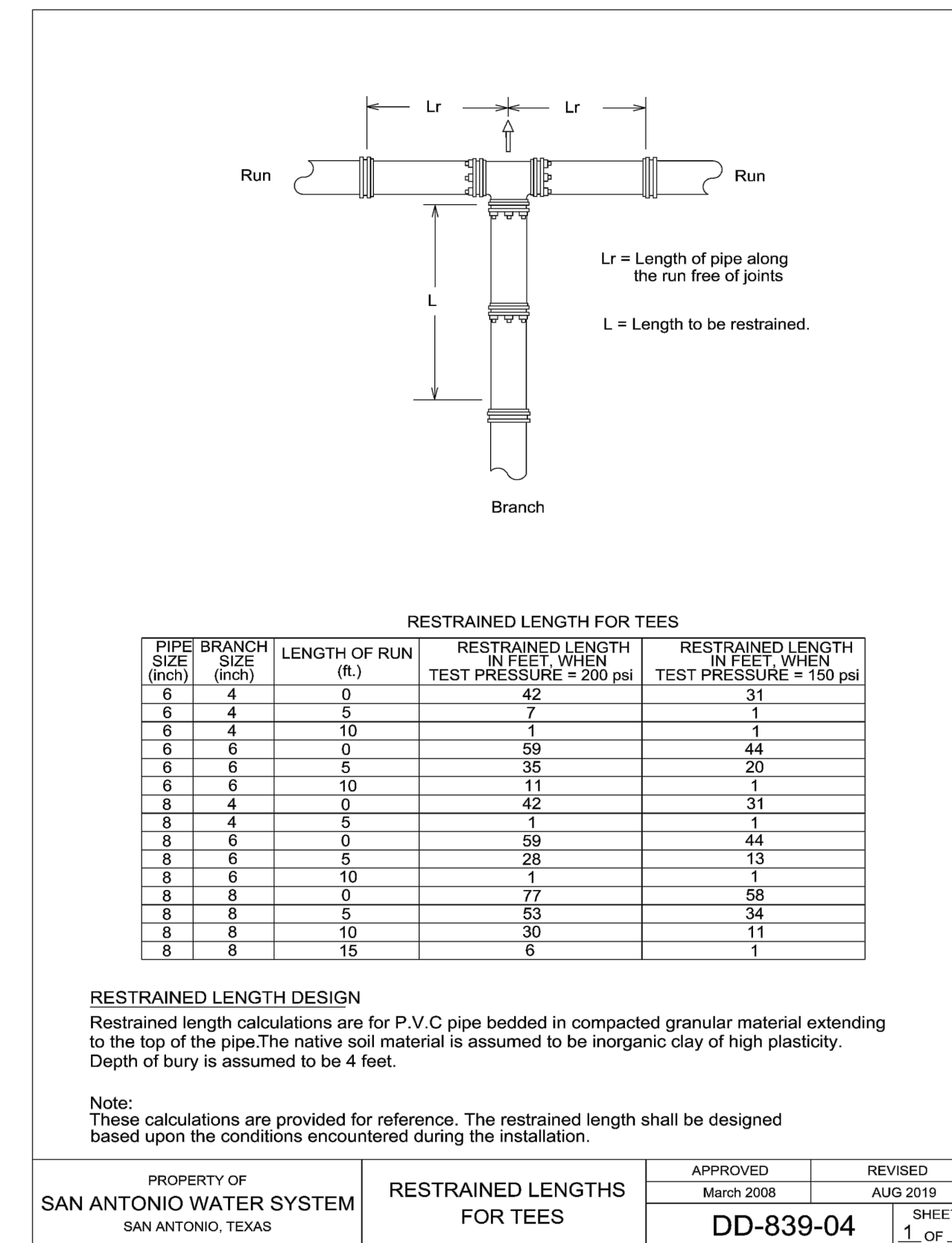
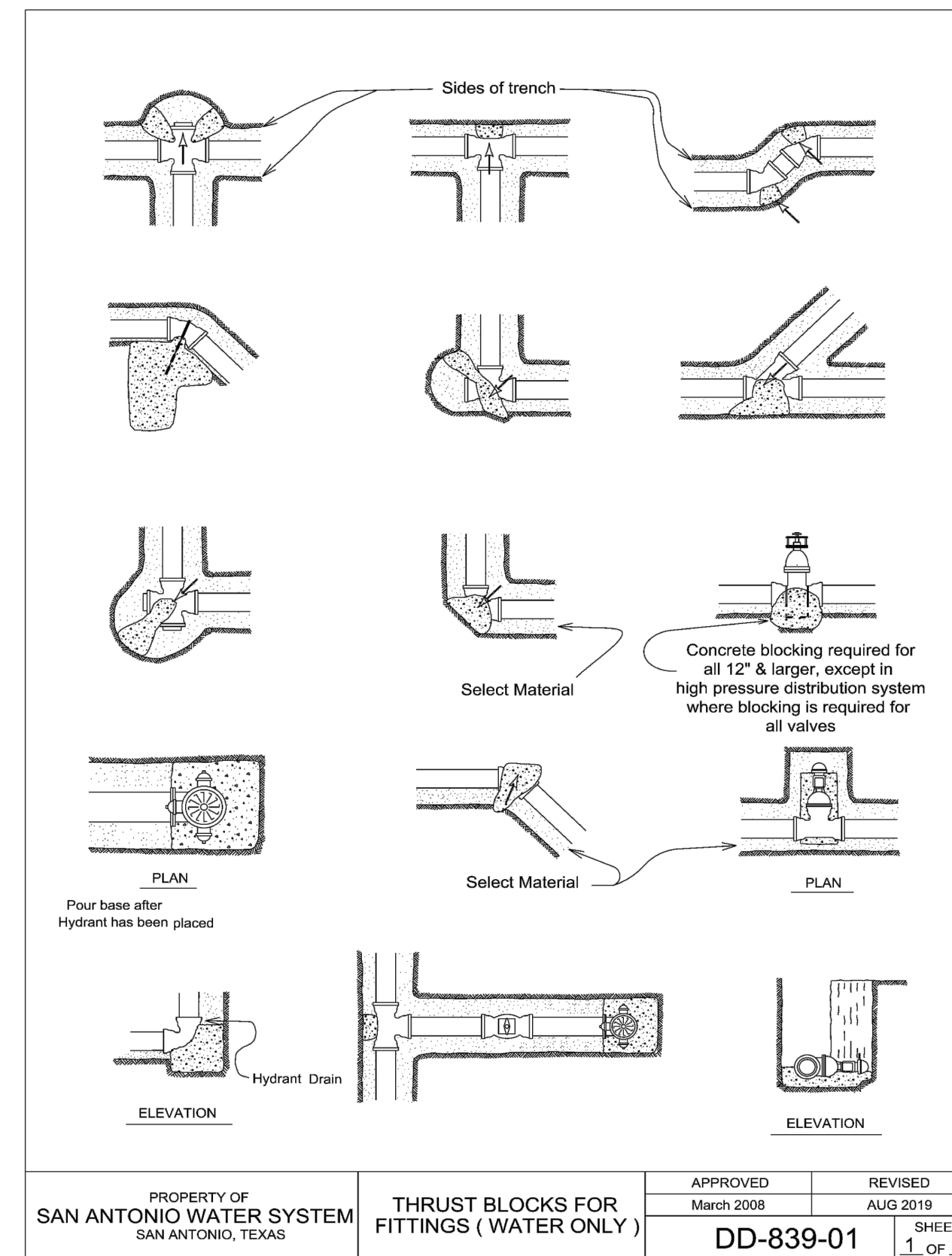
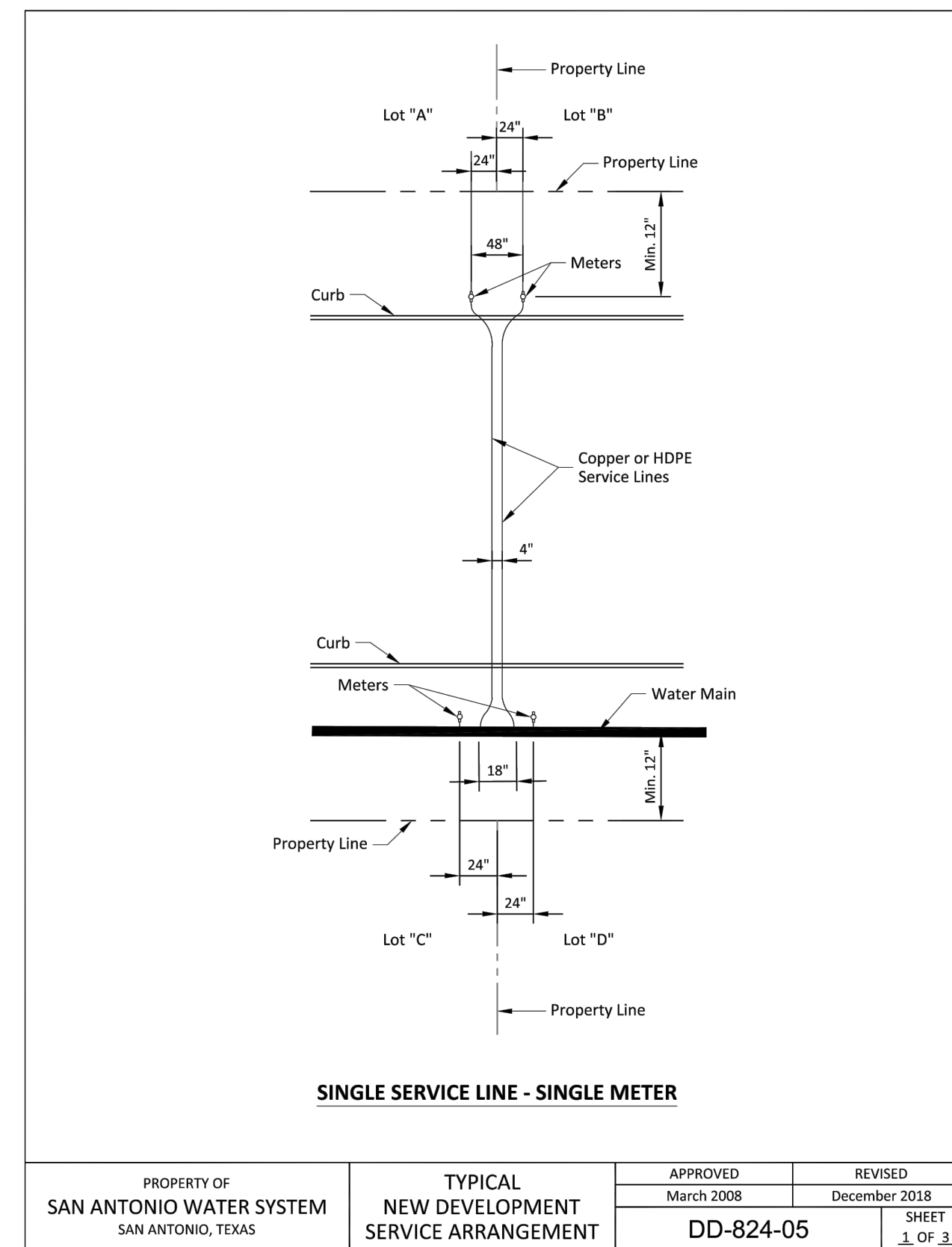


TYPICAL FIRE HYDRANT DETAIL FOR LOCAL B
N.T.S.

