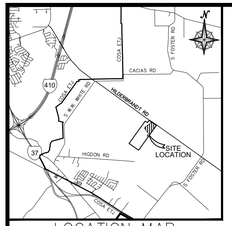
PLAT NO. 22-11800026



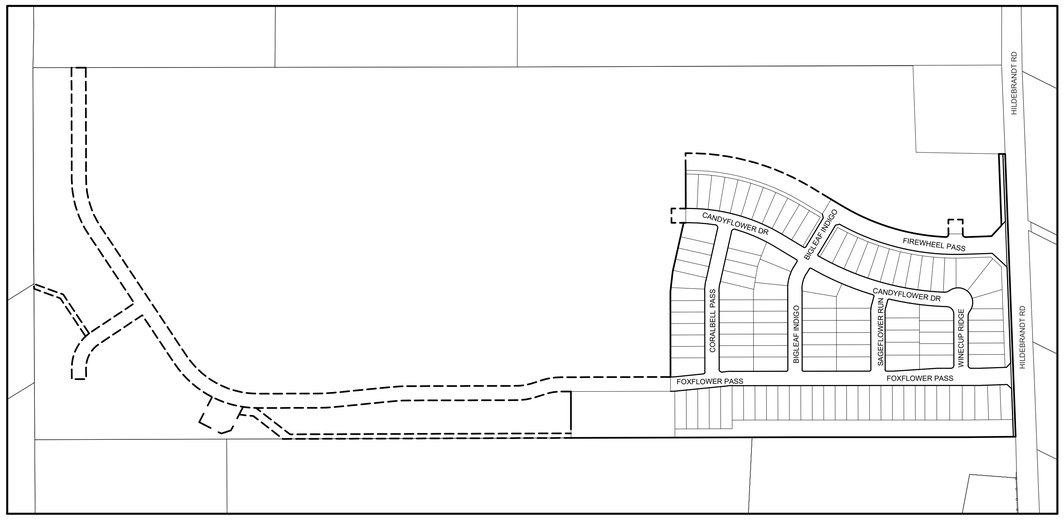
LOCATION MAP

NOT TO SCALE

CONSTRUCTION PLANS
for
EASTRIDGE SUBDIVISION
UNIT 1

Sheet List Table

Sheet Number	Sheet Title
100	CONSTRUCTION COVER
200	UTILITY COVER
201	OVERALL UTILITY PLAN
202	OVERALL UTILITY PLAN
300	SANITARY SEWER COVER
301	OVERALL SANITARY SEWER PLAN
302	OVERALL SANITARY SEWER PLAN
303	SANITARY SEWER LINE A PLAN & PROFILE
304	SANITARY SEWER LINE A PLAN & PROFILE
305	SANITARY SEWER LINE A PLAN & PROFILE
306	SANITARY SEWER LINE B PLAN & PROFILE
307	SANITARY SEWER LINE C PLAN & PROFILE
308	SANITARY SEWER LINE D & LINE E PLAN & PROFILE
309	SANITARY SEWER LINE F PLAN & PROFILE
310	SANITARY SEWER DETAILS
400	WATERLINE COVER
401	OVERALL WATER PLAN
402	WATER DETAILS
403	WATER DETAILS
500	STREET & DRAIN COVER
501	OVERALL GRADING PLAN
502	OVERALL GRADING PLAN
503	FOXFLOWER PASS PLAN & PROFILE
504	CANDYFLOWER DRIVE PLAN & PROFILE
505	FIREWHEEL PASS PLAN & PROFILE
506	CORALBELL PASS PLAN & PROFILE
507	BIGLEAF INDIGO PLAN & PROFILE
508	SAGEFLOWER RUN PLAN & PROFILE
509	WINECUP RIDGE PLAN & PROFILE
510	INTERCEPTOR DRAIN "A" PLAN & PROFILE
511	DRAIN "B" PLAN & PROFILE
512	DRAIN "C" PLAN & PROFILE
513	DRAIN "C" PLAN & PROFILE
514	STREET DETAILS
515	STREET DETAILS
516	STREET DETAILS
517	DRAIN DETAILS
518	DRAIN DETAILS
519	DRAIN DETAILS
520	OVERALL SIGN PLAN
521	SIGN DETAILS
522	SIGN DETAILS
523	PAVEMENT MARKING DETAILS
524	HILDEBRANDT NORTH TURN LANE PLAN & PROFILE
525	HILDEBRANDT SOUTH TURN LANE PLAN & PROFILE
600	SEDIMENTATION & EROSION CONTROL COVER
601	SEDIMENTATION AND EROSION CONTROL PLAN
602	SEDIMENTATION AND EROSION CONTROL PLAN
603	SEDIMENTATION & EROSION CONTROL NOTES
604	SEDIMENTATION & EROSION CONTROL DETAILS



INDEX MAP

1"=250'

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DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

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CEC

6/17/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1
CONSTRUCTION COVER

SHEET NO.
100

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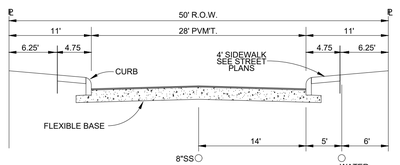
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PLAT NO. 22-11800026

UTILITY PLANS
for
EASTRIDGE SUBDIVISION
UNIT 1

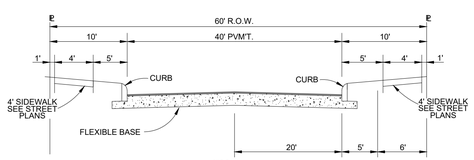
NOTE:

1. 6" P.V.C. SCHEDULE 80 CONDUIT WILL BE REQUIRED FOR C.P.S. UTILITY CROSSING FROM ROW TO ROW AT A DEPTH OF 36" BELOW FINAL GRADE, WHEN STREET OR DRAIN CONSTRUCTION PRECEDES UTILITY INSTALLATION.
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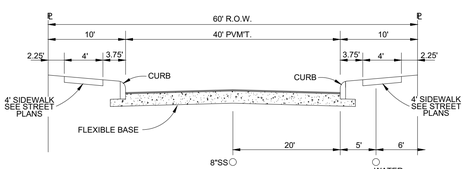
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NOT TO SCALE



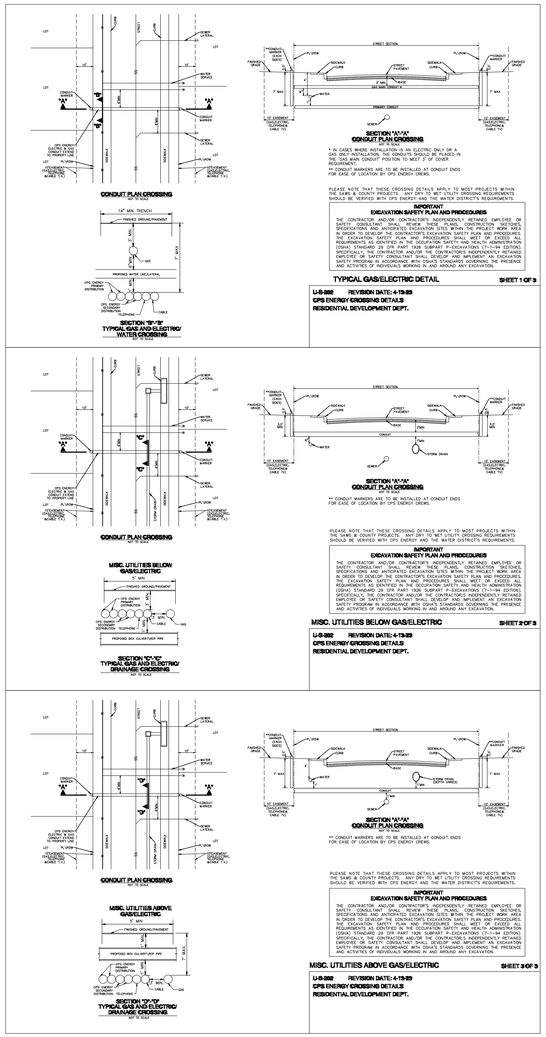
TYPICAL LOCAL "B" STREET SECTION
W/ NO LOTS FRONTING ROADWAY

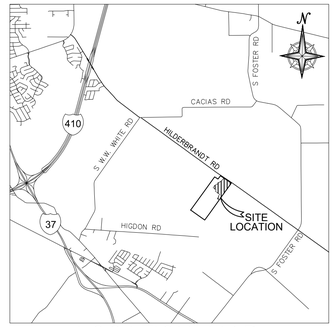
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TYPICAL LOCAL "B" STREET SECTION
W/ LOTS FRONTING ROADWAY

NOT TO SCALE





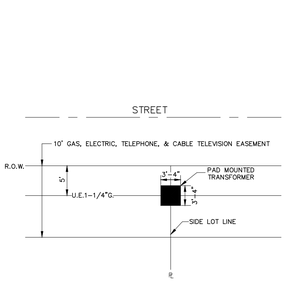
LOCATION MAP

SHEET LIST TABLE

SHEET	TITLE
200	UTILITY COVER
201	OVERALL UTILITY PLAN
202	OVERALL UTILITY PLAN

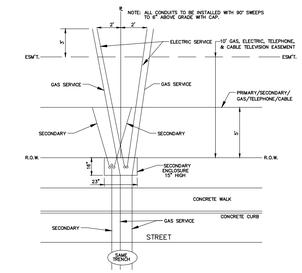
LEGEND

EXISTING EDGE OF PAVEMENT	
EXISTING SANITARY SEWER MAIN	E8"PVC
PROPOSED SANITARY SEWER MAIN	P8"SS
DIRECTION OF FLOW	
EXISTING WATER MAIN	E8"PVC
PROPOSED WATER MAIN	P8"PVC
PROPOSED LIGHT POLE (100 WATT LED)	L.P.
SANITARY SERVICE LATERAL	SS
IRRIGATION SERVICE	IRR
PROPOSED WATER SERVICE / METER	
PROPOSED FIRE HYDRANT	



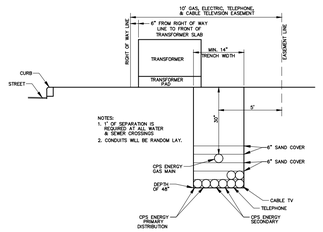
EASEMENT DETAILS

NOT TO SCALE



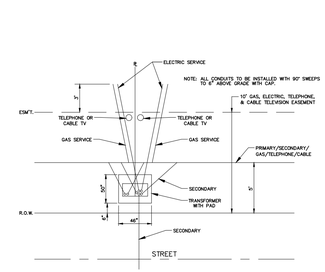
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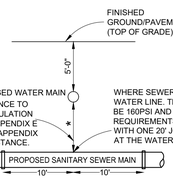
TRENCH DIAGRAM
STANDARDS FOR GAS & ELECTRIC TRENCH
OR ELECTRIC TRENCH WITH JOINT UTILITIES

NOT TO SCALE



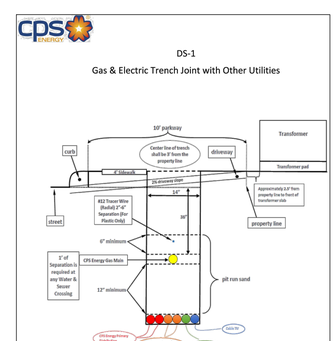
TYPICAL TRANSFORMER DETAIL

NOT TO SCALE



TYPICAL SANITARY SEWER/
WATER CROSSING DETAIL

NOT TO SCALE



JOINT TRENCH DETAIL

NOT TO SCALE

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICALS/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION, SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA'S STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

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REV	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1

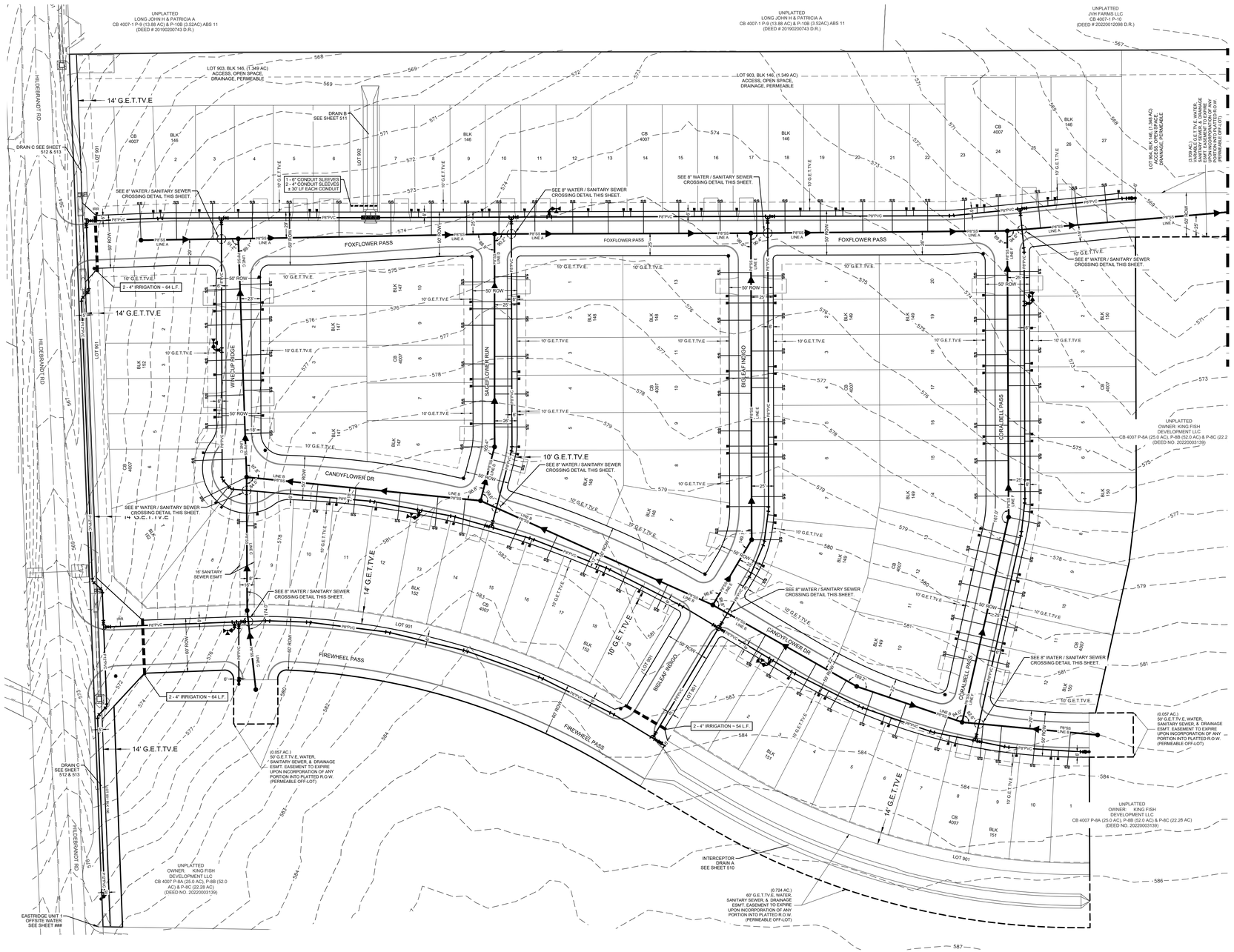
UTILITY COVER

SHEET NO.
200

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Date: May 08, 2024 3:30pm User ID: Lance.Elmy File: L:\Develop\Proj\2021\E0674101_Eastridge Unit 1\cad\E0674101 200 UTILITY COVER.dwg

PLAT NO. 22-11800026



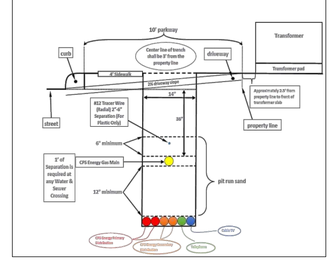
BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OF WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY

0 60' 120'

1" = 60'

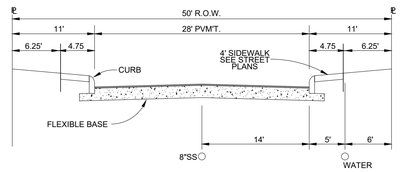
DS-1

Gas & Electric Trench Joint with Other Utilities



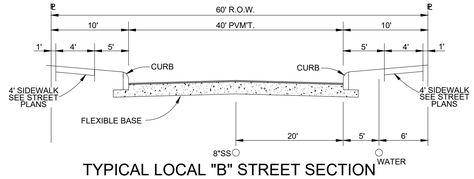
JOINT TRENCH DETAIL

NOT TO SCALE



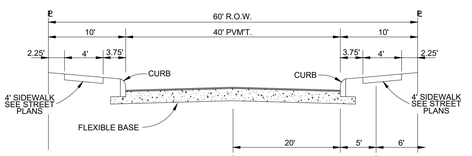
TYPICAL LOCAL "A" STREET SECTION

NOT TO SCALE



TYPICAL LOCAL "B" STREET SECTION
W/ NO LOTS FRONTING ROADWAY

NOT TO SCALE



TYPICAL LOCAL "B" STREET SECTION
W/ LOTS FRONTING ROADWAY

NOT TO SCALE

NOTE:

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STREETLIGHT NOTE

STREETLIGHT POLES TO BE IN OPEN GREEN SPACE WHERE SHOWN ON PLANS.

DRIVEWAY NOTE

DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

BEXAR COUNTY PERMIT NOTE:

BEXAR COUNTY RIGHT OF WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY

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DRAWN BY: S.Q.V.
DATE: 01/2021
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REGISTRATION #F-2214 / #10041000

REV	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1

OVERALL UTILITY PLAN

SHEET NO.
201

date: May 06, 2022K 3:09pm User ID: CarrieEling File: L:\Develop\Proj\2021\E067401\Eastridge Unit 1\plotof\E067401 201 OVERALL UTILITY PLAN.dwg

PLAT NO. 22-11800026

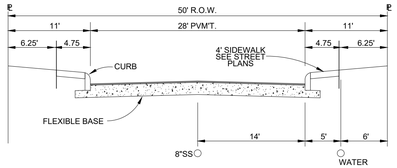
LEGEND

EXISTING EDGE OF PAVEMENT	
EXISTING SANITARY SEWER MAIN	E8"PVC
PROPOSED SANITARY SEWER MAIN	P8"SS
DIRECTION OF FLOW	
EXISTING WATER MAIN	E8"PVC
PROPOSED WATER MAIN	P8"PVC
PROPOSED LIGHT POLE (100 WATT LED)	L.P.
PROPOSED CONDUIT	
SANITARY SERVICE LATERAL	SS
IRRIGATION SERVICE	IRR
PROPOSED WATER SERVICE / METER	
PROPOSED FIRE HYDRANT	

0 60' 120'

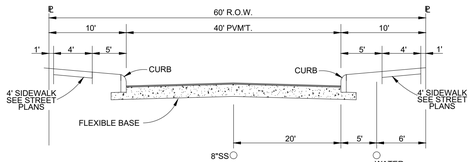
1" = 60'

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BEXAR COUNTY RIGHT OR WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY



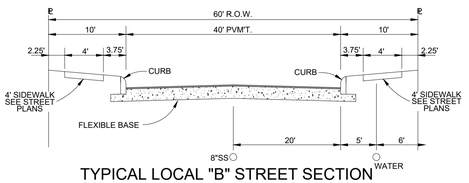
TYPICAL LOCAL "A" STREET SECTION

NOT TO SCALE



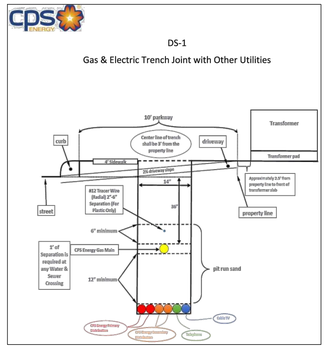
TYPICAL LOCAL "B" STREET SECTION
W/ NO LOTS FRONTING ROADWAY

NOT TO SCALE



TYPICAL LOCAL "B" STREET SECTION
W/ LOTS FRONTING ROADWAY

NOT TO SCALE



JOINT TRENCH DETAIL

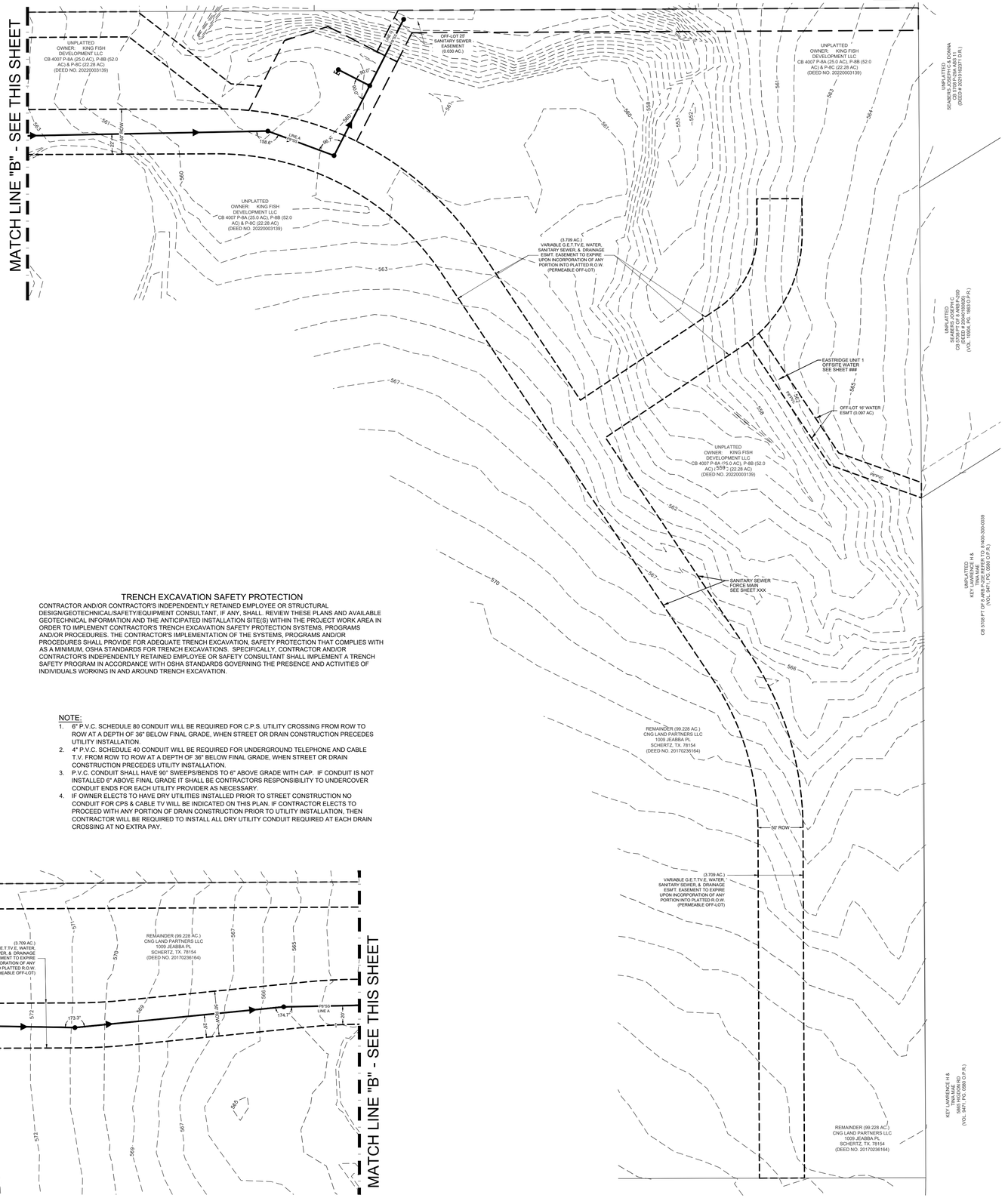
NOT TO SCALE

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NOTE:

1. 6" P.V.C. SCHEDULE 80 CONDUIT WILL BE REQUIRED FOR C.P.S. UTILITY CROSSING FROM ROW TO ROW AT A DEPTH OF 36" BELOW FINAL GRADE, WHEN STREET OR DRAIN CONSTRUCTION PRECEDES UTILITY INSTALLATION.
2. 4" P.V.C. SCHEDULE 40 CONDUIT WILL BE REQUIRED FOR UNDERGROUND TELEPHONE AND CABLE T.V. FROM ROW TO ROW AT A DEPTH OF 36" BELOW FINAL GRADE, WHEN STREET OR DRAIN CONSTRUCTION PRECEDES UTILITY INSTALLATION.
3. P.V.C. CONDUIT SHALL HAVE 90° SWEEPS/BENDS TO 6" ABOVE GRADE WITH CAP. IF CONDUIT IS NOT INSTALLED 6" ABOVE FINAL GRADE IT SHALL BE CONTRACTORS RESPONSIBILITY TO UNDERCOVER CONDUIT ENDS FOR EACH UTILITY PROVIDER AS NECESSARY.
4. IF OWNER ELECTS TO HAVE DRY UTILITIES INSTALLED PRIOR TO STREET CONSTRUCTION NO CONDUIT FOR CPS & CABLE TV WILL BE INDICATED ON THIS PLAN. IF CONTRACTOR ELECTS TO PROCEED WITH ANY PORTION OF DRAIN CONSTRUCTION PRIOR TO UTILITY INSTALLATION, THEN CONTRACTOR WILL BE REQUIRED TO INSTALL ALL DRY UTILITY CONDUIT REQUIRED AT EACH DRAIN CROSSING AT NO EXTRA PAY.



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CIVIL ENGINEERING CONSULTANTS
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TEL: (210) 641-9999
FAX: (210) 641-8844
REGISTRATION #F-2214 / #10041000

DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

REV	DATE	DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1

OVERALL UTILITY PLAN

SHEET NO.
202

Date: May 08, 2024, 3:08pm User ID: CarlosEmig File: L:\Develop\Proj_22\E0674101_Eastridge Unit 1\cad\E0674101_20' OVERALL UTILITY PLAN.dwg

PLAT NO. 22-11800026

SANITARY SEWER CONSTRUCTION PLANS
for
EASTRIDGE SUBDIVISION
UNIT 1

NOTES
1. ALL RESIDENTIAL SEWER SERVICE LATERALS SHALL BE CAPPED AND SEALED.
2. LATERALS TO LOTS THAT SLOPE AWAY FROM STREET SHALL BE SLOPED FROM THE TEE OR STACK AT 2% THROUGH THE G.E.T.TV.E LOCATED IN THE FRONT OF THE LOT.
3. ALL SEWER PIPE TO BE SDR-26 UNLESS OTHERWISE NOTED.
4. CONTRACTOR TO INSURE LATERALS AT PROPOSED DRY UITLITY CROSSINGS ARE LOCATED AT A DEPTH TO AVOID ANY CONFLICT WITH DRY UTILITY INSTALLATION.

SAWS STANDARD GENERAL CONSTRUCTION NOTES
ASSOCIATED WITH 2021 SAWS STANDARD SPECS
Updated March 18, 2021

GENERAL CONSTRUCTION :

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 Chapter 290.
   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 Construction."
   E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).

2. The Contractor shall obtain SAWS Standard Details from SAWS website, https://apps.saws.org/business_center/specs/constspecs/ unless otherwise noted within design plans.

3. The Contractor is to notify and make arrangements with the SAWS Construction Inspection Division at 210-233-3500 (during regular SAWS working hours), and provide notification procedures the Contractor will use to notify affected home residents and/or property owners two (2) weeks prior to excavation. Outside of regular SAWS working hours the SAWS EOC should be contacted at 210-704-7297.

4. If necessary, Contractor will coordinate use of SAWS premises at no additional cost to SAWS. Such efforts include, but are not limited to, obtaining security identification badges required for access to SAWS facilities.

5. Locations and depths of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.

6. The Contractor shall verify the exact location of underground utilities and drainage structures prior to construction whether shown on plans or not. As-builts for SAWS infrastructure can be obtained at website below. Contractor shall coordinate physical locates for SAWS infrastructure through the SAWS Inspector. Please allow up to 7 business days for locates requesting pipe location markers on SAWS infrastructure. The following contact information are supplied for verification purposes:

   San Antonio Water System:
   Request as-builts: https://www.saws.org/service/locates-service/
   COSA Drainage 210-206-8433
   COSA Traffic Signal Operations 210-207-7720
   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 as a result of damages done by the project's construction.

8. Contractor shall not make use of dumpsters or waste bins that are intended to serve residents and/or businesses.

9. All work in Texas Department of Transportation and Bexar County right-of-way shall be done in accordance with respective construction specifications and permit.

10. The Contractor shall comply with City of San Antonio or other governing Municipality's tree ordinances when excavating near trees.

11. All work within the 100-year Floodplain shall be done in accordance with Floodplain Development Permit.

12. Any work completed without prior written authorization which is not included in these plans and specifications will not be compensated by the San Antonio Water System.

13. Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays.

    Weekend Work: Contractors are required to submit request to the SAWS Inspection Construction department by 12:00pm on the Wednesday prior to the weekend being requested. Request should be sent to constworkreq@saws.org.

    Any and all SAWS utility work installed without weekend approval will be subject to be uncovered for proper inspection at no cost to SAWS.

14. PRE CON SITE VIDEO: Before the start of any construction. The site must be video recorded by the contractor with one copy submitted to SAWS Inspections. A pre-site video will provide accurate documentation of the existing conditions (NSPI).

15. POWER POLE BRACING: Contractors should be advised that there are existing overhead utility poles along the project corridor. Contractors should further be advised that if the distance from the outside face of a utility trench to the face of a utility pole is less than 5 feet, said utility pole is subject to bracing, based on a determination made by utility pole owner. Costs incurred by contractor for bracing of these utility poles is subsidiary to that respective utility company's work. It is advisable for the contractor to review the construction documents, and visit the construction site to determine potential impacts.

16. CONSTRUCTION SEQUENCING: It is the Contractor's sole responsibility to schedule sequencing for removal and installation of existing and proposed SAWS utilities in conjunction with general project construction. Sequence of construction activities shall be considered in order to minimize the extent and duration of disturbances.

17. Contractor shall comply with applicable regulations including, but not limited to, those overseen by the U.S. Occupational Safety and Health Administration (OSHA). OSHA information and related materials may be obtained at https://www.osha.gov/ or at the OSHA San Antonio Office located at Fountainhead Tower, Suite 605 8200 W. Interstate 10 San Antonio, TX 78230 which is also reachable by phone at (210) 472-5040.

18. 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 areas in order to implement Contractor's trench excavation safety protection systems, programs and/or procedures. The Contractor's implementation of the systems, programs and/or procedures shall provide for adequate trench excavation safety protection that complies with, as a minimum, OSHA standards for trench excavations. Specifically, Contractor and/or Contractor's independently retained employee or safety consultant shall implement a trench safety program in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.

SEWER:

22. 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:

    A. Identify the source of the SSO and notify SAWS Emergency Operations Center immediately at 210-704-SAWS (210-704-7297). Provide the address of the spill and an estimated volume or flow.
    B. Attempt to eliminate the source of the SSO.
    C. Contain sewage from the SSO to the extent of preventing a possible contamination of waterways.
    D. Clean up spill site (return contained sewage to the collection system if possible) and properly dispose of contaminated soil/materials.
    E. Clean the affected sewer mains and remove any debris.
    F. 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.

    No separate measurement or payment shall be made for this work. All work shall be done according to guidelines set by the TCEQ and SAWS.

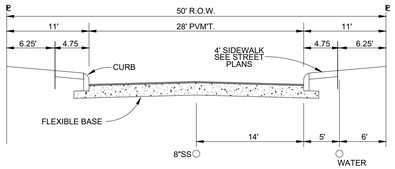
23. The Contractor shall provide bypass pumping of sewage around each segment of pipe to be replaced, in accordance with SAWS Standard Specification Item No. 865, "Bypass Pumping Small Diameter Sanitary Sewer Mains" and Standard Specification Item No. 864, "Bypass Pumping Large Diameter Sanitary Sewer Mains" as applicable. Payment for such work will be made under the appropriate bid item associated with Sanitary Sewer Bypass Pumping in accordance with SAWS Standard Specifications 865 and 864.

24. Prior to tie-ins, any shutdowns of existing force mains of any size must be coordinated with the SAWS Construction Inspection Division at 210-233-3500 and/or SAWS Production groups at least two weeks or more 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.

25. 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).

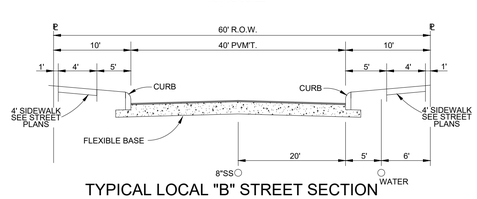
26. SMART MANHOLE COVERS: The Contractor shall notify SAWS EOC at 210-704-SAWS (210-233-7297) and either America Espinoza at 210-233-2934 or Jose A. Martinez at 210-233-3071 a minimum of 72 hours, not counting weekends or SAWS holidays, before working on the pipe or manhole, in order to have SAWS remove the Smart Cover. Any damage done to the Smart Cover will be charged to the Contractor through a change order.

27. FLOW METERS IN MANHOLES: The Contractor shall notify Bobby Johnson at 210-233-3493 or Abel Borunda at 210-233-3704 a minimum of 72 hours, not counting weekends or SAWS holidays, before working on the pipe or manhole, in order to have SAWS remove the Flow Meter in the manhole. Any damage done to the Flow Meter will be charged to the Contractor through a change order.



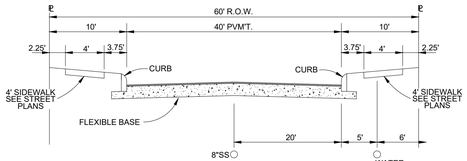
TYPICAL LOCAL "A" STREET SECTION

NOT TO SCALE



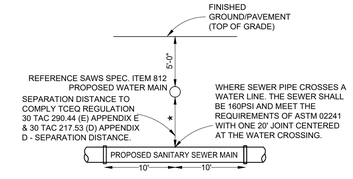
TYPICAL LOCAL "B" STREET SECTION
W/ NO LOTS FRONTING ROADWAY

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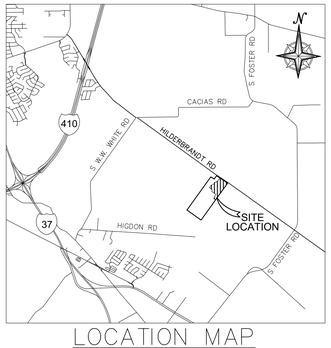
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W/ LOTS FRONTING ROADWAY

NOT TO SCALE



TYPICAL SANITARY SEWER/
WATER CROSSING DETAIL

NOT TO SCALE



LOCATION MAP

Sheet List Table

SHEET	TITLE
300	SANITARY SEWER COVER
301	OVERALL SANITARY SEWER PLAN
302	OVERALL SANITARY SEWER PLAN
303	SANITARY SEWER LINE A PLAN & PROFILE
304	SANITARY SEWER LINE A PLAN & PROFILE
305	SANITARY SEWER LINE A PLAN & PROFILE
306	SANITARY SEWER LINE B PLAN & PROFILE
307	SANITARY SEWER LINE C PLAN & PROFILE
308	SANITARY SEWER LINE D & LINE E PLAN & PROFILE
309	SANITARY SEWER LINE F & LINE G PLAN & PROFILE
310	SANITARY SEWER DETAILS

LEGEND

EXISTING EDGE OF PAVEMENT	
EXISTING SANITARY SEWER MAIN	E8"PVC
PROPOSED SANITARY SEWER MAIN	P8"SS
DIRECTION OF FLOW	
EXISTING WATER MAIN	E8"PVC
PROPOSED WATER MAIN	P8"PVC
SANITARY SERVICE LATERAL	SS

SEWER QUANTITIES

Onsite Sewer

Item No:	Description	Unit	Quantity
550.0	Trench Excavation Safety Protection	L.F.	9,703
848.0	8" Sanitary Sewer Pipe (6' - 8') * SDR 26	L.F.	2,667
848.0	8" Sanitary Sewer Pipe (8' - 10') * SDR 26	L.F.	410
848.0	8" Sanitary Sewer Pipe (10' - 12') * SDR 26	L.F.	456
848.0	8" Sanitary Sewer Pipe (12' - 14') * SDR 26	L.F.	570
848.0	8" Sanitary Sewer Pipe (14' - 16') * SDR 26	L.F.	534
848.0	8" Sanitary Sewer Pipe (16' - 18') * SDR 26	L.F.	609
848.0	8" Sanitary Sewer Pipe (18' - 20') * SDR 26	L.F.	227
848.0	8" Sanitary Sewer Pipe (20' - 22') * SDR 26	L.F.	235
848.0	12" Sanitary Sewer Pipe (18' - 20') * SDR 26	L.F.	44
852.0	Sanitary Sewer Manhole (Watertight/ Unless Specified Vented)	EA.	21
852.0	Sanitary Sewer Drop Manhole (Watertight/ Unless Specified Vented)	EA.	5
852.3	Extra Depth Manhole (>6')	V.F.	150.2
854.1	6" Sanitary Sewer Pipe, Laterals * SDR 26 (Includes Wyes, Tees, Bends)	L.F.	3,951
858.0	Concrete Cradle	C.Y.	8.4
860.0	Vertical Stacks (Includes Tees, Bends, And Wyes)	V.F.	167.3
866.0	Sewer Main Television Inspection	L.F.	5,752

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SURVEY LICENSE #10041000
Email: cecceotexas.com

OWNER/DEVELOPER:
DAR-BRAN DEVELOPMENT, LLC.
307 HUNTINGTON PLACE
SHAVANO PARK, TEXAS 78231
PHONE: (210) 662-0066

TRENCH EXCAVATION SAFETY PROTECTION

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EAST SEWERSHED - DOS RIOS W.R.C.
ALL SEWER PIPE TO BE SDR-26 UNLESS OTHERWISE NOTED

Developer's Name: KING FISH DEVELOPMENT LLC
Developer's Address: 2722 WEST BITTERS RD, SUITE 106
City: SAN ANTONIO State: TEXAS Zip: 78248
Phone #: 210 882-6800 Fax #:
SAWS Block Map#: 200-544, 200-542, & 190-542 Total EDU's: 112 Total Acreage: 28.767
Total Linear Footage of Pipe: 8" - 5,706 LF & 12" - 44 LF
- LIFT STATION LOT
Number of Lots: 112 - RESIDENTIAL LOTS
Plat No: PLAT NO. 22-11800026
SAWS JOB NO.: 22-1512

SAWS Job No. 22-1512

DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

8/11/2023
STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1

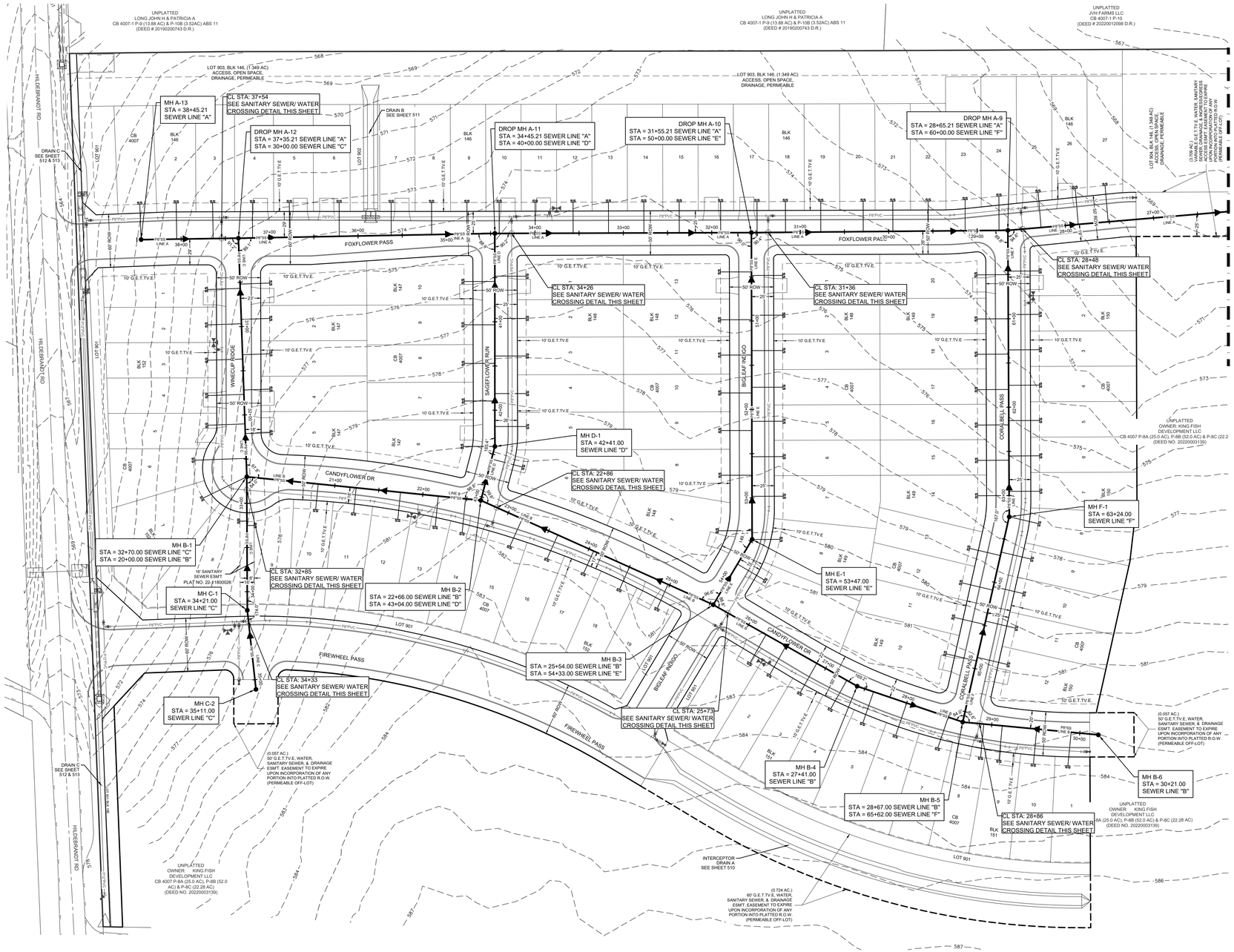
SANITARY SEWER COVER

SHEET NO.
300

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Date: Aug 11, 2023, 11:40am User ID: Mary.Stewart File: L:\Develop\Proj\2501\E0674101\Drawings\Unit 1\cad\E0674101 300 SANITARY SEWER COVER.dwg

PLAT NO. 22-11800026



LEGEND

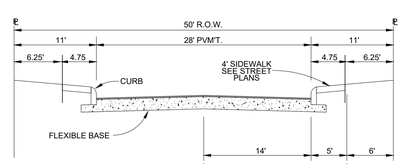
- EXISTING EDGE OF PAVEMENT
- EXISTING SANITARY SEWER MAIN — E8"PVC
- PROPOSED SANITARY SEWER MAIN — P8"SS
- DIRECTION OF FLOW
- EXISTING WATER MAIN — E8"PVC
- PROPOSED WATER MAIN — P8"PVC
- SANITARY SERVICE LATERAL — SS

0 60' 120'

NOTES

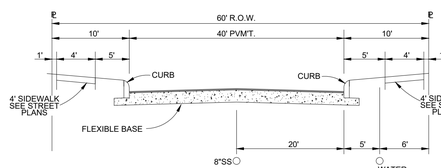
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4. CONTRACTOR TO INSURE LATERALS AT PROPOSED DRY UITLITY CROSSINGS ARE LOCATED AT A DEPTH TO AVOID ANY CONFLICT WITH DRY UTILITY INSTALLATION.

BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OR WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY



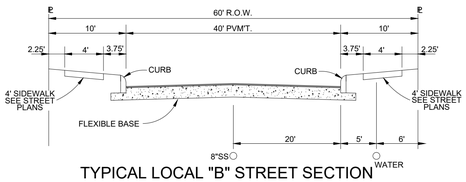
TYPICAL LOCAL "A" STREET SECTION

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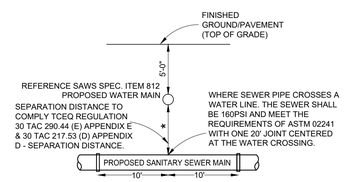
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TYPICAL LOCAL "B" STREET SECTION
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TYPICAL SANITARY SEWER/
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Developer's Name	KING FISH DEVELOPMENT LLC
Developer's Address	2722 WEST BITTERS RD, SUITE 106
City	SAN ANTONIO State TEXAS Zip 78248
Phone #	210 882-6800 Fax #
SAWS Block Map#	200-544, 200-542, & 190-542
Total EDU's	112 Total Acreage 28.767
Total Linear Footage of Pipe:	8" - 5,708 LF & 12" - 44 LF
Plat No.	PLAT NO. 22-11800026
Number of Lots	112 - RESIDENTIAL LOTS - LIFT STATION LOT
SAWS JOB NO.	22-1512

SAWS Job No. 22-1512

DESIGNED BY:	L.T.E.
DRAWN BY:	S.O.V.
DATE:	01/2021
JOB NO.:	E0674101

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dba. DON DURDEN, INC.
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TEL: (210) 641-8999
FAX: (210) 641-8440
REGISTRATION #F-2214 / #10041000

8/11/2023

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1
OVERALL SANITARY SEWER PLAN

SHEET NO.
301

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Date: Aug 11, 2023, 11:43am User: @ Mary Stewart File: L:\Develop\Proj\2021\E067401_Eastridge Unit 1\cadd\E067401_SSP_OVERALL SANITARY SHEET PLAN.dwg

PLAT NO. 22-11800026

LEGEND

- EXISTING EDGE OF PAVEMENT
- EXISTING SANITARY SEWER MAIN — 8"PVC
- PROPOSED SANITARY SEWER MAIN — P8"SS
- DIRECTION OF FLOW
- EXISTING WATER MAIN — 8"PVC
- PROPOSED WATER MAIN — P8"PVC
- SANITARY SERVICE LATERAL — SS

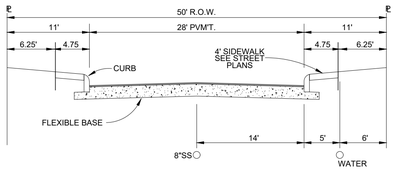
0 60' 120'

1" = 60'

EAST SEWERSHED - DOS RIOS W.R.C.
ALL SEWER PIPE TO BE SDR-26 UNLESS OTHERWISE NOTED

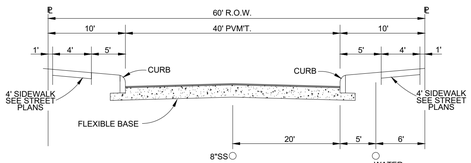
Developer's Name	KING FISH DEVELOPMENT LLC		
Developer's Address	2722 WEST BITTERS RD, SUITE 106		
City	SAN ANTONIO	State TEXAS	Zip 78248
Phone #	210 882-6800	Fax #	
SAWS Block Map#	200-544, 200-542, & 199-542	Total EDU's	112
Total Linear Footage of Pipe:	8" - 5,708 LF & 12" - 44 LF	Total Acreage	28.767
Number of Lots:	1 - LIFT STATION LOT 112 - RESIDENTIAL LOTS	Plat No.	PLAT NO. 22-11800026
		SAWS JOB NO.	22-1512

SAWS Job No. 22-1512



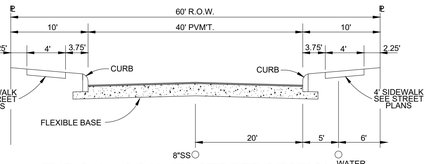
TYPICAL LOCAL "A" STREET SECTION

NOT TO SCALE



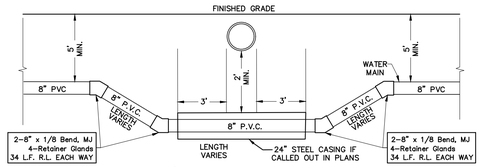
TYPICAL LOCAL "B" STREET SECTION
W/ NO LOTS FRONTING ROADWAY

NOT TO SCALE



TYPICAL LOCAL "B" STREET SECTION
W/ LOTS FRONTING ROADWAY

NOT TO SCALE



8" WATER/SEWER CROSSING DETAIL

N.T.S.

TYPICAL SANITARY SEWER/
WATER CROSSING DETAIL

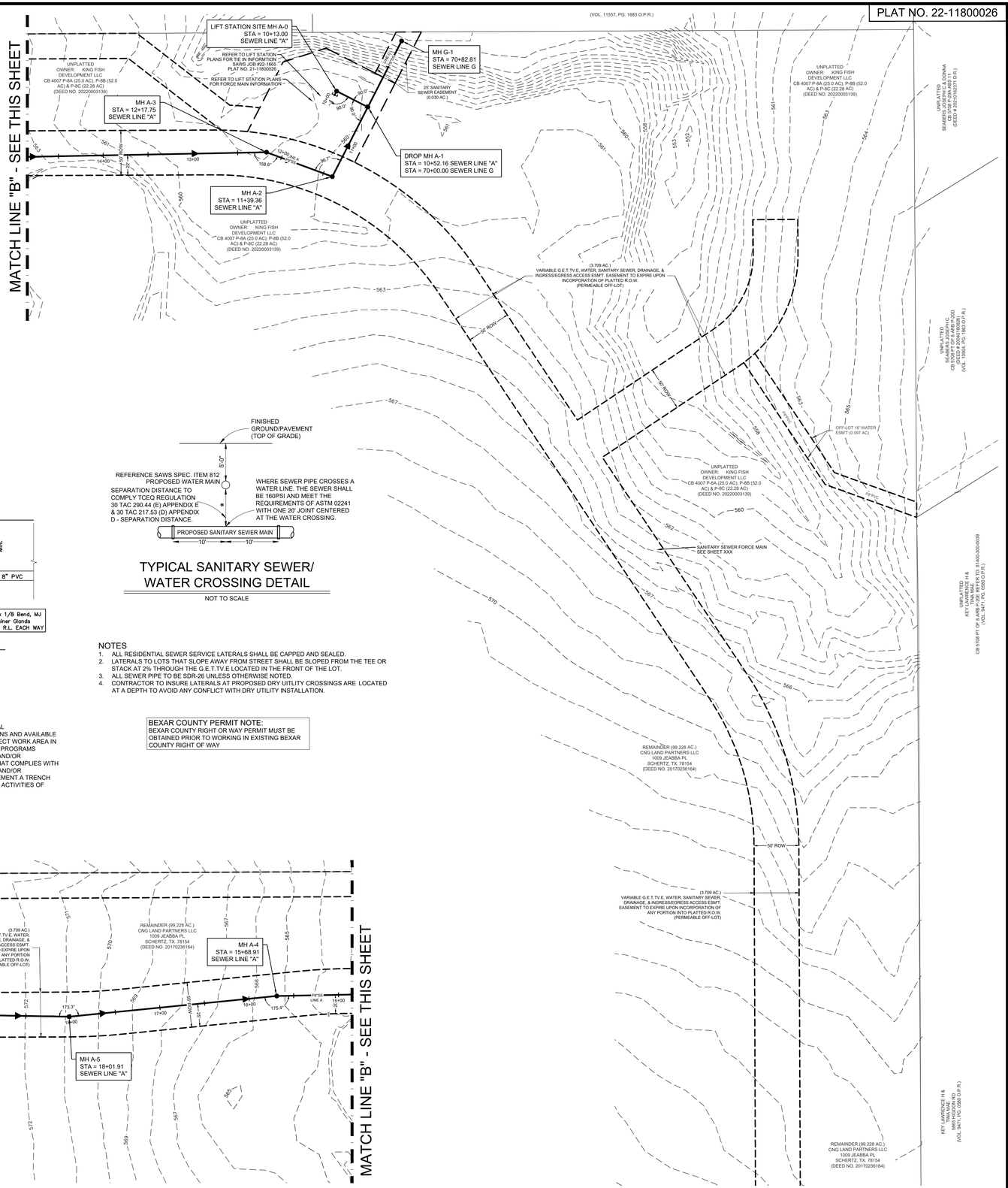
NOT TO SCALE

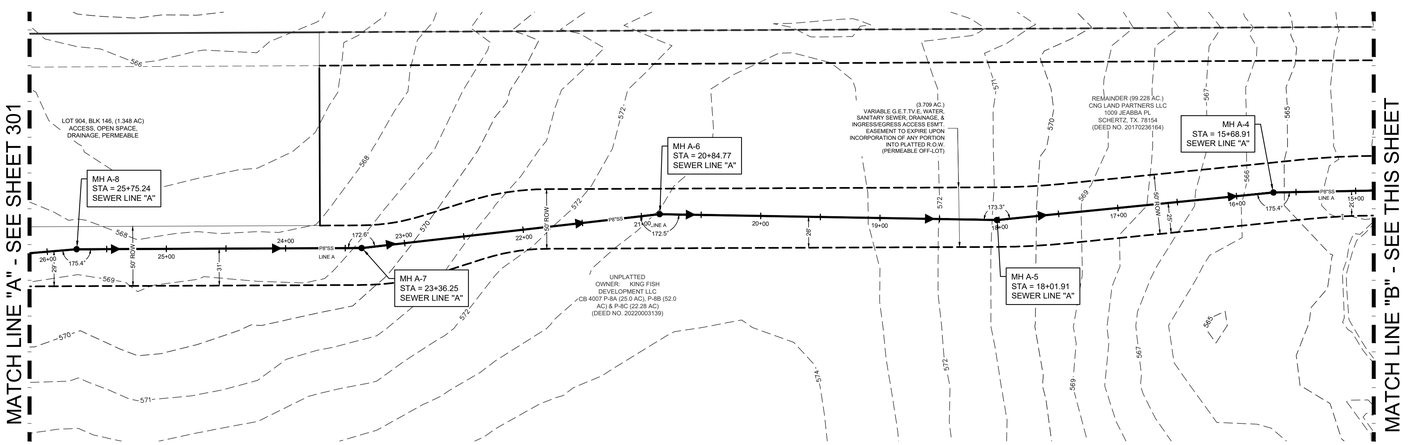
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TRENCH EXCAVATION SAFETY PROTECTION

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BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OR WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY





CIVIL ENGINEERING CONSULTANTS
d b a . D O N D U R D E N , I N C .
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-9999
FAX: (210) 641-9440
REGISTRATION #F-2214 / #10041000

DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

8/11/2023

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

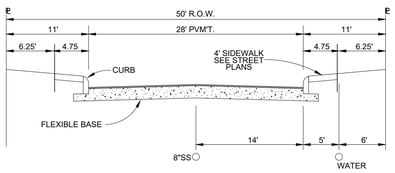
EASTRIDGE
SUBDIVISION UNIT 1
OVERALL SANITARY SEWER PLAN

SHEET NO.
302

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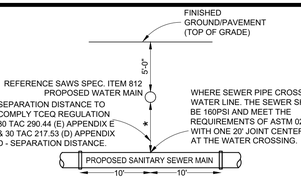
Date: Aug 11, 2023, 11:40am User ID: MaryStewart File: L:\Drawings\Proj\2021\06\Plat\Eastridge Unit 1\plat\06Plat01 301 OVERALL SANITARY SEWER PLAN.dwg

PLAT NO. 22-11800026



TYPICAL LOCAL "A" STREET SECTION

NOT TO SCALE



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

NOT TO SCALE

TRENCH EXCAVATION SAFETY PROTECTION

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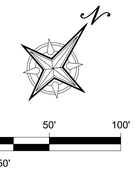
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City: SAN ANTONIO State: TEXAS Zip: 78248
Phone #: 210 882-6800 Fax #:
SAWS Block Map#: 200-544, 200-542, & 190-542 Total EDU's: 112 Total Acreage: 28.767
Total Linear Footage of Pipe: 1 - LIFT STATION LOT 8" - 5,708 LF & 12" - 44 LF Plat No.: PLAT NO. 22-11800026
Number of Lots: 112 - RESIDENTIAL LOTS SAWS JOB NO.: 22-1512

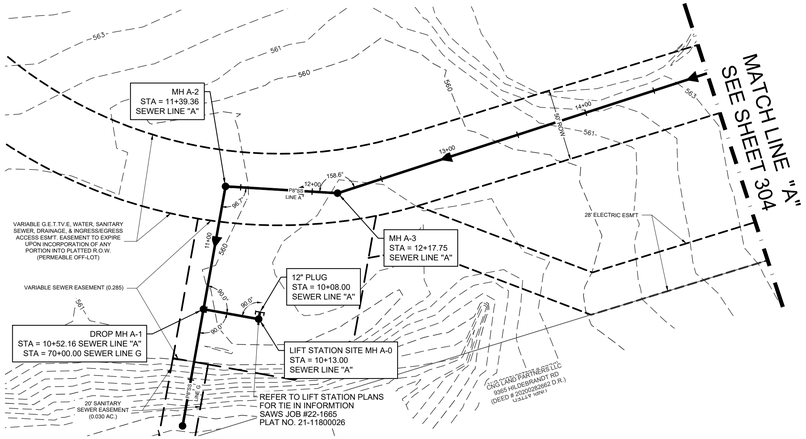
SAWS Job No. 22-1512

LEGEND

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- SANITARY SERVICE LATERAL — SS

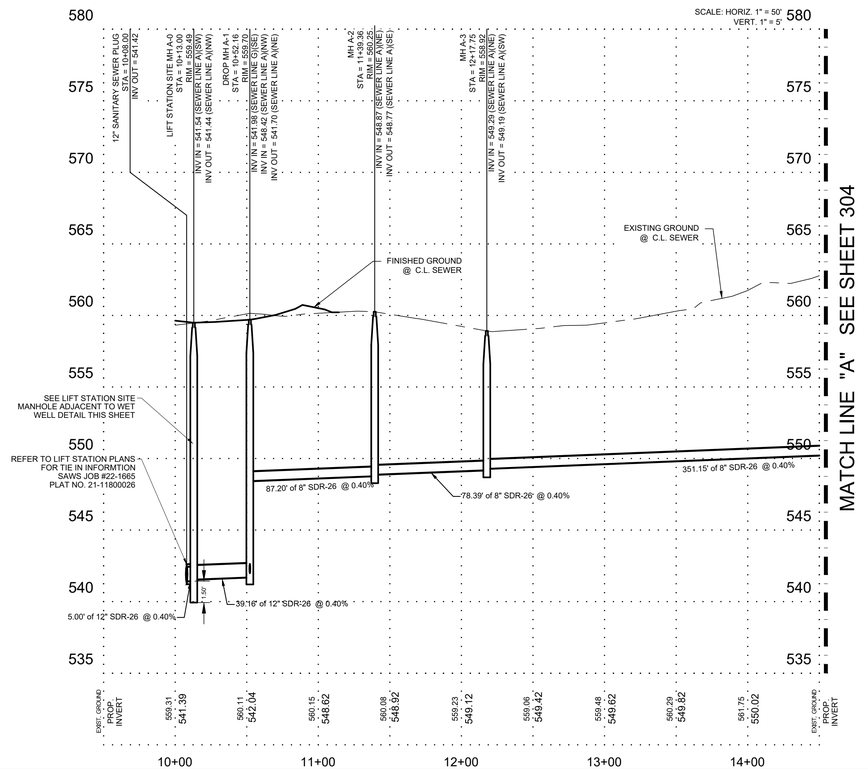


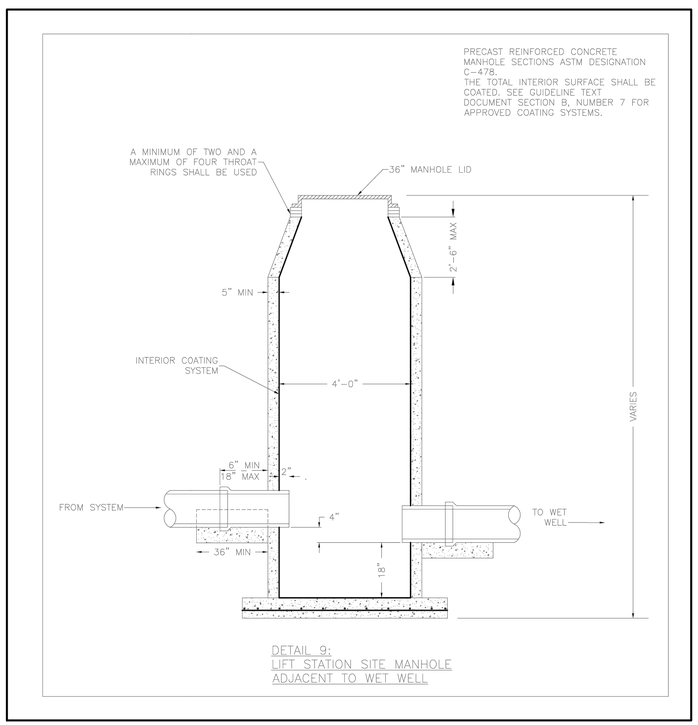
BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OR WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY



