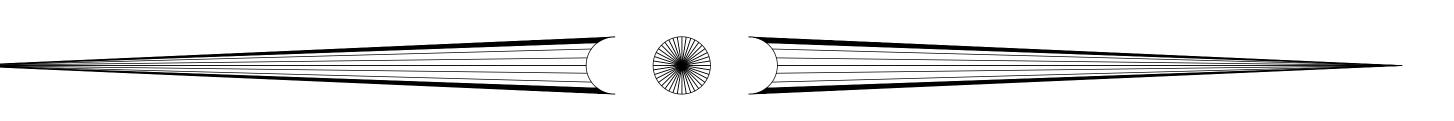
CONSTRUCTION PLANS FOR



LEGACY AT OAK HILL ENCLAVE

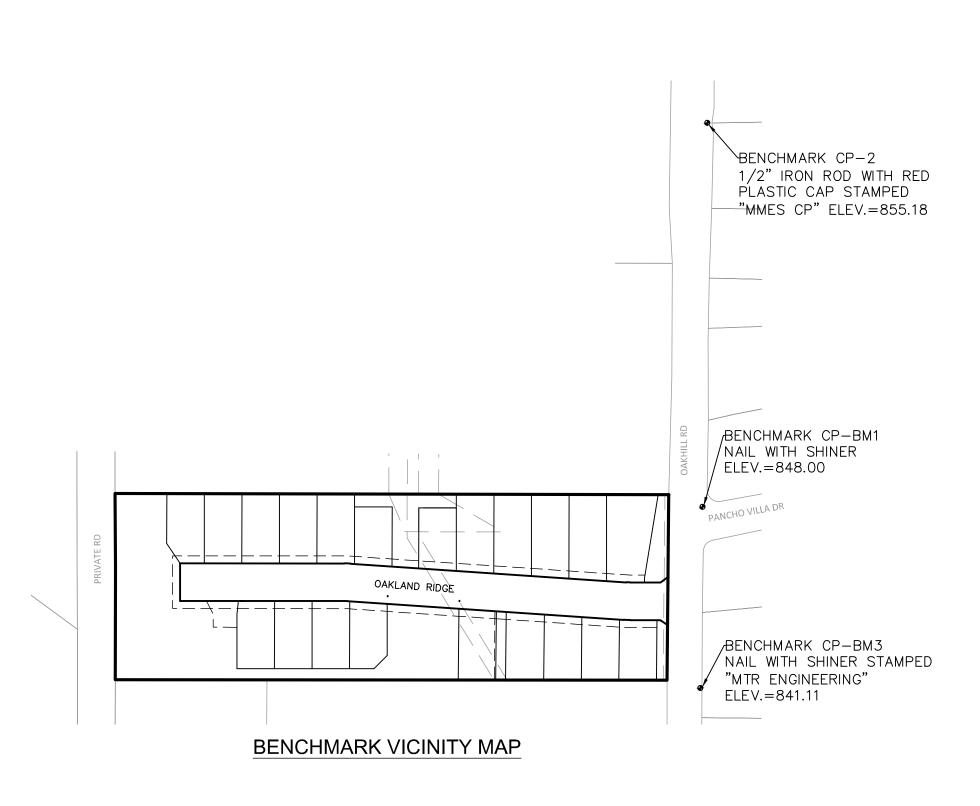
PLAT NO. 24-11800310

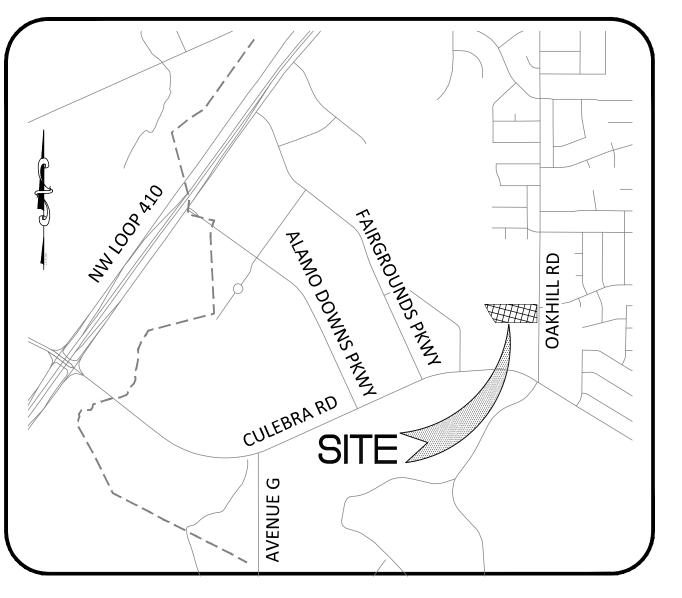
SUBMITTED BY:

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

OWNER/DEVELOPER

MRCP FUND I, LLC 85 N.E. LOOP 410, SUITE 203 SAN ANTONIO, TX 78216 210-274-0025





VICINITY MAP

SUBMITTAL DATE:

LEGAL DESCRIPTION:

BEING A 4.175 ACRE TRACT OF LAND SITUATED IN THE JUAN MONTES SURVEY NO. 6, ABSTRACT NO. 11, COUNTY BLOCK 5708, BEING ALL OF A CALLED 97.934 ACRE TRACT, DESIGNATED AS TRACT I, AS CONVEYED TO SAN ANTONIO LD, LLC, BY SPECIAL WARRANTY DEED WITH VENDOR'S LIEN AS RECORDED IN DOCUMENT NUMBER 20220189805 OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS.



SAN ANTONIO, TEXAS 78249



FAX: (210) 698-5085

Sheet List Table

Sheet Number Sheet Title

COVER SHEET

0 COVER OVERALL

UTILITY PLANS

C1.0 UTILITY COVER
C1.1 UTILITY OVERALL

SEWER PLANS

2.0 SEWER COVER

C2.1 SEWER OVERALL
C2.2 SANITARY SEWER LINE "A"

2.3 SANITARY SEWER LINE "B" AND "C"

C2.4 SANITARY SEWER DETAILS

WATER PLANS

) WATER COVER L WATER OVERALL

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 OAKHILL RIDGE STREET PLAN AND PROFILE

C4.4 DRAIN "A"

C4.5 DETENTION POND

C4.6 DRAINAGE DETAILS
C4.7 DRAINAGE DETAILS

C4.8 STANDARD STREET DETAILS

C4.9 STANDARD STREET DETAILS

C4.10 TYPICAL STREET SECTIONS

GRADING PLANS

C5.0 GRADING PLAN

SW3P PLANS

C6.0 SW3P PLAN
C6.1 SW3P DETAILS

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

- 1. LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF ALL UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON THE PLANS OR NOT. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.
- ALL EXCAVATION IS UNCLASSIFIED. THERE IS NO ADDITIONAL PAYMENT FOR ROCK EXCAVATION.
- FOR ROCK EXCAVATION.

 3. ALL SPOIL AND UNUSABLE MATERIAL FROM THIS PROJECT SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT NO ADDITIONAL
- 4. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THE PROJECT.
- CONSTRUCTION OF THE PROJECT.

 5. CONSTRUCTION STAKING TO BE PROVIDED BY CONSULTANT IS AS FOLLOWS:
- A. STREET CENTERLINE STAKING FOR CLEARING.
 B. STREET STAKING (ONE SIDE) FOR STREET EXCAVATION AND WATER
- B. STREET STAKING (ONE SIDE) FOR STREET EXCAVATIO MAIN INSTALLATION.
- C. SEWER STAKING AT 100-FT INTERVALS.
 D. STAKING FOR WATER SERVICES.
- E. STAKING FOR DRAINAGE CHANNELS.F. FINAL STREET STAKING.G. METER BOX STAKING.
- H. CPS STAKING.
 I. SETTING OF LOT CORNERS.

CPS NOTES:

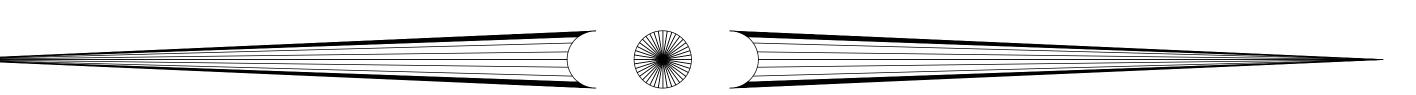
1. CPS TO SUPPLY ALL ELECTRIC CONDUITS FOR TRENCH AS FOLLOW:

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

NOTE:

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

CONSTRUCTION PLANS FOR



LEGACY AT OAK HILL ENCLAVE

UTILITY IMPROVEMENTS

AVENUE G AVE

SHEET INDEX

SHEET NO. TITLE

C0.0 COVER SHEET
C1.0 UTILITY COVER

C1.1 OVERALL UTILITY IMPORVEMENTS OVERALL

PLAT NO. 24-11800310

SAN ANTONIO, TEXAS 78249

MOY TARIN RAMIREZ ENGINEERS, LLC.

12770 CIMARRON PATH, SUITE 100

OWNER/DEVELOPER

85 N.E. LOOP 410, SUITE 203

SAN ANTONIO, TX 78216

SUBMITTED BY:

TEL: (210) 698-5051

FAX: (210) 698-5085

MRCP FUND I, LLC

210-274-0025

C1.2 OVERALL UTILITY IMPROVEMENTS OVERALL

A' CONC. SIDEWALK SOIL/PARKWAY MAX SLOPE 1"/FT. MIN. SLOPE 1/4"/FT. 8"-12" MAIN, 4' MIN. DEPTH > 16" MAIN, 5' MIN. DEPTH FROP. SAN. SWR. PROP. SAN. SWR. R 10' 30' 4' CONC. SIDEWALK CURB ASPH. PAVEMENT Q CURB MAX SLOPE 1"/FT. MIN. SLOPE 1/4"/FT. COMPACTED BASE 95% COMPACTED DENSITY PROP. SAN. SWR. TREATED SUBGRADE

LEGEND

EXISTING WATER MAIN

PROPOSED WATER MAIN

EXISTING FIRE HYDRANT

PROPOSED GATE VALVE

PROPOSED SANITARY SEWER MAIN

EXISTING UNDERGROUND ELECTRIC

EXISTING UNDERGROUND TELEPHONE

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

PROPOSED SERVICE LATERAL WITH ONE-WAY CLEANOUT

EXISTING SANITARY SEWER MAIN

EXISTING OVERHEAD ELECTRIC

EXISTING GATE VALVE

EXISTING STREET LIGHT

EXISTING POWER POLE

PROPOSED POWER POLE
PROPOSED TRANSFORMER
PROPOSED WATER SERVICE

EXISTING TRANSFORMER

90% COMPACTED DENSITY

EXISTING SECONDARY ENCLOSURE

PROPOSED SECONDARY ENCLOSURE

EXISTING IRRIGATION CONTROL VALVE

PROPOSED FIRE HYDRANT

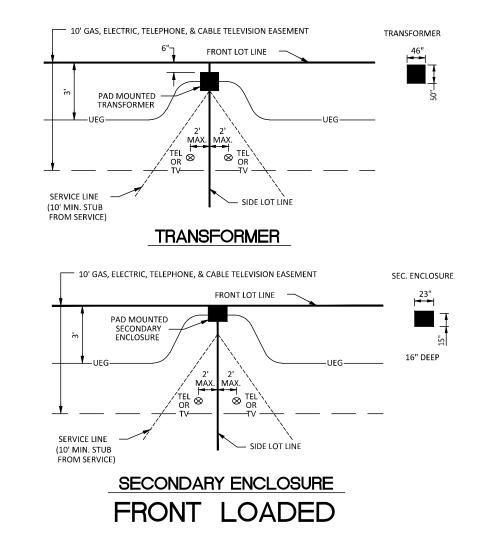
----- E8"W -----

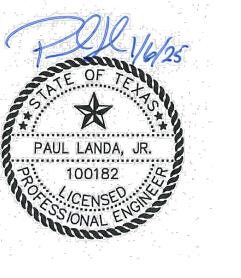
----- E8"SS -----

D.P.R.B.C.T.

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

TYPICAL STREET CROSS-SECTION (30' PAVEMENT)





SUBMITTAL DATE: MARCH 2021

LEGAL DESCRIPTION:

BEING A 4.175 ACRE TRACT OF LAND SITUATED IN THE JUAN MONTES SURVEY NO. 6, ABSTRACT NO. 11, COUNTY BLOCK 5708, BEING ALL OF A CALLED 97.934 ACRE TRACT, DESIGNATED AS TRACT I, AS CONVEYED TO SAN ANTONIO LD, LLC, BY SPECIAL WARRANTY DEED WITH VENDOR'S LIEN AS RECORDED IN DOCUMENT NUMBER 20220189805 OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS.

NOTE TO CONTRACTOR:

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

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

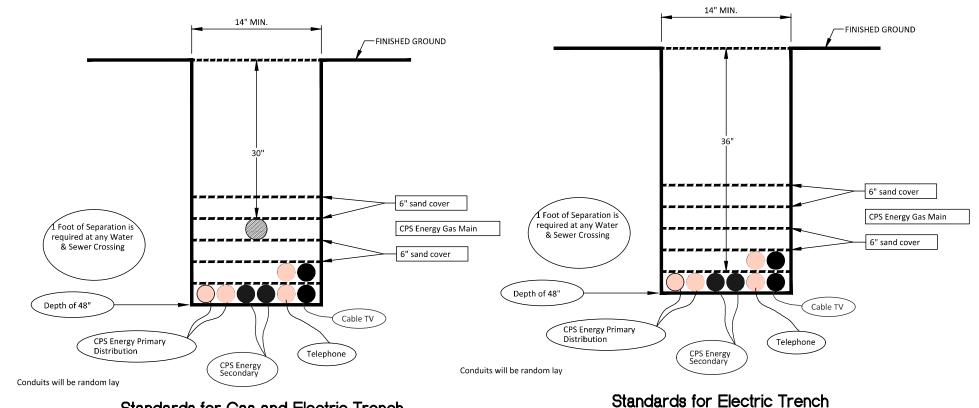


- EngineersSurveyorsPlanners
- Moy Tarin Ramirez Engineers, LLC

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

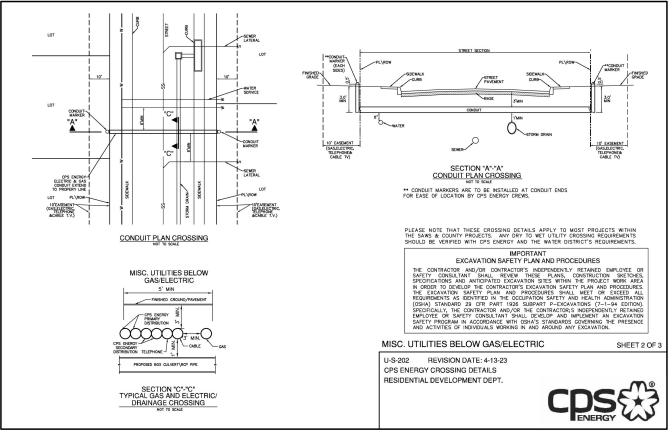


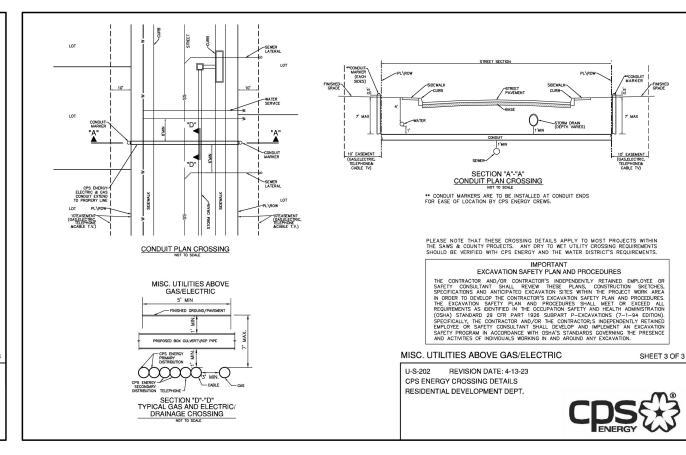
Standards for Gas and Electric Trench or Electric Trench with Joint Utilities

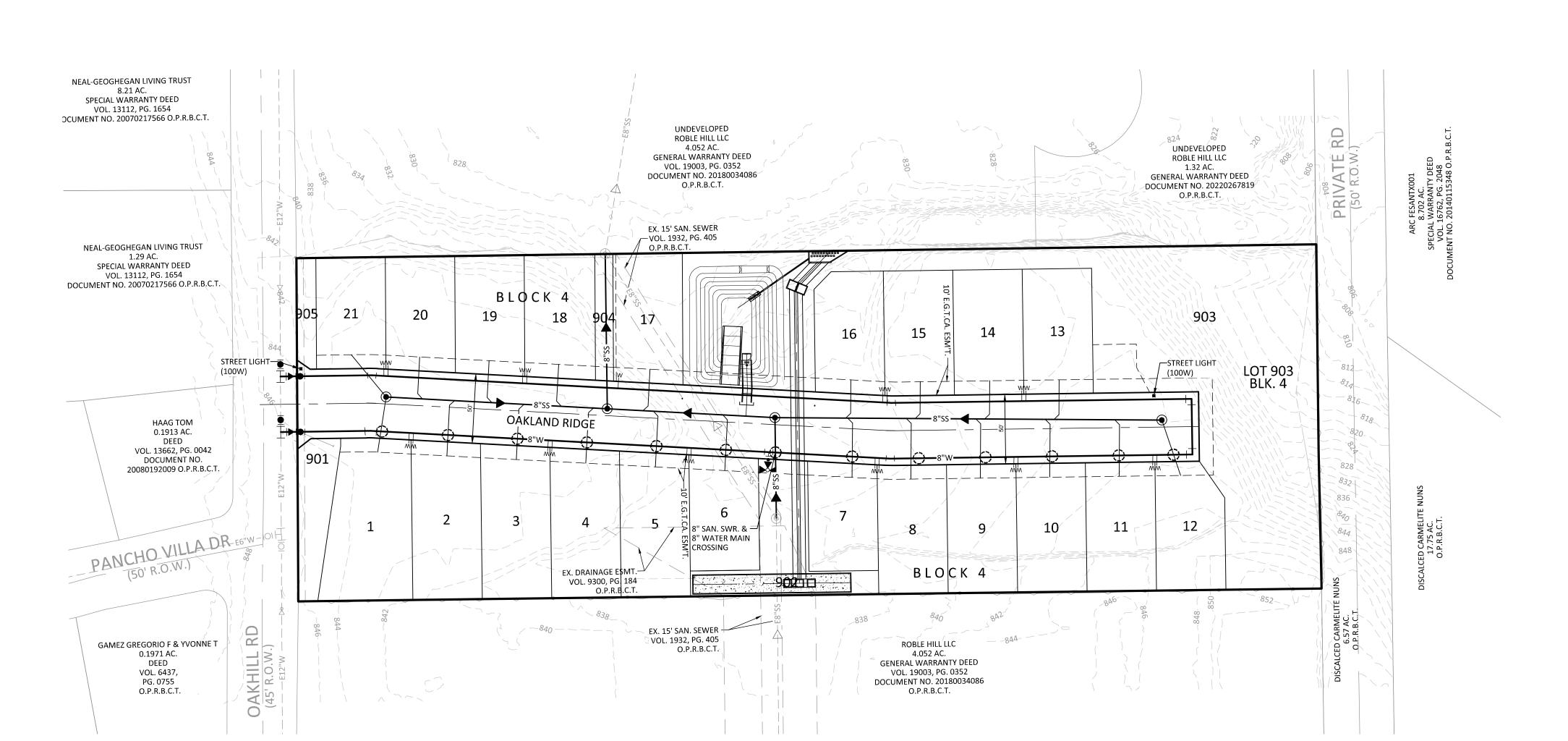
Standards for Electric Trench
or Electric Trench with Joint Utilities

TRENCH DETAILS

TTAL SET TEXAS C1.0







LEGEND

EXISTING WATER MAIN	- — — E8"W — — — —
PROPOSED WATER MAIN	8"W——
PROPOSED FIRE HYDRANT	
EXISTING FIRE HYDRANT	
PROPOSED GATE VALVE	
EXISTING GATE VALVE	ullet
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	\(\phi\)
OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS	O.P.R.B.C.T.
OFFICIAL PUBLIC RECORDS OF MEDINA COUNTY, TEXAS	O.P.R.M.C.T.
PROPOSED STREET LIGHT UG, 100W AND SINGLE ARM	×
PROPOSED STREET LIGHT UG, 250W AND SINGLE ARM	*
EXISTING POWER POLE	PP
EXISTING SECONDARY ENCLOSURE	©
PROPOSED SECONDARY ENCLOSURE	©
PROPOSED POWER POLE	PP
PROPOSED TRANSFORMER	
PROPOSED WATER SERVICE	——€
PROPOSED IRRIGATION SERVICE	IR
PROPOSED SERVICE LATERAL WITH ONE-WAY CLEANOUT	
EXISTING TRANSFORMER	
EXISTING IRRIGATION CONTROL VALVE	⊗
EXISTING WATER METER	-⊠

PLAT NO. 24-11800310

PAUL LANDA, JR. 100182

ENT Ш IMPRO **OVER**

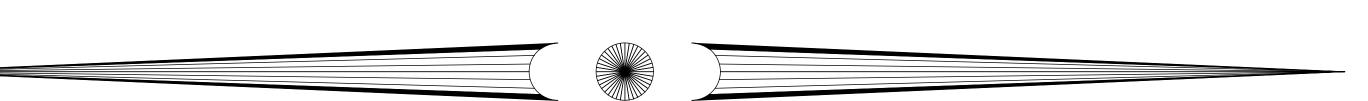
SHEET

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LEGACY AT OAK HILL ENCLAVE

SANITARY SEWER IMPROVEMENTS

SAWS CONSTRUCTION NOTES COUNTER PERMIT AND GENERAL CONSTRUCTION PERMI

- 1. 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: A. 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
- B. Current TXDOT "Standard Specifications for Construction of Highways, Streets and Drainage". C. Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction"
- D. Current City of San Antonio "Standard Specifications for Public Works Construction" E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
- 2. 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.
- 3. 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. 4. 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
- 5. 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
- 6. 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
- 7. 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. 8. 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 9. The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating
- 10. The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood
- 11. Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be
- sent to constworkreg@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 12. 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.
- 13. A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division.

233-2014. Provide the address of the spill and an estimated volume or flow.

- 1. 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)
- 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
- 2. 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
- 3. 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.
- 4. 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. 5. 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) 6. 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.

BEXAR COUNTY

ADDITIONAL SEWER NOTES

HE 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.

- 1. SANITARY SEWER LATERALS TO BE LOCATED AS SHOWN ON THE SANITARY SEWER PLANS
- 2. PAY CUTS FOR SANITARY SEWERS LOCATED IN STREETS ARE ESTIMATED TO THE FINISHED SUBGRADE ELEVATION. PAY CUTS ARE TO EXISTING GROUND IN UNPAVED AREAS.
- 3. EXTEND ALL SANITARY SEWER LATERALS TO THE PROPERTY LINE OR TO THE EASEMENT LINE AS INDICATED. ALL LATERALS ARE 35' LONG UNLESS OTHERWISE NOTED.
- 4. SANITARY SEWER LINES AND LATERALS WILL BE PVC SDR 26 ASTM D 3034 UNLESS OTHERWISE NOTED ON PLAN AND PROFILE SHEETS
- 5. SDR FITTINGS WILL MATCH SDR SEWER MAIN, NO SEPARATE PAY ITEM.
- 6. ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE UPGRADIENT SIDE OF THE SEWER TRENCH THUS ALLOWING THE TRENCH TO
- 7. QUANTITIES ARE BASED ON CURRENT SAWS SPECIFICATIONS.
- 8. ALL MANHOLES TO HAVE WATERTIGHT RING AND COVERS.

INTERCEPT ANY SILT CONTAMINATED RUNOFF.