TXDOT PERMIT NO. SAT20221017153623

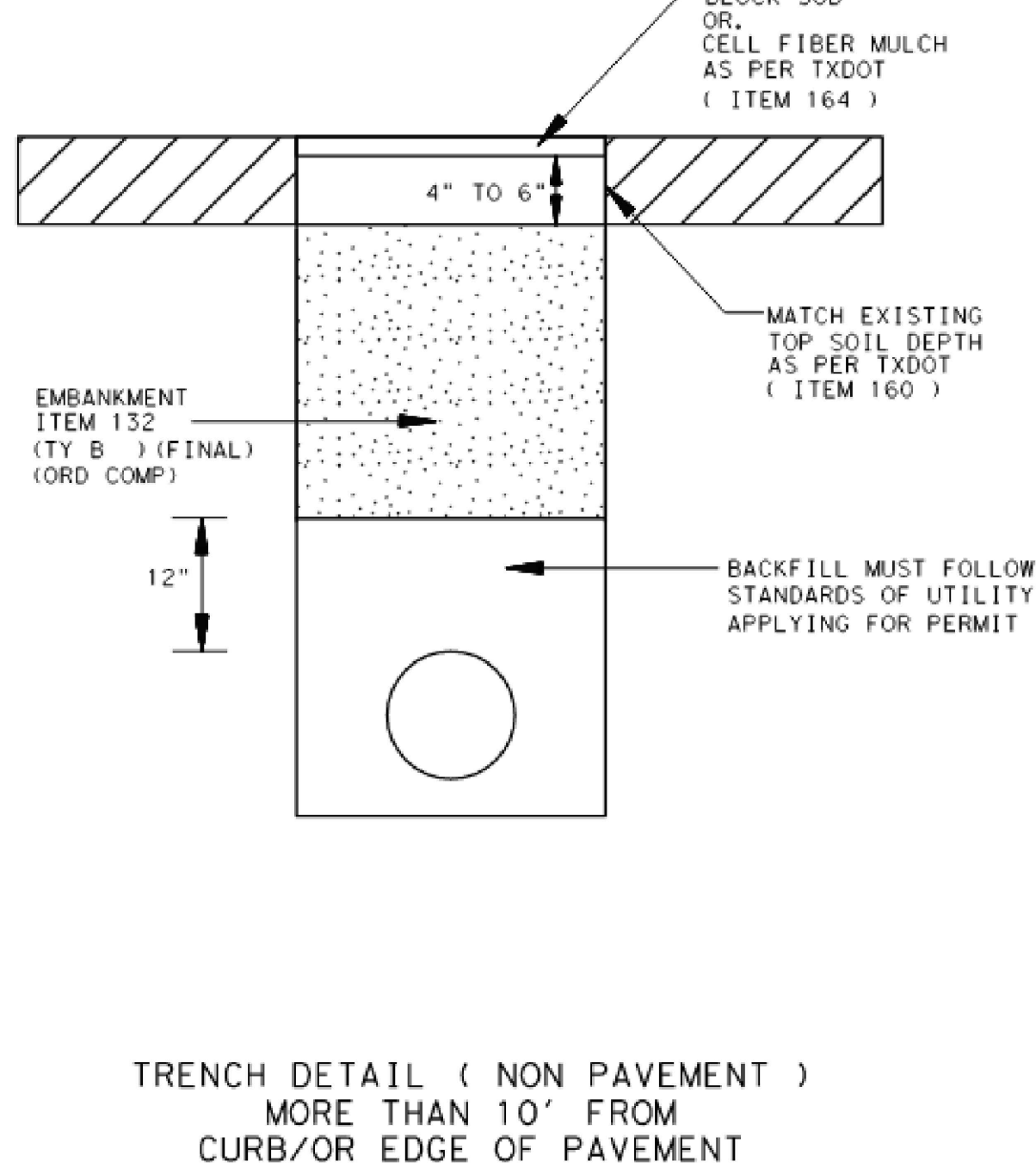
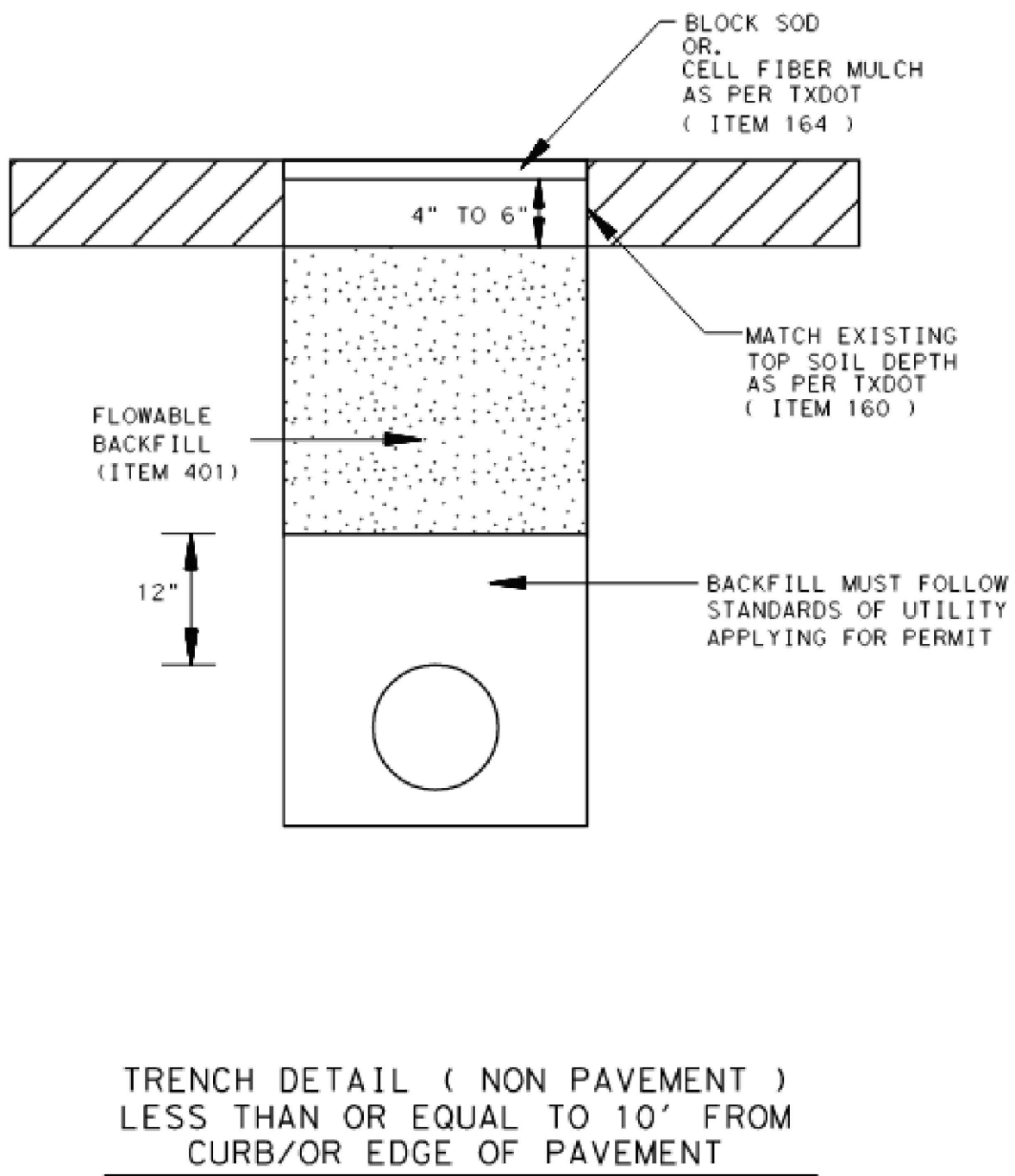
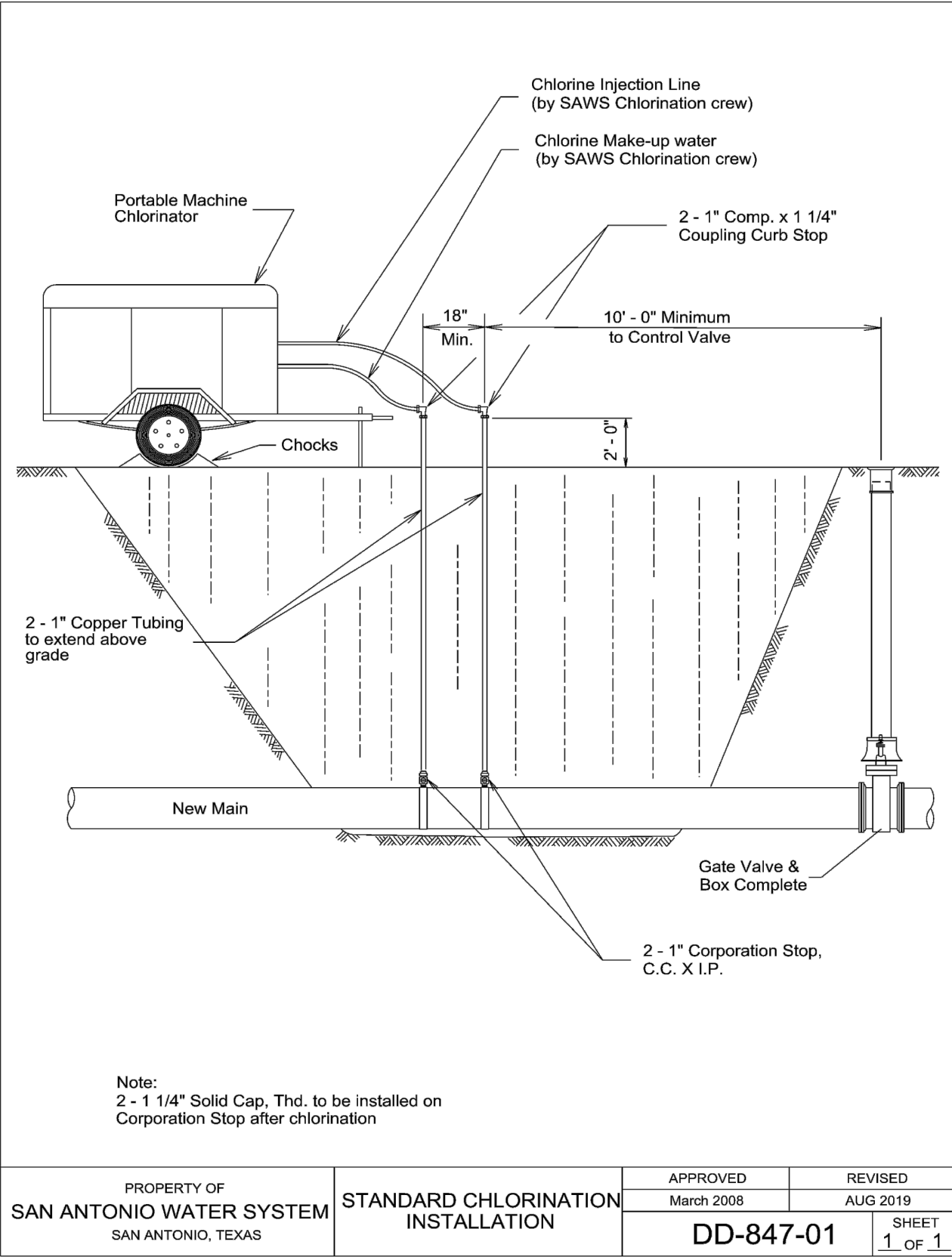
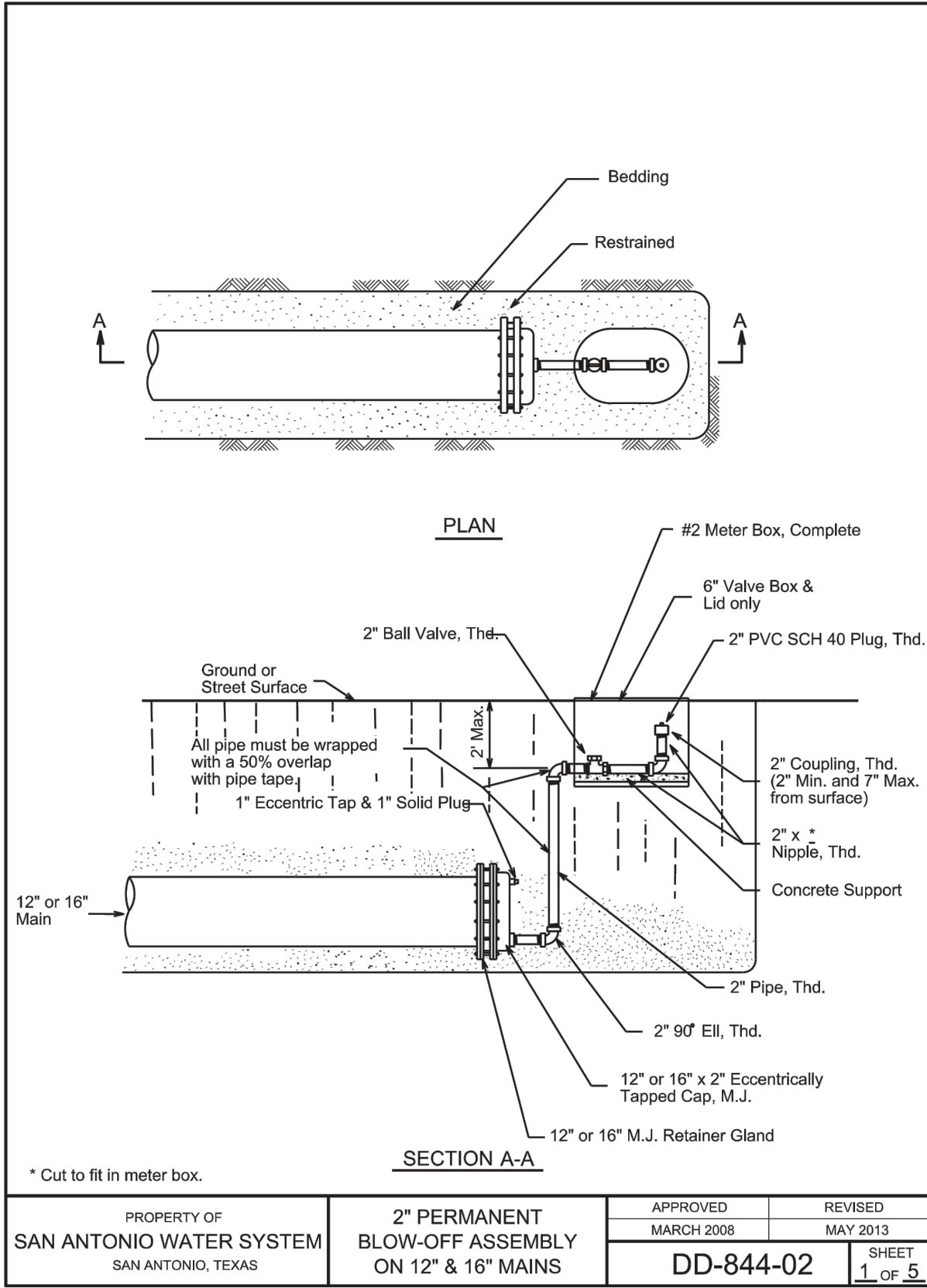
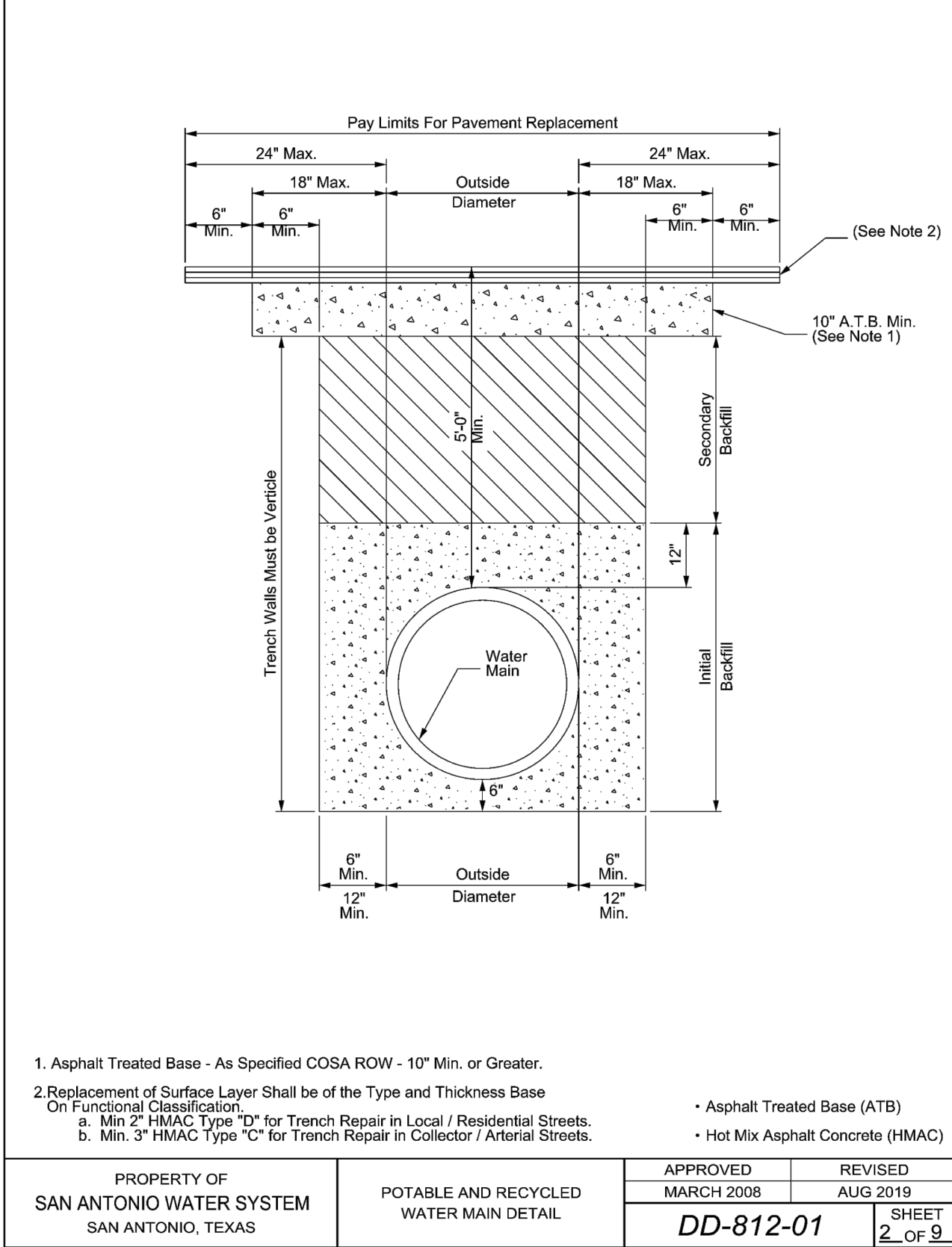
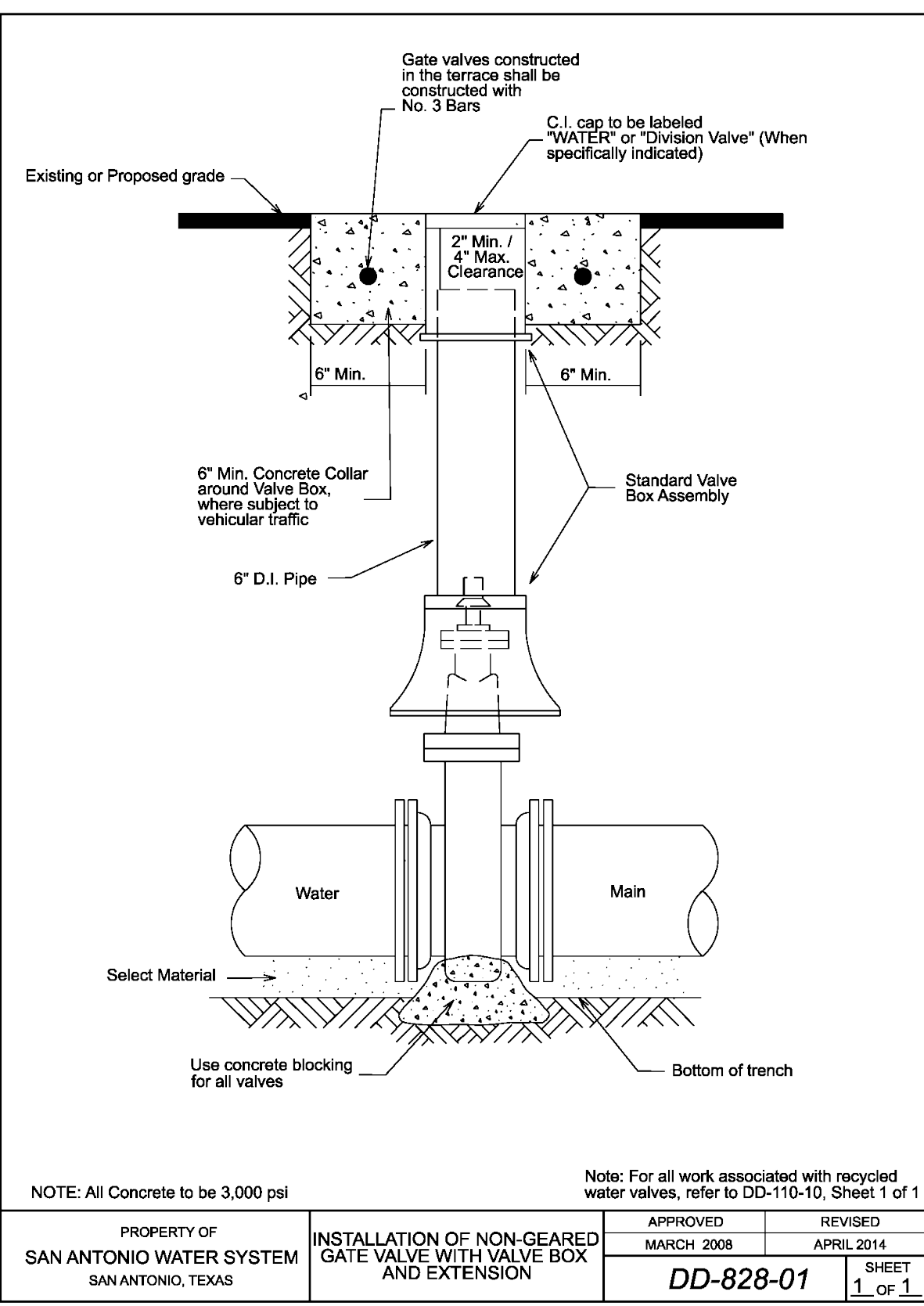
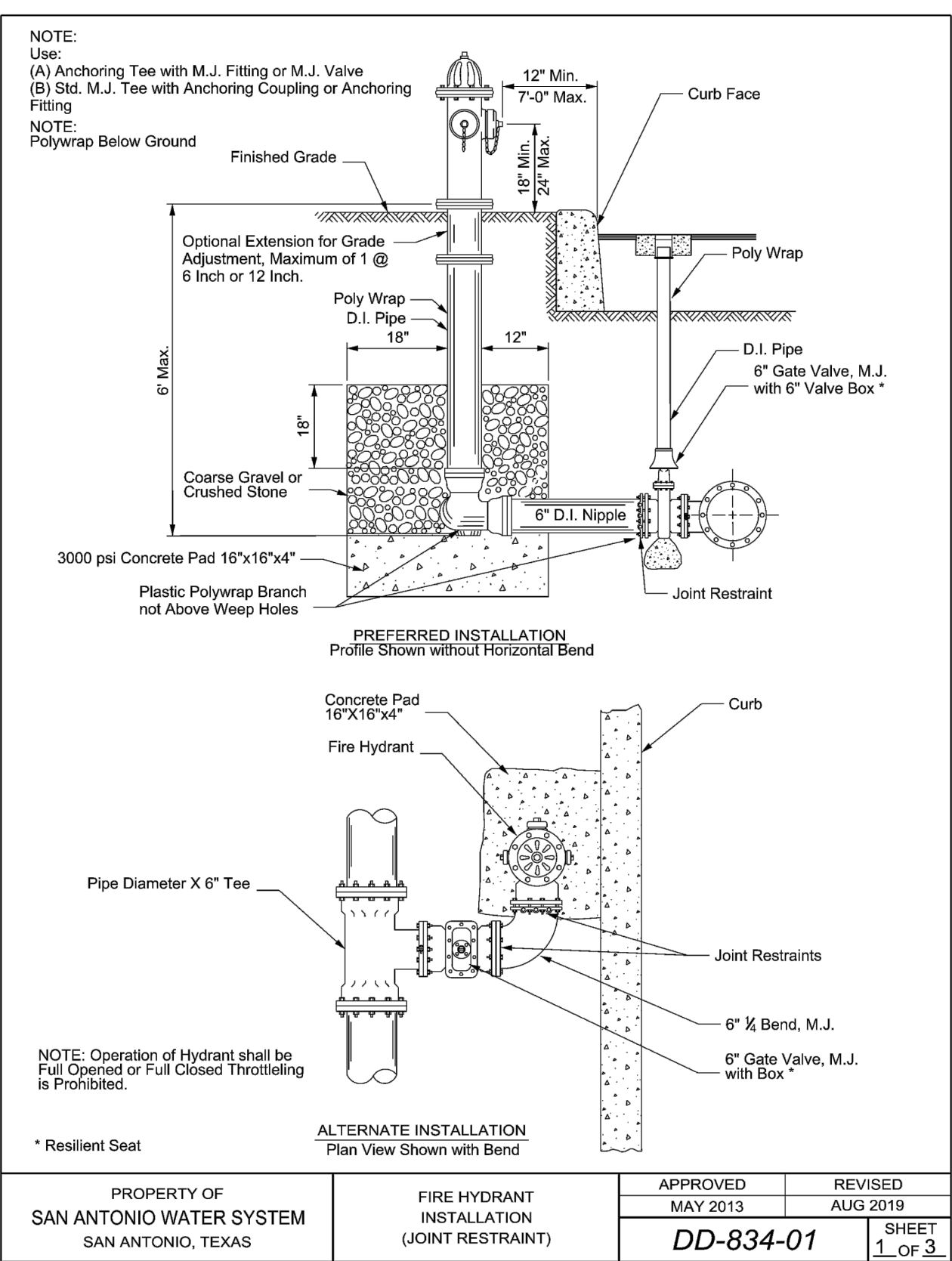
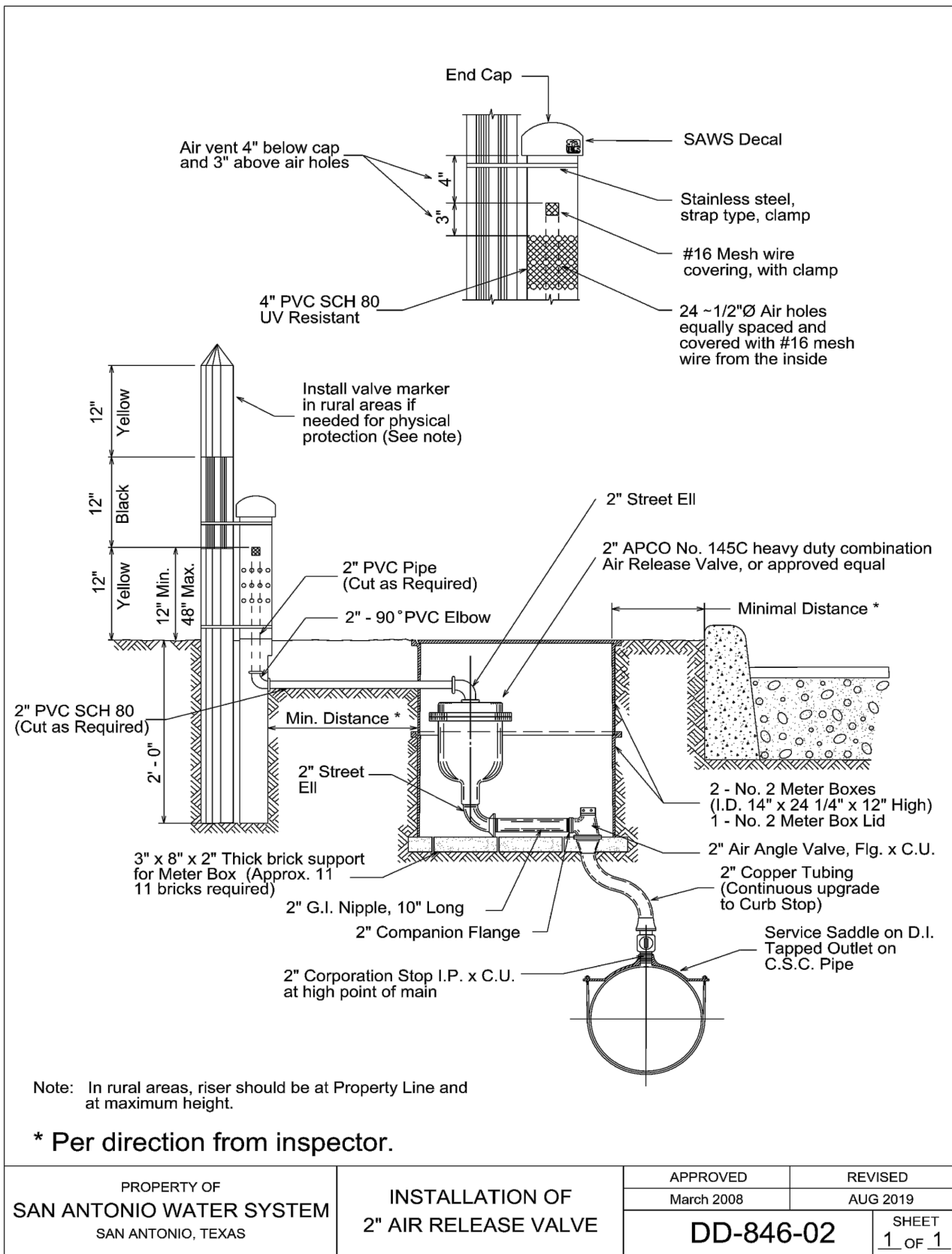
PRESSURE_ZONE_2			
Developer's Name	KINGFISH DEVELOPMENT, LLC		
Developer's Address	2722 W. BITTERS RD. SUITE 106		
SAN ANTONIO	State	TX	Zip 78248
Phone #	(210) 882-6800	Fax #	
SAWS Block Map #	132-514	Total EDU's	61
Total Linear Footage of Pipe	8" ~ 1,758 L.F. - 12" ~ 928 L.F.	Plat No.	22-11800352
Number of Lots	60	SAWS Job No.	22-1155

SUBMITTAL SET



PRESSURE ZONE 2

CS.2



NOTES:
• PIPE 24" OR LESS USE 1' FROM O/D OF PIPE TO EXCAVATED WALLS.
• PIPE 24" OR GREATER USE 2' FROM O/D OF PIPE TO EXCAVATED WALLS.