SANITARY SEWER LINE "A"

STA. 10+00.00 TO STA. 14+50.00





DETAIL 9:
LIFT STATION SITE MANHOLE
ADJACENT TO WET WELL

CIVIL ENGINEERING CONSULTANTS
d b a . D O N D U R D E N , I N C .
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-9999
FAX: (210) 641-9940
REGISTRATION #F-2214 / #10041000

DESIGNED BY: L.T.E.
DRAWN BY: S.O.V.
DATE: 01/2021
JOB NO.: E0674101

8/11/2023

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

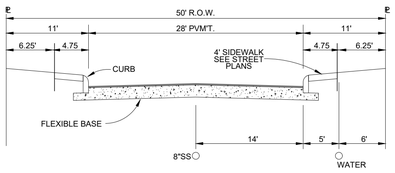
REV	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1
SANITARY SEWER LINE A
PLAN & PROFILE

SHEET NO.
303

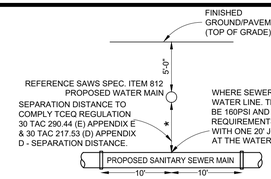
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Date: Aug 11, 2023, 11:45am User ID: Mary.Stewart File: L:\Drawings\Proj_2021\E0674101_Eastridge Unit 1\Good\E0674101 303 SANITARY SEWER LINE A PLAN & PROFILE.dwg



TYPICAL LOCAL "A" STREET SECTION

NOT TO SCALE



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

NOT TO SCALE

TRENCH EXCAVATION SAFETY PROTECTION

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Developer's Address	2722 WEST BITTERS RD, SUITE 106
City SAN ANTONIO	State TEXAS Zip 78248
Phone # 210 882-6800	Fax #
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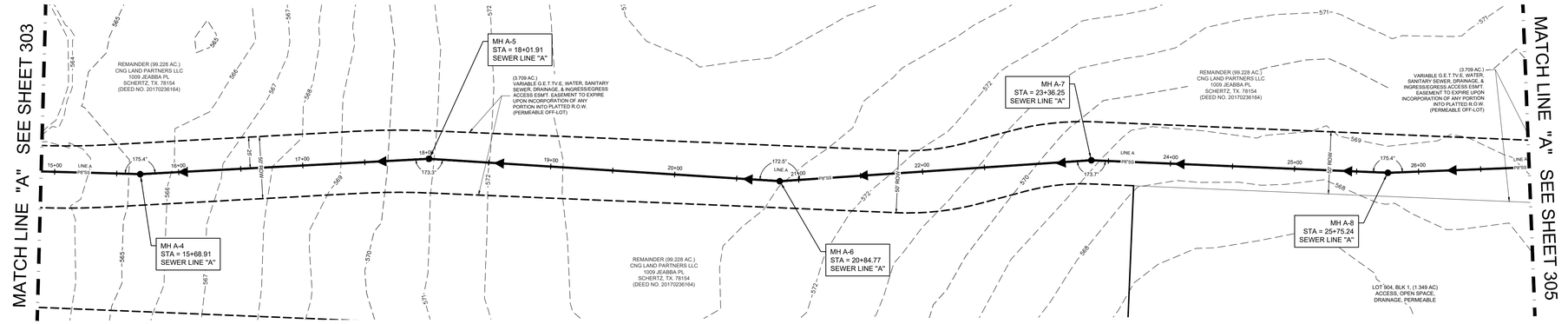
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BEXAR COUNTY PERMIT NOTE:
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PLAT NO. 22-11800026

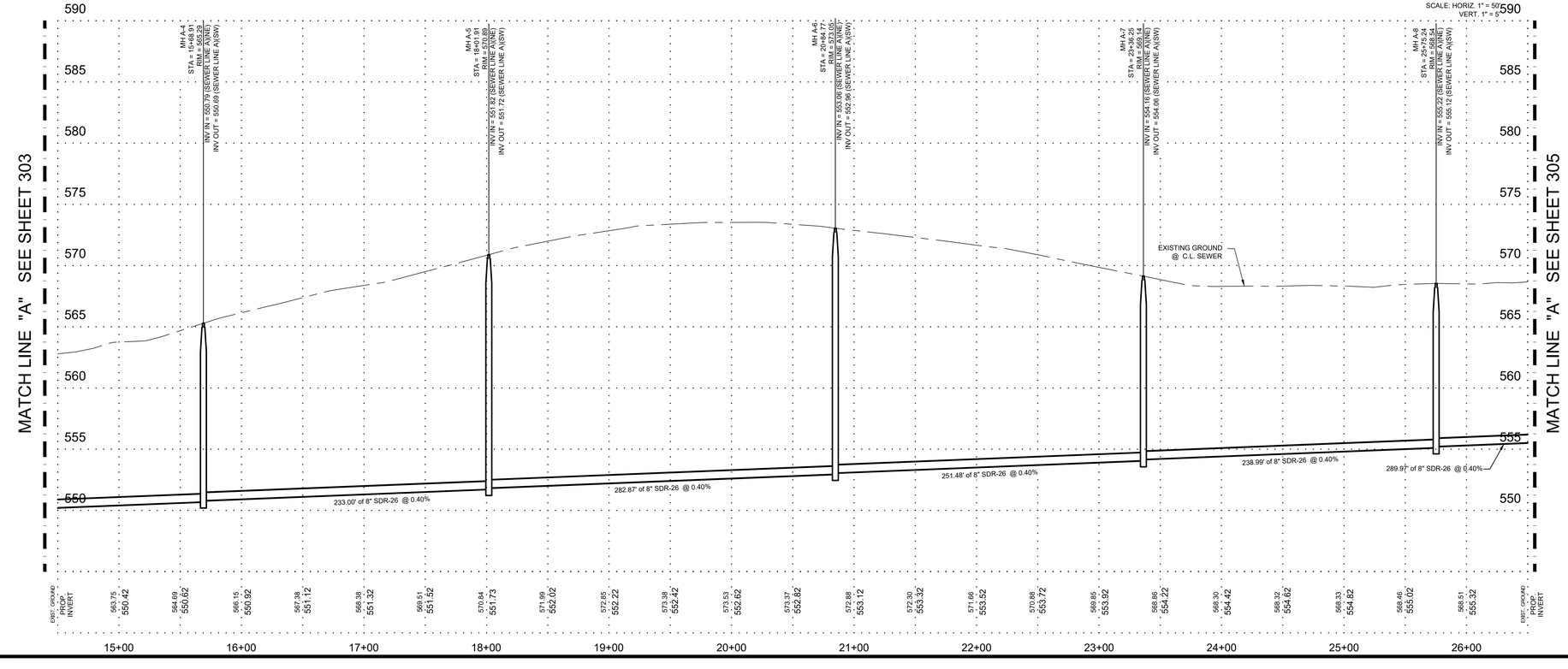
0 50' 100'
1" = 50'



SANITARY SEWER LINE "A"

STA. 14+50.00 TO STA. 26+50.00

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



CIVIL ENGINEERING CONSULTANTS
dba. DON DURDEN, INC.
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
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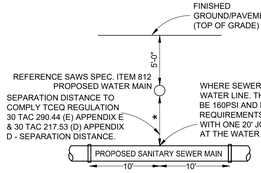
EASTRIDGE
SUBDIVISION UNIT 1
SANITARY SEWER LINE A
PLAN & PROFILE

SHEET NO.
304

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PLAT NO. 22-11800026



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

NOT TO SCALE

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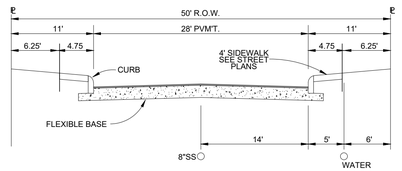
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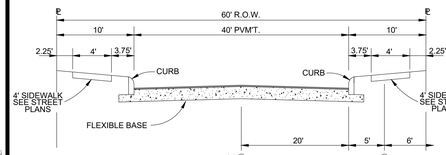
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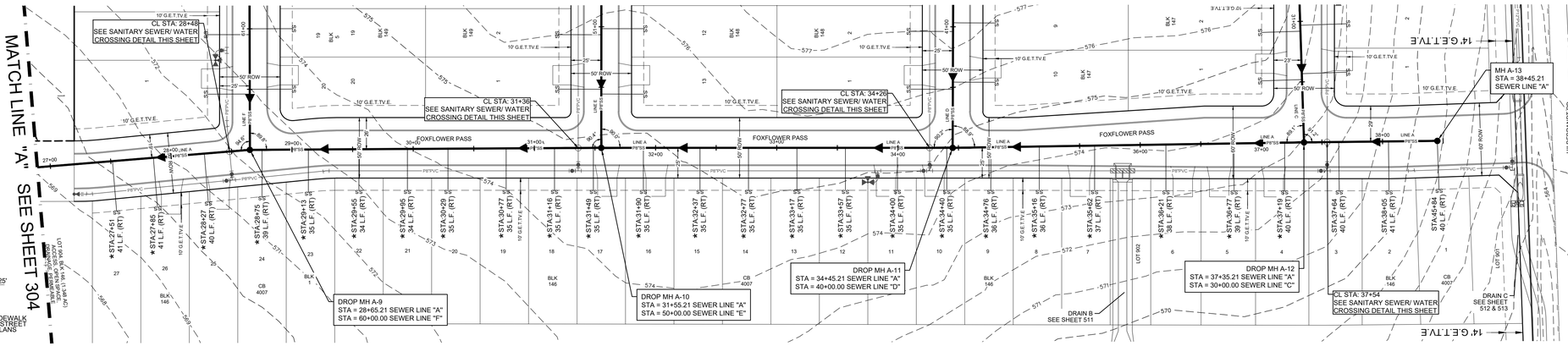
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NOT TO SCALE



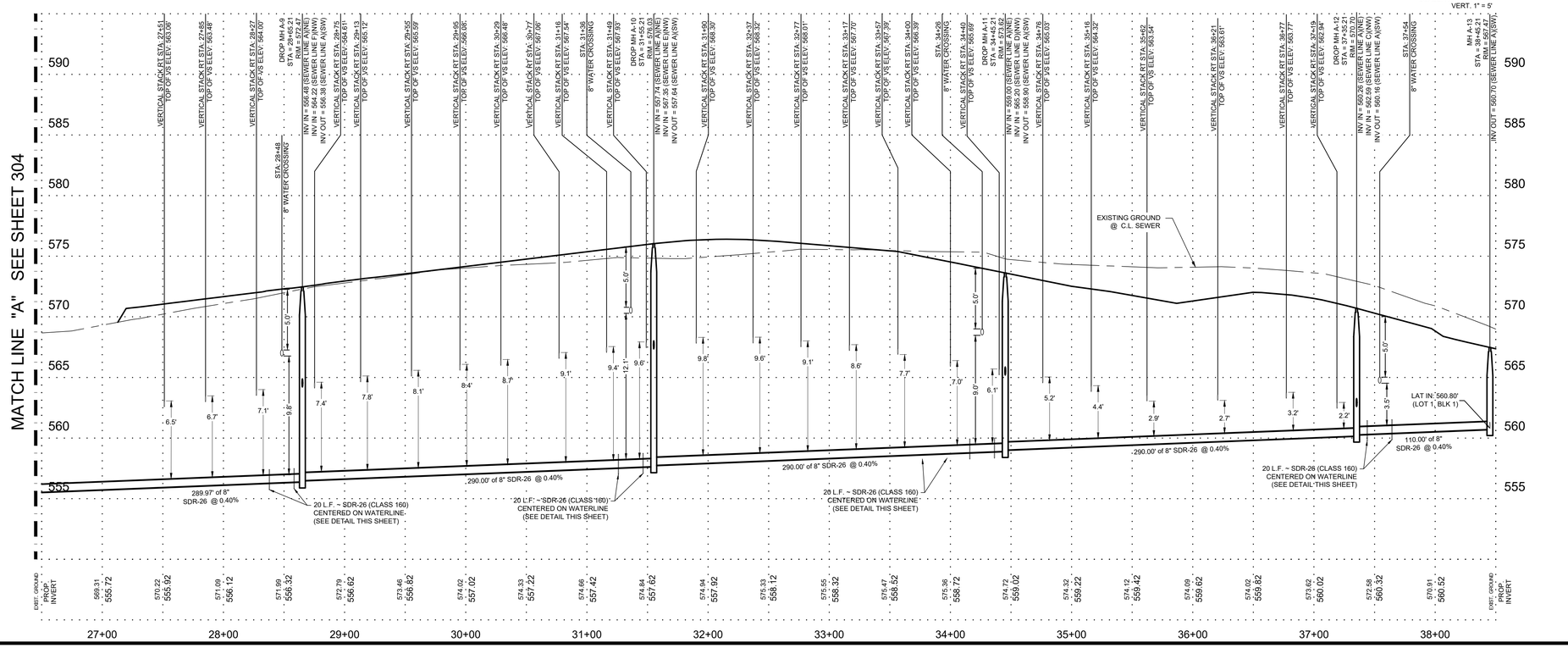
TYPICAL LOCAL "B" STREET SECTION W/ LOTS FRONTING ROADWAY

NOT TO SCALE



SANITARY SEWER LINE "A"

STA. 26+50.00 TO STA. 38+45.21



CIVIL ENGINEERING CONSULTANTS
d b a . D O N D U R D E N , I N C .
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-9999
FAX: (210) 641-8440
REGISTRATION #F-2214 / #10041000

CEC

8/11/2023

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

DESIGNED BY:	L.T.E.
DRAWN BY:	S.O.V.
DATE:	01/2021
JOB NO.:	E0674101

REV.	DATE	DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1

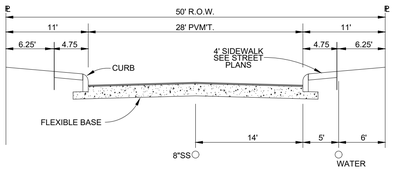
SANITARY SEWER LINE A PLAN & PROFILE

SHEET NO.
305

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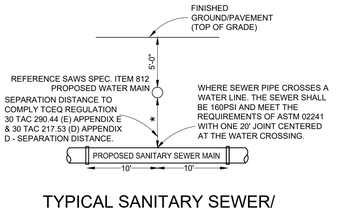
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PLAT NO. 22-11800026



TYPICAL LOCAL "A" STREET SECTION

NOT TO SCALE



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

NOT TO SCALE

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

NOTES

1. ALL RESIDENTIAL SEWER SERVICE LATERALS SHALL BE CAPPED AND SEALED.
2. LATERALS TO LOTS THAT SLOPE AWAY FROM STREET SHALL BE SLOPED FROM THE TEE OR STACK AT 2% THROUGH THE G.E.T.TV.E LOCATED IN THE FRONT OF THE LOT.
3. ALL SEWER PIPE TO BE SDR-26 UNLESS OTHERWISE NOTED.
4. CONTRACTOR TO INSURE LATERALS AT PROPOSED DRY UITLITY CROSSINGS ARE LOCATED AT A DEPTH TO AVOID ANY CONFLICT WITH DRY UTILITY INSTALLATION.

EAST SEWERSHED - DOS RIOS W.R.C.
ALL SEWER PIPE TO BE SDR-26 UNLESS OTHERWISE NOTED

Developer's Name	KING FISH DEVELOPMENT LLC		
Developer's Address	2722 WEST BITTERS RD, SUITE 106		
City	SAN ANTONIO	State	TEXAS
Zip	78248		
Phone #	210 882-6800	Fax #	
SAWS Block Map#	200-544, 200-542, & 190-542	Total EDU's	112
Total Acreage	28.767		
Total Linear Footage of Pipe:	8" - 5,708 LF & 12" - 44 LF	Plat No.	PLAT NO. 22-11800026
Number of Lots:	112 - RESIDENTIAL LOTS	SAWS JOB NO.	22-1512

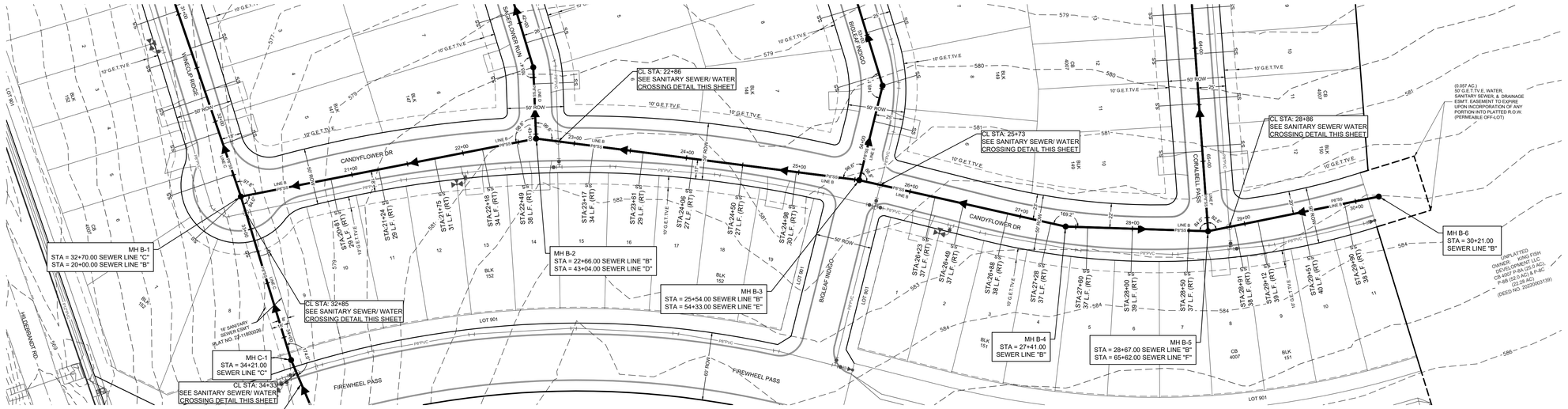
SAWS Job No. 22-1512

LEGEND

EXISTING EDGE OF PAVEMENT	
EXISTING SANITARY SEWER MAIN	E8"PVC
PROPOSED SANITARY SEWER MAIN	P8"SS
DIRECTION OF FLOW	
EXISTING WATER MAIN	E8"PVC
PROPOSED WATER MAIN	P8"PVC
SANITARY SERVICE LATERAL	SS

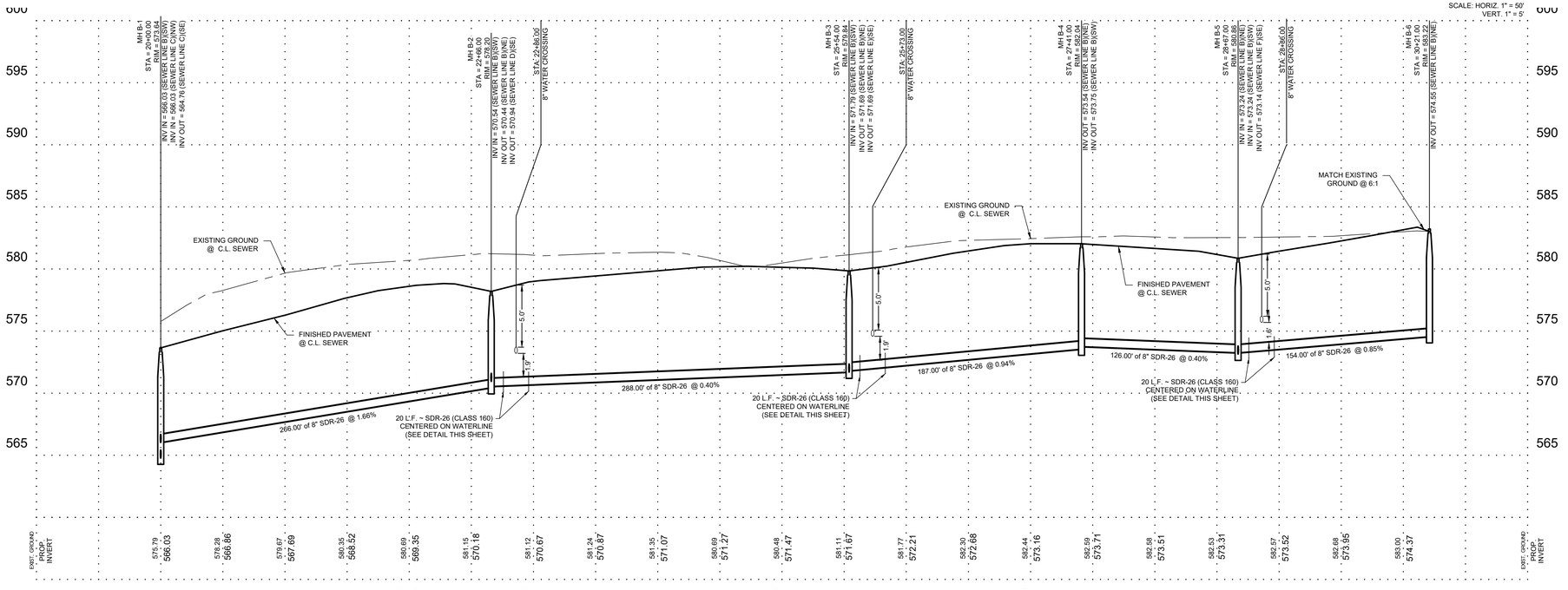
0 50' 100'
1" = 50'

BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OR WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY



SANITARY SEWER LINE "B"

STA. 20+00.00 TO STA. 30+21.00



DESIGNED BY:	L.T.E.
DRAWN BY:	S.O.V.
DATE:	01/2021
JOB NO.:	E0674101

CIVIL ENGINEERING CONSULTANTS
dba. DON DURDEN, INC.
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-9999
FAX: (210) 641-3300
REGISTRATION #F-2214 / #10041000

8/11/2023

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION
1	08/11/2023	PLAT NO. 22-11800026

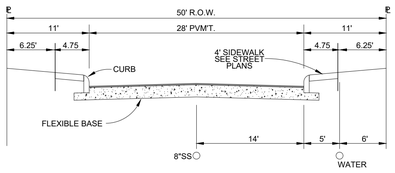
EASTRIDGE
SUBDIVISION UNIT 1
SANITARY SEWER LINE B
PLAN & PROFILE

SHEET NO.
306

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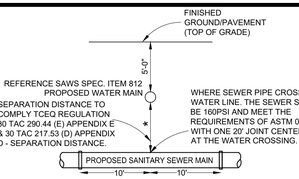
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PLAT NO. 22-11800026



TYPICAL LOCAL "A" STREET SECTION

NOT TO SCALE



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

NOT TO SCALE

TRENCH EXCAVATION SAFETY PROTECTION

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2. LATERALS TO LOTS THAT SLOPE AWAY FROM STREET SHALL BE SLOPED FROM THE TEE OR STACK AT 2% THROUGH THE G.E.T.TV.E LOCATED IN THE FRONT OF THE LOT.
3. ALL SEWER PIPE TO BE SDR-26 UNLESS OTHERWISE NOTED.
4. CONTRACTOR TO INSURE LATERALS AT PROPOSED DRY UITLITY CROSSINGS ARE LOCATED AT A DEPTH TO AVOID ANY CONFLICT WITH DRY UTILITY INSTALLATION.

EAST SEWERSHED - DOS RIOS W.R.C.
ALL SEWER PIPE TO BE SDR-26 UNLESS OTHERWISE NOTED

Developer's Name	KING FISH DEVELOPMENT LLC		
Developer's Address	2722 WEST BITTERS RD, SUITE 106		
City	SAN ANTONIO	State TEXAS	Zip 78248
Phone #	210 882-6800 200-544, 200-542, & 190-542	Fax #	
SAWS Block Map#		Total EDU's 112	Total Acreage 28.767
Total Linear Footage of Pipe	8" - 5,708 LF & 12" - 44 LF	Plat No.	PLAT NO. 22-11800026
Number of Lots	112 - RESIDENTIAL LOTS	SAWS JOB NO.	22-1512

SAWS Job No. 22-1512

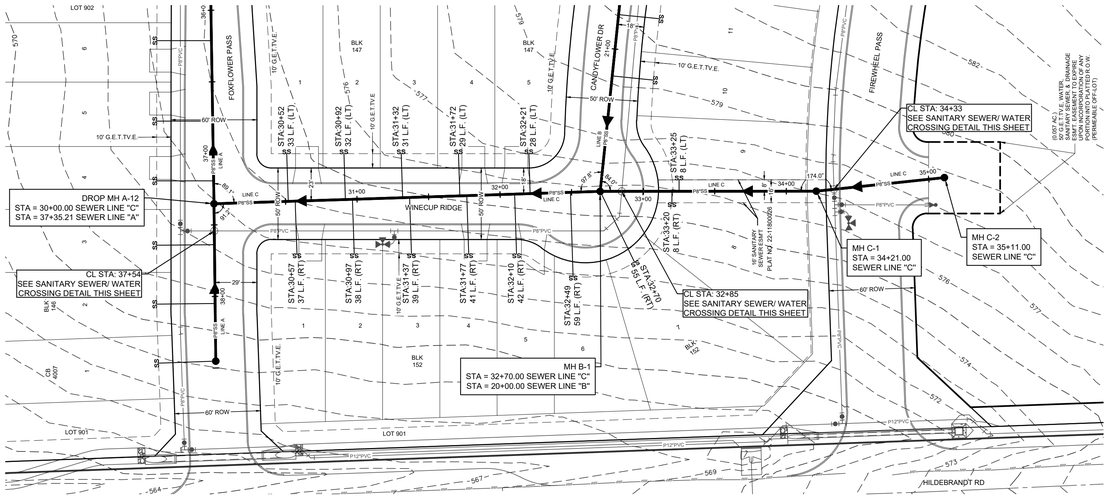
LEGEND

EXISTING EDGE OF PAVEMENT	
EXISTING SANITARY SEWER MAIN	E8"PVC
PROPOSED SANITARY SEWER MAIN	P8"SS
DIRECTION OF FLOW	
EXISTING WATER MAIN	E8"PVC
PROPOSED WATER MAIN	P8"PVC
SANITARY SERVICE LATERAL	SS

0 50' 100'

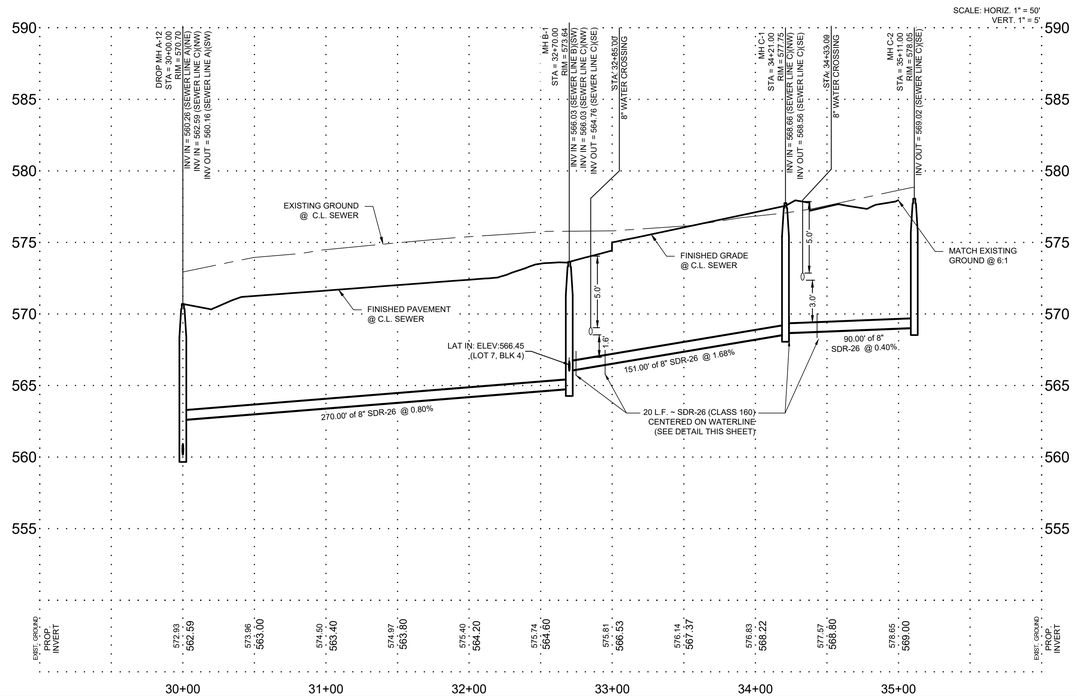
1" = 50'

BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OR WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY



SANITARY SEWER LINE "C"

STA. 30+00.00 TO STA. 35+11.00



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DESIGNED BY:	L.T.E.
DRAWN BY:	S.O.V.
DATE:	01/2021
JOB NO.:	E0674101

CIVIL ENGINEERING CONSULTANTS
dba. DON DURDEN, INC.
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-9999
FAX: (210) 641-9440
REGISTRATION #F-2214 / #10041000

8/11/2023

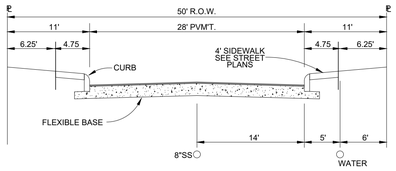
STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1
SANITARY SEWER LINE C
PLAN & PROFILE

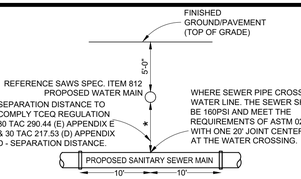
SHEET NO.
307

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TYPICAL LOCAL "A" STREET SECTION

NOT TO SCALE



TYPICAL SANITARY SEWER/
WATER CROSSING DETAIL

NOT TO SCALE

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

NOTES

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EAST SEWERSHED - DOS RIOS W.R.C.
ALL SEWER PIPE TO BE SDR-26 UNLESS OTHERWISE NOTED

Developer's Name	KING FISH DEVELOPMENT LLC		
Developer's Address	2722 WEST BITTERS RD, SUITE 106		
City	SAN ANTONIO	State TEXAS	Zip 78248
Phone #	210 882-6800	Fax #	
SAWS Block Map#	200-544, 200-542, & 190-542	Total EDU's 112	Total Acreage 28.767
Total Linear Footage of Pipe:	8" - 5,708 LF & 12" - 44 LF	Plat No.	PLAT NO. 22-11800026
Number of Lots	112 - RESIDENTIAL LOTS 1 - LIFT STATION LOT	SAWS JOB NO.	22-1512

SAWS Job No. 22-1512

LEGEND

- EXISTING EDGE OF PAVEMENT
- EXISTING SANITARY SEWER MAIN — E8"PVC
- PROPOSED SANITARY SEWER MAIN — P8"SS
- DIRECTION OF FLOW
- EXISTING WATER MAIN — E8"PVC
- PROPOSED WATER MAIN — P8"PVC
- SANITARY SERVICE LATERAL — SS

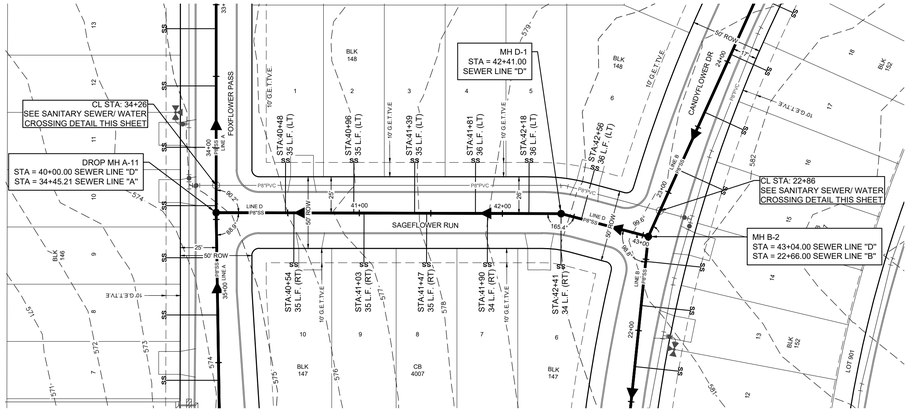
BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OR WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY

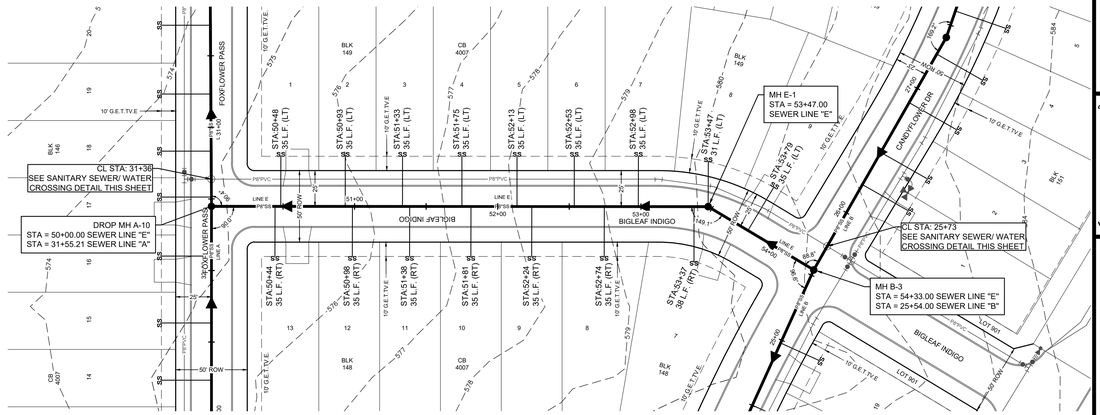
PLAT NO. 22-11800026

N

0 50' 100'

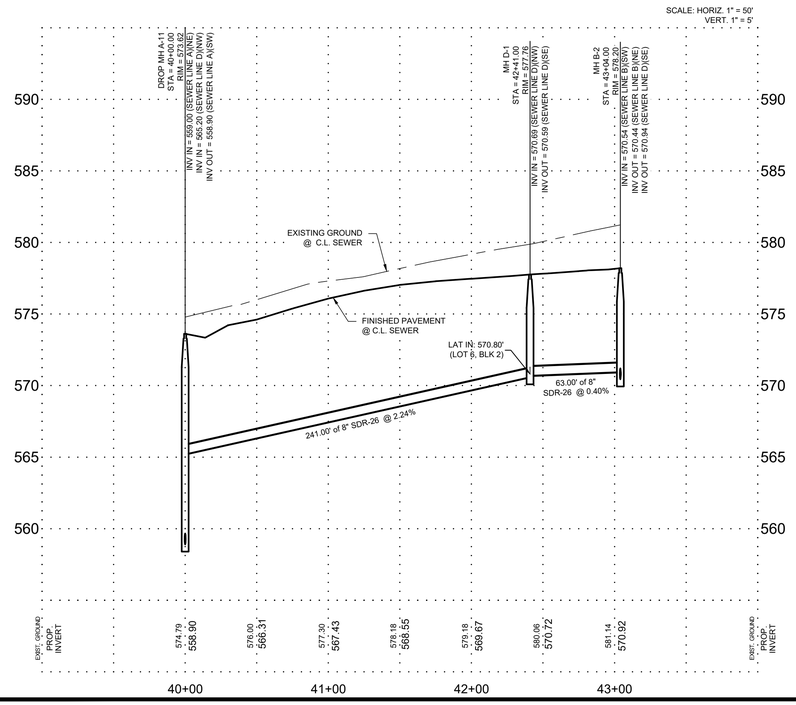
1" = 50'





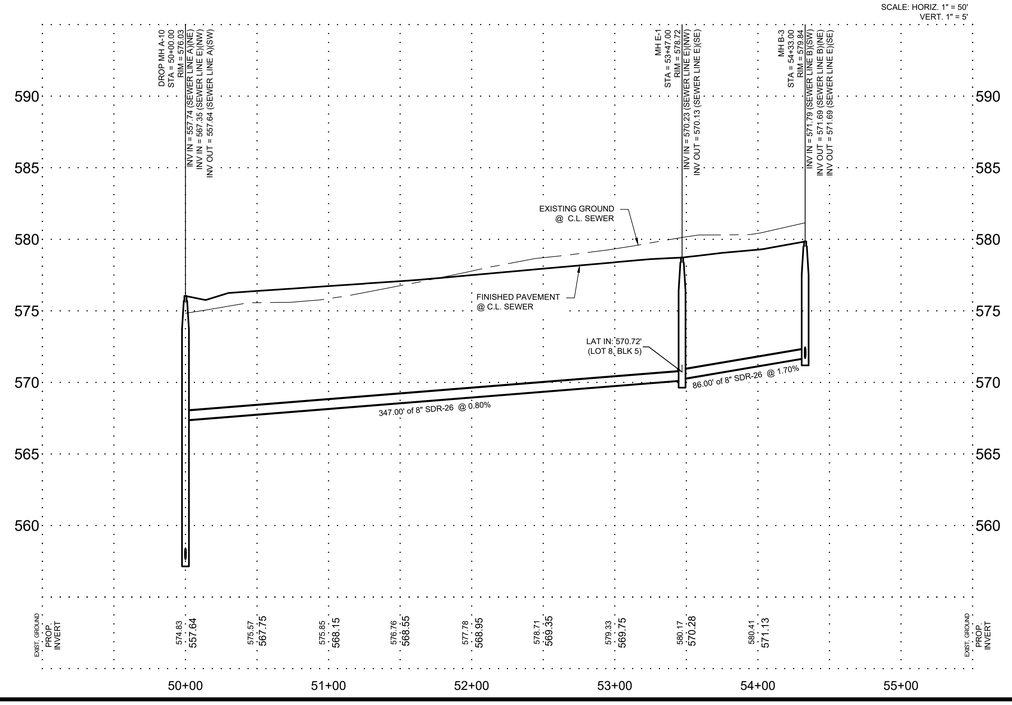
SANITARY SEWER LINE "D"

STA. 40+00.00 TO STA. 43+04.00



SANITARY SEWER LINE "E"

STA. 50+00.00 TO STA. 54+33.00



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CIVIL ENGINEERING CONSULTANTS
d b a . D O N D U R D E N , I N C .
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-9999
FAX: (210) 641-3340
REGISTRATION #F-2214 / #10041000

8/11/2023

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

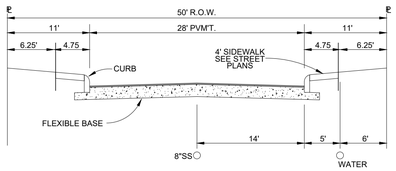
DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

EASTRIDGE
SUBDIVISION UNIT 1
SANITARY SEWER LINE D & LINE E PLAN & PROFILE

SHEET NO.
308

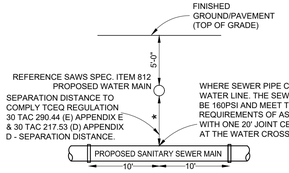
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PLAT NO. 22-11800026



TYPICAL LOCAL "A" STREET SECTION

NOT TO SCALE



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

NOT TO SCALE

TRENCH EXCAVATION SAFETY PROTECTION

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NOTES

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2. LATERALS TO LOTS THAT SLOPE AWAY FROM STREET SHALL BE SLOPED FROM THE TEE OR STACK AT 2% THROUGH THE G.E.T.TV.E LOCATED IN THE FRONT OF THE LOT.
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EAST SEWERSHED - DOS RIOS W.R.C.
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Developer's Name	KING FISH DEVELOPMENT LLC		
Developer's Address	2722 WEST BITTERS RD, SUITE 106		
City	SAN ANTONIO	State TEXAS	Zip 78248
Phone #	210 882-6800	Fax #	
SAWS Block Map#	200-544, 200-542, & 190-542	Total EDU's 112	Total Acreage 28.767
Total Linear Footage of Pipe:	8" - 5,708 LF & 12" - 44 LF	Plat No	PLAT NO. 22-11800026
Number of Lots	112 - LIFT STATION LOT 112 - RESIDENTIAL LOTS	SAWS JOB NO.	22-1512

SAWS Job No. 22-1512

LEGEND

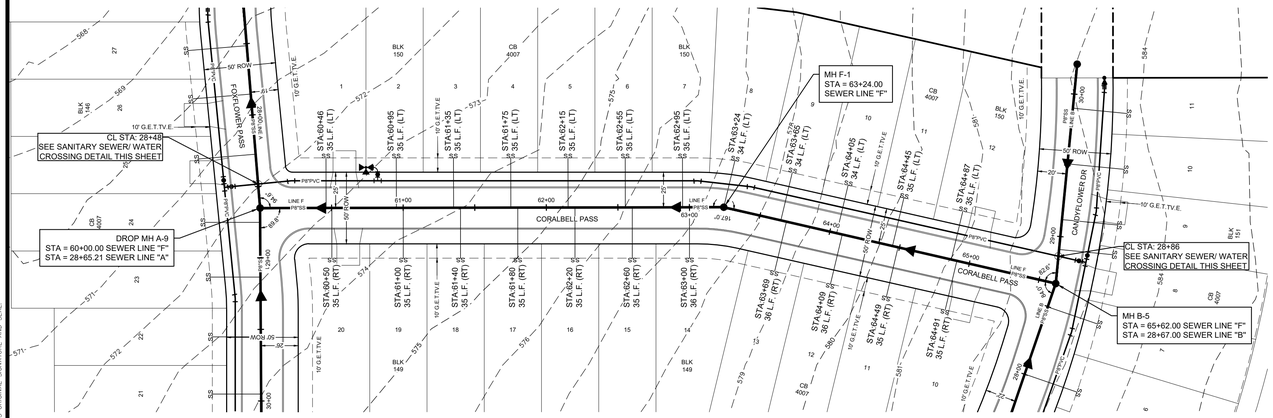
EXISTING EDGE OF PAVEMENT	
EXISTING SANITARY SEWER MAIN	E8"PVC
PROPOSED SANITARY SEWER MAIN	P8"SS
DIRECTION OF FLOW	
EXISTING WATER MAIN	E8"PVC
PROPOSED WATER MAIN	P8"PVC
SANITARY SERVICE LATERAL	SS

N

0 50' 100'

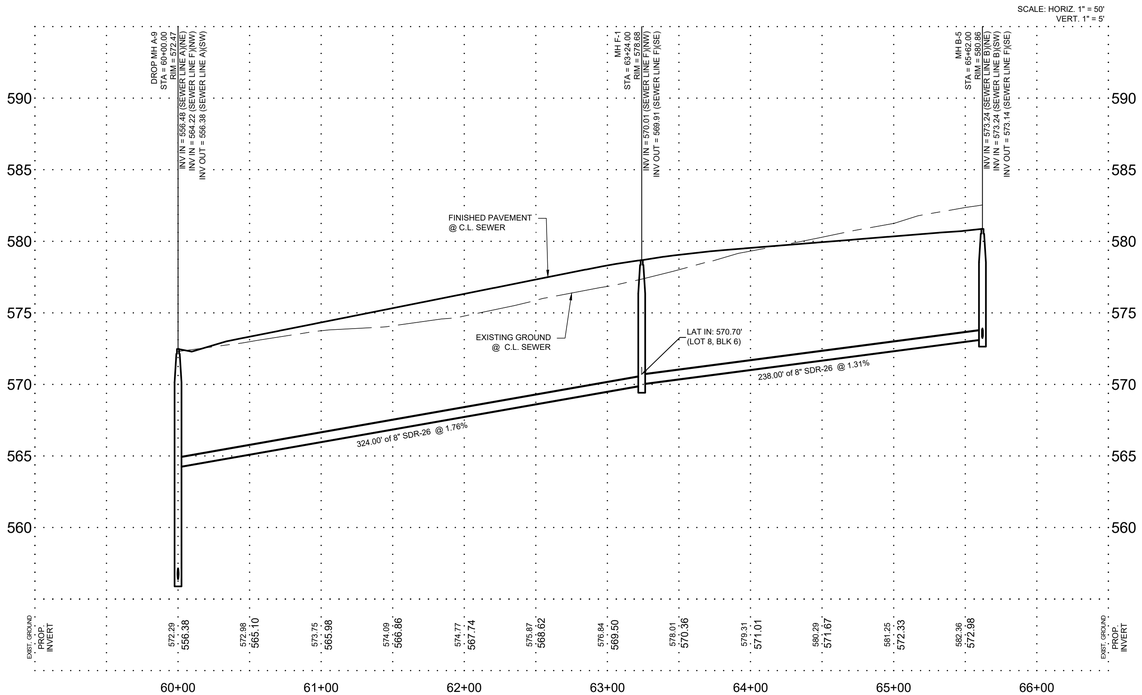
1" = 50'

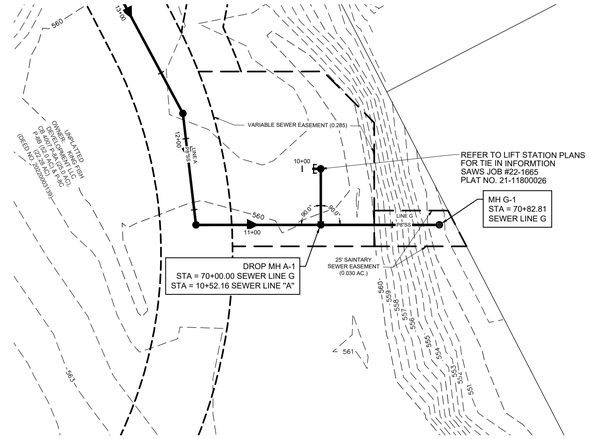
BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OR WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY



SANITARY SEWER LINE "F"

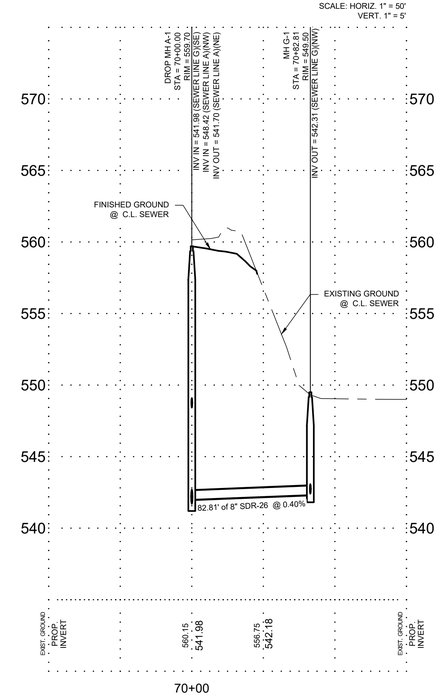
STA. 60+00.00 TO STA. 65+62.00





SANITARY SEWER LINE "G"

STA. 70+00.00 TO STA. 70+82.81



CIVIL ENGINEERING CONSULTANTS
d b a . D O N D U R D E N , I N C .
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-9999
FAX: (210) 641-9440
REGISTRATION #F-2214 / #10041000

DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

8/11/2023

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1
SANITARY SEWER LINE F
& LINE G PLAN & PROFILE

SHEET NO.
309

THIS DRAWING HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. REFER ONLY TO FINAL HARD COPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL

Date: Aug 11, 2023, 11:47am User: @ Mary.Stewart File: L:\Develop\Proj_2021\E0674101_Eastridge Unit 1\Good\E0674101 309 SANITARY SEWER LINE F & LINE G PROFILE.dwg

EAST SEWERSHED - DOS RIOS W.R.C.
ALL SEWER PIPE TO BE SDR-26 UNLESS OTHERWISE NOTED

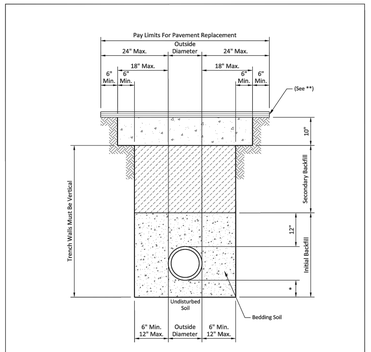
Developer's Name: KING FISH DEVELOPMENT LLC
Developer's Address: 2722 WEST BITTERS RD, SUITE 106
City: SAN ANTONIO State: TEXAS Zip: 78248
Phone #: 210- 882-6800 Fax #:
SAWS Block Map# & Lot: 200-044, 200-542, & 190-542 Total EDU's: 112 Total Acreage: 28.767
Total Linear Footage of Pipe: 8" - 5,708 LF & 12" - 44 LF Plat No.: PLAT NO. 22-11800026
Number of Lots: 1 - LIFT STATION LOT; 112 - RESIDENTIAL LOTS SAWS JOB NO.: 22-1512

SAWS Job No. 22-1512

PLAT NO. 22-11800026

GENERAL NOTES

1. ALL MATERIALS, CONSTRUCTION, AND TESTING SHALL CONFORM TO THE FOLLOWING AS APPLICABLE:
   a. CURRENT TCEQ (FORMERLY TNRCC) DESIGN CRITERIA
   b. REFERENCE TO SAN ANTONIO WATER SYSTEM SPECIFICATIONS
   c. REFERENCE TO SAN ANTONIO RIVER AUTHORITY CRITERIA
   d. CURRENT TxDOT SPECIFICATION AND CRITERIA
   e. CURRENT CITY OF SAN ANTONIO STANDARD SPECIFICATIONS SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION
2. MANHOLE RINGS AND COVERS SHALL BE TRANS - TEX A77, OR EQUAL. WHEN WATERTIGHT MANHOLE RINGS AND COVERS ARE SPECIFIED, THEY SHALL BE TRANS - TEX A77 "O" RING, OR EQUAL.
3. a. MATERIAL FOR SANITARY SEWER PIPE MUST BE THE SAME FROM MANHOLE TO MANHOLE. CHANGES IN TYPE OF PIPE MAY BE MADE, ONLY, AT MANHOLES, OR SPECIAL STRUCTURES, EXCEPT AS APPROVED BY THE SEWER ENGINEER.
   b. ADAPTERS AND CONCRETE COLLARS SHALL BE USED, ONLY, AS DIRECTED BY THE ENGINEER, AND AS APPROVED BY THE SEWER ENGINEER.
4. ALL SEWER PIPE WITH LESS THAN THREE (3') FEET OF COVER SHALL BE CONCRETE ENCASED.
5. ALL FORCE MAINS SHALL BE PROVIDED WITH THRUST BLOCKS, WHERE CHANGES IN DIRECTION OCCUR, OR AS DIRECTED BY THE ENGINEER.



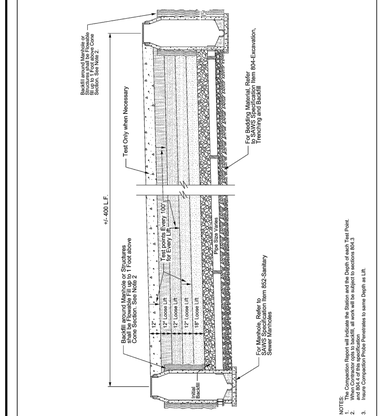
The Existing Material at the Bearing Level shall be Removed and Replaced to a Minimum Depth of 6-Inches or ¼ of the Outside Diameter of the Pipe, whichever is greater, with Bedding Material.

In Areas of over Excavation, Encasement shall extend from Trench Wall. Pay Limits shall not Exceed 12" Max. as shown on Detail. Additional Encasement shall be Incidental.

* Sewer Gravel 6" Min. or ¼ O.D. of the Pipe, whichever is greater.
** Minimum 2" HMAC Type "D" for Trench Repair in Local/Residential Streets.
** Minimum 3" HMAC Type "C" for Trench Repair in Collector/Arterial Streets.

- Hot Mix Asphalt Concrete (HMAC)
- Asphalt Treated Base (A.T.B.)

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	SANITARY SEWER PIPE LAID IN TRENCH	MARCH 2008	AUG 2019
	DD-804-01	SHEET 1 OF 1	


Backfill around Manhole or Pipe Shall be Flowable Fill Up to Grade. See Note 2
Test Only when Necessary
+/- 400 L.F.
Backfill around Manhole or Pipe Shall be Flowable Fill Up to Grade. See Note 2
12" Cross Lift
12" Cross Lift
12" Cross Lift
18" Cross Lift
Base Material
Bedding Material
Pipe Embedment Material
Trench Excavation Safety System (OSHA)
Undisturbed Soil
Trench Width
Pipe O.D. + 24" Min. 30" Max.
Pipe O.D. + 24" Min. 30" Max.
Pipe O.D. + 24" Min. 30" Max.

PLAT NO. 22-11800026

WATERLINE CONSTRUCTION PLANS
for
EASTRIDGE SUBDIVISION
UNIT 1

General Section Notes

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 Chapter 290.
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 hours prior to beginning any work.

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 at no cost to SAWS.

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 near trees.

10. The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.

11. Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be sent to constworkreq@saws.org.

Weekend Work: Contractors are required to notify the SAWS Inspection Construction Department 48 hours in advance to request weekend work. Request should be sent to constworkreq@saws.org.

Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for proper inspection.

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 Notes

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".

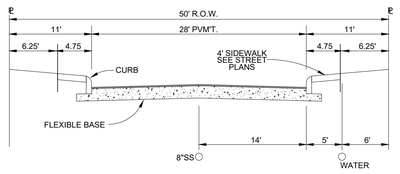
6. PRVs Required: Contractor to verify that no portion of the tract is below ground elevation of **565** feet where the static pressure will normally exceed 80 PSI. At all such locations where the ground level is below **565** feet, the Developer or Builder shall install at each lot, on the customer's 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.

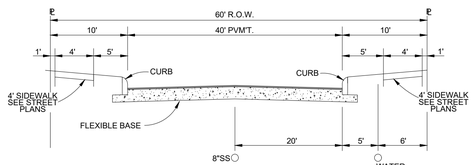
All commercial backflow prevention devices must be approved by SAWS prior to installation.

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.



TYPICAL LOCAL "A" STREET SECTION

NOT TO SCALE



TYPICAL LOCAL "B" STREET SECTION
W/ NO LOTS FRONTING ROADWAY

NOT TO SCALE



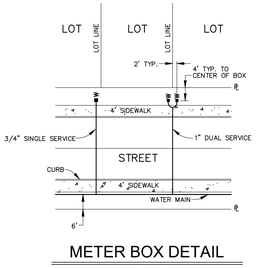
TYPICAL LOCAL "B" STREET SECTION
W/ LOTS FRONTING ROADWAY

NOT TO SCALE

FIRE HYDRANT DETAIL ON LOCAL "A"

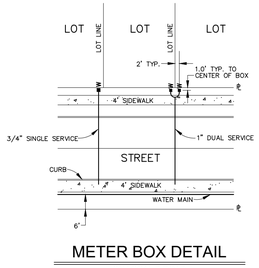
NOT TO SCALE

NOTE: Sidewalks and fire hydrants shall be installed per City of San Antonio Standard Specifications for Construction and SAWS Standard Specifications for Construction.



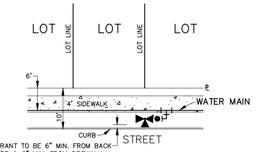
METER BOX DETAIL

ON LOCAL A ROAD



METER BOX DETAIL

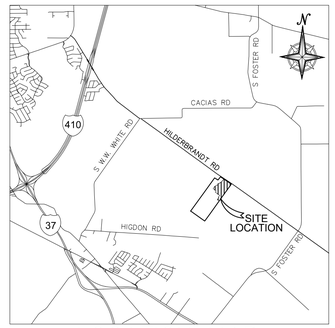
ON LOCAL B ROAD



FIRE HYDRANT DETAIL ON LOCAL "B"

NOT TO SCALE

NOTE: Sidewalks and fire hydrants shall be installed per City of San Antonio Standard Specifications for Construction and SAWS Standard Specifications for Construction.



LOCATION MAP

SHEET INDEX

SHEET	TITLE
400	WATERLINE COVER
401	OVERALL WATER PLAN
402	WATER DETAILS
403	WATER DETAILS

LEGEND

EXISTING EDGE OF PAVEMENT	
EXISTING SANITARY SEWER MAIN	E8"PVC
PROPOSED SANITARY SEWER MAIN	P8"SS
DIRECTION OF FLOW	
EXISTING WATER MAIN	E8"PVC
PROPOSED WATER MAIN	P8"PVC
IRRIGATION SERVICE	IRR
PROPOSED WATER SERVICE / METER	
PROPOSED FIRE HYDRANT	

NOTES:
1) SAWS REQUIRES GCPs AND COUNTER PERMITS TO USE LEAD FREE (<0.25% LEAD) FIRE HYDRANTS.

2) ANCHORAGE/THRUST BLOCKING AND JOINT RESTRAINTS SHALL BE DONE IN ACCORDANCE WITH SAWS STANDARD SPECIFICATIONS FOR CONSTRUCTION. (ITEM NO. 839)

3) ALL 12"AND 8" PVC WATER PIPE BEING USED FOR THIS PROJECT IS C-900, CLASS 235 (DR-18).

4) THE SAN ANTONIO WATER SYSTEM IS HEREBY GRANTED THE RIGHT OF INGRESS AND EGRESS ACROSS GRANTOR'S ADJACENT PROPERTY TO ACCESS THE WATER AND/OR WASTEWATER EASEMENTS SHOWN.

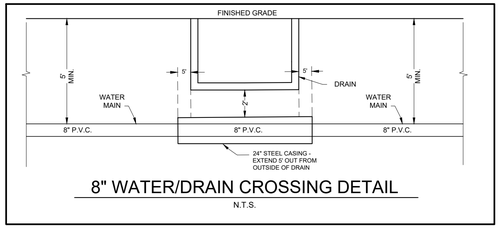
5) UNLESS OTHERWISE NOTED ALL SERVICES SHALL BE 3/4" WITH 5/8" METER.