- 9. ALL MANHOLES TO BE CONCRETE RING ENCASED
- % SLOPE TO 10. MANHOLES TO BE VENTED AS SHOWN ON THE SANITARY SEWER PLANS.
- 11. AN "*" DENOTES AN EXISTING TEE.
- 12. ALL SANITARY SEWER LATERALS SHALL HAVE A MIN. 2.0

13. MINIMUM COVER FROM TOP OF SANITARY SEWER LATERALS TO TOP OF

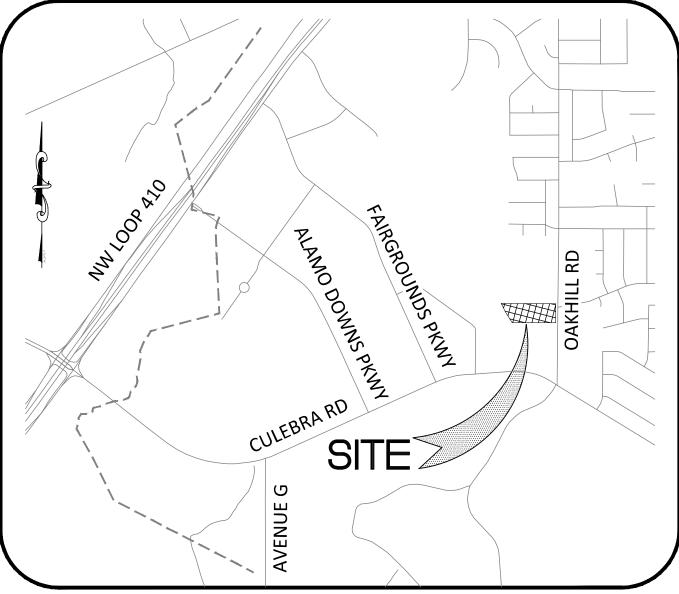
- A. IF LATERALS DO NOT CROSS WATER MAINS, 5' COVER B. IF LATERALS CROSS WATER MAIN,
- WATER MAIN COVER 5.5'
- 5.7' 12" 6.0' 16"
- 14. ALL MANHOLE OPENINGS SHALL BE 30".

SAN ANTONIO WATER SYSTEM CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS

- I. 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)
- II. 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.
- III, 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 SEGMENT 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
- IV. WHERE A SEWER MAIN PARALLELS A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE FEET, THE SEWER MAIN SHALL BE BELOW THE WATER MAIN, SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI FOR BOTH PIPE AND JOINTS FOR A DISTANCE OF NINE FEET BEYOND THE POINT OF CONFLICT, SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE BETWEEN OUTER DIAMETERS OF TWO FEET VERTICALLY AND FOUR FEET HORIZONTALLY, AND SHALL BE JOINED WITH PRESSURE RING GASKET CONNECTIONS OR CORROSION PROTECTED MECHANICAL COUPLING DEVICES OF A CAST IRON OR DUCTILE IRON MATERIAL.
- SANITARY SEWER MANHOLES SHALL NOT BE INSTALLED ANY CLOSER THAN NINE FEET TO WATER MAINS.

NOTE TO CONTRACTOR:

- BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.
- THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED THE CONTRACTOR SHALL CONTACT EACH INDIVIDUAL UTILITY. FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR



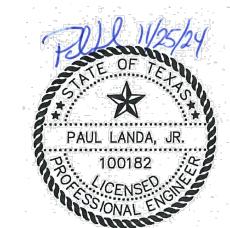
VICINITY MAP

SUBMITTAL DATE:

REVISION DATE:

LEGAL DESCRIPTION:

BEING A 4.175 ACRE TRACT OF LAND SITUATED IN THE JUAN MONTES SURVEY NO. 6, ABSTRACT NO. 11, COUNTY BLOCK 5708, BEING ALL OF A CALLED 97.934 ACRE TRACT, DESIGNATED AS TRACT I, AS CONVEYED TO SAN ANTONIO LD, LLC, BY SPECIAL WARRANTY DEED WITH VENDOR'S LIEN AS RECORDED IN DOCUMENT NUMBER 20220189805 OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS.





- E = 2092626.7360 Engineers
- Surveyors ELEV. = 848.000 N = 13713214.9000 Planners

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

BENCHMARK

K-CP 3 SET MAGNAIL W/MTR SHINER ON SIDEWALK ELEV. = 841.110 N = 13712973.8810

K-CP 1 MAG NAIL W/SHINER

E = 2092629.6010

K-CP 2 IP 1/2 W/MMES CP RED CAP ELEV. = 855.180 N = 13713725.9930 E = 2092636.0440

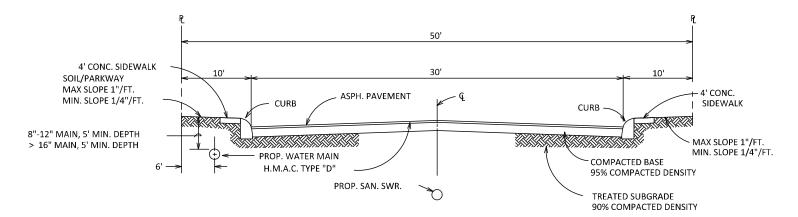
PLAT NO. 24-11800310

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

MRCP FUND I, LLC 85 N.E. LOOP 410, SUITE 203 SAN ANTONIO, TX 78216 210-274-0025



ESTIMATED SEWER QUANTITIES

ITEM	DESCRIPTION	UNIT	EST/QTY
1	TIE INTO EXISTING SANITARY SEWER MAIN	E.A.	2
2	TRENCH EXCAVATION SAFETY PROTECTION	L.F.	745
3	8" SANITARY SEWER PIPE, SDR-26 (6'-10')	L.F.	438
4	8" SANITARY SEWER PIPE, SDR-26 (10'-14')	L.F.	218
5	8" SANITARY SEWER PIPE, SDR-26 (14'-16')	L.F.	89
6	ABANDON EXISTING 8" SANITARY SEWER PIPE	L.F.	227
7	STANDARD SANITARY SEWER MANHOLE	EA.	3
8	DROP MANHOLE	E.A.	1
9	EXTRA DEPTH MANHOLE	V.F.	19.8
10	VERTICAL STACKS	V.F.	24.7
11	SANITARY SEWER LATERALS, SDR-26	L.F.	762
12	SEWER MAIN TELEVISION INSPECTION	L.F.	745

Sheet List Table

Sheet Number Sheet Title

SEWER PLANS

SEWER COVER C2.0

C2.1 SEWER OVERALL & BYPASS PUMPING PLAN

C2.2 SANITARY SEWER LINE "A" C2.3 SANITARY SEWER LINE "B" AND "C"

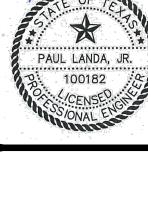
C2.4 SANITARY SEWER DETAILS

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 MRCP FUND I, LLC Developer's Address 85 N.E. LOOP 410, SUITE 203 Phone #__ 210-274-0025 SAWS Block Map <u>#</u> 122588, 124588 Total EDU's <u>21</u> Total Acreage <u>4.175</u> Total Linear Footage of Pipe 8" - 745 L.F. _ Plat No._ 24-11800310 SAWS Job No. 24-1613 Number of Lots 21





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SHEET

Developer's Name_MRCP FUND I, LLC Developer's Address 85 N.E. LOOP 410, SUITE 203 City SAN ANTONIO SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED Phone #____210-274-0025

LEGEND EXISTING WATER MAIN PROPOSED WATER MAIN PROPOSED FIRE HYDRANT EXISTING FIRE HYDRANT PROPOSED GATE VALVE EXISTING GATE VALVE PROPOSED SANITARY SEWER MAIN & MANHOLE **EXISTING SANITARY SEWER MAIN & MANHOLE** PROPOSED SERVICE LATERAL WITH ONE-WAY CLEAN-OUT VERTICAL STACK ELECTRIC, GAS, TELEPHONE & CABLE TV EASEMENT E.G.T.CA.E. TEMPORARY BENCHMARK \bigcirc SANITARY SEWER/WATER CROSSING LOCATION OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS O.P.R.B.C.T.

DISCHARGE MANHOLE (EX MH-2)

-BYPASS SYSTEM

DISCHARGE LINE

BYPASS PUMPING

ABOVE GROUND

EX. 15' SAN. SEWER

EX. 15' SAN. SEWER

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

🖯 VOL. 1932, PG. 405

VOL. 1932, PG. 405 O.P.R.B.C.T.

END HERE

CK 4

EX. DRAINAGE E\$MT.—У

O.P.R.B.C.T

VOL. 9300, PG 184

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.

OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.

BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS

THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON

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

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.

NOTE TO CONTRACTOR:

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

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

8.21 AC. EXISTING 8" SANITARY SEWER SPECIAL WARRANTY DEED MAIN CONSTRUCTED WITH VOL. 13112, PG. 1654 SAWS JOB NO. DJ-2944 DOCUMENT NO. 20070217566 O.P.R.B.C.T. EXISTING 12" AC WATER MAIN CONSTRUCTED WITH UNDEVELOPED SAWS JOB NO. 5959 ROBLE HILL LLC 4.052 AC. UNDEVELOPED GENERAL WARRANTY DEED ROBLE HILL LLC VOL. 19003, PG. 0352 DOCUMENT NO. 20180034086 GENERAL WARRANTY DEED O,P.R.B.C.T. DOCUMENT NO. 20220267819 O.P.R.B.C.T. **EXISTING MH-2** STA. 1+00.00 LINE "C" EX. 15' SAN. SEWER TOP: 829.00 √VOL. 1932, PG. 405 NEAL-GEOGHEGAN LIVING TRUST SPECIAL WARRANTY DEED EX. 8" SAN. SEWER ~ 227 L.F. VOL. 13112, PG. 1654 DOCUMENT NO. 20070217566 O.P.R.B.C.T. CONSTRUCTED W/ STA. 3+80.40 LINE "A" SAWS JOB NO. DJ-2944 =STA. 1+00.00 LINE "B" TO BE ABANDONED TOP: 836.29 AND REPLACED 13 - STA. 6+58.92 LINE "A" TOP: 839.69 OAKLAND RIDGE (PRIVAT RD) HAAG TOM 0.1913 AC. VOL. 13662, PG. 0042 DOCUMENT NO. 20080192009 O.P.R.B.C.T MH A-1 TOP: 843.19 8" SAN. SWR. & DROP MH A-2 8" WATER MAIN STA. 2+59.50 LINE "A" CROSSING =STA. 2+11.61 LINE "C" TOP: 836.66 EX. DRAINAGE E\$MT.-VOL. 9300, PG. 184 O.P.R.B.C.T. - STA. 1+72.58 LINE "B" TOP: 833.59 🔍 EX. 15' SAN. SEWER 🕌 GAMEZ GREGORIO F & YVONNE T VOL. 1932, PG. 405 0.1971 AC. ROBLE HILL LLC O.P.R.B.C.T. DEED 4.052 AC. VOL. 6437, GENERAL WARRANTY DEED PG. 0755 VOL. 19003, PG. 0352 EXISTING 8" SANITARY SEWER O.P.R.B.C.T. DOCUMENT NO. 20180034086 MAIN CONSTRUCTED WITH O.P.R.B.C.T. SAWS JOB NO. DJ-2944

NOTES SAWS ITEM NO. 864-S1 BYPASS PUMPING SMALL DIAMETER SANITARY SEWERS.

SUGGESTED SITE BYPASS PUMPING PLAN

1. CONTRACTOR SHALL PREPARE AND SUBMIT A BYPASS PUMPING PLAN (BPP) A MINIMUM TWO WEEKS PRIOR TO COMMENCING ANY PORTION OF THE PROPOSED SCOPE OF WORK AND SHALL BE ACKNOWLEDGED BY SAWS PRIOR TO BEGINNING WORK. THE BPP SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS (CONTRACTOR'S ENGINEER).

8

ROBLE HILL LLC

4.052 AC.

GENERAL WARRANTY DEED

VOL. 19003, PG. 0352

DOCUMENT NO. 20180034086

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

SUCTION MANHOLE (EX

BYPASS PUMPING

BYPASS PUMP LINE

USING FLOW THROUGH

EXISTING 8" MAIN

PROPOSED PLUG

ABOVE GROUND

MH-1

- 2. CONTRACTOR SHALL SUBMIT MANUFACTURER'S PRODUCT DATA, INSTRUCTIONS, RECOMMENDATIONS, SHOP DRAWINGS, AND NECESSARY CERTIFICATIONS IN ORDER FOR THE
- PROPOSED BPP TO BE REVIEWED AND ACKNOWLEDGED. 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE BYPASS PUMPING PLAN AND SYSTEM. CONTRACTOR'S BYPASS PUMPING SYSTEM DESIGN SHALL BE DEVELOPED BASED UPON THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE BYPASS SYSTEM SHALL MEET REQUIREMENTS OF ALL CODES AND REGULATORY AGENCIES HAVING JURISDICTION.

PRIVATE STREET DESIGNATION NOTE: LOT 999, BLOCK 4, N.C.B. 14938, IS A PRIVATE STREET AND IS DESIGNATED AS AN UNDERGROUND AND AT-GRADE INFRASTRUCTURE AND SERVICE FACILITIES EASEMENT FOR GAS, ELECTRIC, STREET LIGHT, TELEPHONE CABLE TELEVISION, DRAINAGE, PEDESTRIAN, PUBLIC WATER, WASTEWATER, AND RECYCLED WATER MAINS.

CAUTION:

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- LOCATE AND TAG THEIR UNDERGROUND FACILITIES PRIOR TO EXCAVATION.
- RESPONSIBLE FOR LOCATING AND EXPOSING CONFLICTS PRIOR TO CONSTRUCTION.

SAWS Block Map <u>#</u> 122588, 124588 Total EDU's <u>21</u> Total Acreage <u>4.175</u> _ Plat No._24-11800310 Total Linear Footage of Pipe 8" - 745 L.F. Number of Lots 21 SAWS Job No. 24-1613

4' CONC. SIDEWALK-

SOIL/PARKWAY MAX SLOPE 1"/FT.

> 16" MAIN, 5' MIN. DEPTH

MIN. SLOPE 1/4"/FT.

8"-12" MAIN, 5' MIN. DEPTH

NEAL-GEOGHEGAN LIVING TRUST

SEPARATION DISTANCE TO COMPLY WITH TCEQ REGULATION 30 TAC 290.44 (E)

20 LF. OF 160 P.S.I. PRESSURE RATED PVC PIPE

CENTERED ACROSS WATER CROSSING (SDR 26).

— SEWER PIPE AT WATER LINE CROSSINGS SHALL MEET

THE REQUIREMENTS OF ASTM D2241 WITH ONE JOINT

I SIDEWALK

95% COMPACTED DENSITY

TREATED SUBGRADE

90% COMPACTED

APPENDIX D - SEPARATION DISTANCE

APPENDIX E & 30 TAC 217.53 (D)

PROPOSED SANITARY SEWER LINE

TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

- ASPH. PAVEMENT

PROP. SAN. SWR.

N.T.S.

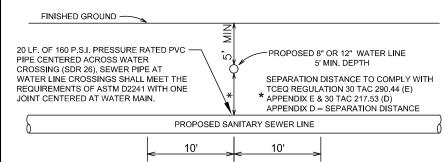
TYPICAL STREET CROSS-SECTION (30' PAVEMENT)

FINISHED GROUND -

H.M.A.C. TYPE "D" -

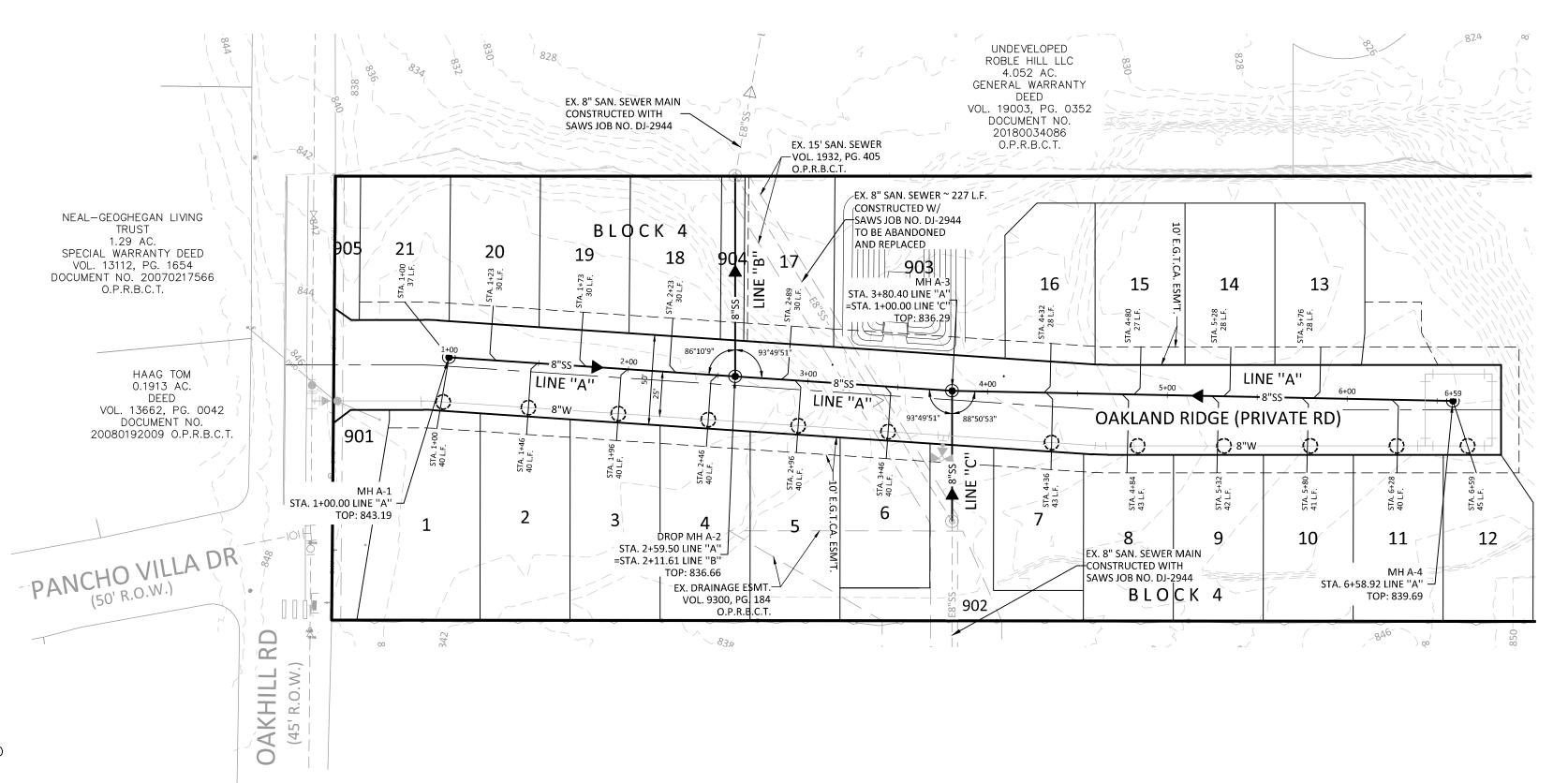
PROPOSED 8" OR 12" WATER LINE -

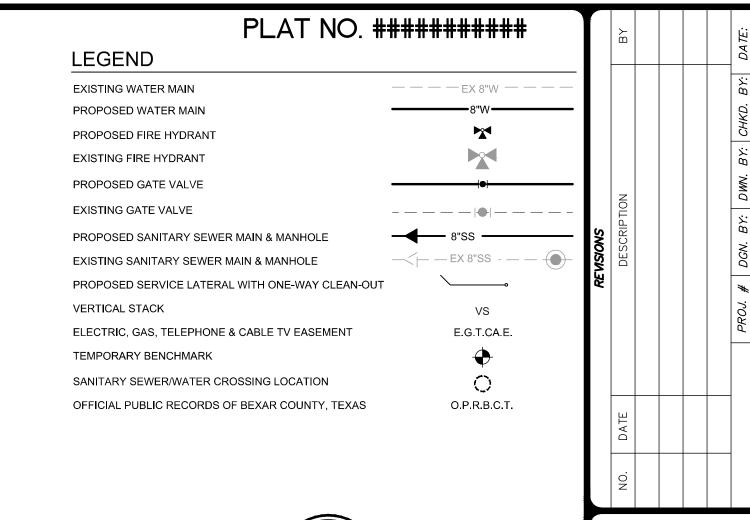
CAUTION: **EXISTING UTILITIES:** 1. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY CONTRACTOR PRIOR TO THE CONSTRUCTION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF SAME DURING CONSTRUCTION. 2. IT IS ESSENTIAL 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. 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.

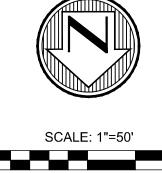


TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL N.T.S.

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Developer's Name MRCP FUND I, LLC Developer's Address 85 N.E. LOOP 410, SUITE 203 _ Zip__**7**8216 City SAN ANTONIO Phone # 210-274-0025 SAWS Block Map # 122588, 124588 Total EDU's 21 Total Acreage 4.175 Total Linear Footage of Pipe 8" - 745 L.F. SAWS Job No. 24-1613 Number of Lots 21

Plat No. 24-11800310

PAUL LANDA, JR. 100182

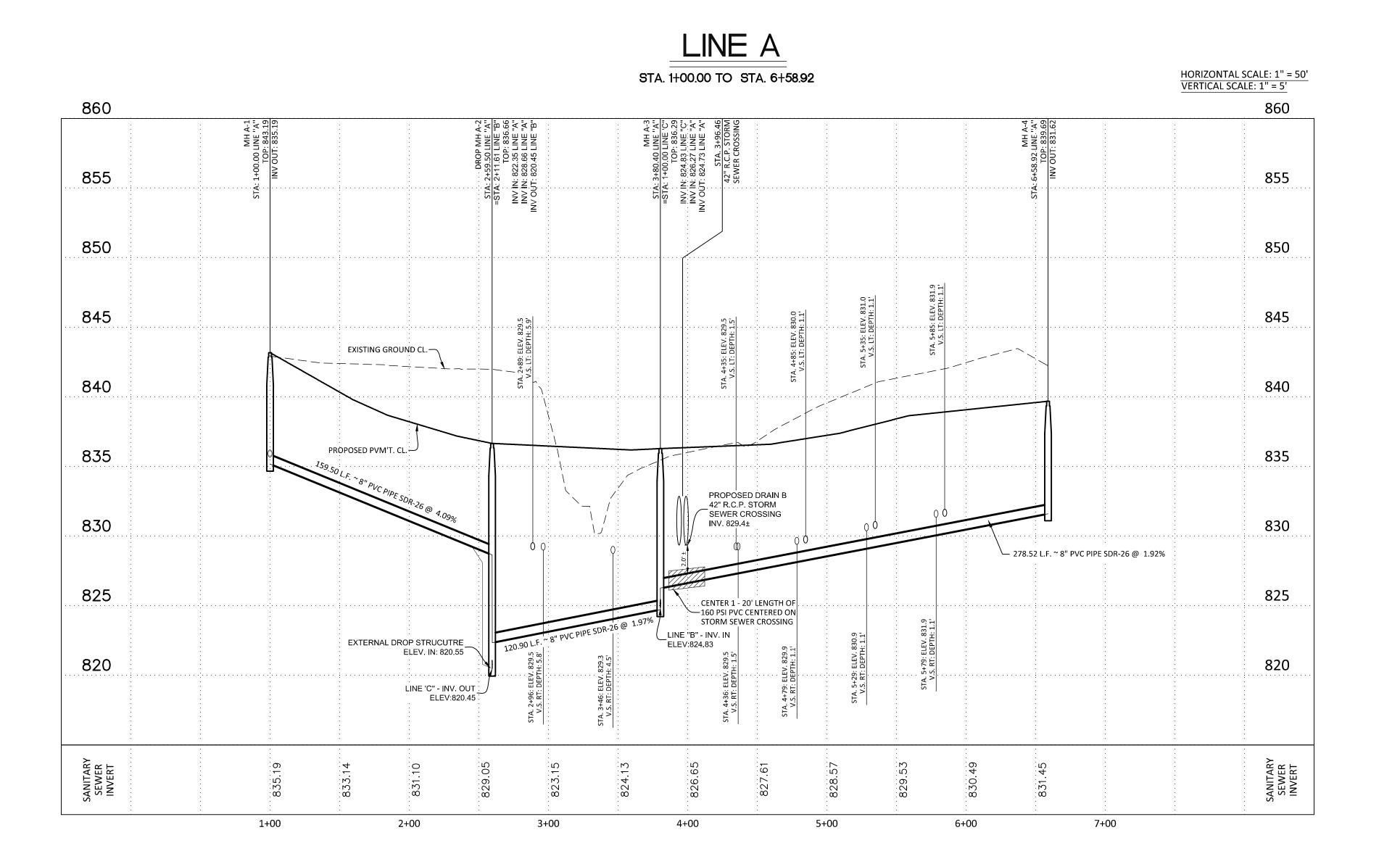
PROFILE ∞ Z SEWER LINE

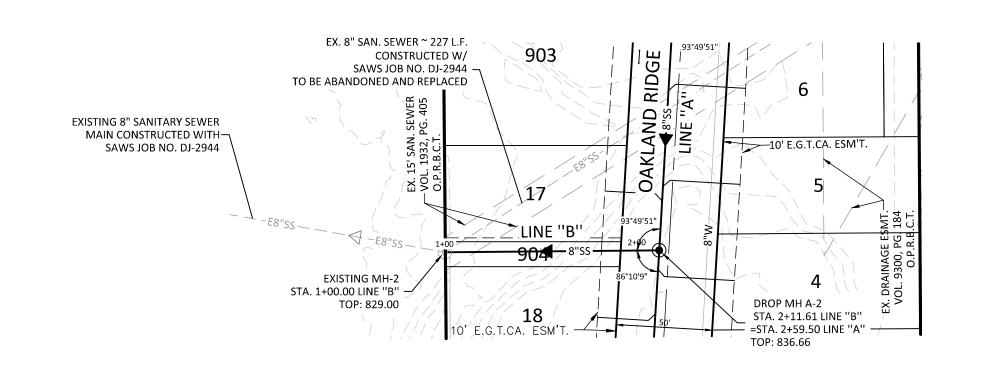
SANITARY

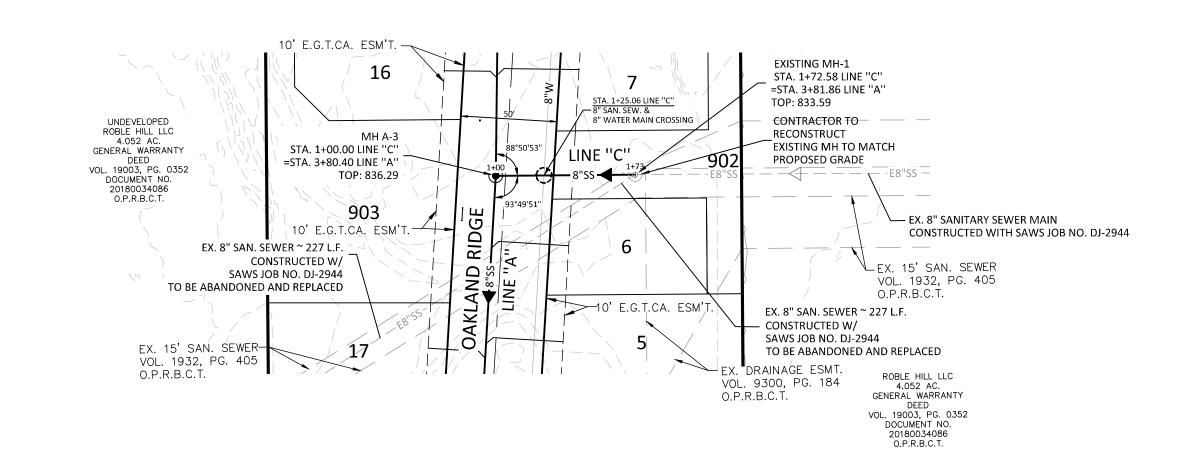
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C2.2