TX-DOT SAN ANTONIO DISTRICT
TRENCH BACKFILL DETAIL
NON PAVEMENT

TXDOT PERMIT NO. SAT20221017153623

Developer's Name	KINGFISH DEVELOPMENT, LLC		
Developer's Address	2722 W. BITTERS RD. SUITE 106		
City	SAN ANTONIO	State	TX
Phone	(210) 882-6800	Fax	
SAWS Block Map #	132-514	Total EDU's	61
Total Linear Footage of Pipe	8" ~ 1,758 L.F. - 12" ~ 928 L.F.	Plot No.	22-11800352
Number of Lots	60	SAWS Job No.	22-1155

SUBMITTAL SET

VERDIN SUBDIVISION, UNIT 2
WATER DETAILS

Engineers
Surveyors
Planners

MIR

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

PROJ. # 22092
CHKD. BY: [blank]
DATE: [blank]

SHEET

C3.3

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

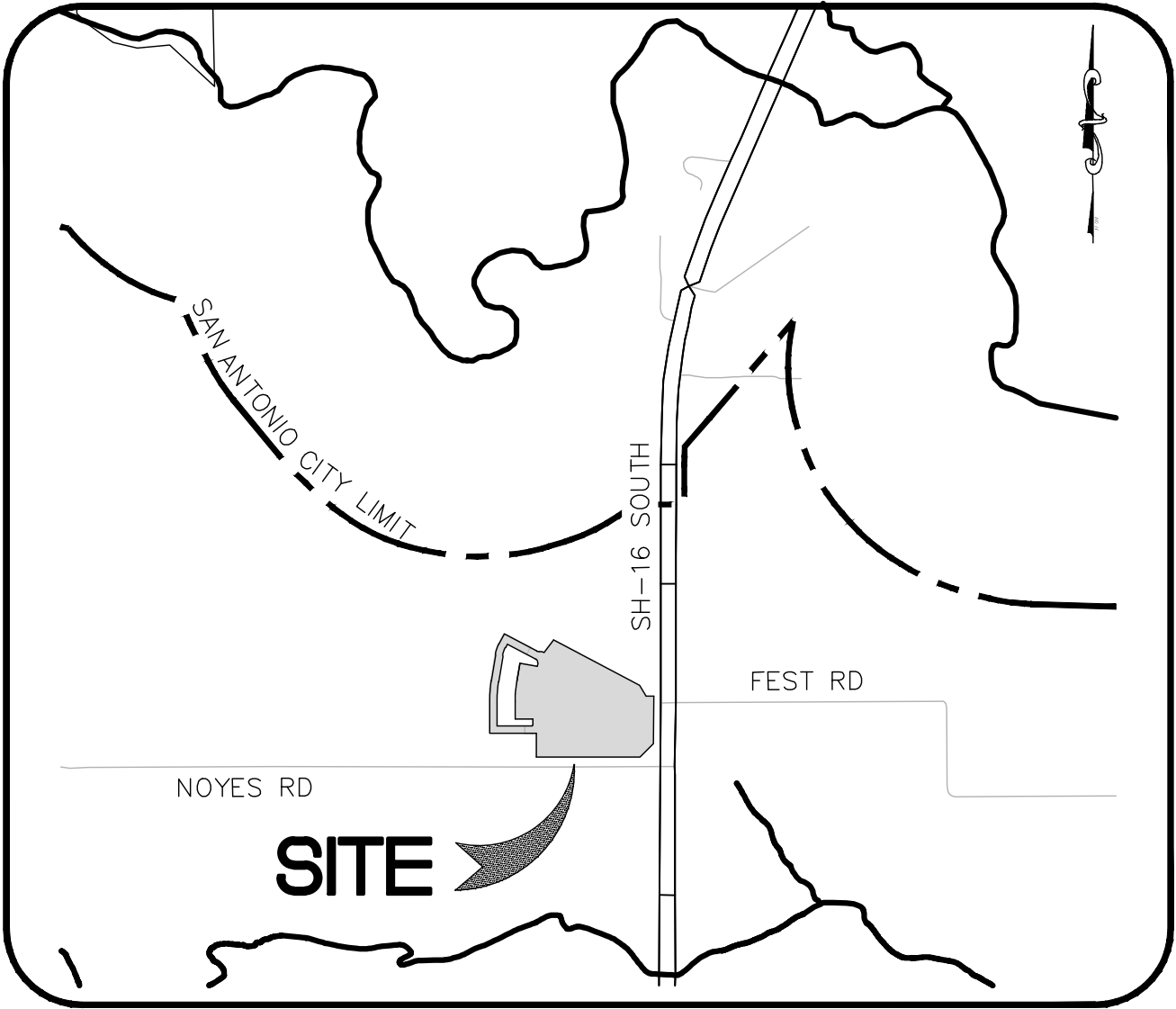
REINFORCING STEEL: CONFORM TO A.S.T.M. A-615, GRADE 60
(2" COVER UNLESS OTHERWISE NOTED ON PLANS)

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 THE CITY OF SAN ANTONIO UDC, APPENDIX H- STORM WATER DESIGN CRITERIA MANUAL, CHAPTER 16.2.1- GRASSES. 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	805.81(C)
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:
OCTOBER 2022

LEGAL DESCRIPTION:

BEING A 13.578 ACRE TRACT OF LAND BEING SITUATED IN THE RUFENO RODRIGUEZ SURVEY NO. 49, ABSTRACT NO. 613, COUNTY BLOCK NO. 4202, AS CONVEYED TO KING FISH DEVELOPMENT, LLC BY WARRANTY DEED WITH VENDOR'S LIEN AS RECORDED IN DOCUMENT NUMBER 20220169411, BEXAR COUNTY TEXAS.



SHEET INDEX

SHEET NO.	TITLE
C4.0	STREET COVER
C4.1	TRAFFIC PLAN
C4.2	TRAFFIC DETAILS
C4.3	TRAFFIC DETAILS
C4.4	FLYCATCHER WAY PLAN AND PROFILE
C4.5	PINTAIL PLACE PLAN AND PROFILE
C4.6	WREN WAY PLAN AND PROFILE
C4.7	TERN TRACE & STILT STREET PLAN AND PROFILE
C4.8	DRAIN "A" PLAN AND PROFILE
C4.9	DRAIN "B" PLAN AND PROFILE
C4.10	TEMPORARY INTERCEPTOR DRAIN "C" PLAN AND PROFILE
C4.11	STANDARD DETAILS
C4.12	STANDARD DETAILS
C4.13	STANDARD STREET SECTIONS

BEXAR COUNTY

MTR

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

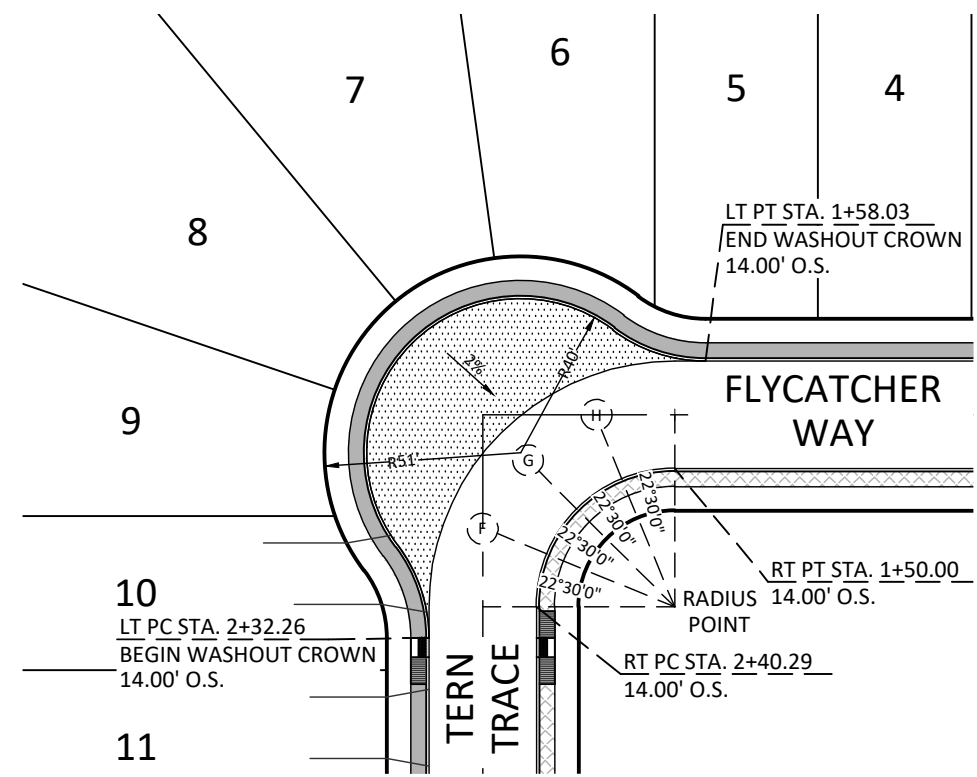
• Engineers

• Surveyors

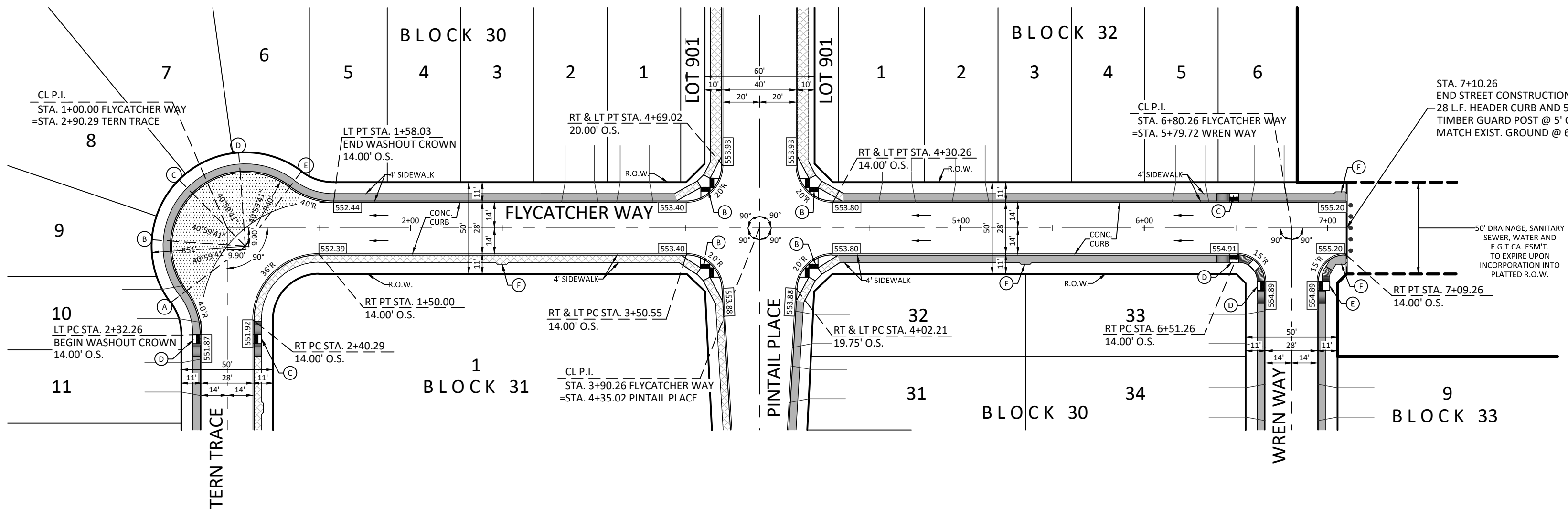
• Planners

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.



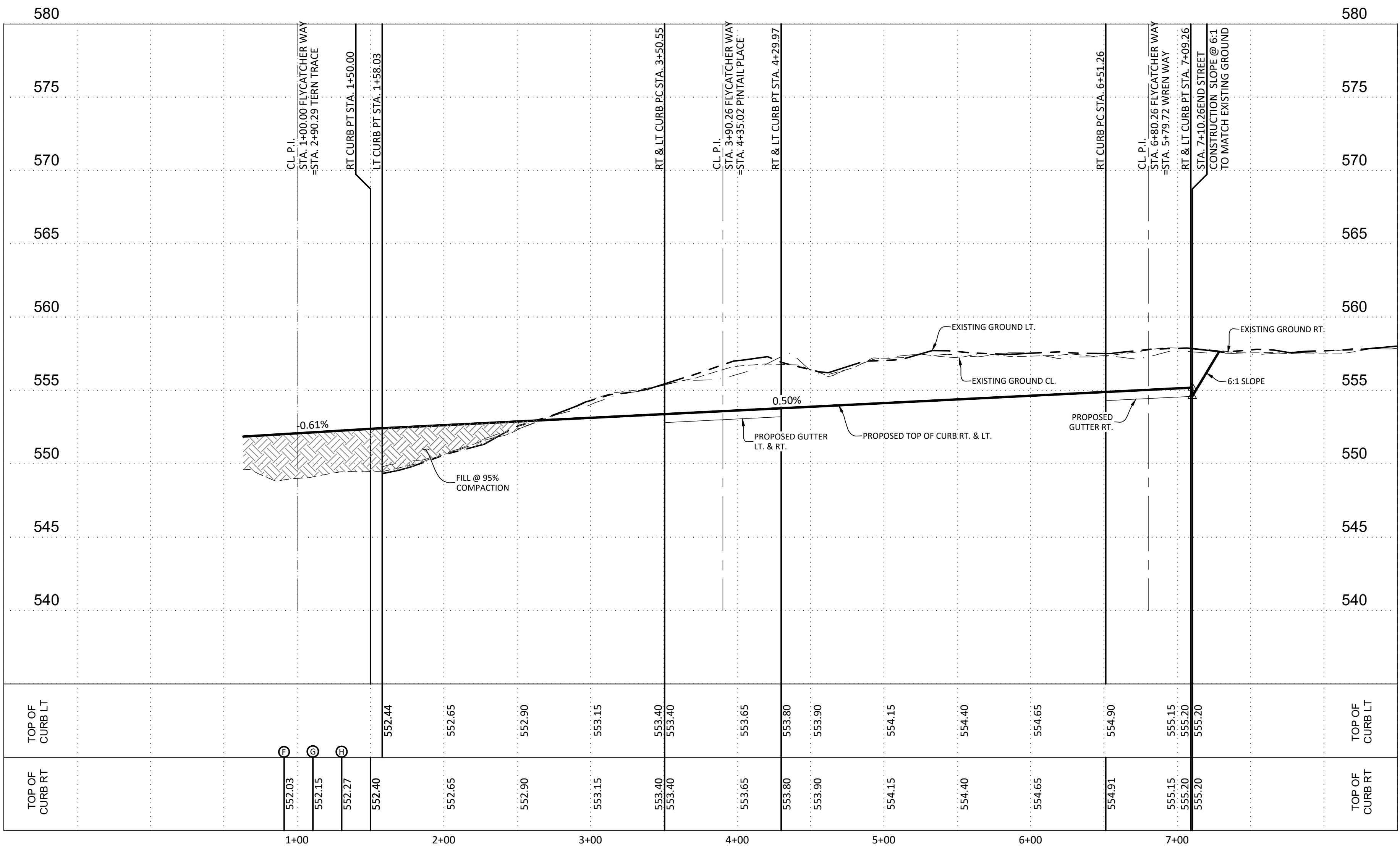
KNUCKLE SAC TABLE		
POINT	TOP OF CURB	GUTTER
LT PC STA. 2+32.26	551.87	551.29
A	552.10	551.52
B	552.35	551.77
C	552.50	551.92
D	552.53	551.95
E	552.44	594.23
F	552.03	594.51
G	552.15	594.79
H	552.40	551.82
LT PT STA. 1+58.03	552.44	551.86



FLYCATCHER WAY

STA. 1+00.00 TO STA. 7+10.26

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



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

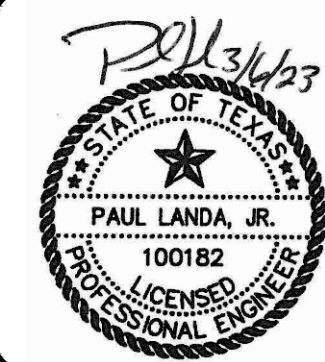
PROPOSED CONTOUR

PROPOSED CONCRETE CURB

FLOW ARROW

• 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) 698-5055



VERDIN SUBDIVISION UNIT 2
STREET PLAN & PROFILE
FLYCATCHER WAY
STA. 1+00.00 TO STA. 7+10.26

SHEET

C4.4

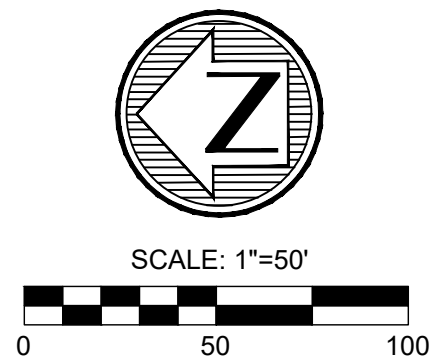
SUBMITTAL SET

CAUTION!!!
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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.

KNUCKLE SAC TABLE		
POINT	TOP OF CURB	GUTTER
RT PC STA. 3+43.98	552.32	551.74
J	552.60	552.02
K	552.91	552.33
L	553.08	552.50
M	553.09	552.51
N	552.94	552.23
RT PT STA. 1+61.69	552.85	552.27

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD
C1	32.99'	200.00'	9°27'01"	16.53'	32.95'



PLAT NO. 22-11800352

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

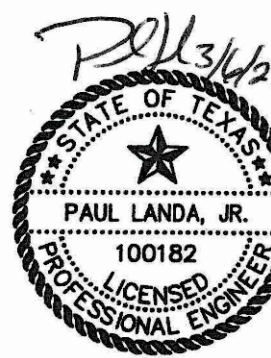
1
A
B
C
D
E
F
805.81TC
805.81

• Engineers
• Surveyors
• Planners

MTR

Moy Tarin Ramirez Engineers, LLC

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

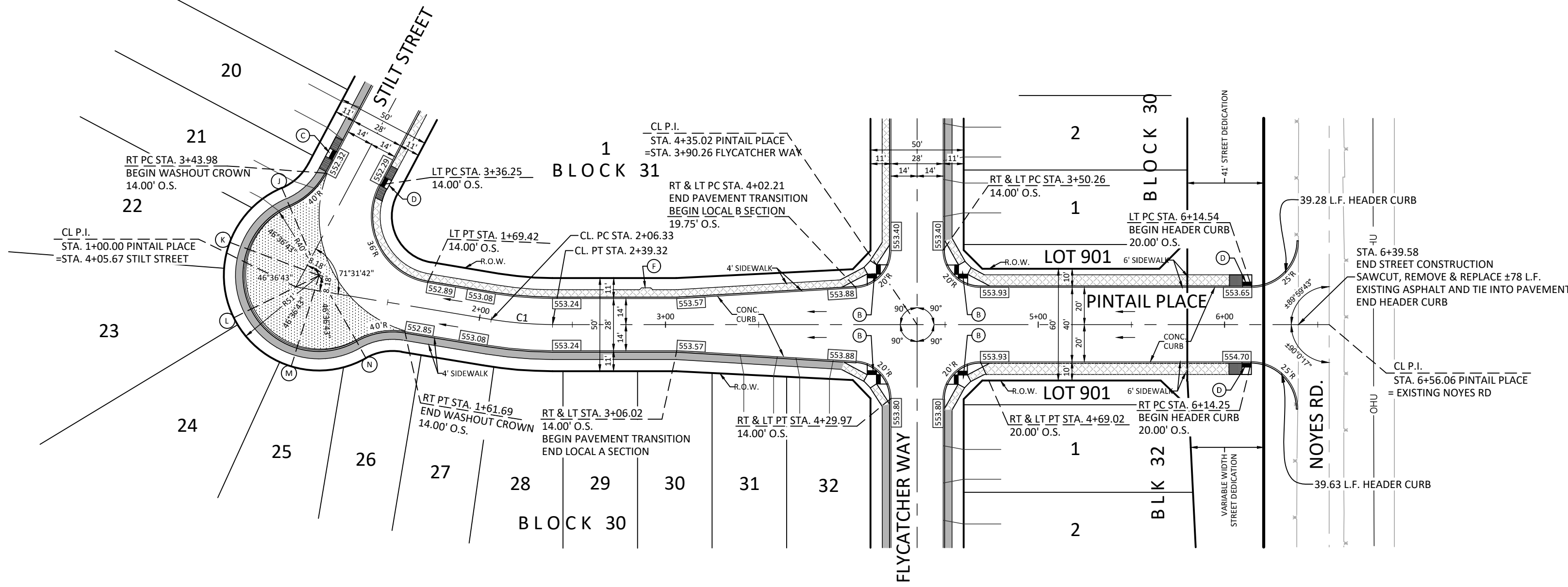
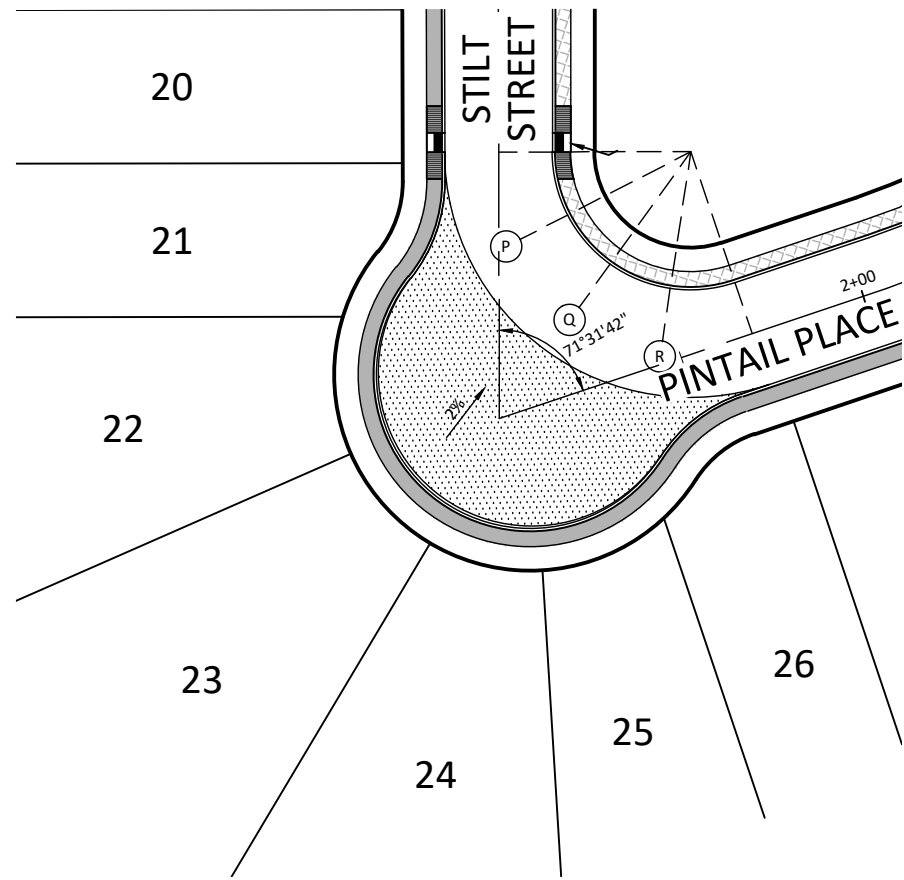