CIVIL ENGINEERING CONSULTANTS
D O N D U R D E N , I N C .
11550 I.H. 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230
P) 210.641.9999
F) 210.641.6440
REGISTRATION #F-2214
SURVEY LICENSE #10041000
Email: cec@cectexas.com

OWNER/DEVELOPER:
DAR-BRAN DEVELOPMENT, LLC.
307 HUNTINGTON PLACE
SHAVANO PARK, TEXAS 78231
PHONE: (210) 662-0066

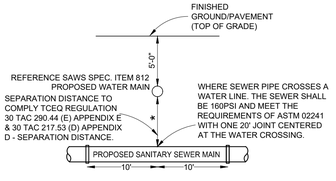
WATER QUANTITIES
Onsite Water

Item No:	Description	Unit	Quantity
550.0	Trench Protection	L.F.	5634
818.0	8" Pipe, P.V.C. C-900, Class 235 (DR-18)	L.F.	4851
818.0	12" Pipe, P.V.C. C-900, Class 235 (DR-18)	L.F.	783
824.0	3/4" Single Water Service - Short (5/8" Meter)	EA.	89
824.0	3/4" Single Water Service - Long (5/8' Meter)	EA.	23
824.0	3/4" Irrigation Service- Short (3/4" Meter)	EA.	1
824.0	1" Irrigation Service- Short (1" Meter)	EA.	1
828.0	8" Gate Valve MJ W/ Box	EA.	21
828.0	12" Gate Valve MJ W/ Box	EA.	2
833.0	Meter Box	EA.	114
834.1	Standard Fire Hydrant	EA.	6
836.0	D.I. MJ Compact Fittings (C153)	TON	2.2
840.0	12" PVC Water Tie-In To Existing 12" PVC	EA.	1
841.0	Hydrostatic Test	EA.	1
844.0	2" Blowoff (Permanent)	EA.	4
844.0	2" Blowoff (Temporary)	EA.	1
856.3	24" Steel Sleeve	L.F.	20



8" WATER/DRAIN CROSSING DETAIL

N.T.S.



TYPICAL SANITARY SEWER/
WATER CROSSING DETAIL

NOT TO SCALE

REVIEWED BY THE SAN ANTONIO WATER SYSTEM

THIS DOES NOT RELIEVE THE DESIGNING ENGINEER, CONTRACTOR OR SUB-CONTRACTOR OF THE RESPONSIBILITY FOR COMPLYING WITH ALL OF THE SAN ANTONIO WATER SYSTEM AND T.C.E.Q. RULES AND REGULATIONS

BY: _____
DATE: 5/10/22

BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OF WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY

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

PRESSURE ZONE (PZ) 750

Developer's Name	KING FISH DEVELOPMENT LLC
Developer's Address	2722 WEST BITTERS RD, SUITE 106
City	SAN ANTONIO State TEXAS Zip 78248
Phone #	210 882-6800 Fax#
SAWS Block Map#	200542 & 200544 Total EDU's 115.5 Total Acreage 28.529 AC
Total Linear Footage of Pipe	8" PVC 4,851 LF; 12" PVC 783 LF Plat No. PLAT NO. 22-11800026
Number of Lots	1 - LIFT STATION LOT 112 - RESIDENTIAL LOTS SAWS JOB NO. 22-1013

ALL WATER PIPE TO BE C-900, CLASS 235 (DR-18) UNLESS OTHERWISE NOTED

SAWS Job No. 22-1013

DESIGNED BY: L.T.E.
DRAWN BY: S.O.V.
DATE: 01/2021
JOB NO.: E0674101

CIVIL ENGINEERING CONSULTANTS
d b a . D O N D U R D E N , I N C .
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-9999
FAX: (210) 641-6440
REGISTRATION #F-2214 / #10041000

4/29/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1

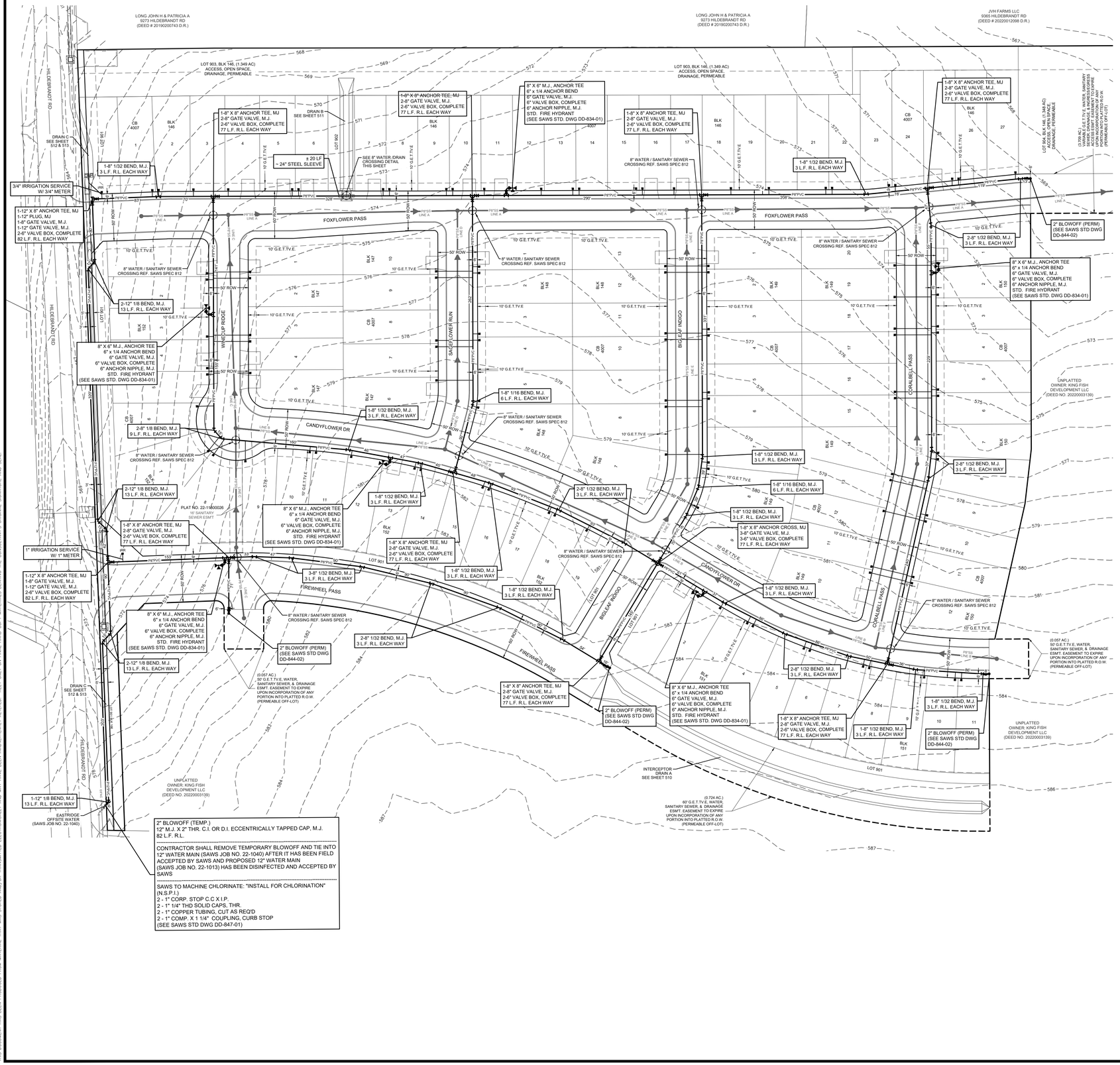
WATERLINE COVER

SHEET NO.
400

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN UNINTENTIONALLY ALTERED. - REV'S ONLY ON FINAL HARD COPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL

Date: Apr 29, 2022, 12:57pm User ID: Mary.Stewart File: L:\Drawings\Proj\2021\EA0101.dwg\Layout: 400 WATERLINE COVER.dwg

PLAT NO. 22-11800026

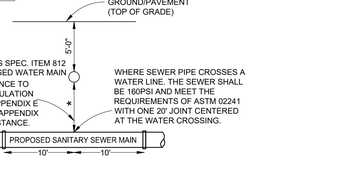


LEGEND

- EXISTING EDGE OF PAVEMENT
- EXISTING SANITARY SEWER MAIN — E8"PVC
- PROPOSED SANITARY SEWER MAIN — P8"SS
- DIRECTION OF FLOW
- EXISTING WATER MAIN — E8"PVC
- PROPOSED WATER MAIN — P8"PVC
- IRRIGATION SERVICE — IRR
- PROPOSED WATER SERVICE / METER
- PROPOSED FIRE HYDRANT

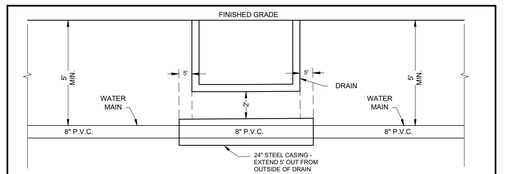
0 60' 120'
1" = 60'

BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OR WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

NOT TO SCALE



8" WATER/DRAIN CROSSING DETAIL

N.T.S.

NOTES:

1) SAWS REQUIRES GCPs AND COUNTER PERMITS TO USE LEAD FREE (<0.25% LEAD) FIRE HYDRANTS.

2) ANCHORAGE/THRUST BLOCKING AND JOINT RESTRAINTS SHALL BE DONE IN ACCORDANCE WITH SAWS STANDARD SPECIFICATIONS FOR CONSTRUCTION. (ITEM NO. 839)

3) ALL 12"AND 8" PVC WATER PIPE BEING USED FOR THIS PROJECT IS C-900, CLASS 235 (DR-18).

4) THE SAN ANTONIO WATER SYSTEM IS HEREBY GRANTED THE RIGHT OF INGRESS AND EGRESS ACROSS GRANTOR'S ADJACENT PROPERTY TO ACCESS THE WATER AND/OR WASTEWATER EASEMENTS SHOWN.

5) UNLESS OTHERWISE NOTED ALL SERVICES SHALL BE 3/4" WITH 5/8" METER.

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

PRESSURE ZONE (PZ) 750

Developer's Name	KING FISH DEVELOPMENT LLC
Developer's Address	2722 WEST BITTERS RD, SUITE 106
City	SAN ANTONIO State TEXAS Zip 78248
Phone #	210 882-6800 Fax#
SAWS Block Map#	200542 & 200544 Total EDU's 115.5 Total Acreage 28.529 AC
Total Linear Footage of Pipe	8" PVC 4,851 LF; 12" PVC 783 LF Plat No. PLAT NO. 22-11800026
Number of Lots	1 - LIFT STATION LOT 112 - RESIDENTIAL LOTS SAWS JOB NO. 22-1013

ALL WATER PIPE TO BE C-900, CLASS 235 (DR-18) UNLESS OTHERWISE NOTED

SAWS Job No. 22-1013

DESIGNED BY: L.T.E. | DRAWN BY: S.O.V. | DATE: 01/2021 | JOB NO.: E0674101

CIVIL ENGINEERING CONSULTANTS
d b a . D O N D U R D E N , I N C .
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-8999
FAX: (210) 641-8998
REGISTRATION #F-2214 / #10041000

4/29/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1

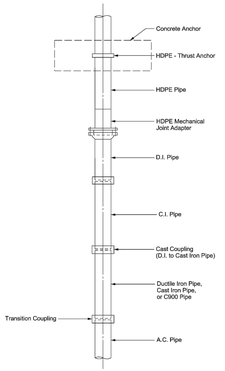
OVERALL WATER PLAN

SHEET NO.
401

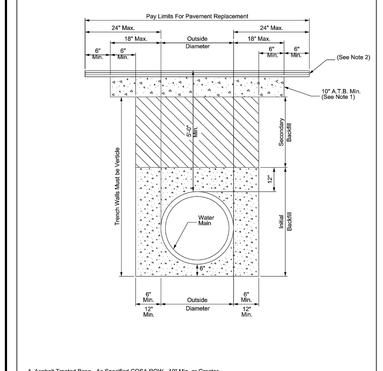
THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN UNINTENTIONALLY ALTERED. REVIEW ON FINAL HARD COPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL

Date: Apr 29, 2022, 12:30pm User ID: Mary Stewart File: L:\Drawings\Proj\2021\[E0674101_Eastridge.dwg]Tab[E0674101 401 OVERALL WATER PLAN.dwg]

PLAT NO. 22-11800026



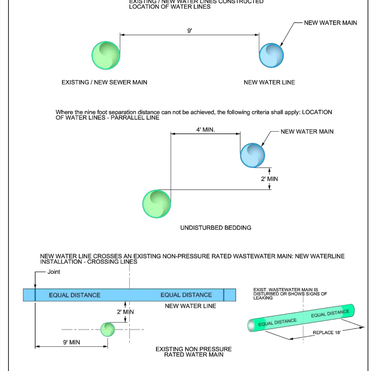
PROPERTY OF	PIPE COUPLINGS	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS		MARCH 2008	AUG 2019
		DD-812-01	SHEET 1 OF 9



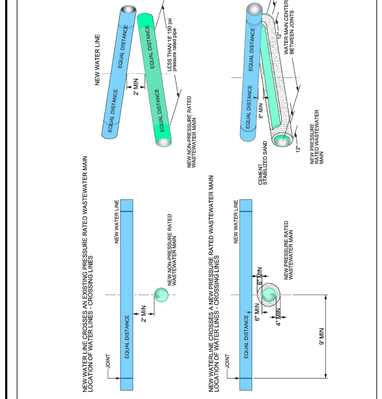
1. Asphalt Treated Base - As Specified COSA ROW - 10" Min. or Greater.
2. Replacement of Surface Layer Shall be of the Type and Thickness Base On Functional Classification:
   a. Min 2" HMAC Type "D" for Trench Repair in Local / Residential Streets.
   b. Min. 3" HMAC Type "C" for Trench Repair in Collector / Arterial Streets.

- Asphalt Treated Base (ATB)
- Hot Mix Asphalt Concrete (HMAC)

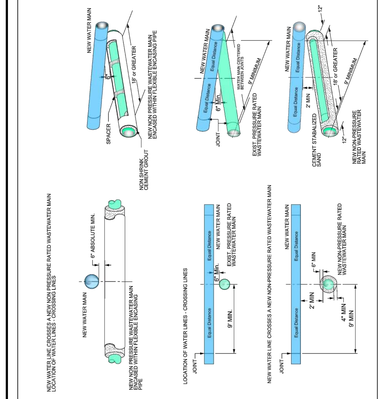
PROPERTY OF	POTABLE AND RECYCLED WATER MAIN DETAIL	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS		MARCH 2008	AUG 2019
		DD-812-01	SHEET 2 OF 9



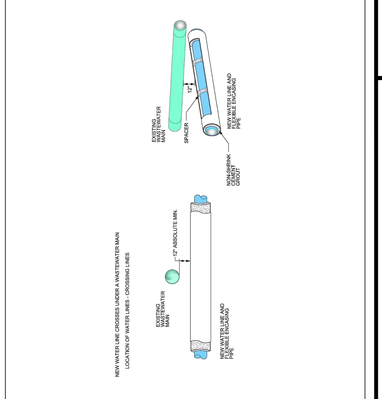
PROPERTY OF	WATER LINES	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS		MARCH 2008	AUG 2019
		DD-812-01	SHEET 3 OF 9



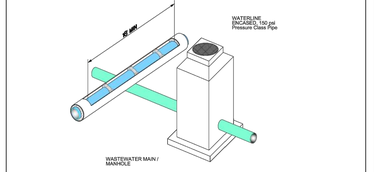
PROPERTY OF	DETAIL	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS		MARCH 2015	AUG 2019
		DD 812-01	SHEET 4 OF 9



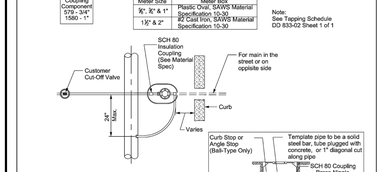
PROPERTY OF	DETAIL	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS		MARCH 2008	AUG 2019
		DD-812-01	SHEET 5 OF 9



PROPERTY OF	DETAIL	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS		MAY 2013	AUG 2019
		DD-812-01	SHEET 6 OF 9



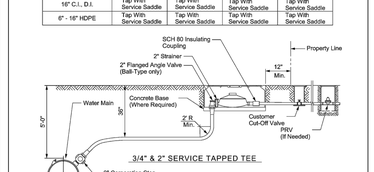
PROPERTY OF	CLEANOUT SEPARATION	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS		MAY 2013	AUG 2019
		DD-812-01	SHEET 7 OF 9



PROPERTY OF	COPPER or HDPE SERVICE INSTALLATION MAIN in TERRACE or IMPROVED STREET	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS		MARCH 2008	AUG 2019
		DD-824-01	SHEET 1 OF 3

PIPE TAPPING SCHEDULE

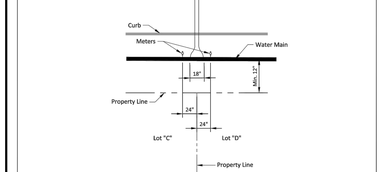
PIPE DIAMETER	SERVICE SIZE ¾"	1"	1½"	2"
6" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
6" C.I., D.I.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
8" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
8" C.I., D.I.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
8" PVC	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
10" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
10" C.I., D.I.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
10" PVC	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
12" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
12" C.I., D.I.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
12" PVC	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
16" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
16" C.I., D.I.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
6" - 16" HDPE	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle



3/4" & 2" SERVICE TAPPED TEE

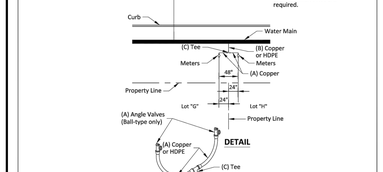
Note: For Direct Tap to Main, see Tapping Schedule

PROPERTY OF	COPPER & HDPE SERVICE INSTALLATION TAPPING SCHEDULE	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS		MARCH 2008	AUG 2019
		DD-824-01	SHEET 3 OF 3



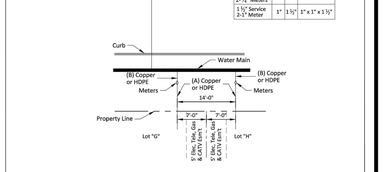
SINGLE SERVICE LINE - SINGLE METER

PROPERTY OF	TYPICAL NEW DEVELOPMENT SERVICE ARRANGEMENT	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS		March 2008	December 2018
		DD-824-05	SHEET 1 OF 3



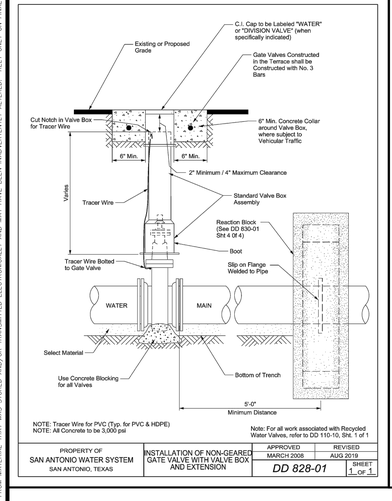
SINGLE SERVICE LINE - DUAL METER

PROPERTY OF	TYPICAL SERVICE ARRANGEMENT	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS		March 2008	December 2018
		DD-824-05	SHEET 2 OF 3



SINGLE SERVICE LINE W/ EASEMENT

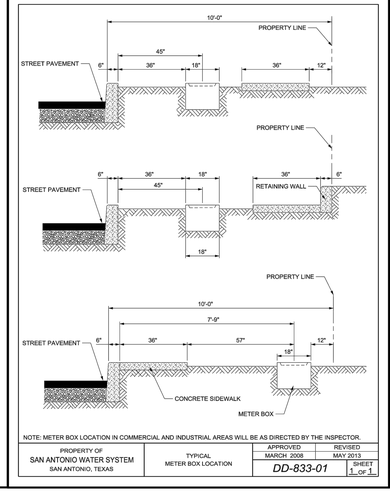
PROPERTY OF	ALTERNATE SERVICE ARRANGEMENT	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS		March 2008	December 2018
		DD-824-05	SHEET 3 OF 3



NOTE: Tracer Wire for PVC (Typ. for PVC & HDPE)
NOTE: All Concrete to be 3,000 psi

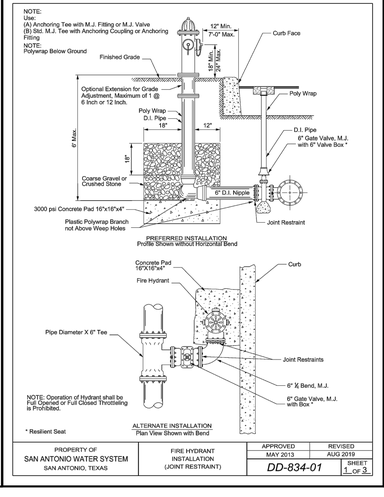
Note: For all work associated with Recycled Water Valves, refer to DD 110-10, Sht. 1 of 1

PROPERTY OF	INSTALLATION OF NON-GEARED GATE VALVE WITH VALVE BOX AND EXTENSION	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS		MARCH 2008	AUG 2019
		DD 828-01	SHEET 1 OF 1

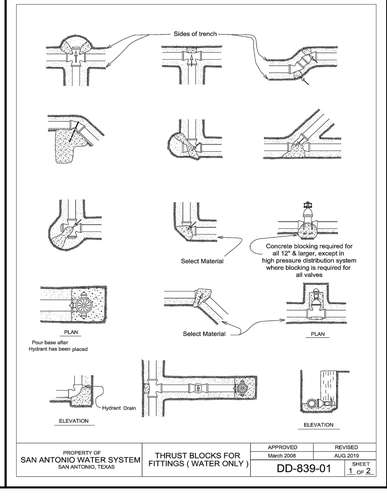


NOTE: METER BOX LOCATION IN COMMERCIAL AND INDUSTRIAL AREAS WILL BE AS DIRECTED BY THE INSPECTOR.

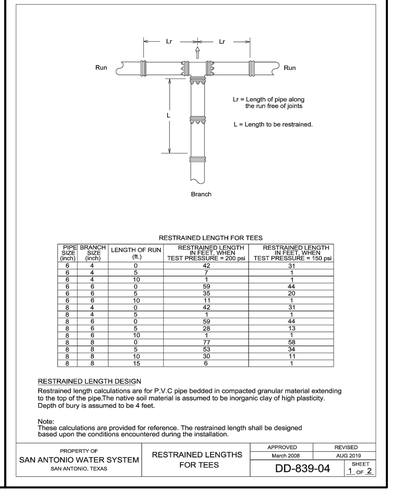
PROPERTY OF	TYPICAL METER BOX LOCATION	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS		MARCH 2008	MAY 2013
		DD-833-01	SHEET 1 OF 1



PROPERTY OF	FIRE HYDRANT INSTALLATION (JOINT RESTRAINT)	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS		MAY 2013	AUG 2019
		DD-834-01	SHEET 1 OF 3



PROPERTY OF	THRUST BLOCKS FOR FITTINGS (WATER ONLY)	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS		March 2008	AUG 2019
		DD-839-01	SHEET 1 OF 2



RESTRAINED LENGTH FOR TEES

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

RESTRAINED LENGTH DESIGN

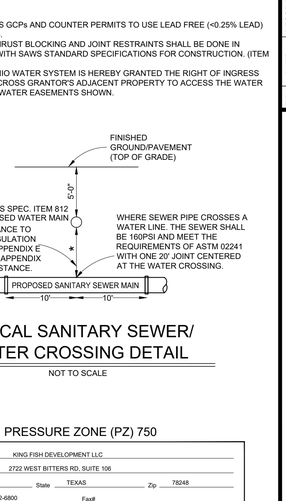
Restrained length calculations are for P.V.C pipe bedded in compacted granular material extending to the top of the pipe.The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:-
These calculations are provided for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

PROPERTY OF	RESTRAINED LENGTHS FOR TEES	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS		March 2008	AUG 2019
		DD-839-04	SHEET 1 OF 2

NOTES:

1. SAWS REQUIRES GCPs AND COUNTER PERMITS TO USE LEAD FREE (<0.25% LEAD) FIRE HYDRANTS.
2. ANCHORAGE/THRUST BLOCKING AND JOINT RESTRAINTS SHALL BE DONE IN ACCORDANCE WITH SAWS STANDARD SPECIFICATIONS FOR CONSTRUCTION. (ITEM NO. 839).
3. THE SAN ANTONIO WATER SYSTEM IS HEREBY GRANTED THE RIGHT OF INGRESS AND EGRESS ACROSS GRANTOR'S ADJACENT PROPERTY TO ACCESS THE WATER AND/OR WASTEWATER EASEMENTS SHOWN.



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

NOT TO SCALE

PRESSURE ZONE (PZ) 750

Developer's Name	KING FISH DEVELOPMENT LLC
Developer's Address	2722 WEST BITTERS RD, SUITE 106
City	SAN ANTONIO
State	TEXAS
Zip	78248
Phone #	210 882-6800
Fax#	
SAWS Block Map#	200542 & 200544
Total EDU's	115.5
Total Acreage	28.529 AC.
Total Linear Footage of Pipe:	8" PVC 4,851 LF; 12" PVC 783 LF
Plat No.	PLAT NO. 22-11800026
Number of Lots:	1 - LIFT STATION LOT 112 - RESIDENTIAL LOTS
SAWS JOB NO.	22-1013

ALL WATER PIPE TO BE C-900, CLASS 235 (DR-18) UNLESS OTHERWISE NOTED

SAWS Job No. 22-1013

DESIGNED BY:	L.T.E.
DRAWN BY:	S.O.V.
DATE:	01/2021
JOB NO.:	E0674101

CIVIL ENGINEERING CONSULTANTS
d b a . D O N D U R D E N , I N C .
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-9999
FAX: (210) 641-9440
REGISTRATION #F-2214 / #10041000

4/29/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1

WATER DETAILS

SHEET NO.
402

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Date: Apr 29, 2022, 10:58am User: Mary.Stewart File: L:\Develop\Proj\200\10\WATER\Drawings\Cad\10WATER 400 WATER DETAILS.dwg

PLAT NO. 22-11800026

RESTRAINED LENGTH FOR TEES (Cont'd)

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

RESTRAINED LENGTH DESIGN

Restrained length calculations are for P.V.C pipe bedded in compacted granular material extending to the top of the pipe.The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provided for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

PROPERTY OF SAN ANTONIO WATER SYSTEM, SAN ANTONIO, TEXAS	RESTRAINED LENGTHS FOR TEES	APPROVED: MARCH 2008	REVISED: AUG 2019	DD-839-04	SHEET 2 of 2



L=LENGTH TO BE RESTRAINED

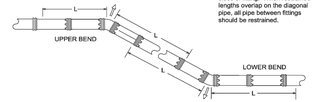
PIPE SIZE (inch)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 150 psi
6	59	44
8	77	58
10	93	69
12	109	82

RESTRAINED LENGTH DESIGN

Restrained length *calculations* are for P.V.C. pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provide for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

PROPERTY OF SAN ANTONIO WATER SYSTEM, SAN ANTONIO, TEXAS	RESTRAINED LENGTHS FOR DEAD ENDS / INLINE VALVES	APPROVED: MARCH 2008	REVISED: AUG 2019	DD-839-05	SHEET 1 of 1



L = Length to be restrained on both sides of fitting. When restrained lengths overlap on the diagonal pipe, all pipe between fittings should be restrained.

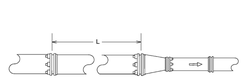
PIPE SIZE (inch)	BEND ANGLE (deg.)	LOW SIDE DEPTH	UPPER BEND RESTRAINED LENGTH IN FEET TEST PRESSURE = 200 psi	LOWER BEND RESTRAINED LENGTH IN FEET TEST PRESSURE = 200psi	UPPER BEND RESTRAINED LENGTH IN FEET TEST PRESSURE = 150 psi	LOWER BEND RESTRAINED LENGTH IN FEET TEST PRESSURE = 150 psi
6	45	5	24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

RESTRAINED LENGTH DESIGN

Restrained length calculations are for P.V.C. pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provided for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

PROPERTY OF SAN ANTONIO WATER SYSTEM, SAN ANTONIO, TEXAS	RESTRAINED LENGTHS VERTICAL OFFSETS	APPROVED: MARCH 2008	REVISED: AUG 2019	DD-839-06	SHEET 1 of 1



L=Length to be restrained

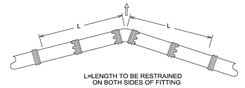
PIPE SIZE (inch)	SMALL SIZE (inch)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 150 psi
6	4	30	23
6	6	55	42
8	6	32	24
12	4	95	71
12	6	80	60
12	8	58	43

RESTRAINED LENGTH DESIGN

Restrained length calculations are for P.V.C. pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provided for reference. Th restrained length shall be designed based upon the conditions encountered during the installation.

PROPERTY OF SAN ANTONIO WATER SYSTEM, SAN ANTONIO, TEXAS	RESTRAINED LENGTHS FOR REDUCERS	APPROVED: MARCH 2008	REVISED: AUG 2019	DD-839-07	SHEET 1 of 1



L=LENGTH TO BE RESTRAINED
ON BOTH SIDES OF FITTING

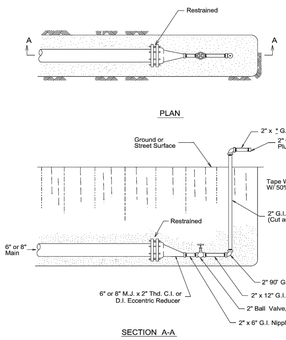
PIPE SIZE (inch)	BEND ANGLE (deg.)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 150 psi
6	90	23	17
6	45	9	7
6	22.5	5	3
6	11.25	2	2
8	90	30	22
8	45	12	9
8	22.5	6	4
8	11.25	3	2
12	90	43	32
12	45	18	13
12	22.5	8	6
12	11.25	4	3

RESTRAINED LENGTH DESIGN

Restrained length calculations are for P.V.C pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

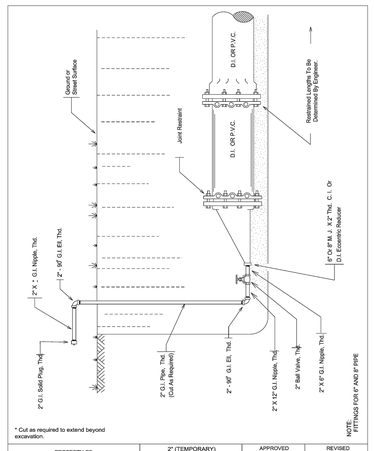
Note:
These calculations are provided for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

PROPERTY OF SAN ANTONIO WATER SYSTEM, SAN ANTONIO, TEXAS	RESTRAINED LENGTHS FOR HORIZONTAL BENDS	APPROVED: MARCH 2008	REVISED: AUG 2019	DD-839-08	SHEET 1 of 1



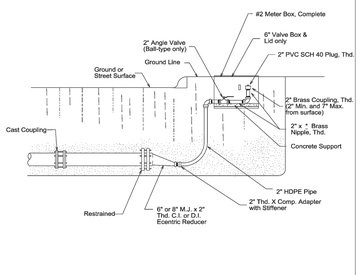
* Cut as required to extend beyond excavation

PROPERTY OF SAN ANTONIO WATER SYSTEM, SAN ANTONIO, TEXAS	2" TEMPORARY BLOW-OFF ASSEMBLY ON 6" & 8" MAINS	APPROVED: MARCH 2008	REVISED: AUG 2019	DD-844-01	SHEET 4 of 4



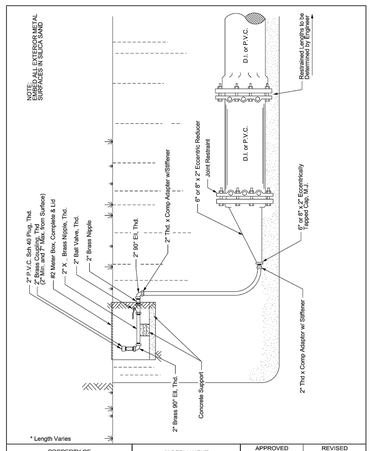
* Cut as required to extend beyond excavation.

PROPERTY OF SAN ANTONIO WATER SYSTEM, SAN ANTONIO, TEXAS	2" PERMANENT BLOW-OFF ASSEMBLY ON 6" & 8" MAINS	APPROVED: MARCH 2008	REVISED: AUG 2019	DD-844-02	SHEET 3 of 5



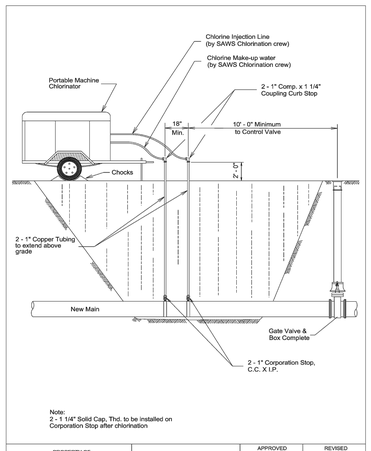
* Cut to fit in meter box.

PROPERTY OF SAN ANTONIO WATER SYSTEM, SAN ANTONIO, TEXAS	2" PERMANENT BLOW-OFF ASSEMBLY ON 6" & 8" D.I./ PVC MAINS	APPROVED: MARCH 2008	REVISED: AUG 2019	DD-844-02	SHEET 5 of 5



* Length Varies

PROPERTY OF SAN ANTONIO WATER SYSTEM, SAN ANTONIO, TEXAS	STANDARD CHLORINATION INSTALLATION	APPROVED: March 2008	REVISED: AUG 2019	DD-847-01	SHEET 1 of 1



Note:
2 - 1 1/4" Solid Cap, Thd. to be installed on Corporation Stop after chlorination

PRESSURE ZONE (PZ) 750

Developer's Name: KING FISH DEVELOPMENT LLC
Developer's Address: 2722 WEST BITTERS RD, SUITE 106
City: SAN ANTONIO State: TEXAS Zip: 78248
Phone #: 210 882-6800 Fax#:
SAWS Block Map#: 200542 & 200544 Total EDU's: 115.5 Total Acreage: 28.529 AC
Total Linear Footage of Pipe: 8" PVC 4,851 LF; 12" PVC 783 LF Plat No.: PLAT NO. 22-11800026
Number of Lots: 1 - LIFT STATION LOT; 112 - RESIDENTIAL LOTS SAWS JOB NO.: 22-1013

ALL WATER PIPE TO BE C-900, CLASS 235 (DR-18) UNLESS OTHERWISE NOTED

SAWS Job No. 22-1013

DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

CIVIL ENGINEERING CONSULTANTS
d b a . D O N D U R D E N , I N C .
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
PH.: (210) 641-8999
FAX: (210) 641-8440
REGISTRATION #F-2214 / #10041000

4/29/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV.	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1

WATER DETAILS

SHEET NO.
403

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Date: Apr 29, 2022, 10:36am User: ID: Mary.Stewart File: L:\Develop\Proj\2021\E0674101\Drawings\dwg\ T:\cadd\E0674101 405 WATER DETAILS.dwg

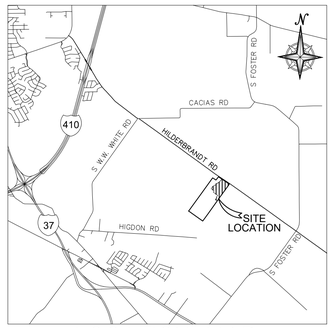
PLAT NO. 22-11800026

STREET & DRAIN CONSTRUCTION PLANS
for
EASTRIDGE SUBDIVISION
UNIT 1

LEGEND

WHEELCHAIR RAMPS
WASHOUT CROWN
SIDEWALK TO BE BUILT BY DEVELOPER
PROPOSED DRIVEWAY
TOP OF CURB ELEVATION — 940
EXISTING STREET LIGHT — ELP
PROPOSED STREET LIGHT (100 WATT) — LP

BEXAR COUNTY RIGHT OF WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY



LOCATION MAP

GENERAL NOTES

1. All materials and construction procedures within the scope of this project shall, be approved by the City of San Antonio Public Works and comply with the following as applicable:
A. Reference to Current "San Antonio Water System Utility Specifications"
B. Reference to Current City of San Antonio "Standard Specifications for Public Works Construction"

2. The locations and depths of existing utilities, including service laterals, and drainage structures shown on the plans are approximate only. The Contractor shall verify the exact location and depths of underground utilities at least 48 hours prior to construction whether shown on plans or not, and to protect the same during construction. Texas State Wide One Call Locator 1-800-545-6005 City Public Service AT&T Time Warner Valero Energy Co.

3. The Contractor shall notify the City prior to the start of each phase of street construction and call for inspections with a minimum of 24 hours notice.

4. Testing will be paid for by Developer, coordinated by Contractor, and witnessed by City.

5. Minimum Testing Schedule:

Densities - Subgrade	1 Per 500 Foot Minimum
Densities - Base	1 Per 500 Foot Minimum
Proctors - Subgrade	1 Per Material Per Subdivision
Proctors - Base	1 Per 5,000 C.Y.
Lime Series - Subgrade	1 Per Material Per Subdivision
Concrete - Structures	1 Set (3) Per 50 C.Y.

6. Transition washout crown to normal crown in 25'.

7. No extra payment shall be allowed for work called for on the plans, but not included in the bid proposal. This incidental work will be required and shall be included in the pay item to which it relates.

8. The contractor shall be responsible for restoring to its original or better condition any damage done to existing fences, concrete islands, street paving, curbs, shrubs, bushes or driveways. (No separate pay item).

9. Due to federal regulations Title 49, Part 192.171 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.

14. Contractor shall notify the city inspector twenty four (24) hours prior to backfill of any utility trenches to schedule for density test as required.

11. All waste material shall become property of the contractor and shall be his sole responsibility to dispose of this material off the limits of the project. No waste material shall be placed in existing lows that will block or alter flow limits of existing artificial or natural drainage.

12. The contractor shall not place any waste material in the 100-year flood plain without first obtaining an approved Flood Plain Development Permit.

14. The contractor shall maintain all adjoining streets and traveled routes free from spilled and/or tracked construction materials and/or debris.

14. It is the contractor's responsibility to see that all signs and barricades are properly installed and maintained. All locations and distances will be decided upon in the field by the contractor, using the "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". The City's construction inspector will only be responsible to inspect barricades and signs. If, in the opinion of the construction inspector, the barricades and signs do not conform to established standards or are incorrectly placed or are insufficient in quantity to protect the general public, the inspector shall have the option to stop operations until such time as the conditions are corrected.

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. The Contractor's implementation of the systems, programs and/or procedures shall provide for adequate trench excavation, safety protection that complies with as a minimum, OSHA standards for trench excavations. Specifically, Contractor and/or Contractor's independently retained employee or safety consultant shall implement a trench safety program in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.

Sheet List Table

Sheet Number	Sheet Title
500	STREET & DRAIN COVER
501	OVERALL GRADING PLAN
502	OVERALL GRADING PLAN
503	FOXFLOWER PASS PLAN & PROFILE
504	CANDYFLOWER DRIVE PLAN & PROFILE
505	FIREWHEEL PASS PLAN & PROFILE
506	CORALBELL PASS PLAN & PROFILE
507	BIGLEAF INDIGO PLAN & PROFILE
508	SAGEFLOWER RUN PLAN & PROFILE
509	WINECUP RIDGE PLAN & PROFILE
510	INTERCEPTOR DRAIN "A" PLAN & PROFILE
511	DRAIN "B" PLAN & PROFILE
512	DRAIN "C" PLAN & PROFILE
513	DRAIN "C" PLAN & PROFILE
514	STREET DETAILS
515	STREET DETAILS
516	STREET DETAILS
517	DRAIN DETAILS
518	DRAIN DETAILS
519	DRAIN DETAILS
520	OVERALL SIGN PLAN
521	SIGN DETAILS
522	SIGN DETAILS
523	PAVEMENT MARKING DETAILS
524	HILDEBRANDT NORTH TURN LANE PLAN & PROFILE
525	HILDEBRANDT SOUTH TURN LANE PLAN & PROFILE

CEC
CIVIL ENGINEERING CONSULTANTS
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11550 I.H. 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230
P) 210.641.9999
F) 210.641.6440
REGISTRATION #F-2214
SURVEY LICENSE #10041000
Email: cec@cectexas.com

OWNER/DEVELOPER:
DAR-BRAN DEVELOPMENT, LLC.
307 HUNTINGTON PLACE
SHAVANO PARK, TEXAS 78231
PHONE: (210) 662-0066

STREET IMPROVEMENTS

ITEM	DESCRIPTION	UNIT	EST/QTY
SP1	Remove Existing Striping	LF	219
104.1	Street Excavation	CY	14,485
107.1	Embankment (Final) (Dens. Cont.) (Type A)	CY	1,103
108.1	Lime Stabilized Subgrade (6" Compacted Depth)	SY	11,007
108.1	Lime Stabilized Subgrade (8" Compacted Depth)	SY	6,864
108.2	Lime (28.5 & 38 #/S.Y.)	TON	288
200.1	10" Flexible Base - Local A	SY	11,007
200.1	19.5" Flexible Base - Local B	SY	6,864
202.1	Prime Coat	GAL	3,575
203.1	Tack Coat	GAL	1,618
205.2	9" Hot Mix Asphaltic Pavement (Type B) - Special Pavement	SY	49
205.4	2" Hot Mix Asphaltic Pavement (Type D) - Local A	SY	9,818
205.4	3" Hot Mix Asphaltic Pavement (Type D) - Local B	SY	6,316
205.4	3" Hot Mix Asphaltic Pavement (Type D) - Special Pavement	SY	45
500.1	Concrete Curb w/ Rebar	LF	8,605
500.1	Header Curb	LF	295
502.1	Concrete Sidewalk	SY	720
510.10	Timber Guard Posts	EA	26
531.3	R1-1 Stop Sign (30"x30") (High Intensity)	EA	10
531.3	R1-1 Stop Sign (36"x36") (High Intensity)	EA	2
531.56	OM4-3 End of Road Marker	EA	14
531.57	9" Street Name, Block Numbers (High Intensity)	EA	24
535.1	4" Wide Yellow Line	LF	996
537.8	RAIS Pav Mrk Cl B (Refl) (TY II A-A)	EA	54
SP2	Two-Way Blue Reflective Marker (Fire Hydrant)	EA	5

HILDEBRANDT NORTH TURN LANE IMPROVEMENTS

ITEM	DESCRIPTION	UNIT	EST/QTY
SP1	Traffic Control/Permitting	LS	1
104.1	Street Excavation	CY	80
108.1	Lime Stabilized Subgrade (8" Compacted Depth)	SY	269
108.2	Lime (38#/S.Y.)	TON	6
203.1	Tack Coat	GAL	30
205.2	12" Hot Mix Asphaltic Pavement (Type B) - Turn Lane	SY	269
205.4	2" Hot Mix Asphaltic Pavement (Type D) - Turn Lane	SY	291
535.4	8" Wide White Line	LF	141
535.8	Right White Arrow	EA	2
535.12	White Word "ONLY"	EA	1
537.6	RAIS Pav Mrk Cl B (Refl) TY I-C	EA	8

HILDEBRANDT SOUTH TURN LANE IMPROVEMENTS

ITEM	DESCRIPTION	UNIT	EST/QTY
SP1	Traffic Control/Permitting	LS	1
104.1	Street Excavation	CY	73
108.1	Lime Stabilized Subgrade (8" Compacted Depth)	SY	258
108.2	Lime (38#/S.Y.)	TON	5
203.1	Tack Coat	GAL	28
205.2	12" Hot Mix Asphaltic Pavement (Type B) - Turn Lane	SY	258
205.4	2" Hot Mix Asphaltic Pavement (Type D) - Turn Lane	SY	279
535.4	8" Wide White Line	LF	140
535.8	Right White Arrow	EA	2
535.12	White Word "ONLY"	EA	1
537.6	RAIS Pav Mrk Cl B (Refl) TY I-C	EA	8

INTERCEPTOR DRAIN "A" IMPROVEMENTS

ITEM	DESCRIPTION	UNIT	EST/QTY
105.1	Channel Excavation	CY	636
107.1	Embankment (Final) (Dens. Cont.) (Type A)	CY	16
520.1	Hydromulching	SY	1,180

DRAIN "B" IMPROVEMENTS

ITEM	DESCRIPTION	UNIT	EST/QTY
105.1	Channel Excavation	CY	111
307.1	10' Elevated Sidewalk	CY	5.1
505.1	Concrete Rip-Rap (6" Thick)	SY	4
520.1	Hydromulching	SY	245
522.1	Sidewalk Pipe Railing	LF	32
SP1	Slotted Armor Curb	LF	10.5

DRAIN "C" IMPROVEMENTS

ITEM	DESCRIPTION	UNIT	EST/QTY
105.1	Channel Excavation	CY	588
107.1	Embankment (Final) (Dens. Cont.) (Type A)	CY	703
309.1	Precast Reinforced Concrete Box Culvert (2' x 3')	LF	134
401.1	Reinforced Concrete Pipe (Class III) (24" DIA)	LF	118
401.3	Reinforced Concrete Pipe (Elliptical) (29" x 45")	LF	106
403.12	Special Inlet (4-Way) (5' x 5')	EA	2
407.4	Concrete Collars	CY	0.33
505.1	Concrete Rip-Rap (6" Thick)	SY	186
520.1	Hydromulching	SY	3,325
SP1	12" - 18" Rock Rubble (18" Depth)	SY	37

DESIGNED BY:	L.T.E.
DRAWN BY:	S.Q.V.
DATE:	01/2021
JOB NO.:	E0674101

CIVIL ENGINEERING CONSULTANTS
dba. DON DURDEN, INC.
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REGISTRATION #F-2214 / #10041000
CEC

6/17/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1

STREET & DRAIN COVER

SHEET NO.
500

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Date: Jan 17, 2022, 3:33pm User ID: Mary.Stewart File: L:\Drawings (Proj)\2021\E0674101\Drawings dwg\Civil\E0674101 500 STREET & DRAIN COVER.dwg

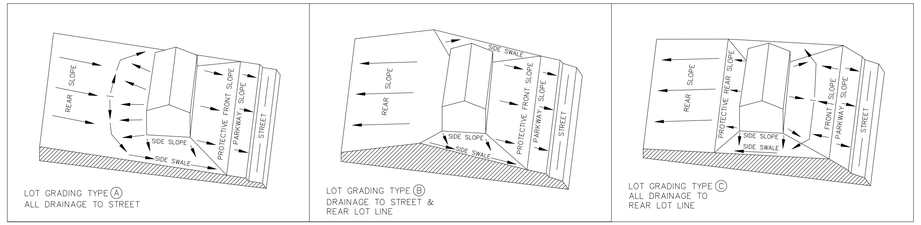
PLAT NO. 22-11800026

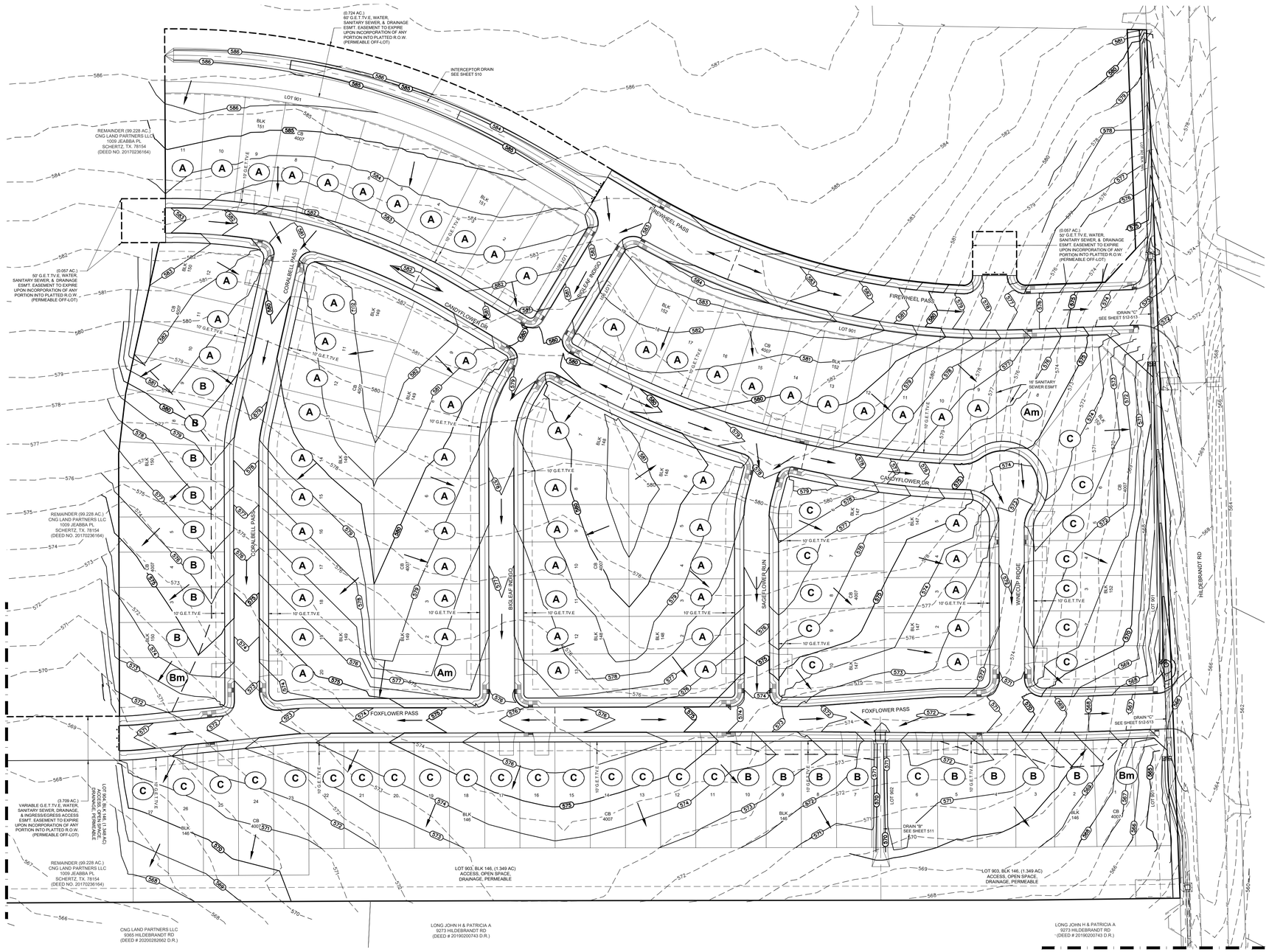
TRENCH EXCAVATION SAFETY PROTECTION

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

BEXAR COUNTY PERMIT NOTE:

BEXAR COUNTY RIGHT OF WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY







LEGEND

740 PROPOSED FINISHED CONTOUR
740 EXISTING CONTOUR
A, B & C LOT GRADING TYPE

A-LOT DRAINS TO FRONT
B-LOT DRAINS TO FRONT AND REAR
C-LOT DRAINS TO REAR

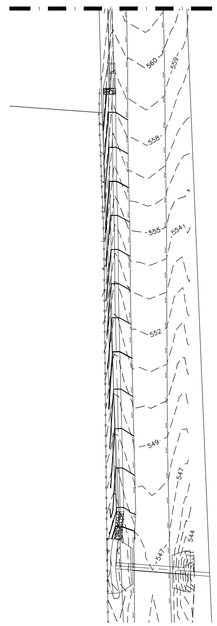
NOTES:

1. DRIVEWAYS SHALL BE LOCATED ON THE HIGH SIDE OF EACH LOT.
2. FINISHED FLOOR ELEVATIONS SHALL BE A MINIMUM OF 8" ABOVE FINAL GRADE AFTER PLACEMENT OF TOP SOIL AND SOD.
3. FINAL LOT SWALES SHALL BE PLACED WITH HOME CONSTRUCTION.

GENERAL NOTES

1. Fill Materials: Materials shall consist of soils approved by the Engineer from sources identified and approved. The soil shall be free of vegetable matter and other deleterious substance and shall not contain rocks or lumps having a diameter greater than six inches (6").
2. Depth and Mixing of Fill Layers: The selected fill material shall be placed in level, uniform layers which, when compacted, shall have a density conforming to required amount of compaction. Each layer shall be thoroughly blade mixed during the spreading to insure uniformity of material in each layer. Compacted layer thickness normally will be six inches (6"), however, it may be increased to twelve inches (12") if compaction equipment of demonstrated capability will be used.
3. Rock: When fill material includes rock; the maximum rock size acceptable shall be six inches (6"). No large rocks shall be allowed to nest and all voids must be carefully filled with small stones or earth, and properly compacted. No large rocks will be allowed within twelve inches (12") of the finished surface.
4. Moisture Content: The fill material shall be compacted at the appropriate moisture content specified for the soils being used and identified in soil and laboratory reports. Moisture content tolerances shall be plus or minus 3% from optimum.
5. Amount of Compaction: After each layer (lift) has been placed, mixed and spread evenly, it shall be compacted to the specified density. The specified density shall be stated as a percentage of the maximum density attainable using current ASTM D 698 to 95 percent density.
6. Compaction of Fill Layer: Compaction equipment shall be of such design that it will compact the fill to the appropriate specified density at the optimum moisture content. Compaction effort shall be continuous over each layer until density has been achieved.
7. Density Tests: Field density tests shall be made by the Soils Engineer after the compaction of each layer. When test indicate that the density of any layer or portion is below required density, the area shall be reworked until density is obtained. The number of tests shall be established by the Soil Engineer to certify to the required 79G letter requirements.

MATCH LINE "A"
SEE THIS SHEET



DESIGNED BY:	L.T.E.
DRAWN BY:	S.Q.V.
DATE:	01/2021
JOB NO.:	E0674101

CIVIL ENGINEERING CONSULTANTS
dba. DON DURDEN, INC.
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CEC

6/17/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV:	DATE	DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1

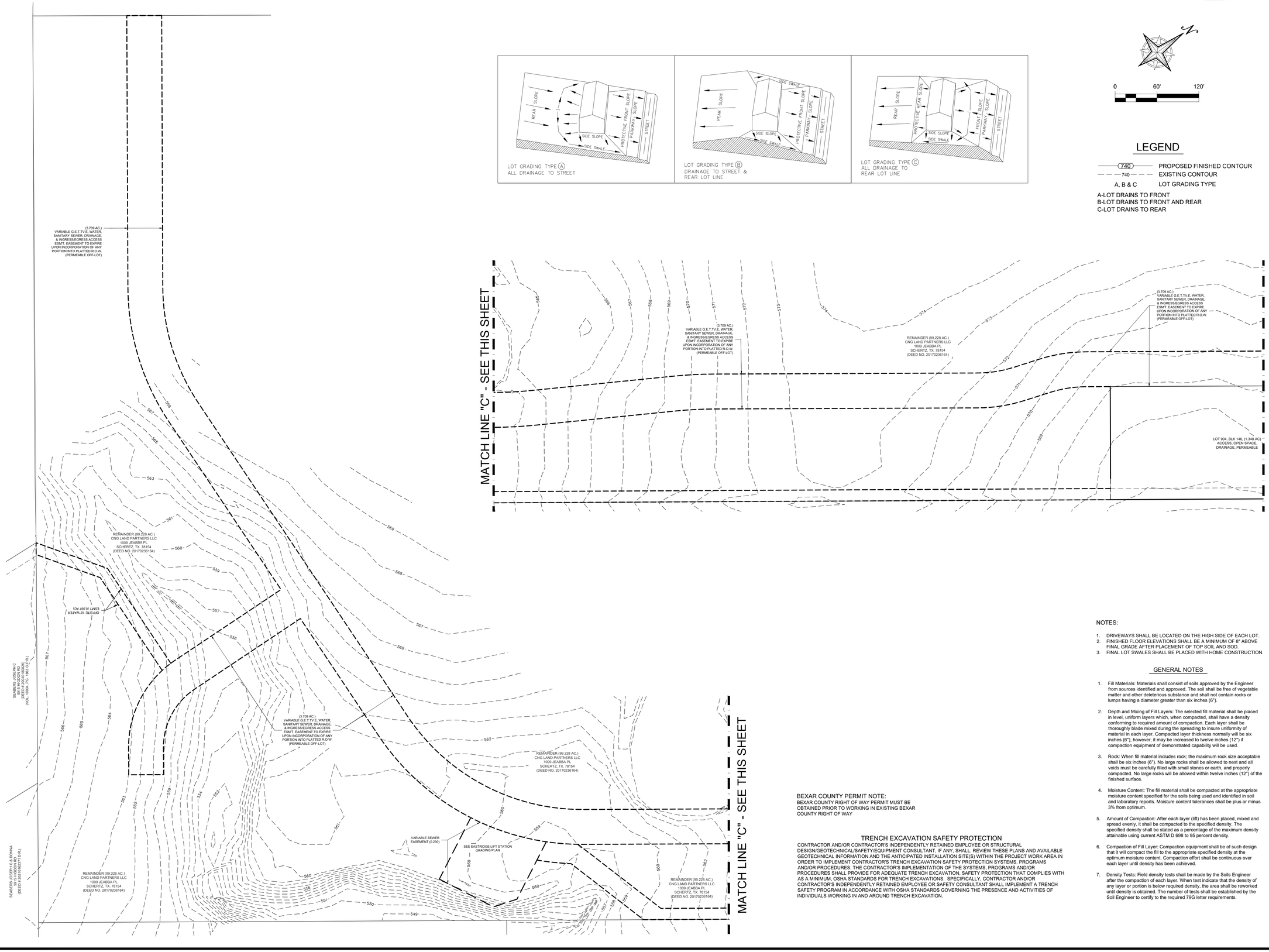
OVERALL GRADING PLAN

SHEET NO.
501

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Date: Jun 17, 2022, 3:33pm User ID: Mary.Stewart File: L:\Drawings\Proj_2021\E0674101_Eastridge Unit 1\cad\E0674101 SW-502 GRADE GRADING.dwg

PLAT NO. 22-11800026



LEGEND

740 PROPOSED FINISHED CONTOUR
740 EXISTING CONTOUR
A, B & C LOT GRADING TYPE

A-LOT DRAINS TO FRONT
B-LOT DRAINS TO FRONT AND REAR
C-LOT DRAINS TO REAR

BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OF WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY

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

NOTES:

1. DRIVEWAYS SHALL BE LOCATED ON THE HIGH SIDE OF EACH LOT.
2. FINISHED FLOOR ELEVATIONS SHALL BE A MINIMUM OF 8" ABOVE FINAL GRADE AFTER PLACEMENT OF TOP SOIL AND SOD.
3. FINAL LOT SWALES SHALL BE PLACED WITH HOME CONSTRUCTION.