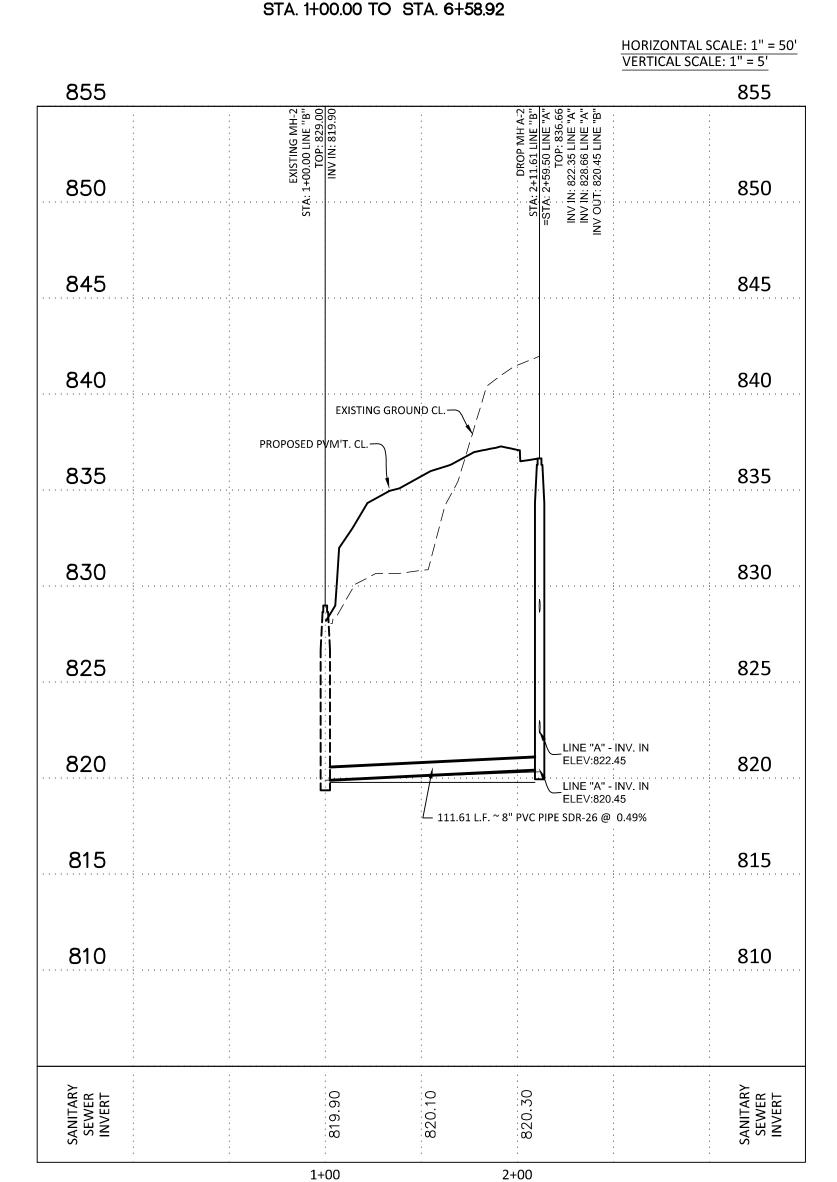
SUBMITTAL SET

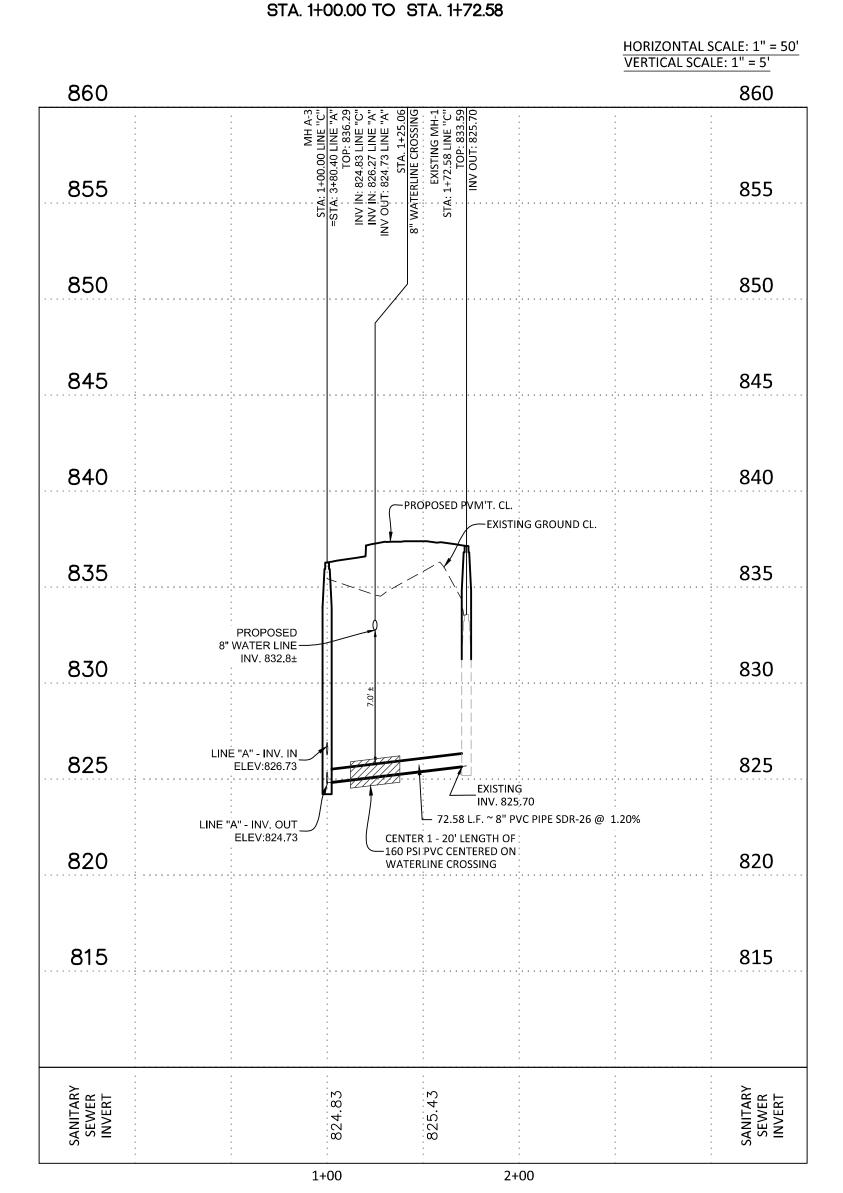






LINE "B"





PLAT NO. 24-11800310 LEGEND — — — EX 8"W — — —

EXISTING WATER MAIN PROPOSED WATER MAIN PROPOSED FIRE HYDRANT EXISTING FIRE HYDRANT PROPOSED GATE VALVE EXISTING GATE VALVE ----PROPOSED SANITARY SEWER MAIN & MANHOLE — ← EX 8"SS - — — **EXISTING SANITARY SEWER MAIN & MANHOLE** PROPOSED SERVICE LATERAL WITH ONE-WAY CLEAN-OUT VERTICAL STACK VS ELECTRIC, GAS, TELEPHONE & CABLE TV EASEMENT E.G.T.CA.E.

TEMPORARY BENCHMARK

SANITARY SEWER/WATER CROSSING LOCATION OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS





Developer's Name_MRCP_FUND I, LLC Developer's Address 85 N.E. LOOP 410, SUITE 203 City SAN ANTONIO Phone # 210-274-0025 _ Fax #___ SAWS Block Map # 122588, 124588 Total EDU's 21 Total Acreage 4.175 Total Linear Footage of Pipe 8" - 745 L.F. Plat No. 24-11800310

CAUTION:

Number of Lots 21

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SAWS Job No. 24-1613

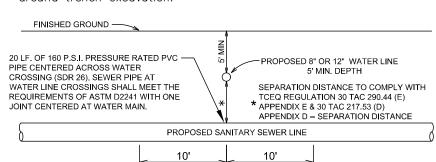
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TRENCH EXCAVATION SAFETY PROTECTION

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 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 SANITARY SEWER/ WATER CROSSING DETAIL

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0 PR ∞ Z -B WER Z

PAUL LANDA, JR.

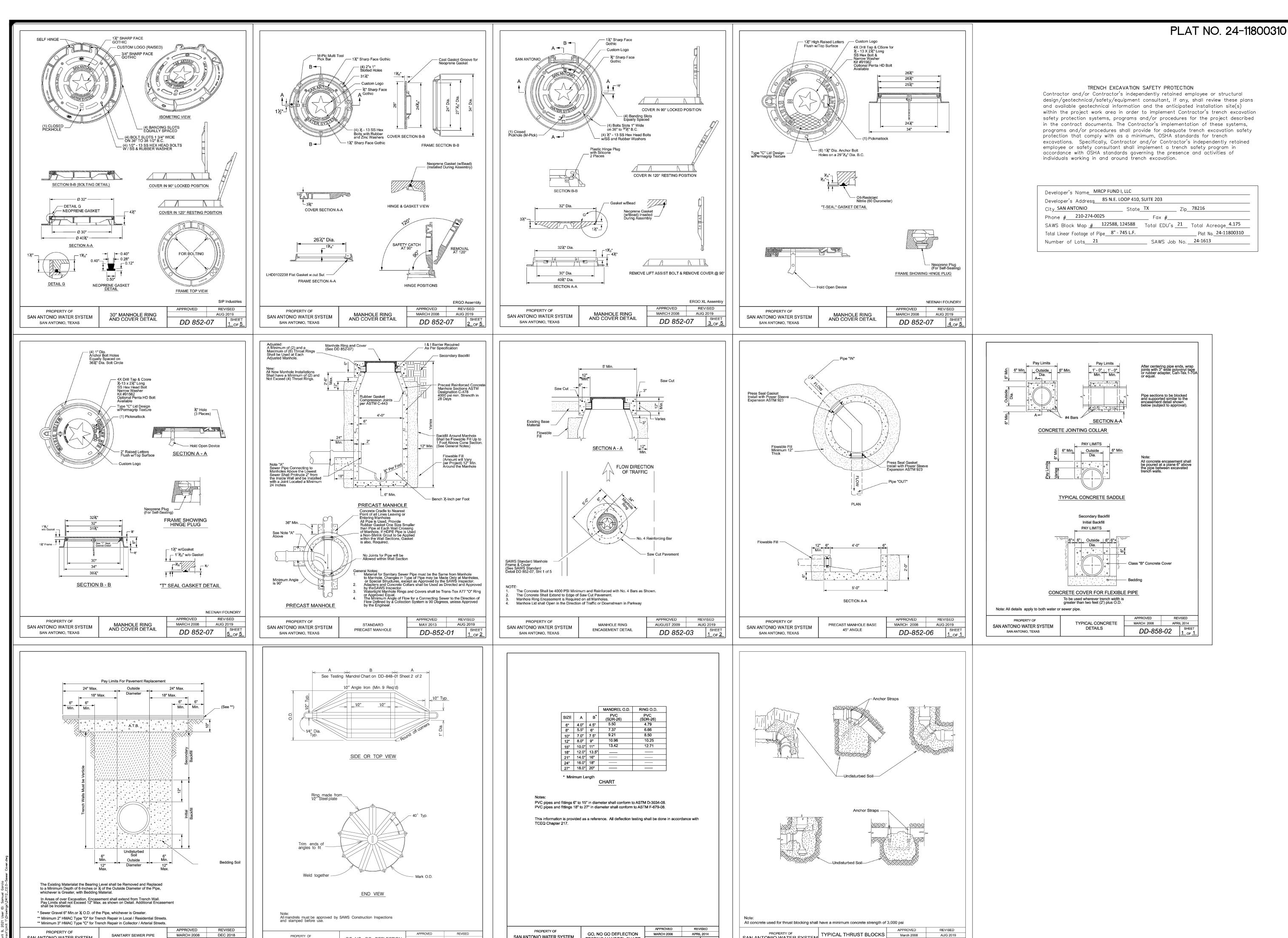
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ANITARY S

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SHEET

SUBMITTAL SET



MARCH 2008

DD-848-01

TESTING MANDREL CHART

SAN ANTONIO WATER SYSTEM

SAN ANTONIO, TEXAS

GO, NO GO DEFLECTION

TESTING MANDREL

AN ANTONIO WATER SYSTEM

SAN ANTONIO, TEXAS

March 2008

DD-848-01

APRIL 2014

SAN ANTONIO WATER SYSTEM

SAN ANTONIO, TEXAS

(SEWER ONLY)

AUG 2019

DD-839-03

MARCH 2008

DD-804-01

SANITARY SEWER PIPE

LAID IN TRENCH

SAN ANTONIO WATER SYSTEM

SAN ANTONIO, TEXAS

SUBMITTAL SET

PAUL LANDA, JR. 100182

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SANITARY

SHEET

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

PLAT NO. 24-11800310

OWNER/DEVELOPER

MRCP FUND I, LLC 85 N.E. LOOP 410, SUITE 203 SAN ANTONIO, TX 78216 210-274-0025

LEGACY AT OAK HILL ENCLAVE

SAWS CONSTRUCTION NOTES COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT

General Section

- 1. 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: A. 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
- B. Current TXDOT "Standard Specifications for Construction of Highways, Streets and Drainage".
- C. Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".
- D. Current City of San Antonio "Standard Specifications for Public Works Construction". E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
- 2. 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
- 3. 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. 4. 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
- 5. 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
- 6. 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
- 7. 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. 8. 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. 9. The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating
- 10. The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood 11. Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be
- 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
- 12. 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.
- 13. A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division.

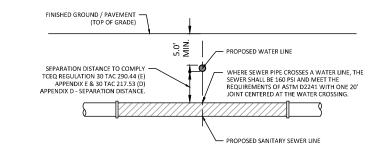
Water Section

- 1. 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
- 2. 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"
- 3. 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)
- 4. 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.
- 5. All valves shall read "open right". 6. 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). 7. 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. 8. 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.
- 9. 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
- 10. 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.

WATER IMPROVEMENTS



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

RESTRAINT JOINTS

- ALL TEES RESTRAINT JOINT AS REQUIRED PER
- ALL BENDS RESTRAINT JOINT AS REQUIRED PER
- ALL VALVES/DEAD ENDS RESTRAINT JOINT AS REQUIRED PER SAWS DD839-05
- ALL VERTICAL BENDS RESTRAINT JOINT AS REQUIRED

BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT. THE BIDDER WARRANTS

FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS

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.

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

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

MISCELLANEOUS GENERAL NOTES

. MACHINE CHLORINATION BY THE SAN ANTONIO WATER SYSTEM FOR NEW

JUMPER CONNECTIONS TO EXISTING WATER SERVICE TO BE PROVIDED AS

4. FITTINGS WEIGHT IS BASED ON M.J. DUCTILE IRON FITTINGS (COMPACT).

*6. MINIMUM COVER OVER WATER MAIN BASED ON FINISHED GROUND.

5. CONTRACTOR TO OBTAIN STREET CUT PERMITS AS NECESSARY FOR WATER

MAINS WITH HTH FOR NEW WATER MAINS 750 FEET AND LESS

REQUIRED OR DIRECTED BY THE SAWS INSPECTOR.

3. ALL MAINS ARE ON-SITE.

WATER LINE DIA. MIN. DEPTH

WATER MAINS GREATER THAN 800 FEET. CONTRACTOR SHALL CHLORINATE NEW

MAIN INSTALLATION. REPLACEMENT OF CURB, SIDEWALKS, BASE AND PAVEMENT

WILL BE SUBSIDIARY TO THE ITEMS THAT THE STREET CUT WAS NEEDED FOR.

ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD), TO PROPERLY WARN, GUIDE AND CONTROL TRAFFIC

AT LEAST ONE OPEN TRAFFIC LANE (12 FT.), CONTROLLED WITH FLAGMEN, DURING WORKING HOURS. DURING

SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS

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

NOTE TO CONTRACTOR:

TRAFFIC CONTROL NOTE:

VICINITY MAP

SUBMITTAL DATE:

LEGAL DESCRIPTION:

BEING A 4.175 ACRE TRACT OF LAND SITUATED IN THE JUAN MONTES SURVEY NO. 6, ABSTRACT NO. 11, COUNTY BLOCK 5708, BEING ALL OF A CALLED 97.934 ACRE TRACT, DESIGNATED AS TRACT I, AS CONVEYED TO SAN ANTONIO LD, LLC, BY SPECIAL WARRANTY DEED WITH VENDOR'S LIEN AS RECORDED IN DOCUMENT NUMBER 20220189805 OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS.

BENCHMARK K-CP 3 SET MAGNAIL W/MTR SHINER ON SIDEWALK ELEV. = 841.110

N = 13712973.8810

E = 2092626.7360

ELEV.= 848.000

N = 13713214.9000

E = 2092629.6010

ELEV.= 855.180

N = 13713725.9930E = 2092636.0440

K-CP 1 MAG NAIL W/SHINER

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

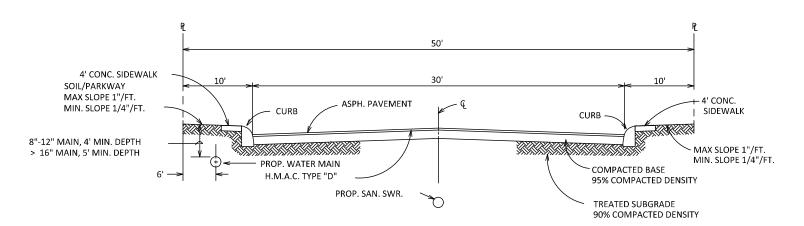
12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051 SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085

COVER SHEET

SHEET INDEX

SHEET NO. TITLE

- UTILITY COVER OVERALL UTILITY IMPORVEMENTS OVERALL
- OVERALL UTILITY IMPROVEMENTS OVERALL



TYPICAL STREET CROSS-SECTION (30' PAVEMENT)

ESTIMATED WATER QUANTITIES

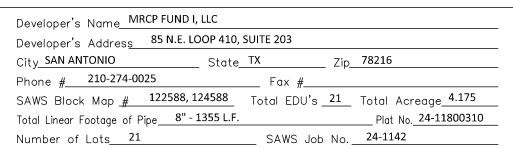
ITEM	DESCRIPTION	UNIT	EST/QTY
1	8" WATER MAIN TIE-IN	EA.	2
2	TRENCH EXCAVATION PROTECTION	L.F.	1,355
3	8" PIPE, C900 DR 18 PVC CLASS 235 (Includes Joint Restraints)	L.F.	1,355
4	8" GATE VALVE, M.J. (COMPLETE WITH RESTRAINTS)	EA.	2
5	12" GATE VALVE, M.J. (COMPLETE WITH RESTRAINTS)	EA.	2
6	STANDARD FIRE HYDRANT (COMPLETE WITH TEE, VALVE, BENDS AND RESTRAINTS)	EA.	1
7	3/4" SINGLE SERVICE with 5/8" METER : SHORT	EA.	21
8	D.I. FITTINGS (RESTRAINED)	TON	1.4
9	HYDROSTATIC TESTING	EA.	1
10	METER BOXES	EA.	21

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

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.

PRESSURE ZONE 994



K-CP 2 IP 1/2 W/MMES CP RED CAP

SUBMITTAL SET TEXAS C3.0

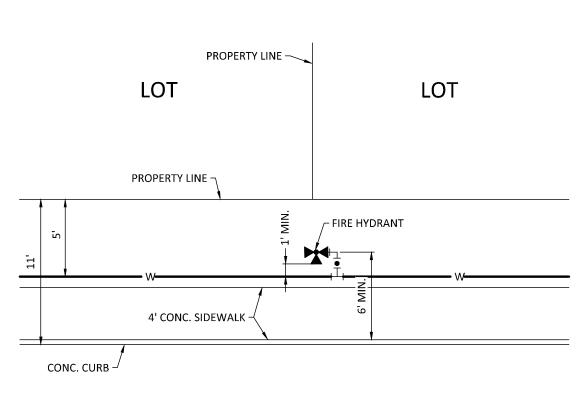
BEXAR COUNTY

ALL VALVES/DEAD ENDS RESTRAINT JOINT AS REQUIRED PER SAWS DD839-05

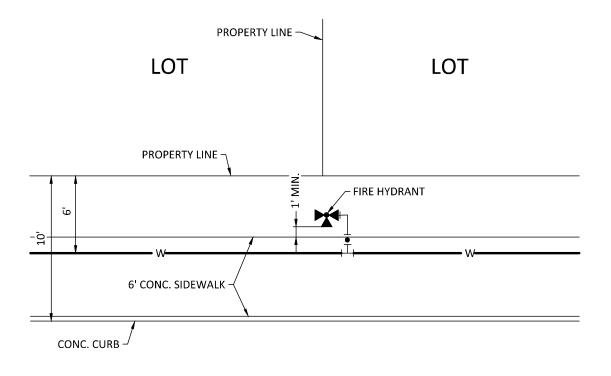
ALL VERTICAL BENDS RESTRAINT JOINT AS REQUIRED PER SAWS DD-839-06

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.



TYPICAL FIRE HYDRANT DETAIL FOR LOCAL A



TYPICAL FIRE HYDRANT DETAIL FOR LOCAL B

PRESSURE ZONE 994

Developer's Name MRCP FL	JND I, LLC			
Developer's Address 85 N		SUITE 203		
	State_		Zip_	78216
			•	
SAWS Block Map # 1225				
Total Linear Footage of Pipe	8" - 1355 L.F.			Plat No. 24-1180031
Number of Lots 21				

comply with as a minimum, OSHA standards for trench excavations. Specifically, Contractor and/or Contractor's independently retained employee or safety consultant

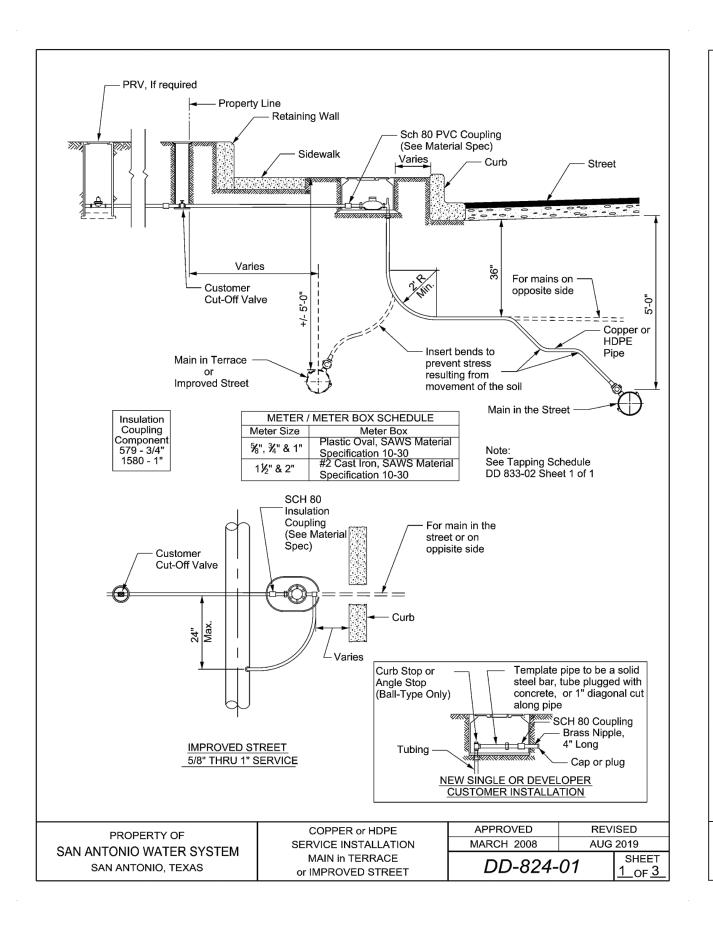
shall implement a trench safety program in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.