VERDIN SUBDIVISION UNIT 2
STREET PLAN & PROFILE
PINTAIL PLACE
STA. 1+00.00 TO STA. 6+39.58

SHEET

C4.5

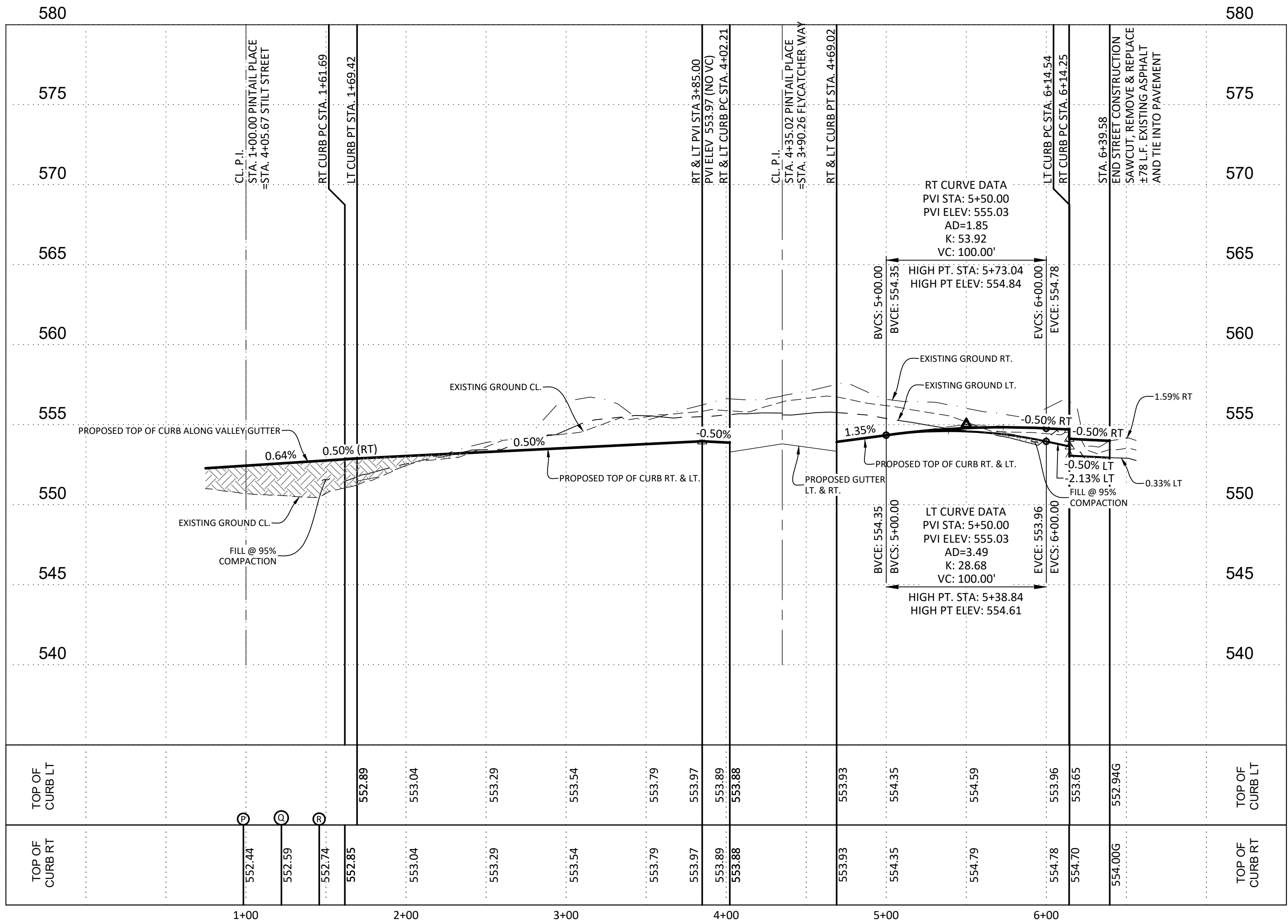
SUBMITTAL SET



PINTAIL PLACE

STA. 1+00.00 TO STA. 6+39.58

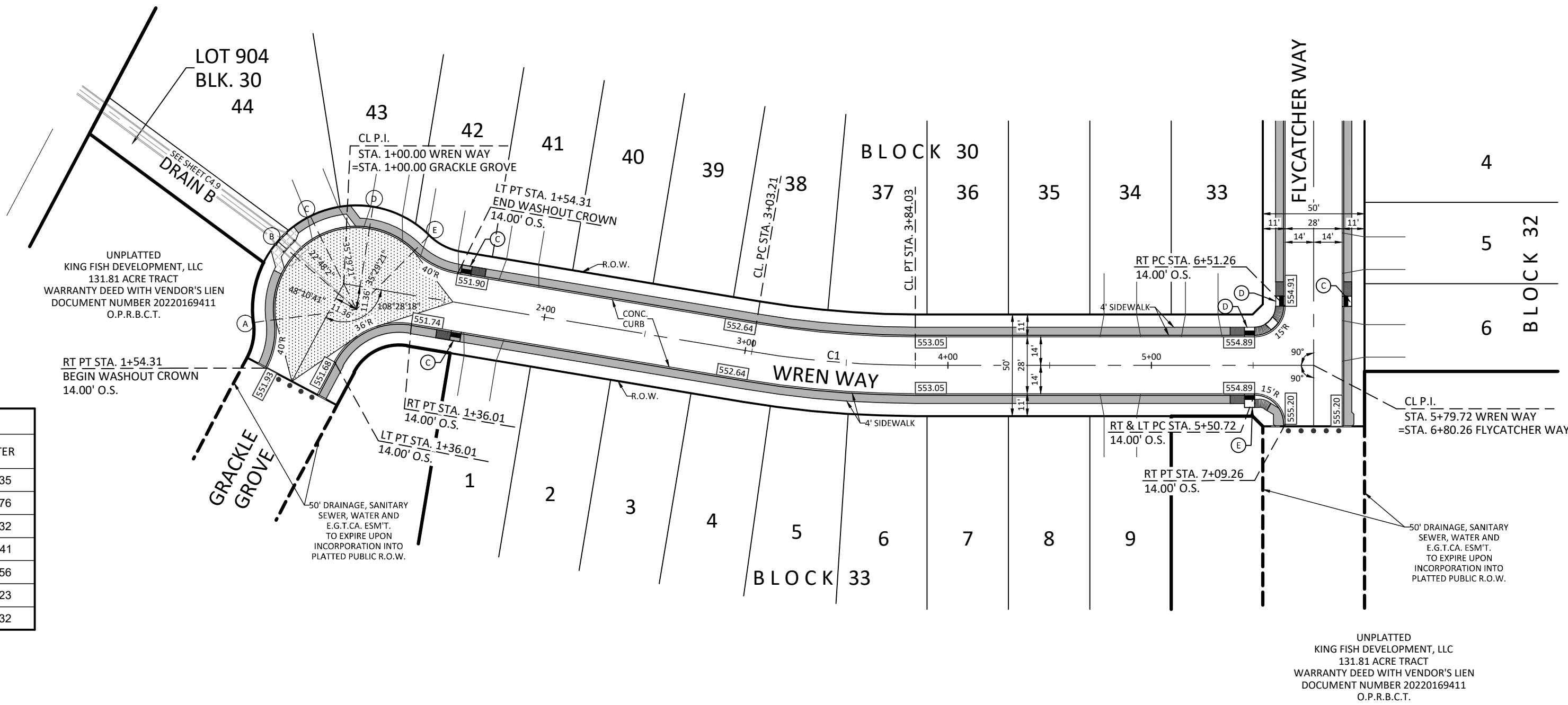
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



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.

KNUCKLE SAC TABLE		
POINT	TOP OF CURB	GUTTER
RT PT STA. 1+54.31	551.93	551.35
A	551.34	550.76
B	550.90	550.32
C	550.99	550.41
D	551.14	550.56
E	551.52	594.23
LT PT STA. 1+54.31	551.90	551.32

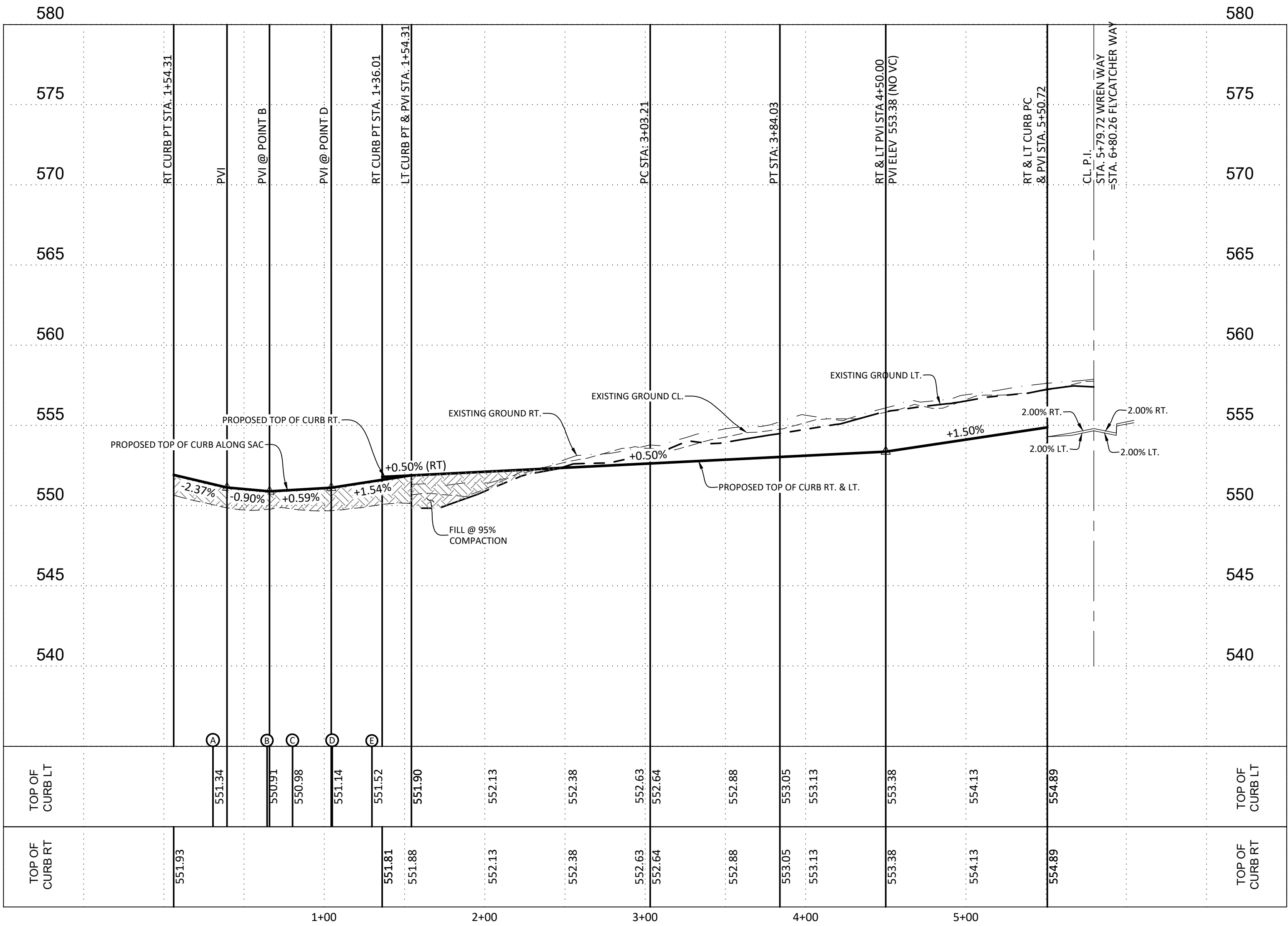


CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD
C1	80.82'	490.00'	9°27'01"	40.50'	80.73'

WREN WAY

STA. 1+00.00 TO STA. 5+79.72

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



LEGEND

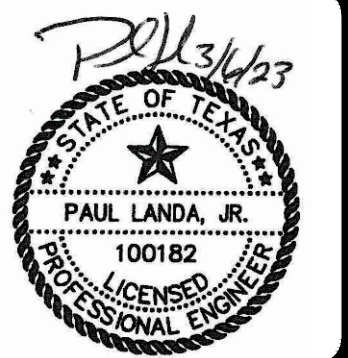
- CONTRACTOR TO TIE EXISTING AND PROPOSED CURB/SIDEWALK PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY ELEVATIONS.
- SIDEWALK WHEELCHAIR RAMP - TYPE 10 DIRECTIONAL RAMPS (SINGLE)
- SIDEWALK WHEELCHAIR RAMP - TYPE 10 DIRECTIONAL RAMPS (DUAL)
- SIDEWALK WHEELCHAIR RAMP - TYPE II (DEVELOPER INSTALLED)
- 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

REVISIONS

NO.	DESCRIPTION	DATE	BY

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) 698-5051



VERDIN SUBDIVISION UNIT 2
STREET PLAN & PROFILE
WREN WAY
STA. 1+00.00 TO STA. 5+79.72

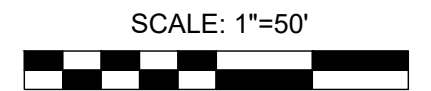
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STREET TIE-IN & INTERSECTION
PAVEMENT REPLACEMENT AND/OR ANY
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R.O.W.

KNUCKLE SAC TABLE		
POINT	TOP OF CURB	GUTTER
LT PC STA. 2+32.26	551.87	551.29
A	552.10	551.52
B	552.35	551.77
C	552.50	551.92
D	552.53	551.95
E	552.44	594.23
LT PT STA. 1+58.03	552.44	551.86

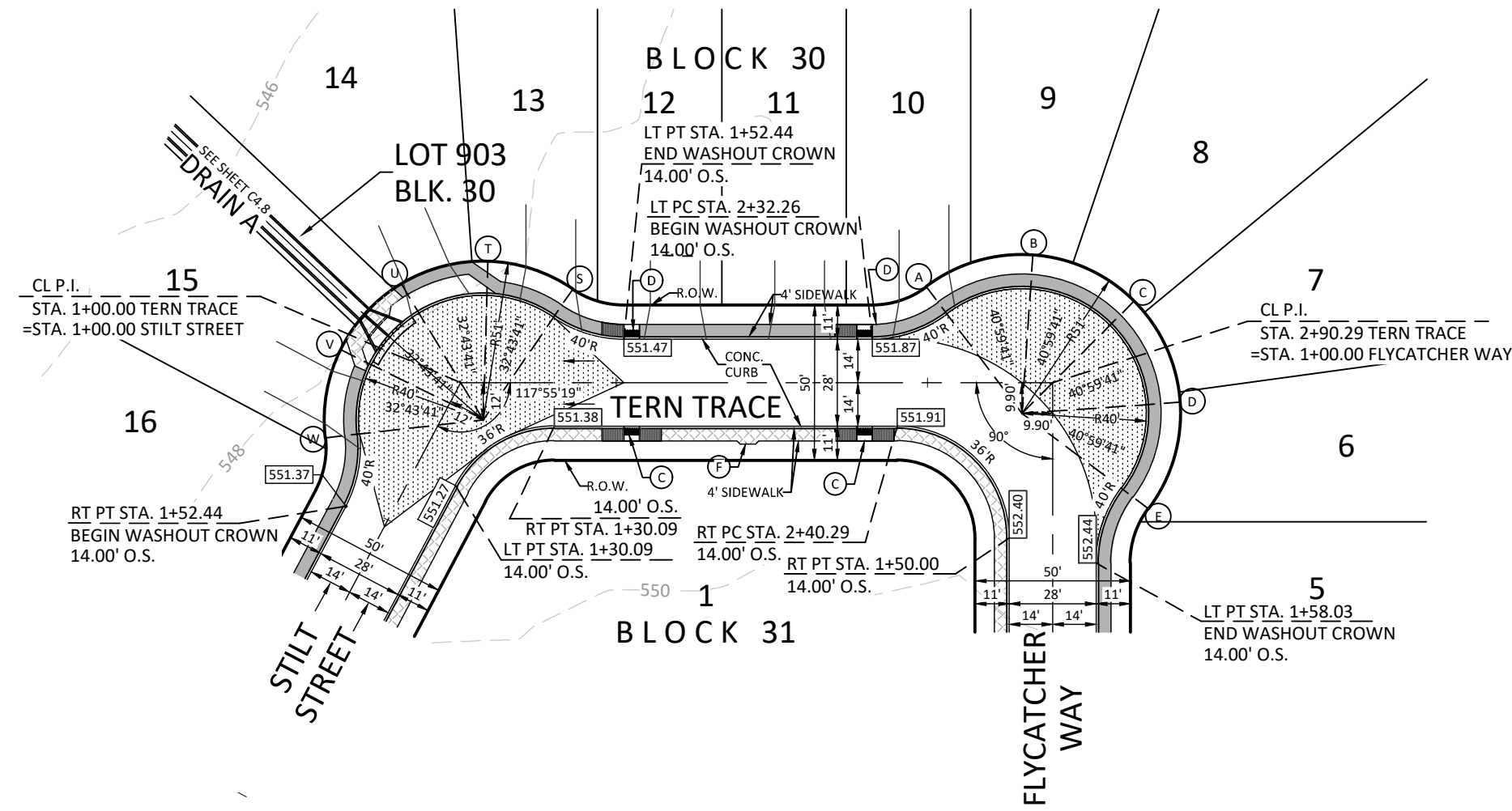
KNUCKLE SAC TABLE		
POINT	TOP OF CURB	GUTTER
LT PT STA. 1+52.44	551.47	550.89
S	551.30	550.72
T	551.14	550.56
U	550.98	550.40
V	550.99	550.41
W	551.17	594.23
RT PT STA. 1+61.69	551.37	550.79

KNUCKLE SAC TABLE		
POINT	TOP OF CURB	GUTTER
RT PC STA. 3+43.98	552.32	551.74
J	552.60	552.02
K	552.91	552.33
L	553.08	552.50
M	553.09	552.51
N	552.94	594.23
RT PT STA. 1+61.69	552.85	552.27