GENERAL NOTES

1. Fill Materials: Materials shall consist of soils approved by the Engineer from sources identified and approved. The soil shall be free of vegetable matter and other deleterious substance and shall not contain rocks or lumps having a diameter greater than six inches (6").
2. Depth and Mixing of Fill Layers: The selected fill material shall be placed in level, uniform layers which, when compacted, shall have a density conforming to required amount of compaction. Each layer shall be thoroughly blade mixed during the spreading to insure uniformity of material in each layer. Compacted layer thickness normally will be six inches (6"), however, it may be increased to twelve inches (12") if compaction equipment of demonstrated capability will be used.
3. Rock: When fill material includes rock; the maximum rock size acceptable shall be six inches (6"). No large rocks shall be allowed to nest and all voids must be carefully filled with small stones or earth, and properly compacted. No large rocks will be allowed within twelve inches (12") of the finished surface.
4. Moisture Content: The fill material shall be compacted at the appropriate moisture content specified for the soils being used and identified in soil and laboratory reports. Moisture content tolerances shall be plus or minus 3% from optimum.
5. Amount of Compaction: After each layer (lift) has been placed, mixed and spread evenly, it shall be compacted to the specified density. The specified density shall be stated as a percentage of the maximum density attainable using current ASTM D 698 to 95 percent density.
6. Compaction of Fill Layer: Compaction equipment shall be of such design that it will compact the fill to the appropriate specified density at the optimum moisture content. Compaction effort shall be continuous over each layer until density has been achieved.
7. Density Tests: Field density tests shall be made by the Soils Engineer after the compaction of each layer. When test indicate that the density of any layer or portion is below required density, the area shall be reworked until density is obtained. The number of tests shall be established by the Soil Engineer to certify to the required 79G letter requirements.

DESIGNED BY:	L.T.E.
DRAWN BY:	S.Q.V.
DATE:	01/2021
JOB NO.:	E0674101

CIVIL ENGINEERING CONSULTANTS
dba. DON DURDEN, INC.
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-8999
FAX: (210) 641-8440
REGISTRATION #F-2214 / #10041000

6/17/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1

OVERALL GRADING PLAN

SHEET NO.
502

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Date: Jun 17, 2022, 3:32pm User ID: MaryStewart File: L:\Drawings\Proj\2021\E0674101\Eastridge.dwg [\\cad\E0674101 502-502 OVERALL GRADING.dwg]

PLAT NO. 22-11800026

STREETLIGHT NOTE
STREETLIGHT POLES TO BE IN OPEN GREEN SPACE WHERE SHOWN ON PLANS.

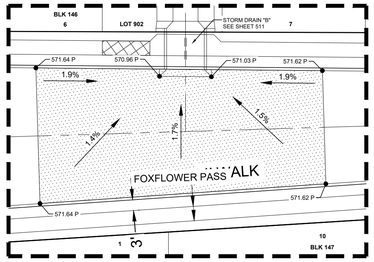
DRIVEWAY NOTE
DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OR WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY

HEADER CURB NOTE:
HEADER CURB TO BE TRANSITIONED TO STD. CURB IN 2'.

(2) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE II
(3) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE III
(4) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE IV

REFER TO WHEELCHAIR RAMP STANDARDS ON STREET DETAILS.



INTERSECTION DETAIL "1"

Line Table		
Line	Length	Direction
L1	142.91'	S33°49'57"W
L2	153.66'	S35°52'01"W
L3	147.05'	S34°08'17"W
L4	562.86'	S35°52'01"W
L5	176.73'	S30°14'41"W

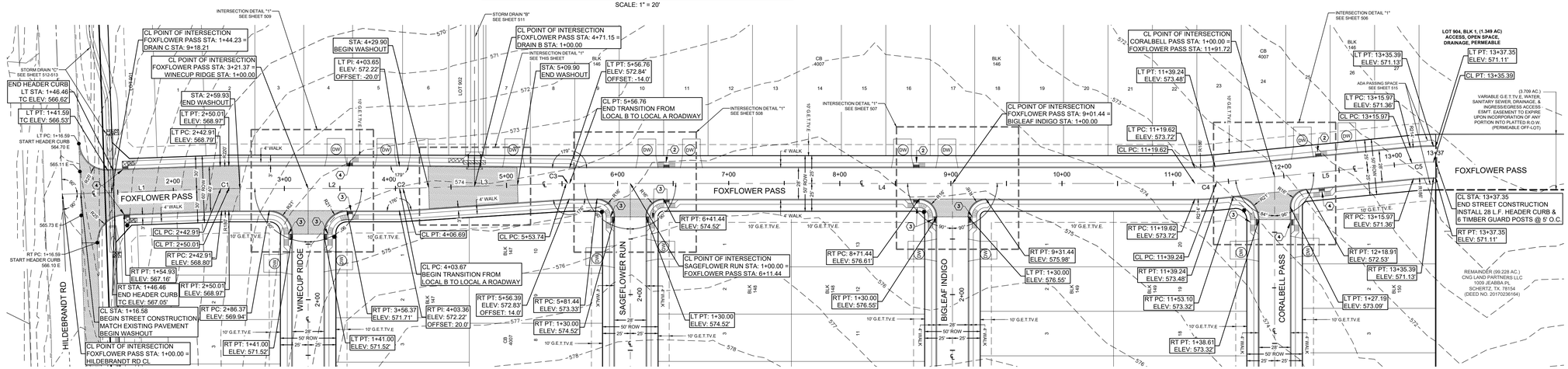
Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	7.10'	200.00'	2°02'04"	S34° 50' 59"W	7.10'
C2	3.02'	100.00'	1°43'44"	S35° 00' 09"W	3.02'
C3	3.02'	100.00'	1°43'44"	S35° 00' 09"W	3.02'
C4	19.63'	200.00'	5°37'20"	S33° 03' 21"W	19.62'
C5	19.42'	200.00'	5°33'47"	S33° 01' 34"W	19.41'

LEGEND

WHEELCHAIR RAMPS
WASHOUT CROWN
SIDEWALK TO BE BUILT BY DEVELOPER
PROPOSED DRIVEWAY
TOP OF CURB ELEVATION
EXISTING STREET LIGHT
PROPOSED STREET LIGHT (100 WATT)

0 50' 100'
1" = 50'

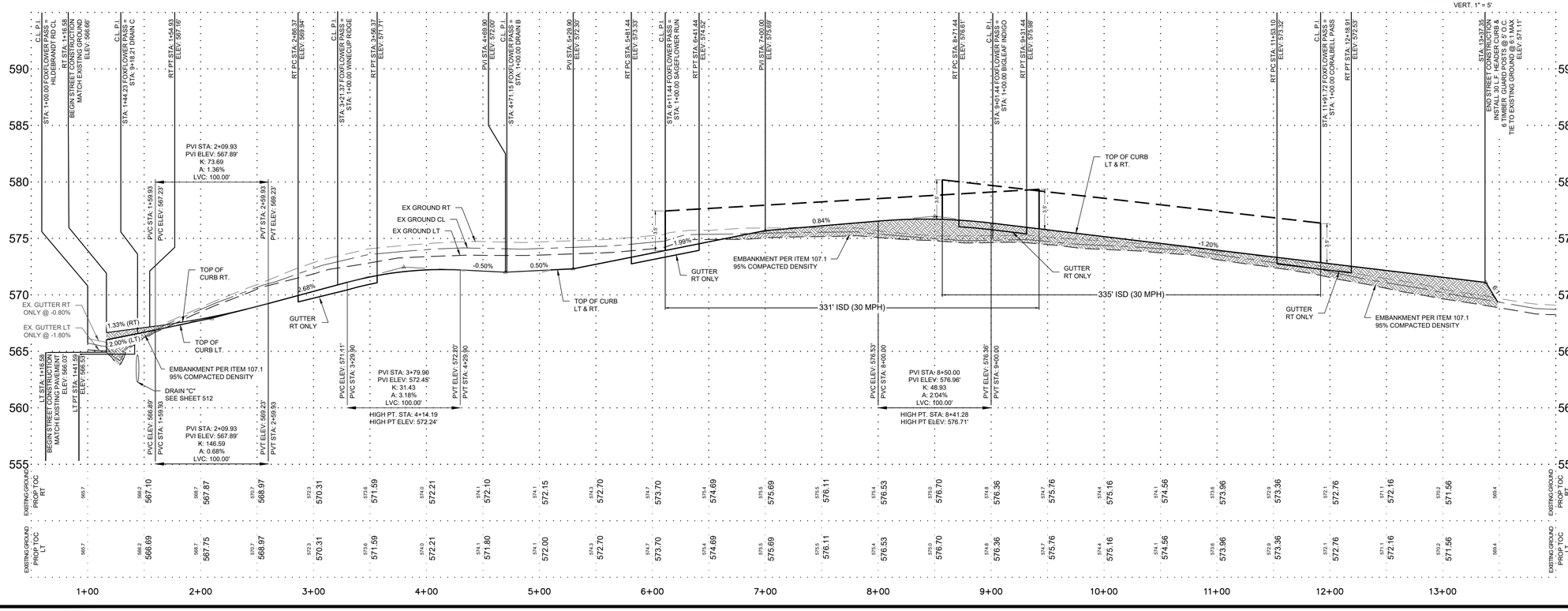
SCALE: 1" = 20'



FOXFLOWER PASS

STA. 1+00.00 TO STA. 13+37.35

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



CIVIL ENGINEERING CONSULTANTS
dba. DON DURDEN, INC.
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
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REGISTRATION #F-2214 / #10041000

DESIGNED BY: L.T.E.
DRAWN BY: S.O.V.
DATE: 01/2021
JOB NO.: E0674101

6/17/2022
STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1
FOXFLOWER PASS
PLAN & PROFILE

SHEET NO.
503

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Date: Jun 17, 2022, 3:13pm User ID: Mary.Stewart File: L:\Jobs\eip\Proj_2021\E067401_Eastridge Unit 1\cad\E067401 SUS FOXFLOWER PASS PLAN & PROFILE.dwg

PLAT NO. 22-11800026

STREETLIGHT NOTE
STREETLIGHT POLES TO BE IN OPEN GREEN SPACE WHERE SHOWN ON PLANS.

DRIVEWAY NOTE
DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OF WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY

(2) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE II
(3) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE III
(4) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE IV

REFER TO WHEELCHAIR RAMP STANDARDS ON STREET DETAILS.

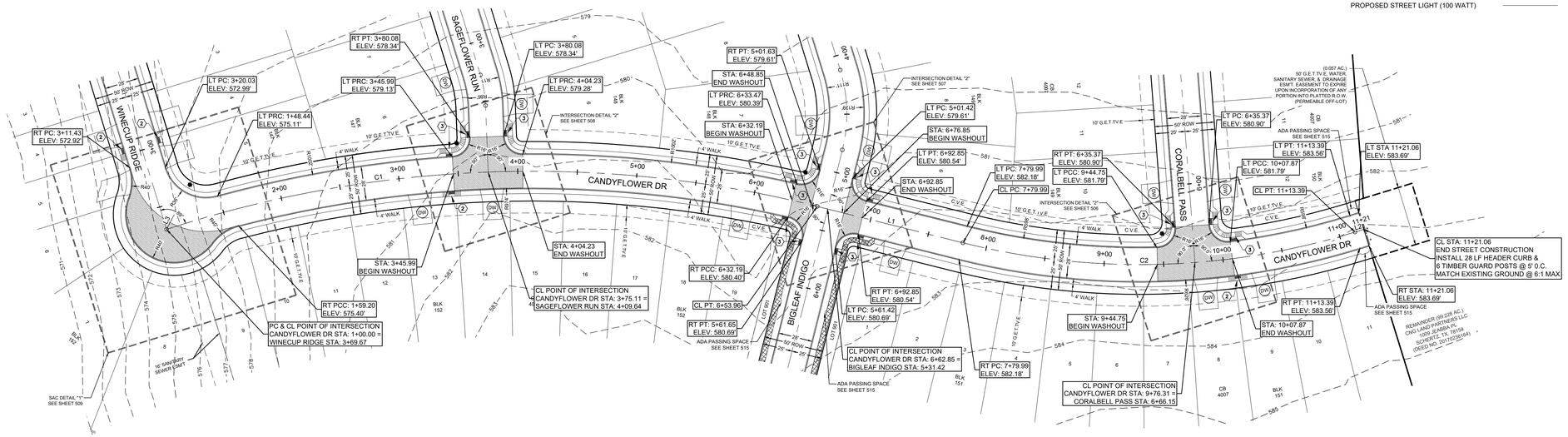
Line Table		
Line	Length	Direction
L1	126.03'	S66°58'52"W
L2	7.67'	S35°46'06"W
L3	14.00'	N00°38'19"W

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	553.96'	988.00'	032°07'31"	S50° 55' 07"W	546.73'
C2	333.40'	612.00'	031°12'46"	S51° 22' 29"W	329.29'

LEGEND
- WHEELCHAIR RAMPS
- WASHOUT CROWN
- SIDEWALK TO BE BUILT BY DEVELOPER
- PROPOSED DRIVEWAY (DW)
- TOP OF CURB ELEVATION (940)
- EXISTING STREET LIGHT (ELP)
- PROPOSED STREET LIGHT (100 WATT) (LP)

N

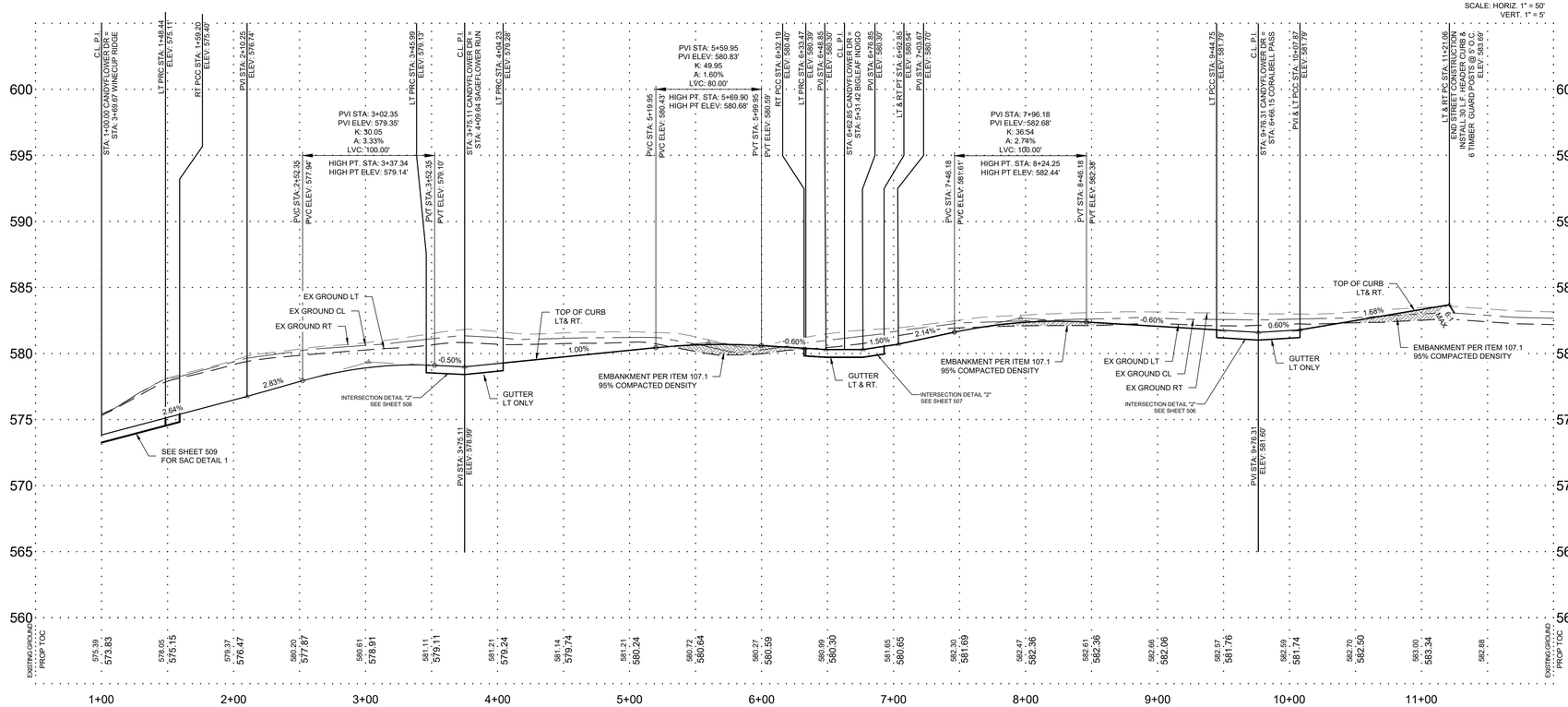
0 50' 100'
1" = 50'



CANDYFLOWER DR

STA. 1+00.00 TO STA. 11+21.06

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



DESIGNED BY:	L.T.E.	DATE:	01/2021
DRAWN BY:	S.O.V.	JOB NO.:	E0674101

CIVIL ENGINEERING CONSULTANTS
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REGISTRATION #F-2214 / #10041000

6/17/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1
CANDYFLOWER DRIVE
PLAN & PROFILE

SHEET NO.
504

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Date: Jan 12, 2022, 2:34pm User ID: Mary.Stewart File: L:\Develop\Proj\22011\DWG\Civil\22011_Eastridge Unit 1 Condo\E0674101 504 CANDYFLOWER DRIVE PLAN & PROFILE.dwg

PLAT NO. 22-11800026

STREETLIGHT NOTE
STREETLIGHT POLES TO BE IN OPEN GREEN SPACE WHERE SHOWN ON PLANS.

DRIVEWAY NOTE
DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OR WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY

Line Table		
Line	Length	Direction
L1	192.32'	S33°49'57"W
L2	43.89'	S66°58'52"W

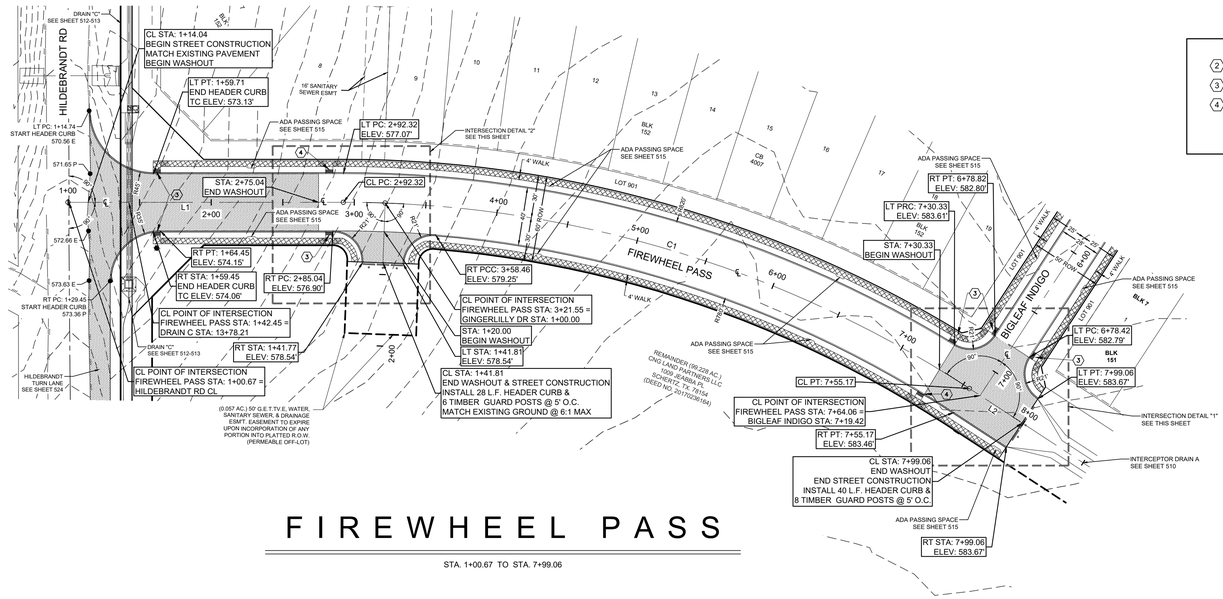
Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	462.84'	800.00'	33°08'55"	S50° 24' 25"W	456.41'

- (2) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE II
- (3) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE III
- (4) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE IV

REFER TO WHEELCHAIR RAMP STANDARDS ON STREET DETAILS.

LEGEND
- WHEELCHAIR RAMPS
- WASHOUT CROWN
- SIDEWALK TO BE BUILT BY DEVELOPER
- PROPOSED DRIVEWAY (DW)
- TOP OF CURB ELEVATION (940)
- EXISTING STREET LIGHT (ELP)
- PROPOSED STREET LIGHT (100 WATT) (LP)

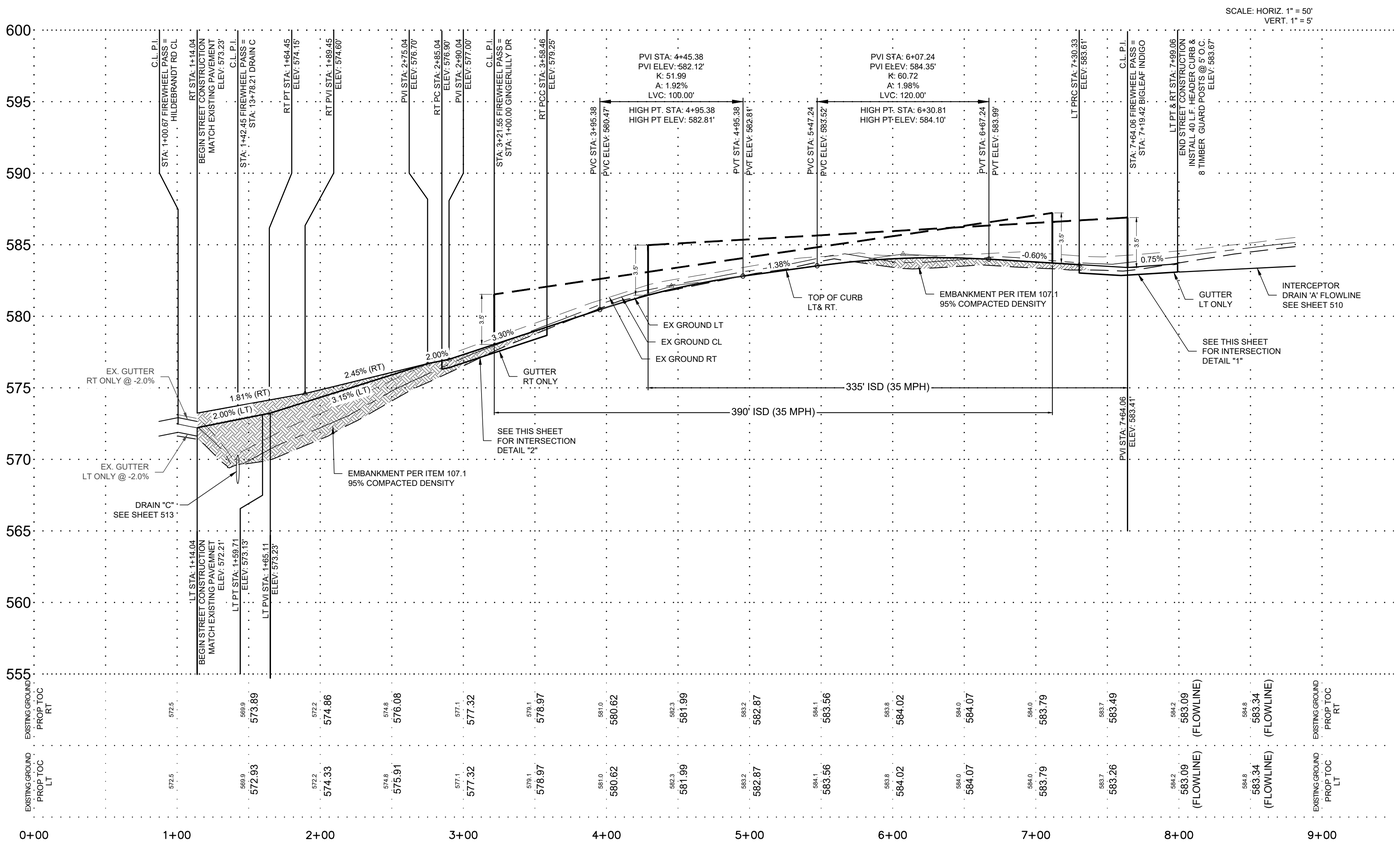
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1" = 50'

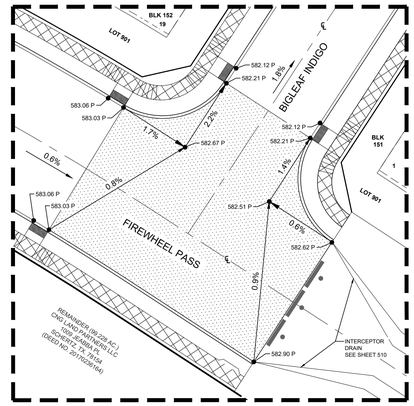


FIREWHEEL PASS

STA. 1+00.67 TO STA. 7+99.06

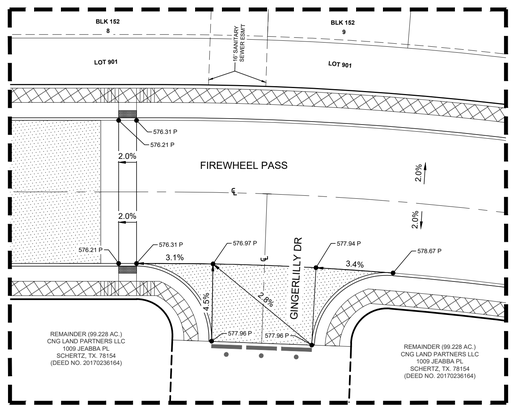
SCALE: HORIZ. 1" = 50'
VERT. 1" = 5'





INTERSECTION DETAIL "1"

SCALE: 1" = 20'



INTERSECTION DETAIL "2"

SCALE: 1" = 20'

CIVIL ENGINEERING CONSULTANTS
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REGISTRATION #F-2214 / #10041000

DESIGNED BY: L.T.E.
DRAWN BY: S.O.V.
DATE: 01/2021
JOB NO.: E0674101

6/17/2022
STATE OF TEXAS
MARY P. STEWART
108905
LICENSED PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1
FIREWHEEL PASS PLAN & PROFILE

SHEET NO.
505

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Date: Jun 17, 2022, 3:34pm User ID: MaryStewart File: L:\Develop\Proj\2021\E0674101_Eastridge Unit 1\cad\E0674101_505 FIREWHEEL PASS PLAN & PROFILE.dwg

PLAT NO. 22-11800026

STREETLIGHT NOTE
STREETLIGHT POLES TO BE IN OPEN GREEN SPACE WHERE SHOWN ON PLANS.

DRIVEWAY NOTE
DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OF WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY

Line Table		
Line	Length	Direction
L1	310.09'	N54°07'59"W
L2	222.71'	N41°23'53"W

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	33.34'	150.00'	12°44'06"	N47° 45' 56"W	33.27'

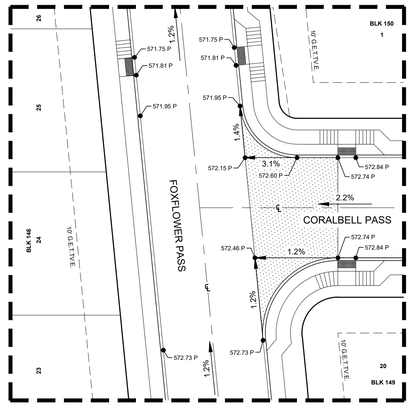
(2) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE II
(3) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE III
(4) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE IV

REFER TO WHEELCHAIR RAMP STANDARDS ON STREET DETAILS.

LEGEND

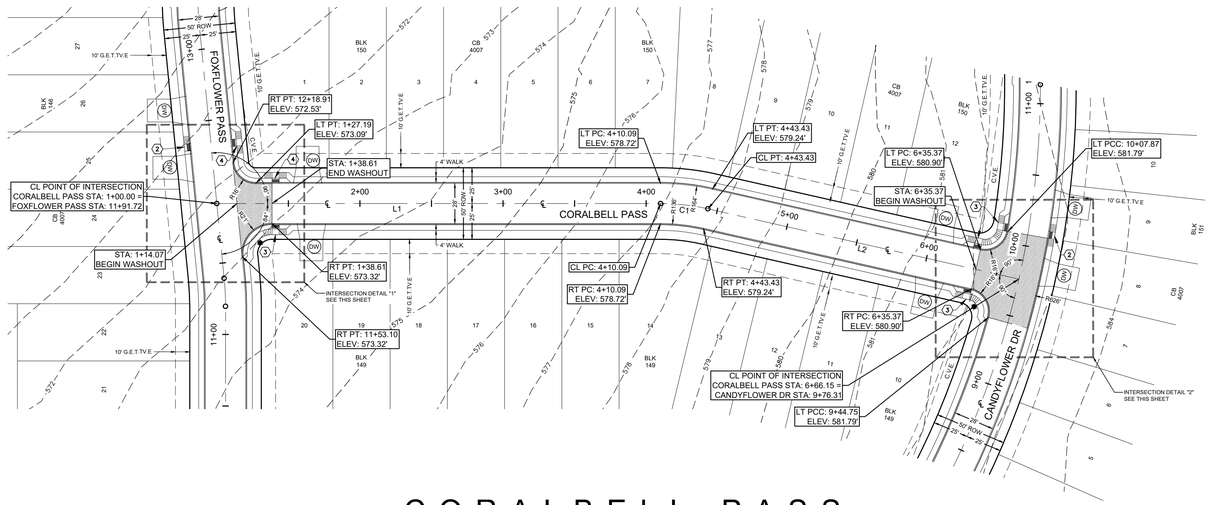
- WHEELCHAIR RAMPS
- WASHOUT CROWN
- SIDEWALK TO BE BUILT BY DEVELOPER
- PROPOSED DRIVEWAY (DW)
- TOP OF CURB ELEVATION 940
- EXISTING STREET LIGHT ELP
- PROPOSED STREET LIGHT (100 WATT) LP

0 50' 100'
1" = 50'



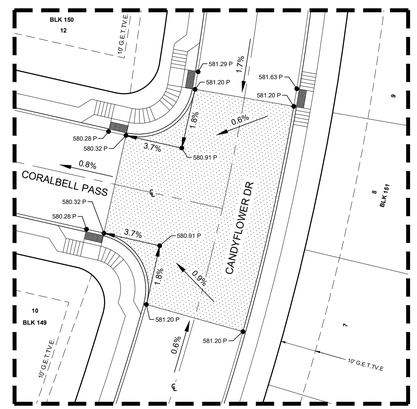
INTERSECTION DETAIL "1"

SCALE: 1" = 20'



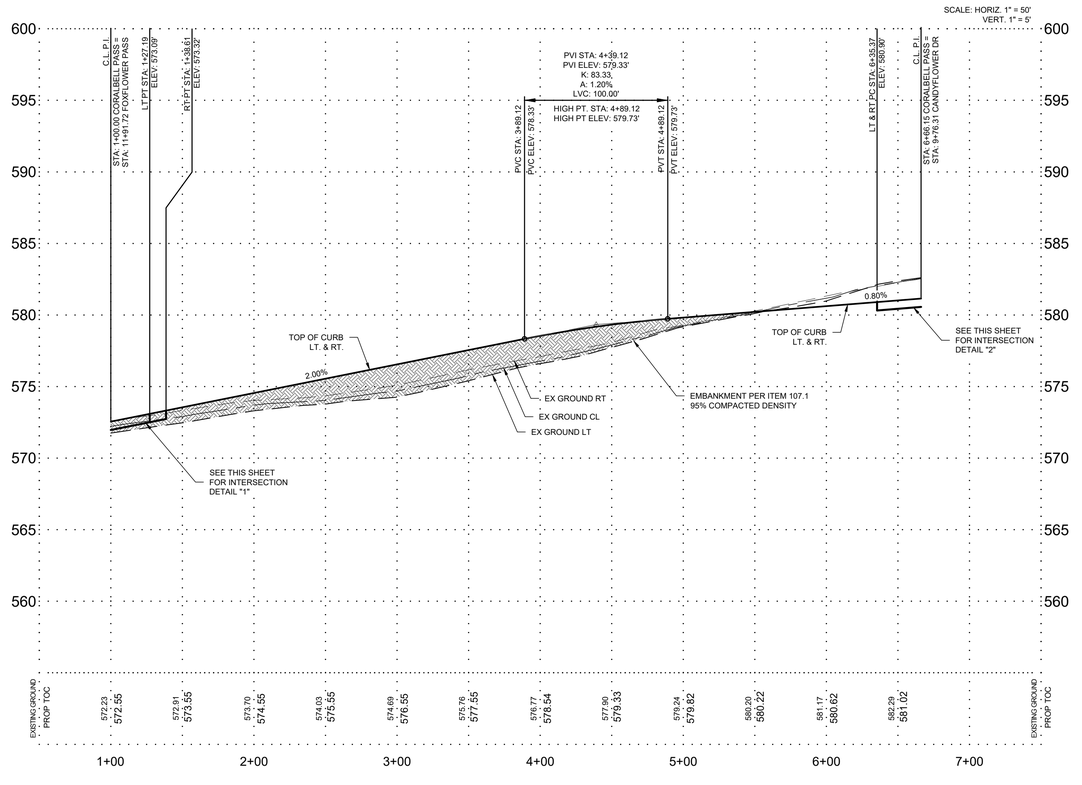
C O R A L B E L L P A S S

STA. 1+00.00 TO STA. 6+66.15



INTERSECTION DETAIL "2"

SCALE: 1" = 20'



CIVIL ENGINEERING CONSULTANTS
dba. DON DURDEN, INC.
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SAN ANTONIO, TEXAS 78230-1037
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REGISTRATION #F-2214 / #10041000

CEC

DESIGNED BY:	L.T.E.
DRAWN BY:	S.Q.V.
DATE:	01/2021
JOB NO.:	E0674101

6/17/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV:	DATE	DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1

CORALBELL PASS PLAN & PROFILE

SHEET NO.
506

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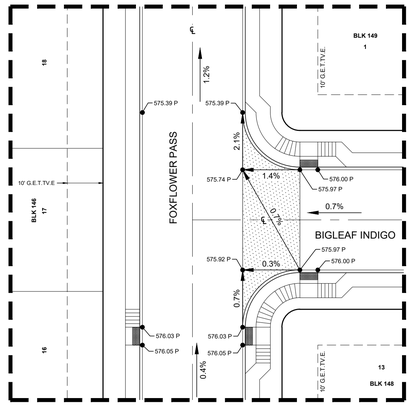
Date: Jun 17, 2022, 3:36pm User ID: Mary.Stewart File: C:\Jetready\Proj_2021\E0674101_Eastridge Unit 1\cosb\E0674101 SUB CORALBELL PASS PLAN & PROFILE.dwg

PLAT NO. 22-11800026

STREETLIGHT NOTE
STREETLIGHT POLES TO BE IN OPEN GREEN SPACE WHERE SHOWN ON PLANS.

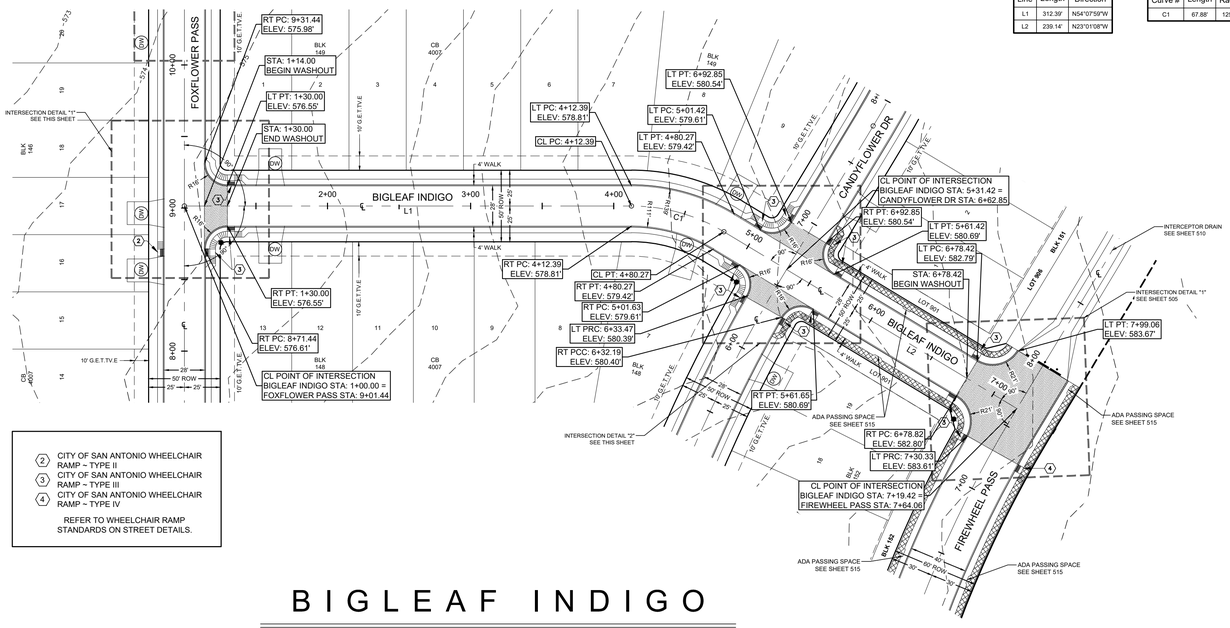
DRIVEWAY NOTE
DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OF WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY



INTERSECTION DETAIL "1"

SCALE: 1" = 20'



Line Table		
Line	Length	Direction
L1	312.39'	N54°07'59"W
L2	239.14'	N23°01'08"W

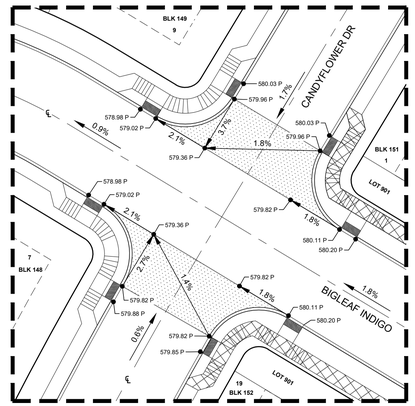
Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	67.88'	125.00'	31°06'51"	N38° 34' 33"W	67.05'

(2) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE II
(3) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE III
(4) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE IV

REFER TO WHEELCHAIR RAMP STANDARDS ON STREET DETAILS.

B I G L E A F I N D I G O

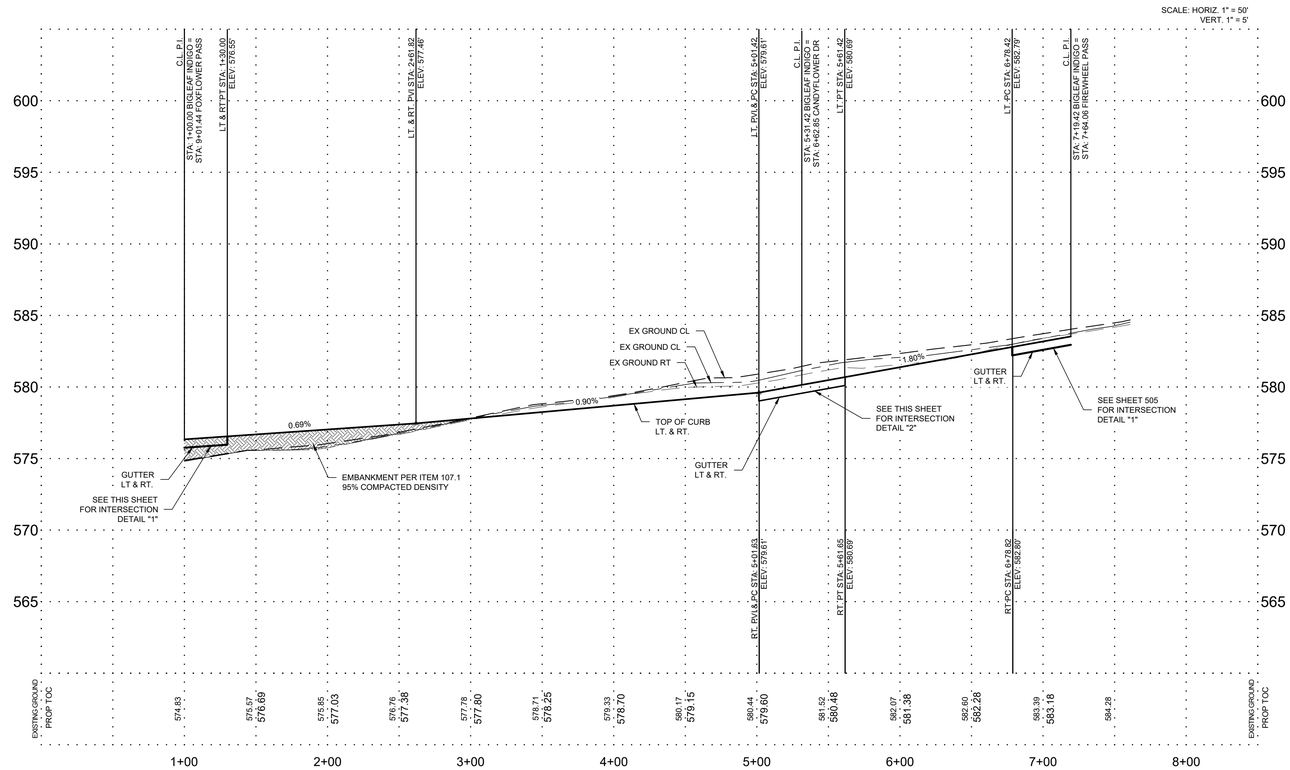
STA. 1+00.00 TO STA. 7+19.42



INTERSECTION DETAIL "2"

SCALE: 1" = 20'

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



LEGEND

- WHEELCHAIR RAMPS
- WASHOUT CROWN
- SIDEWALK TO BE BUILT BY DEVELOPER
- PROPOSED DRIVEWAY (DW)
- TOP OF CURB ELEVATION (940)
- EXISTING STREET LIGHT (ELP)
- PROPOSED STREET LIGHT (100 WATT) (LP)

0 50' 100'
1" = 50'

DESIGNED BY: L.T.E.
DRAWN BY: S.O.V.
DATE: 01/2021
JOB NO.: E0674101

CIVIL ENGINEERING CONSULTANTS
dba. DON DURDEN, INC.
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
PH: (210) 641-9999
FAX: (210) 641-9949
REGISTRATION #F-2214 / #10041000

6/17/2022
STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1

BIGLEAF INDIGO PLAN & PROFILE

SHEET NO.
507

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Date: Jun 17, 2022, 3:35pm User ID: Mary.Stewart File: L:\Develop\Proj_2021\E0674101_Eastridge Unit 1\cad\E0674101 507 BIGLEAF INDIGO PAP.dwg

PLAT NO. 22-11800026

STREETLIGHT NOTE
STREETLIGHT POLES TO BE IN OPEN GREEN SPACE WHERE SHOWN ON PLANS.

DRIVEWAY NOTE
DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OR WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY

(2) CITY OF SAN ANTONIO WHEELCHAIR RAMP – TYPE II
(3) CITY OF SAN ANTONIO WHEELCHAIR RAMP – TYPE III
(4) CITY OF SAN ANTONIO WHEELCHAIR RAMP – TYPE IV

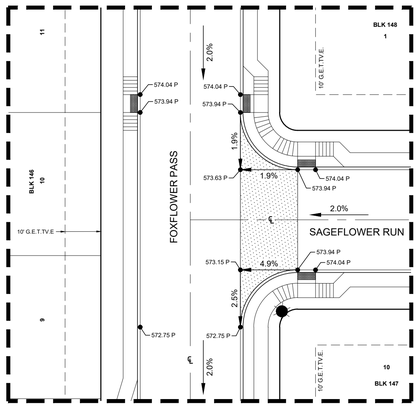
REFER TO WHEELCHAIR RAMP STANDARDS ON STREET DETAILS.

Line Table		
Line	Length	Direction
L1	227.65'	N54°07'59"W
L2	55.91'	N39°11'23"W

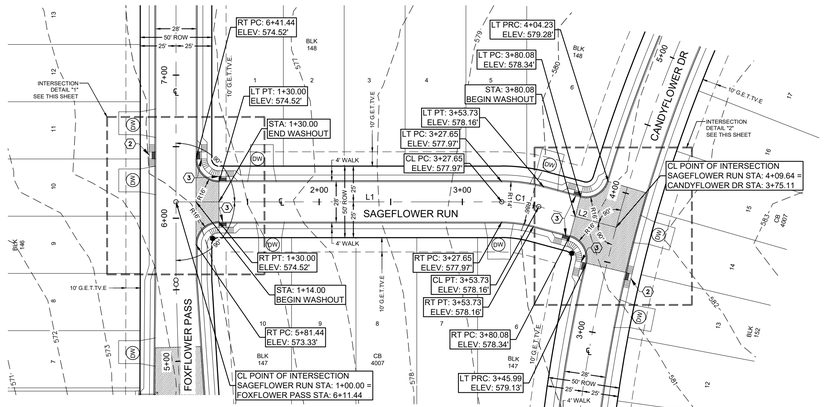
Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	26.08'	100.00'	14°56'36"	N46° 39' 41"W	26.01'

LEGEND
- WHEELCHAIR RAMPS
- WASHOUT CROWN
- SIDEWALK TO BE BUILT BY DEVELOPER
- PROPOSED DRIVEWAY (DW)
- TOP OF CURB ELEVATION (940)
- EXISTING STREET LIGHT (ELP)
- PROPOSED STREET LIGHT (100 WATT) (LP)

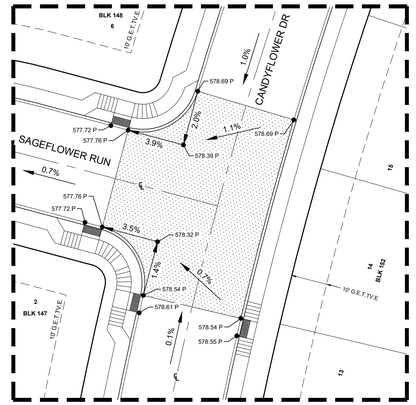
0 50' 100'
1" = 50'



INTERSECTION DETAIL "1"
SCALE: 1" = 20'

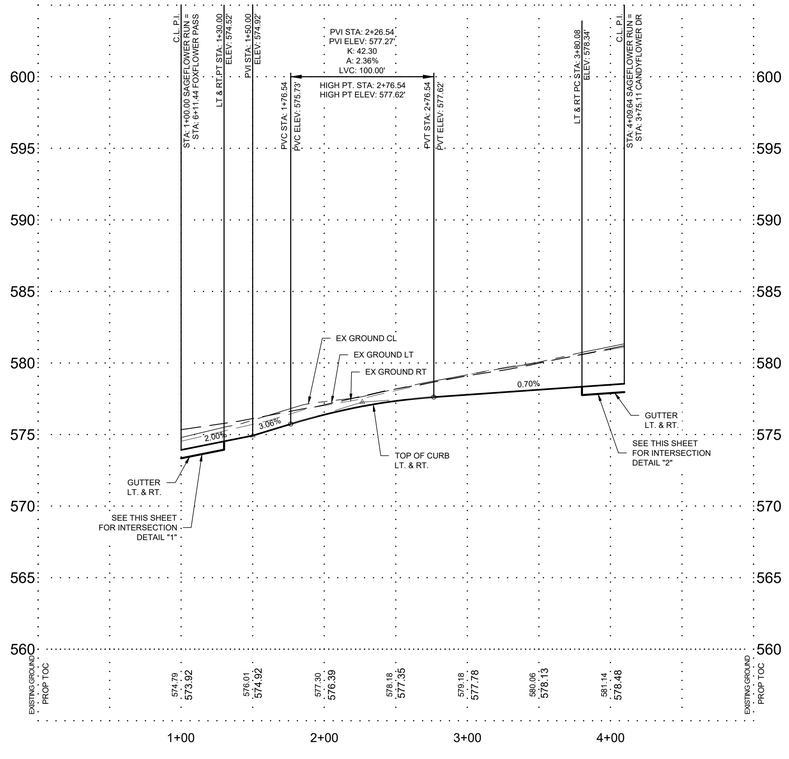


SAGEFLOWER RUN
STA. 1+00.00 TO STA. 4+09.64



INTERSECTION DETAIL "2"
SCALE: 1" = 20'

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



DESIGNED BY:	L.T.E.
DRAWN BY:	S.O.V.
DATE:	01/2021
JOB NO.:	E0674101

CIVIL ENGINEERING CONSULTANTS
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REGISTRATION #F-2214 / #10041000

6/17/2022
STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV:	DATE	DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1
SAGEFLOWER RUN PLAN & PROFILE

SHEET NO.
508

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Date: Jun 17, 2022, 3:36pm User ID: Mary.Stewart File: C:\Jenkins\Proj_Jobs\E0674101_Eastridge Unit 1\Cosdd\E0674101_Sht_SAGEFLOWER Run P&P.dwg

PLAT NO. 22-11800026

STREETLIGHT NOTE
STREETLIGHT POLES TO BE IN OPEN GREEN SPACE WHERE SHOWN ON PLANS.

DRIVEWAY NOTE
DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OF WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY

(2) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE II
(3) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE III
(4) CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE IV

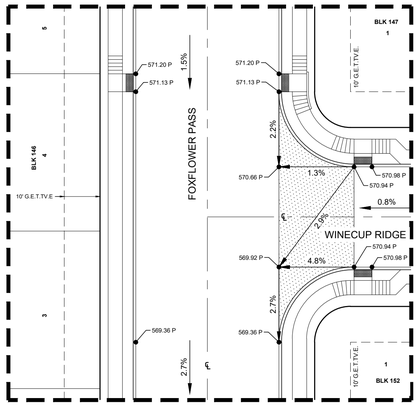
REFER TO WHEELCHAIR RAMP STANDARDS ON STREET DETAILS.

LINE TABLE		
LINE NO.	LENGTH	BEARING
L1	269.67'	S54°07'59"E
L2	14.00'	S09°38'19"E

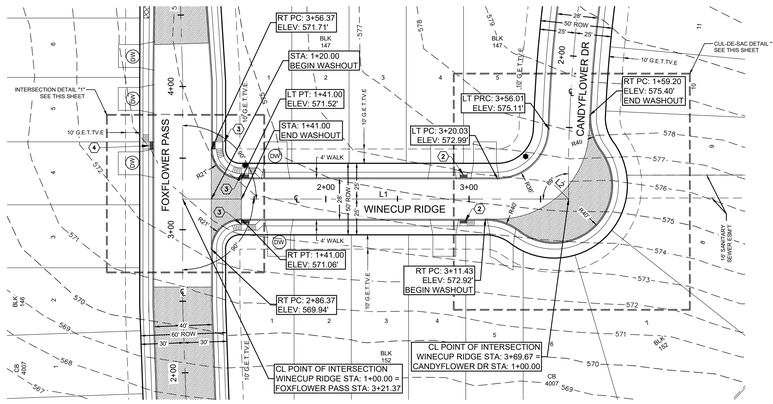
LEGEND
- WHEELCHAIR RAMPS
- WASHOUT CROWN
- SIDEWALK TO BE BUILT BY DEVELOPER
- PROPOSED DRIVEWAY (DW)
- TOP OF CURB ELEVATION (940)
- EXISTING STREET LIGHT (ELP)
- PROPOSED STREET LIGHT (100 WATT) (LP)

N

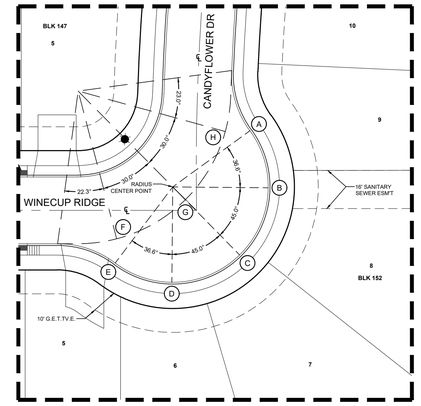
0 50' 100'
1" = 50'



INTERSECTION DETAIL "1"
SCALE: 1" = 20'

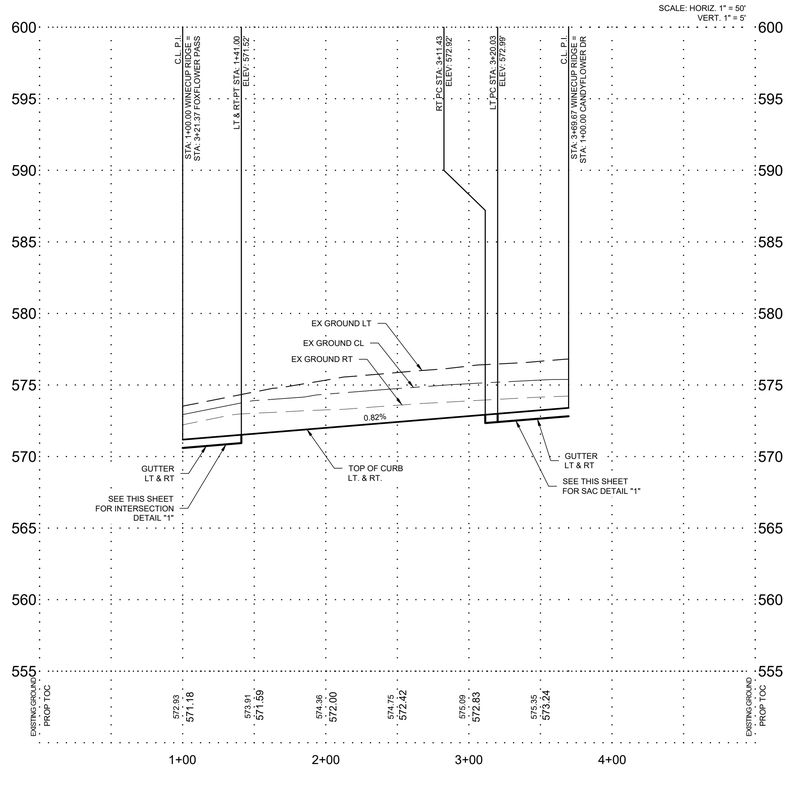


W I N E C U P R I D G E
STA. 1+00.00 TO STA. 3+69.67



SAC DETAIL "1"
SCALE: 1" = 30'

POINT	CURB ELEV.	GUTTER ELEV.
RT. PCC	575.40	574.82
A	575.04	574.46
B	575.02	574.44
C	574.71	574.13
D	574.13	573.55
E	573.48	572.90
F	--	572.77
G	--	573.49
H	--	574.21
RT. PC	572.92	572.34



DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

CIVIL ENGINEERING CONSULTANTS
d b a . D O N D U R D E N , I N C .
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REGISTRATION #F-2214 / #10041000

6/17/2022
STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

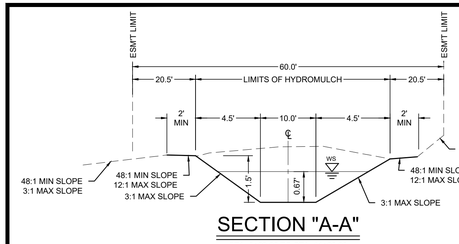
EASTRIDGE
SUBDIVISION UNIT 1
WINECUP RIDGE
PLAN & PROFILE

SHEET NO.
509

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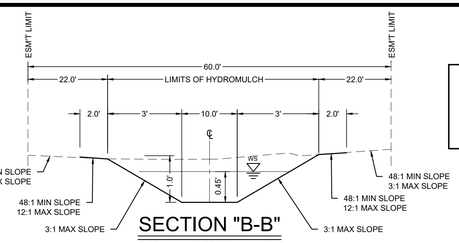
Date: Jan 17, 2022, 3:36pm User: ID: Mary.Stewart File: L:\Develop\Proj\2021\E0674101\Eastridge Unit 1\cad\E0674101 509 WINECUP RIDGE P&P.dwg

PLAT NO. 22-11800026



SECTION "A-A"

STA: 8+29.06 TO STA: 11+00.00



SECTION "B-B"

STA: 11+10.00 TO STA: 13+14.69

NOTE:

CONTRACTOR TO ENSURE POSITIVE DRAINAGE AT UPSTREAM & DOWNSTREAM ENDS OF DRAINS AND THAT NO PONDING WILL OCCUR.