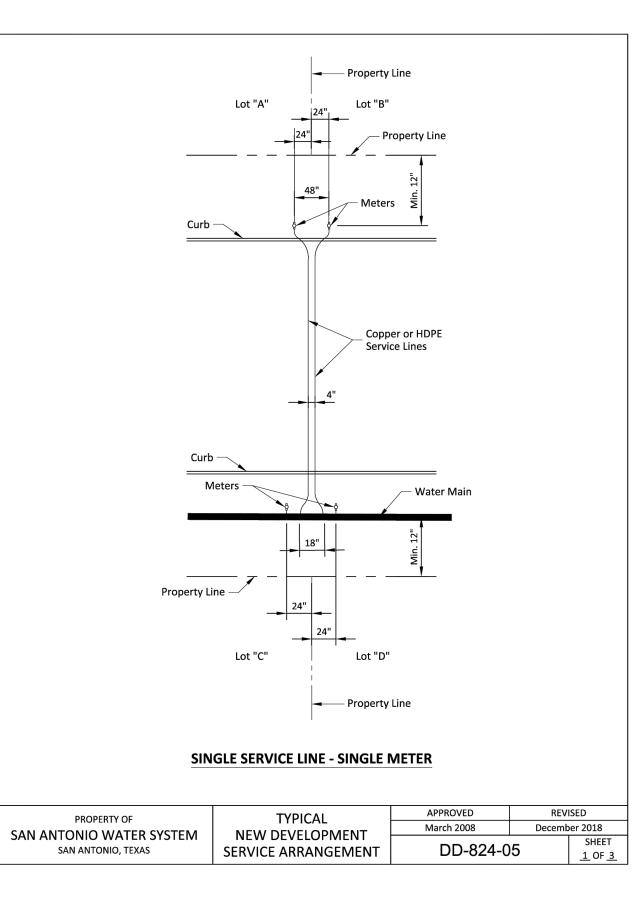
SUBMITTAL SET

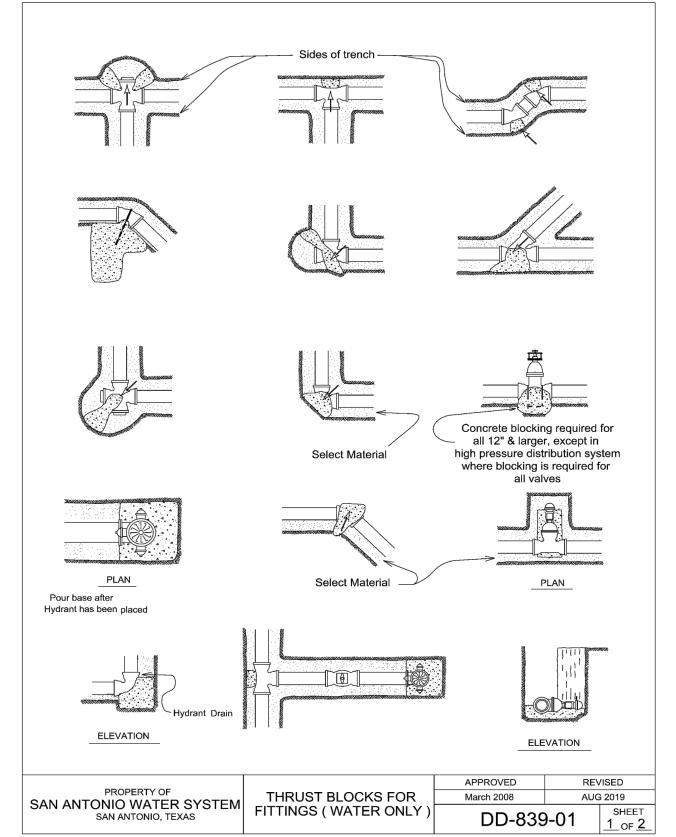


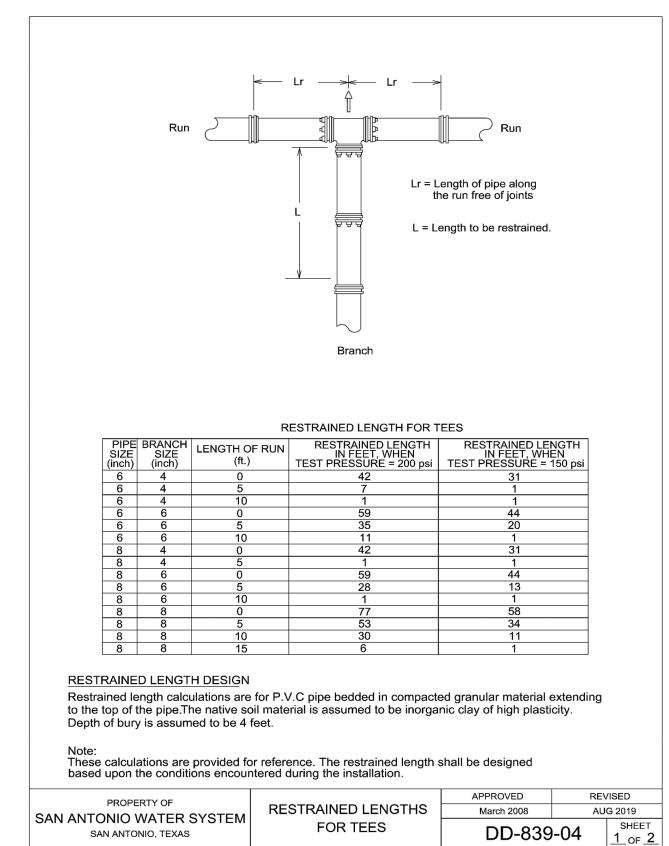
TRIBUTION 0 **WATER**

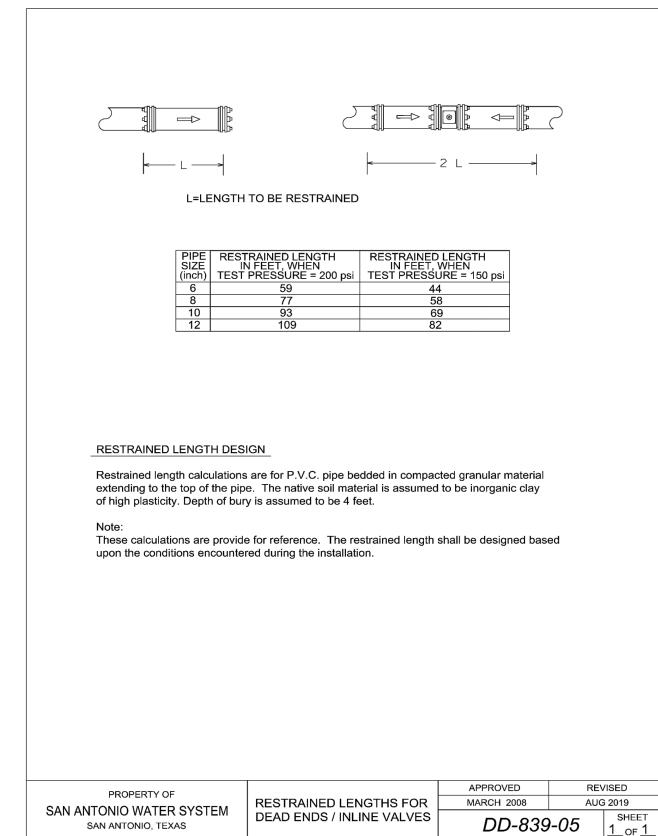
SHEET

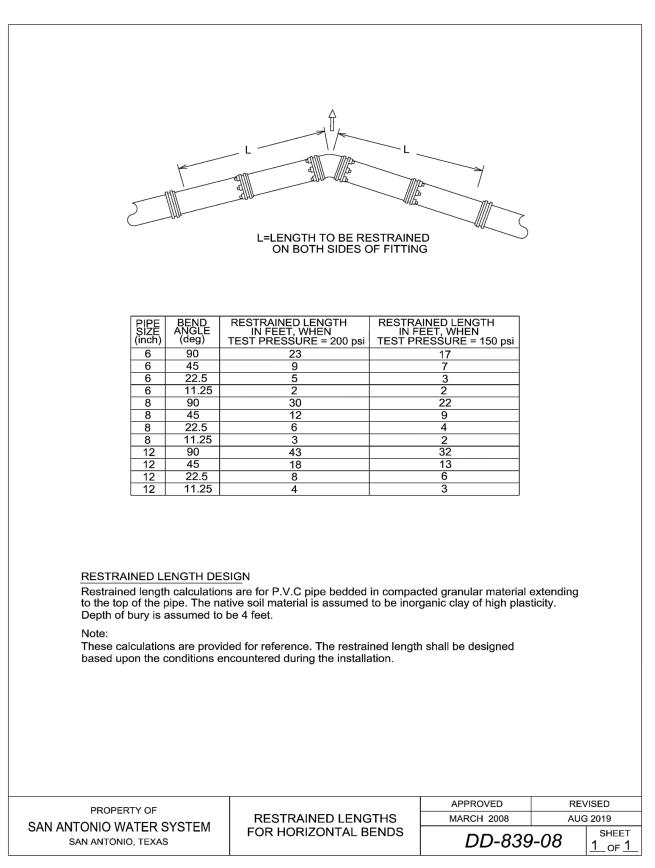


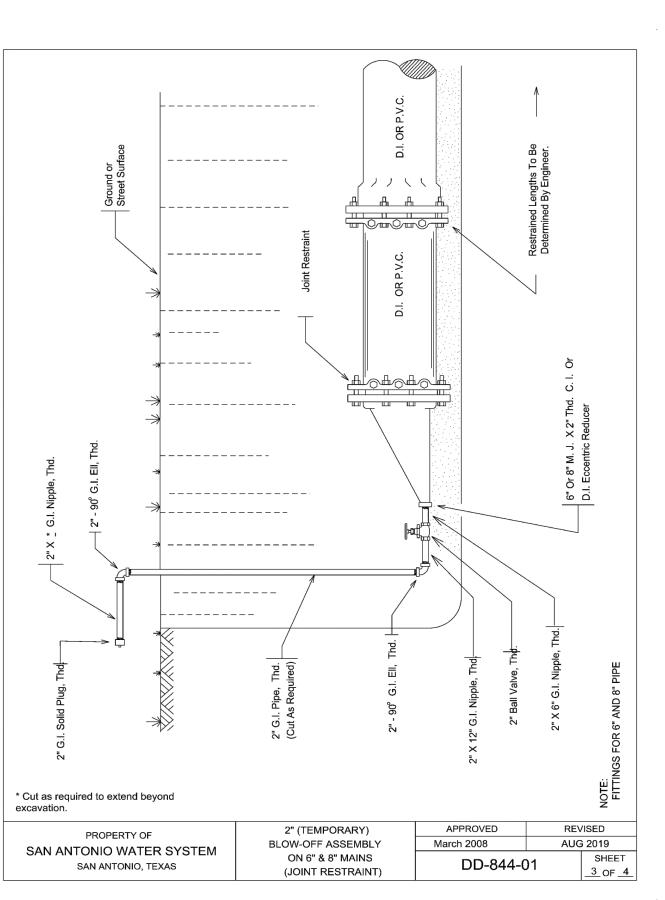


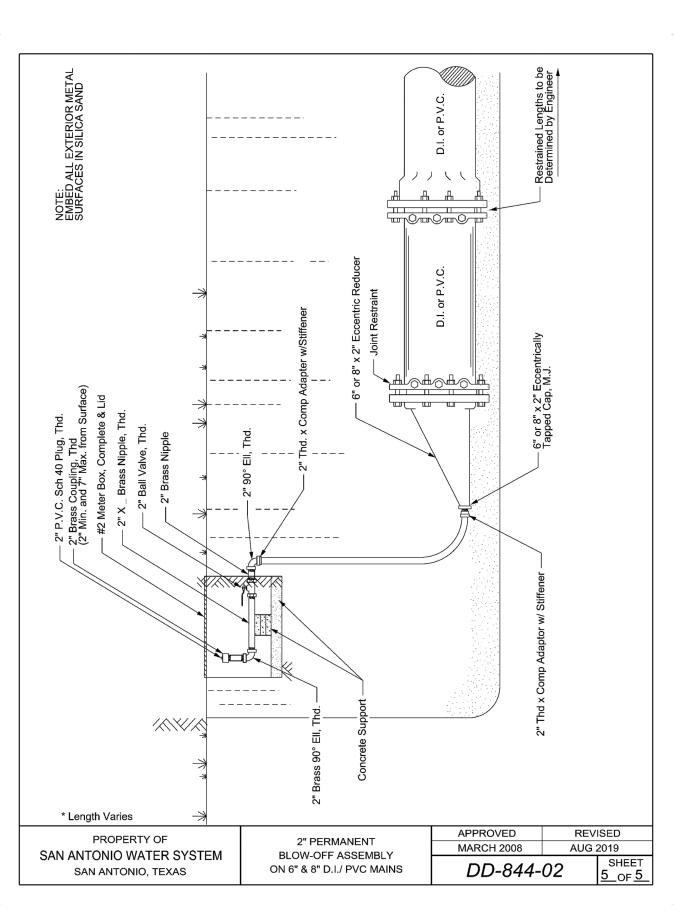












PRESSURE ZONE 994

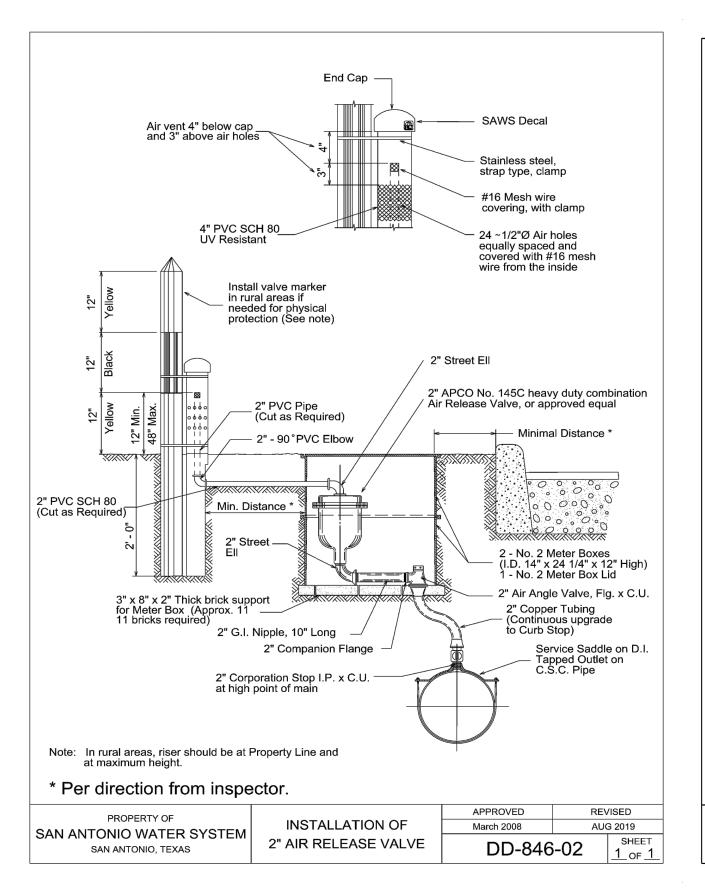
Developer's Name MRCP F Developer's Address 85		SUITE 203		
City SAN ANTONIO			Zip_	78216
Phone # 210-274-0025		Fax #		
SAWS Block Map # 122	2588, 124588	Total EDU's _	21_	Total Acreage 4.175
Total Linear Footage of Pipe_	8" - 1355 L.F.			Plat No. 24-1180031
Number of Lots 21		SAWS Job	No.	24-1142

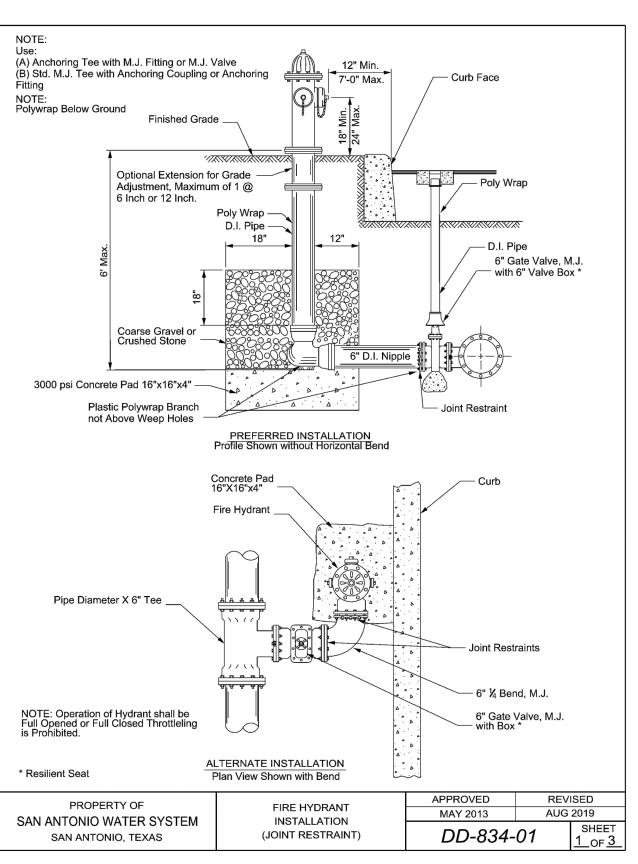
SHEET

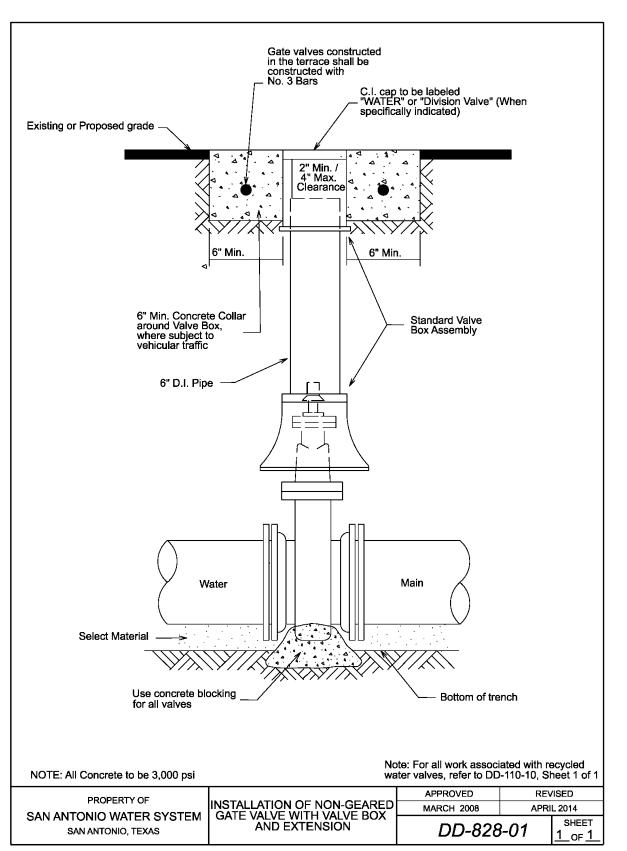
PAUL LANDA, JR. 100182

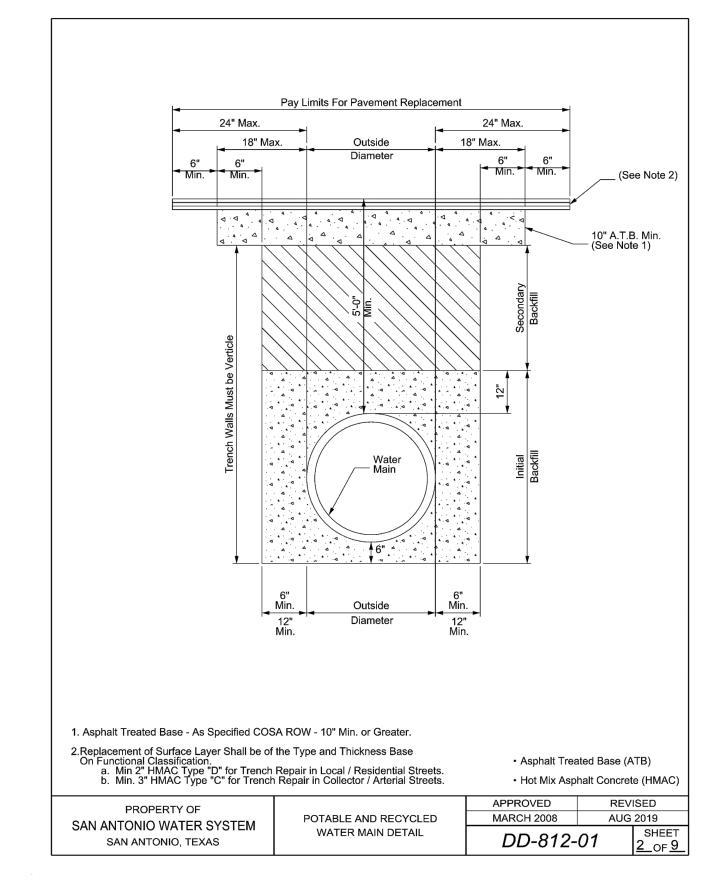
WATER

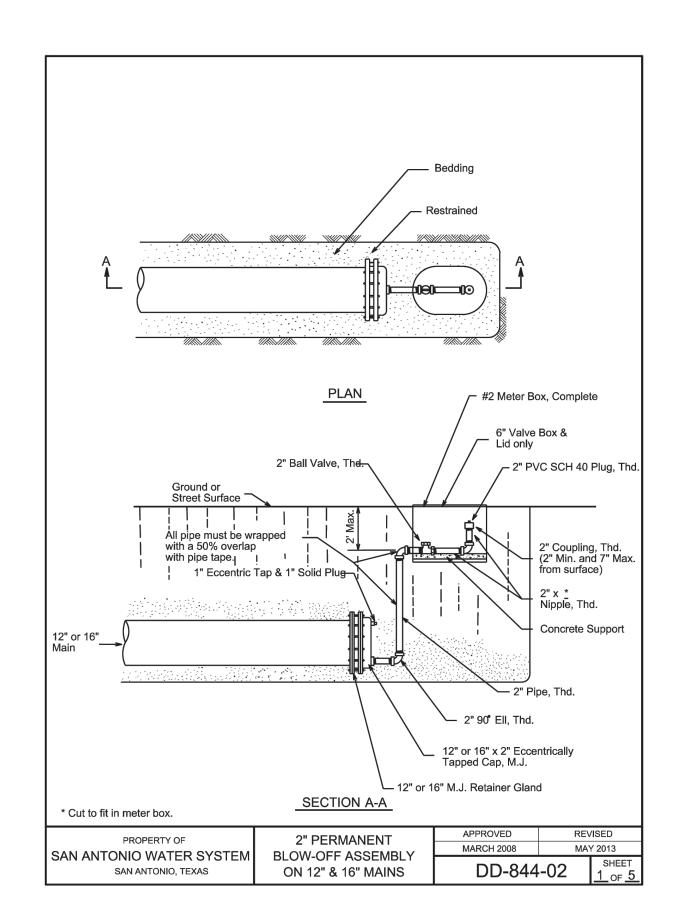
SUBMITTAL SET

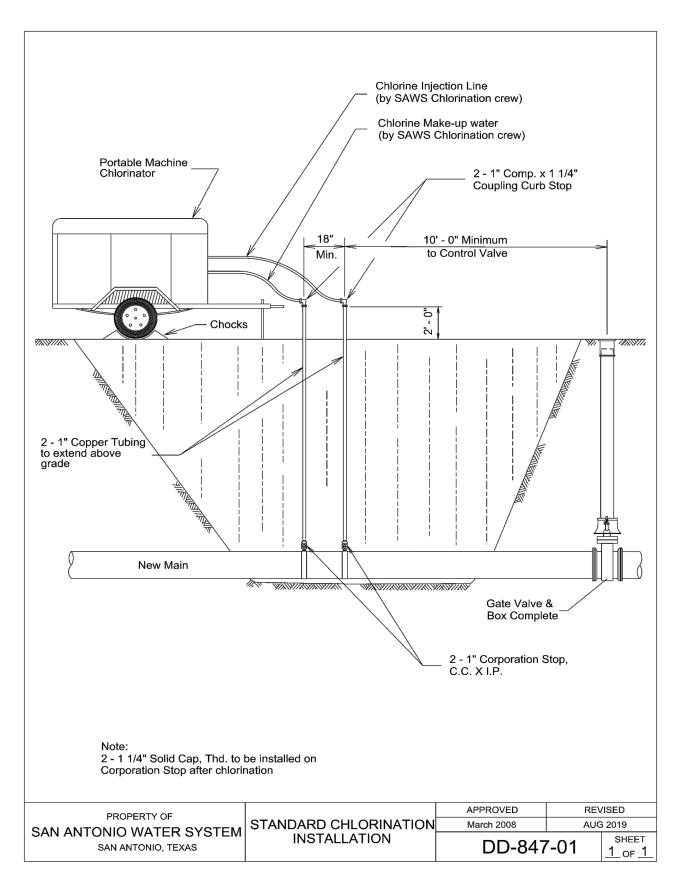






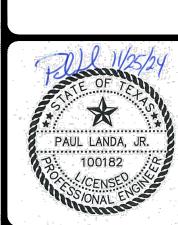






PRESSURE ZONE 994

Developer's Address 85 N.	E. LOOP 410,	SUITE 203		
City SAN ANTONIO			Zip_	78216
Phone # 210-274-0025		Fax #		
SAWS Block Map # 12258		**		
Total Linear Footage of Pipe	8" - 1355 L.F.			Plat No. 24-11800310
		SAWS Job		