LEGEND

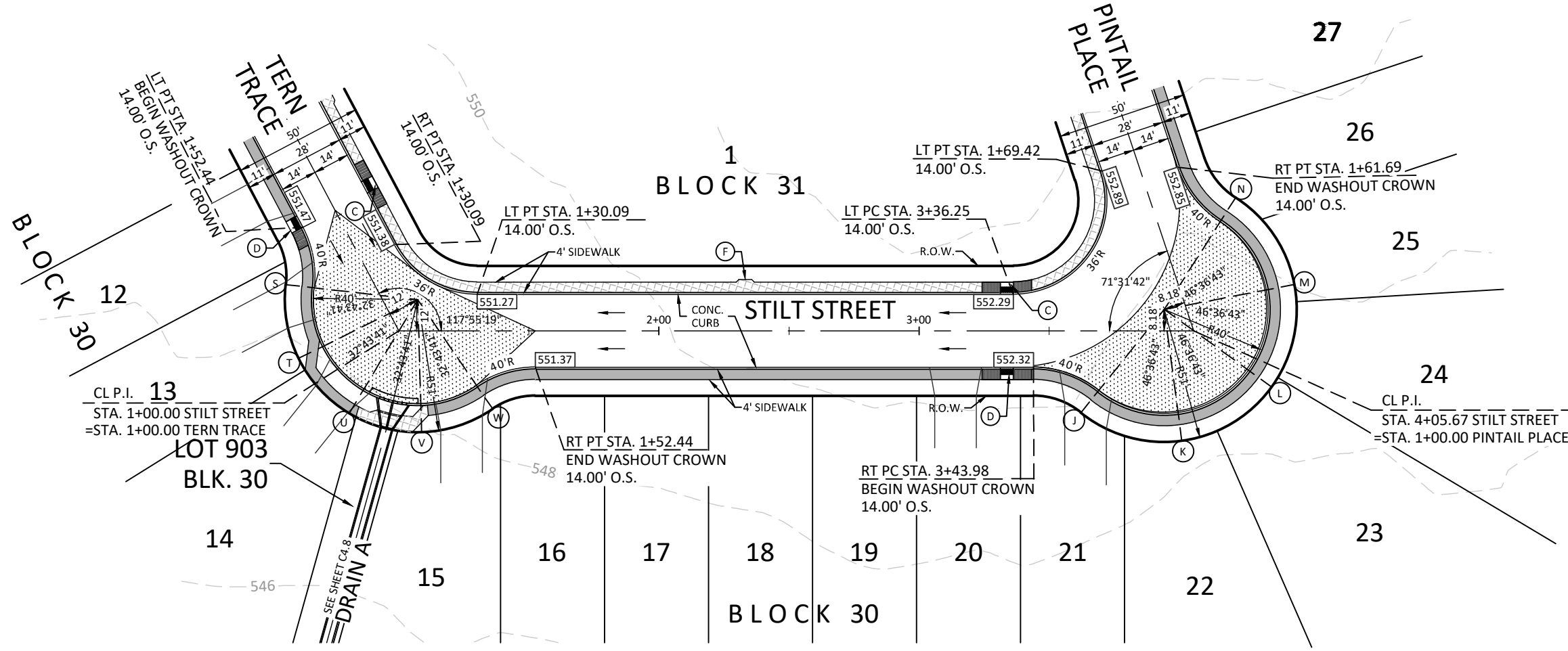
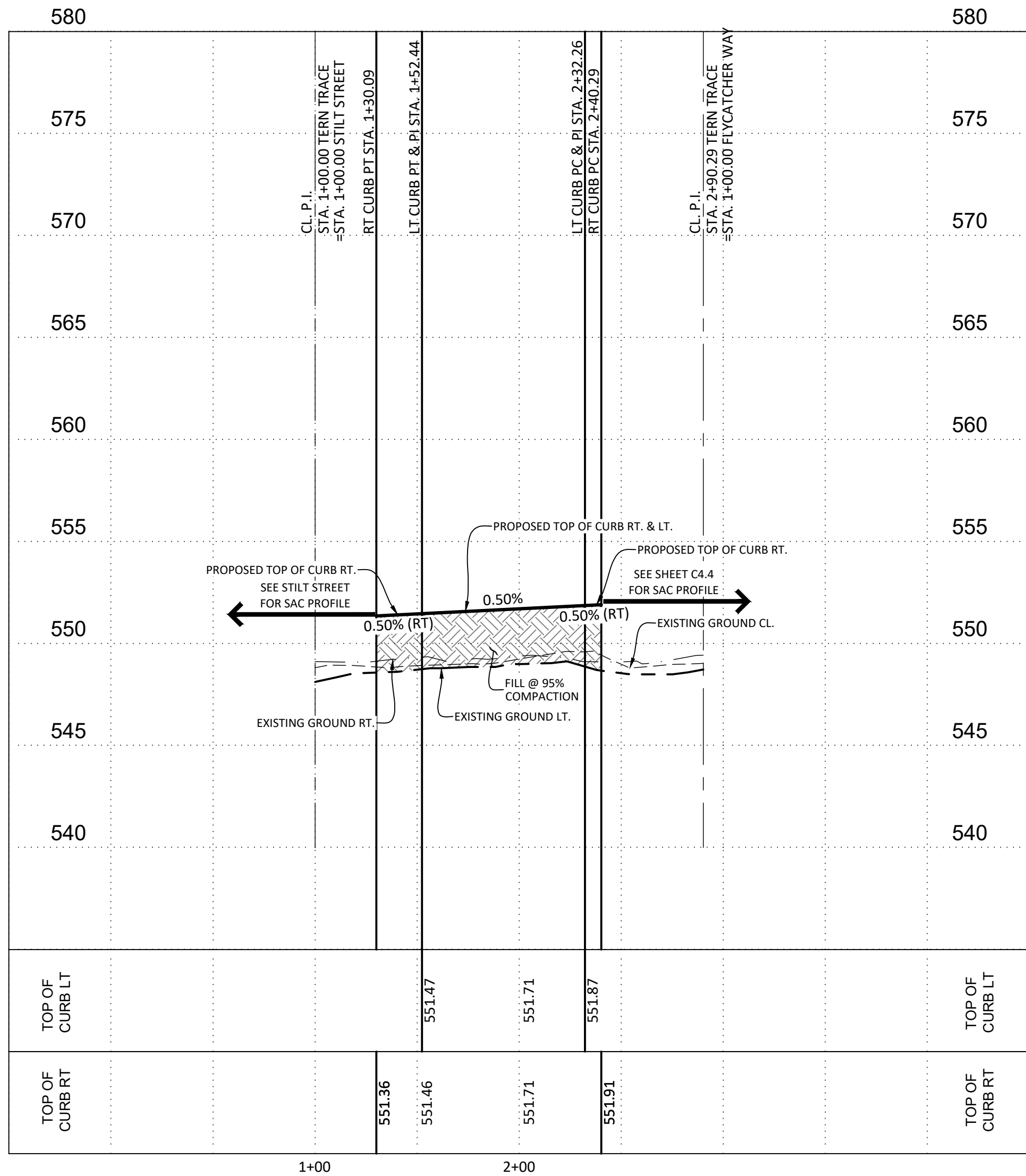
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- SIDEWALK WHEEL CHAIR RAMP
- WASH-OUT CROWN
- FILL @ 95% COMPACTION
- POSSIBLE DRIVEWAY LOCATION
- PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED CONCRETE CURB
- FLOW ARROW



TERN TRACE

STA. 1+00.00 TO STA. 2+90.29

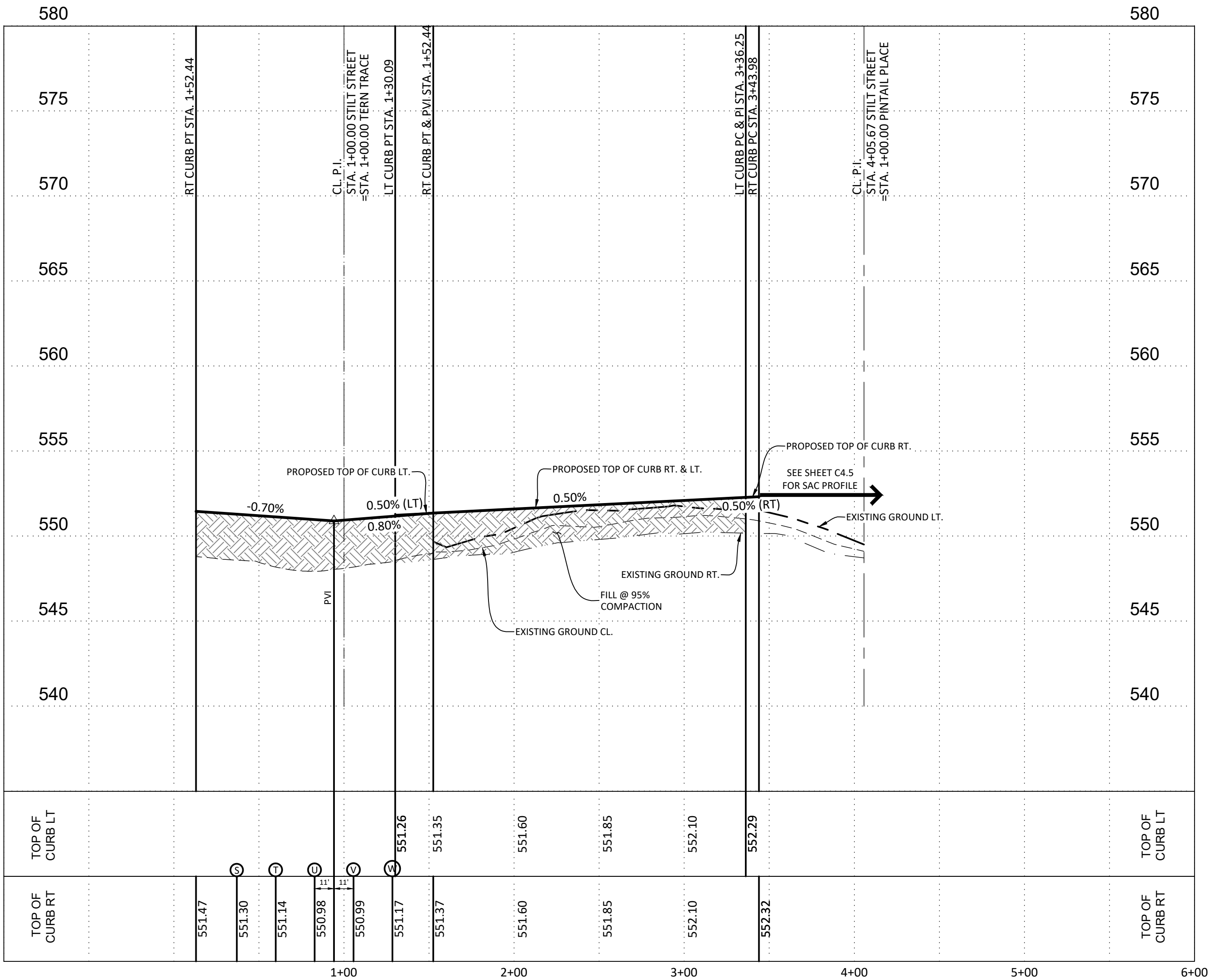
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



STILT STREET

STA. 1+00.00 TO STA. 4+05.67

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

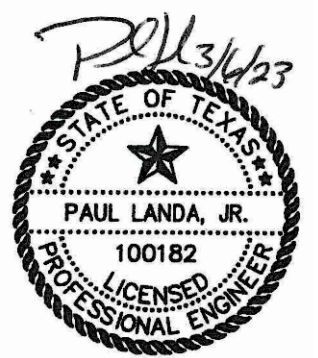


REVISIONS		NO.	DATE	DESCRIPTION
BY				
CHKD. BY				
DATE				

Engineers
Surveyors
Planners

MTR

May 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

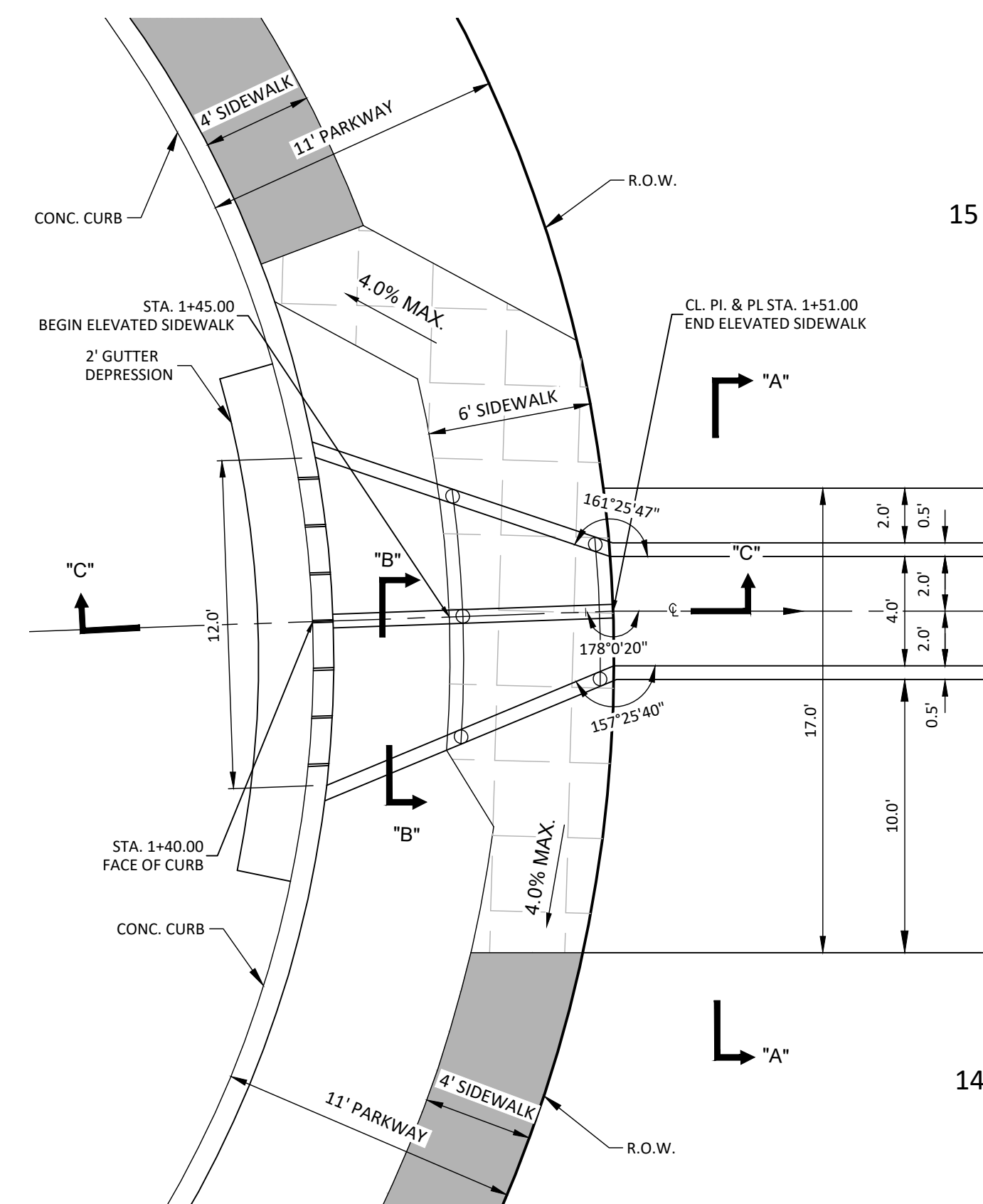




VERDIN SUBDIVISION UNIT 2
STREET PLAN & PROFILE
TERN TRACE & STILT STREET
STA. 1+00.00 TO STA. 2+90.29 & STA. 1+00.00 TO STA. 4+05.67

SHEET

C4.7

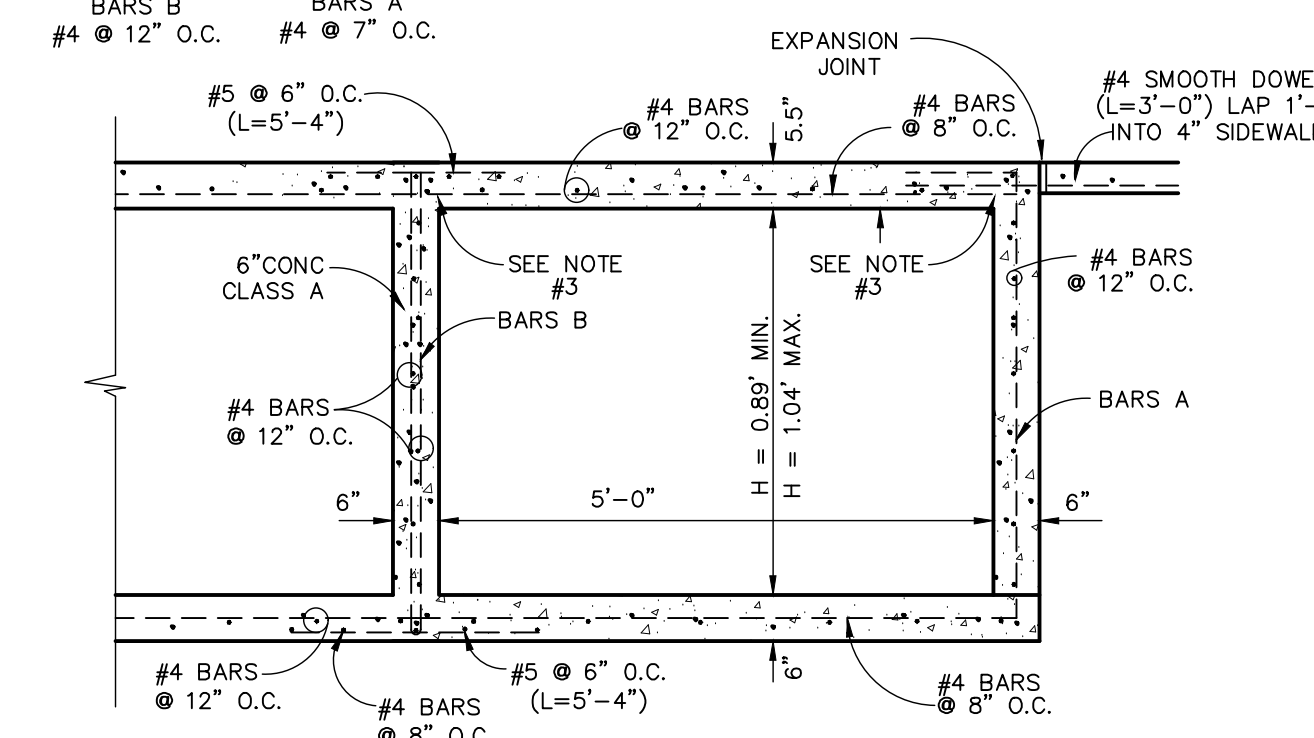
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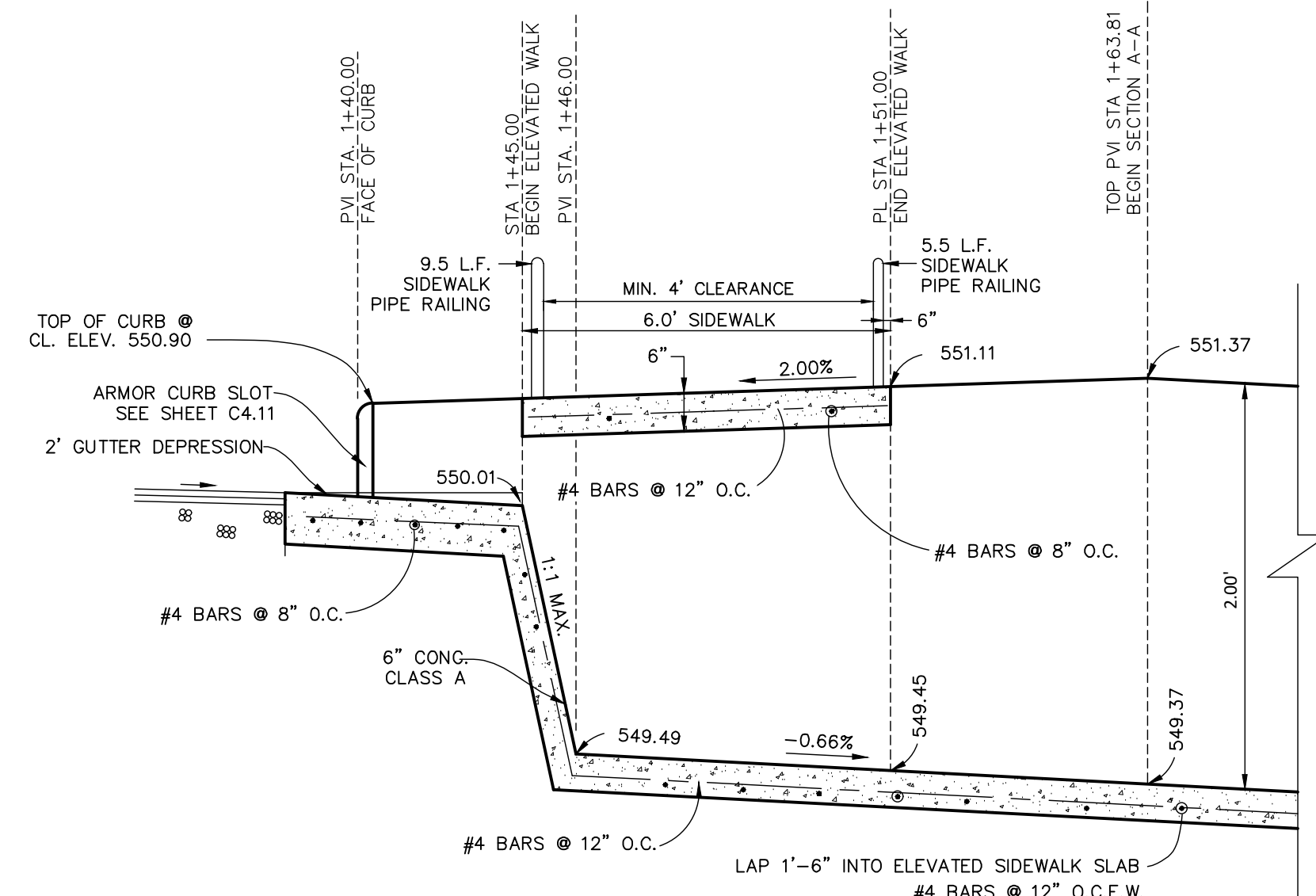



BARS B BARS A
 #4 @ 12" O.C. #4 @ 7" O.C.