BEXAR COUNTY PERMIT NOTE:

BEXAR COUNTY RIGHT OF WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	435.81'	800.00'	031°12'46"	S51° 22' 29"W	430.45'

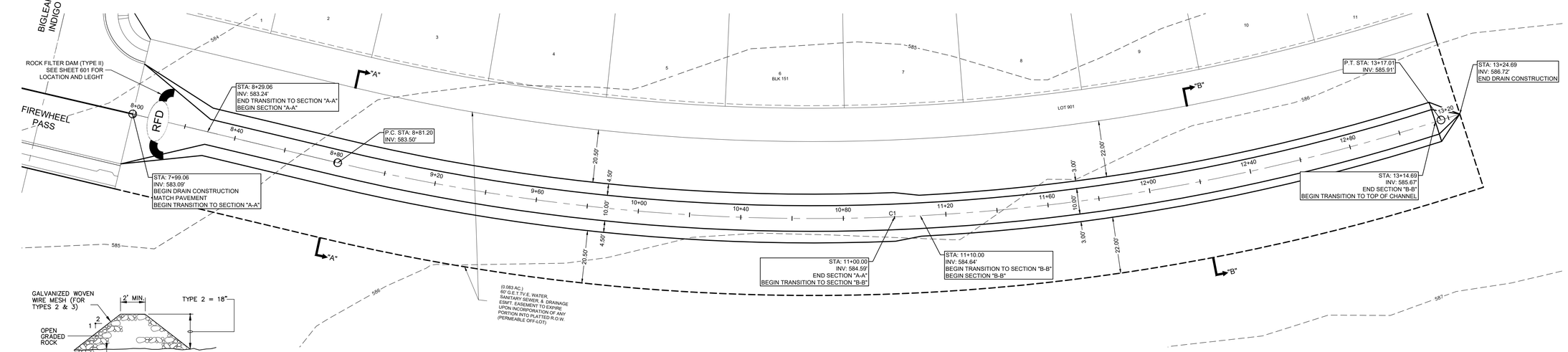
LEGEND

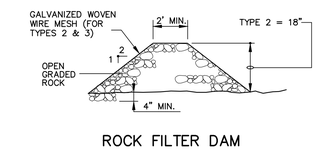
PROPOSED CONTOURS — 662

EXISTING CONTOURS — 670

0 20' 40'

1" = 20'



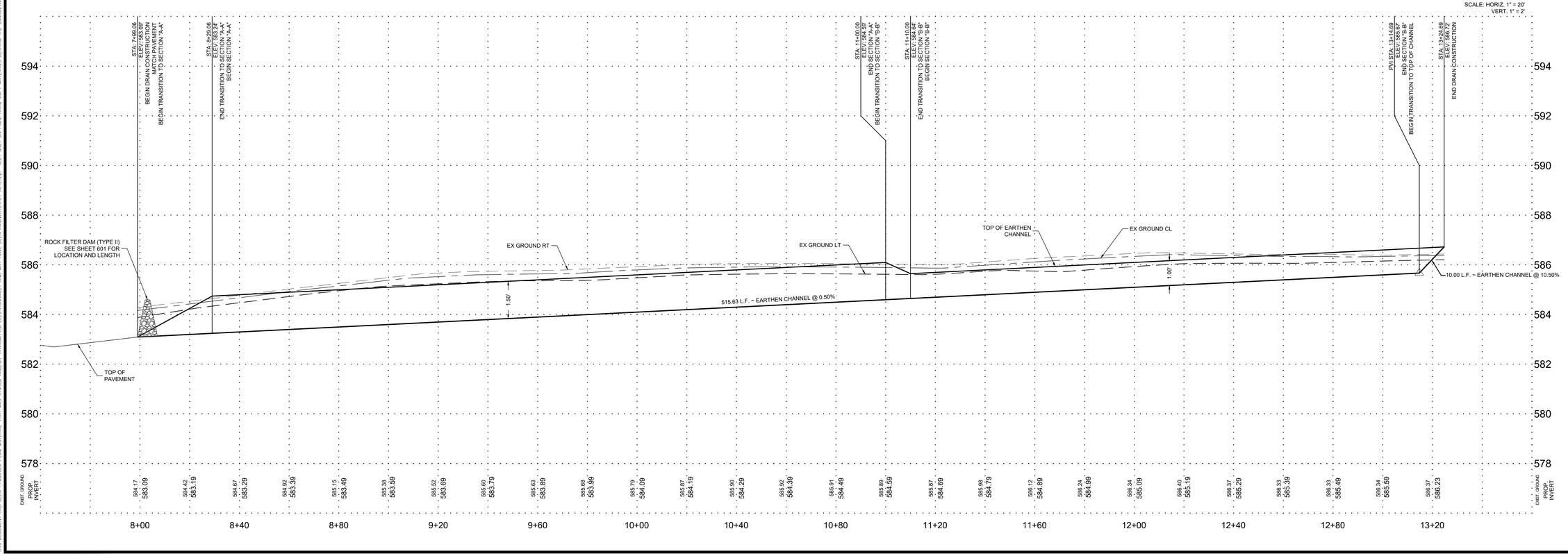


ROCK FILTER DAM

ROCK FILTER DAM TYPE 2

INTERCEPTOR DRAIN "A" PLAN AND PROFILE

STA. 7+99.06 TO STA. 13+24.69



DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

CIVIL ENGINEERING CONSULTANTS
dba. DON DURDEN, INC.
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-9999
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REGISTRATION #F-2214 / #10041000

6/17/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1
INTERCEPTOR DRAIN "A"
PLAN & PROFILE

SHEET NO.
510

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Date: Jun 17, 2022, 3:36pm User ID: Mary Stewart File: C:\Jetviewpl\Proj_2021\E067410\01_Eastridge Unit 1\Voids\E067410 510-511 DRAIN A & B PLAN & PROFILE.dwg

PLAT NO. 22-11800026

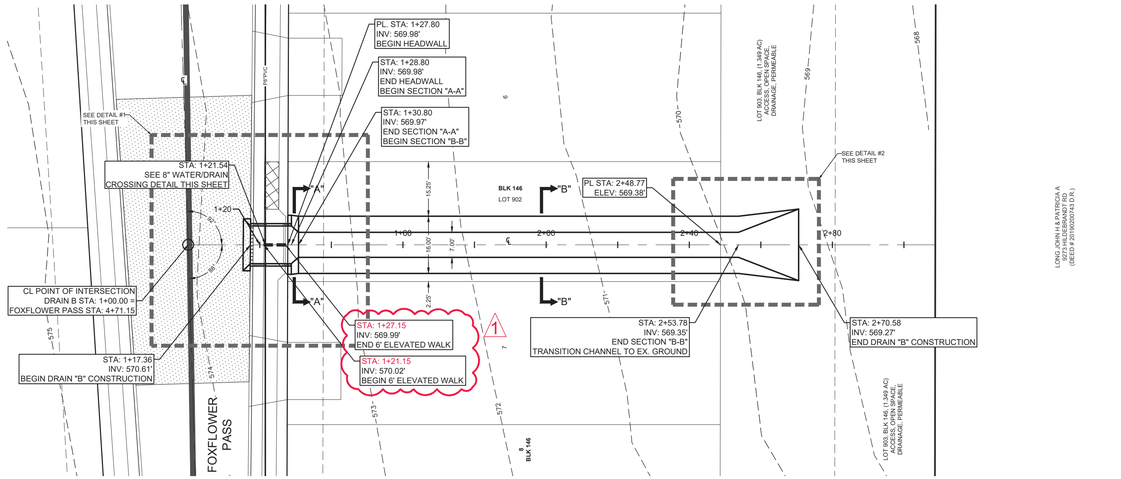
TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, OR 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 PROJECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACTOR'S 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.

NOTE:

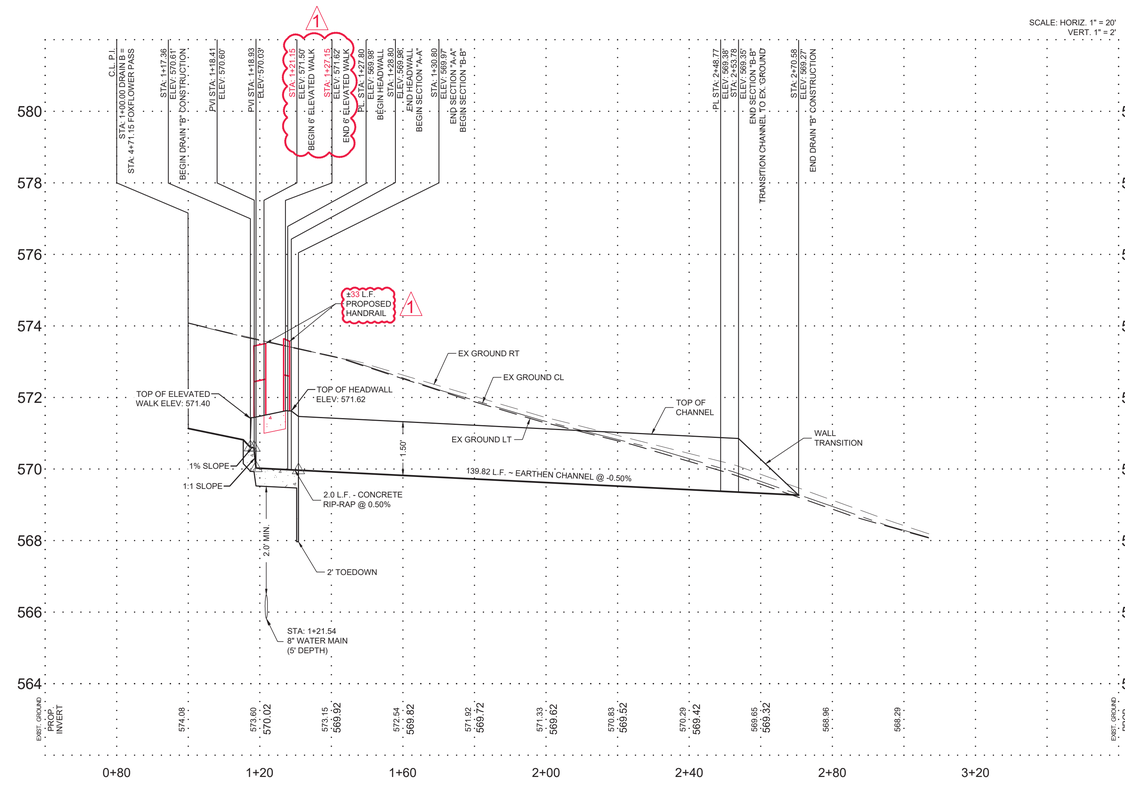
CONTRACTOR TO ENSURE POSITIVE DRAINAGE AT UPSTREAM & DOWNSTREAM ENDS OF DRAINS AND THAT NO PONDING WILL OCCUR.

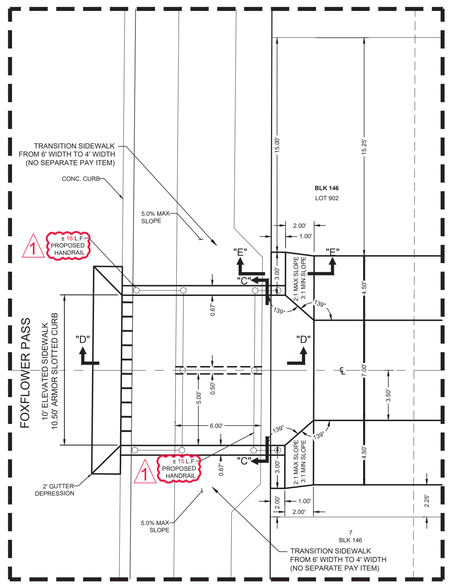
BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OF WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY



DRAIN "B" PLAN AND PROFILE

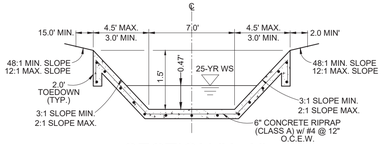
STA. 1+00.00 TO STA. 2+70.58





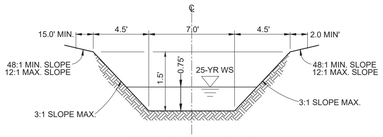
DETAIL #1

SCALE: 1" = 5'



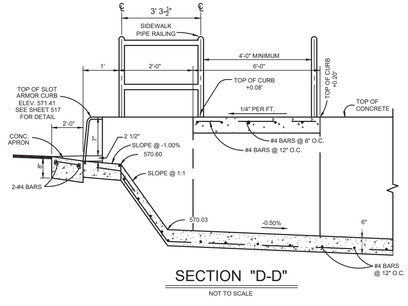
SECTION "A-A"

NOT TO SCALE
STA. 1+28.80 TO STA. 1+30.80



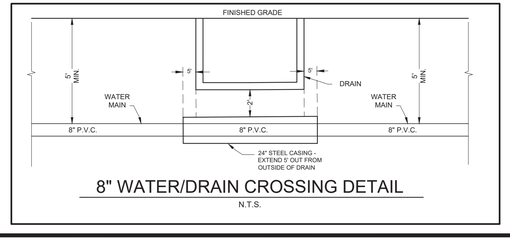
SECTION "B-B" (EARTHEN)

NOT TO SCALE
STA. 1+30.80 TO STA. 2+53.78



SECTION "D-D"

NOT TO SCALE



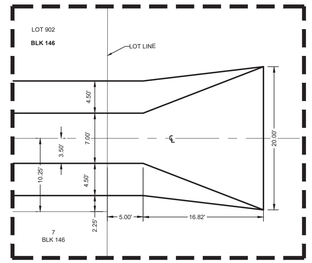
8" WATER/DRAIN CROSSING DETAIL

N.T.S.

LEGEND

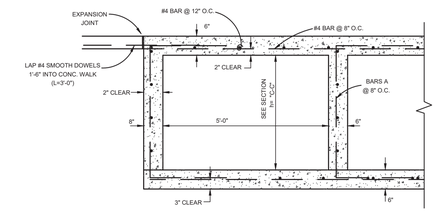
PROPOSED CONTOURS — 662
EXISTING CONTOURS — 670

0 20' 40'
1" = 20'



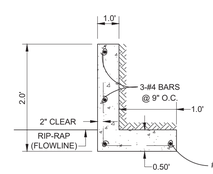
DETAIL #2

SCALE: 1" = 10'



SECTION "C-C"

NOT TO SCALE



SECTION "E-E" (HEADWALL DETAIL)

NOT TO SCALE

NOTES:

1. COVER FOR REINFORCEING STEEL IS 2" UNLESS NOTED.
2. ALL CONCRETE SHALL BE CLASS "C" 3600 PSI. @ 28 DAY WITH COURSE AGGREGATE GRADE 2-5.
3. MINIMUM BAR DEVELOPMENT LENGTH FOR SPLICE AND BENDS SHALL BE 24 INCHES.
4. TRANSITION FROM STANDARD CURB TO ELEVATED WALK. NO SEPARATE PAY ITEM.
5. SEE SHEET 514 FOR HANDRAIL DETAILS.

REVISED
7:38 am, Aug 11, 2022

PRIOR TO CONSTRUCTION NOTE:

CONTRACTOR TO COORDINATE WITH HOME OWNERS AND GIVE TWO WEEK NOTICE FOR WORK WITHIN SINGLE FAMILY LOTS. WORK WILL REQUIRE THE USE OF SMALL MACHINERY TO LIMIT AREA OF DISTURBANCE. PROTECTION OF EXISTING HOME AND PROPERTY SHALL FOLLOW RECOMMENDATIONS OF THE STRUCTURAL ENGINEER. WORK AND DISTURBANCE WILL BE LIMITED TO EASEMENT AREAS ONLY. FENCES, UTILITY BUILDINGS, AND GRASS AREA SHALL BE REMOVED AND REPLACED TO A BETTER THAN EXISTING CONDITION (NOT MEASURED AND TO BE INCLUDED IN COST OF STRUCTURE). TEMPORARY FENCING TO PROTECT PROPERTY, PEOPLE, AND PETS SHALL BE UTILIZED (NOT MEASURED AND TO BE INCLUDED IN COST OF STRUCTURE). CONTRACTOR SHALL PRESENT A SCHEDULE OF CONSTRUCTION OPERATION TO MINIMIZE DISTURBANCE TO HOMEOWNERS BUT IN NO WAY EXTEND MORE THAN 14 CALENDAR DAYS. BACKFILL AROUND STRUCTURE SHALL BE WITH 413 HIGH STRENGTH FLOWABLE FILL (500 PSI) TO ONE FOOT BELOW EXISTING GRADE ALLOWING FOR TOPSOIL AND GRASS REPLACEMENT (NOT MEASURED AND TO BE INCLUDED IN COST OF STRUCTURE).

DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

CIVIL ENGINEERING CONSULTANTS
dba. DON DURDEN, INC.
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TEL: (210) 641-9999
FAX: (210) 641-3440
REGISTRATION #F-2214 / #10041000

8/10/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION
1	08/10/2022	REVISED ELEVATED SIDEWALK LOCATION AND LABELS

EASTRIDGE
SUBDIVISION UNIT 1

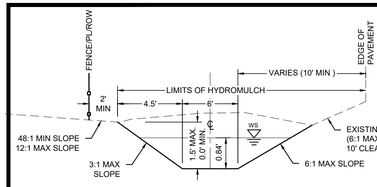
DRAIN "B" PLAN & PROFILE

SHEET NO.
511

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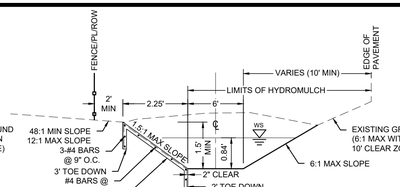
Date: Aug 10, 2022, 7:40am User ID: Mary.Stewart File: L:\Develop\Proj\2021\E0674101_Eastridge.dwg Layout: Drain B & B PROFILE.dwg

PLAT NO. 22-11800026



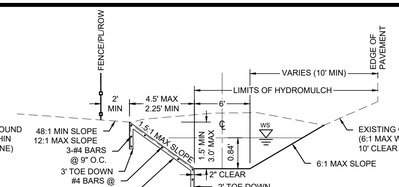
SECTION "A1-A1"

STA: 2+24.07 TO STA: 3+44.98



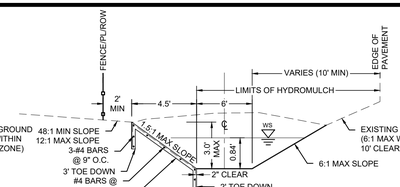
SECTION "A2-A2"

STA: 3+44.98 TO STA: 4+00.00



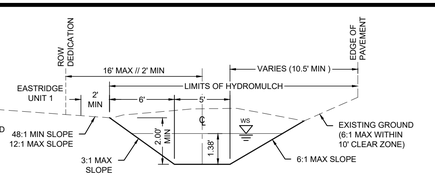
SECTION "A3-A3"

STA: 4+00.00 TO STA: 5+00.00



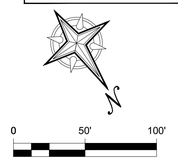
SECTION "A4-A4"

STA: 5+00.00 TO STA: 5+74.10



SECTION "B-B"

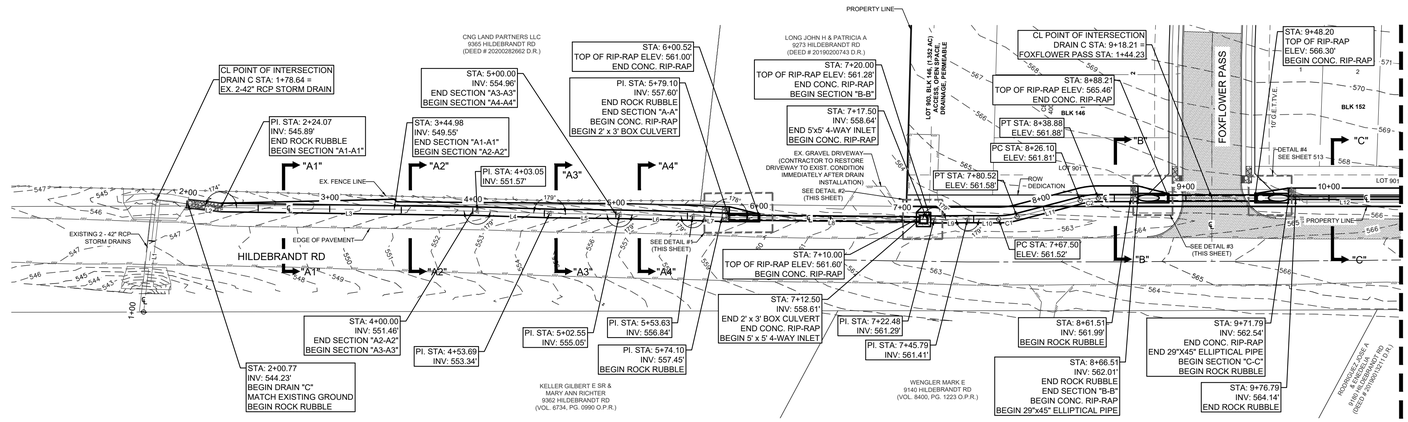
STA: 7+20.00 TO STA: 8+66.51



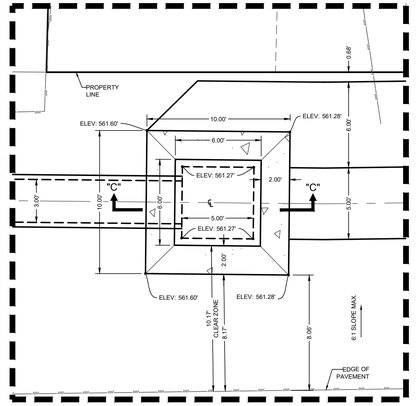
LEGEND

PROPOSED CONTOURS — 662

EXISTING CONTOURS — 670

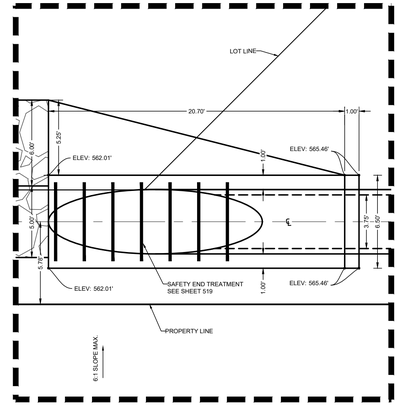


MATCH LINE "A" - SEE SHEET 513



DETAIL "2"

SCALE: 1" = 5'



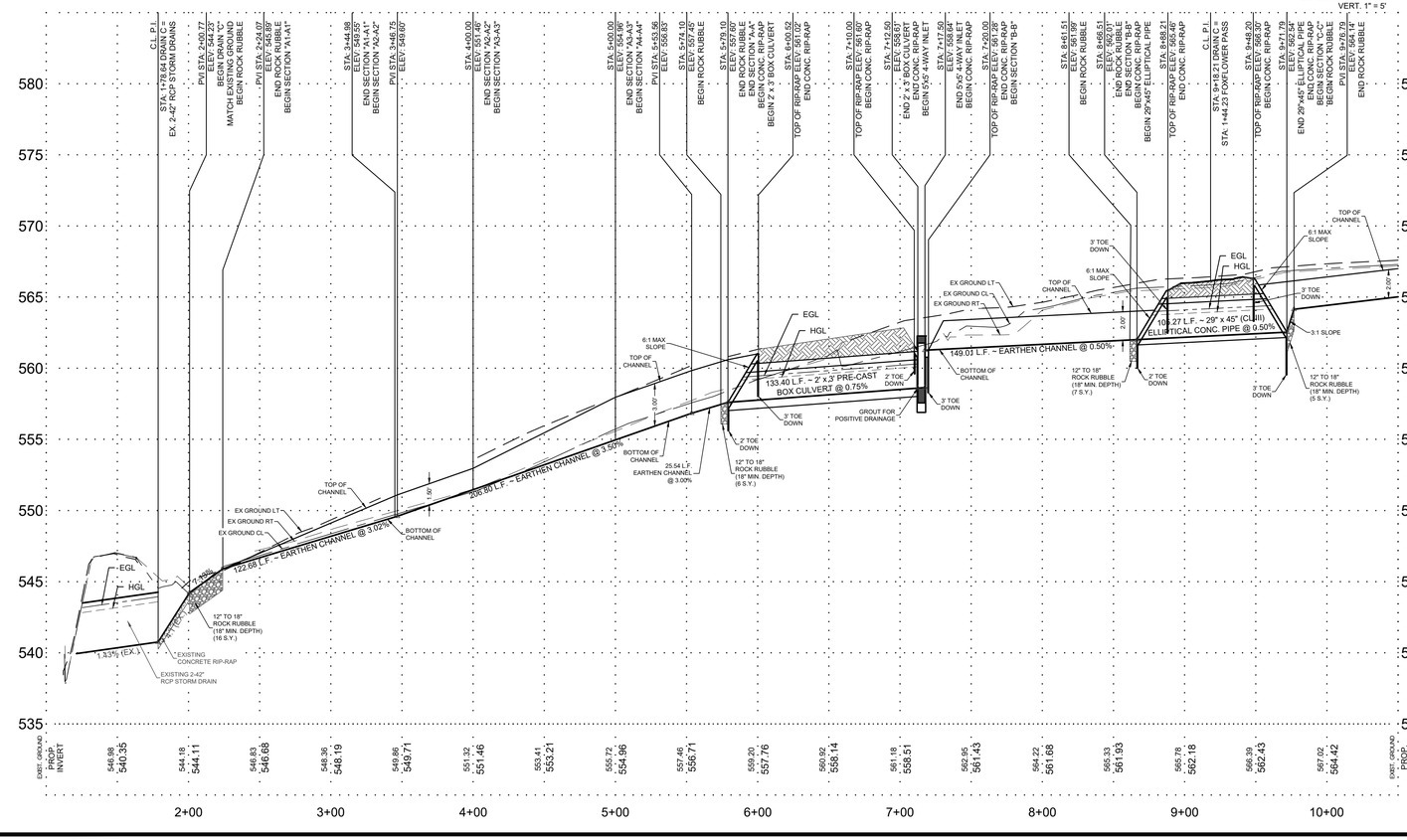
DETAIL "3"

SCALE: 1" = 5'

DRAIN "C" PLAN AND PROFILE

STA. 1+00.00 TO STA. 10+50.00

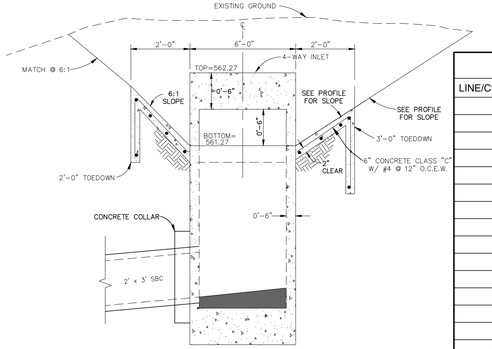
SCALE: HORIZ. 1" = 50'
VERT. 1" = 5'



MATCH LINE "A" - SEE SHEET 513

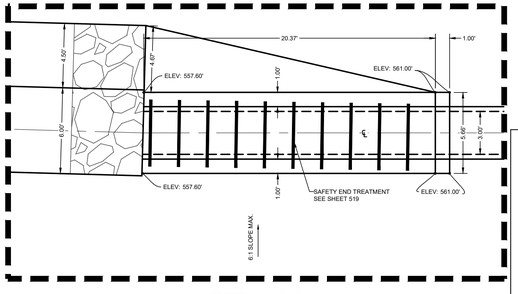
DETAIL "1"

SCALE: 1" = 5'



SECTION C-C

NOT TO SCALE



DETAIL "C"

SCALE: 1" = 5'

NOTE:

THERE IS AN EXISTING EAST CENTRAL SUD WATERLINE IN THIS AREA, CONTRACTOR TO HAVE WATERLINE LOCATED BEFORE START OF CONSTRUCTION. CONTACT ENGINEER WITH ANY ISSUES.

BEXAR COUNTY NOTES:

1. BEXAR COUNTY RIGHT OF WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY
2. SIDEWALK CONTRACTOR TO COORDINATE WITH BEXAR COUNTY/CITY INSPECTOR PRIOR TO INSTALLATION OF WHEEL CHAIR RAMPS.
3. SIDEWALK ADJACENT TO RESIDENTIAL LOTS SHALL BE THE RESPONSIBILITY OF THE HOME BUILDER. ALL OTHER SIDEWALK SHALL BE THE RESPONSIBILITY OF THE DEVELOPER.

NOTE:

CONTRACTOR TO ENSURE POSITIVE DRAINAGE AT UPSTREAM & DOWNSTREAM ENDS OF DRAINS AND THAT NO PONDING WILL OCCUR.

NOTE:

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3. COVER FOR REINFORCING STEEL IS 2" UNLESS NOTED.
4. ALL CONCRETE SHALL BE CLASS "C" 3600 PSI. @ 28 DAYS WITH COURSE AGGREGATE GRADE 2-5.
5. MINIMUM BAR DEVELOPMENT LENGTH FOR SPLICE AND BENDS SHALL BE 24 INCHES.
6. REFERENCE SHEETS 517-519 FOR DRAIN DETAILS.

LINE AND CURVE TABLE

LINE/CURVE NO.	LENGTH	BEARING/DELTA	RADIUS
C1	13.02'	014°54'56"	50.00'
C2	12.78'	014°38'38"	50.00'
C3	11.02'	021°02'22"	30.00'
C4	11.02'	021°02'22"	30.00'
L1	78.64'	S40°21'45"W	
L2	45.43'	N49°39'57"W	
L3	178.97'	N55°21'54"W	
L4	50.65'	N54°17'44"W	
L5	48.86'	N55°30'59"W	
L6	51.08'	N54°45'14"W	
L7	25.47'	N54°00'46"W	
L8	143.38'	N55°34'52"W	
L9	23.31'	N56°55'27"W	
L10	21.71'	N55°53'45"W	
L11	45.58'	N70°48'41"W	
L12	607.79'	N56°10'03"W	
L13	225.12'	N56°29'16"W	

CIVIL ENGINEERING CONSULTANTS
d b a . D O N D U R D E N , I N C .
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-8999
FAX: (210) 641-8440
REGISTRATION #F-2214 / #10041000

6/17/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

EASTRIDGE SUBDIVISION UNIT 1

(FOR BEXAR COUNTY PERMIT ONLY)

DRAIN "C" PLAN & PROFILE

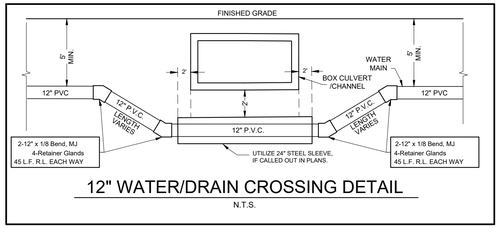
SHEET NO.

512

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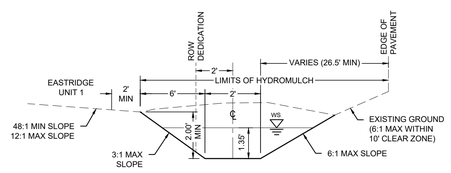
Date: Jun 17, 2022, 2:39pm User: @ Mary.Stewart File: L:\Develop\Proj\2021\E0674101_Eastridge Unit 1\cadd\E0674101 512-513 DRAIN C PLAN & PROFILE.dwg

PLAT NO. 22-11800026



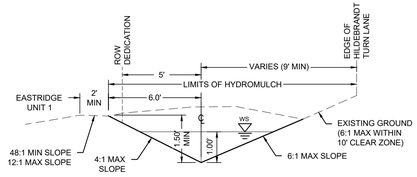
12" WATER/DRAIN CROSSING DETAIL

N.T.S.



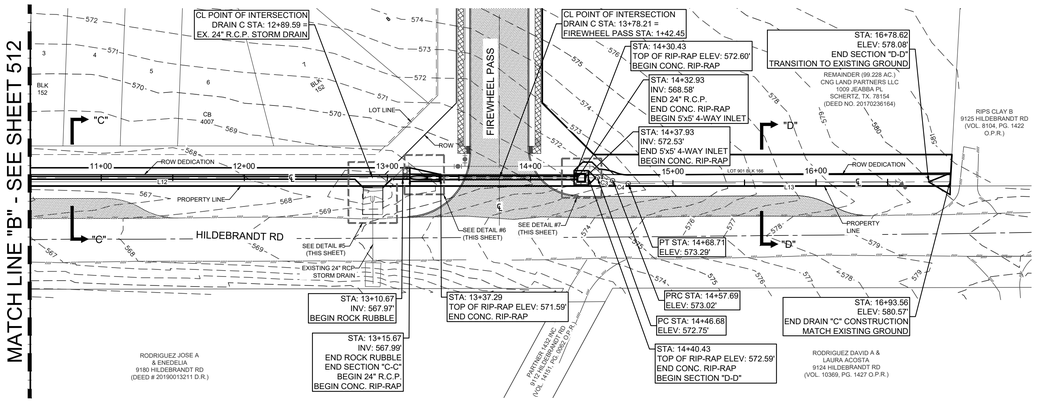
SECTION "C-C"

STA: 9+71.79 TO STA: 13+15.67



SECTION "D-D"

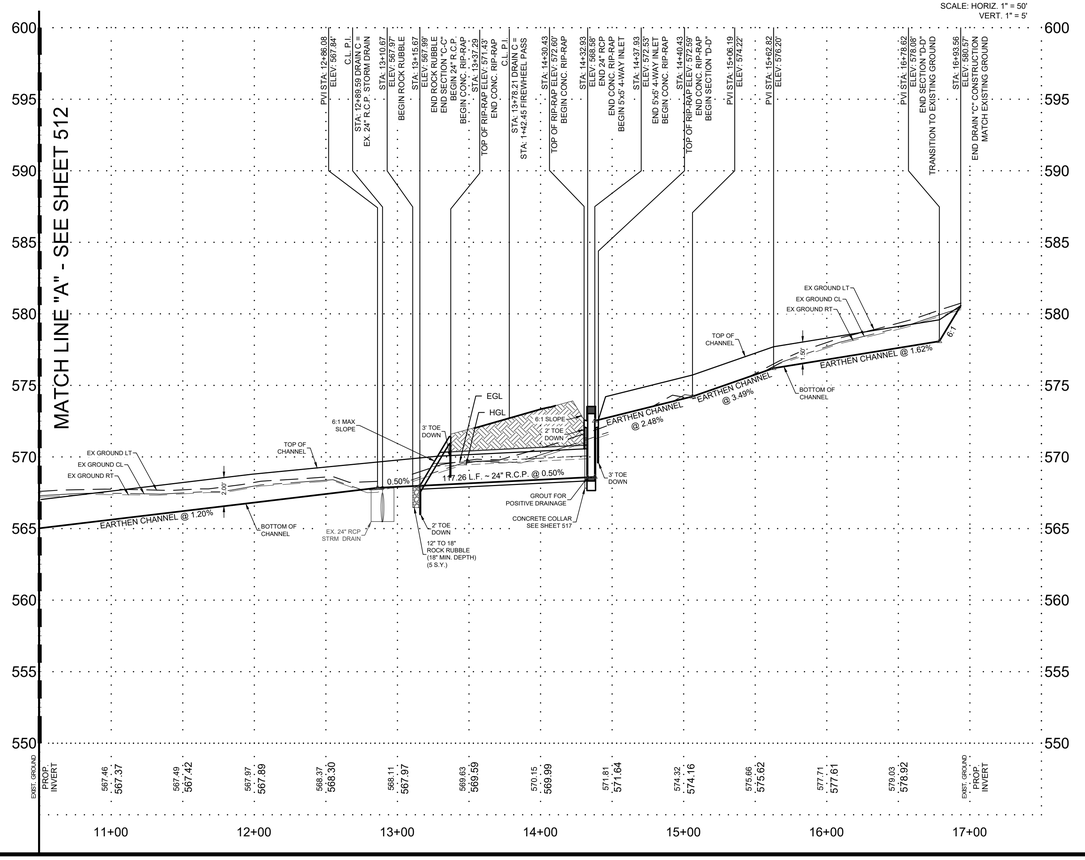
STA: 14+40.43 TO STA: 16+78.62

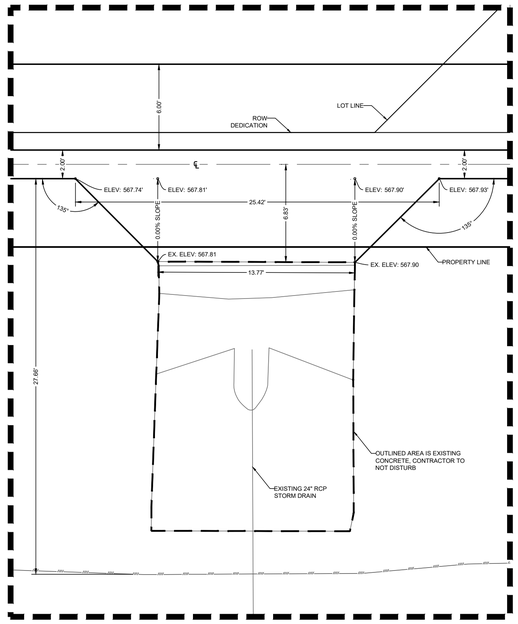


DRAIN "C" PLAN AND PROFILE

STA. 10+50.00 TO STA. 16+93.56

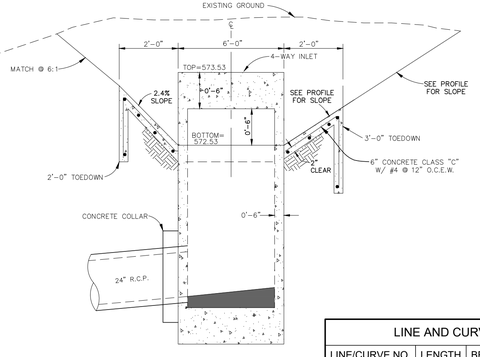
SCALE: HORIZ. 1" = 50'
VERT. 1" = 5'





DETAIL "5"

SCALE: 1" = 5'



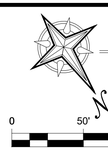
SECTION C-C

NOT TO SCALE

LINE AND CURVE TABLE			
LINE/CURVE NO.	LENGTH	BEARING/DELTA	RADIUS
C1	13.02'	014°54'56"	50.00'
C2	12.78'	014°38'38"	50.00'
C3	11.02'	021°02'22"	30.00'
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L1	78.64'	S40°21'45"W	
L2	45.43'	N49°39'57"W	
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L12	607.79'	N56°10'03"W	
L13	225.12'	N56°29'16"W	

NOTE:

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LEGEND

PROPOSED CONTOURS 662
EXISTING CONTOURS 670

NOTE:

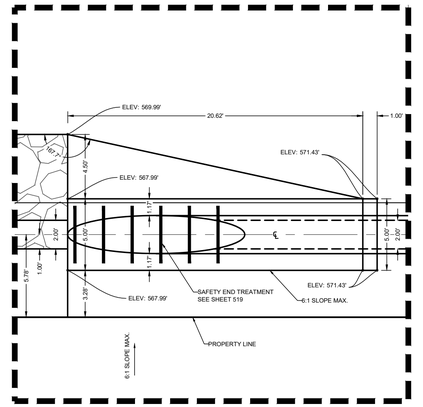
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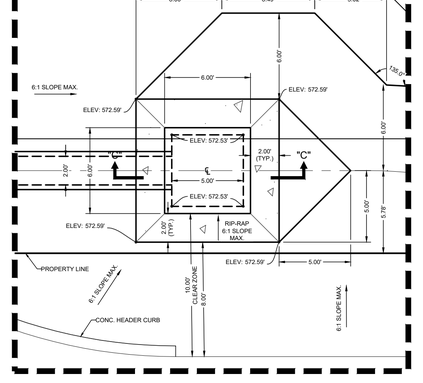
NOTE:

CONTRACTOR TO ENSURE POSITIVE DRAINAGE AT UPSTREAM & DOWNSTREAM ENDS OF DRAINS AND THAT NO PONDING WILL OCCUR.



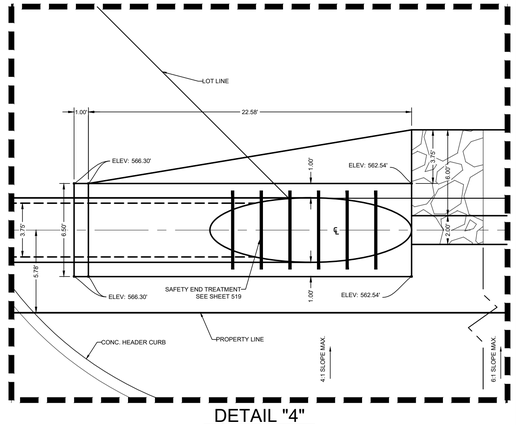
DETAIL "6"

SCALE: 1" = 5'



DETAIL "7"

SCALE: 1" = 5'



DETAIL "4"

SCALE: 1" = 5'

CIVIL ENGINEERING CONSULTANTS
d b a . D O N D U R D E N , I N C .
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-8999
FAX: (210) 641-8440
REGISTRATION #F-2214 / #10041000

6/17/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

EASTRIDGE SUBDIVISION UNIT 1

(FOR BEXAR COUNTY PERMIT ONLY)

DRAIN "C" PLAN & PROFILE

SHEET NO.

513

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN UNINTENTIONALLY ALTERED. REFER ONLY TO FINAL HARD COPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL.

Date: Jan 17, 2022, 3:37pm User ID: MaryStewart File: L:\Develop\Proj_2020\E0674101\Eastridge dwn \Cover\E0674101 512-513 Drain C PLAN & PROFILE.dwg

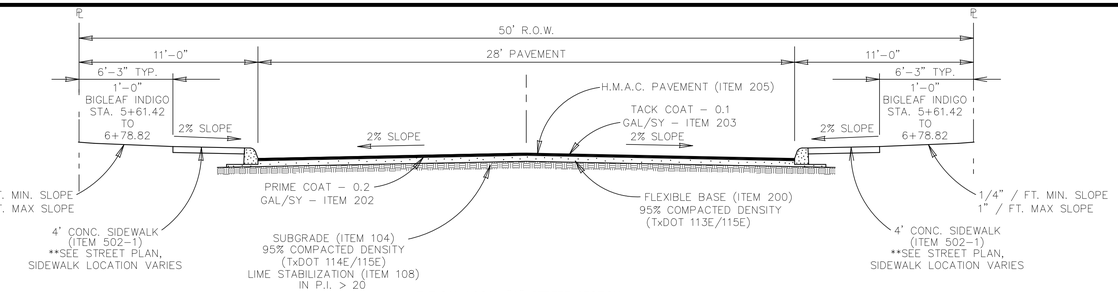
PLAT NO. 22-11800026

LOCAL A PRIMARY PAVEMENT DESIGN

PAVEMENT DESIGN WAS PREPARED by InTEC, INC

PAVEMENT STRUCTURE (DESIGN CBR=2.5)	STR. COEF.	STR. NO.
2" HOT MIX ASPHALT TYPE D	0.44	0.88
10" FLEXIBLE BASE (TYPE A, GRADE 1 OR 2)	0.14	1.40
6" LIME STABILIZED SUBGRADE (28.5#/SY)	0.08	0.48
	TOTAL	2.76

FOXFLOWER PASS:	STA. 6+41.44 TO STA. 13+37.34
CANDYFLOWER DRIVE:	STA. 1+00.00 TO STA. 6+32.19
	STA. 6+92.85 TO STA. 11+21.06
CORALBELL PASS:	STA. 1+00.00 TO STA. 6+66.15
BIGLEAF INDIGO:	STA. 1+00.00 TO STA. 5+01.42
SAGEFLOWER RUN:	STA. 1+30.00 TO STA. 4+09.64
WINECUP RIDGE:	STA. 1+41.00 TO STA. 3+69.67



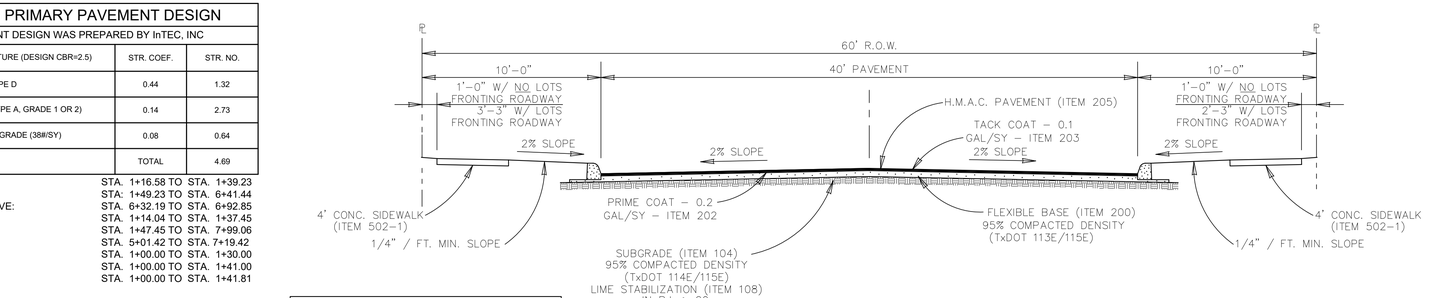
TYPICAL LOCAL "A" STREET SECTION
NOT TO SCALE

LOCAL B PRIMARY PAVEMENT DESIGN

PAVEMENT DESIGN WAS PREPARED by InTEC, INC

PAVEMENT STRUCTURE (DESIGN CBR=2.5)	STR. COEF.	STR. NO.
3" HOT MIX ASPHALT TYPE D	0.44	1.32
19.5" FLEXIBLE BASE (TYPE A, GRADE 1 OR 2)	0.14	2.73
8" LIME STABILIZED SUBGRADE (38#/SY)	0.08	0.64
	TOTAL	4.69

FOXFLOWER PASS:	STA. 1+16.58 TO STA. 1+39.23
	STA. 1+49.23 TO STA. 6+41.44
CANDYFLOWER DRIVE:	STA. 6+32.19 TO STA. 6+92.85
FIREWHEEL PASS:	STA. 1+14.04 TO STA. 1+37.45
	STA. 1+47.45 TO STA. 7+99.06
BIGLEAF INDIGO:	STA. 5+01.42 TO STA. 7+19.42
SAGEFLOWER RUN:	STA. 1+00.00 TO STA. 1+30.00
WINECUP RIDGE:	STA. 1+00.00 TO STA. 1+41.00
GINGERLILLY DR:	STA. 1+00.00 TO STA. 1+41.81



TYPICAL LOCAL "B" STREET SECTION
NOT TO SCALE

GEOTECHNICAL ENGINEERING STUDY

SUBSURFACE EXPLORATION AND PAVEMENT ANALYSIS
PROPOSED NEW STREETS
EASTRIDGE, UNIT 1
BEXAR COUNTY, TEXAS

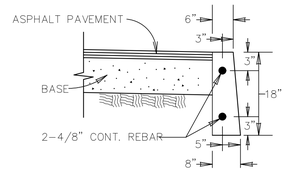
BY: InTEC
InTEC PROJECT No. S211490
DATE: DECEMBER 19, 2021

SPECIAL PAVEMENT DESIGN

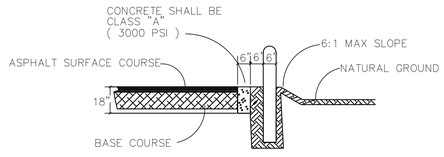
PAVEMENT DESIGN WAS PREPARED by InTEC, INC

PAVEMENT STRUCTURE (DESIGN CBR=10.0)	STR. COEF.	STR. NO.
3" HOT MIX ASPHALT TYPE D	0.44	1.32
9" HOT MIX ASPHALT TYPE B	0.34	3.06
	TOTAL	4.38

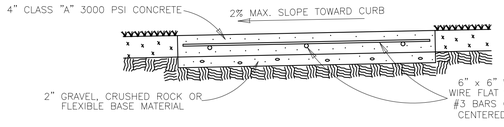
FOXFLOWER PASS:	STA. 1+39.23 TO STA. 1+49.23
FIREWHEEL PASS:	STA. 1+37.45 TO STA. 1+47.45



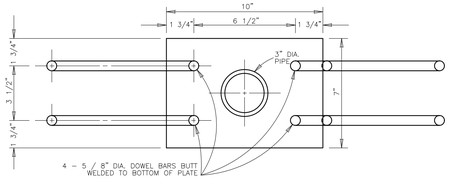
HEADER CURB DETAIL W/ REBAR
N.T.S.

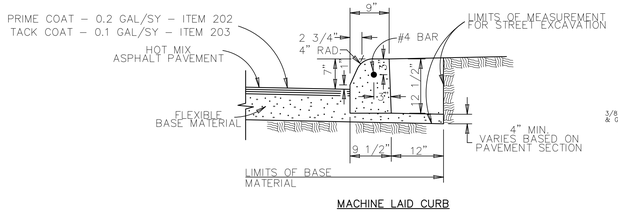


CONCRETE FLUSH CURB & BARRICADE POST

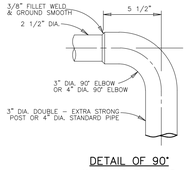


CONCRETE SIDEWALK SECTION
ITEM 502.1





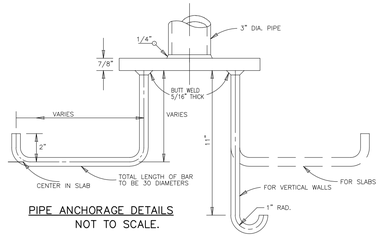
MACHINE LAID CURB
ITEM 501 ON FLEXIBLE BASE MATERIAL



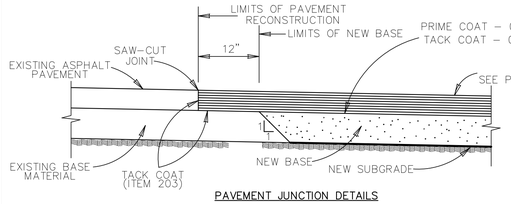
DETAIL OF 90° WELDING ELBOWS

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

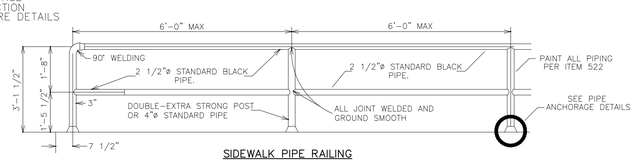
NOT TO SCALE



PIPE ANCHORAGE DETAILS
NOT TO SCALE.



PAVEMENT JUNCTION DETAILS
NOT TO SCALE



SIDEWALK PIPE RAILING
NOT TO SCALE
ITEM 522.1

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

FILL MATERIAL NOTE:
IF FILL IS USED TO RAISE THE GRADE, APPROVED FILL MATERIAL UNDERNEATH THE PAVEMENT SHOULD BE ON-SITE MATERIAL, FREE OF DELETERIOUS MATERIAL WITH MAXIMUM PLASTICITY INDEX VALUE OF 50 AND A MINIMUM CBR VALUE OF 2.5. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. LIME OR CEMENT APPLICATION RATES SHOULD BE RE-EVALUATED FOR THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY AND/OR COUNTY GUIDELINES.

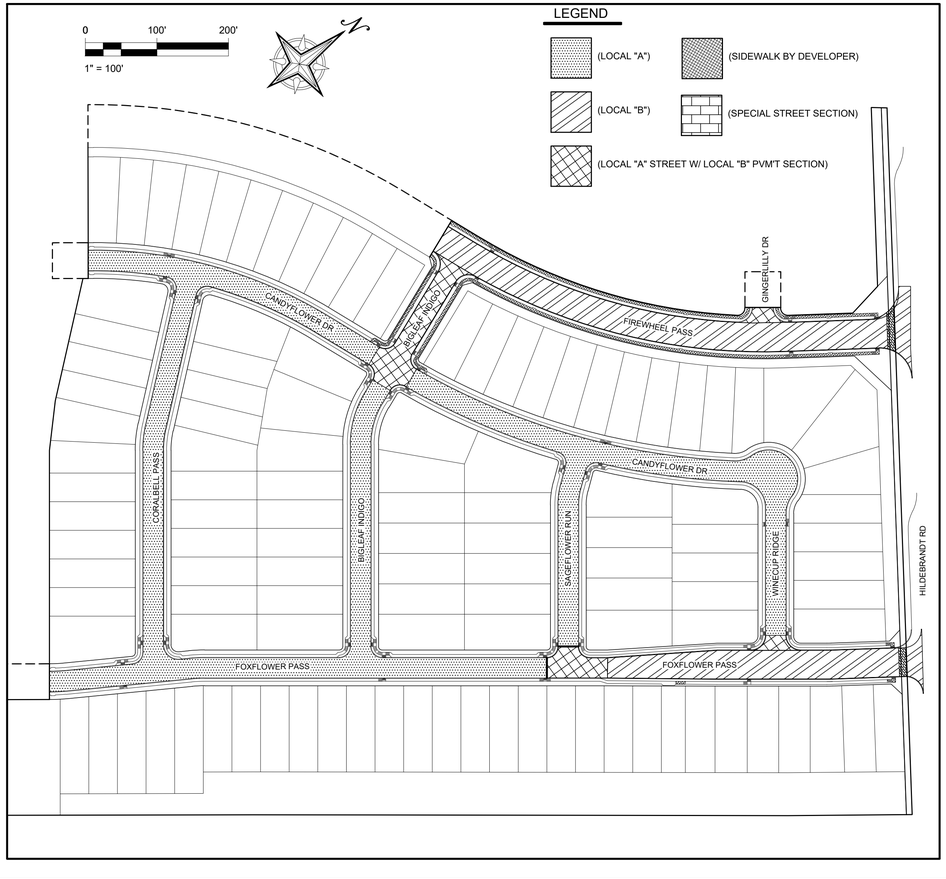
SUBGRADE MATERIAL NOTE:
1. SUBGRADE SOIL PLASTICITY INDEX SHOULD BE LESS THAN OR EQUAL TO 20 FOR PRIMARY PAVEMENT DESIGN.
2. IF THE SUBGRADE SOIL PLASTICITY INDEX VALUE IS GREATER THAN 20, THEN ONE OF THE FOLLOWING OPTIONS SHOULD BE FOLLOWED:
   2.a. THE SUBGRADE SHOULD BE STABILIZED TO A DEPTH OF 6 INCHES (SEE ALTERNATE PAVEMENT DESIGN).
   2.b. THE EXPANSIVE CLAYS SHOULD BE REMOVED AND REPLACED WITH SOILS WITH A PLASTICITY INDEX VALUE OF 20 OR LESS.
3. GEOTECHNICAL ENGINEER SHALL BE ON SITE TO MAKE SUBGRADE DETERMINATION AND PROVIDE/SUBMIT LETTER INDICATING STATION TO STATION FOR PLACEMENT OF EACH PVMT. DESIGN SECTION TO BE APPROVED BY ENGINEER PRIOR TO PLACEMENT OF BASE.

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 ¾ INCH SIEVE FROM THE SAMPLE):
  -MINIMUM PASSING 1 ¾" SIEVE 100
  -MINIMUM PASSING ¾" SIEVE 85
  -MINIMUM PASSING NO. 4 SIEVE 60
- 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 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 +/- 1.0 INCH.

LIME STABILIZATION
TO INCLUDE A LIME STABILIZED LAYER AS PART OF THE STRUCTURAL PAVEMENT SYSTEM, THE APPLICATION RATE OF LIME SHALL BE DETERMINED BASED ON LABORATORY TESTING AND SHALL BE THE LOWEST PERCENTAGE OF LIME THAT PROVIDES:.

• A PH OF 12.4 OR THE HIGHEST PH ACHIEVED IN ACCORDANCE WITH ASTM D6276 STANDARD TEST METHOD FOR USING PH TO ESTIMATE THE SOIL-LIME PROPORTION REQUIREMENT FOR SOIL STABILIZATION,
• A PI OF LESS THAN 20 IN ACCORDANCE WITH ASTM D4318 STANDARD TEST METHODS FOR LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS,
• AN UNCONFINED COMPRESSIVE STRENGTH (UCS) AT 7-DAYS OF AT LEAST 160 PSI IN ACCORDANCE WITH ASTM D5102 STANDARD TEST METHODS FOR UNCONFINED COMPRESSIVE STRENGTH OF COMPACTED SOIL-LIME MIXTURES (PROCEDURE B) (IN ADDITION, CURING SHOULD OCCUR FOR 7 DAYS AT 40°C AND SPECIMENS SHOULD BE SUBJECTED TO 24-HR CAPILLARY SOAK PRIOR TO TESTING), AND
• [OPTIONAL CRITERIA FOR EXPANSIVE SOILS] A THREE DIMENSIONAL EXPANSION OF LESS THAN 1% (OR MAYBE 2%).



CIVIL ENGINEERING CONSULTANTS
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11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
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FAX: (210) 641-8998
REGISTRATION #F-2214 / #10041000

DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

6/17/2022
STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

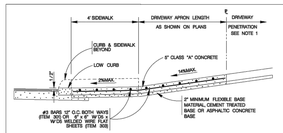
EASTRIDGE
SUBDIVISION UNIT 1
STREET DETAILS

SHEET NO.
514

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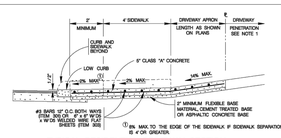
Date: Jun 17, 2022, 3:39pm User: © Mary Stewart File: L:\Drawings\Proj_2021\E0674101_Eastridge Unit 1\cad\E0674101 514-515 STREET DETAILS.dwg

PLAT NO. 22-11800026



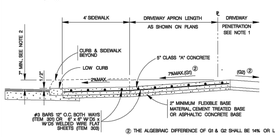
TYPICAL RESIDENTIAL DRIVEWAY SECTION

WITH SIDEWALK ABUTTING CURB
ITEM 503.1



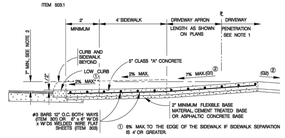
TYPICAL RESIDENTIAL DRIVEWAY SECTION

WITH SIDEWALK SEPARATED FROM CURB
ITEM 503.1



TYPICAL COMMERCIAL DRIVEWAY SECTION

WITH SIDEWALK ABUTTING CURB
ITEM 503.2



TYPICAL COMMERCIAL DRIVEWAY SECTION

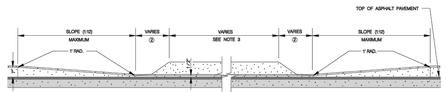
WITH SIDEWALK SEPARATED FROM CURB
ITEM 503.2

CONCRETE DRIVEWAY NOTES

1. DRIVEWAY PENETRATION REFERS TO A PORTION OF THE DRIVEWAY THAT MAY BE NECESSARY TO RECONSTRUCT WITHIN PRIVATE PROPERTY TO COMPLY WITH A MAXIMUM DRIVEWAY SLOPE. ONLY ONE OF THE FOLLOWING ITEMS SHALL BE PAID FOR UNDER THE FOLLOWING ITEMS AS MAY APPLY:
   A) CONCRETE DRIVEWAY PAD FOR UNDER ITEM NO.503.1 OR 503.2
   B) ASPHALTIC CONCRETE DRIVEWAY PAD FOR UNDER ITEM NO.508.4 AND SHALL INCLUDE A MINIMUM OF 7" ASPHALT TYPE "D" & 6" FLEXIBLE BASE
   C) GRAVEL DRIVEWAY PAD FOR UNDER ITEM NO.502.6 AND SHALL INCLUDE A MINIMUM OF 6" FLEXIBLE BASE
2. 7" MINIMUM HEIGHT WILL NOT NECESSARILY OCCUR AT THE PROPERTY LINE IT MAY OCCUR WITHIN THE RIGHT OF WAY OR WITHIN THE DRIVEWAY PENETRATION OR PRIVATE PROPERTY.
3. 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:

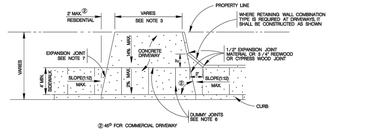
TYPE	MINIMUM	MAXIMUM
RESIDENTIAL	10'	20'
COMMERCIAL – ONE WAY	12'	20'
COMMERCIAL – TWO WAY	24'	30'

4. FOR LOCAL TYPE "A" STREETS, SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND 8' SEPARATED FROM THE CURB.THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 2' FROM THE BACK OF CURB.
5. FOR OTHER THAN LOCAL TYPE "A" STREETS,THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND SEPARATED A MINIMUM OF 2' 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.
6. 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.
7. A MINIMUM OF TWO ROUND AND SMOOTH DOWEL BARS 3/4" IN DIAMETER AND 18" IN LENGTH SHALL BE SPACED 18" APART AT EACH EXPANSION JOINT.
8. 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 5%.
9. SIDEWALK RAMP SURFACE SHALL BE BRUSH FINISHED.



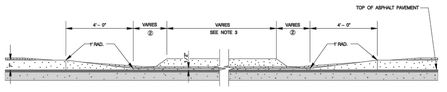
CURB PROFILE AT DRIVEWAY

WITH SIDEWALK ABUTTING CURB



TYPICAL DRIVEWAY PLAN VIEW

WITH SIDEWALK ABUTTING CURB



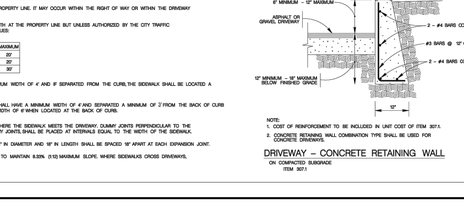
CURB PROFILE AT DRIVEWAY

WITH SIDEWALK SEPARATED FROM CURB



TYPICAL DRIVEWAY PLAN VIEW

WITH SIDEWALK SEPARATED FROM CURB



NOTE:
1. COST OF REINFORCEMENT TO BE INCLUDED IN UNIT COST OF ITEM 307.1.
2. CONCRETE RETAINING WALL COMBINATION TYPE SHALL BE USED FOR CONCRETE DRIVEWAYS.