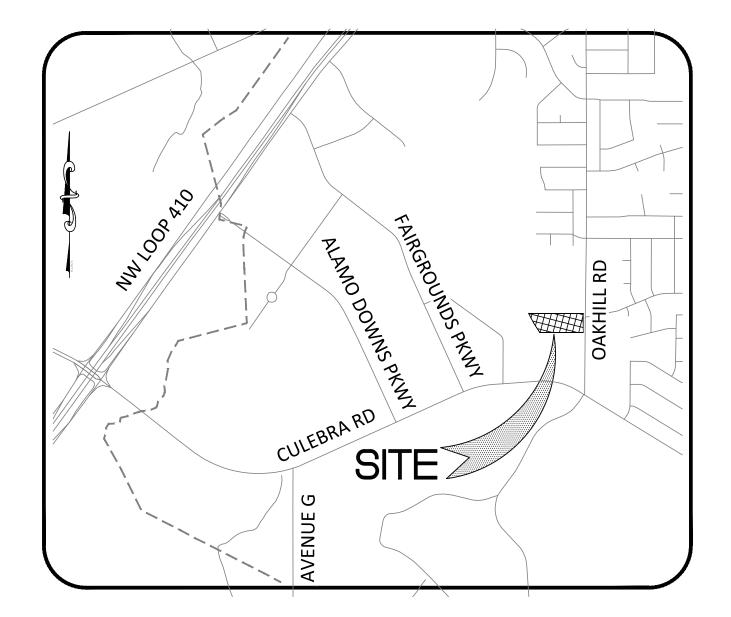


C3.3

CONSTRUCTION PLANS FOR

LEGACY AT OAK HILL ENCLAVE

STREET AND DRAINAGE IMPROVEMENTS



SUBMITTAL DATE:

VICINITY MAP

LEGAL DESCRIPTION:

BEING A 4.175 ACRE TRACT OF LAND SITUATED IN THE JUAN MONTES SURVEY NO. 6, ABSTRACT NO. 11, COUNTY BLOCK 5708, BEING ALL OF A CALLED 97.934 ACRE TRACT, DESIGNATED AS TRACT I, AS CONVEYED TO SAN ANTONIO LD, LLC, BY SPECIAL WARRANTY DEED WITH VENDOR'S LIEN AS RECORDED IN DOCUMENT NUMBER 20220189805 OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS.





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

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE TO THE CITY OF SAN ANTONIO SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- 2. ALL CONSTRUCTION IS SUBJECT TO INSPECTION AND APPROVAL BY THE CITY OF SAN ANTONIO.
- 3. 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 TELE. NO.: 210-704-7109

TEXAS STATE WIDE ONE CALL LOCATOR TELE. NO.: 800-545-6005 CITY PUBLIC SERVICE

TIME WARNER CABLE

- 4. 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.
- 5. THE CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT THE TELEPHONE COMPANY DURING CONSTRUCTION.
- 6. 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).
- 7. MATERIAL SPECIFICATIONS:
 - CONCRETE/CONCRETE RIPRAP: CLASS A 3000 PSI IN 28 DAYS UNLESS 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
- 8. CONTRACTOR TO COORDINATE CONCRETE CURB DEPRESSIONS WITH THE DEVELOPER (NO SEPARATE PAY ITEM).
- 9. TRANSITION TO/FROM WASHOUT CROWNS IN TWENTY-FIVE FEET (25').

CONTRACTOR TO TIE EXISTING AND PROPOSED CURB/SIDEWALK.

10. IMPROVED EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE CHANNEL SUBGRADE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CANNEL FOR MAINTENANCE. REFER TO 16.2.1 OF THE CITY OF SAN ANTONIO STORM WATER DESIGN CRITERIA MANUAL. NO EXTRA PAY ITEM.

LEGEND

PROPERTY LINE

FLOW ARROW

EXISTING CONTOUR

PROPOSED CONTOUR

PROPOSED CONCRETE CURB

PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY SIDEWALK WHEELCHAIR RAMP - TYPE 10 **DIRECTIONAL RAMPS (SINGLE)** SIDEWALK WHEELCHAIR RAMP - TYPE 10 DIRECTIONAL RAMPS (DUAL) SIDEWALK WHEELCHAIR RAMP - TYPE II EXISTING TOP OF CURB ELEVATION 805.81TC PROPOSED TOP OF CURB ELEVATION HOME BUILDER INSTALLED 4' SIDEWALK DEVELOPER INSTALLED 4' SIDEWALK EXISTING SIDEWALK SIDEWALK WHEEL CHAIR RAMP WASH-OUT CROWN FILL @ 95% COMPACTION POSSIBLE DRIVEWAY LOCATION

Sheet Number Sheet Title STREET & DRAIN PLANS

Sheet List Table

STREET COVER C4.1 TRAFFIC PLAN C4.2 TRAFFIC DETAILS

C4.3 OAKHILL RIDGE STREET PLAN AND PROFILE

C4.4 STANDARD DETAILS C4.5 STANDARD DETAILS TYPICAL STREET SECTIONS

DRAIN "A" DRAIN "B" DRAIN "C" C4.10 **DETENTION POND**

C4.11 **DETENTION POND** C4.12 DRAINAGE DETAILS

GRADING PLANS

C5.0 **GRADING PLAN** SW3P PLANS

C6.0 SW3P PLAN C6.1 SW3P DETAILS

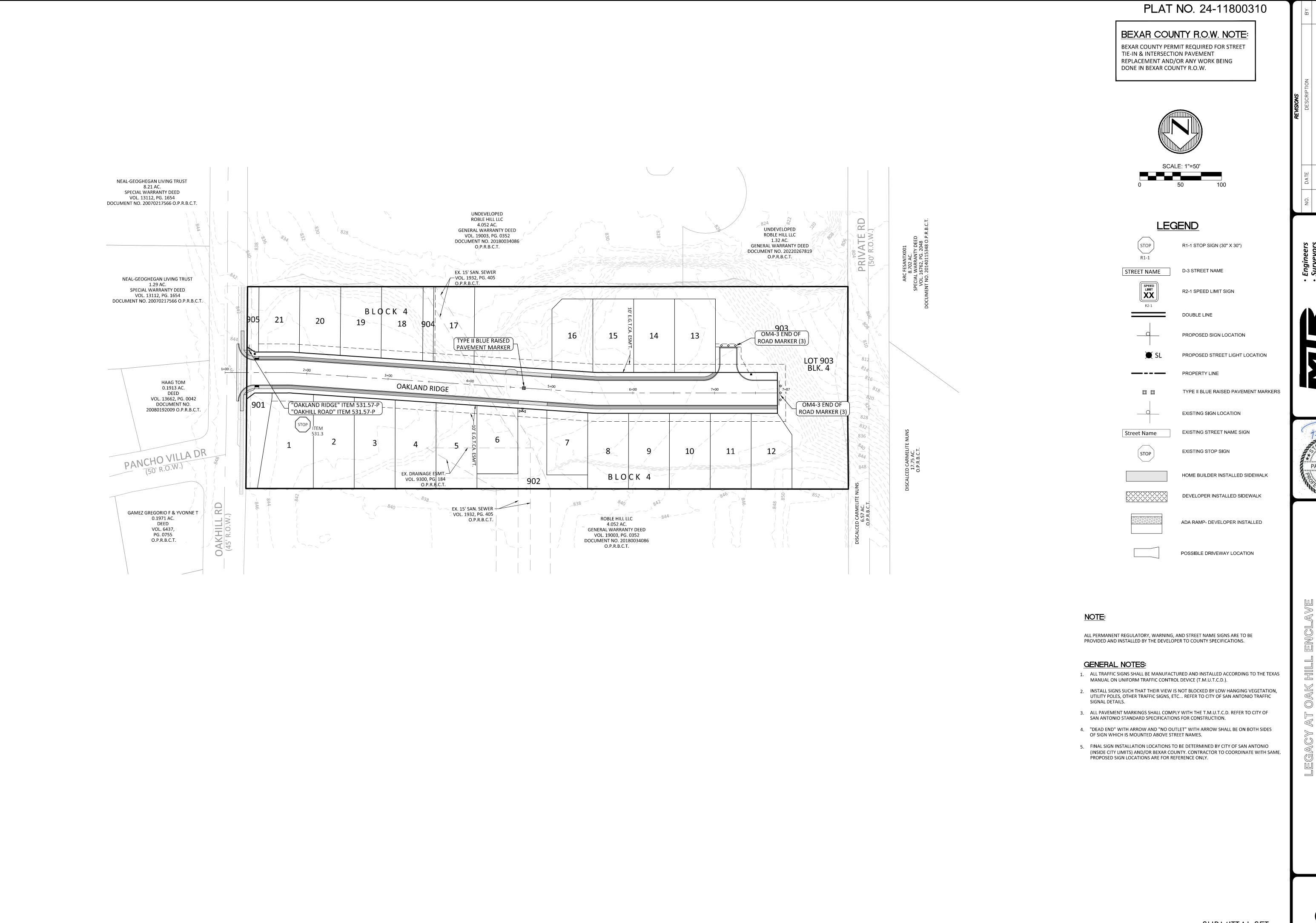
SUBMITTED BY:

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

OWNER/DEVELOPER

MRCP FUND I, LLC 85 N.E. LOOP 410, SUITE 203 SAN ANTONIO, TX 78216

210-274-0025



PROJ. # DGN. BY: DWN. BY: CHKD. BY:

**Planners

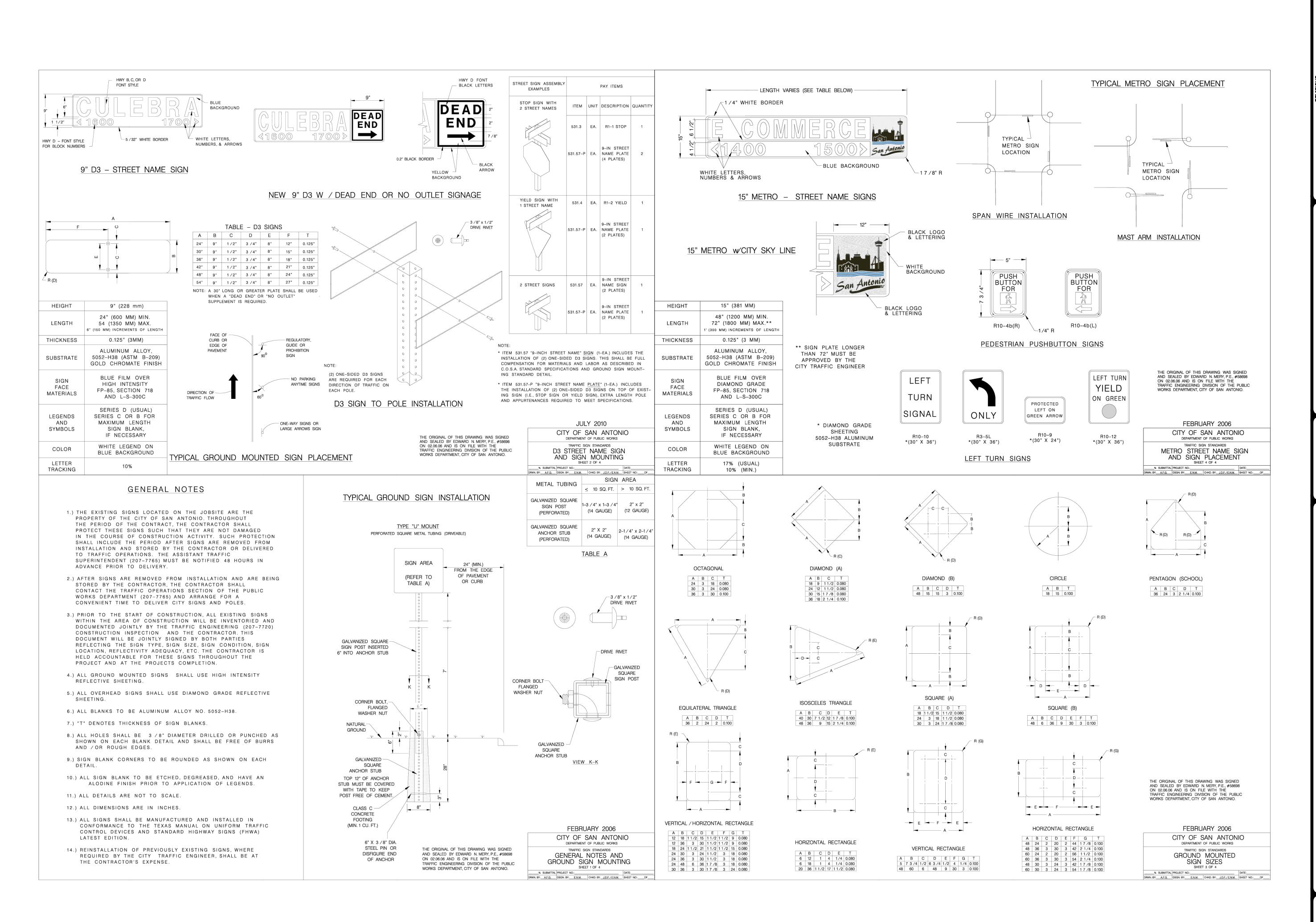
**Plan





OVERALL TRAFFIC PLAN

SHEET



NO. DATE
DESCRIPTION

PROJ. # DGN. BY: DWN. BY: LUL

Surveyors
Surveyors
Planners

Z Engineers, LLC
7/SURVEYING: F-10131500

Moy Tarin Ramirez Eng RBELS: ENGINEERING F-5297/SURVE

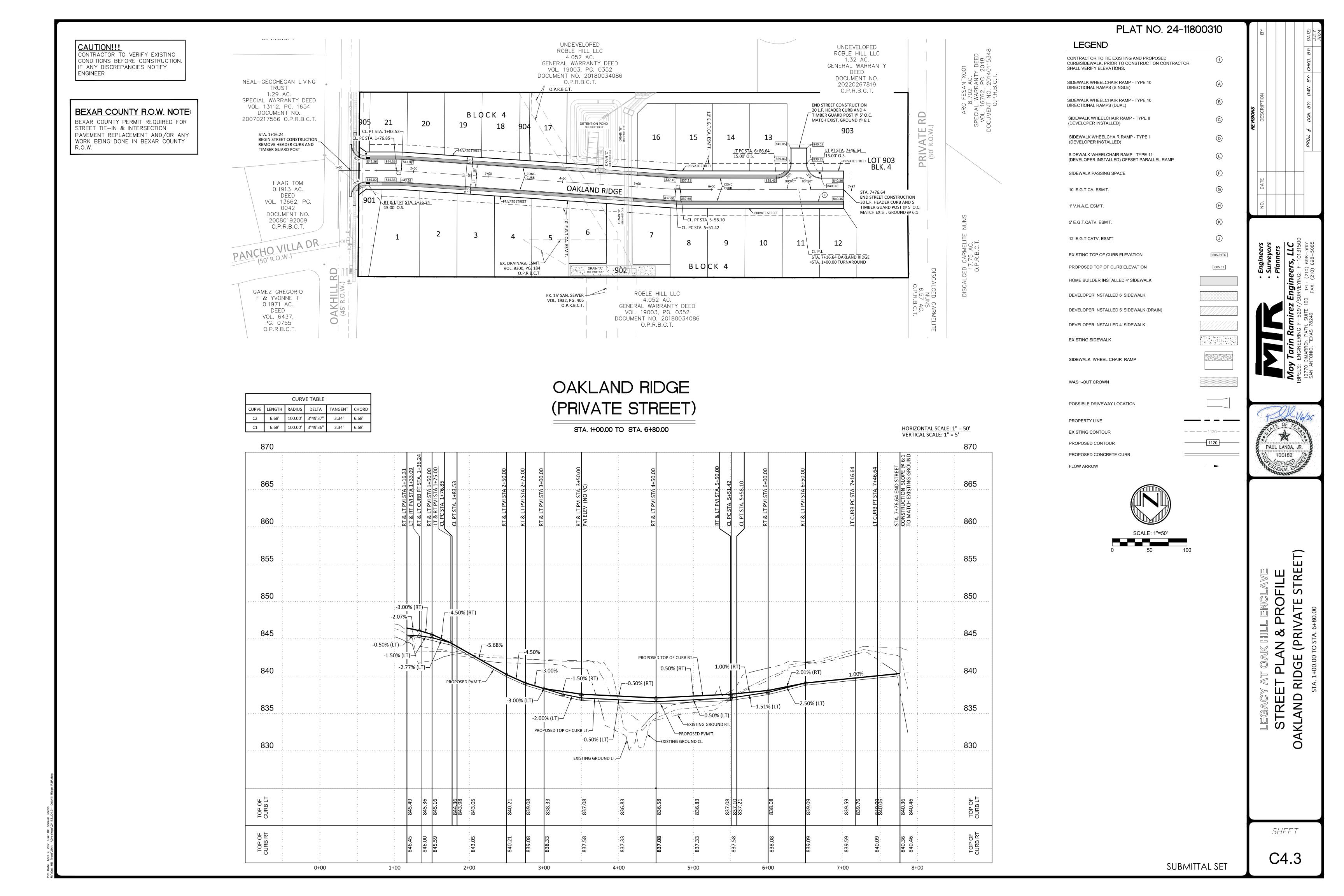


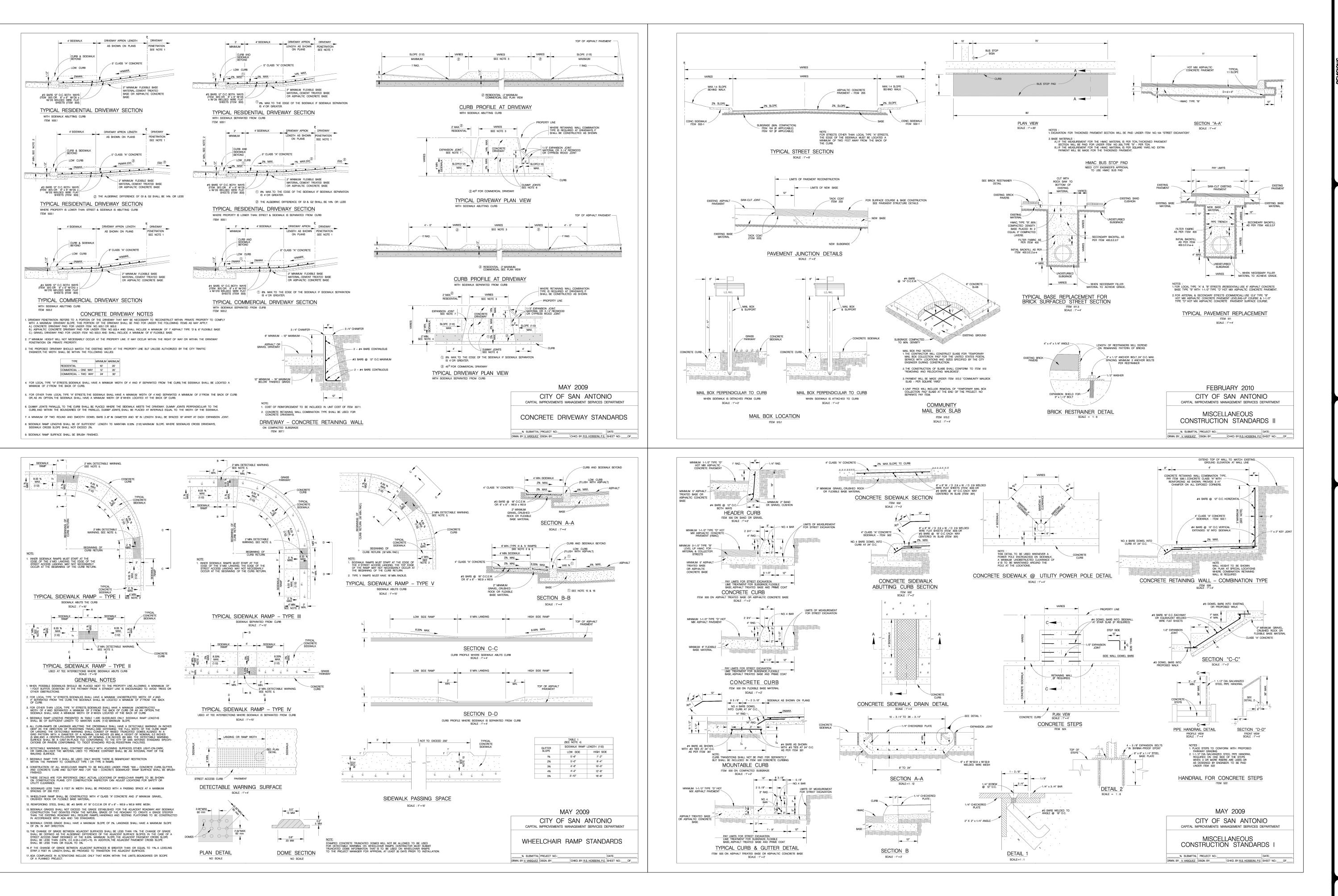
FIC PLAN DETAILS

<

2

SHEET





Deate Description

Deate Description

PROJ. # DGN. BY: CHKD. BY: 5

• Engineers
• Surveyors
• Planners
• Planners

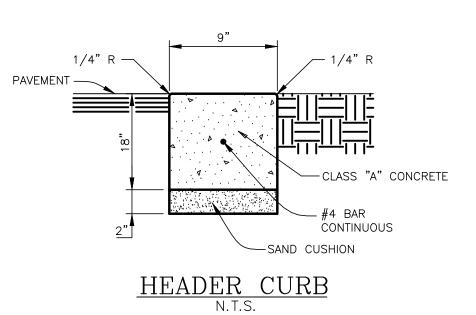
Moy Tarin Ramirez Engin
TBPELS: ENGINEERING F-5297/SURVEYIN

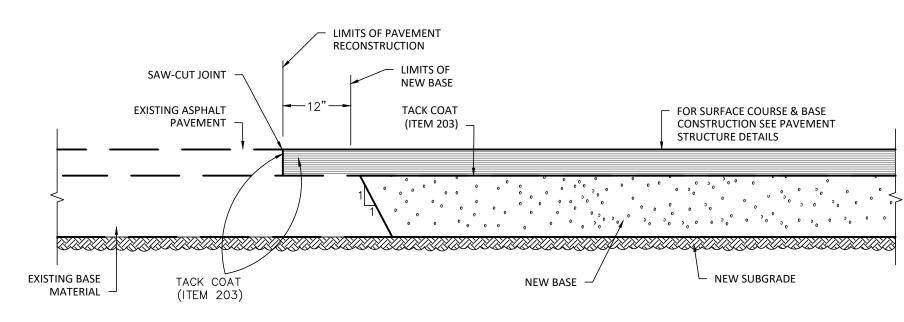


STREET PLAN & PROFILE
STANDARD DETAILS

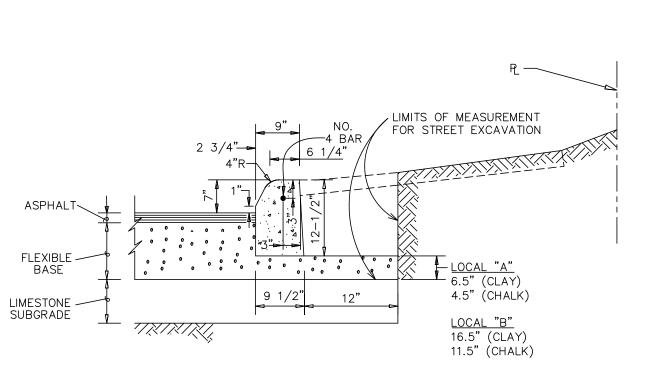
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CONCRETE SIDEWALK DETAIL



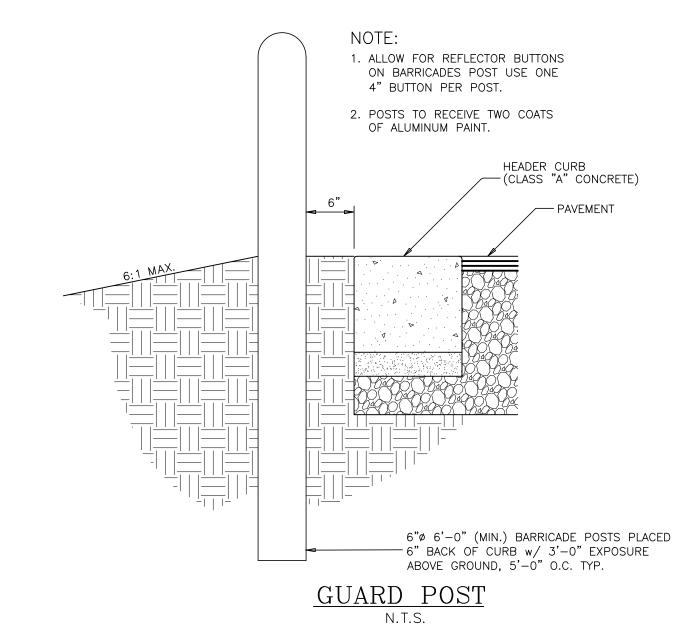


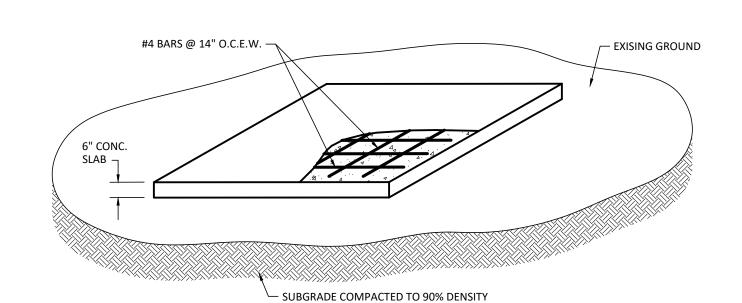
PAVEMENT JUNCTION DETAILS
N.T.S.