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



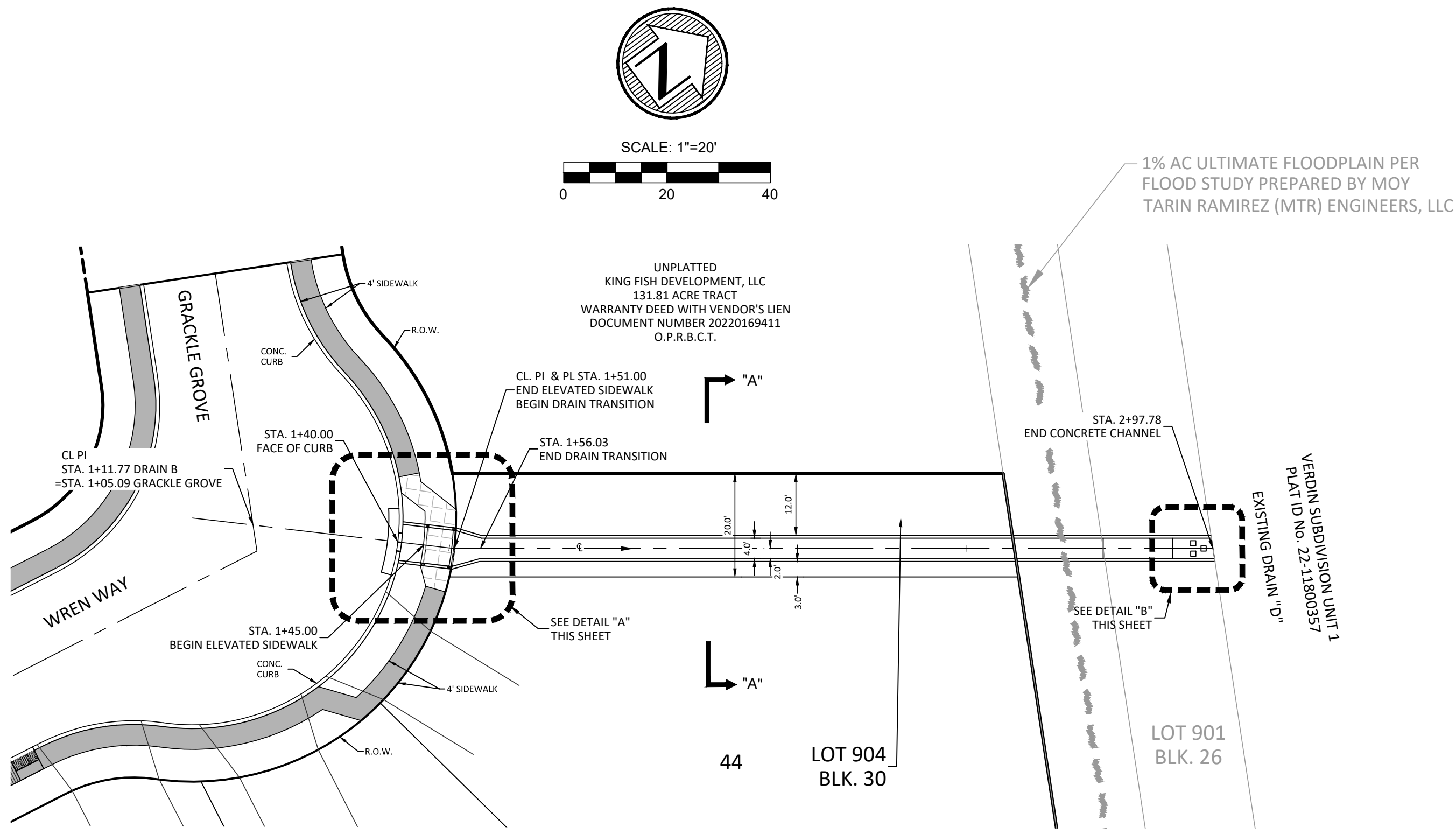
SECTION "B-B"
(N.T.S.)



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



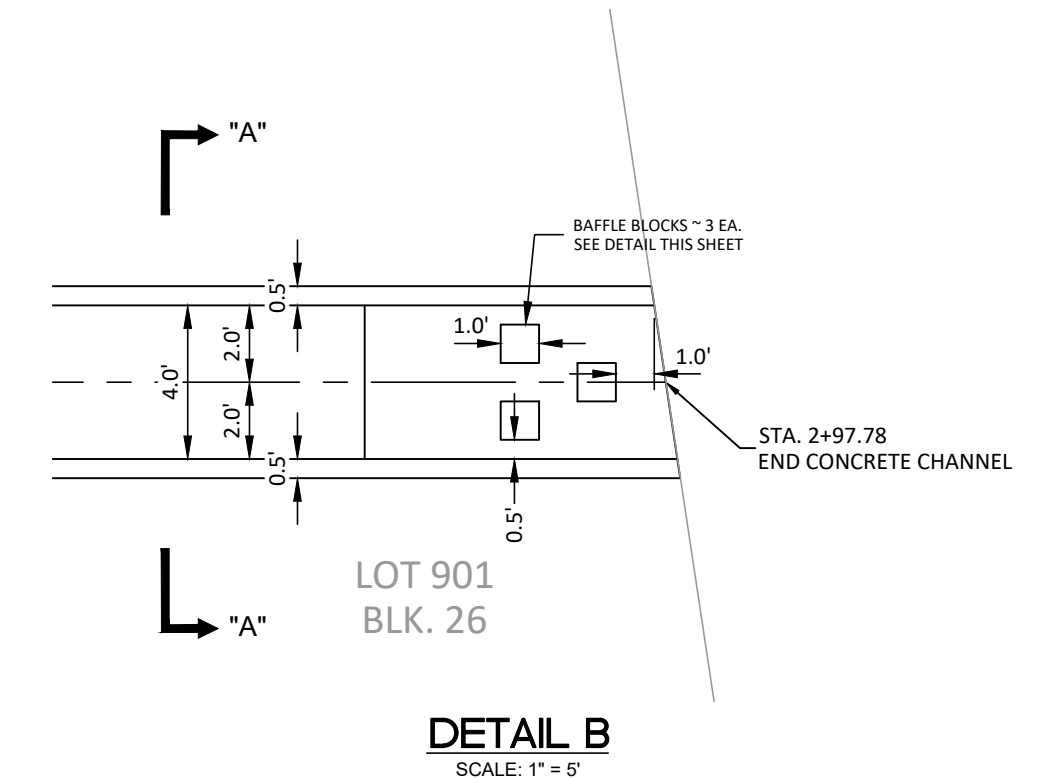
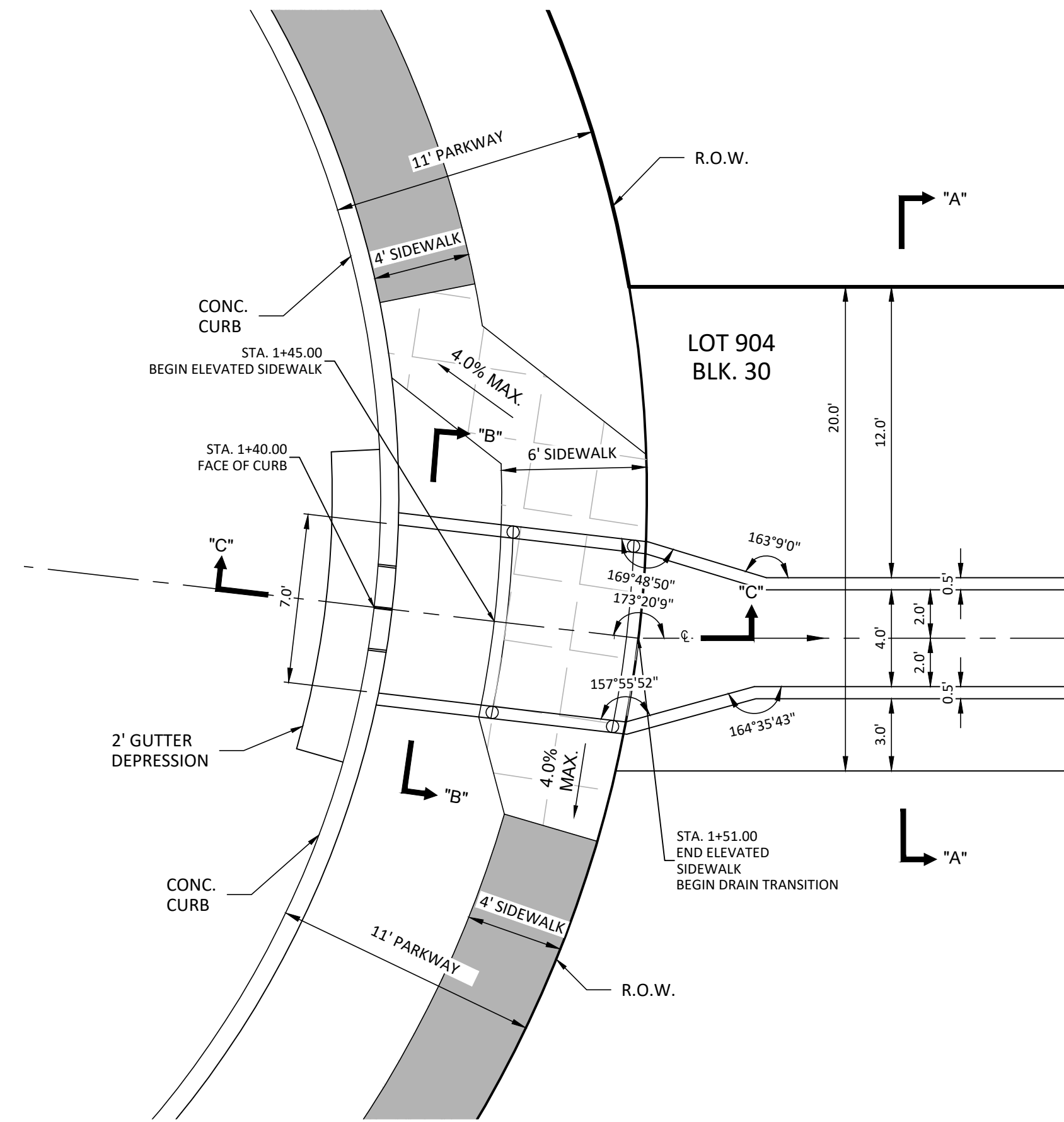
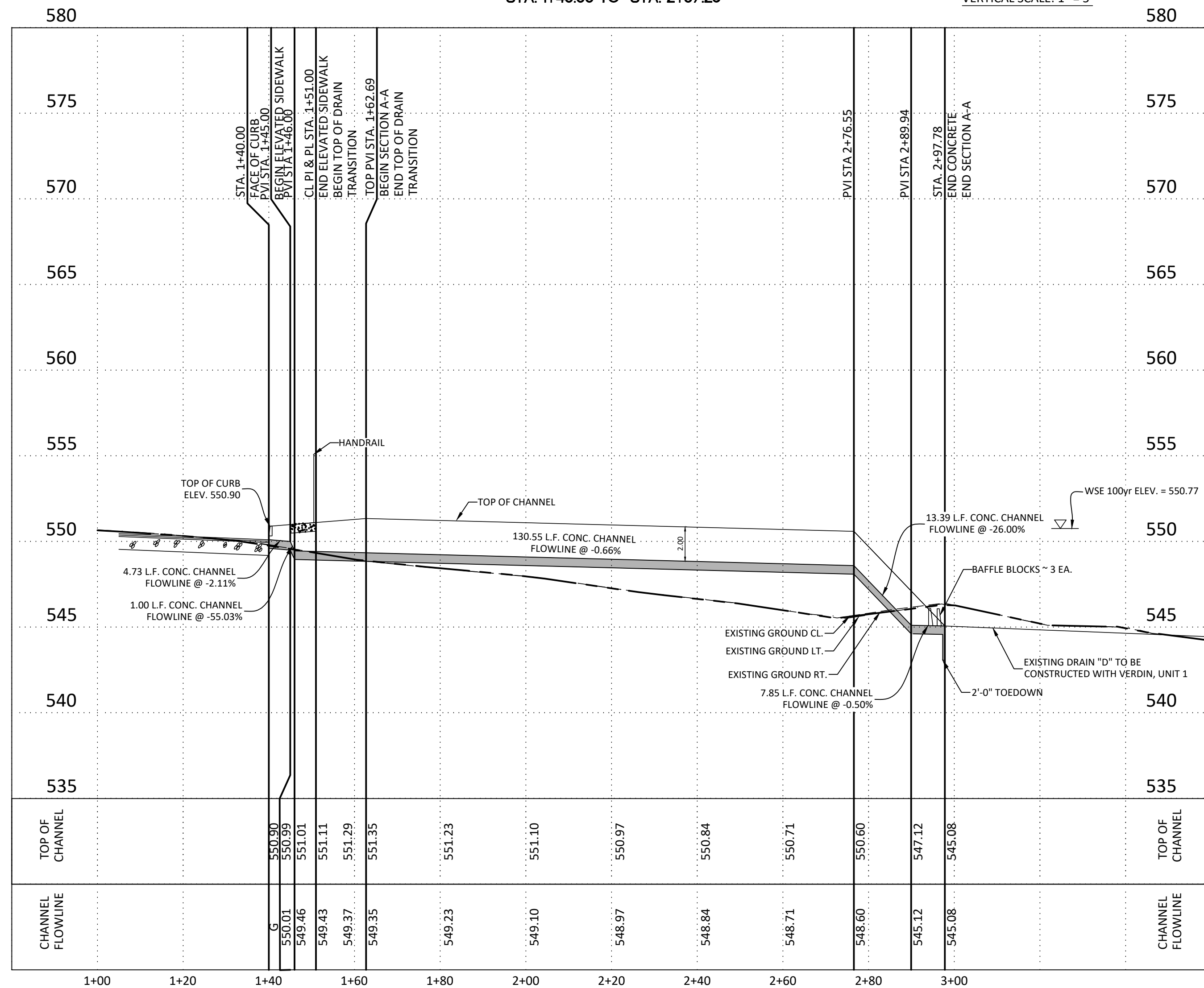
Plot Date: March 9, 2023 User: G. Arjona Ramirez
R:\Midwest\Twin Unit 2\Drawings\22-11800357.dwg 3:48:20pm 3/9/23 Plot and Printing



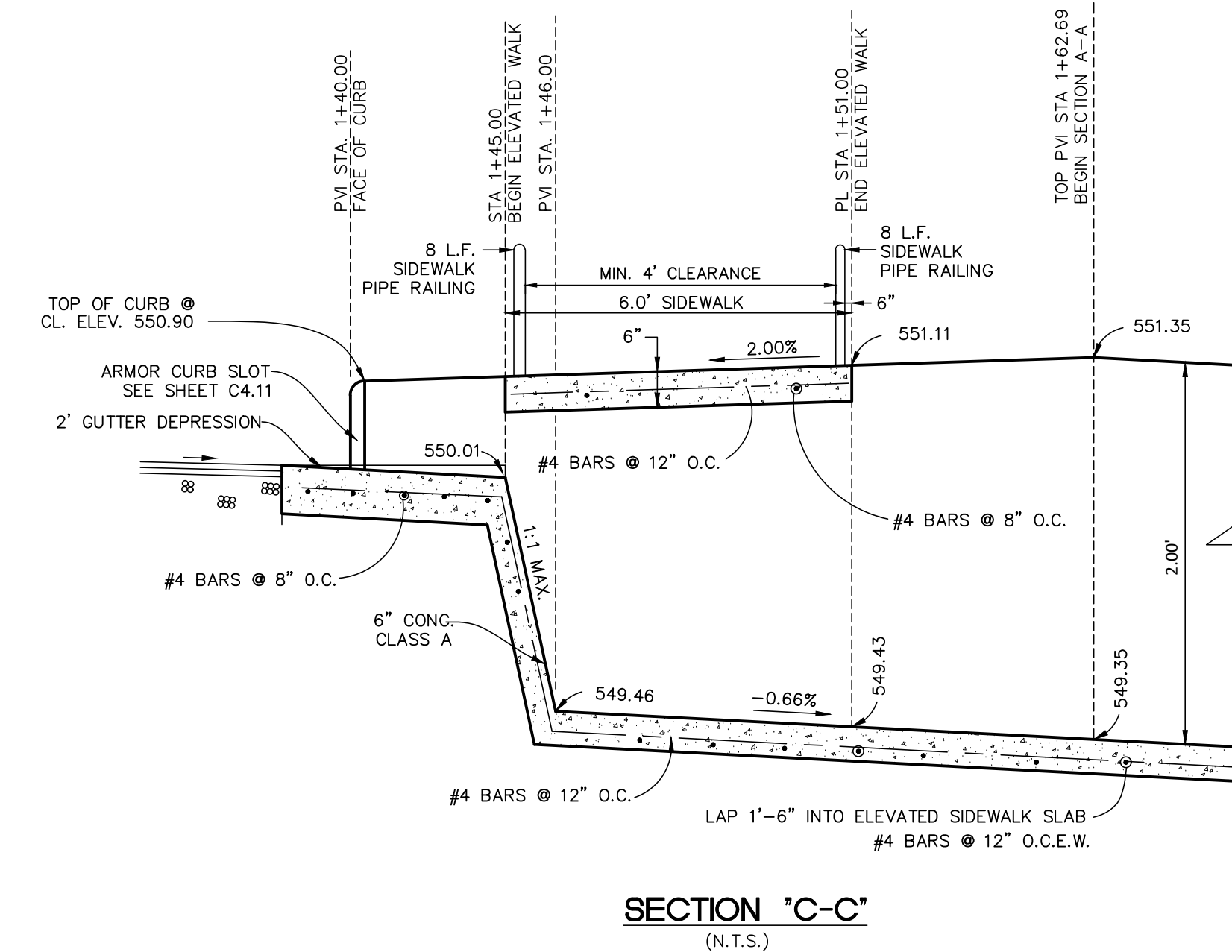
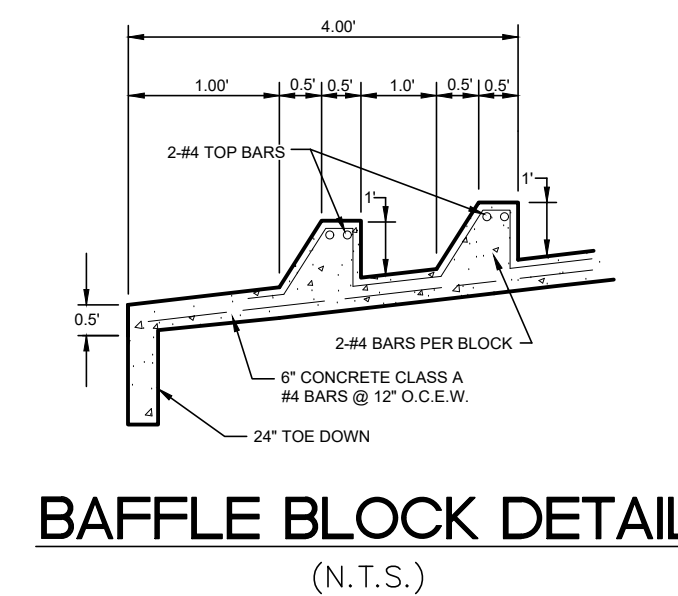
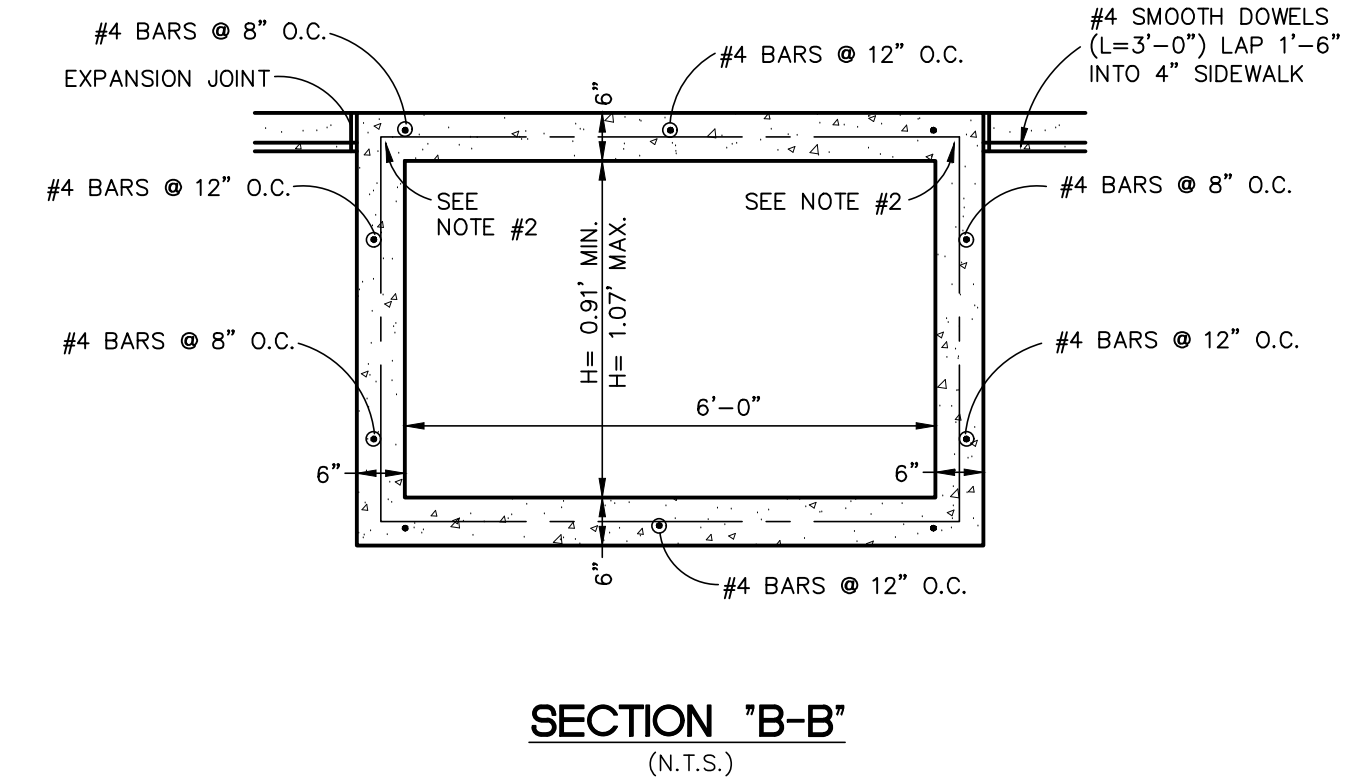
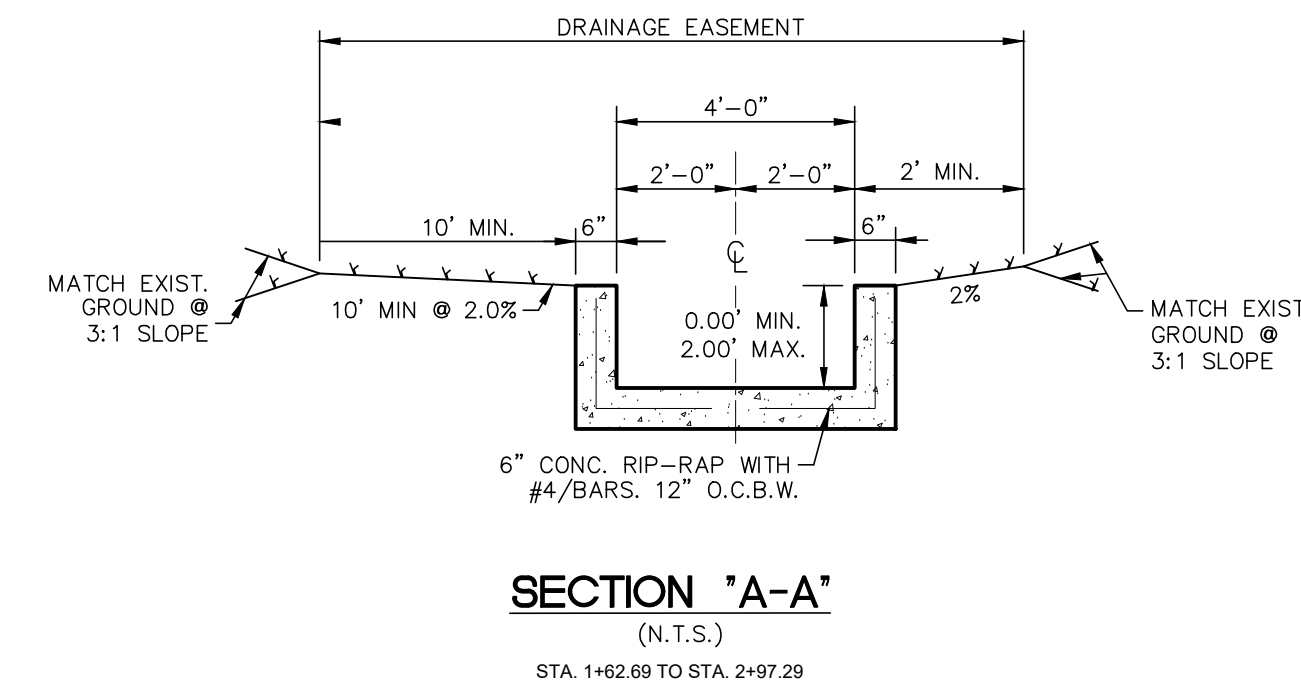
DRAIN "B"