DRIVEWAY – CONCRETE RETAINING WALL

ON COMPACTED SUBGRADE
ITEM 307.1

MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

CONCRETE DRIVEWAY STANDARDS

% SUBMITTAL	PROJECT NO.:	DATE:
DRAWN BY: V. VASQUEZ	DESIGN BY:	CHKD. BY: R.S. HOSSEINI, P.E.	SHEET NO.:	OF



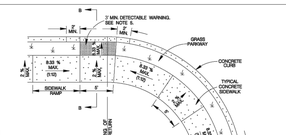
TYPICAL SIDEWALK RAMP – TYPE I

SIDEWALK ABUTS THE CURB
SCALE : 1"=10'



TYPICAL SIDEWALK RAMP – TYPE II

USED AT TEE INTERSECTIONS WHERE SIDEWALK ABUTS CURB
SCALE : 1"=10'



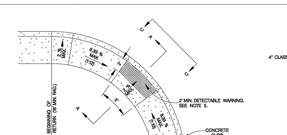
TYPICAL SIDEWALK RAMP – TYPE III

SIDEWALK SEPARATED FROM CURB
SCALE : 1"=10'



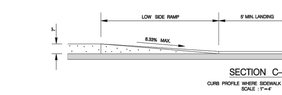
TYPICAL SIDEWALK RAMP – TYPE IV

USED AT TEE INTERSECTIONS WHERE SIDEWALK IS SEPARATED FROM CURB
SCALE : 1"=10'



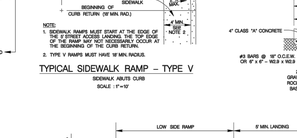
TYPICAL SIDEWALK RAMP – TYPE V

SIDEWALK ABUTS CURB
SCALE : 1"=10'



SECTION A–A

SCALE : 1"=4"

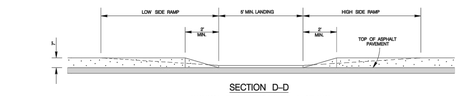


SECTION B–B

SCALE : 1"=4"

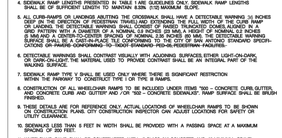
SECTION C–C

CURB PROFILE WHERE SIDEWALK ABUTS CURB
SCALE : 1"=4"



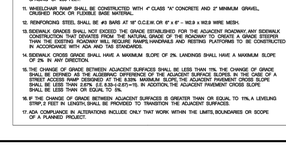
SECTION D–D

CURB PROFILE WHERE SIDEWALK IS SEPARATED FROM CURB
SCALE : 1"=4"



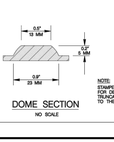
DETECTABLE WARNING SURFACE

SCALE : 1"=4"



PLAN DETAIL

NO SCALE



DOME SECTION

NO SCALE

NOTE:
STAMPED CONCRETE TRUNCATED DOMES WILL NOT BE ALLOWED TO BE USED FOR DETECTABLE WARNING ON WHEELCHAIR RAMPS. CONTRACTOR MUST SUBMIT TRUNCATED DOME INFORMATION THAT IS TO BE USED ON WHEELCHAIR RAMPS TO THE PROJECT MANAGER FOR APPROVAL AT LEAST 30 DAYS PRIOR TO INSTALLATION.

SIDEWALK PASSING SPACE

SCALE : 1"=10'

TABLE 1
(SEE NOTE 4)

GUTTER SLOPE	SIDEWALK RAMP LENGTH (1:12)	
	LOW SIDE	HIGH SIDE
1%	8'-0"	7'-0"
2%	8'-0"	8'-4"
3%	8'-0"	10'-0"
4%	8'-0"	12'-8"
5%	9'-10"	16'-8"

MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

WHEELCHAIR RAMP STANDARDS

% SUBMITTAL	PROJECT NO.:	DATE:
DRAWN BY: V. VASQUEZ	DESIGN BY:	CHKD. BY: R.S. HOSSEINI, P.E.	SHEET NO.:	OF

DESIGNED BY: L.T.E.
DRAWN BY: S.O.V.
DATE: 01/2021
JOB NO.: E0674101

CIVIL ENGINEERING CONSULTANTS
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SAN ANTONIO, TEXAS 78230-1037
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REGISTRATION #F-2214 / #10041000

6/17/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1

STREET DETAILS

SHEET NO.
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PLAT NO. 22-11800026

DESIGNED BY: L.T.E.
DRAWN BY: S.O.V.
DATE: 01/2021
JOB NO.: E0674101

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REGISTRATION #F-2114 / #10041000

6/17/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV | DATE | DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1

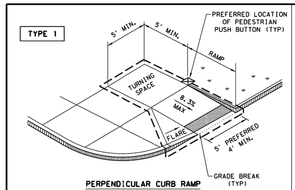
STREET DETAILS

SHEET NO.
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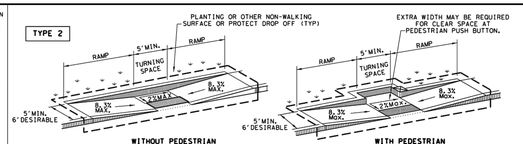
DATE:
FILE:

TYPE 1



PERPENDICULAR CURB RAMP

TYPE 2

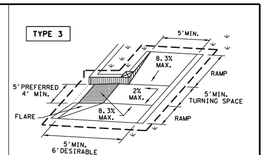


WITHOUT PEDESTRIAN PUSH BUTTON

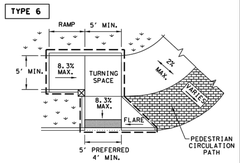
WITH PEDESTRIAN PUSH BUTTON

PARALLEL CURB RAMP

TYPE 3

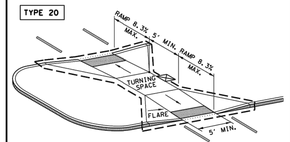


TYPE 6



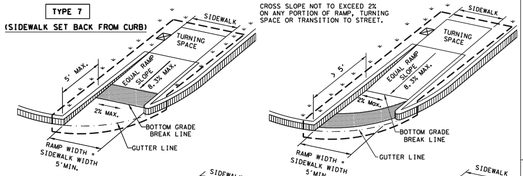
COMBINATION CURB RAMPS

TYPE 20

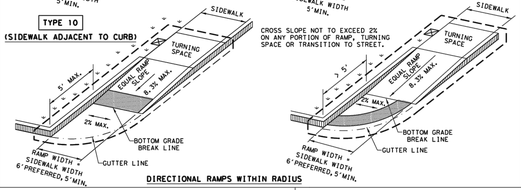


CURB RAMPS AT MEDIAN ISLANDS

TYPE 7
(SIDEWALK SET BACK FROM CURB)

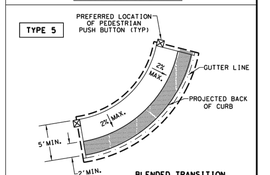


TYPE 10
(SIDEWALK ADJACENT TO CURB)



DIRECTIONAL RAMPS WITHIN RADIUS

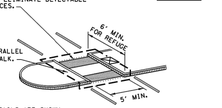
TYPE 5



BLENDED TRANSITION (FLUSH LANDING)

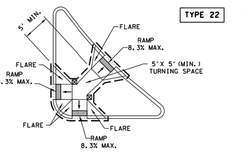
INSTALL DETECTABLE WARNING SURFACE AT EACH END OF THE CUT-THROUGH RAMP FOR A MINIMUM 2' USUAL SIDEWALK SURFACE WIDTH. IF MEDIAN IS LESS THAN 6' WIDE, ELIMINATE DETECTABLE WARNING SURFACES.

TYPE 21

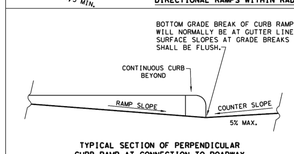


NOTE: CURB DETAILS ARE SHOWN ELSEWHERE IN THE PLANS.

TYPE 22



COMBINATION ISLAND RAMPS



TYPICAL SECTION OF PERPENDICULAR CURB RAMP AT CONNECTION TO ROADWAY

NOTES / LEGEND:

SEE GENERAL NOTES ON SHEET 2 OF 4 FOR MORE INFORMATION.

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

DETECTABLE WARNING SURFACE

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON IF APPLICABLE.

GUTTER LINE

GRADE BREAK

RAMP LIMITS OF PAYMENT

SHEET 1 OF 4

Texas Department of Transportation — Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

FILE: ped18	DN:TxDOT	DW:VP	CK:KM	CK:FK & JG
© TxDOT: MARCH, 2002	CONT: 1601	JOB:		HIGHWAY
REVISIONS	DIST:	COUNTY:		SHEET NO.
REVISED 06,2005				
REVISED 06,2012				
REVISED 07,2014				

GENERAL NOTES

CURB RAMPS

1. Install a curb ramp or blended transition at each pedestrian street crossing.
2. All slopes shown are maximum allowable. Cross slopes of 1.5% and lesser running should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
3. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
4. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is desirable. Where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances. 5'x 5' passing areas at intervals not to exceed 200' are required.
5. Turning Spaces shall be 5'x 5' minimum. Cross slope shall be maximum 2%.
6. Clear space at the bottom of curb ramps shall be a minimum of 4'x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
7. Provide flared sides where the pedestrian circulation path crosses the curb ramp. Flared sides shall be sloped at 10% maximum, measured parallel to the curb. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected.
8. Additional information on curb ramp location, design, light reflective value and texture may be found in the latest draft of the Proposed Guidelines for Pedestrian Facilities in the Public Right of Way (PROWAG) as published by the U.S. Architectural and Transportation Barriers Compliance Board (Access Board).
9. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.
10. Small channelization islands, which do not provide a minimum 5'x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.
11. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps shall align with theoretical crosswalks unless otherwise directed.
12. Provide curb ramps to connect the pedestrian access route at each pedestrian street crossing. Handrails are not required on curb ramps.
13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
14. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
15. Furnish and install No. 3 reinforcing steel bars at 18" o.c. both ways, unless otherwise directed.
16. Provide a smooth transition where the curb ramps connect to the street.
17. Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.
18. Existing features that comply with applicable standards may remain in place unless otherwise shown on the plans.

DETECTABLE WARNING MATERIAL

19. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with PROWAG. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved cast-in-place dark brown or dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans.
20. Detectable Warning Materials must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
21. Detectable warning surfaces must be firm, stable and slip resistant.
22. Detectable warning surfaces shall be a minimum of 24 inches in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
23. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb and neither end of that edge is greater than 5 feet from the back of curb. Detectable warning surfaces may be curved along the corner radius.
24. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.

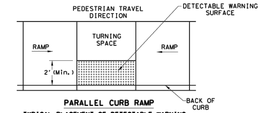
DETECTABLE WARNING PAVERS (IF USED)

25. Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.
26. Lay full-size units first followed by closure units consisting of at least 25 percent (25%) of a full unit. Cut detectable warning paver units using a power saw.

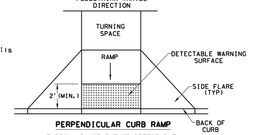
SIDEWALKS

27. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within unobstructed reach range specified in PROWAG section R406.
28. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.
29. Street grades and cross slopes shall be as shown elsewhere in the plans.
30. Changes in level greater than 1/4 inch are not permitted.
31. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway. Where a continuous grade greater than five percent (5%) must be provided, handrails may be desirable to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with PROWAG R409.
32. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
33. Driveways and turnouts shall be constructed and paid for in accordance with Item "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks".
34. Sidewalk details are shown elsewhere in the plans.

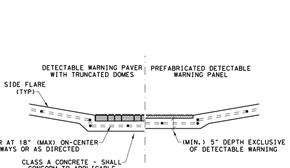
DETECTABLE WARNING SURFACE DETAILS



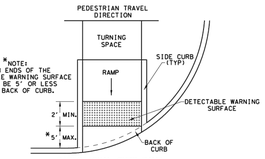
PARALLEL CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE.



PERPENDICULAR CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.



SECTION VIEW DETAIL
CURB RAMP AT DETECTIBLE WARNINGS



*NOTE: BOTH ENDS OF THE DETECTABLE WARNING SURFACE SHALL BE 5' OR LESS FROM BACK OF CURB.

DIRECTIONAL CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.

SHEET 2 OF 4

Texas Department of Transportation — Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

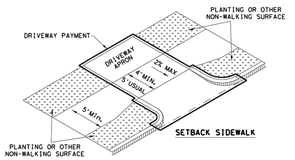
PED-18

FILE: ped18	DN:TxDOT	DW:VP	CK:KM	CK:FK & JG
© TxDOT: MARCH, 2002	CONT: 1601	JOB:		HIGHWAY
REVISIONS	DIST:	COUNTY:		SHEET NO.
REVISED 06,2005				
REVISED 06,2012				
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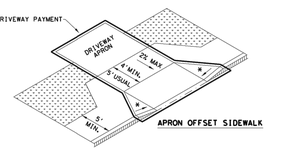
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DATE:
FILE:

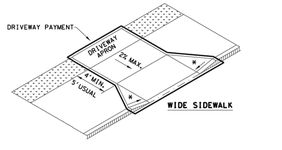
SIDEWALK TREATMENT AT DRIVEWAYS



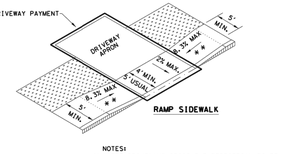
SETBACK SIDEWALK



APRON OFFSET SIDEWALK



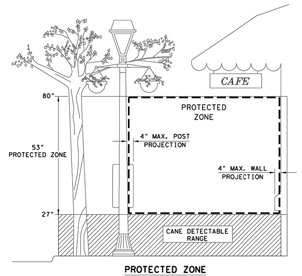
WIDE SIDEWALK



RAMP SIDEWALK

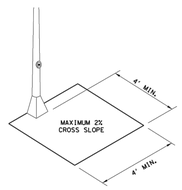
NOTES:
* WHERE DRIVEWAYS CROSS THE PEDESTRIAN ROUTE, SIDES SHALL BE FLARED AT 10% MAX SLOPE.

** IF CURB HEIGHT IS GREATER THAN 6 INCHES, USE GRADE LESS THAN OR EQUAL TO 5%. HANDRAIL AND DETECTABLE WARNING ARE NOT REQUIRED.

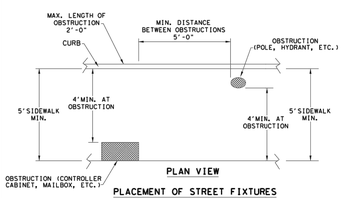


PROTECTED ZONE

NOTE: IN PEDESTRIAN CIRCULATION AREA, MAXIMUM 4" PROJECTION FOR POST OR WALL MOUNTED OBJECTS BETWEEN 27" AND 80" ABOVE THE SURFACE.



CLEAR SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



PLAN VIEW

PLACEMENT OF STREET FIXTURES

NOTE: ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' X 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.



WHEN AN OBSTRUCTION OF A HEIGHT GREATER THAN 27" FROM THE SURFACE WOULD CREATE A PROTRUSION OF MORE THAN 4" INTO THE PEDESTRIAN CIRCULATION AREA, CONSTRUCT ADDITIONAL CURB OR FOUNDATION AT THE BOTTOM TO PROVIDE A MAXIMUM 4" OVERHANG.

PROTRUDING OBJECTS OF A HEIGHT ≤27" ARE DETECTABLE BY CANE AND DO NOT REQUIRE ADDITIONAL TREATMENT.

DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

SHEET 3 OF 4

Texas Department of Transportation — Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

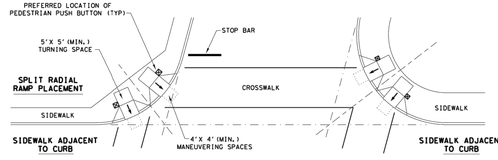
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© TxDOT: MARCH, 2002	CONT: 1601	JOB:		HIGHWAY
REVISIONS	DIST:	COUNTY:		SHEET NO.
REVISED 06,2005				
REVISED 06,2012				
REVISED 07,2014				

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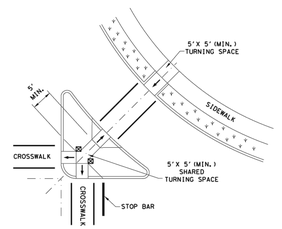
DATE:
FILE:

TYPICAL CROSSING LAYOUTS

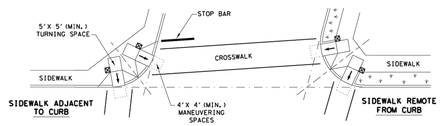
SEE SHEET 1 OF 4 FOR DETAILS AND DIMENSIONS



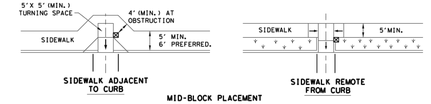
SKEWED INTERSECTION WITH "LARGE" RADIUS

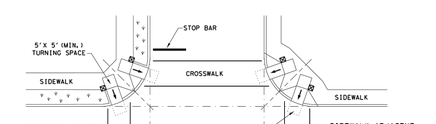


AT INTERSECTION W/FREE RIGHT TURN & ISLAND



SKEWED INTERSECTION WITH "SMALL" RADIUS





NORMAL INTERSECTION WITH "SMALL" RADIUS

LEGEND:

SHOWS DOWNWARD SLOPE.

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON (IF APPLICABLE).

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

SHEET 4 OF 4

Texas Department of Transportation — Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

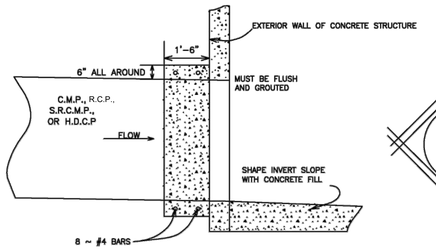
FILE: ped18	DN:TxDOT	DW:VP	CK:KM	CK:FK & JG
© TxDOT: MARCH, 2002	CONT: 1601	JOB:		HIGHWAY
REVISIONS	DIST:	COUNTY:		SHEET NO.
REVISED 06,2005				
REVISED 06,2012				
REVISED 07,2014				

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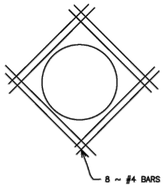
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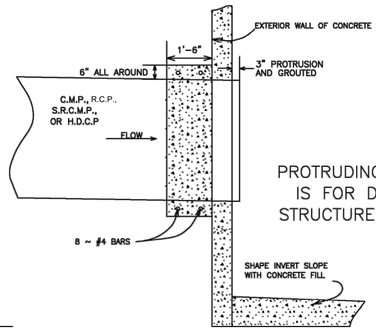
PLAT NO. 22-11800026

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



PIPE FLUSH WITH INVERT





PROTRUDING PIPE IS FOR DROP STRUCTURE ONLY

CONCRETE COLLAR DETAIL

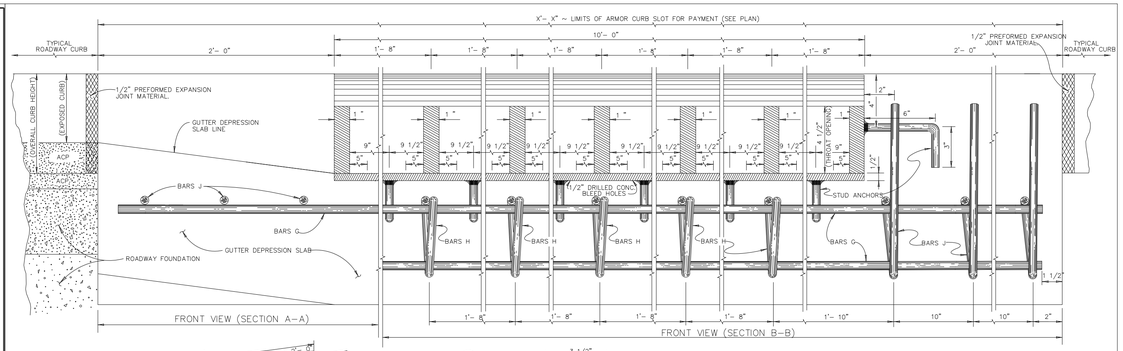
(NOT TO SCALE)

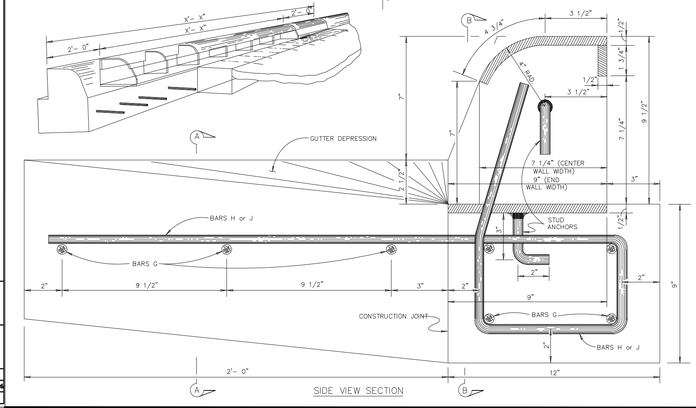
JANUARY 2006

STANDARD PLANS
CITY OF SAN ANTONIO, TEXAS
DEVELOPMENT SERVICES

CONCRETE COLLAR DETAIL

DRAWN BY:	DATE:	REVISIONS	SCALE: SEE ABOVE
ANDREW WINTER, P.E.			DATE: 19 JANUARY 2006
CHECKED BY: SAM BENT, P.E.			SHEET: 1 OF 1



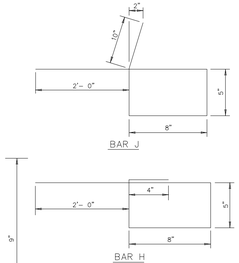


ESTIMATED QUANTITIES
FOR REINFORCING STEEL

BAR	NO.	SIZE	SPAC.	LENGTH	WEIGHT
G	7	#4	SHOWN	13'- 9"	64
H	5	#4	1'- 8"	4'- 6"	15
J	6	#4	8"	5'- 0"	20
TOTAL WEIGHT *				LBS.	99
CONCRETE FOR FOUNDATION *				C.Y.	0.47
CONCRETE FOR GUTTER DEPRESSION*				C.Y.	0.78

STRUCTURAL STEEL FOR ARMOR CURB SLOT		
STUD ANCHORS (1/2"DIA.)	LBS.	3.5
STEEL PLATE	LBS.	451
TOTAL WEIGHT*	LBS.	454.5

* FOR CONTRACTORS INFO ONLY.



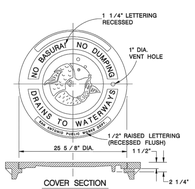
GENERAL NOTES:
ALL CONCRETE SHALL BE CL."A".
ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
ALL SIDES OF ARMOR CURB SLOT AND STUD ANCHORS SHALL BE 1/4" FILLET WELDS.
ALL EXPOSED STRUCTURAL STEEL (ARMOR) SHALL BE GALVANIZED.
ALL EXPOSED EDGES ON ARMOR CURB SHALL RECEIVE A 1/8" BEVEL.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

ARMOR CURB SLOT
WITH CONCRETE FOUNDATION
SAN ANTONIO DISTRICT STANDARDS

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FED.RD. DIVISION	PROJECT NO.			SHEET NO.
6				
STATE	STATE (DIST.)	COUNTY		
TEXAS	SAT			
CONT.	SECT.	JOB	HIGHWAY NO.	

10/95
REV.07/01



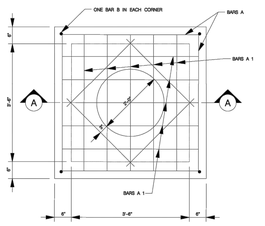
COVER SECTION

MANHOLE LID & RING DETAIL

SCALE: 1 : 16

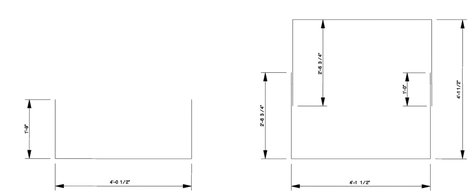
NOTES FOR MANHOLE LID AND RING

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



TOP SLAB PLAN VIEW

SCALE:1" = 2'-0"



BARS A

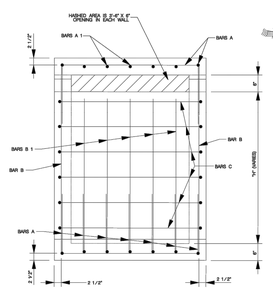
SCALE:1" = 2'-0"

BARS C

SCALE:1" = 2'-0"

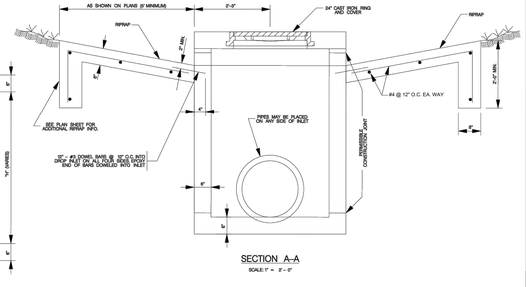
ESTIMATED QUANTITIES FOR "H" = 4'-6"					
REINFORCING STEEL					
BAR	NO.	SIZE	SPACE	LENGTH	WEIGHT
A	18	4	8" +/-	7'-6 1/2"	79
A 1	10	4	8" +/-	4'-0 1/2"	27
B	4	4	AS SHOWN	5'-7"	15
B 1	20	4	8" +/-	4'-7"	61
C	12	4	9" +/-	18'-6"	148
J	4	4	AS SHOWN	2'-6"	6
TOTAL REINFORCING STEEL					336 Lbs. *
CLASS A CONCRETE					2.10 CY *

* FOR CONTRACTOR'S INFORMATION ONLY. QUANTITIES VARY WITH "H". SEE INLET & MANHOLE SUMMARY SHEETS FOR "H".



SIDE VIEW WALL

SCALE:1" = 2'-0"



SECTION A-A

SCALE:1" = 2'-0"

GENERAL NOTES:

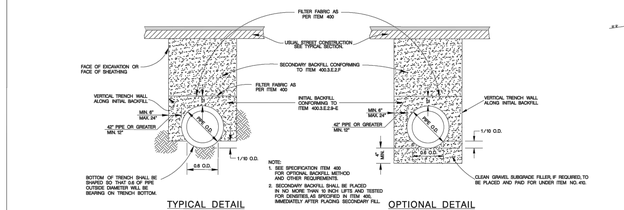
1. ALL BARS INTERCEPTING THE RING AND COVER OPENING AND PIPE OPENINGS. SHALL BE FIELD CUT
2. CONCRETE SHALL BE CLASS "A", 3000 PSI IN 28 DAYS.
3. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
4. ALL EXPOSED CORNERS SHALL HAVE 3/4" CHAMFER
5. PAYMENT FOR ALL EXCAVATION, BACKFILLING, CONCRETE, REINFORCING STEEL, RINGS, AND COVER SHALL BE INCLUDED IN THE UNIT COST OF ITEM 403 "STORM SEWER JUNCTION BOXES AND INLETS".

JANUARY 2005

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

4-WAY INLET STANDARDS

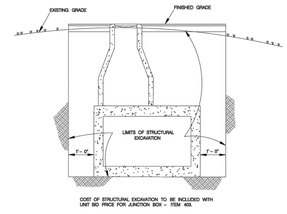
% SUBMITTAL	PROJECT NO.:		DATE:
DRAWN BY: M. BARRERA, E.I.T.	DESIGN BY:	CHKD. BY:	SHEET NO.: OF



TYPICAL DETAIL

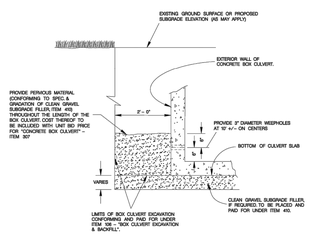
OPTIONAL DETAIL

PIPE BEDDING & BACKFILL DETAILS

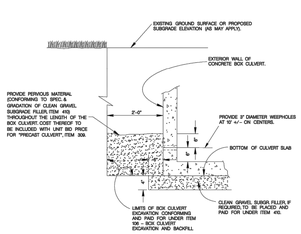


STRUCTURAL EXCAVATION AT JUNCTION BOXES

NO SCALE

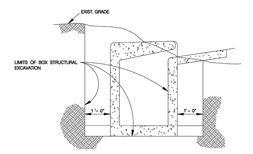


CAST-IN-PLACE BOX CULVERT



PRECAST BOX CULVERT

CONCRETE BOX CULVERT



STRUCTURAL EXCAVATIONS AT DRAINAGE INLETS

NO SCALE

MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

PIPE BEDDING & MISCELLANEOUS DRAINAGE DETAILS

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

DESIGNED BY:	L.T.E.
DRAWN BY:	S.Q.V.
DATE:	01/2021
JOB NO.:	E0674101

CIVIL ENGINEERING CONSULTANTS
dba. DON DURDEN, INC.
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL. (210) 641-8999
FAX. (210) 641-8440
REGISTRATION #F-2214 / #10041000

CEC

6/17/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1

DRAIN DETAILS

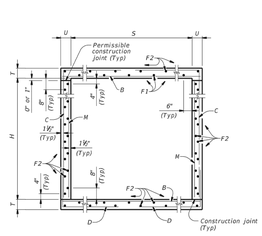
SHEET NO.

517

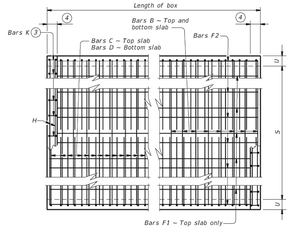
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Date: Jan 17, 2022, 2:36pm User: © Mary Stewart File: L:\Develop\Proj\2021\2067401 Eastridge Unit 1\cad\E2067401 S16 DRAIN DETAILS.dwg

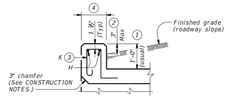
PLAT NO. 22-11800026



TYPICAL SECTION



PLAN OF REINF STEEL



SECTION THRU CURB

1. 0" Min to 5'-0" Max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail or curbs taller than 1'-0", refer to the Extended Curb Details (ECD) standard sheet. For structures with T631 or T631LS bridge rail, refer to the Mounting Details for T631 & T631LS Rails (T631-CM) standard sheet. Refer to the Rail Anchorage Curb (RAC) standard sheet for structures with bridge rail other than T631 or T631LS.
2. For vehicle safety, the following requirements must be met:
   - For structures without bridge rail, construct curbs no more than 3" above finished grade.
   - For structures with bridge rail, construct curbs flush with finished grade.

   Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
3. For curbs less than 1'-0" high, tilt Bars K or reduce bar height as necessary to maintain cover. For curbs less than 3" high, Bars K may be omitted.
4. 1'-0" typical. 2'-3" when the Rail Anchorage Curb (RAC) standard sheet is referred to elsewhere in the plans.

The Contractor may replace Bars B, C, D, E, F1, F2, H, Y, and/or Z with deformed welded wire reinforcement (WWR) meeting the requirements of ASTM A1064. The area of required reinforcement may be reduced by the ratio of 60 ksi / 70 ksi. Spacing of WWR is limited to 4" Min and 18" Max. When required, provide lap splices in the WWR of the same length required for the equivalent bar size, rounded up for wire sizes between conventional bar sizes. The lap length required for WWR is never less than the lap length required for uncoated #4 bars.

Example conversion: Replacing No. 6 Gr 60 at 6" Spacing with WWR.
Required WWR = (0.44 sq. in. per 0.5 ft.) x (60 ksi / 70 ksi) = 0.755 sq. in. per ft.
If D30.6 wire is used to meet the 0.755 sq. in. per ft. requirement in this example, the required spacing = (0.306 sq. in.) / (0.755 sq. in. per ft.) x (12 in. per ft.) = 4.86" Max spacing. Required lap length for the provided D30.6 wire is 2'-1" (the same minimum lap length required for uncoated #5 bars, as listed under MATERIAL NOTES).

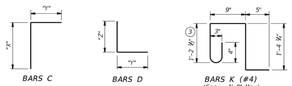
CONSTRUCTION NOTES:
Do not use permanent forms.
Chamfer the bottom edge of the top slab 3" at the entrance.
Optionally, raise construction joints shown at the flow line by a maximum of 6". If this option is taken, Bars M may be cut off or raised, Bars C and D may be reversed.

MATERIAL NOTES:
Provide Grade 60 reinforcing steel.
Provide galvanized reinforcing steel if required elsewhere in the plans.
Provide Class C concrete (f'c = 3,600 psi) for culvert barrel and curb, with the following exceptions: provide Class S concrete (f'c = 4,000 psi) for top slabs of:
- culverts with overlay,
- culverts with 1-to-2 course surface treatment, or
- culverts with the top slab as the final riding surface.

Provide bar laps, where required, as follows:
- Uncoated or galvanized – #4 = 1'-8" Min
- Uncoated or galvanized – #5 = 2'-1" Min

GENERAL NOTES:
Designed according to AASHTO LRFD Bridge Design Specifications for the range of fill heights shown.
See the Single Box Culverts Cast-In-Place Miscellaneous Detail (SCC-MD) standard sheet for details pertaining to skewed ends, angle sections, and lengthening.

Cover dimensions are clear dimensions, unless noted otherwise.
Reinforcing bar dimensions shown are out-to-out of bar.



HL93 LOADING SHEET 1 OF 2

Texas Department of Transportation — Bridge Division Standard

SINGLE BOX CULVERTS CAST-IN-PLACE
0' TO 30' FILL

SCC-3 & 4

File:	scc34ste-21.dgn	dn: TxDOT	ck: BWP	dw: TxDOT	ck: TxDOT
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REVISIONS		DIST	COUNTY		SHEET NO.
04/2021 Updated X values.					

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DATE:
FILE:

SECTION DIMENSIONS				FILL HEIGHT (5)	BILLS OF REINFORCING STEEL (For Box Length = 40 feet)																				QUANTITIES					
					Bars B				Bars C				Bars D				Bars M – #4			Bars F1 – #4 at 18" Spa			Bars F2 – #4 at 18" Spa			Bars H 4 – #4		Bars K		Per Foot of Barrel		Curb		Total	
S	H	T	U		No.	Size	Spa	Length	Weight	No.	Size	Spa	Length	Weight	" X "	" Y "	No.	Size	Spa	Length	Weight	No.	Length	Wt	No.	Length	Weight	Length	Wt	No.	Wt	Conc (CY)	Reinf (Lb)	Conc (CY)	Reinf (Lb)	Conc (CY)	Reinf (Lb)
3'-0"	2'-0"	8"	7"	30"	108	#5	9"	3'-11"	441	108	#4	9"	5'-4"	385	2'-6"	2'-10"	108	#4	9"	5'-1"	367	2'-10"	2'-3"	108	9"	2'-0"	144	3	39'-9"	80	19	39'-9"	505	3'-11"	10	10	28	0.292	48.1	0.3	38	12.0	1,960
3'-0"	2'-0"	8"	7"	30"	108	#5	9"	3'-11"	441	108	#4	9"	6'-4"	457	3'-6"	2'-10"	108	#4	9"	5'-1"	367	2'-10"	2'-3"	108	9"	2'-0"	216	3	39'-9"	80	23	39'-9"	611	3'-11"	10	10	28	0.335	54.3	0.3	38	13.7	2,210
4'-0"	2'-0"	8"	7"	30"	108	#5	9"	4'-11"	554	162	#4	6"	5'-8"	613	2'-6"	3'-2"	162	#4	6"	5'-5"	586	3'-2"	2'-3"	108	9"	2'-0"	144	3	39'-9"	80	21	39'-9"	558	4'-11"	13	12	33	0.342	63.4	0.4	46	14.1	2,581
4'-0"	3'-0"	8"	7"	30"	108	#5	9"	4'-11"	554	162	#4	6"	6'-8"	721	3'-6"	3'-2"	162	#4	6"	5'-5"	586	3'-2"	2'-3"	108	9"	3'-0"	216	3	39'-9"	80	25	39'-9"	664	4'-11"	13	12	33	0.385	70.5	0.4	46	15.8	2,867
4'-0"	4'-0"	8"	7"	30"	108	#5	9"	4'-11"	554	162	#4	6"	7'-8"	830	4'-6"	3'-2"	162	#4	6"	5'-5"	586	3'-2"	2'-3"	108	9"	4'-0"	289	3	39'-9"	80	25	39'-9"	664	4'-11"	13	12	33	0.428	75.1	0.4	46	17.5	3,049

(5) For direct traffic culverts (fill height ≤ 2 ft.), identify the required box size and select the option with the minimum fill height.

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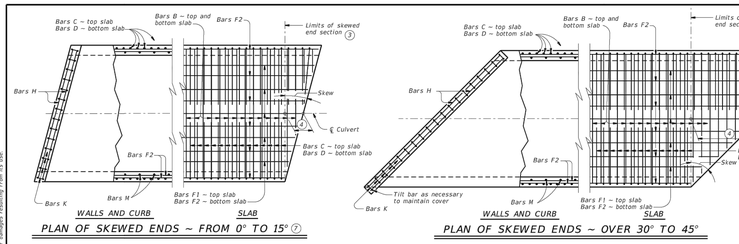
HL93 LOADING SHEET 2 OF 2

Texas Department of Transportation — Bridge Division Standard

SINGLE BOX CULVERTS CAST-IN-PLACE
0' TO 30' FILL

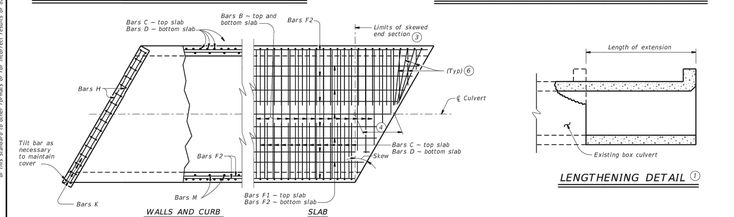
SCC-3 & 4

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©TxDOT	February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS		DIST	COUNTY		SHEET NO.
04/2021 Updated X values.					

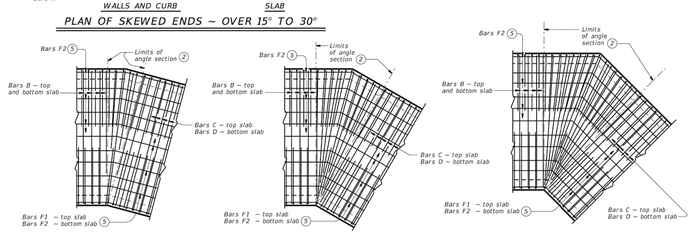


PLAN OF SKEWED ENDS ~ FROM 0° TO 15° (7)

PLAN OF SKEWED ENDS ~ OVER 30° TO 45°



PLAN OF SKEWED ENDS ~ OVER 15° TO 30°



PLAN OF ANGLE SECTION ~ FROM 0° TO 15°

PLAN OF ANGLE SECTION ~ OVER 15° TO 30°

PLAN OF ANGLE SECTION ~ OVER 30° TO 45°

1. For skewed box culverts with less than 2'-0" of fill, break back the top slab to provide a 1'-10" minimum lap of the existing longitudinal bars with the longitudinal bars in the extension.
   For non-skewed box culverts with less than 2'-0" of fill and for skewed or non-skewed culverts with a fill depth of 2'-0" or greater, break back the top slab to provide a 1'-10" minimum lap of the existing longitudinal bars with the longitudinal bars in the extension. Alternatively, if the box is non-skewed, embed #6 anchor bars with a Type III, C, D , E, or F anchor adhesive into the existing walls, top and bottom slab at 1'-0" center-to-center spacing. Minimum embedment depth is 8". Anchor adhesive chosen must be able to achieve a basic bond strength in tension, N_{ba}, of 26.4 kips. Submit signed and sealed calculations or the manufacturer's published literature showing the proposed anchor adhesive's ability to develop this load to the Engineer for approval prior to use. Anchor installation, including hole size, drilling, and clean out, must be in accordance with Item 450, "Railing," Test adhesive anchors in accordance with Item 450.3.3. "Tests." Test 3 anchors per 100 anchors installed.
   Bars F1 and F2 may be spliced at any point to install the extension. Clean and extend the exposed wingwall and apron reinforcing into the extension. When lengthening existing box culverts with dimensions different than current standard dimensions, form horizontal and vertical transitions as directed by the Engineer. Match bottom slabs to maintain an uninterrupted flow line. Field bend existing and new reinforcing into transitions and maintain specified cover requirements. For top slabs of culverts with overlay, with 1-to-2 course surface treatment, or with the top slab as the final riding surface, adjust the "H" dimension to provide a smooth riding surface.
2. When the spacing between Bars B becomes less than half of the normal spacing, cut bars to avoid conflict.
3. The length of Bars B vary in the skewed end sections.
4. [the half of overall width] x [tangent of the skew angle]
5. Place Bars F1 and F2 continuously through the angle section. Bend Bars F1 and F2 to remain parallel to the walls of the box culvert.
6. When necessary to avoid conflict in acute corners, shorten the slab extension leg of Bars C and Bars D to a minimum of 1'-6" for skews of 30° thru 45°.
7. At the Contractor's option, for skews of 15° or less, place Bars B, C, and D parallel to the skewed end while maintaining spacing along centerline of box. Increase lengths of Bars B shown on the Single Box Culverts Cast-In-Place (SCC) standards sheets to accommodate the skew.

CONSTRUCTION NOTES:
Do not use permanent forms.
When required, lap Bars H 1'-8" for uncoated or galvanized bars.
Provide a minimum of 1 ½" clear cover.

MATERIAL NOTES:
Provide Grade 60 reinforcing steel.
Provide galvanized reinforcing steel, if required elsewhere in the plans.
Provide Class C concrete (f'c = 3,600 psi) with these exceptions: provide Class S concrete (f'c = 4,000 psi) for top slabs of culverts with overlay, with 1-to-2 course surface treatment, or with the top slab as the final riding surface.

GENERAL NOTES:
Designed according to AASHTO LRFD Bridge Design Specifications.
Refer to Single Box Culverts Cast-in-Place (SCC) standard sheets for details of straight sections of culvert.
For skewed sections and angle sections, refer to Single Box Culverts Cast-in-Place (SCC) standard sheets for slab and wall dimensions, bar sizes, maximum bar spacing, and any other details not shown.
For skewed ends with curbs, adjust length of Bars H, number of Bars K, curb concrete volume, and reinforcing steel weight by dividing the values shown on the culvert Single Box Culverts Cast-in-Place (SCC) standard sheets by the cosine of the skew angle.

Cover dimensions are clear dimensions, unless noted otherwise.

HL93 LOADING

Texas Department of Transportation — Bridge Division Standard

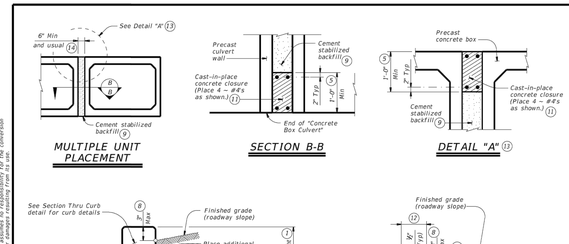
SINGLE BOX CULVERTS CAST-IN-PLACE MISCELLANEOUS DETAILS

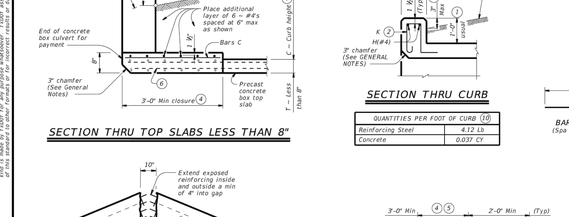
SCC-MD

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REVISIONS		DIST	COUNTY		SHEET NO.

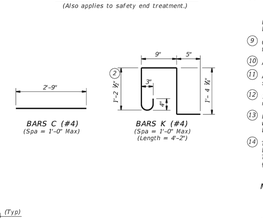
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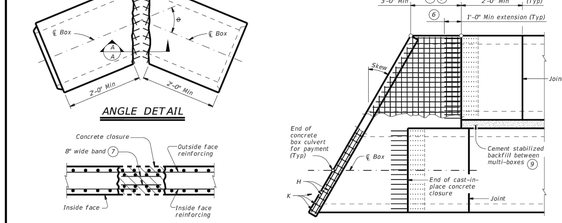
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QUANTITIES PER FOOT OF CURB (10)	
Reinforcing Steel	4.12 Lb
Concrete	0.037 CY





CONTRACTOR SHALL PROVIDE LAY SCHEDULE AND SHOP DRAWINGS PRIOR TO PRECAST CULVERT INSTALLATION.

WINGWALL CONNECTION
(Also applies to safety end treatment.)

1. 0" Min to 5'-0" Max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail, or curbs taller than 1'-0, refer to the Extended Curb Details (ECD) standard sheet. For structures with T631 or T631LS bridge rail, refer to the Mounting Details for T631 & T631LS Rails (T631-CM) standard sheet. Refer to the Box Culvert Rail Mounting Details (RAC) standard sheet for structures with bridge rail other than T631 or T631LS.
2. For curbs less than 1'-0" high, tilt Bars K or reduce bar height as necessary to maintain cover. For curbs less than 3" high, Bars K may be omitted.
3. Extend curb, wingwall, or safety end treatment reinforcing into concrete closure. Bend or trim, as necessary, any reinforcing that does not fit into closure area.
4. Provide a 3'-0" Min cast-in-place concrete closure. Break back boxes in the field or cast as shown. Extend bars of reinforcing in the closure that are the same size and spacing as in the precast box section. Provide #4 longitudinal reinforcement spaced at 12" inches Max within the closure. Except where shown otherwise, construct the cast-in-place closure flush with the inside and outside faces of the precast box section.
5. For multiple unit placements, adjust the length of the closure for the interior walls as necessary. Provide a 3'-0" Min cast-in-place closure in the top slab, bottom slab, and exterior wall. See Section B-B detail when interior walls are cast full length.
6. Extend precast box reinforcing a minimum of 1'-0" into concrete closure (Typ).
7. Place bands of reinforcing matching the inside and outside face reinforcing in the gaps of the top and bottom slabs. Place a band matching the outside face reinforcing of the wall in the gaps of the walls (placed in the outside face only). Tack weld the bands to the exposed reinforcing at each point of contact.
8. For vehicle safety, the following requirements must be met:
   - For structures without bridge rail, construct curbs no more than 3" above finished grade.
   - For structures with bridge rail, construct curbs flush with finished grade.

   Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
9. Cement stabilized backfill between boxes is considered part of the box culvert for payment.
10. All curb concrete and reinforcing is considered part of the box culvert for payment.
11. Any additional concrete and reinforcing required for the closures will be considered subsidiary to the box culvert for payment.
12. 1'-0" typical. 2'-3" when the Box Culvert Rail Mounting Details (RAC) standard sheet is referred to elsewhere in the plans.
13. For multiple unit placement with overlay, with 1 to 2 course surface treatment, or with the top slab as the final riding surface, provide wall closure as shown in Detail "A".
14. This dimension may be increased with approval of the Engineer to allow the precast boxes to be tunneled or jacked in accordance with Item 476, "Jacking, Boring, or Tunneling Pipe or Box". No payment will be made for any additional material in the gap between adjacent boxes.

MATERIAL NOTES:
Provide Grade 60 reinforcing steel.
Provide ASTM A1064 welded wire reinforcement.
Provide Class C concrete (f'c = 3,600 psi) for the closures.
Provide cement stabilized backfill meeting the requirements of Item 400, "Excavation and Backfill for Structures."
Any additional concrete required for the closures will be considered subsidiary to the box culvert.

GENERAL NOTES:
Designed according to AASHTO LRFD Bridge Design Specifications.
Refer to the Single Box Culverts Precast (SCP) standard sheets for details and notes not shown.
Chamfer the bottom edge of the top slab closure 3 inches at culvert closure ends.

Cover dimensions are clear dimensions, unless noted otherwise.
Reinforcing bars dimensions are out-to-out of bars.

HL93 LOADING

Texas Department of Transportation — Bridge Division Standard

BOX CULVERTS PRECAST MISCELLANEOUS DETAILS

SCP-MD

File:	scpmdste-20.dgn	dn: GAF	ck: LRB	dw: BWP/TxDOT	ck: GAF
©TxDOT	February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS		DIST	COUNTY		SHEET NO.

REV	DATE	DESCRIPTION

DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

CIVIL ENGINEERING CONSULTANTS
d b a . D O N D U R D E N , I N C .
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-8999
FAX: (210) 641-8998
REGISTRATION #F-2214 / #10041000

6/17/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED PROFESSIONAL ENGINEER

EASTRIDGE SUBDIVISION UNIT 1

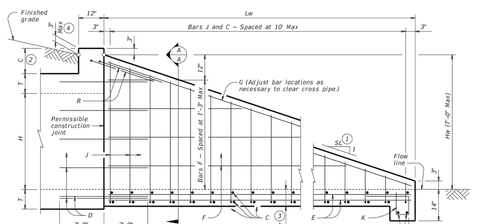
DRAIN DETAILS

SHEET NO.
518

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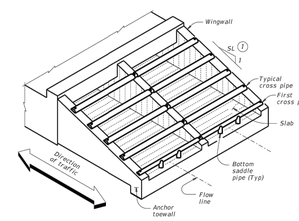
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PLAT NO. 22-11800026



TYPICAL WINGWALL ELEVATION

(Cross pipes not shown for clarity.)



ISOMETRIC VIEW OF TYPICAL INSTALLATION

(Showing bolted anchor option.)

WING DIMENSION CALCULATIONS:

Hw = H + T + C ~ 0.250
Lw = (Hw ~ 0.333) (SL)

For cast-in-place culverts:
Atw = (N) (S) + (N + 1) (U)
For precast culverts:
Atw = (N) (2U + S) + (N ~ 1) (0.500')

Total Wingwall Area (SF)
= (0.5) (Hw + 0.333) (Lw) (N ~ 1)
Total Concrete Volume (CY)
= [(Wingwall Area) (0.583') +
(Lw) (Atw) (0.583') +
(Atw) (1.167') (1.167' ~ 0.583')] ÷ (27)

PIPE RUNNER DIMENSION CALCULATIONS:

Pipe Runner Length (feet)
= (Lw) (K1) + (1.917')
Total Reinforcing (Lb)
= (1.55) (Lw) (Atw) +
(4.43) (Atw) +
(K2) (Hw) (N + 1) (√Lw)

C = Height of curb above top of top slab (feet)
Hw = Height of wingwall (feet)
K = Constant value for use in formulas

Slope SL:1	K1	K2
3:1 ~	1.054 ~	7.45
4:1 ~	1.031 ~	8.49
6:1 ~	1.014 ~	10.30

Atw = Anchor toewall length (feet)
Lw = Length of wingwall (feet)
N = Number of culvert barrels
SL:1 = Side slope ratio (horizontal : 1 vertical)

See applicable box culvert standard for H, S, T, and U values.

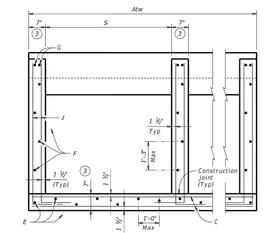
MATERIAL NOTES:

Provide Grade 60 reinforcing steel.
Provide galvanized reinforcing steel if required elsewhere in the plans.
Adjust reinforcing as necessary to provide a minimum clear cover of 1½".
Provide Class "C" concrete (f'c = 3,600 psi).
Provide pipe runners, cross pipes, and anchor pipes meeting the requirements of ASTM A53 (Type E or S, Gr B), ASTM A500 Gr B, or API 5L52.
Provide ASTM A307 bolts.
Galvanize all steel components, except the concrete reinforcing, unless required elsewhere in the plans, after fabrication.
Repair galvanizing damaged during transport or construction in accordance with Item 445, "Galvanizing."

GENERAL NOTES:

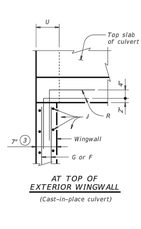
Designed according to AASHTO LRFD Bridge Design Specifications.
The safety end treatments shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the cross pipes.
Cross pipes are designed for a traversing load of 10,000 pounds at yield as recommended by Research Report 280-2F, "Safety Treatment of Roadside Parallel-Drainage Structures", Texas Transportation Institute, March 1981.
The quantities for concrete, reinforcing steel, and cross pipes resulting from the formulas given herein are for Contractor's information only.
See the Box Culvert Supplement (BCS) standard sheet for additional dimensions and information.
Alternate design drawings bearing the seal of a professional engineer will be acceptable for precast construction of the safety end treatments.

Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing dimensions are out-to-out of bars.



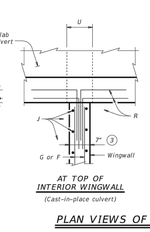
SECTION A-A

(Showing typical wingwall and wing slab reinforcing. Pipe runners not shown for clarity.)



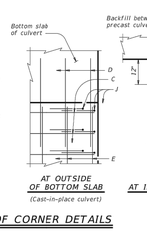
AT TOP OF EXTERIOR WINGWALL

(Cast-in-place culvert)



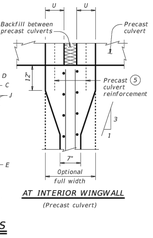
AT TOP OF INTERIOR WINGWALL

(Cast-in-place culvert)



AT OUTSIDE OF BOTTOM SLAB

(Cast-in-place culvert)



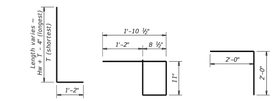
AT INTERIOR WINGWALL

(Precast culvert)

PLAN VIEWS OF CORNER DETAILS

Bar	Size	Spacing
C	#4	10" Max
D	#4	Match F and E
E	#4	1'- 0" Max
F	#4	1'- 3" Max
G	#6	As shown
J	#4	10" Max
K	#4	1'- 0" Max
R	#4	As shown

TABLE OF REINFORCING BAR SIZES AND SPACING



BARS J (Length = 4'-3") BARS K BARS R

1. Provide 6:1 or flatter slope.
2. 0" Min to 5'-0" Max. Estimated curb heights are shown elsewhere in the plans. For structures without railing and curbs taller than 1'-0", refer to Extended Curb Details the Extended Curb Details (ECD) standard sheet.
3. Wingwall and slab thicknesses may be the same as the adjacent culvert wall and slab thicknesses (7" Minimum). If thicknesses greater than the minimum (7") are used, no changes will be made in quantities and no additional compensation will be allowed.
4. For vehicle safety, reduce height, if necessary, to provide a maximum 3" projection above finished grade. No changes will be made in quantities and no additional compensation will be allowed for this work.
5. For culverts with C = 0", the precast culvert reinforcing may extend 1'-0" minimum into wingwall. Wingwall bars D and R may be omitted. Otherwise, refer to the Wingwall Connection detail on the Box Culvert Precast Miscellaneous Details (SCP-MD) standard sheet.

SHEET 1 OF 2

Texas Department of Transportation | Bridge Division Standard

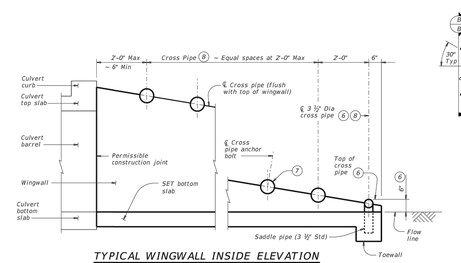
SAFETY END TREATMENT
FOR BOX CULVERTS
(MAXIMUM Hw = 7'-0")
TYPE I ~ PARALLEL DRAINAGE

SETB-PD

FILE:	setpdte-20.dgn	DN: GAF	CK: CAT	DW: TxDOT	CK: TxDOT
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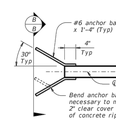
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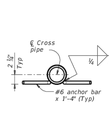


TYPICAL WINGWALL INSIDE ELEVATION

(Showing installation of cross pipes.)



PART PLAN



SECTION B-B

OPTIONAL ANCHOR BAR DETAILS

REQUIRED PIPE SIZES (8)		
Culvert Span Sizes	Cross Pipe Size	Sleeve Pipe Size (9)
First Pipe	3 ½" STD	2 ½" STD
30" to 42"	4" STD	3" STD
48" to 72"	5" STD	4" STD
78" to 120"	6" STD	5" STD

STANDARD PIPE SIZES		
Pipe Size	Pipe O.D.	Pipe I.D.
2 ½" STD	2.875"	2.469"
3" STD	3.500"	3.068"
3 ½" STD	4.000"	3.548"
4" STD	4.500"	4.026"
5" STD	5.563"	5.047"
6" STD	6.625"	6.065"

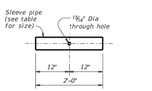
(6) The proper installation of the first cross pipe is critical for vechicle saftey. Place the top of the first cross pipe at no more than 6" above the flow line.

(7) Always install the third cross pipe from the bottom of the culvert using a bolted connection. Take care to ensure that concrete does not flow into this cross pipe so as to permit disassembly of the bolted connection to allow cleanout access.

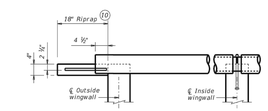
(8) Provide cross pipes and sleeve pipes (if required) as shown in the Required Pipe Sizes table. Provide 3 1#2" saddle pipes for the 3 1#2" first cross pipe.

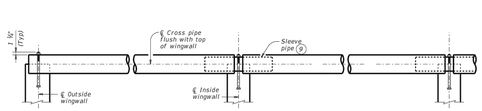
(9) At Contractor's option, make the cross pipe continuous across the inside wingwalls. If this option is selected, omit the sleeve pipe and make a 15#16" diameter throughhole in the cross pipe to accept the anchor bolt at the centerline of each interior wingwall.

(10) Provide riprap when using the Optional Anchor Bar details. Riprap is included in the bid price for Safety End Treatment. Provide riprap in accordance with Item 432, "Riprap".



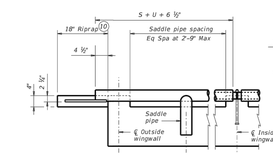
SLEEVE PIPE DETAILS (9)

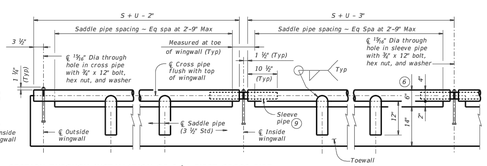




SECTION THROUGH INSTALLATION OF TYPICAL FULL CROSS PIPE

(Anchor details and dimensions are similar to those shown below in Section Through Installation of 3 ½" First Cross Pipe detail.)





SECTION THROUGH INSTALLATION OF 3 ½" FIRST CROSS PIPE

OUTSIDE CULVERT BARREL WITH OPTIONAL ANCHOR BARS & RIPRAP

OUTSIDE CULVERT BARREL WITH BOLTED ANCHOR

INSIDE CULVERT BARREL

CROSS PIPE INSTALLATION DETAILS

SHEET 2 OF 2

Texas Department of Transportation | Bridge Division Standard

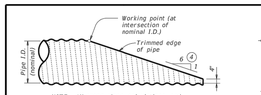
SAFETY END TREATMENT
FOR BOX CULVERTS
(MAXIMUM Hw = 7'-0")
TYPE I ~ PARALLEL DRAINAGE

SETB-PD

FILE:	setpdte-20.dgn	DN: GAF	CK: CAT	DW: TxDOT	CK: TxDOT
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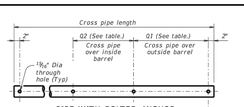
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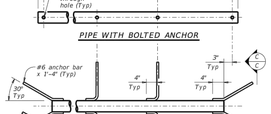
NOTE: All cross pipes, calculations, and dimensions are based on the pipe culverts mitered as shown in this detail. Alternate styles of mitered ends will require that appropriate adjustments be made to the values presented on this standard.