CURB NOTE: THE COST OF BASE MATERIAL UNDER & BEHIND THE CURB SHALL BE INCLUDED IN THE COST OF THE CURB.

MACHINE LAID CURB





NOTES:

- THE CONTRACTOR WILL CONSTRUCT CONCRETE SLABS FOR
 "TEMPORARY MAIL BOX COLLECTION PAD" FOR THE UNITED
 STATES POSTAL SERVICE AT THE LOCATIONS AND SIZES
 SPECIFIED BY THE CITY ENGINEER DURING CONSTRUCTION.
- 2) THE CONSTRUCTION OF SLABS SHALL CONFORM TO ITEM NO. 502 "CONCRETE SIDEWALKS AND DRIVEWAYS"
- 3) PAYMENT WILL BE MADE UNDER ITEM NO. 502-2 DRIVEWAYS PER SQUARE YARD.
- 4) UNIT PRICE WILL INCLUDE REMOVAL OF "TEMPORARY MAIL BOX COLLECTION PAD" SLABS AT THE END OF THE PROJECT. NO SEPARATE PAY ITEM.

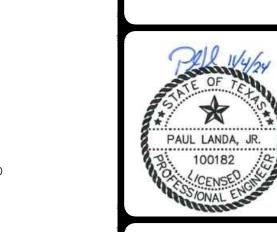
TEMPORARY MAIL BOX COLLECTION PAD

CONCRETE DRIVEWAY NOTES:

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

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

- 2. FOR LOCAL TYPE "A" STREETS, SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 3' FROM THE BACK OF CURB.
- 3. FOR OTHER THAN LOCAL TYPE "A" STREETS, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH 4' AND SEPARATED A MINIMUM OF 3' FROM THE BACK OF CURB OR, AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
- 4. DUMMY JOINTS PARALLEL TO THE CURB SHALL BE PLACED WHERE THE SIDEWALK MEETS THE DRIVEWAY. DUMMY JOINTS PERPENDICULAR TO THE CURB, AND WITHIN THE BOUNDARIES OF THE PARALLEL DUMMY JOINTS, SHALL BE PLACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK.
- 5. A MINIMUM OF TWO ROUND AND SMOOTH DOWEL BARS 3/8" IN DIAMETER AND 18" IN LENGTH SHALL BE SPACED 18" APART AT EACH EXPANSION JOINT.
- 6. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE. WHERE SIDEWALKS CROSS DRIVEWAYS, SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%..
- 7. SIDEWALK RAMP SURFACE SHALL BE BRUSH FINISHED.



STANDARD DETAILS

SHEET

N.T.S. STREET ~ STA. 1+00.00 TO STA. 6+80.00

35 L.F. 4' CONC. WALK 4' CONC. WALK XOÁĶĽĄŇĎ ŘIDGÉ 4' CONC. WALK 4' CONC. WALK 4' CONC. WALK

DURING CONSTRUCTION.

PAVEMENT INDEX MAP

DEVELOPER INSTALLED

LOCAL "A"

NOTES:

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. "SUBSURFACE EXPLORATION & PAVEMENT ANALYSIS FOR PROPOSED NEW STREETS - 171 ACRE NICHOLAS TRACT, SAN ANTONIO, TEXAS, DATED SEPTEMBER 10, 2021.
- 3. CONTRACTOR TO COORDINATE ALL MATERIAL TESTING

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

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

•• MINIMUM PASSING 13/4 SIEVE •• MINIMUM PASSING 3/4 SIEVE

- •• MINIMUM PASSING NO. 4 SIEVE • SAMPLE SOIL-LIME MIXTURE FOR DETERMINATION OF MAXIMUM DRY DENSITY (MDD). IN THE LABORATORY, MOLD SPECIMENS TO 95% OF MDD AT OPTIMUM MOISTURE CONTENT AND VERIFY UCS TO BE AT LEAST 160 PSI IN ACCORDANCE WITH
- PROCEDURE OUTLINED ABOVE FOR MIXTURE DESIGN. • 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).
- VERIFY DEPTH OF LIME STABILIZED LAYER TO DEPTH AS NOTED ON PLAN TO WITHIN

* PAVEMENT SECTIONS

CLAY SUBGRADE (CBR 2.5) PAVEMENT MATERIAL LOCAL A

TYPE D ASPHALTIC CONCRETE 2.0 IN. FLEXIBLE BASE (TxDOT ITEM 10 IN. 247 TYPE A GRADE 2)

LIME STABILIZED SUBGRADE (31.0 LBS/SY) 6.0 IN. (6.5% BY WEIGHT)

NOTE: THE SUBGRADE SOILS SHOULD BE TESTED FOR SOLUBLE SULPHATE CONTENT PRIOR TO INSTALLATION OF LIME OR CEMENT

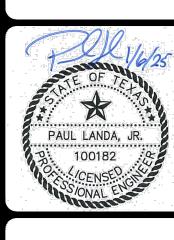
SELECT FILL MATERIAL SHALL HAVE A MAXIMUM PLASTICITY INDEX OF 50 AND A CALIFORNIA BEARING RATIO (CBR) OF AT LEAST 2.5

GEOTECHNICAL REPORT::
INTEGRATED TESTING AND ENGINEERING COMPANY OF SAN ANTONIO, L.P.

SUBSURFACE EXPLORATION AND PAVEMENT ANALYSIS PROPOSED NEW STREETS LEGACY AT OAK HILL ENCLAVE SAN ANTONIO, TX

INTEC PROJECT NO. S241200 (SEPTEMBER 17, 2024)





DETAIL STRE STANDARD

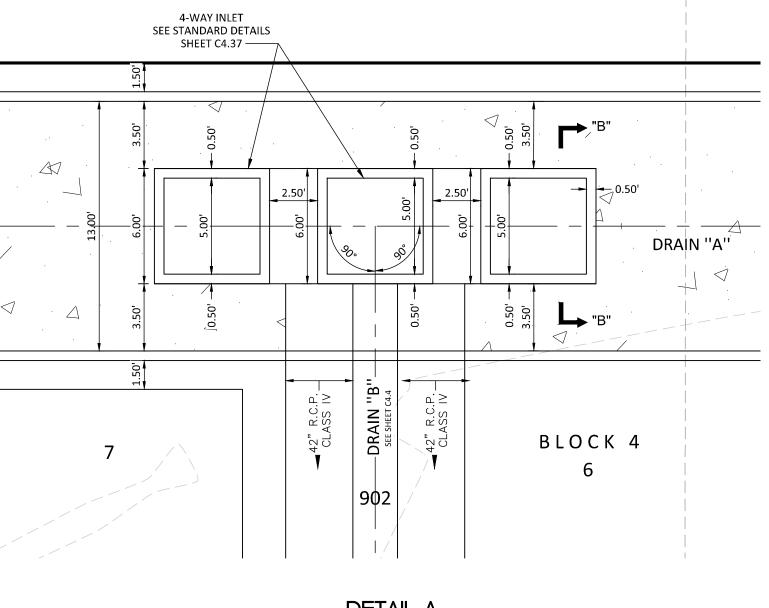
SHEET

- 1. COVER FOR REINFORCING STEEL IS 2" UNLESS OTHERWISE NOTED.
- 2. SEE GENERAL NOTES ON SHEET C4.0 FOR MATERIAL SPECIFICATIONS.
- 3. MINIMUM BAR DEVELOPMENT LENGTH FOR SPLICE AND BENDS AT WALL AND FLOOR CONNECTIONS SHALL BE 30 INCHES.
- 4. ALL CONCRETE SHALL RESIST A MINIMUM 3000 PSI 28 DAY BREAK, UNLESS OTHERWISE NOTED.
- 5. PROVIDE CONCRETE APRONS ON ALL INLETS, REFERENCE DETAILS FOR
- 6. 3/4" CHAMFER ON ALL EXPOSED CONCRETE EDGES.

CONSTRUCTION REQUIREMENTS.

NOTED OTHERWISE.

- 7. ALL STORM PIPE MATERIAL IS CONCRETE REINFORCEMENT PIPE, UNLESS
- 8. IMPROVED EARTHEN CHANNELS AND DETENTION PONDS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE CHANNEL SURFACE AREA WILL HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE. REFER TO SECTION 16.2.1 OF THE STORM WATER DESIGN CRITERIA MANUAL.



DETAIL A SCALE: 1" = 5'

DRAIN "A"

CL PI ~ 4-WAY INLET

STA. 1+37.19 DRAIN A —

=STA. 1+00.00 DRAIN B

SEE DETAIL "A" THIS SHEET

STA. 1+00.50

BEGIN CONCRETE

BEGIN DRAIN CONSTRUCTION

0+80

1+00

1+20

1+40

1+60

1+80

2+00

2+20

ROBLE HILL LLC

4.052 AC.

GENERAL WARRANTY DEED

VOL. 19003, PG. 0352

DOCUMENT NO.

20180034086

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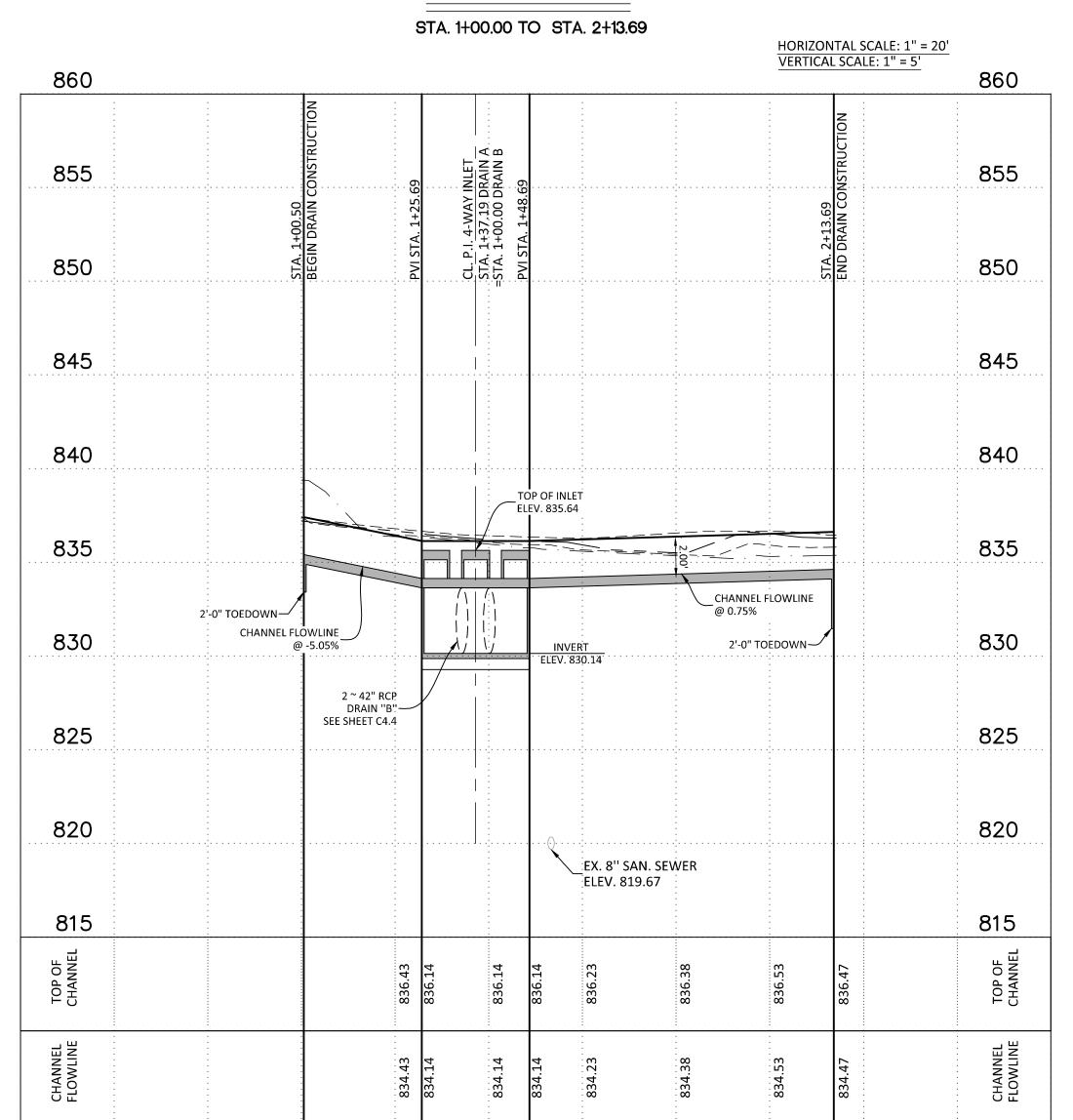
BLOCK 4

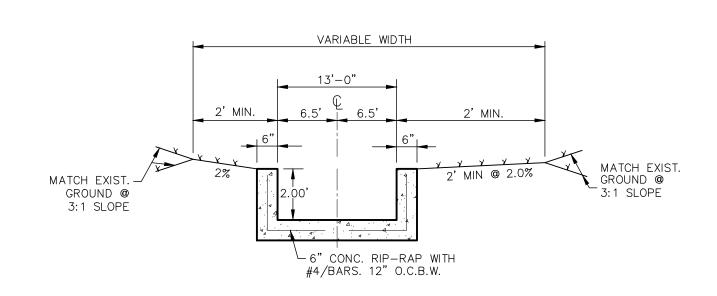
DRAIN A

STA. 2+13.69

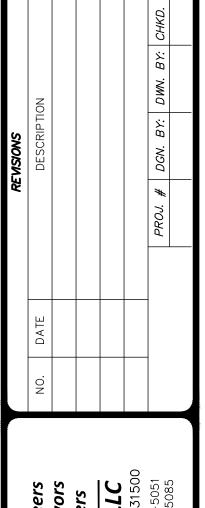
END CONCRETE

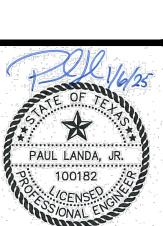
-END DRAIN CONSTRUCTION





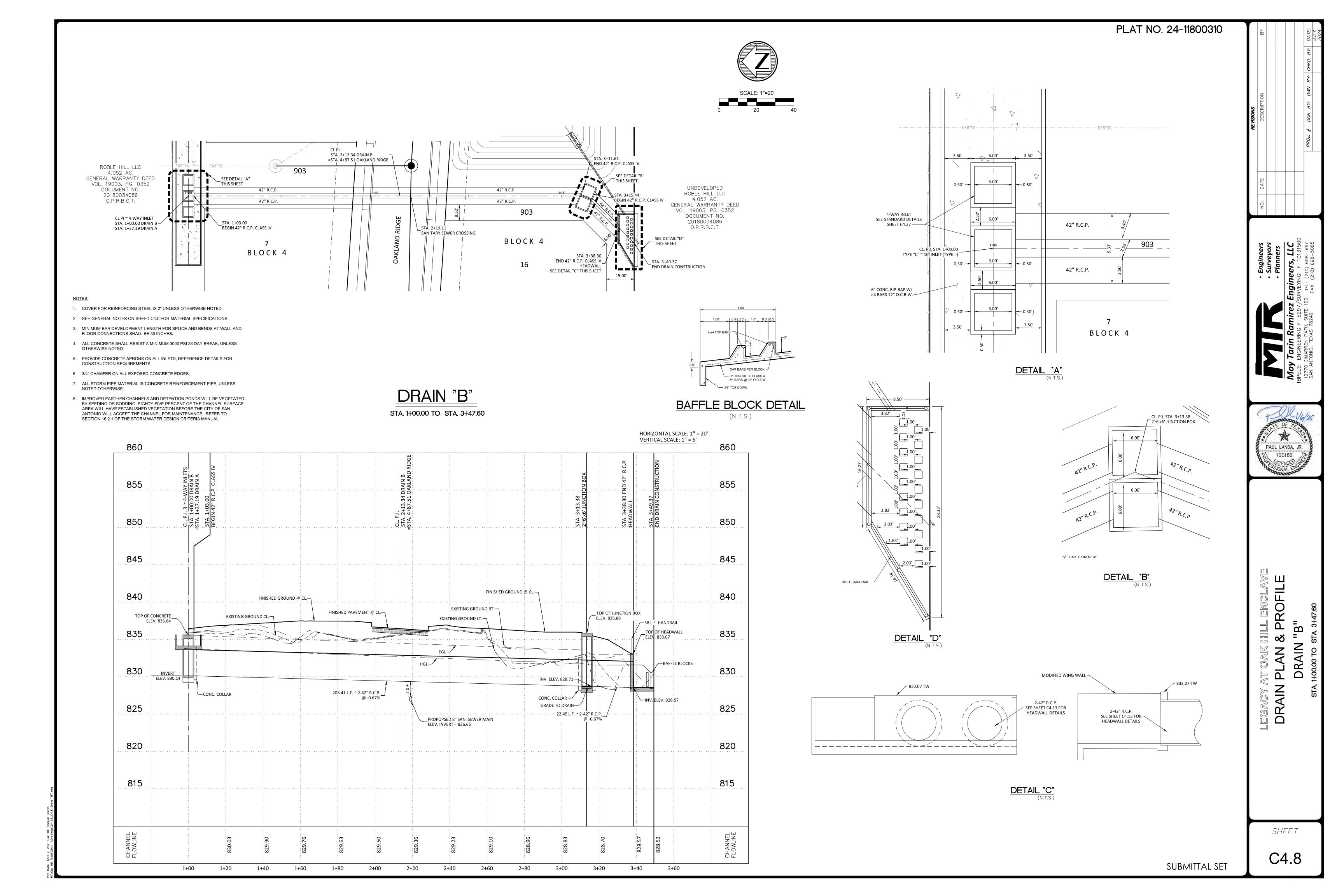
SECTION "A-A" (N.T.S.) STA. 1+00.00 TO STA. 2+13.69



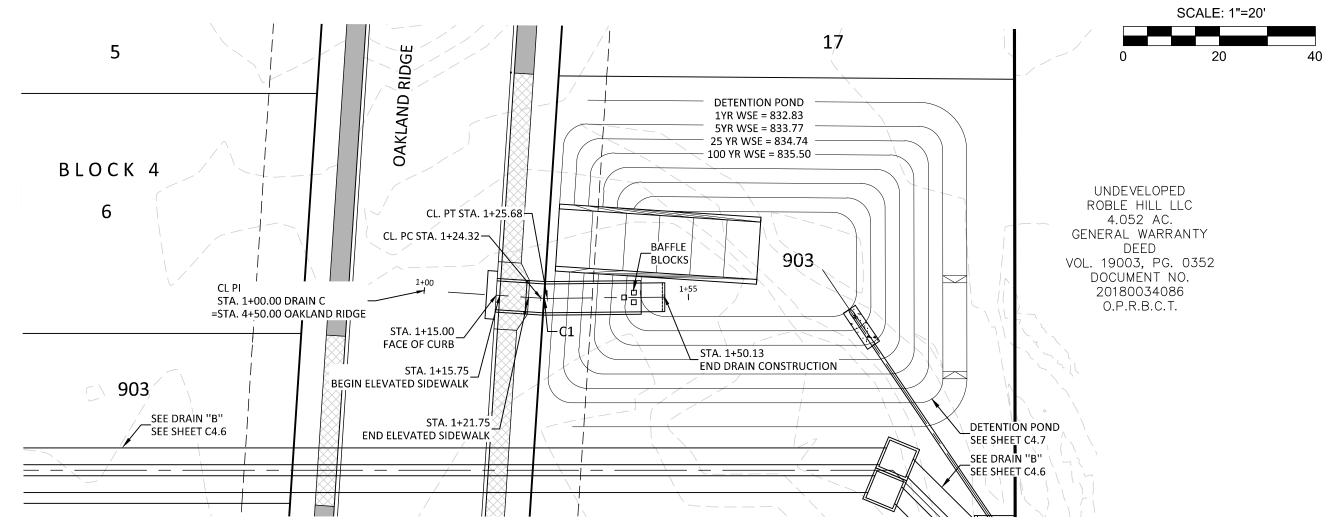


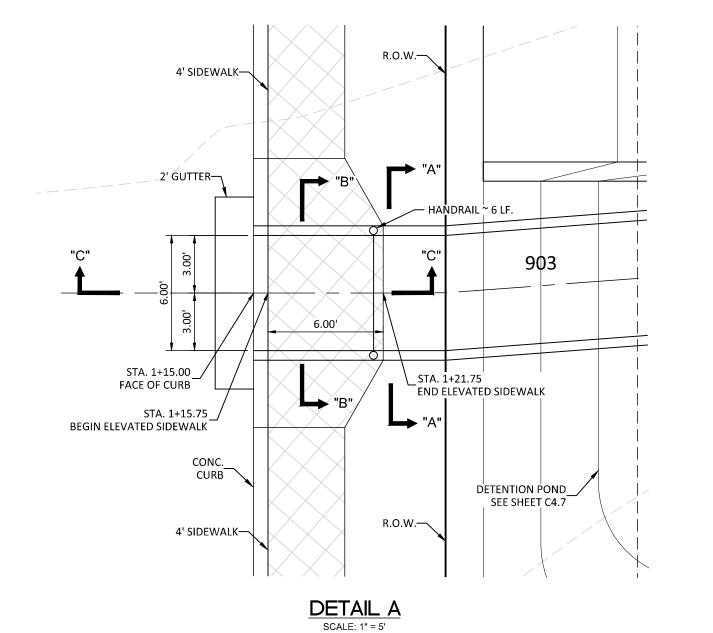
PROFILE DRAIN. 1+00:00 TO PLAN DRAIN

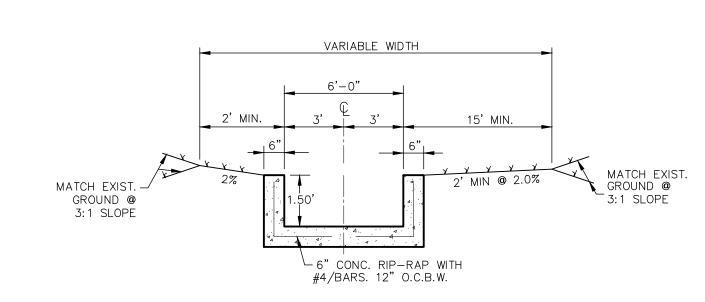
SHEET









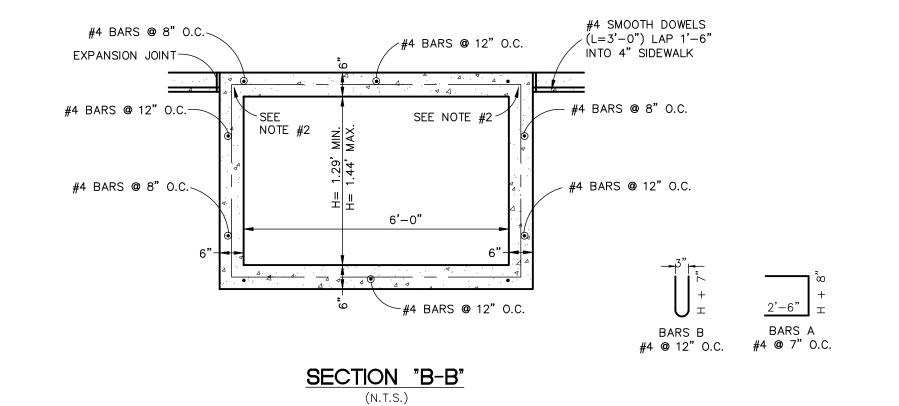


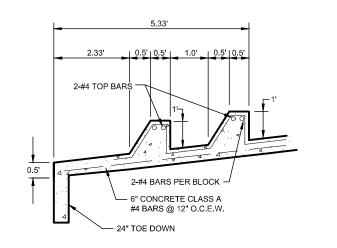
SECTION "A-A" (N.T.S.)