STA. 1+40.00 TO STA. 2+97.29

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



- PLAT NO. 22-11800352
- 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 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.



SUBMITTAL SET

VERDIN SUBDIVISION UNIT 2
DRAIN PLAN & PROFILE
DRAIN "B"

STA. 1+40.00 TO STA. 2+97.29

SHEET

C4.9

REVISIONS

NO.	DATE	DESCRIPTION

BY

DATE

NO.

PROJ. #

DGN. BY:

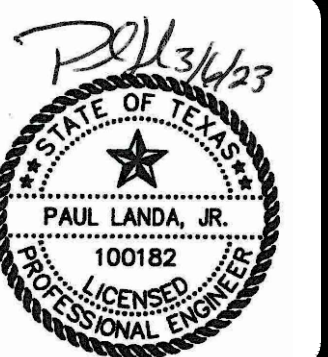
CHKD. BY:

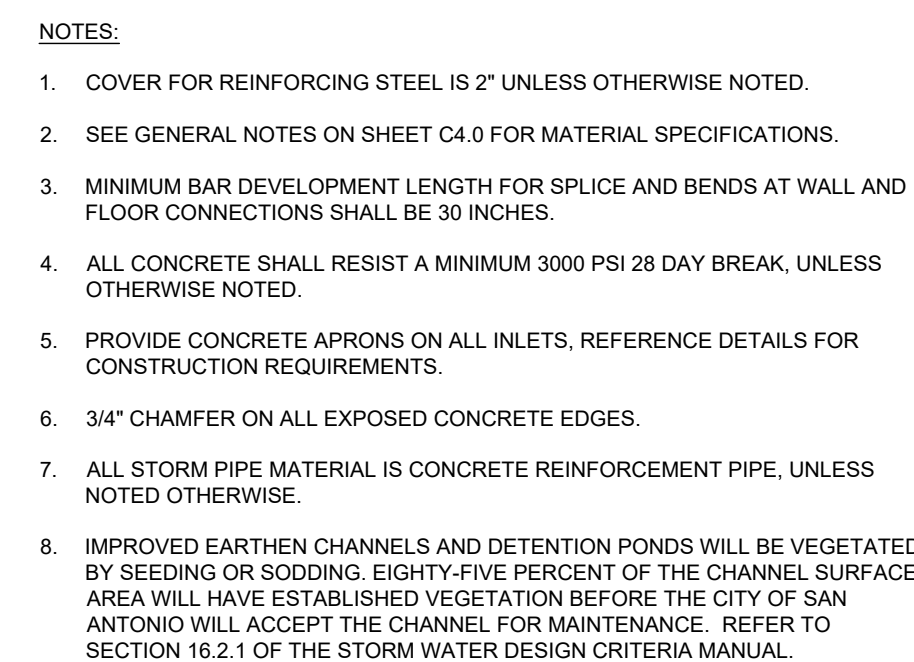
DATE

Engineers
Surveyors
Planners

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

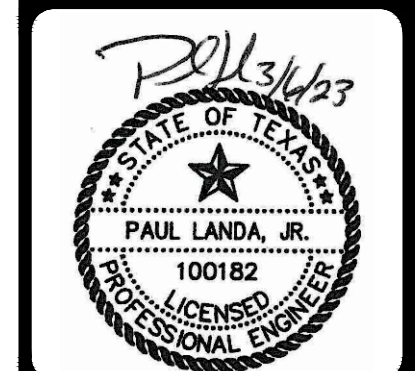




CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD
C1	64.48'	200.00'	18°28'18"	32.52'	64.20'
C2	128.65'	780.00'	9°27'01"	64.47'	128.51'



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

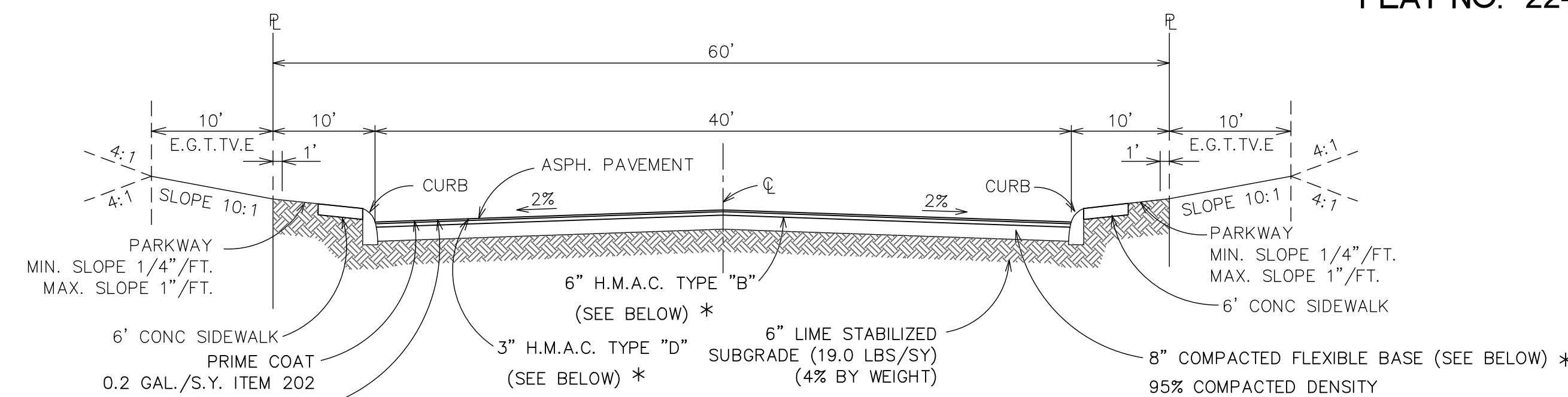


DRAIN PLAN & PROFILE
TEMPORARY INTERCEPTOR DRAIN "C"

STA 1+00 TO STA 7+19.22

SHEET

C4.10



LOCAL "B"

TYPICAL STREET CROSS-SECTION (40' PAVEMENT)

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 2, BEXAR COUNTY, TEXAS PAVEMENT DESIGN

FROST GEOSCIENCES, INC. PROJECT NO. FGS-G 22122-2 REVISED (DECEMBER 12, 2022)

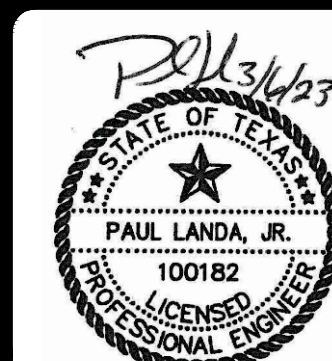
* PAVEMENT SECTION TO BE DETERMINED BY ENGINEER AFTER INSPECTION OF SUBGRADE DURING CONSTRUCTION.

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

PAVEMENT MATERIAL	CLAY SUBGRADE (CBR 3.0)	
	LOCAL A	LOCAL B
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 2, BEXAR COUNTY, TEXAS, PAVEMENT DESIGN, FROST GEOSCIENCES, INC. PROJECT NO.: FGS-6 22122-2, REVISED (DECEMBER 12, 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 UNFILL SELECT FILL (ITEM 410.2) GRAVEL, OR WITH LIMEFILL MILLING

- 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 MIXING, THE PULVERIZATION SHALL BE CHECKED USING THE FOLLOWING CRITERIA (REMOVE NON-SLAKING AGGREGATES RETAINED ON THE $\frac{1}{8}$ INCH SIEVE FROM THE SAMPLE):
 - MINIMUM PASSING 1 $\frac{1}{2}$ INCH _____ 100
 - MINIMUM PASSING $\frac{3}{4}$ INCH _____ 100
 - MINIMUM PASSING NO. 4 SIEVE _____ 60
 - MINIMUM PASSING NO. 20 SIEVE _____ 10
- AFTER THE OUTLIFT AND BEFORE THE DETERMINATION OF MAXIMUM DRY DENSITY (MDD), IN THE LABORATORY, MOLD SPECIMENS TO 95% OF MDD AT OPTIMUM MOISTURE CONTENT AND VERICAL CURS TO BE AT LEAST 160 PDS IN ACCORDANCE WITH VERICAL CURS OUTLIFT FOR LIME TREATMENT.
- AFTER THE OUTLIFT AND BEFORE THE DETERMINATION OF MAXIMUM DRY DENSITY (MDD), IN THE LABORATORY, MOLD SPECIMENS TO 95% OF MDD AT OPTIMUM MOISTURE CONTENT AND VERICAL CURS TO BE AT LEAST 160 PDS IN ACCORDANCE WITH VERICAL CURS OUTLIFT FOR LIME TREATMENT.
- 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).
- AFTER THE CURE PERIOD, THE FIELD DENSITY SHALL BE CHECKED WITHIN 10 DAYS.



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 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 ROOTS OR OTHER UNEVEN FEATURES WILL BE REMOVED. 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 SLOPE SHALL BE STEPPED OR BENCHED. GROUND SURFACES WHICH ARE FLATTER THAN 5 TO 1 SHALL BE BENCHED 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 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 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 COMPACTATION 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 SLOPES SHALL BE COMPACTED. COMPACTING 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.

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 HEIGHT BETWEEN DENSITY TESTING SHALL BE TWELVE INCHES (12") AND AS SPECIFIED BY THE GEOTECHNICAL ENGINEER. DENSITY TESTING SHALL BE CONDUCTED PRIOR TO MEET THE CONTRACTOR'S CONSTRUCTION SCHEDULE. NOTIFICATION BY THE CONTRACTOR FOR GEOTECHNICAL ENGINEER TO CONDUCT TESTS SHALL BE AT LEAST 48 HOURS BEFORE THE TESTS ARE TO BE CONDUCTED. TESTING SHALL BE DONE (NOT 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 THE LIFT OR HEIGHT OF FILL IS NOT AS SPECIFIED BY THE GEOTECHNICAL ENGINEER, THE 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. WHEN 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. THE FIELD TESTS SHALL BE COMPLETED (GROSS) TO 10% OF THE AREA TO BE TESTED AS DETERMINED BY THE GEOTECHNICAL ENGINEER. IN ANY AREAS SUPPORTING THE PROPOSED STRUCTURES REQUIRING FILL SHALL BE TESTED FOR COMPACTION QUALITY.
2. FILLS SHALL BE TESTED A MAXIMUM OF EACH TWELVE INCHES (12") AND AS SPECIFIED BY GEOTECHNICAL ENGINEER, OF FILL.
3. THE TEST RESULTS OF THE FIELD TESTS SHALL BE FURNISHED 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.

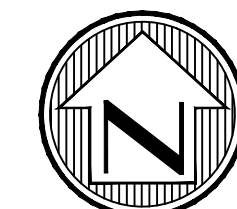
AREAS INVOLVING CUT ON ONE PORTION AND FILL ON ANOTHER PORTION OF A SPECIFIC LOT SHALL BE PREPARED TO A MINIMUM DEPTH OF 6-IN. AND WILL BE THE SAME MATERIAL CLASSIFICATION AT THE SAME COMPACTION AND MOISTURE CONTENT. A MINIMUM OF TWO (2) FIELD DENSITY TESTS SHALL BE REQUIRED ON EACH CUT/FILL LOT FOR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

MINIMUM SLAB EXPOSURE IS 1.0'.

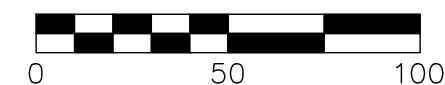
ALL ELEVATIONS AT FRONT PROPERTY LINE ARE 0.18' ABOVE CURB ELEVATION.

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.



SCALE: 1"=50'



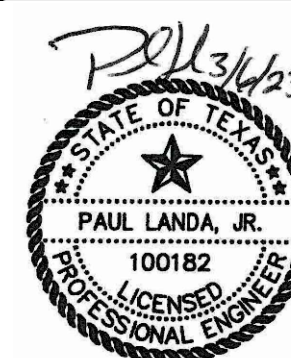
SUBMITTAL SET

[illegible]

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



Moy Tarin Ramirez Engineers, LLC
PELPS: ENGINEERING F-5297/SURVEYING: F-10131500
12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051