SIDE ELEVATION OF TYPICAL PIPE CULVERT MITER

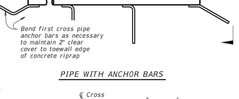
(Showing corrugated metal pipe (CMP) culvert Details at reinforced concrete pipe (RCP) culvert are similar.)



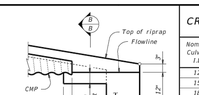
PIPE WITH BOLTED ANCHOR



PIPE WITH ANCHOR BARS



ISOMETRIC VIEW OF TYPICAL INSTALLATION



DETAIL "A"

(Showing invert with corrugated metal pipe (CMP) culvert. Reinforced concrete pipe (RCP) culvert details are similar. Cross pipes not shown for clarity.)



SECTION B-B

(Cross pipes not shown for clarity.)

SECTION C-C

CROSS PIPE DETAILS

Nominal Culvert I.D.	Conc Riprap (CY) (6)	Pipe Culvert Spa ~ G	Single Barrel ~ Q1	Multi-Barrel ~ Q1	Q2	Conditions for Use of Cross Pipes	Cross Pipe Sizes
12"	0.6	0'-9"	N/A	2'-1"	1'-9"	3 or more pipe culverts	3" Std (3.500" O.D.)
15"	0.7	0'-11"	N/A	2'-5"	2'-2"		
18"	0.8	1'-2"	N/A	2'-10"	2'-8"		
21"	0.9	1'-4"	N/A	3'-2"	3'-1"		
24"	0.9	1'-7"	N/A	3'-6"	3'-7"		
27"	1.0	1'-8"	N/A	3'-10"	3'-11"	3 or more pipe culverts	3 ½" Std (4.000" O.D.)
30"	1.1	1'-10"	N/A	4'-2"	4'-4"	2 or more pipe culverts	
33"	1.2	1'-11"	4'-2"	4'-5"	4'-8"	All pipe culverts	4" Std (4.500" O.D.)
36"	1.3	2'-1"	4'-5"	4'-9"	5'-1"		
42"	1.5	2'-4"	4'-11"	5'-5"	5'-10"		
48"	1.7	2'-7"	5'-5"	6'-0"	6'-7"	All pipe culverts	5" Std (5.563" O.D.)
54"	2.0	3'-0"	5'-11"	6'-9"	7'-6"		
60"	2.2	3'-3"	6'-5"	7'-4"	8'-3"		
66"	2.4	3'-3"	6'-11"	7'-10"	8'-9"		
72"	2.7	3'-4"	7'-5"	8'-5"	9'-4"		

CROSS PIPE LENGTHS, REQUIRED PIPE SIZES, AND RIPRAP QUANTITIES (2)

(1) The proper installation of the first cross pipe is critical for vehicle safety. Place the top of the first cross pipe no more than 6" above the flow line.

(2) Provide cross pipes, except the first bottom pipe, of the size shown in the table. Provide a 3 1#2" standard pipe (4" O.D.) for the first bottom pipe.

(3) Install the third cross pipe from the bottom of the culvert using a bolted connection. Ensure that riprap concrete does not flow into the cross pipe so as to permit disassembly of the bolted connection to allow cleanout access. At the Contractor's option, install all other cross pipes using the bolted connection details.

(4) Match cross slope as shown elsewhere in the plans. Cross slope of 6:1 or flatter is required for vehicle safety.

(5) Riprap placed beyond the limits shown will be paid for as concrete riprap in accordance with Item 432, "Riprap".

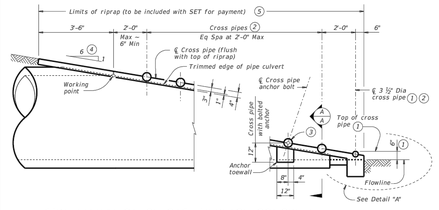
(6) Quantities shown are for one end of one reinforced concrete pipe (RCP) culvert. For multiple pipe culverts or for corrugated metal pipe (CMP) culverts, quantities will need to be adjusted. Riprap quantities are for contractor's information only.

MATERIAL NOTES:

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.
Provide cross pipes that meet the requirements of ASTM A53 (Type E or S, Gr B), ASTM A500 (Gr B), or API 5LX52.
Provide ASTM A307 bolts and nuts.
Galvanize all steel components, except concrete reinforcing, after fabrication. Repair galvanizing damaged during transport or construction in accordance with the specifications.

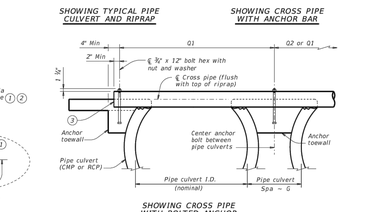
GENERAL NOTES:

Cross pipes are designed for a traversing load of 10,000 pounds at yield as recommended by Research Report 280-2F, "Safety Treatment of Roadside Parallel-Drainage Structures", Texas Transportation Institute, March 1981.
Safety end treatments (SET) shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the cross pipes.
Construct concrete riprap and all necessary inverts in accordance with the requirements of Item 432, "Riprap".
Payment for riprap and toewall is included in the Price Bid for each Safety End Treatment.



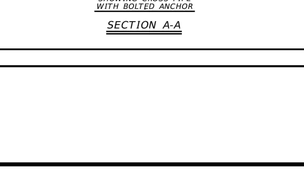
SIDE ELEVATION OF CAST-IN-PLACE CONCRETE

(Showing reinforced concrete pipe (RCP) culvert. Details at corrugated metal pipe (CMP) culvert are similar.)



SHOWING TYPICAL PIPE CULVERT AND RIPRAP

SHOWING CROSS PIPE WITH ANCHOR BAR



SHOWING CROSS PIPE WITH BOLTED ANCHOR

SECTION A-A

Texas Department of Transportation | Bridge Division Standard

SAFETY END TREATMENT
FOR 12" DIA TO 72" DIA
PIPE CULVERTS
TYPE II ~ PARALLEL DRAINAGE

SETP-PD

FILE:	setpdte-20.dgn	DN: GAF	CK: CAT	DW: JRP	CK: GAF
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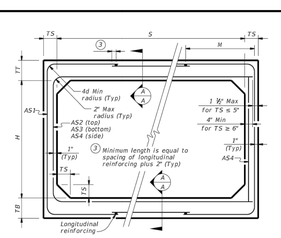
BOX DATA

SECTION DIMENSIONS					Fill Height	M (Min)	REINFORCING (sq. in. / ft.) (2)						(1) Lift Weight
S (ft.)	H (ft.)	TT (in.)	TB (in.)	TS (in.)	(ft.)	(in.)	AS1	AS2	AS3	AS4	AS5	AS7	AS8	(tons)
3	2	7	6	4	< 2	~	0.17	0.25	0.16	0.10	0.17	0.17	0.14	3.3
3	2	4	4	4	2 < 3	31	0.13	0.19	0.18	0.10	~	~	~	2.4
3	2	4	4	4	3 ~ 5	31	0.10	0.11	0.12	0.10	~	~	~	2.4
3	2	4	4	4	10	31	0.10	0.10	0.10	0.10	~	~	~	2.4
3	2	4	4	4	15	31	0.10	0.13	0.13	0.10	~	~	~	2.4
3	2	4	4	4	20	31	0.11	0.17	0.17	0.10	~	~	~	2.4
3	2	4	4	4	25	31	0.14	0.21	0.21	0.10	~	~	~	2.4
3	2	4	4	4	30	31	0.17	0.25	0.25	0.10	~	~	~	2.4
3	2	4	4	4	35	31	0.20	0.29	0.30	0.10	~	~	~	2.4
3	3	7	6	4	< 2	~	0.17	0.27	0.17	0.10	0.17	0.17	0.14	3.7
3	3	4	4	4	2 < 3	31	0.10	0.22	0.21	0.10	~	~	~	2.8
3	3	4	4	4	3 ~ 5	31	0.10	0.14	0.14	0.10	~	~	~	2.8
3	3	4	4	4	10	31	0.10	0.11	0.11	0.10	~	~	~	2.8
3	3	4	4	4	15	31	0.10	0.14	0.15	0.10	~	~	~	2.8
3	3	4	4	4	20	31	0.10	0.18	0.19	0.10	~	~	~	2.8
3	3	4	4	4	25	31	0.10	0.23	0.23	0.10	~	~	~	2.8
3	3	4	4	4	30	31	0.12	0.27	0.28	0.10	~	~	~	2.8
3	3	4	4	4	35	31	0.14	0.32	0.32	0.10	~	~	~	2.8

(1) For box length = 8'-0"

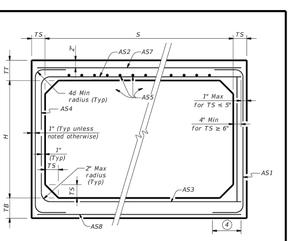
(2) AS1 thru AS4, AS7 and AS8 are minimum required areas of reinforcement per linear foot of box length. AS5 is minimum required area of reinforcement per linear foot of box width.

CONTRACTOR SHALL PROVIDE LAY SCHEDULE AND SHOP DRAWINGS PRIOR TO PRECAST CULVERT INSTALLATION.



CORNER OPTION "A" CORNER OPTION "B"

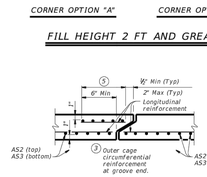
FILL HEIGHT 2 FT AND GREATER



CORNER OPTION "A" CORNER OPTION "B"

FILL HEIGHT LESS THAN 2 FT

(4) Length is equal to spacing of longitudinal reinforcing plus 2". (10" Min) (Typ)



SECTION A-A

(Showing top and bottom slab joint reinforcement.)

MATERIAL NOTES:
Provide 0.03 sq. in./ft. minimum longitudinal reinforcement at each face in slabs and walls. This minimum requirement may be met by the transverse wires when wire mesh reinforcement is used.
Provide Class H concrete (f'c = 5,000 psi).

GENERAL NOTES:
Designs shown conform to ASTM C1577. Refer to ASTM C1577 for information on details not shown.
See Box Culverts Precast Miscellaneous Details (SCP-MD) standard sheet for details and notes not shown.
In lieu of furnishing the designs shown on this sheet, the contractor may furnish an alternate design that is equal to or exceeds the box design for the design fill height in the table. Submit shop plans for alternate designs in accordance with Item "Precast Concrete Structural Members (Fabrication)".

HL93 LOADING

Texas Department of Transportation | Bridge Division Standard

SINGLE BOX CULVERTS
PRECAST
3'-0" SPAN

SCP-3

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REGISTRATION #F-2214 / #10041000

DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

6/17/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV.	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1

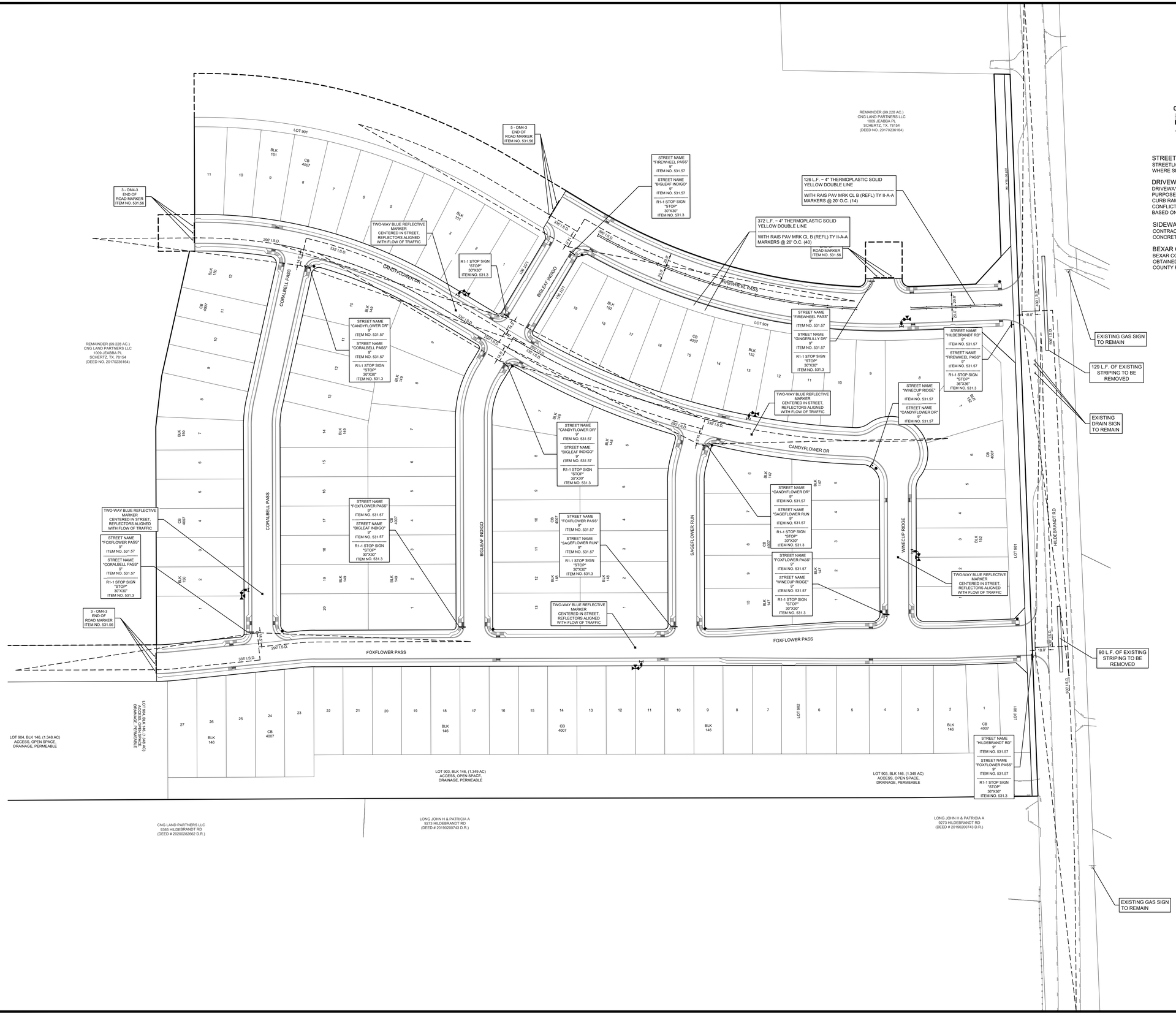
DRAIN DETAILS

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519

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PLAT NO. 22-11800026



STREETLIGHT NOTE
STREETLIGHT POLES TO BE IN OPEN GREEN SPACE WHERE SHOWN ON PLANS.

DRIVEWAY NOTE
DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

SIDEWALK NOTE
CONTRACTOR IS TO MATCH EXISTING CONCRETE CURB, CONCRETE SIDEWALK, AND PAVEMENT ELEVATIONS.

BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OF WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY

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CEC

6/17/2022

STATE OF TEXAS
MARY P. STEWART
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REV	DATE	DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1

OVERALL SIGN PLAN

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520

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PLAT NO. 22-11800026

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DRAWN BY: S.O.V.
DATE: 01/2021
JOB NO.: E0674101

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6/17/2022

STATE OF TEXAS
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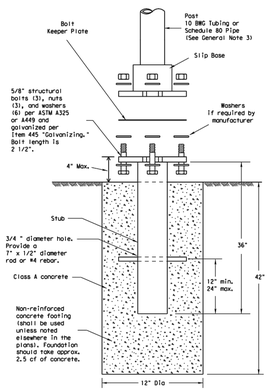
EASTRIDGE SUBDIVISION UNIT 1

SHEET NO. 521

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TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS



SM RD SGN ASSM TY XXXXX(1)SA(X-XXXX)

NOTE

There are various devices approved for the Triangular Slipbase System. Please reference the Material Producer List for approved slip base systems. http://www.txdot.gov/business/producer_list.htm The devices shall be installed per manufacturers' recommendations. Installation procedures shall be provided to the Engineer by Contractor.

GENERAL NOTES:

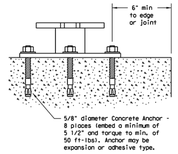
1. Slip base shall be permanently marked to indicate manufacturer, Method, design, and location of marking are subject to approval of the TxDot Traffic Standards Engineer.
2. Material used as post with this system shall conform to the following specifications:
   10 BWG Tubing (2.875" outside diameter)
   0.134" nominal wall thickness
   Seamless or electric-resistance welded steel tubing or pipe
   Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
   Other steels may be used if they meet the following:
   55,000 PSI minimum yield strength
   70,000 PSI minimum tensile strength
   20% minimum elongation in 2"
   Wall thickness (uncoated) shall be within the range of 0.122" to 0.138"
   Outside diameter (uncoated) shall be within the range of 2.867" to 2.883"
   Galvanization per ASTM A123 or ASTM A653 G210. For pressured steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.
   Schedule 80 Pipe (2.875" outside diameter)
   0.276" nominal wall thickness
   Steel: tubing per ASTM A500 Gr C
   Other seamless or electric-resistance welded steel tubing or pipe with equivalent
   outside diameter and wall thickness may be used if they meet the following:
   46,000 PSI minimum yield strength
   62,000 PSI minimum tensile strength
   21% minimum elongation in 2"
   Wall thickness (uncoated) shall be within the range of 0.248" to 0.304"
   Outside diameter (uncoated) shall be within the range of 2.855" to 2.895"
   Galvanization per ASTM A123
3. See the Traffic Operations Division website for detailed drawings of sign clamps and Texas Universal Triangular Slipbase System components. The website address is:
   http://www.txdot.gov/publications/traffic.htm
4. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.

ASSEMBLY PROCEDURE

Foundation
1. Prepare 12-inch diameter by 42-inch deep hole. If solid rock is encountered, the depth of the foundation may be reduced such that it is embedded a minimum of 18 inches into the solid rock.
2. The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor-driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Concrete shall be Class A.
3. Push the pipe end of the slip base stub into the center of the concrete. Rotate the stub back and forth while pushing it down into the concrete to assure good contact between the concrete and stub. Continue to work the stub into the concrete until it is between 2 to 4 inches above the ground.
4. Plumb the stub. Allow a minimum of 4 days to set, unless otherwise directed by the Engineer.
5. The triangular slipbase system is multidirectional and is designed to release when struck from any direction.

Support
1. Cut support so that the bottom of the sign will be 7 to 7.5 feet above the edge of the traveleay (i.e., edge of the closest lane) when slip plate is below the edge of pavement or 7 to 7.5 feet above slip plate when the slip plate is above the edge of the traveleay. The cut shall be plumb and straight.
2. Attach sign to support using connections shown. When multiple signs are installed on the same support, ensure the minimum clearance between each sign is maintained. See SMD(SLIP-2) for clearances based on sign types.

CONCRETE ANCHOR



SM RD SGN ASSM TY XXXXX(X)SB(X-XXXX)

Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. Heavy hex nut per ASTM A563, and hardened washer per ASTM F436. The stud bolt shall have a minimum yield and ultimate tensile strength of 50 and 75 KSI, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations. Top of bolt shall extend at least flush with top of the nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 5 1/2" minimum embedment, shall have a minimum allowable tension and shear of 3900 and 3100 psi, respectively.

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

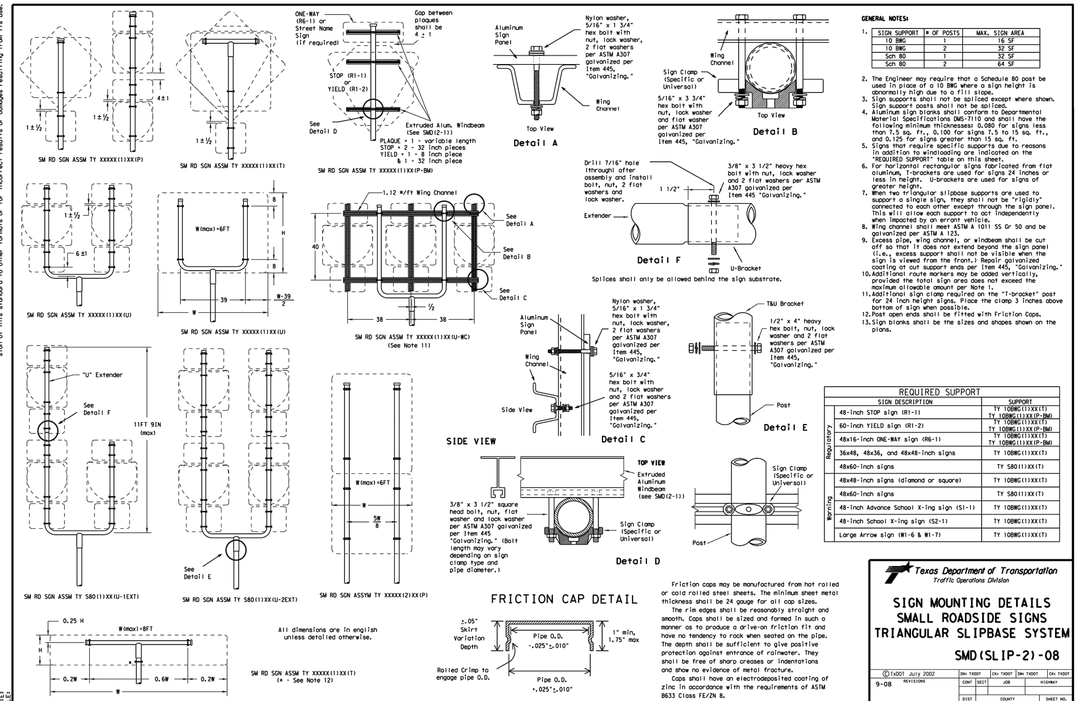
SMD(SLIP-1)-08

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GENERAL NOTES:		
SIGN SUPPORT	# OF POSTS	MAX. SIGN AREA
10 BWG	1	16 SF
10 BWG	2	32 SF
Sch 80	1	32 SF
Sch 80	2	64 SF

2. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
3. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
4. Aluminum sign blanks shall conform to Departmental Material Specifications DMS-7110 and shall have the following minimum thicknesses: 0.080 for signs less than 7.5 sq. ft., 0.100 for signs 7.5 to 15 sq. ft., and 0.125 for signs greater than 15 sq. ft.
5. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
6. For horizontal rectangular signs fabricated from flat aluminum, T-brackets are used for signs 24 inches or less in height. U-brackets are used for signs of greater height.
7. When two triangular slipbase supports are used to support a single sign, they shall not be "rigidly" connected to each other except through the sign panel. This will allow each support to act independently when impacted by an errant vehicle.
8. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
9. Excess pipe, wing channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing."
10. Additional sign clamps required on the "T-bracket" post for 24 inch high signs. Place the clamp 3 inches above bottom of sign when possible.
11. Post open ends shall be fitted with Friction Caps.
12. Slip blanks shall be the sizes and shapes shown on the plans.

REQUIRED SUPPORT		
	SIGN DESCRIPTION	SUPPORT
Regulatory	48-Inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	60-Inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	48x16-Inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	36x48, 48x36, and 48x48-Inch signs	TY 10BWG(1)XX(T)
	48x60-Inch signs	TY SB01(1)XX(T)
	48x48-Inch signs (diamond or square)	TY 10BWG(1)XX(T)
	48x60-Inch signs	TY SB01(1)XX(T)
Warning	48-Inch Advance School X-ing sign (S1-1)	TY 10BWG(1)XX(T)
	48-Inch School X-ing sign (S2-1)	TY 10BWG(1)XX(T)
	Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)

Friction caps may be manufactured from hot rolled or cold rolled steel sheets. The minimum sheet metal thickness shall be 24 gauge for all cap sizes.

The rim edges shall be reasonably straight and smooth. Caps shall be sized and formed in such a manner as to produce a drive-on friction fit and have no tendency to rock when seated on the pipe. The depth shall be sufficient to give positive protection against entrance of rainwater. They shall be free of sharp creases or indentations and show no evidence of metal fracture.

Caps shall have an electrodeposited coating of zinc in accordance with the requirements of ASTM B633 Class FE/ZN 8.

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

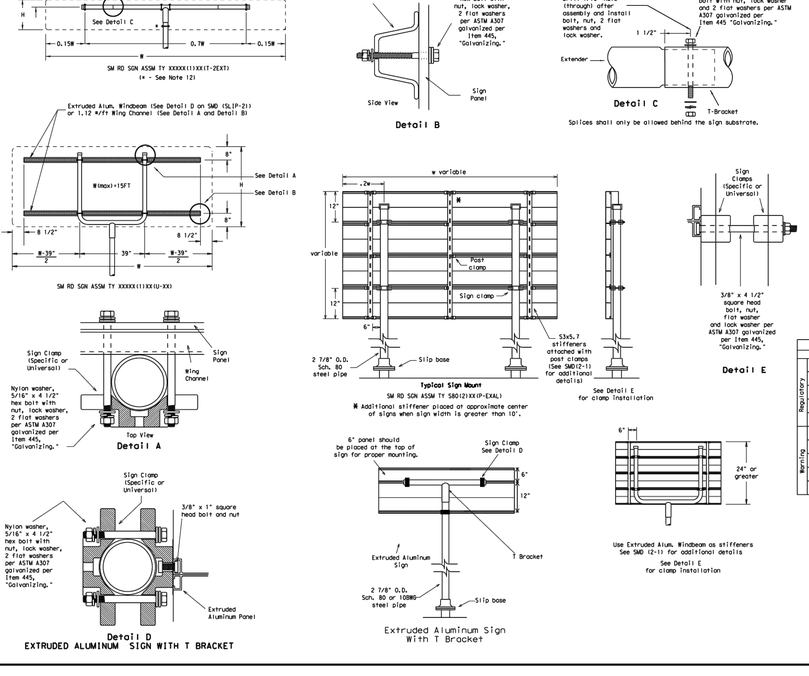
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2. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
3. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
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	48x16-Inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	36x48, 48x36, and 48x48-Inch signs	TY 10BWG(1)XX(T)
	48x60-Inch signs	TY SB01(1)XX(T)
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	48-Inch School X-ing sign (S2-1)	TY 10BWG(1)XX(T)
	Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)

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Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

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SIGN SUPPORT DESCRIPTIVE CODES

(Descriptive Codes correspond to project estimate and quantities sheets)

SM RD SGN ASSM TY XXXXX(X)XX(X-XXXX)

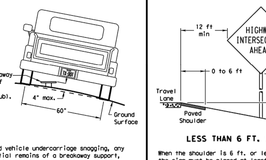
Post Type
FRP = Fiberglass Reinforced Plastic Pipe (see SMD(FRP))
TWT = Thin-Walled Tubing (see SMD(TWT))
10BWG = 10 BWG Tubing (see SMD(SLIP-1) to (SLIP-3))
SB0 = Schedule 80 Pipe (see SMD(SLIP-1) to (SLIP-3))

Number of Posts (1 or 2)

Anchor Type
UA = Universal Anchor - Concreted (see SMD(FRP) and (TWT))
UB = Universal Anchor - Bolted Down (see SMD(FRP) and (TWT))
WS = Wedge Anchor Steel - (see SMD(TWT))
WP = Wedge Anchor Plastic (see SMD(TWT))
SA = Slipbase - Concreted (see SMD(SLIP-1) to (SLIP-3))
SB = Slipbase - Bolted Down (see SMD(SLIP-1) to (SLIP-3))

Sign Mounting Designation
P = Prefab. "Plain" (see SMD(SLIP-1) to (SLIP-3), (TWT), (FRP))
T = Prefab. "T" (see SMD(SLIP-1) to (SLIP-3), (TWT))
U = Prefab. "U" (see SMD(SLIP-1) to (SLIP-3))
IF REQUIRED
1EXT or 2EXT = Number of Extensions (see SMD(SLIP-1) to (SLIP-3), (TWT))
BM = Extruded Wing Base (see SMD(SLIP-1) to (SLIP-3))
WC = 1.12 M/Ft Wing Channel (see SMD(SLIP-1) to (SLIP-3))
EXAL = Extruded Aluminum Sign Panels (see SMD(SLIP-3))

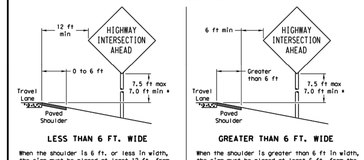
REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT



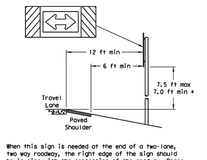
To avoid vehicle undercarriage snagging, any substantial remains of a breakaway support, when it is broken away, should not project more than 4 inches above a 60-inch chord (i.e., typical space between wheel pans).

SIGN LOCATION

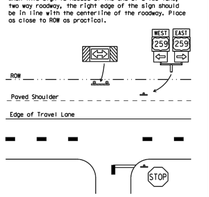
PAVED SHOULDERS



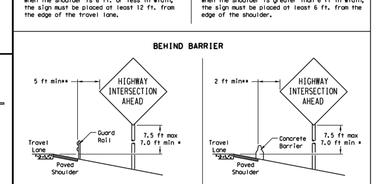
T-INTERSECTION



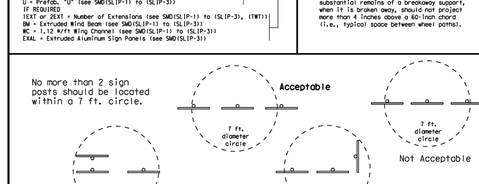
When this sign is needed at the end of a two-lane, two way roadway, the right edge of the sign should be in line with the centerline of the roadway. Place as close to ROW as practical.



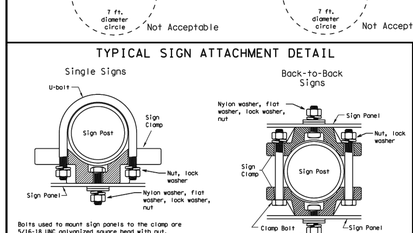
BEHIND BARRIER



**Sign clearance based on distance required for proper guard rail or concrete barrier performance.



TYPICAL SIGN ATTACHMENT DETAIL



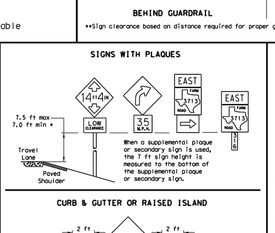
Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum.

When two sign clamps are used to mount signs back-to-back, use a 5/16-18 UNC galvanized hex head per ASTM A307 with nut and helical-spring lock washer. The approximate bolt lengths for various post sizes and sign clamp types are given in the table at right. The bolt length may need to be adjusted depending upon field conditions.

Sign clamps may be either the specific size clamp or the universal clamp.

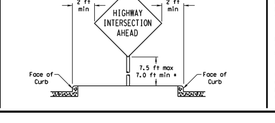
Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2" nominal	3"	3 or 3 1/2"
2 1/2" nominal	3 or 3 1/2"	3 1/2 or 4"
3" nominal	3 1/2 or 4"	4 1/2"

SIGNS WITH PLAQUES



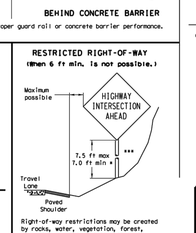
When a supplemental plaque or secondary sign is used, the 7 ft sign height is measured to the bottom of the supplemental plaque or secondary sign.

CURB & GUTTER OR RAISED ISLAND



RESTRICTED RIGHT-OF-WAY

(When 6 ft min. is not possible.)



Right-of-way restrictions may be created by rocks, water, vegetation, forest, buildings, a narrow island, or other factors.

In situations where a lateral restriction prevents the minimum horizontal clearance from the edge of the travel lane, signs should be placed as far from the travel lane as practical.

*** Post may be shorter if protected by guardrail or if Engineer determines the post could not be hit due to extreme slope.

* Signs shall be mounted using the following condition that results in the greatest sign elevations:
(1) a minimum of 7 ft to a maximum of 7.5 feet above the edge of the travel lane or
(2) a minimum of 7 ft to a maximum of 7.5 feet above the grade at the base of the support when sign is installed on the backslope.
The maximum values may be increased when directed by the Engineer.
See the Traffic Operations Division website for detailed drawings of sign clamps, Triangular Slipbase System components and Wedge Anchor System components.
The website address is: http://www.txdot.gov/publications/traffic.htm

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
GENERAL NOTES & DETAILS

SMD(GEN)-08

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REVISIONS	CONT	SECT	JOB	HIGHWAY
9-08	DIST	COUNTY		SHEET NO.

26A

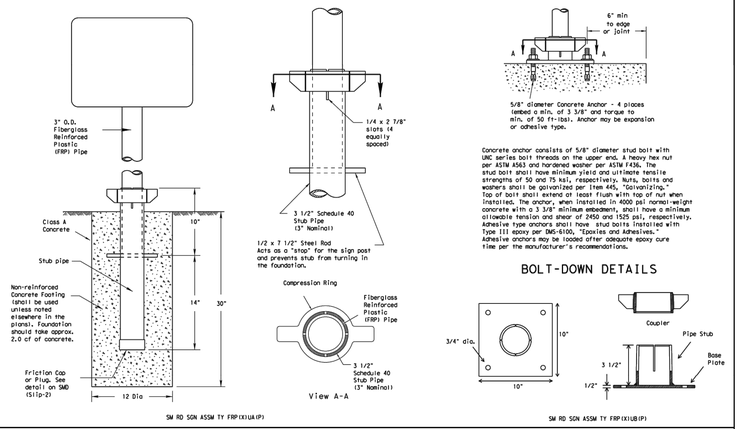
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Date: Jan 17, 2022, 2:39pm User: ID Mary Stewart File: L:\Eastridge\Proj\0674101\400_Drawings\Unit 1\mod\0674101 SHEET SMD(GEN)-08.dwg

PLAT NO. 22-11800026

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Universal Anchor System with Fiberglass Reinforced Plastic (FRP) Post



SM RD SGN ASSM TY FRP(XX)UA(P)

Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. A heavy hex nut per ASTM A563 and hardened washer per ASTM F436. The stud bolt shall have minimum yield and ultimate tensile strengths of 50 and 75 ksi, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Top of bolt shall extend at least flush with top of nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 3 3/8" minimum embedment, shall have a minimum allowable tension and shear of 2450 and 1525 psi, respectively. Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations.

BOLT-DOWN DETAILS

SM RD SGN ASSM TY FRP(XX)UB(P)

GENERAL NOTES:

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

FRP POST REQUIREMENTS

1. Materials shall conform to the requirements of Departmental Material Specification DMS-4410 and will be furnished in a yellow or gray color as specified elsewhere in the plans.
2. Thickness of FRP sign support is 0.125" + 0.031", - 0.0".
3. FRP sign supports are prequalified by the Traffic Operations Division. Prequalification procedures are detailed by writing:
   Texas Department of Transportation
   Traffic Operations Division
   125 East 11th Street
   Austin, Texas 78701-2483

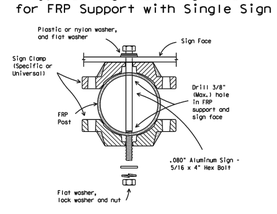
UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURES

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

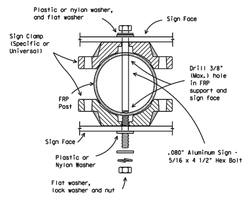
BOLT DOWN SIGN SUPPORT

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

Typical Sign Mounting Detail for FRP Support with Single Sign



Typical Sign Mounting Detail for FRP Support with Back-to-Back Signs



Texas Department of Transportation
Traffic Operations Division

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

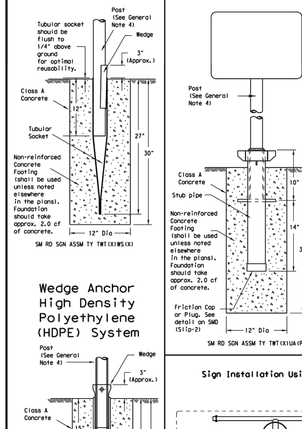
SMD(FRP)-08

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26F

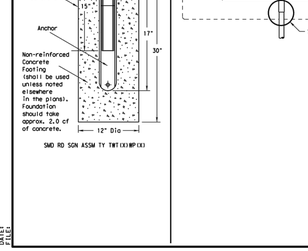
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Wedge Anchor Steel System



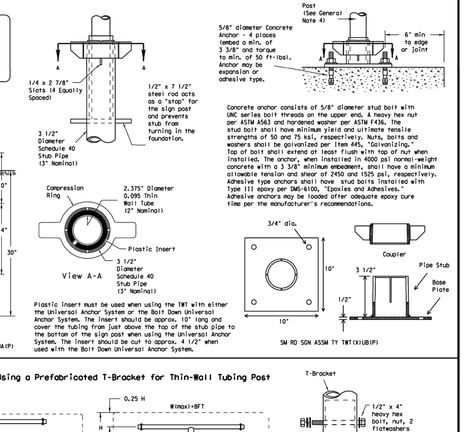
SM RD SGN ASSM TY TWT(XX)WS(X)

Wedge Anchor High Density Polyethylene (HDPE) System



SMD RD SGN ASSM TY TWT(XX)WP(X)

Universal Anchor System with Thin-Walled Tubing Post

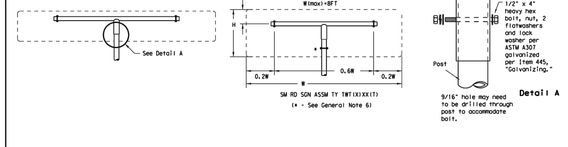


SM RD SGN ASSM TY TWT(XX)UB(P)

Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. A heavy hex nut per ASTM A563 and hardened washer per ASTM F436. The stud bolt shall have minimum yield and ultimate tensile strengths of 50 and 75 ksi, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Top of bolt shall extend at least flush with top of nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 3 3/8" minimum embedment, shall have a minimum allowable tension and shear of 2450 and 1525 psi, respectively. Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations.

Plastic insert must be used when using the TWT with either the Universal Anchor System or the Bolt Down Universal Anchor System. The insert should be approx. 10" long and cover the tubing from just above the top of the stub pipe to the bottom of the sign post when using the Universal Anchor System. The insert should be cut to approx. 4 1/2" when used with the Bolt Down Universal Anchor System.

Sign Installation Using a Prefabricated T-Bracket for Thin-Wall Tubing Post



SM RD SGN ASSM TY TWT(XX)XX(T)
(+ - See General Note 6)

NOTE

The devices shall be installed per manufacturer's recommendations. Installation procedures shall be provided to the Engineer by Contractor.

GENERAL NOTES:

1. The Wedge Anchor System and the Universal Anchor System with thin wall tubing post may be used to support up to 10 square feet of sign area.
2. The tubular socket, wedge and prefabricated T-bracket shall be permanently marked to indicate manufacturer, Method, design, and location of marking are subject to the approval of the TxDOT Traffic Standards Engineer.
3. Except for posts (13 BWG Tubing), clamps, nuts and bolts, all components shall be prequalified. A list of prequalified vendors may be obtained from the Material Producer List web page. The website address is: http://www.txdot.gov/business/producer list.htm
4. Material used as post with this system shall conform to the following specifications:
   13 BWG Tubing (2.375" outside diameter) (TWT)
   0.095" nominal wall thickness
   Seamless or electric-resistance welded steel tubing
   Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
   Other steels may be used if they meet the followings:
   55,000 PSI minimum yield strength
   70,000 PSI minimum tensile strength
   18% minimum elongation in 2"
   Wall thickness (uncoated) shall be within the range of .083" to .099"
   Outside diameter (uncoated) shall be within the range of 2.369" to 2.381"
   Galvanized per ASTM 123 or ASTM A653 G210. For precoated steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.
5. Sign blanks shall be the sizes and shapes shown on the plans.
6. Additional sign clamp required on the "T-bracket" post for 24" high signs. Place clamp at least 3" above bottom of sign when possible.
7. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
8. See the Traffic Operations Division website for detailed drawings of sign clamps and Wedge Anchor System components. The website address is: http://www.txdot.gov/publications/trafftc.htm

WEDGE ANCHOR SYSTEM INSTALLATION PROCEDURE

1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(SIGN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
2. The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Place concrete into hole until it is approximately flush with the ground. Concrete shall be Class A.
3. Insert tubular socket into concrete until top of socket is approximately 1/4 " above the concrete footing.
4. Plumb the socket. Allow a minimum 4 days for concrete to set, unless otherwise directed by Engineer..
5. Attach the sign to the sign post.
6. Insert the sign post into socket and align sign face with roadway.
7. Drive the wedge into the socket to secure post. This will leave approximately 3 inches of the wedge exposed.

UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURE

1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub must be from the bottom and the clearance requirements given on SMD(SIGN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
2. Insert base post in hole to depths shown and backfill hole with concrete.
3. Level and plumb the base post using a torpedo level and allow concrete adequate time to set. The bottom of the slots provided in the stub pipe shall remain above the top of the concrete foundation.
4. Attach the sign to the sign post.
5. Install plastic insert around bottom of post.
6. Insert sign post into base post. Lower until the post comes to rest on steel rod.
7. Seat compression ring using a hammer. Typically, the top of compression ring will be approximately level with top of stub post when optimally installed.
8. Check sign post by hand to ensure it is unable to turn. If loose, increase the tightening of the compression ring.

Texas Department of Transportation
Traffic Operations Division

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

SMD(TWT)-08

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	DIST	COUNTY		SHEET NO.

26E

DESIGNED BY: L.T.E.
DRAWN BY: S.O.V.
DATE: 01/2021
JOB NO.: E0674101

CIVIL ENGINEERING CONSULTANTS
dba. DON DURDEN, INC.
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-8999
FAX: (210) 641-8998
REGISTRATION #F-2147 / #10041000

6/17/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

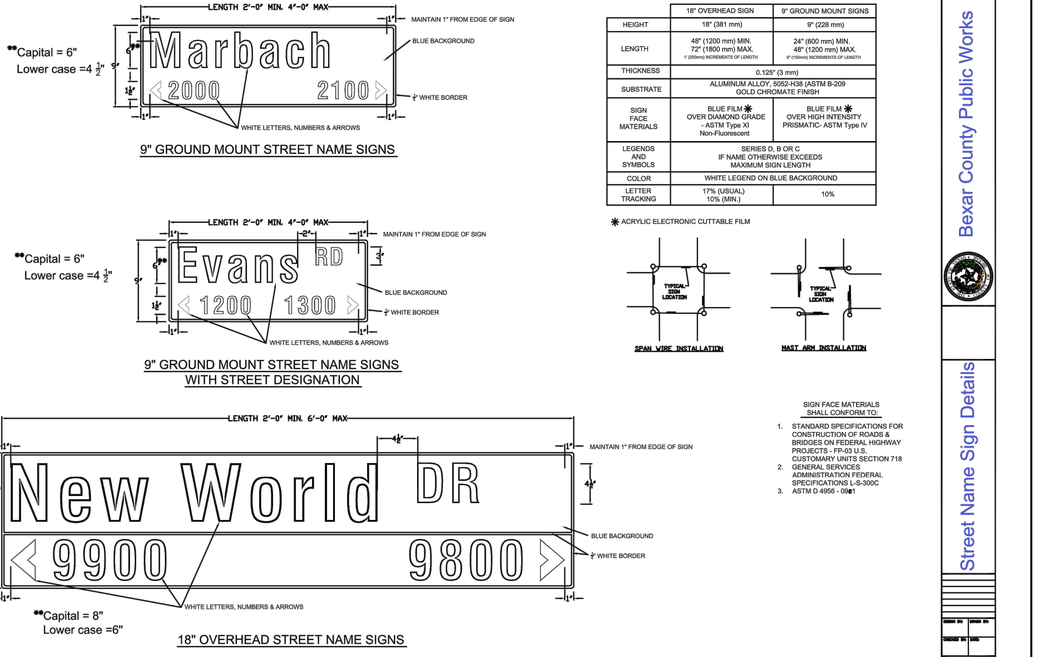
Bexar County Public Works

Street Name Sign Details

REV	DATE	DESCRIPTION

DESIGNED BY: DRAWN BY:
CHECKED BY: DATE:
FILE NAME:

SHEET 46a



9" GROUND MOUNT STREET NAME SIGNS

9" GROUND MOUNT STREET NAME SIGNS WITH STREET DESIGNATION

18" OVERHEAD STREET NAME SIGNS

	18" OVERHEAD SIGN	9" GROUND MOUNT SIGNS
HEIGHT	18" (381 mm)	9" (228 mm)
LENGTH	48" (1200 mm) MIN. 72" (1800 mm) MAX. 1' (305mm) INCREMENTS OF LENGTH	24" (600 mm) MIN. 48" (1200 mm) MAX. 6" (152mm) INCREMENTS OF LENGTH
THICKNESS	0.125" (3 mm)	
SUBSTRATE	ALUMINUM ALLOY, 5052-H38 (ASTM B-209 GOLD CHROMATE FINISH	
SIGN FACE MATERIALS	BLUE FILM ✱ OVER DIAMOND GRADE - ASTM Type XI Non-Fluorescent	BLUE FILM ✱ OVER HIGH INTENSITY PRISMATIC- ASTM Type IV
LEGENDS AND SYMBOLS	SERIES D, B OR C IF NAME OTHERWISE EXCEEDS MAXIMUM SIGN LENGTH	
COLOR	WHITE LEGEND ON BLUE BACKGROUND	
LETTER TRACKING	17% (USUAL) 10% (MIN.)	10%

✱ ACRYLIC ELECTRONIC CUTTABLE FILM

SPAN WIRE INSTALLATION

MAST ARM INSTALLATION

SIGN FACE MATERIALS SHALL CONFORM TO:

1. STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS & BRIDGES ON FEDERAL HIGHWAY PROJECTS - FP-03 U.S. CUSTOMARY UNITS SECTION 718
2. GENERAL SERVICES ADMINISTRATION FEDERAL SPECIFICATIONS L-S-300C
3. ASTM D 4956 - 05e1

EASTRIDGE
SUBDIVISION UNIT 1

SIGN DETAILS

SHEET NO.
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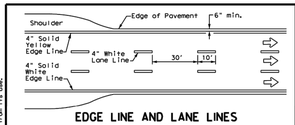
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PLAT NO. 22-11800026

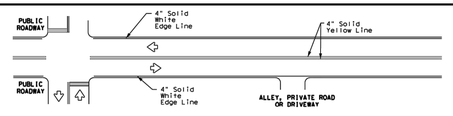
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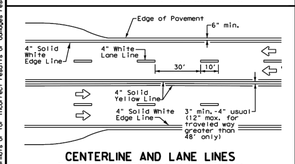
EDGE LINE AND LANE LINES ONE-WAY ROADWAY WITH OR WITHOUT SHOULDERS



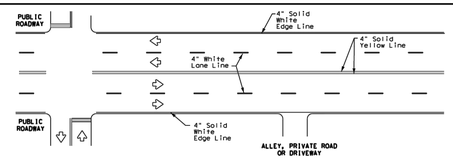
TYPICAL TWO-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS



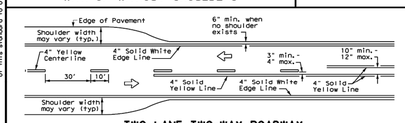
CENTERLINE AND LANE LINES FOUR LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS



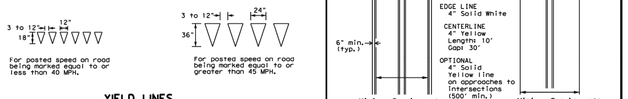
TYPICAL MULTI-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS



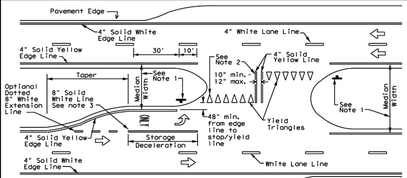
TWO LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS



YIELD LINES



FOUR LANE DIVIDED ROADWAY CROSSOVERS



NOTES

1. Where divided highways are separated by median widths at the median opening itself of 30 feet or more, median openings shall be signed as two separate intersections. Each median opening has two width measurements, with one measurement for each approach. The narrow median width will be the controlling width to determine if signs are required. Yield signs are the typical intersection control. Stop signs are optional as determined by the Engineer.
2. Install median striping (double yellow centerlines and stop bars/yield triangles) when a 50' or greater median centerline can be placed. Stop bars shall only be used with stop signs. Yield traingles shall only be used with yield signs.
3. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer.

GENERAL NOTES

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

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

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

GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE

Based on Traveled Way and Pavement Widths for Undivided Highways

Texas Department of Transportation — Traffic Safety Division Standard

TYPICAL STANDARD PAVEMENT MARKINGS

PM(1)-20

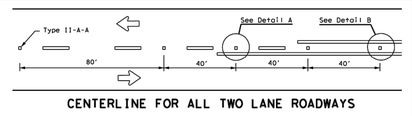
FILE:	pm1-20.dgn	DN:	CK:	DW:	CK:
©TxDOT	November 1978	CONT	SECT	JOB	HIGHWAY
REVISIONS					
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5-00	2-12				
8-00	6-20				

FED.RD. DIV. NO.

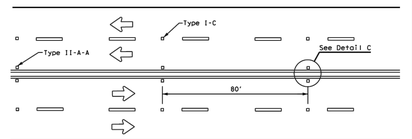
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FILE:

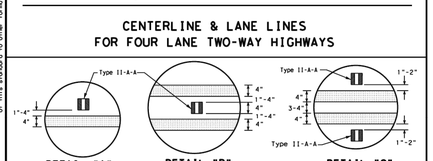
REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE



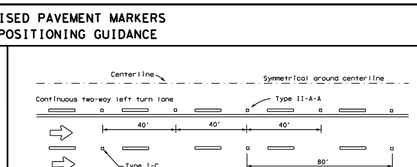
CENTERLINE FOR ALL TWO LANE ROADWAYS



CENTERLINE & LANE LINES FOR FOUR LANE TWO-WAY HIGHWAYS

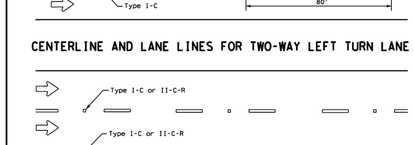


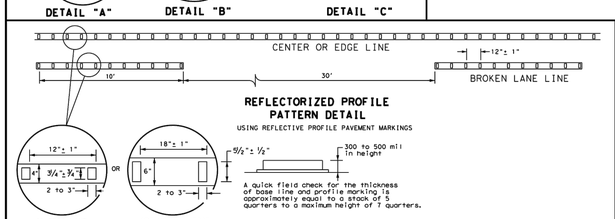
CENTERLINE AND LANE LINES FOR TWO-WAY LEFT TURN LANE



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

Raised pavement markers Type II-C-R shall have clear face toward normal traffic and red face toward wrong-way traffic.





REFLECTORIZED PROFILE PATTERN DETAIL

USING REFLECTIVE PROFILE PAVEMENT MARKINGS

NOTE

Profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.

GENERAL NOTES

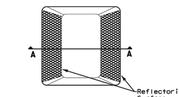
1. All raised pavement markers placed in broken lines shall be placed in line with and midway between the stripes.
2. On concrete pavements the raised pavement markers should be placed to one side of the longitudinal joints.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

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



Type I (Top View)



Type II (Top View)



SECTION A

RAISED PAVEMENT MARKERS

Texas Department of Transportation — Traffic Safety Division Standard

POSITION GUIDANCE USING RAISED MARKERS RELECTORIZED PROFILE MARKINGS

PM(2)-20

FILE:	pm2-20.dgn	DN:	CK:	DW:	CK:
©TxDOT	April 1977	CONT	SECT	JOB	HIGHWAY
REVISIONS					
6-92	2-10	DIST	COUNTY		SHEET NO.
5-00	2-12				
8-00	6-20				

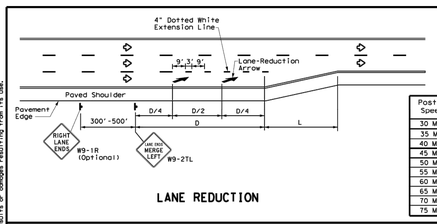
FED.RD. DIV. NO.

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DATE:
FILE:

LANE REDUCTION



Posted Speed	D (ft)	L (ft)
30 MPH	460	$L=\frac{WS^2}{60}$
35 MPH	565	
40 MPH	670	
45 MPH	775	
50 MPH	885	L=WS
55 MPH	990	
60 MPH	1,100	
65 MPH	1,200	
70 MPH	1,250	
75 MPH	1,350	

NOTES

1. Lane reduction pavement markings are used where the number of through lanes is reduced because of narrowing of the roadway or because of a section of on-street parking in what would otherwise be a through lane. For Texas Super 2 Passing Lanes, see TS2(PL) standard sheets.
2. On divided highways, an additional MW9-1R "RIGHT LANE ENDS" sign may be installed in the median aligned with the MW9-1R sign on the right side of the highway.
3. Lane reduction arrows are required for speeds of 45 mph or greater. An optional third lane reduction arrow may be added based on engineering judgement. If used, the optional third lane reduction arrow should be centered between the first and last lane reduction arrows.
4. For lane reductions on freeways and Expressways, signing shall conform to the TxDOT Freeway Signing Handbook.

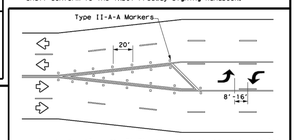
GENERAL NOTES

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

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

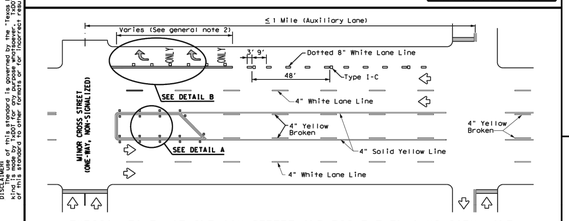
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.

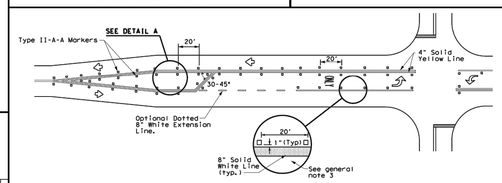
TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY



A two-way left-turn (TWLT) lane-use arrow pavement marking should be used at or just downstream from the beginning of a two-way left-turn lane within a corridor. Repeating the marking after each intersection or dedicated turn bay is not required unless stated elsewhere in the plans.

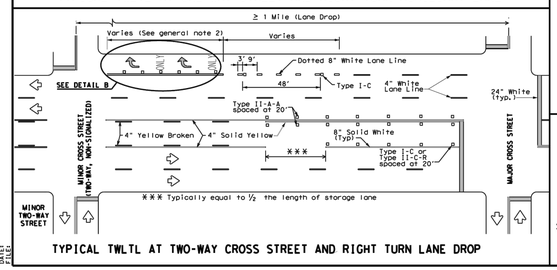
TYPICAL TWLTL AT ONE-WAY STREET AND RIGHT TURN AUXILIARY LANE

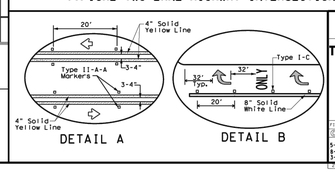




TYPICAL TWO-LANE HIGHWAY INTERSECTION WITH LEFT TURN BAYS

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





Texas Department of Transportation — Traffic Safety Division Standard

TWO-WAY LEFT TURN LANES, RURAL LEFT TURN BAYS, AND LANE REDUCTION PAVEMENT MARKINGS

PM(3)-20

FILE:	pm3-20.dgn	DN:	CK:	DW:	CK:
©TxDOT	April 1995	CONT	SECT	JOB	HIGHWAY
REVISIONS					
5-00	2-10	DIST	COUNTY		SHEET NO.
5-00	2-12				
5-03	6-20				

FED.RD. DIV. NO.

CIVIL ENGINEERING CONSULTANTS
d.b.a. DON DURDEN, INC.
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-8999
FAX: (210) 641-8998
REGISTRATION #F-2114 / #10041000

DESIGNED BY: L.T.E.
DRAWN BY: S.O.V.
DATE: 01/2021
JOB NO.: E0674101

6/17/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1

PAVEMENT MARKING DETAILS

SHEET NO.
523

Date: Jan 17, 2022, 2:39pm User ID: MaryStewart File: L:\Entitled\Proj_2021\E067410\1_Eastridge Unit 1\roads\E0674101 EB-SUD SIGNAGE 010.dwg

PLAT NO. 22-11800026

STREETLIGHT NOTE
STREETLIGHT POLES TO BE IN OPEN GREEN SPACE WHERE SHOWN ON PLANS.