STA. 1+21.75 TO STA. 1+45.22

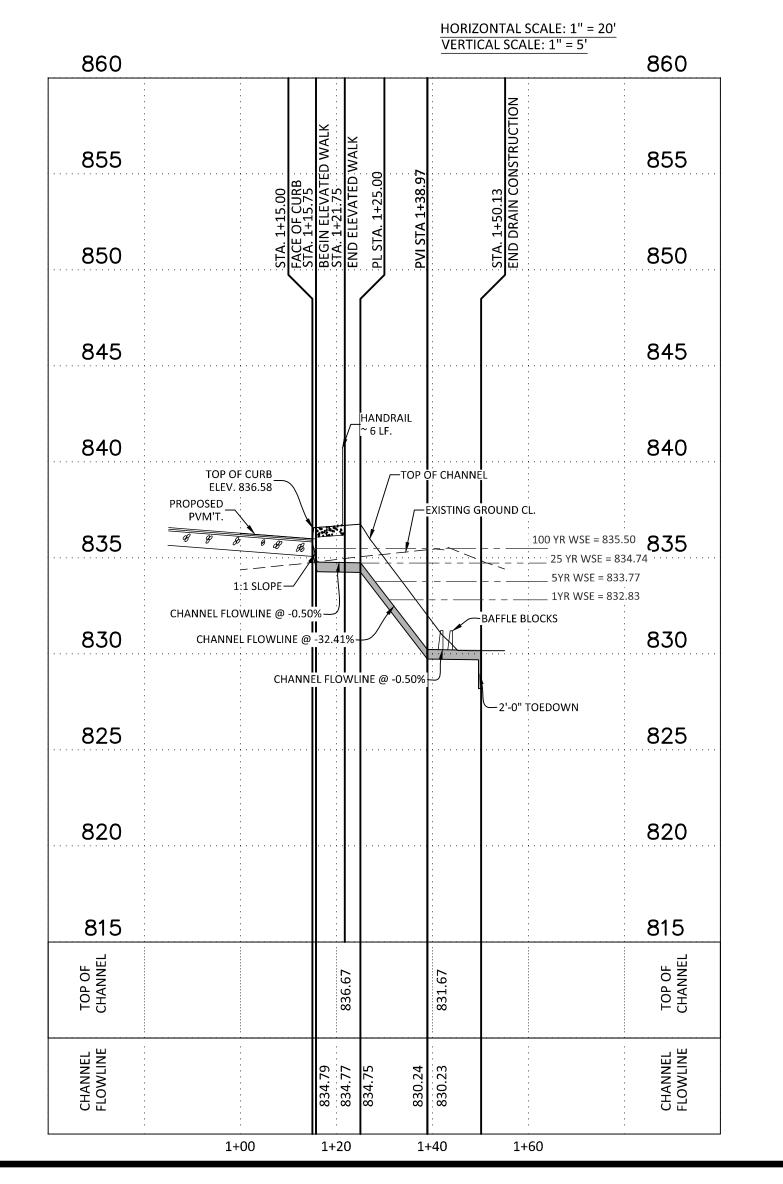
DRAIN "C" STA. 1+15.00 TO STA. 1+50.13

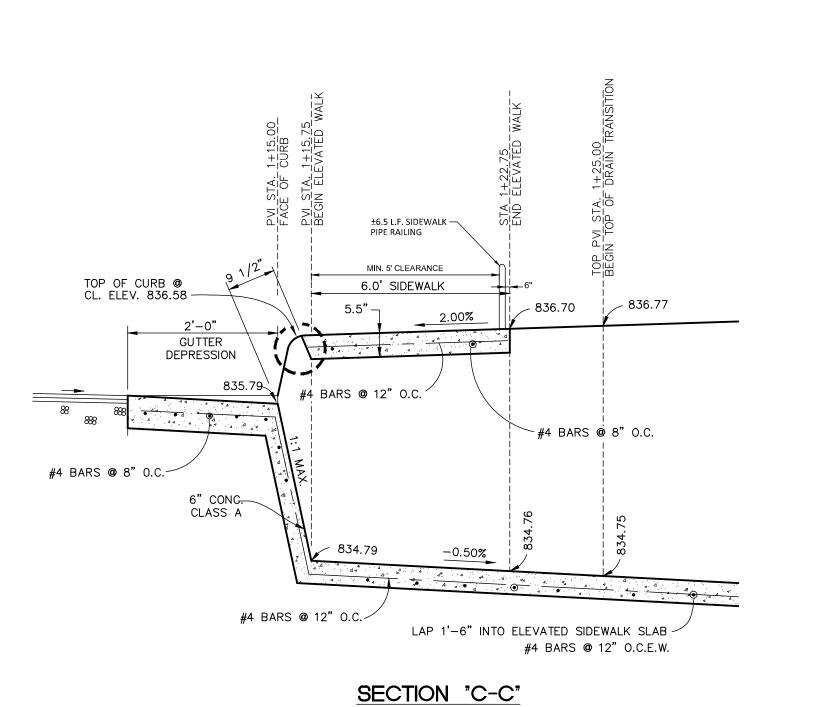
CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	
C1	1.37'	8.74'	8°56'59"	0.68'	1.36'	





BAFFLE BLOCK DETAIL (N.T.S.)

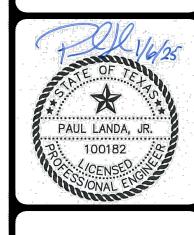




(N.T.S.)

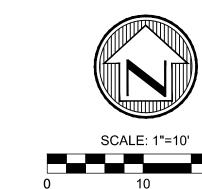
NOTES:

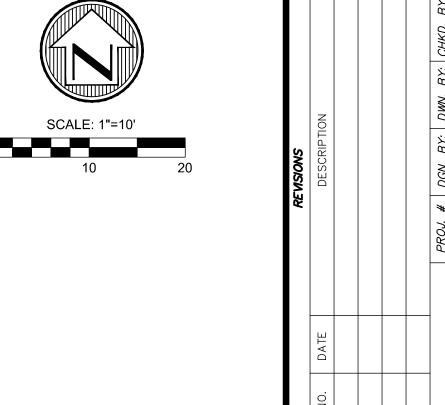
- 1. COVER FOR REINFORCING STEEL IS 2" UNLESS OTHERWISE NOTED.
- 2. SEE GENERAL NOTES ON SHEET C4.0 FOR MATERIAL SPECIFICATIONS.
- 3. MINIMUM BAR DEVELOPMENT LENGTH FOR SPLICE AND BENDS AT WALL AND FLOOR CONNECTIONS SHALL BE 30 INCHES.
- 4. ALL CONCRETE SHALL RESIST A MINIMUM 3000 PSI 28 DAY BREAK, UNLESS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



DRAIN

SHEET





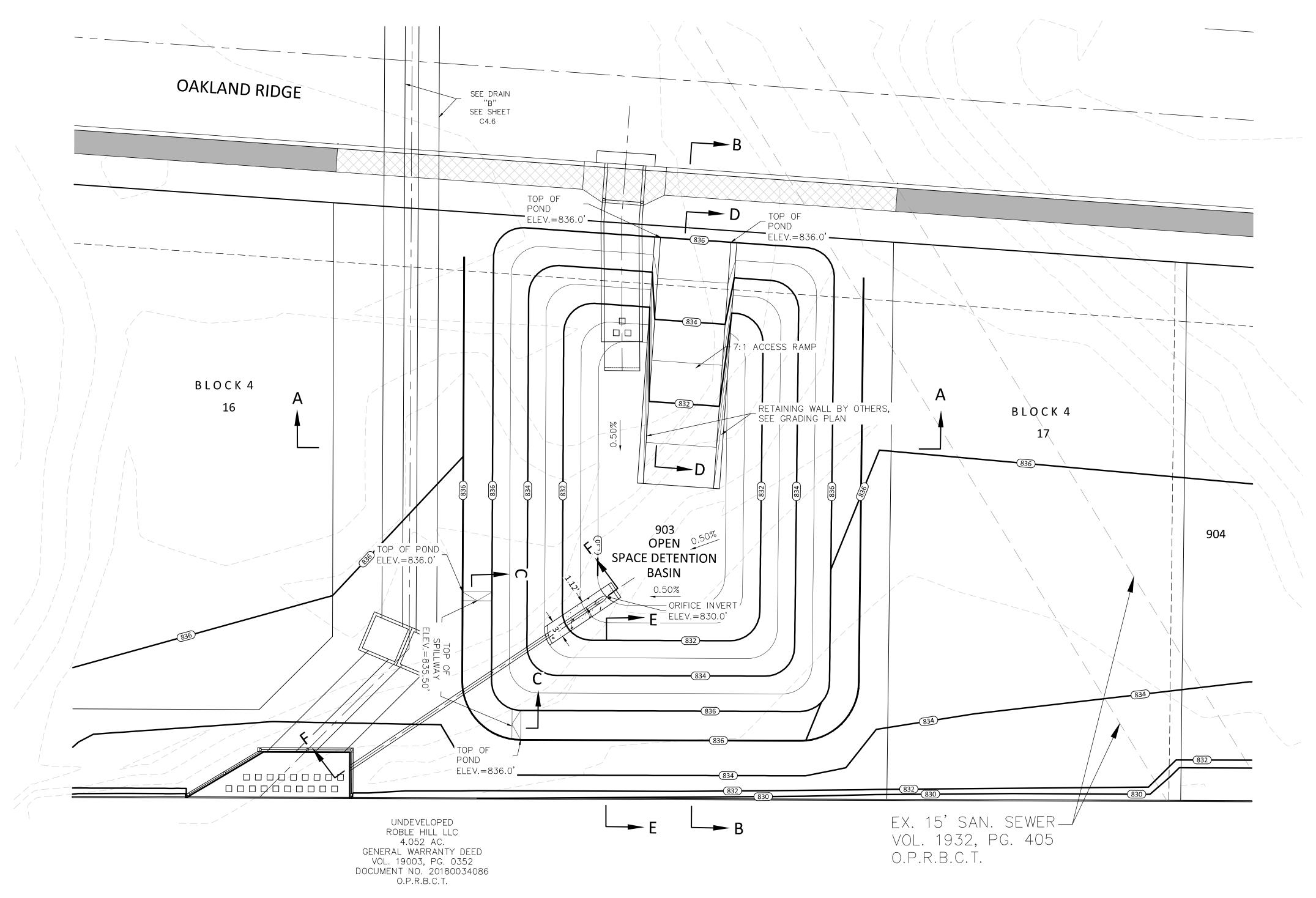




PROFILE DRAIN

SHEET

C4.10



DETENTION POND

NOTES:

- 1. CONTRACTOR SHALL PHASE CONSTRUCTION AND/OR PROVIDE NECESSARY BMPS TO MITIGATE INTERIM CONDITIONS RUNOFF DURING CONSTRUCTION DUE TO CLEARING, GRADING, SUBGRADE PREPARATION, PAVING, BUILDINGS, ETC., AND TO PREVENT ADVERSE IMPACTS TO OTHER PROPERTY, STRUCTURES, AND INFRASTRUCTURE DURING CONSTRUCTION.
- DETENTION POND EXCAVATION AND/OR EMBANKMENT NECESSARY FOR PROVIDING STORAGE MUST BE SUBSTANTIALLY COMPLETE PRIOR TO CITY INSPECTION OF STREET SUBGRADE, CURB, FLEX BASE, AND PAVEMENT WITHIN THE WATERSHED DRAINING TO THE DETENTION POND.

NO. DATE

DESCRIPTION

BY

PROJ. # DGN. BY: DWN. BY: CHKD. BY: JULY

2024

• Engineers
• Surveyors
• Planners
z Engineers, LLC

Moy Tarin Ramirez Eng.
PELS: ENGINEERING F-5297/SURVE

PAUL LANDA, JR.

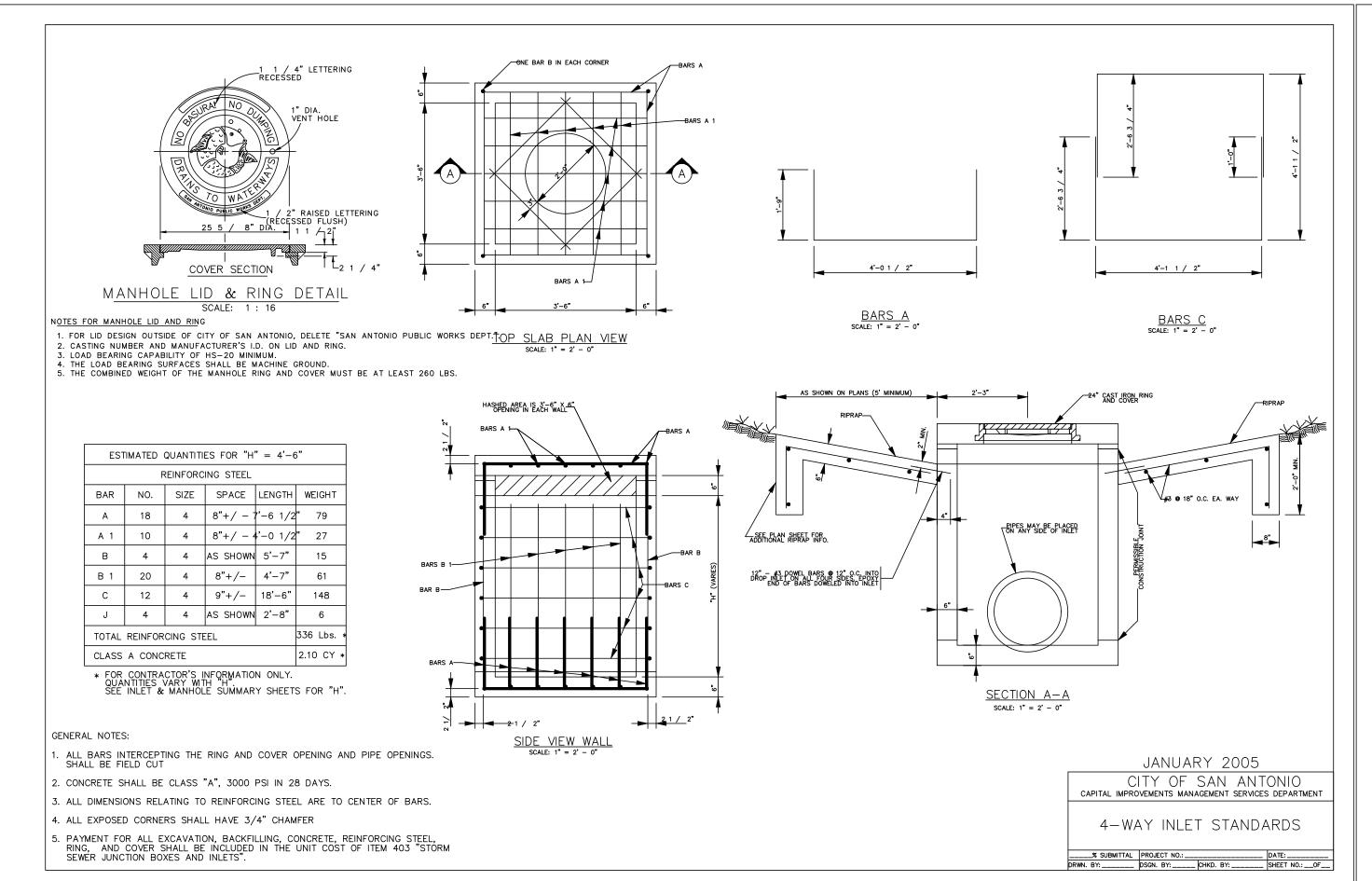
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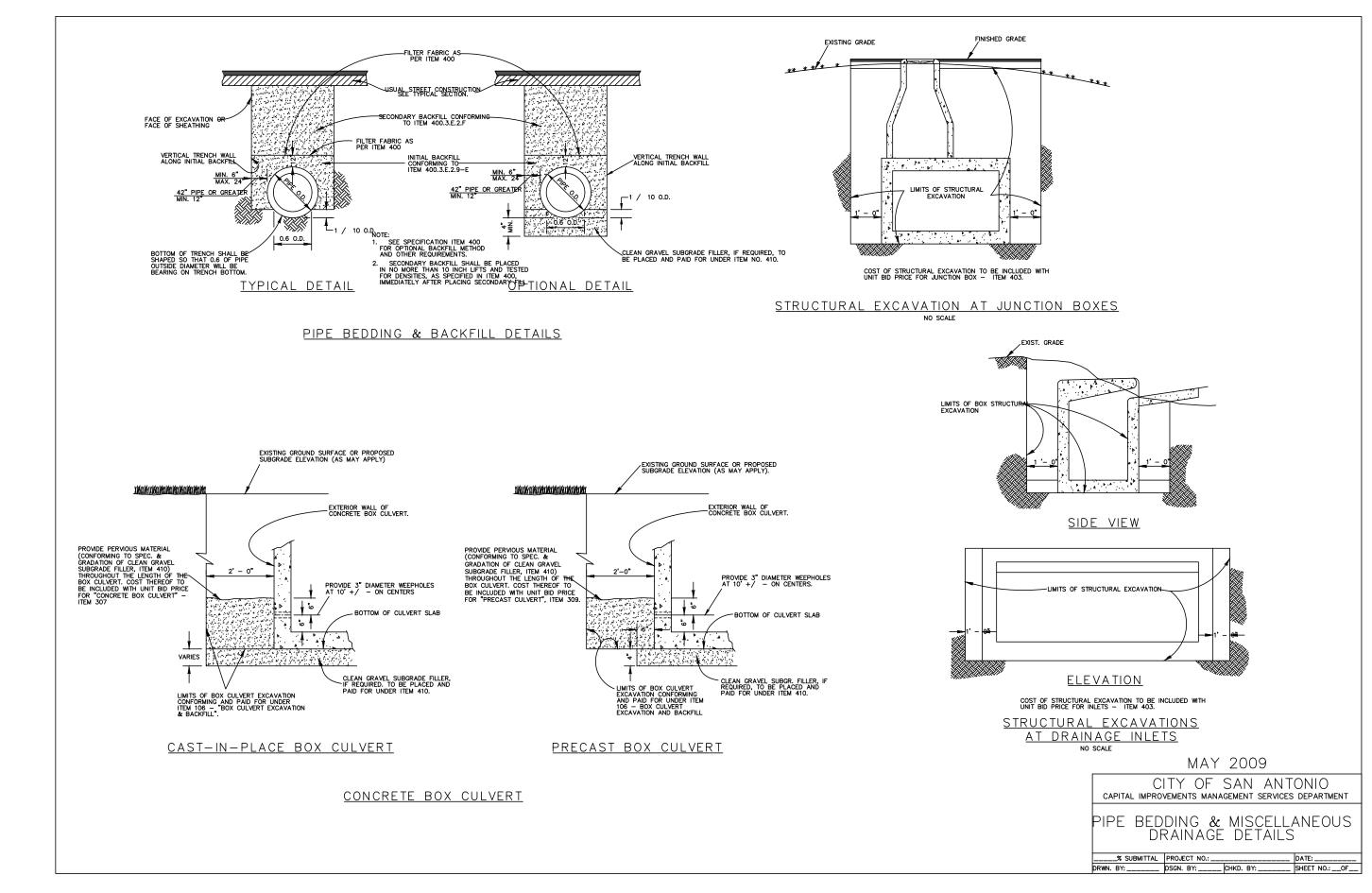
CENSE CHAP