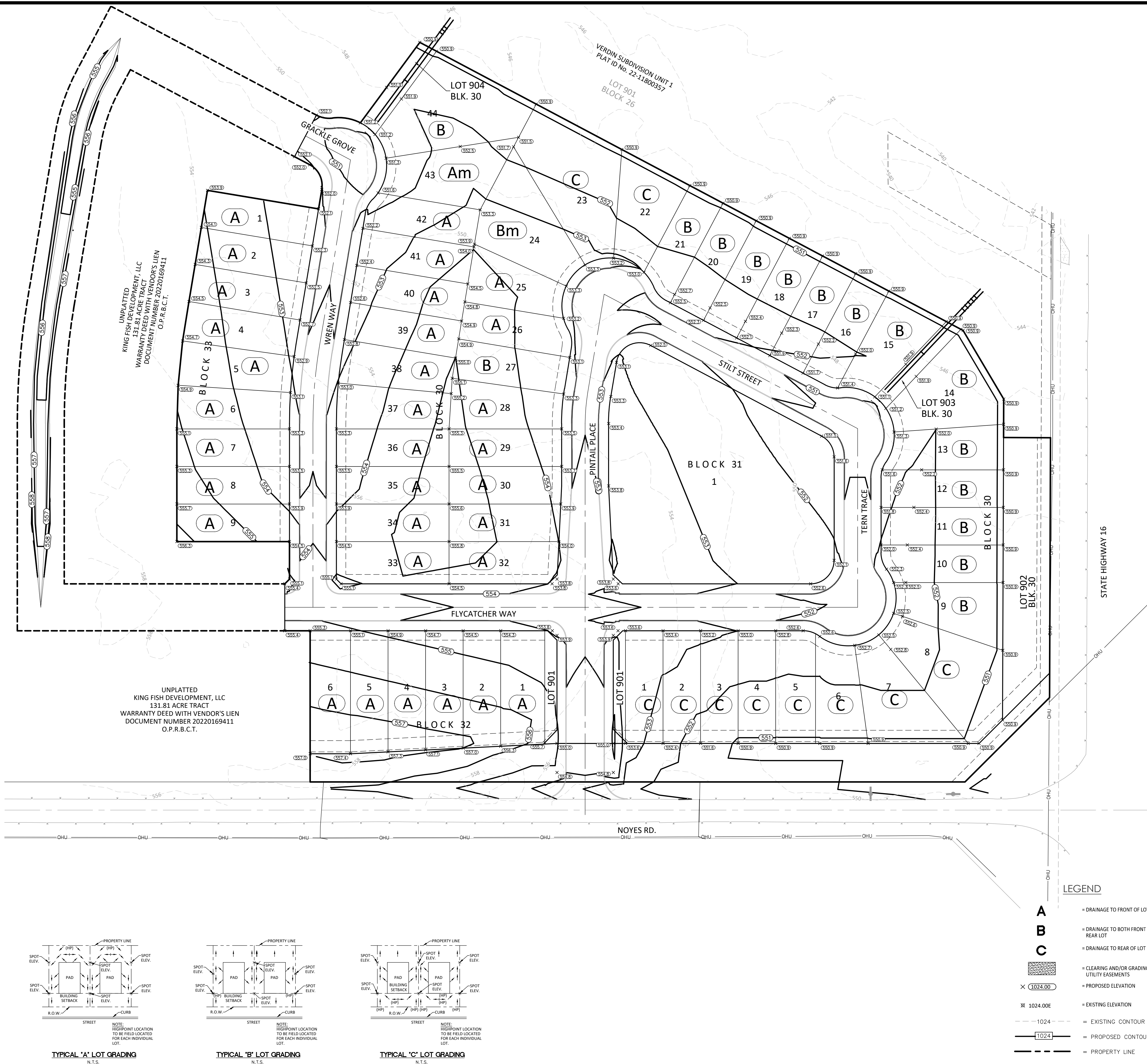


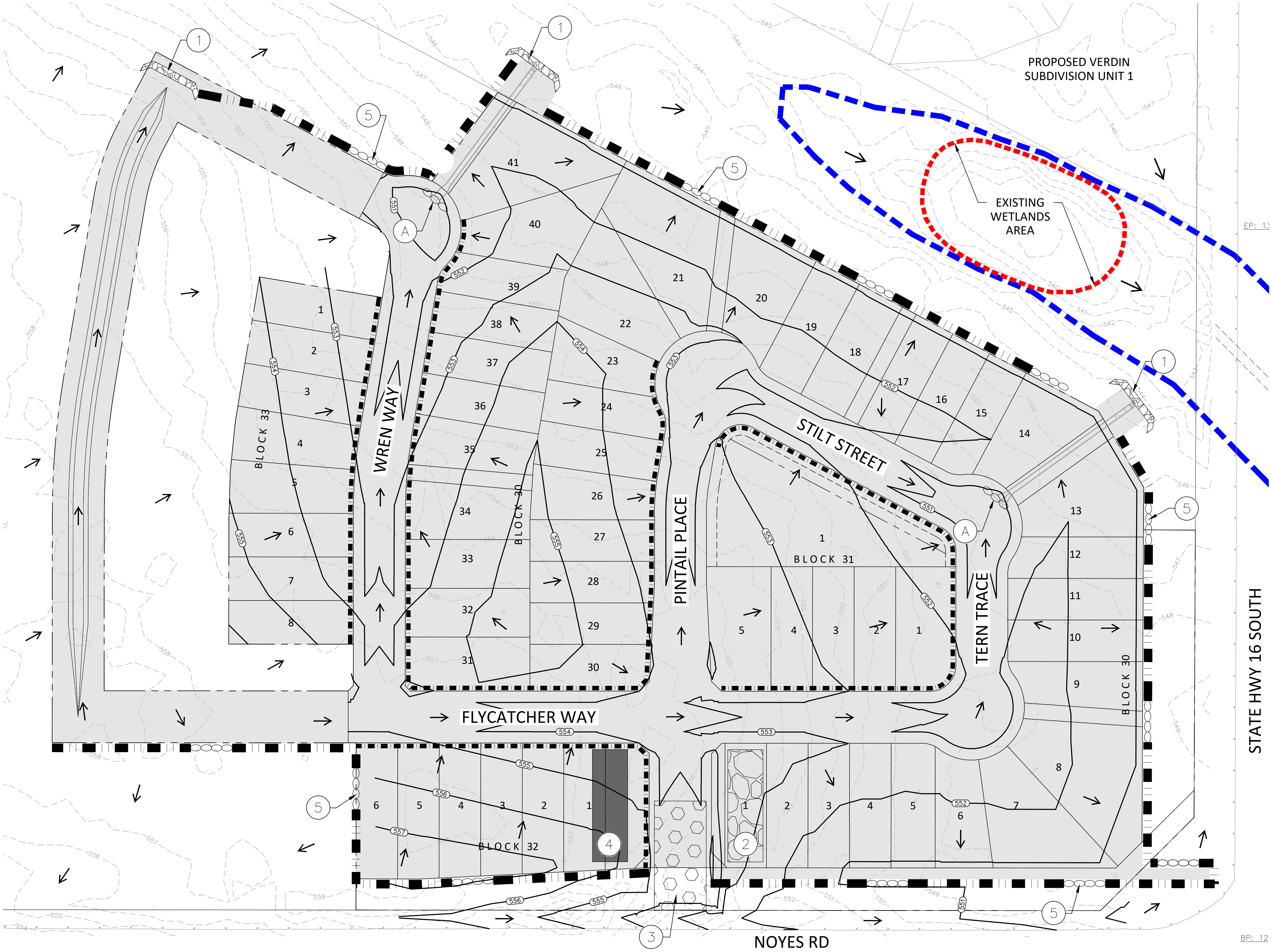
VERDIN SUBDIVISION, UNIT 2

GRADING PLAN

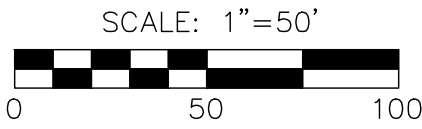
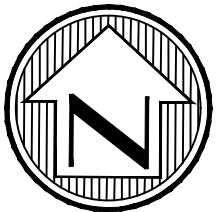
SHEET

C5.0





STATE HWY 16 SOUTH



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 UPGRADE (HIGH) SIDE OF THE TRENCH.

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

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

PHASE I LEGEND

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

PHASE II LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- DRAINAGE FLOW DIRECTION
- SILT FENCE (PHASE II)
- ROCK BERM
- BAGGED GRAVEL INLET FILTER

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
1.	STABILIZED CONSTRUCTION ENT./EXIT	L.S.	1
2.	SILT FENCE (PHASE I)	L.F.	2,191
3.	SILT FENCE (PHASE II)	L.F.	2,347
4.	ROCK BERM - TYPE II	L.F.	120
5.	BAGGED GRAVEL INLET FILTER (PHASE I)	L.F.	480
6.	BAGGED GRAVEL INLET FILTER (PHASE II)	L.F.	60
7.	CONSTRUCTION STAGING AREA	L.S.	1
8.	CONCRETE WASHOUT PIT	L.S.	1

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.

REVISIONS

NO.	DATE	DESCRIPTION

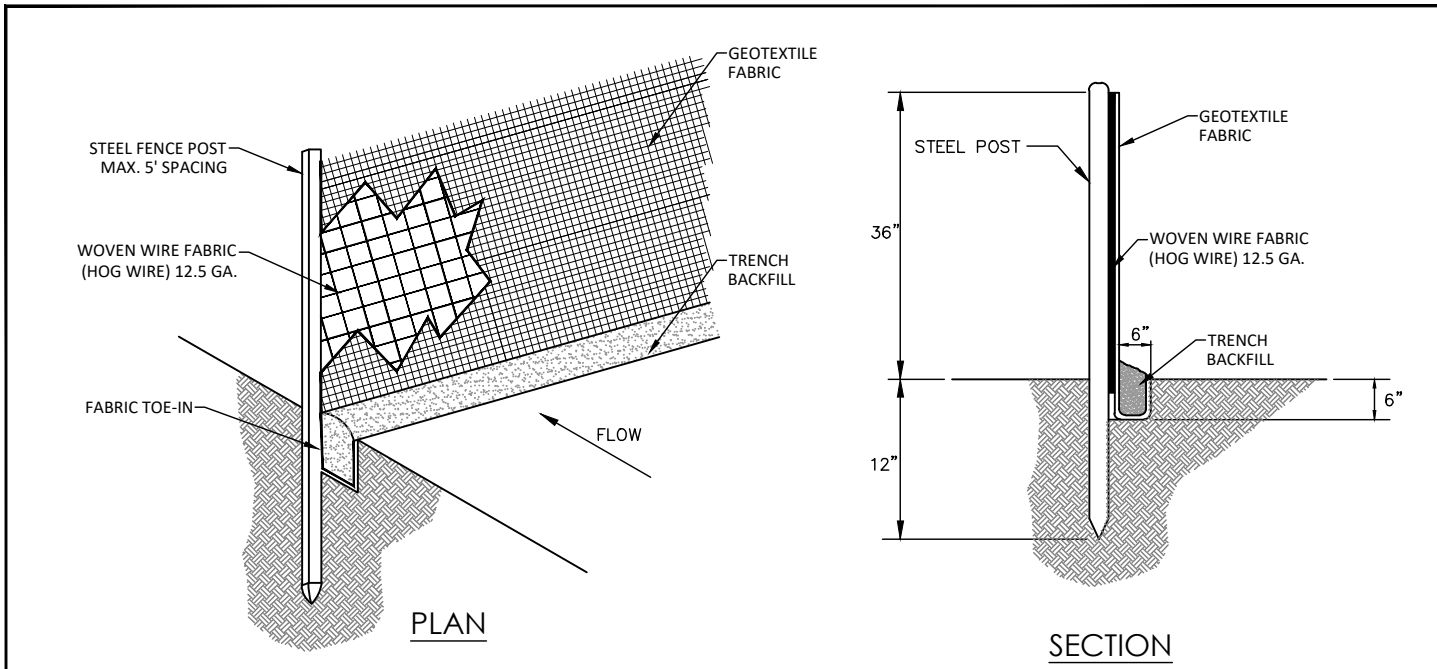
• Engineers
• Surveyors
• Planners

MTK
May 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) 698-5055



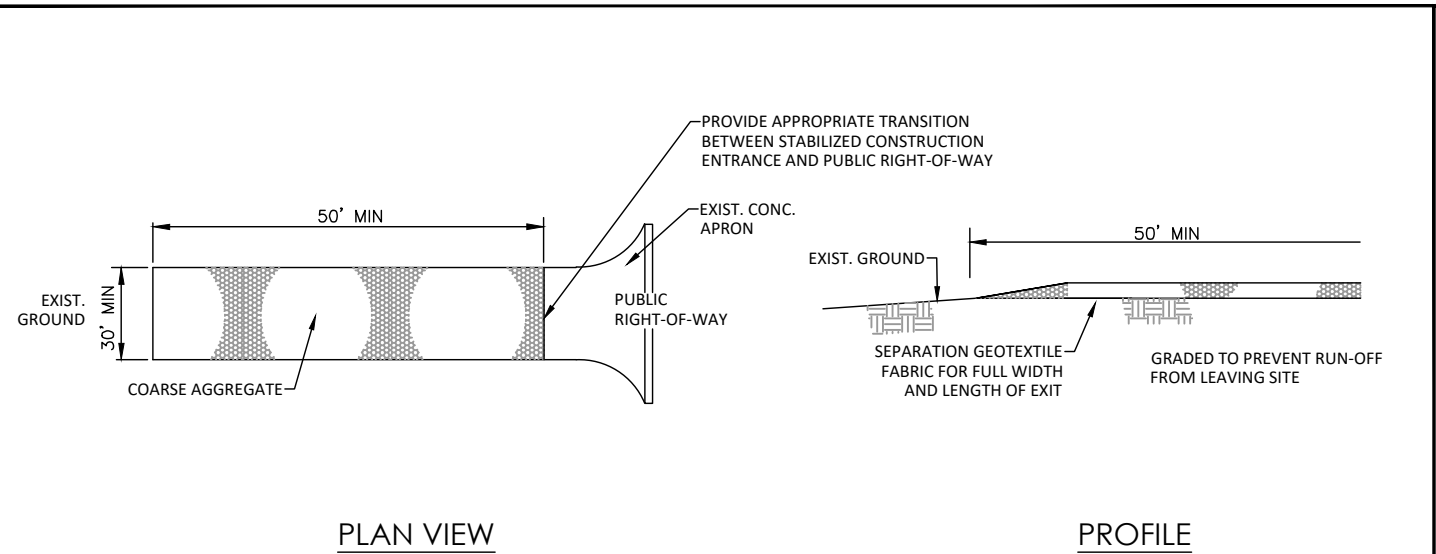
VERDIN SUBDIVISION, UNIT 2
OVERALL STORM WATER POLLUTION
PREVENTION PLAN

Plot Date: February 20, 2023 User: D. Donald McCravy
R:\McCravy\TwinUnits\Stormwater\220222_C6.1-Details.dwg



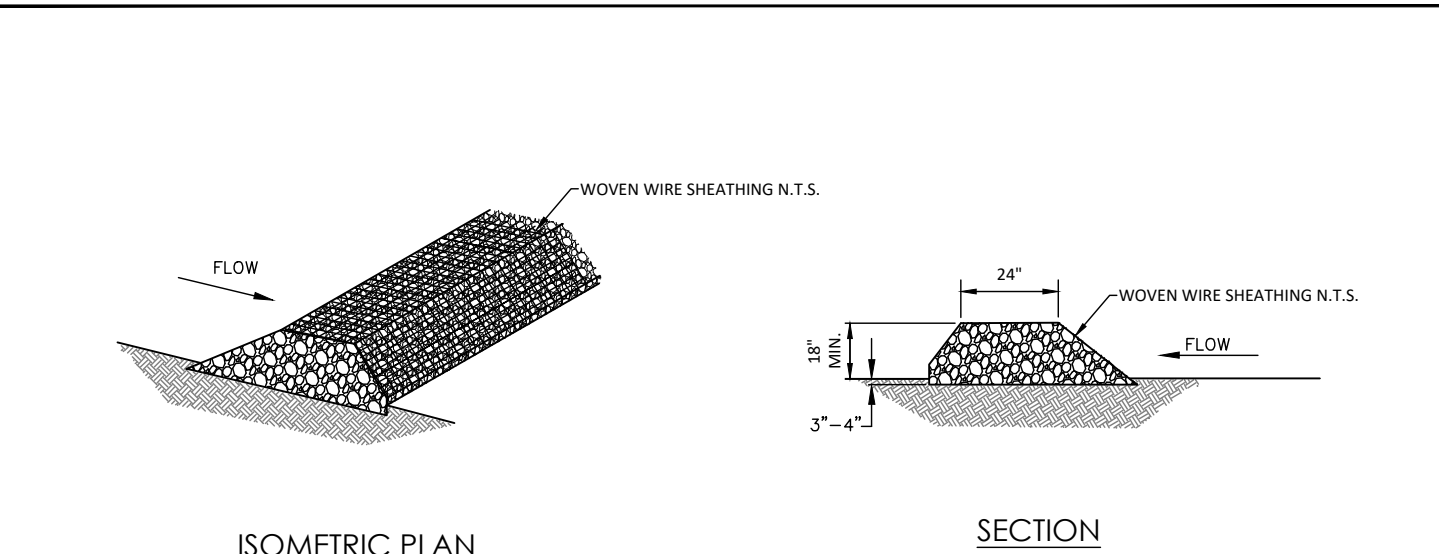
SILT FENCE NOTES

1. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC WIDTH SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN², ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SEVE NO. 30.
2. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR Y-BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM NOMINAL WEIGHT 1.25 LB/FT², 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. POST MUST BE EMBEDDED A MINIMUM OF 1 FOOT 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 FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS ¼ ACRE/100 FEET OF FENCE.
6. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA 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 TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
9. SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE 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 SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER DIKE MAY BE PREFERABLE TO A SILT FENCE AT COMMON VEHICLE ACCESS POINTS.



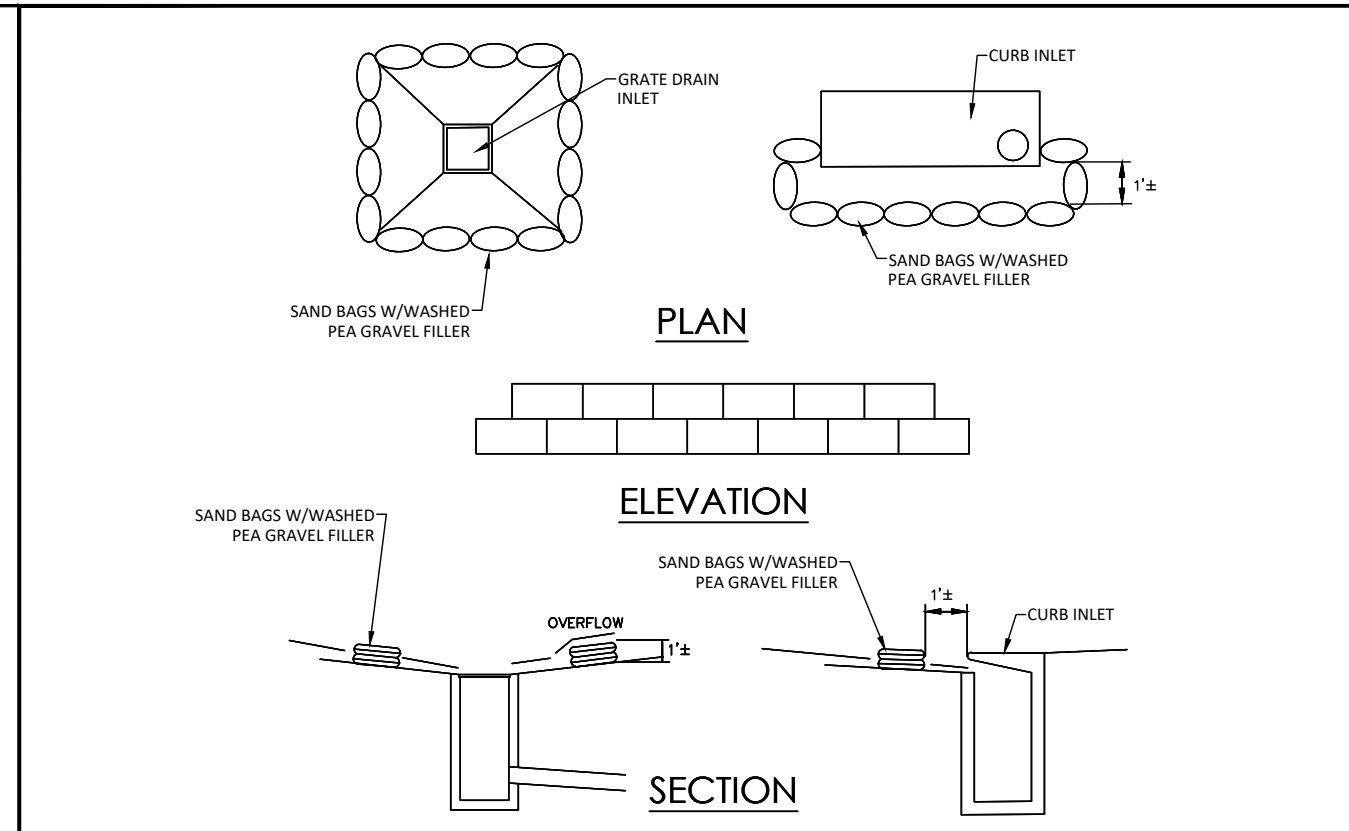
TEMPORARY CONSTRUCTION ENTRANCE/EXIT NOTES

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



ROCK BERM NOTES

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 AND SHOULD BE SECURED WITH SHOT 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 INTO 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 OF IN AN APPROVED MANNER AND REPAIR ANY LOOSE WIRE SHEATHING.
11. THE BERM SHOULD 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 UPSTREAM 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/YD², 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 ¾" 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.

1 SILT FENCE DETAIL

SCALE: NONE

2 STABILIZED CONSTRUCTION ENTRANCE / EXIT

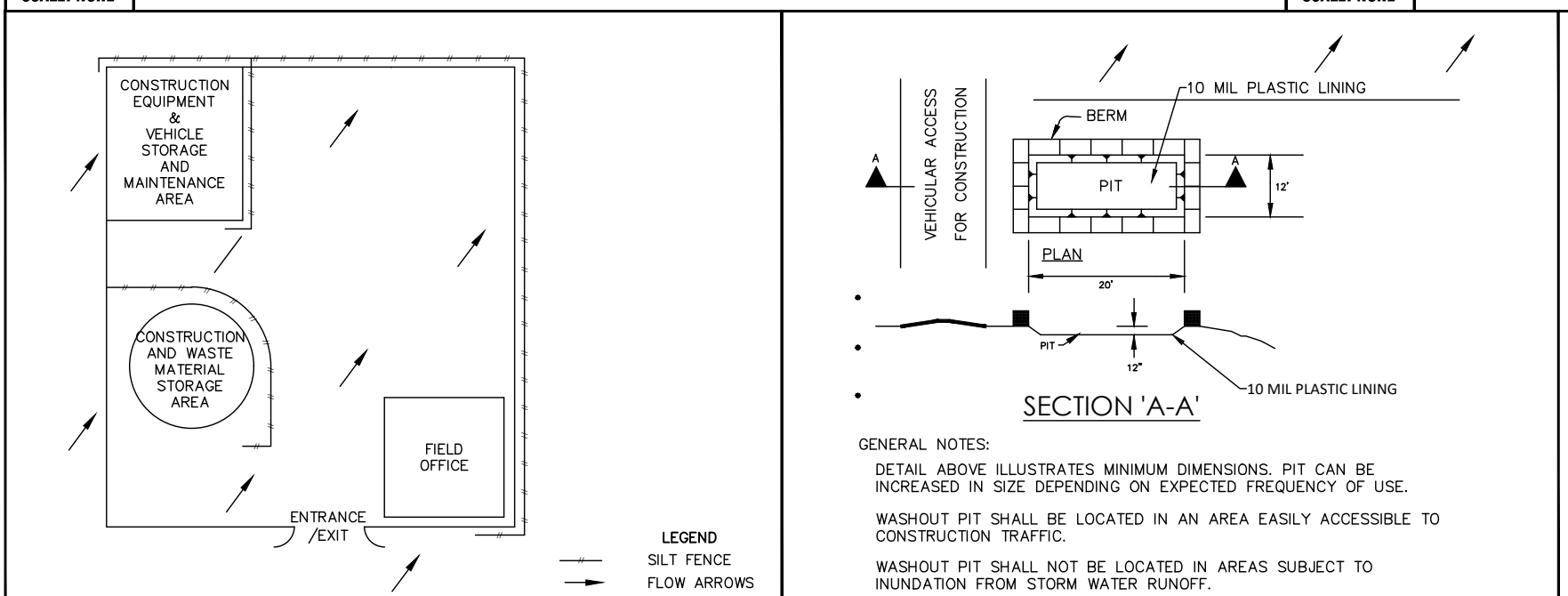
SCALE: NONE

3 ROCK BERM

SCALE: NONE

4 BAGGED GRAVEL INLET FILTER

SCALE: NONE



5 CONSTRUCTION STAGING AREA

SCALE: NONE

6 CONCRETE TRUCK WASHOUT PIT

SCALE: NONE

REVISIONS

NO.	DATE	DESCRIPTION	BY

• Engineers
• Surveyors
• Planners

MTK

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SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5051

VERDIN SUBDIVISION, UNIT 2

STORM WATER POLLUTION PREVENTION PLAN

DETAILS

SHEET

C6.1