DRIVEWAY NOTE
DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

BEXAR COUNTY PERMIT NOTE:
BEXAR COUNTY RIGHT OF WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY

LEGEND

WHEELCHAIR RAMPS
WASHOUT CROWN
SIDEWALK TO BE BUILT BY DEVELOPER
PROPOSED DRIVEWAY
EXISTING EDGE OF PAVEMENT
EXISTING STREET LIGHT — ELP
PROPOSED STREET LIGHT (100 WATT) — LP

0 30' 60'
1" = 30'

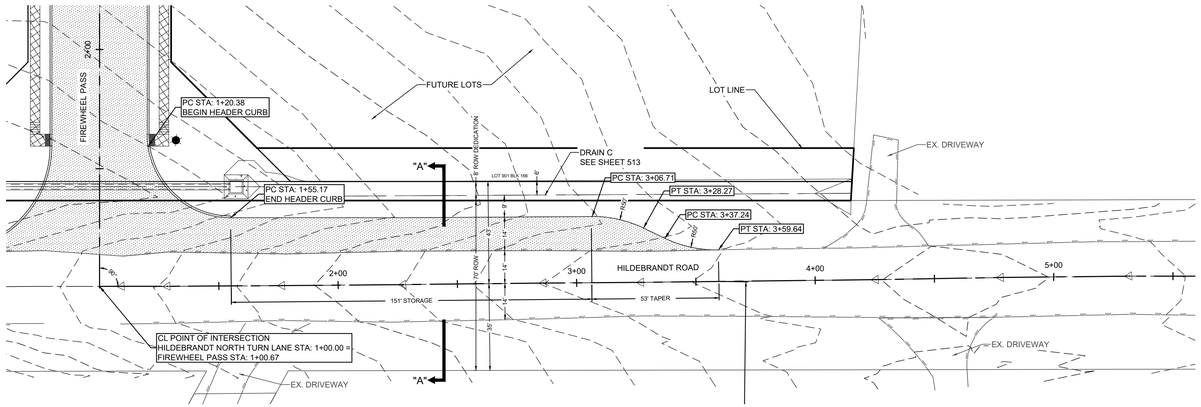
TURN LANE PAVEMENT DESIGN

PAVEMENT DESIGN WAS PREPARED BY InTEC

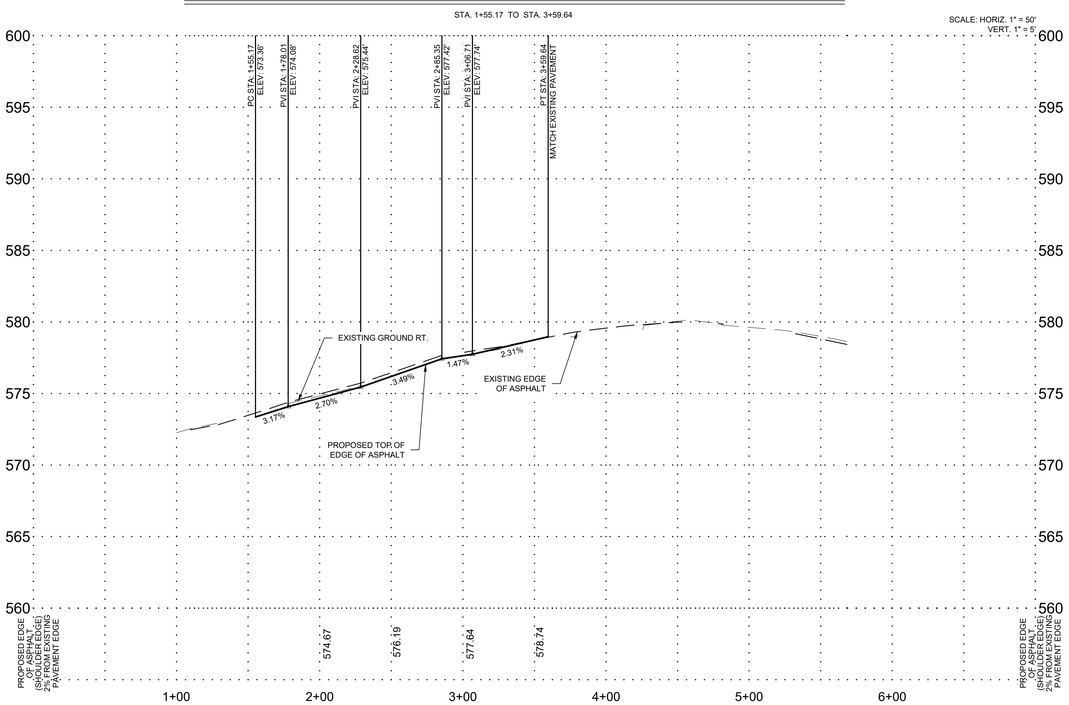
PAVEMENT STRUCTURE (DESIGN CBR=2.5)	STR. COEF.	STR. NO.
2" HOT MIX ASPHALT TYPE D	0.44	0.88
12" HOT MIX ASPHALT TYPE B	0.38	4.56
8" LIME STABILIZED SUBGRADE (38#/S.Y.)	0.08	0.64
	TOTAL	6.08

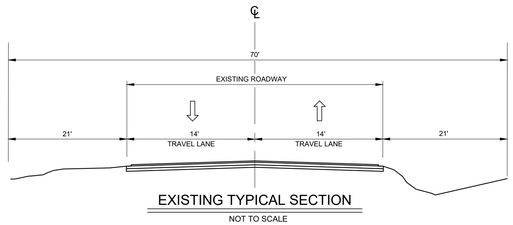
FOR CONSTRUCTION VERIFICATION THE FOLLOWING SHALL BE CONDUCTED IN THE FIELD:

- 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 ¾ INCH SIEVE FROM THE SAMPLE):
  - -MINIMUM PASSING 1 ¾" SIEVE 100
  - -MINIMUM PASSING ¾" SIEVE 85
  - -MINIMUM PASSING NO. 4 SIEVE 60
- 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 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 +/- 1.0 INCH.

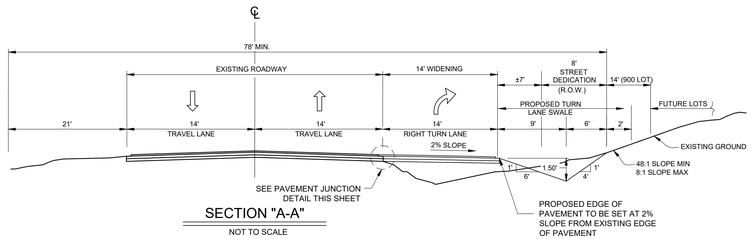


HILDEBRANDT NORTH TURN LANE

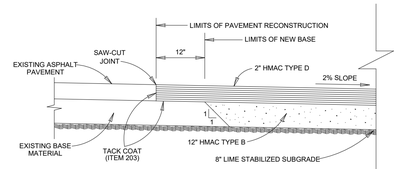




EXISTING TYPICAL SECTION
NOT TO SCALE

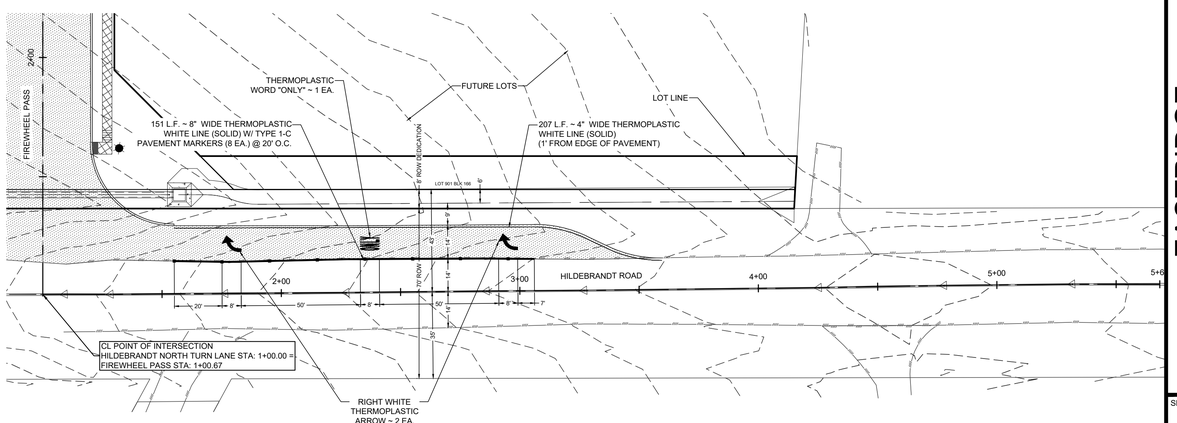


SECTION "A-A"
NOT TO SCALE



STREET SECTION & JUNCTION DETAIL
NOT TO SCALE

STRIPING & PAVEMENT MARKING PLAN



DESIGNED BY:	L.T.E.
DRAWN BY:	S.Q.V.
DATE:	01/2021
JOB NO.:	E0674101

CIVIL ENGINEERING CONSULTANTS
dba. DON DURDEN, INC.
11550 IH 10 WEST, SUITE 395
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TEL: (210) 641-9999
FAX: (210) 641-9440
REGISTRATION #F-2214 / #10041000

6/17/2022
STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1
(FOR BEXAR COUNTY PERMIT ONLY)
HILDEBRANDT NORTH TURN LANE
PLAN & PROFILE

SHEET NO.
524

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Date: Jun 17, 2022, 2:39pm User ID: Mary Stewart File: L:\Develop\Proj\2021\E0674101_Eastridge Unit 1\cad\E0674101 SUD HILDEBRANDT NORTH TURN LANE PLAN & PROFILE.dwg

PLAT NO. 22-11800026

STREETLIGHT NOTE
STREETLIGHT POLES TO BE IN OPEN GREEN SPACE WHERE SHOWN ON PLANS.

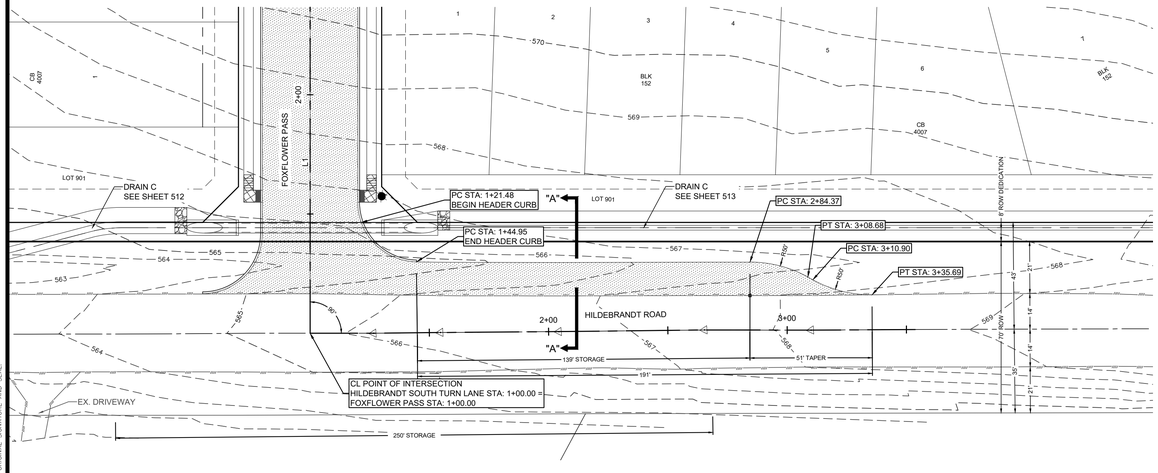
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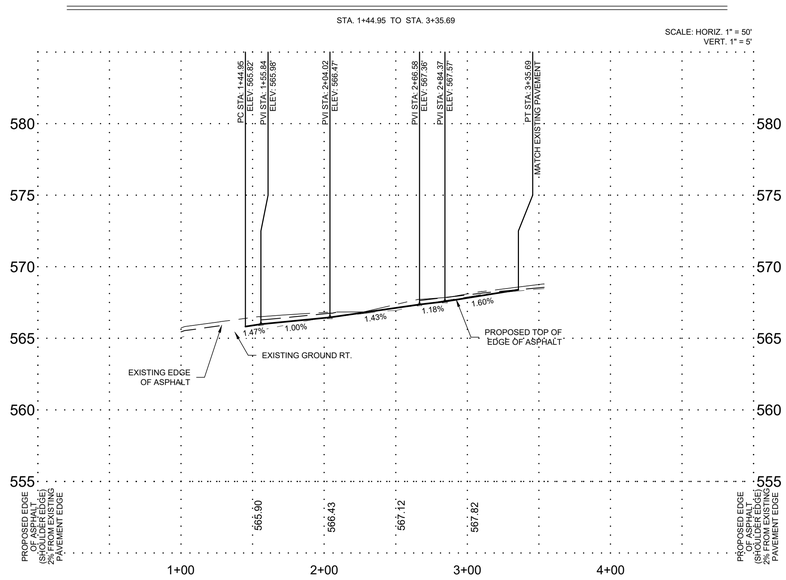
LEGEND

- WHEELCHAIR RAMPS
- WASHOUT CROWN
- SIDEWALK TO BE BUILT BY DEVELOPER
- PROPOSED DRIVEWAY (DW)
- EXISTING EDGE OF PAVEMENT
- EXISTING STREET LIGHT — ELP
- PROPOSED STREET LIGHT (100 WATT) — LP

0 30' 60'
1" = 30'



HILDEBRANDT SOUTH TURN LANE



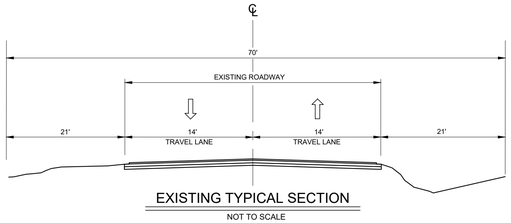
TURN LANE PAVEMENT DESIGN

PAVEMENT DESIGN WAS PREPARED BY InTEC

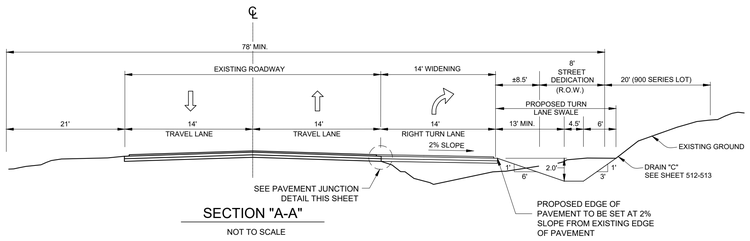
PAVEMENT STRUCTURE (DESIGN CBR=2.5)	STR. COEF.	STR. NO.
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12" HOT MIX ASPHALT TYPE B	0.38	4.56
8" LIME STABILIZED SUBGRADE (38#/S.Y.)	0.08	0.64
	TOTAL	6.08

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

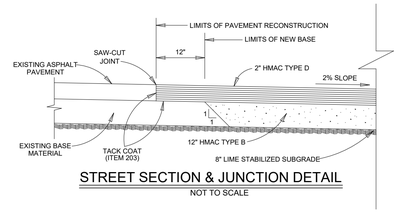
- AFTER INITIAL MIXING THE SOIL-LIME MIXTURE SHALL MELLOW FOR A PERIOD OF TWO TO THREE (2 - 3) DAYS. MAINTAIN MOISTURE DURING MELLOWING.
- AFTER MELLOWING AND FINAL MIXING, THE PULVERIZATION SHALL BE CHECKED USING THE FOLLOWING CRITERIA (REMOVE NON-SLAKING AGGREGATES RETAINED ON THE ¾ INCH SIEVE FROM THE SAMPLE):
  - -MINIMUM PASSING 1 ¾" SIEVE 100
  - -MINIMUM PASSING ¾" SIEVE 85
  - -MINIMUM PASSING NO. 4 SIEVE 60
- 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 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 +/- 1.0 INCH.



EXISTING TYPICAL SECTION
NOT TO SCALE

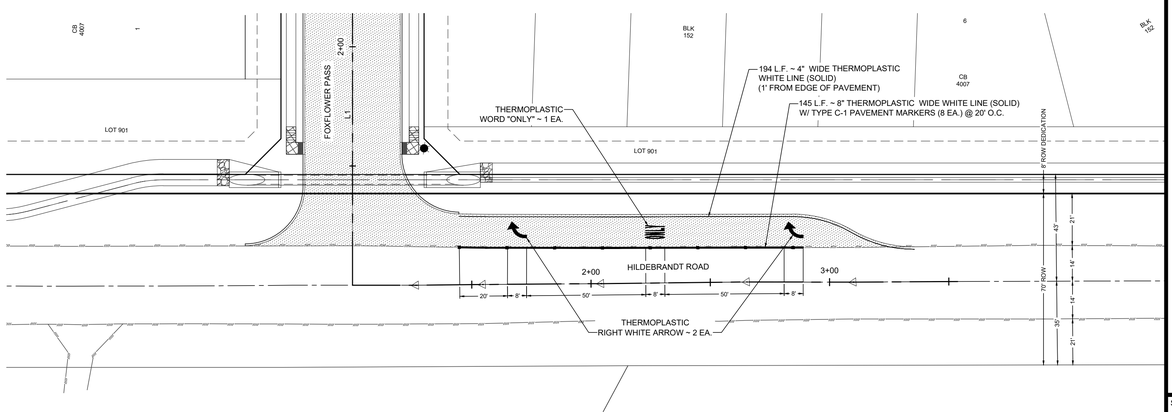


SECTION "A-A"
NOT TO SCALE



STREET SECTION & JUNCTION DETAIL
NOT TO SCALE

STRIPING & PAVEMENT MARKING PLAN



CIVIL ENGINEERING CONSULTANTS
d b a . D O N D U R D E N , I N C .
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-9999
FAX: (210) 641-9440
REGISTRATION #F-2214 / #10041000

DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

6/17/2022
STATE OF TEXAS
MARY P. STEWART
108905
LICENSED PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1
(FOR BEXAR COUNTY PERMIT ONLY)
HILDEBRANDT SOUTH TURN LANE
PLAN & PROFILE

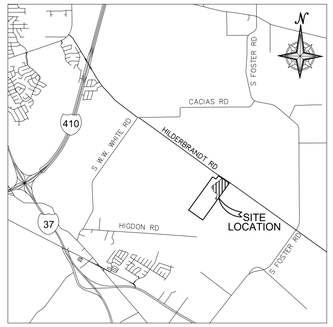
SHEET NO.
525

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Date: Jun 17, 2022, 2:40pm User ID: Mary.Stewart File: L:\Develop\Proj\2021\E067410\1_Eastridge Unit 1\cad\E067410 SU1 HILDEBRANDT SOUTH TURN LANE PLAN & PROFILE.dwg

PLAT NO. 22-11800026

SEDIMENTATION & EROSION CONTROL PLANS for EASTRIDGE SUBDIVISION UNIT 1



LOCATION MAP

GENERAL NOTES

1. All materials and construction procedures within the scope of this project shall, be approved by the City of San Antonio Public Works and comply with the following as applicable:
A. Reference to Current "San Antonio Water System Utility Specifications"
B. Reference to Current City of San Antonio "Standard Specifications for Public Works Construction"

2. The locations and depths of existing utilities, including service laterals, and drainage structures shown on the plans are approximate only. The Contractor shall verify the exact location and depths of underground utilities at least 48 hours prior to construction whether shown on plans or not, and to protect the same during construction. Texas State Wide One Call Locator 1-800-545-6005 City Public Service AT&T Time Warner Valero Energy Co.

3. The Contractor shall notify the City prior to the start of each phase of street construction and call for inspections with a minimum of 24 hours notice.

4. Testing will be paid for by Developer, coordinated by Contractor, and witnessed by City.

5. Minimum Testing Schedule:

Densities - Subgrade	1 Per 500 Foot Minimum
Densities - Base	1 Per 500 Foot Minimum
Proctors - Subgrade	1 Per Material Per Subdivision
Proctors - Base	1 Per 5,000 C.Y.
Lime Series - Subgrade	1 Per Material Per Subdivision
Concrete - Structures	1 Set (3) Per 50 C.Y.

6. Transition washout crown to normal crown in 25'.

7. No extra payment shall be allowed for work called for on the plans, but not included in the bid proposal. This incidental work will be required and shall be included in the pay item to which it relates.

8. The contractor shall be responsible for restoring to its original or better condition any damage done to existing fences, concrete islands, street paving, curbs, shrubs, bushes or driveways. (No separate pay item).

9. Due to federal regulations Title 49, Part 192.171 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.

14. Contractor shall notify the city inspector twenty four (24) hours prior to backfill of any utility trenches to schedule for density test as required.

11. All waste material shall become property of the contractor and shall be his sole responsibility to dispose of this material off the limits of the project. No waste material shall be placed in existing lows that will block or alter flow limits of existing artificial or natural drainage.

12. The contractor shall not place any waste material in the 100-year flood plain without first obtaining an approved Flood Plain Development Permit.

14. The contractor shall maintain all adjoining streets and traveled routes free from spilled and/or tracked construction materials and/or debris.

14. It is the contractor's responsibility to see that all signs and barricades are properly installed and maintained. All locations and distances will be decided upon in the field by the contractor, using the "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". The City's construction inspector will only be responsible to inspect barricades and signs. If, in the opinion of the construction inspector, the barricades and signs do not conform to established standards or are incorrectly placed or are insufficient in quantity to protect the general public, the inspector shall have the option to stop operations until such time as the conditions are corrected.

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

NOTES:

1. DRIVEWAYS SHALL BE LOCATED ON THE HIGH SIDE OF EACH LOT.
2. FINISHED FLOOR ELEVATIONS SHALL BE A MINIMUM OF 8" ABOVE FINAL GRADE AFTER PLACEMENT OF TOP SOIL AND SOD.
3. FINAL LOT SWALES SHALL BE PLACED WITH HOME CONSTRUCTION.

SHEET SET

SHEET	TITLE
600	SEDIMENTATION & EROSION CONTROL COVER
601	SEDIMENTATION AND EROSION CONTROL PLAN
602	SEDIMENTATION AND EROSION CONTROL PLAN
603	SEDIMENTATION & EROSION CONTROL NOTES
604	SEDIMENTATION & EROSION CONTROL DETAILS

LEGEND

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF2 — POST-CONSTRUCTION PHASE 2 TEMPORARY SEDIMENT CONTROL FENCE
- RFD — TEMPORARY ROCK FILTER DAM "TYPE 2" (UNLESS NOTED OTHERWISE ON PLAN)
- TYPE 1 CONSTRUCTION EXIT
- CONCRETE WASHOUT PIT
- GRAVEL FILTER BAGS
- (740) — PROPOSED FINISHED CONTOUR
- 740 — EXISTING CONTOUR
- A, B & C — LOT GRADING TYPE

A-LOT DRAINS TO FRONT
B-LOT DRAINS TO FRONT AND REAR
C-LOT DRAINS TO REAR

TOTAL QUANTITIES

SILT FENCE (INCLUDING J-HOOKS)	2,276 L.F.
SILT FENCE POST-CONSTRUCTION PHASE 2 (INCLUDING J-HOOKS)	234 L.F.
TEMPORARY ROCK FILTER DAM "TYPE 2"	127 L.F.
TYPE I CONSTRUCTION EXIT	1 E.A.
CONCRETE WASHOUT PIT	1 E.A.
GRAVEL FILTER BAGS	55 L.F.

S.W.P.P.P. GENERAL NOTES

1. THE CONTROL MEASURES CONTAINED HEREON (AND AS FURTHER DESCRIBED BY THE STANDARD SPECIFICATIONS) SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE CONSTRUCTION CONTRACT TO ASSURE EFFECTIVE AND CONTINUOUS WATER POLLUTION CONTROL DURING CONSTRUCTION AND POST CONSTRUCTION PERIODS.

2. A RAIN GAUGE SHALL BE PROVIDED BY THE CONTRACTOR AND LOCATED AT THE PROJECT SITE. WITHIN 24 HOURS OF A RAINFALL EVENT OF 0.5 INCHES OR MORE (AS MEASURED BY THE PROJECT SITE GAUGE) THE CONTRACTOR AND INSPECTOR WILL INSPECT THE ENTIRE PROJECT TO DETERMINE THE CONDITION OF THE CONTROL MEASURES. SEDIMENT WILL BE REMOVED AND DEVICES REPAIRED AS SOON AS PRACTICABLE BUT NO LATER THAN 7 DAYS AFTER THE SURROUNDING EXPOSED GROUND HAS DRIED SUFFICIENTLY TO PREVENT FURTHER DAMAGE BEING CAUSED BY REPAIR OPERATIONS.

3. THE CONTRACTOR SHALL CLEAN PAVED SURFACES (ADJACENT TO THE CONSTRUCTION AREAS) AS NECESSARY TO REMOVE SEDIMENT WHICH HAS ACCUMULATED ON THE ROADWAY DUE TO STORMWATER FLOWS AND VEHICULAR TRAFFIC THROUGH AND ACROSS THE CONSTRUCTION SITE.

4. IN CASE OF FAILURE ON THE PART OF THE CONTRACTOR TO PREVENT AND CONTROL SOIL EROSION, SEDIMENTATION AND WATER POLLUTION WHICH MAY DEGRADE RECEIVING WATERS, THE DEVELOPER/OWNER RESERVES THE RIGHT TO EMPLOY OUTSIDE ASSISTANCE OR USE OTHER FORCES TO PROVIDE THE NECESSARY CORRECTIVE MEASURES. ALL COST (INCLUDING ENGINEERING) COST WILL BE DEDUCTED FROM ANY MONEYS DUE TO OR TO BECOME DUE TO THE CONTRACTOR.

5. UPON COMPLETION OF CONSTRUCTION AND THE INSTALLATION OF PERMANENT EROSION CONTROL METHODS, A FINAL EROSION CONTROL INSPECTION WILL BE PERFORMED AS PART OF ACCEPTANCE OF THE PROJECT BY THE DEVELOPER/OWNER. IN THE EVENT THAT THE PERMANENT EROSION CONTROL IS INADEQUATE DUE TO IMPROPER DESIGN OR INSTALLATION. THE PERMANENT EROSION CONTROL MEASURES MUST BE CORRECTED OR REDESIGNED TO FUNCTION PROPERLY.

6. THE NPDES NOTICE OF INTENT (N.O.I.) SHALL BE SIGNED AND SUBMITTED BY THE CONTRACTOR AT LEAST 48 HOURS PRIOR TO THE CONTRACTOR MOVING ONTO THE SITE.

7. THE CONTRACTOR SHALL SUBMIT A SIGNED NOTICE OF TERMINATION (N.O.T.)

CEC
CIVIL ENGINEERING CONSULTANTS
DON DURDEN, INC.
11550 IH. 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230
P) 210.641.9999
F) 210.641.6440
REGISTRATION #F-2214
SURVEY LICENSE #10041000
Email: cec@cectexas.com

OWNER/DEVELOPER:
DAR-BRAN DEVELOPMENT, LLC.
307 HUNTINGTON PLACE
SHAVANO PARK, TEXAS 78231
PHONE: (210) 662-0066

DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

CIVIL ENGINEERING CONSULTANTS
dba. DON DURDEN, INC.
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-9999
FAX: (210) 641-6440
REGISTRATION #F-2214 / #10041000
CEC

5/27/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1
SEDIMENTATION & EROSION CONTROL COVER

SHEET NO.
600

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Date: May 27, 2022, 7:09pm User: © Mary.Stewart File: L:\Drawings\Proj_2021\E0674101\Drawings and Tables\E0674101 600 SEDIMENTATION & EROSION CONTROL COVER.dwg

PLAT NO. 22-11800026

S.W.P.P.P. GENERAL NOTES

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NOTES:

1. DRIVEWAYS SHALL BE LOCATED ON THE HIGH SIDE OF EACH LOT.
2. FINISHED FLOOR ELEVATIONS SHALL BE A MINIMUM OF 8" ABOVE FINAL GRADE AFTER PLACEMENT OF TOP SOIL AND SOD.
3. FINAL LOT SWALES SHALL BE PLACED WITH HOME CONSTRUCTION.

STREETLIGHT NOTE

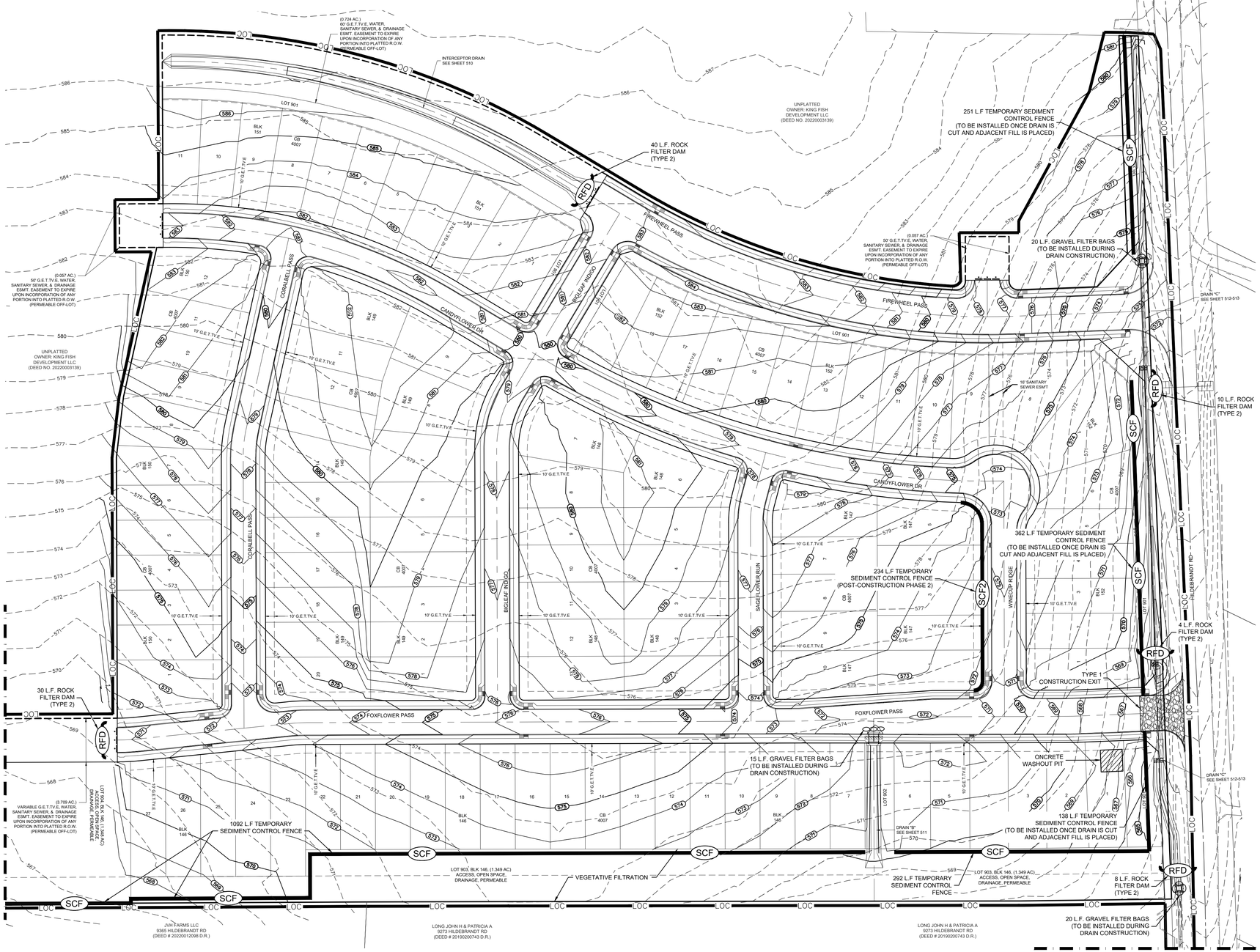
STREETLIGHT POLES TO BE IN OPEN GREEN SPACE WHERE SHOWN ON PLANS.

DRIVEWAY NOTE

DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

BEXAR COUNTY PERMIT NOTE:

BEXAR COUNTY RIGHT OF WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING BEXAR COUNTY RIGHT OF WAY



LEGEND

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF2 — POST-CONSTRUCTION PHASE 2 TEMPORARY SEDIMENT CONTROL FENCE
- RFD — TEMPORARY ROCK FILTER DAM "TYPE 2" (UNLESS NOTED OTHERWISE ON PLAN)
- TYPE 1 CONSTRUCTION EXIT
- CONCRETE WASHOUT PIT
- GRAVEL FILTER BAGS
- 740 — PROPOSED FINISHED CONTOUR
- 740 — EXISTING CONTOUR
- A, B & C — LOT GRADING TYPE

A-LOT DRAINS TO FRONT
B-LOT DRAINS TO FRONT AND REAR
C-LOT DRAINS TO REAR

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DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

CIVIL ENGINEERING CONSULTANTS
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11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-8999
FAX: (210) 641-8440
REGISTRATION #F-2214 / #10041000

5/27/2022
STATE OF TEXAS
MARY P. STEWART
108905
LICENSED PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1
SEDIMENTATION AND EROSION CONTROL PLAN

SHEET NO.
601

Date: May 27, 2022, 11:06am User: @ Mary.Stewart Path: L:\Active\Projs_2021\E0674101_Eastridge Unit 1\Used\E0674101 601-604 SED PLAN-HORZ-SHEETS.dwg

PLAT NO. 22-11800026

TRENCH EXCAVATION SAFETY PROTECTION

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LEGEND

SCF	TEMPORARY SEDIMENT CONTROL FENCE
SCF2	POST-CONSTRUCTION PHASE 2 TEMPORARY SEDIMENT CONTROL FENCE
RFD	TEMPORARY ROCK FILTER DAM "TYPE 2" (UNLESS NOTED OTHERWISE ON PLAN)
	TYPE 1 CONSTRUCTION EXIT
	CONCRETE WASHOUT PIT
	GRAVEL FILTER BAGS
740	PROPOSED FINISHED CONTOUR
740	EXISTING CONTOUR
A, B & C	LOT GRADING TYPE

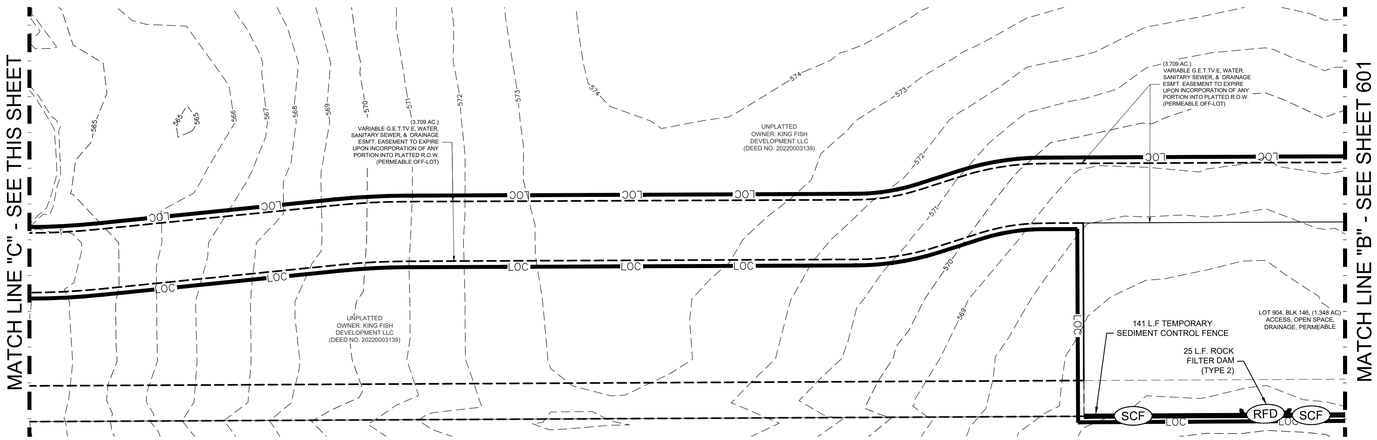
A-LOT DRAINS TO FRONT
B-LOT DRAINS TO FRONT AND REAR
C-LOT DRAINS TO REAR

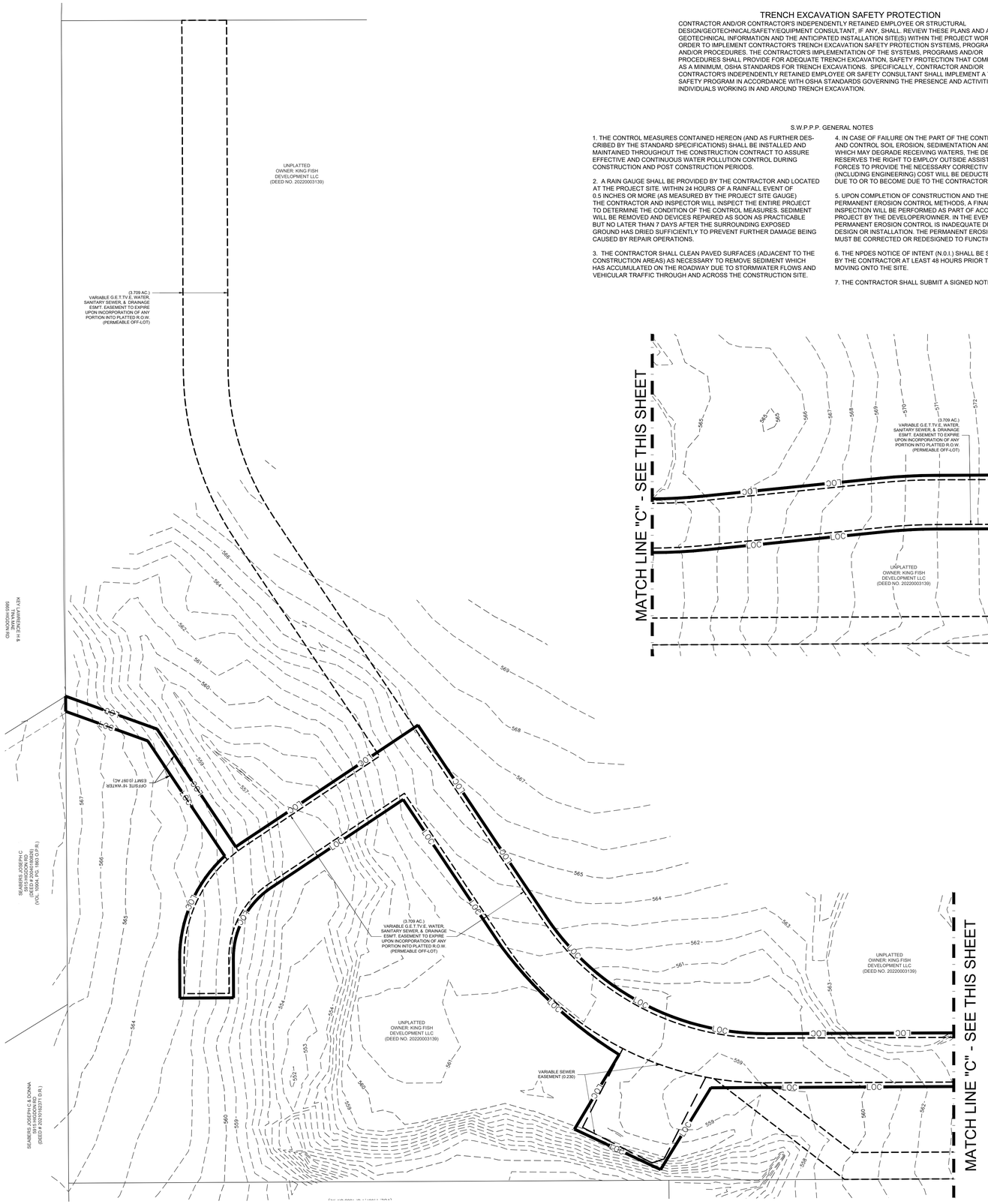
N

0 60' 120'

NOTES:

1. DRIVEWAYS SHALL BE LOCATED ON THE HIGH SIDE OF EACH LOT.
2. FINISHED FLOOR ELEVATIONS SHALL BE A MINIMUM OF 8" ABOVE FINAL GRADE AFTER PLACEMENT OF TOP SOIL AND SOD.
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REGISTRATION #F-2114 / #10041000

5/21/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV.	DATE	DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1

SEDIMENTATION AND EROSION CONTROL PLAN

SHEET NO.
602

Date: May 21, 2022, 11:10am User ID: Mary.Stewart File: L:\Drawings\Proj\2021\E0674101\Cartridge and Trucks\E0674101 602 ESC PLAN-NOTES-DETAILS.dwg

PLAT NO. 22-11800026

SITE DESCRIPTION

PROJECT LIMITS: 28.529 acre phase is located around 7,800 LF east of the intersection of S W.W. WHITE and HILDERBRANDT RD.

LATITUDE 29°19'35.84"N LONGITUDE 98°21'49.54"W

PROJECT DESCRIPTION: Construction of subdivision improvements including: streets, water lines, sanitary sewer lines and drainage improvements.

MAJOR SOIL DISTURBING ACTIVITIES: Soil disturbing activities will include preparing right-of-way clearing, and grubbing, grading, excavation and embankment for the street, excavation for water, sanitary sewer, storm sewer, and structures. Erosion and sediment controls.

TOTAL PROJECT AREA: 28.529 Acres

TOTAL AREA TO BE DISTURBED: 28.52 Acres (100%)

WEIGHTED RUNOFF COEFFICIENT (PRE-CONSTRUCTION): 0.39

WEIGHTED RUNOFF COEFFICIENT (POST-CONSTRUCTION): 0.72

EXISTING CONDITION OF SOIL & VEGETATIVE COVER AND % OF EXISTING VEGETATIVE COVER: The existing topsoil is dark brown fat clay overlain by tan lean clay over sandy clays.

NAME OF RECEIVING WATERS: The storm water will flow into Unnamed Tributary 13 in Calaveras Creek Watershed and Foster Creek.

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

- ___ TEMPORARY SEEDING
- √ PERMANENT PLANTING, SODDING, OR SEEDING
- ___ MULCHING
- ___ SOIL RETENTION BLANKET
- ___ BUFFER ZONES
- ___ PRESERVATION OF NATURAL RESOURCES

OTHER: Disturbed areas on which construction activity has ceased (temporarily or permanently) shall be stabilized within 14 days unless activities are scheduled to resume and do within 21 days.

STRUCTURAL PRACTICES:

- √ SILT FENCES
- ___ HAY BALES
- √ ROCK BERMS
- ___ DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
- √ DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
- ___ DIVERSION DIKE AND SWALE COMBINATIONS
- ___ PIPE SLOPE DRAINS
- √ PAVED FLUMES
- √ ROCK BEDDING AT CONSTRUCTION EXIT
- ___ TIMBER MATTING AT CONSTRUCTION EXIT
- ___ CHANNEL LINERS
- ___ SEDIMENT TRAPS
- ___ SEDIMENT BASINS
- √ STORM INLET SEDIMENT TRAP
- √ STONE OUTLET STRUCTURES
- √ CURBS AND GUTTERS
- √ STORM SEWERS
- √ VELOCITY CONTROL DEVICES

OTHER:

NARRATIVE - SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES:

The order of activities will be as follows:

1. Install temporary control, establish limits of construction, install silt fence, construction entrance/exit, and concrete wash out area.
2. Clear, grub, excavate, and embank for channels/drains/pond/utilities.
3. Construct sanitary sewer.
4. Construct storm drain.
5. Install berm controls/BMP's.
6. Construct water lines.
7. Construct streets.
8. Follow up with developer on BMP removal sequence.
9. When all construction activity is complete and the site is stabilized and approved by the project engineer, remove all temporary structural controls and stabilize areas disturbed by their removal.
10. The contractor is responsible for implementing and maintaining the storm water pollution prevention plan.

STORM WATER MANAGEMENT: Storm water drainage will be conveyed by existing/ proposed drainage structures, storm sewer, and streets.

NON-STORM WATER DISCHARGE: Any water discharged on the site for approved non-storm water discharges, shall be per permit conditions. The source of the non-storm water water is from the San Antonio Water System and should have no detrimental effect on the site or downstream from the site.

OTHER EROSION AND SEDIMENT CONTROLS:

MAINTENANCE: All erosion and sediment controls will be maintained in good working order. If a repair is necessary, it will be done at the earliest date possible, but no later than 7 calendar days after the surrounding exposed ground has dried sufficiently to prevent further damage from heavy equipment. The areas adjacent to creeks and drainage ways shall have priority followed by devices protecting storm sewer inlets.

INSPECTION: An inspection will be performed by a designated inspector every week as well as after every half inch or more of rain (as recorded on a non-freezing rain gauge to be located at the Project Site). An inspection and Maintenance Report will be made per each Inspection. Based on the inspection results, the controls shall be located at the Project Site). An inspection and Maintenance Report will be made per each revised per the inspection report.

WASTE MATERIALS: All waste materials will be collected and stored in a secured metal dumpster. The dumpster will meet all state and local city solid waste management regulations. All trash and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied as necessary or as required by local regulations and the trash will be hauled to a local dump. No construction waste material will be buried on site.

HAZARDOUS WASTE (INCLUDING SPILL REPORTING): At a minimum, any products in the following categories are considered to be hazardous: paints, acids for cleaning masonry surfaces, cleaning solvents, asphalt products, chemical additives for soil stabilization or concrete curing compounds and additives. In the event of a hazardous material spill, the spill coordinator shall be contacted immediately.

SANITARY WASTE: All sanitary waste will be collected from portable units as necessary, or as required by local regulations by a Licensed Sanitary Waste Management Contractor.

OFFSITE VEHICLE TRACKING:

- ___ HAUL ROADS DAMPENED FOR DUST CONTROL
- ___ LOADED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
- √ EXCESS DIRT ON ROAD REMOVED DAILY
- √ STABILIZED CONSTRUCTION ENTRANCE

PERMITS:

REMARKS: Disposal areas, stockpiles, and haul roads shall be constructed in a manner that will minimize and control the amount of sediment that may enter receiving waters. Disposal areas shall not be located in any wetland, waterbody or streambed. Construction staging areas and vehicle maintenance areas shall be constructed by the Contractor in a manner to minimize the runoff of pollutants. All waterways shall be cleared as soon as practicable of temporary embankment, temporary bridges, matting, falsework, piling, debris or other obstructions placed during construction operations that are not a part of the finished work.

OWNERS CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SIGNATURE _____ DATE _____

CONTRACTOR'S CERTIFICATION

I certify under penalty of law that I understand the terms and conditions of the general Texas Pollutant Discharge Elimination System (TPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification plan.

SIGNATURE (CONTRACTOR) _____ DATE _____

DESIGNED BY: L.T.E.
DRAWN BY: S.Q.V.
DATE: 01/2021
JOB NO.: E0674101

CIVIL ENGINEERING CONSULTANTS
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SAN ANTONIO, TEXAS 78230-1037
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REGISTRATION #F-2214 / #10041000

5/27/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE SUBDIVISION UNIT 1
SEDIMENTATION & EROSION CONTROL NOTES

SHEET NO.
603

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Date: May 27, 2022, 11:10am User ID: Mary.Stewart File: L:\Develop\Proj_2021\E0674101_Eastridge Unit 1\cad\E0674101 601-604 SED PLAN-NOTES-SHEETS.dwg

PLAT NO. 22-11800026

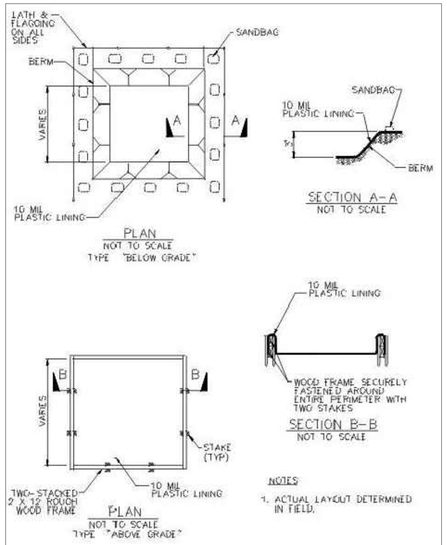


Figure 1-43 Schematics of Concrete Washout Areas

CONCRETE TRUCK WASHOUT PIT

Figure 1-26 Schematic of a Silt Fence Installation (NCTCOG, 1993b)

GENERAL NOTES:

1. Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in2, ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
2. Fence posts should be made of hot rolled steel, at least 4 feet long with Tee or Ybar cross section, surface painted or galvanized, minimum nominal weight 1.25 lb/ft2, and Brindell hardness exceeding 140. Rebar (either #5 or #6) may also be used to anchor the berm.
3. Woven wire backing to support the fabric should be galvanized 2"x 4" welded wire, 12 gauge minimum.
4. 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.
5. 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.

Installation:

1. Lay out the woven wire sheathing perpendicular to the flow line. The sheathing should be 20 gauge woven wire mesh with 1– inch openings.
2. Install the silt fence along the center of the proposed berm placement, as with a normal silt fence described in Section 2.4.3.
3. Place the rock along the sheathing on both sides of the silt fence as shown in the diagram (Figure 1–29), to a height not less than 24 inches. Clean, open graded 3 – 5"diameter rock should be used, except in areas where high velocities or large volumes of flow are expected, where 5– to 8– inch diameter rock may be used.
4. 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.
5. The high service rock berm should be removed when the site is revegetated or otherwise stabilized or it may remain in place as a permanent BMP if drainage is adequate.

SILT FENCE

1.4.6 High Service Rock Berms

A high service rock berm should be designated in areas of important environmental significance such as in steep canyons or above permanent springs, pools, recharge features, or other environmentally sensitive areas that may require a higher level of protection. This type of sediment barrier combines the characteristics of a silt fence and a rock berm to provide a substantial level of sediment reduction and a sturdy enough barrier to withstand higher flows. The drainage area to this device should not exceed 5 acres and the slope should be less than 30%.

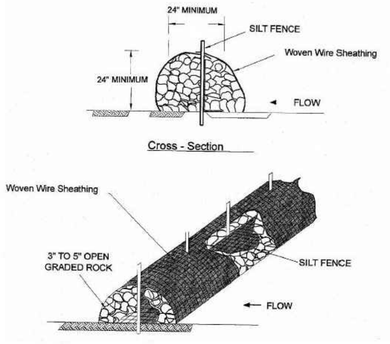


Figure 1-29 Schematic Diagram of High Service Rock Berm (LCRA, 1998)

GENERAL NOTES:

1. Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in2, ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
2. Fence posts should be made of hot rolled steel, at least 4 feet long with Tee or Ybar cross section, surface painted or galvanized, minimum nominal weight 1.25 lb/ft2, and Brindell hardness exceeding 140. Rebar (either #5 or #6) may also be used to anchor the berm.
3. Woven wire backing to support the fabric should be galvanized 2"x 4" welded wire, 12 gauge minimum.
4. 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.
5. 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.

Installation:

1. Lay out the woven wire sheathing perpendicular to the flow line. The sheathing should be 20 gauge woven wire mesh with 1– inch openings.
2. Install the silt fence along the center of the proposed berm placement, as with a normal silt fence described in Section 2.4.3.
3. Place the rock along the sheathing on both sides of the silt fence as shown in the diagram (Figure 1–29), to a height not less than 24 inches. Clean, open graded 3 – 5"diameter rock should be used, except in areas where high velocities or large volumes of flow are expected, where 5– to 8– inch diameter rock may be used.
4. 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.
5. The high service rock berm should be removed when the site is revegetated or otherwise stabilized or it may remain in place as a permanent BMP if drainage is adequate.

HIGH SERVICE ROCK BERM

1. The aggregate should consist of 4 to 8 inch washed stone over a stable foundation as specified in the plan.
2. The aggregate should be placed with a minimum thickness of 8 inches.
3. The geotextile fabric should be designed specifically for use as a soil filtration media with an approximate weight of 6 oz/yd2, a mullen burst rating of 140 lb/in2, and an equivalent opening size greater than a number 50 sieve.
4. If a washing facility is required, a level area with a minimum of 4 inch diameter washed stone or commercial rock should be included in the plans. Divert wastewater to a sediment trap or basin.

Installation:

1. Avoid curves on public roads and steep slopes. Remove vegetation and other objectionable material from the foundation area. Grade crown foundation for positive drainage.
2. The minimum width of the entrance/exit should be 12 feet or the full width of exit roadway, whichever is greater.
3. The construction entrance should be at least 50 feet long.
4. If the slope toward the road exceeds 2%, construct a ridge, 6 to 8 inches high with 3:1 (H:V) side slopes, across the foundation approximately 15 feet from the entrance to divert runoff away from the public road.
5. Place geotextile fabric and grade foundation to improve stability, especially where wet conditions are anticipated.
6. Place stone to dimensions and grade shown on plans. Leave surface smooth and slope for drainage.
7. Divert all surface runoff and drainage from the stone pad to a sediment trap or basin.
8. Install pipe under pad as needed to maintain proper public road drainage.

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 basin. all sediment shall be prevented from entering any storm drain, ditch, or watercourse using approved methods.

Maintenance: The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public roadways. This may require periodic top dressing with additional stone as conditions demand, and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public roadway must be removed immediately.

CONSTRUCTION EXIT

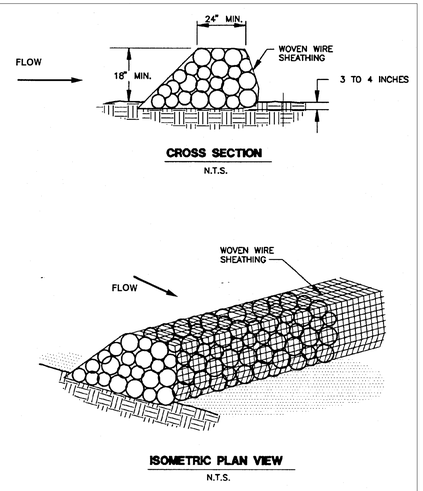


Figure 1-28 Schematic Diagram of a Rock Berm (NCTCOG, 1993)

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. Berm should have a top width of 2 feet minimum with side slopes being 2:1 (H:V) or flatter.
3. Place the rock along the sheathing as shown in the diagram (Figure 1–28), to a height not less than 18".
4. 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.
5. Berm should be built along the contour at zero percent grade or as near as possible.
6. 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.

ROCK BERM

FOR EROSION AND SEDIMENT CONTROL OVER THE EDWARDS AQUIFER CONTRIBUTING ZONE, THE RESPECTIVE BMP DETAILS HAVE BEEN SHOWN ON THIS SHEET AND SW1. THE DETAILS ARE EXCERPTS FROM THE EDWARDS AQUIFER TECHNICAL GUIDANCE MANUAL; RG–348, JULY 2005.

REFER TO THE EROSION CONTROL PLAN (SW1), FOR USE LOCATIONS / PARAMETERS OF THE DETAILS SHOWN IN THE PLAN SET.

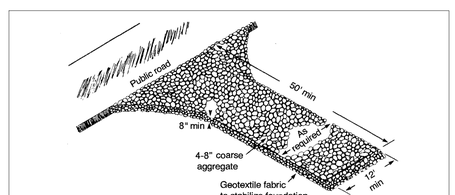


Figure 1-24 Schematic of Temporary Construction Entrance/Exit (after NC, 1993)

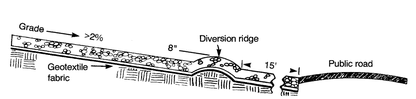


Figure 1-25 Cross-section of a Construction Entrance/Exit (NC, 1993)

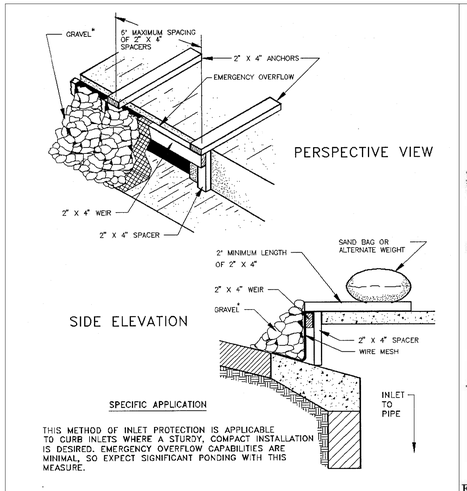


Figure 1-37 Wooden Weir Curb Inlet Protection (VA Dept of Conservation, 1992)

GENERAL NOTES:

1. Attach a continuous piece of wire mesh (30–inch minimum width x inlet throat length plus 4 feet) to the 2–inch x 4–inch wooden weir (with a total length of throat length plus 2 feet) as shown in Figure 1–37. Wood should be "construction grade" lumber.
2. Place a piece of approved filter cloth of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2–inch x 4– inch weir.
3. Securely nail the 2–inch x 4–inch weir to the 9–inch long vertical spacers which are to be located between the weir and inlet face at a maximum 6– foot spacing.
4. Place the assembly against the inlet throat and nail 2–foot (minimum) lengths of 2–inch x 4– inch board to the top of the weir at spacer locations. These 2– inch x 4– inch anchors should extend across the inlet tops and be held in place by sandbags or alternate weight.
5. The assembly should be placed so that the end spacers are a minimum 1 foot beyond both ends of the throat opening.
6. Form the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place coarse aggregate over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
7. This type of protection should be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
8. Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow into inlet.

CURB INLET PROTECTION (WEIR)

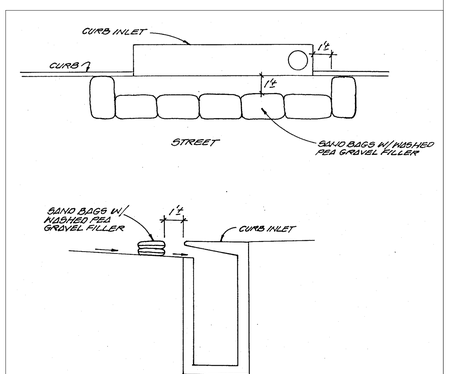


Figure 1-39 Diagram of Bagged Gravel Curb Inlet Protection (Pape-Dawson).

GENERAL NOTES:

1. Inspection should be made weekly and after each rainfall. Repair or replacement should be made promptly as needed by the contractor.
2. Remove sediment when buildup reaches a depth of 3 inches. Removed sediment should be deposited in a suitable area and in such a manner that it will not erode.
3. Check placement of device to prevent gaps between device and curb.
4. Inspect filter fabric and patch or replace if torn or missing.
5. Structures should be removed and the area stabilized only after the remaining drainage area has been properly stabilized.

INLET PROTECTION (GRAVEL FILTER BAGS)

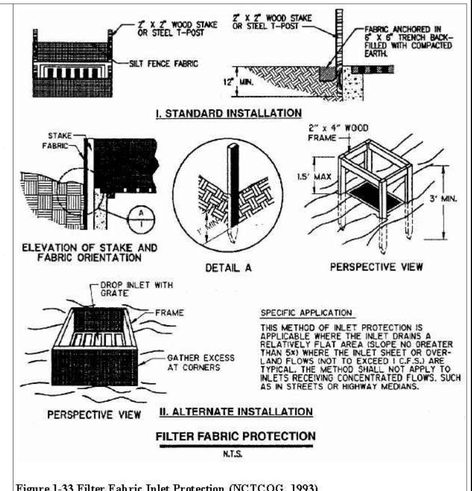


Figure 1-33 Filter Fabric Inlet Protection (NCTCOG, 1993)

GENERAL NOTES:

NOTE THAT THE DETAIL ABOVE, ONLY METAL POSTS / STAKES SHOULD BE USED. WOOD POSTS / STAKES ARE NOT ALLOWED

1. Filter fabric should be a nylon reinforced polypropylene fabric which meets the following minimum criteria: Tensile Strength, 90 lbs.; Puncture Rating, 60 lbs.; Mullen Burst Rating, 280 psi; Apparent Opening Size, U.S. Sieve No. 70.
2. Posts for fabric should be galvanized steel, tubular in cross–section or they may be standard fence "T" posts.
3. Concrete blocks should be standard 8"x 8"x 16"concrete masonry units.
4. Wire mesh should be standard hardware cloth or comparable wire mesh with an opening size not to exceed 1/2 inch.

Guidelines for installation:

Silt Fence Drop Inlet Protection

1. Silt fence should conform to the specifications listed above and should be cut from a continuous roll to avoid joints.
2. For posts, use metal ones with a minimum length of 3 feet.
3. Space stakes evenly around the perimeter of the inlet a maximum of 3 feet apart, and securely drive them into the ground, approximately 18 inches deep (Figure 1–33).
4. To provide needed stability to the installation, a frame with 2 x 4– inch wood strips around the crest of the overflow area at a maximum of 1½ feet above the drop inlet crest should be provided.

INLET PROTECTION (FABRIC)

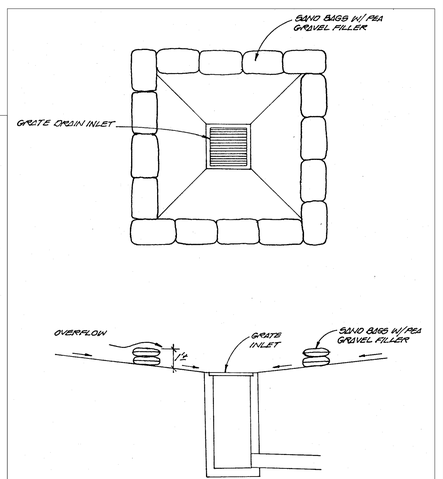


Figure 1-38 Diagram of Bagged Gravel Grate Inlet Protection (Pape-Dawson)

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DESIGNED BY: L.T.E.
DRAWN BY: S.G.V.
DATE: 01/2021
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5/27/2022

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED
PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

EASTRIDGE
SUBDIVISION UNIT 1
SEDIMENTATION & EROSION CONTROL DETAILS

SHEET NO.
604

Date: May 27, 2022, 11:10am User: ID: M:\PW\Street File: L:\Drawings\Proj\2021\067400\Drawings\Unit 1\Detail\067400 SED PLAN NOTES-DETAILS.dwg