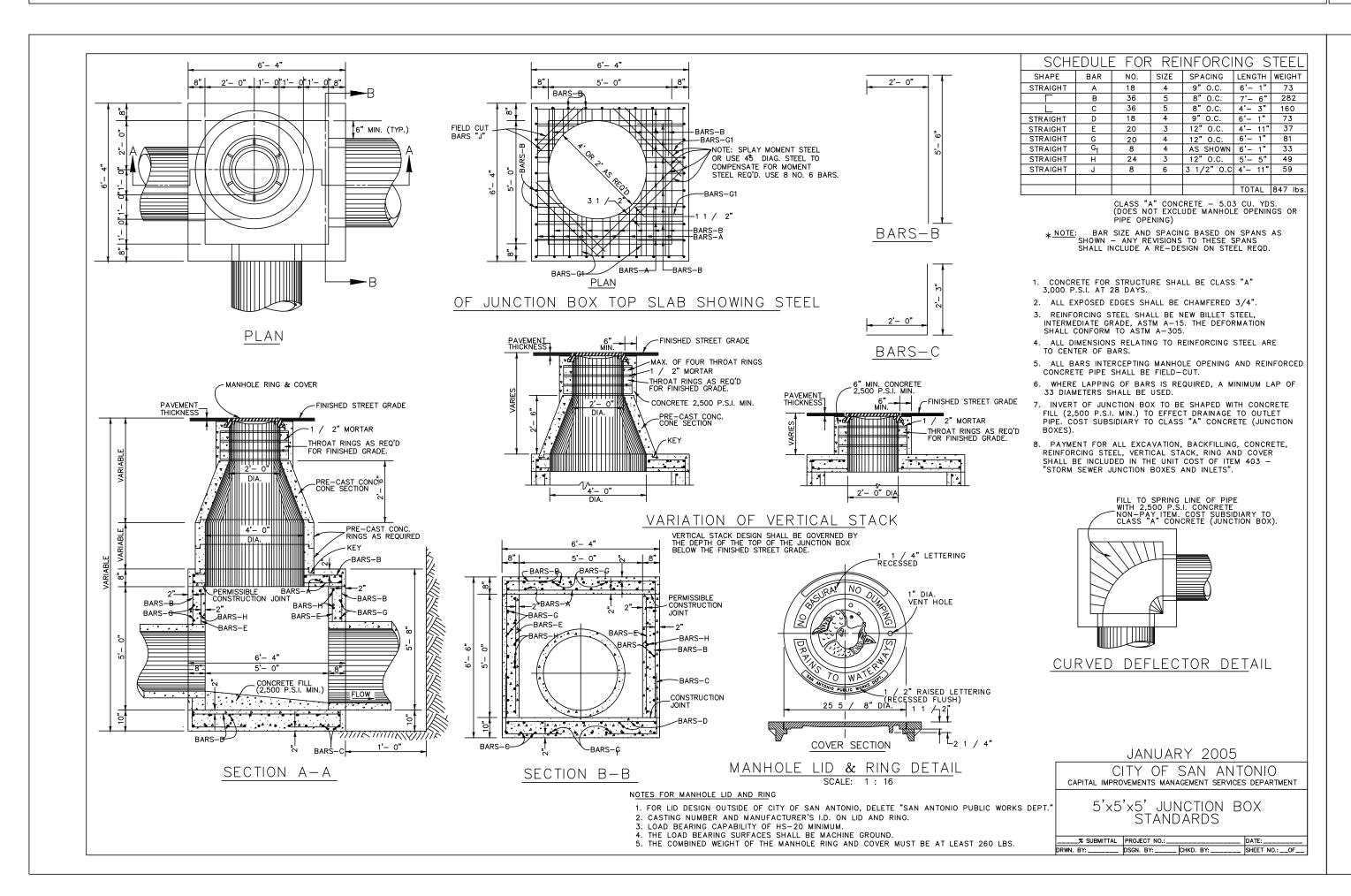
DRAIN PLAN & PROFILE

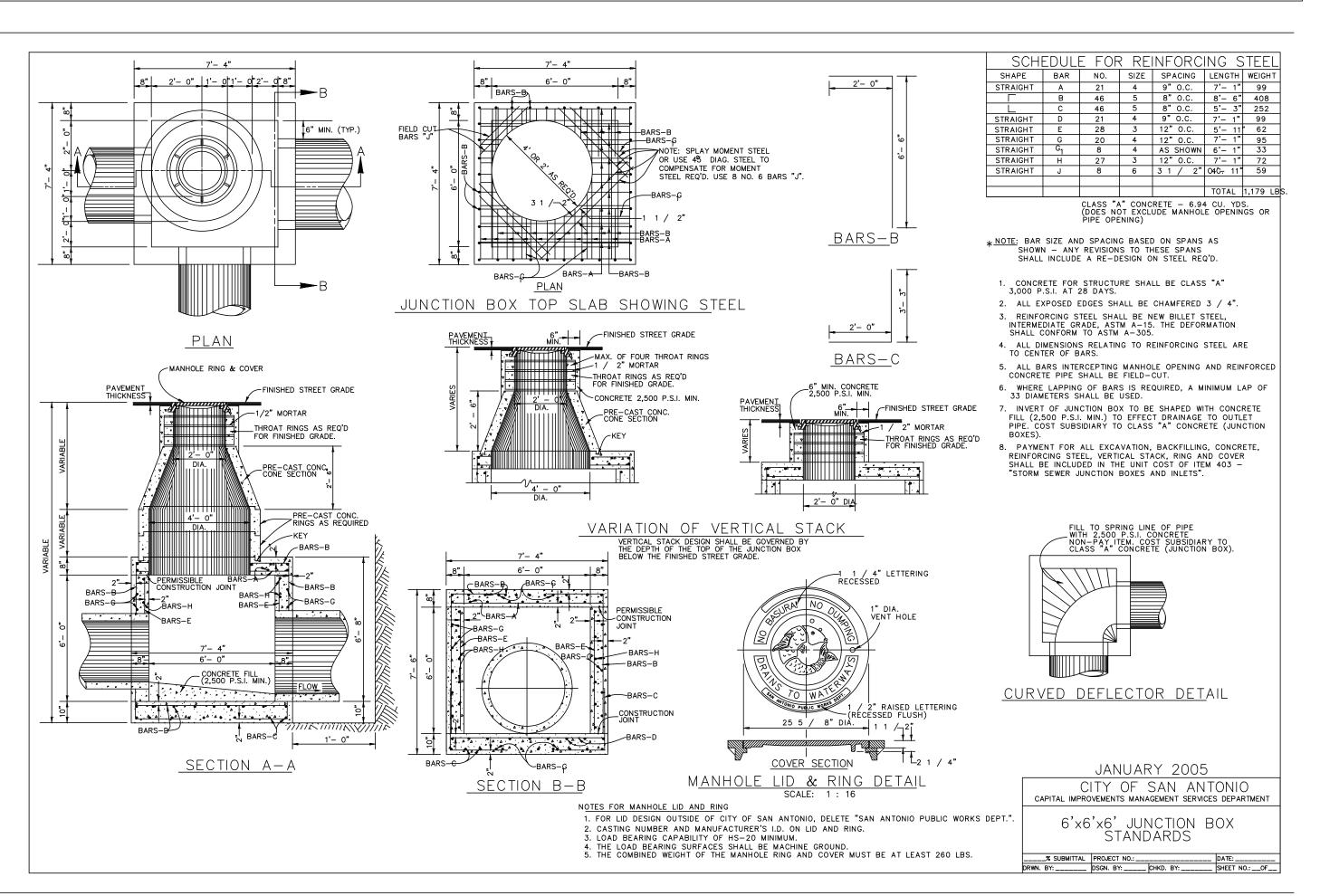
DETENTION POND

SHEET









NO. DATE DESCRIPTION BY: CHKD. BY: JULY 2024

• Surveyors
• Surveyors
• Planners

mirez Engineers, LLC
-5297/SURVEYING: F-10131500
SUITE 100 TEL: (210) 698-5051

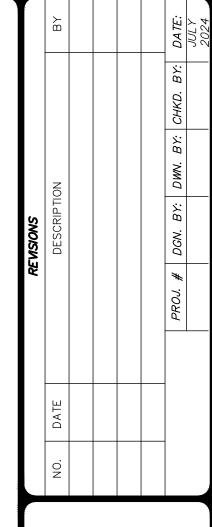
Moy Tarin Ramirez Eng TBPELS: ENGINEERING F-5297/SURV 12770 CIMARRON PATH, SUITE 100 T



STREET PLAN & PROFILE
TYPE "C" CURB INLET

SHEET



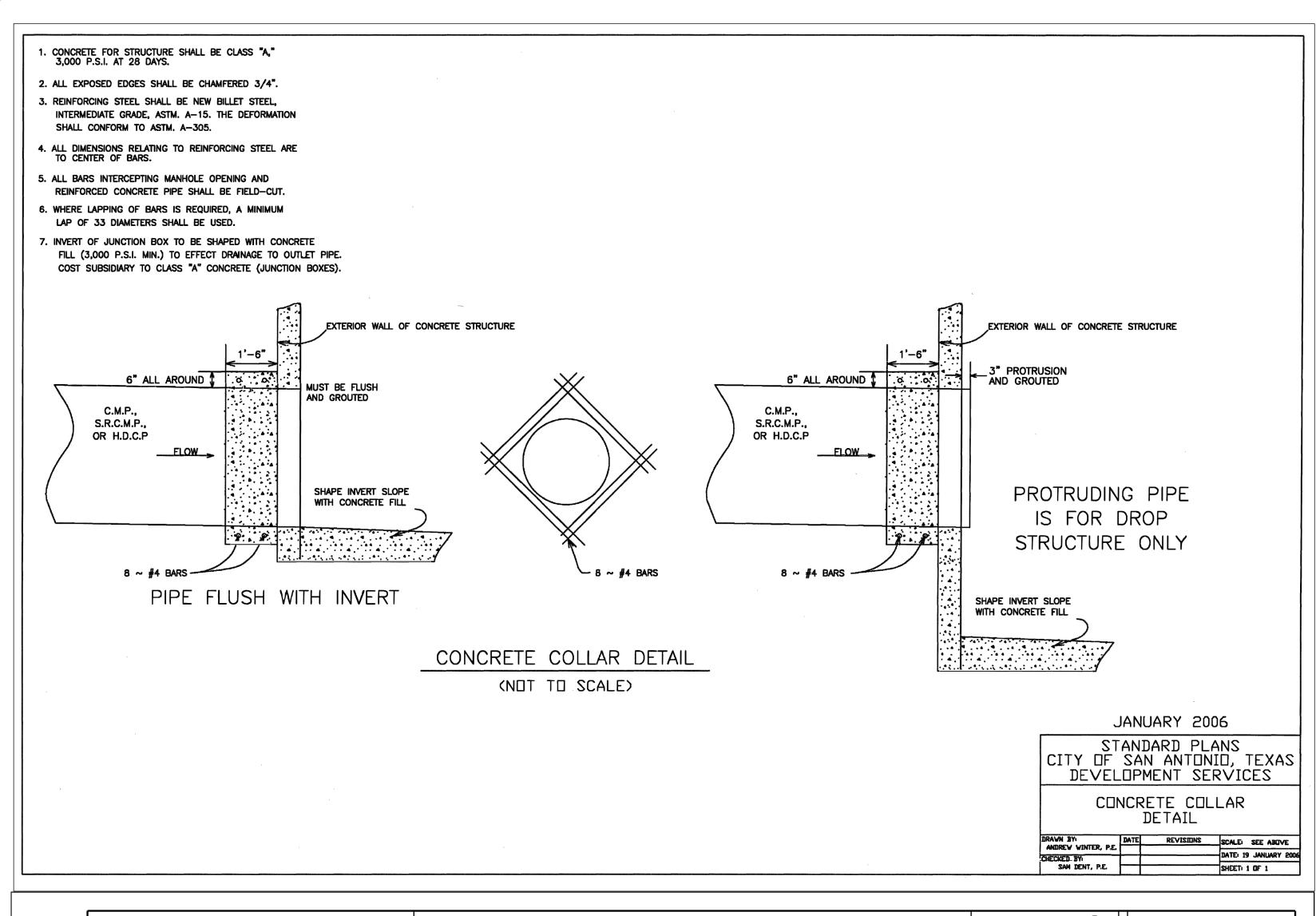


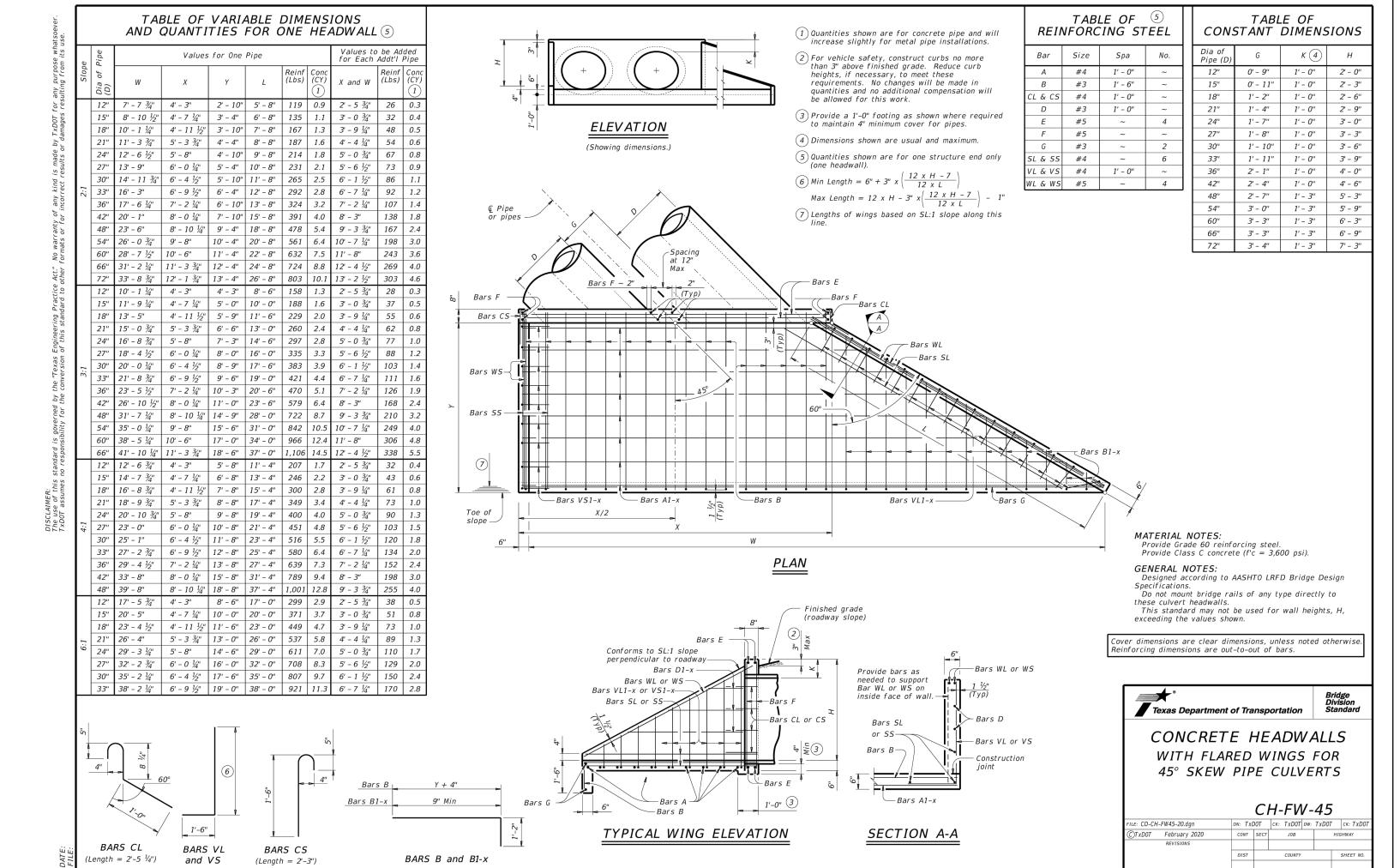


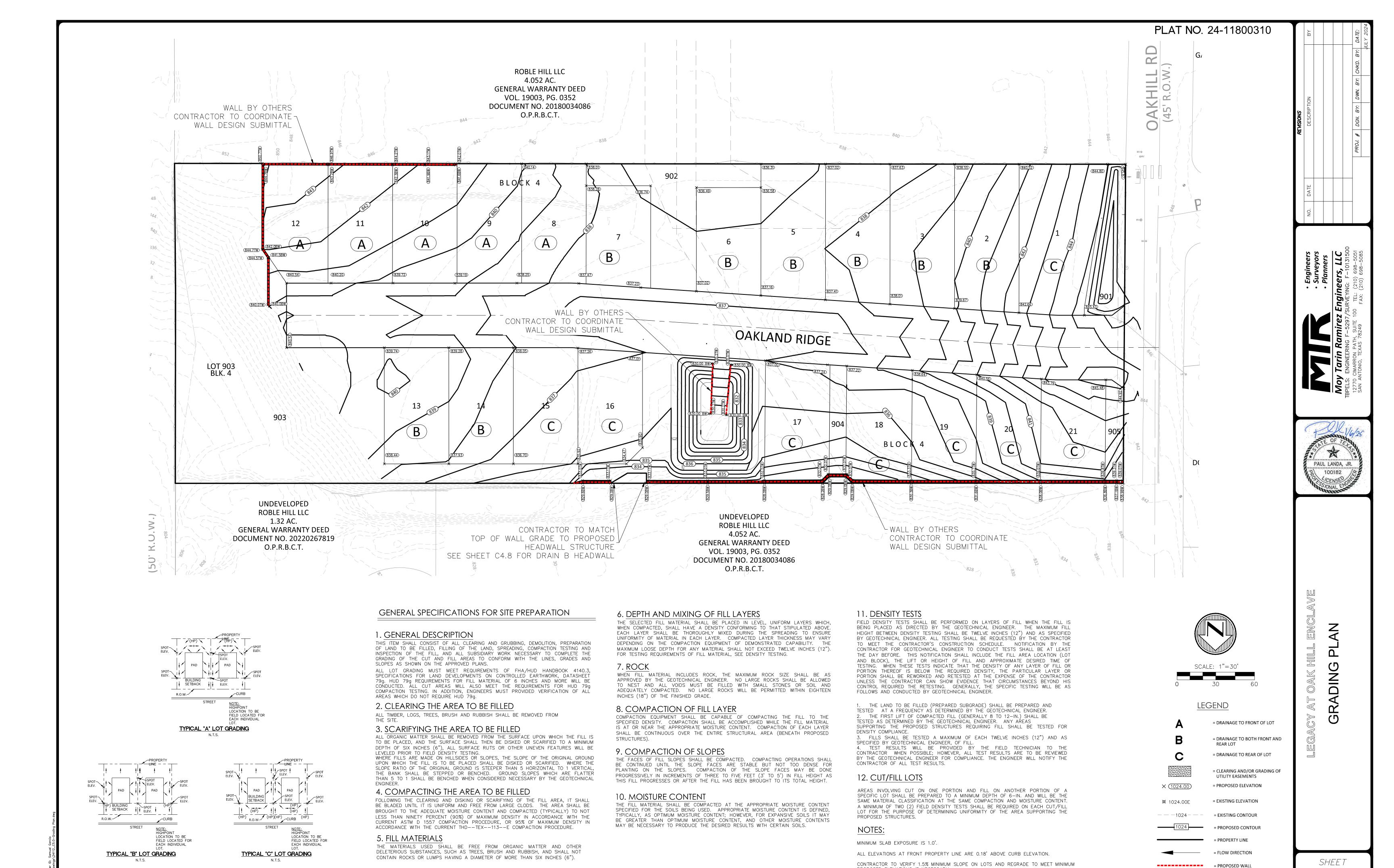


Ā **DRAINAG** AND,

SHEET







PROPOSED ELEVATIONS IF NECESSARY.

AND LARGER OUTSIDE OF THESE AREAS.

CONTRACTOR TO CLEAR ALL RIGHT OF WAY, EASEMENTS AND PRESERVE ANY TREE 10"

SUBMITTAL SET

C5.0

STABILIZED CONSTRUCTION ENTRANCE/EXIT

CONCRETE WASHOUT PIT

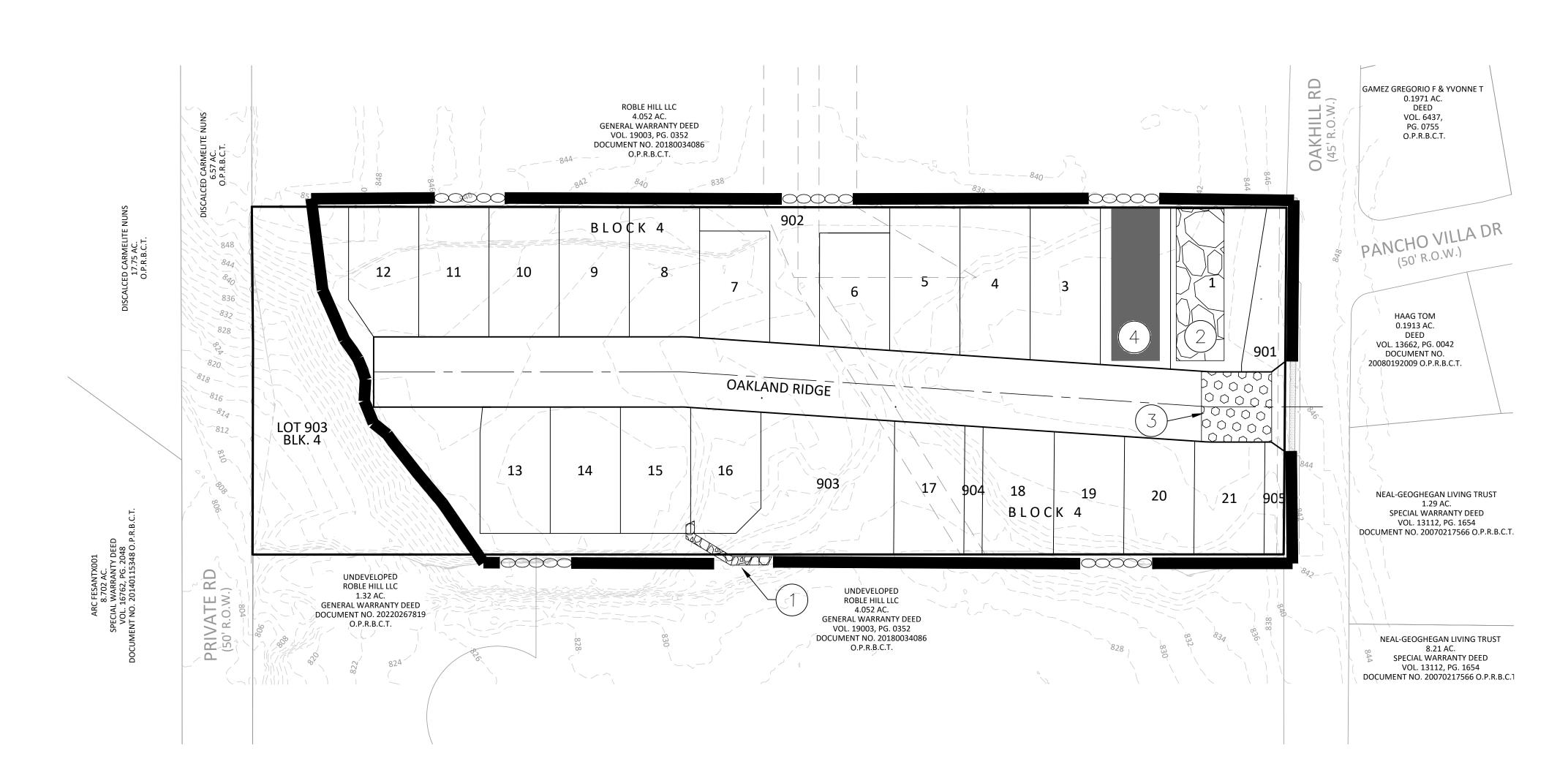
BAGGED GRAVEL INLET FILTER

 ∞



POLLU⁻ AN TORM WATER I ST OVERALL

SHEET



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 CLEANOUT 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 CITY PUBLIC SERVICE 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

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

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

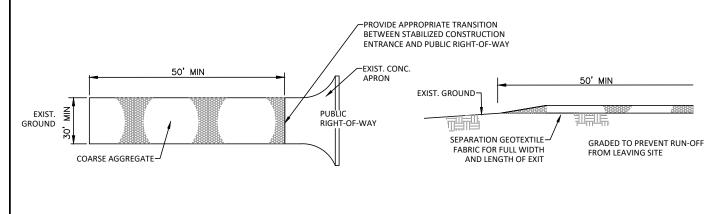
ALL SOIL, SAND, GRAVEL, AND EXCAVATED MATERIALS STOCKPILED ON-SITE WILL HAVE APPROPRIATELY SIZED SILT FENCE PLACED UPGRADIENT AND DOWN GRADIENT.

SUBMITTAL SET

SILT FENCE NOTES

- 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/IN 2 , ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE 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/FT 2 , AND BRINDELL 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 1/4 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.
- 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.

11. REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.



TEMPORARY CONSTRUCTION ENTRANCE/EXIT NOTES

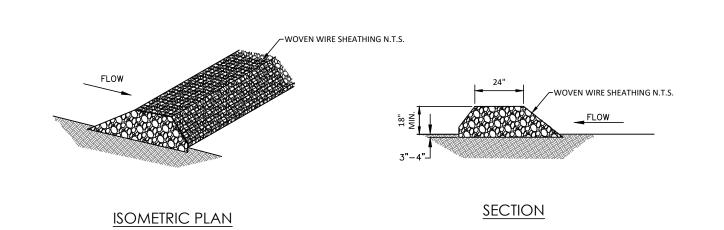
- 1. THE AGGREGATE SHOULD CONSIST OF 4 TO 8 INCH WASHED STONE OVER A STABLE FOUNDATION.
- 2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8 INCHES.

PLAN VIEW

THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD 2 , A MULLEN BURST RATING OF 140 LB/IN 2 , AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.

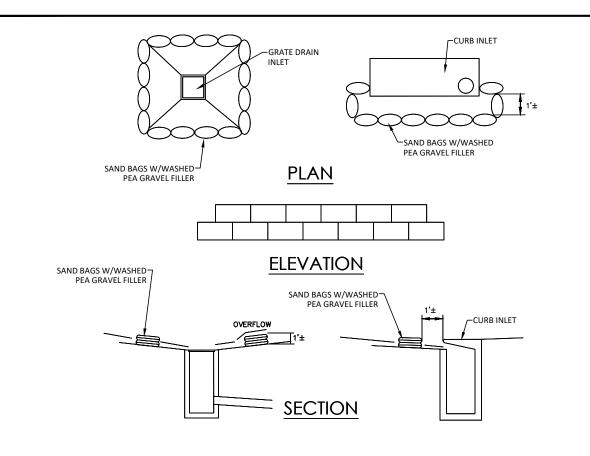
PROFILE

- 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
- 13. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE.



ROCK BERM NOTES

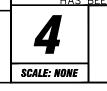
- 1. THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT RINGS.
- 2. CLEAN, OPEN GRADED 3-TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR 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 TIE 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
- 11. THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS,
- 12. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.



- . THE GRAVEL BAG MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, POLYAMIDE OR COTTON BURLAP WOVEN FABRIC, MINIMUM UNIT WEIGHT 4 OZ/YD 2 , MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70 PERCENT.
- 2. THE BAG LENGTH SHOULD BE 24 INCHES, WIDTH SHOULD BE 18 INCHES AND THICKNESS SHOULD BE 6
- 3. THE GRAVEL BAGS SHOULD BE FILLED WITH 34" GRAVEL .
- 4. WHEN A GRAVEL BAG IS FILLED WITH GRAVEL, THE OPEN END OF THE GRAVEL BAG SHOULD BE STAPLED OR
- 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.
- 8. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE

7. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.

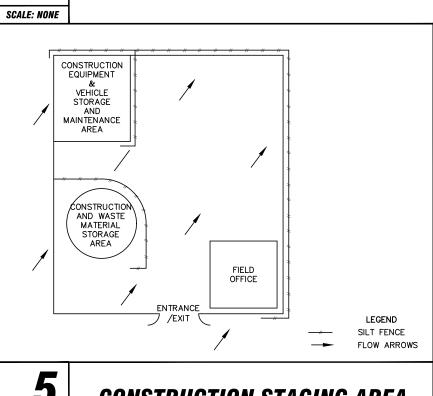
DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE. 9. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



BAGGED GRAVEL INLET FILTER

STABILIZED CONSTRUCTION ENTRANCE / EXIT

ROCK BERM



SILT FENCE DETAIL

CONSTRUCTION STAGING AREA SCALE: NONE

_10 MIL PLASTIC LINING — BERM ______ 10 MIL PLASTIC LINING SECTION 'A-A' DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF. CONCRETE TRUCK WASHOUT PIT

SCALE: NONE

SCALE: NONE

PAUL LANDA, JR 100182

> **EVENTION** PR OLLUTION

SHEET

WATER

STORM

C6.1