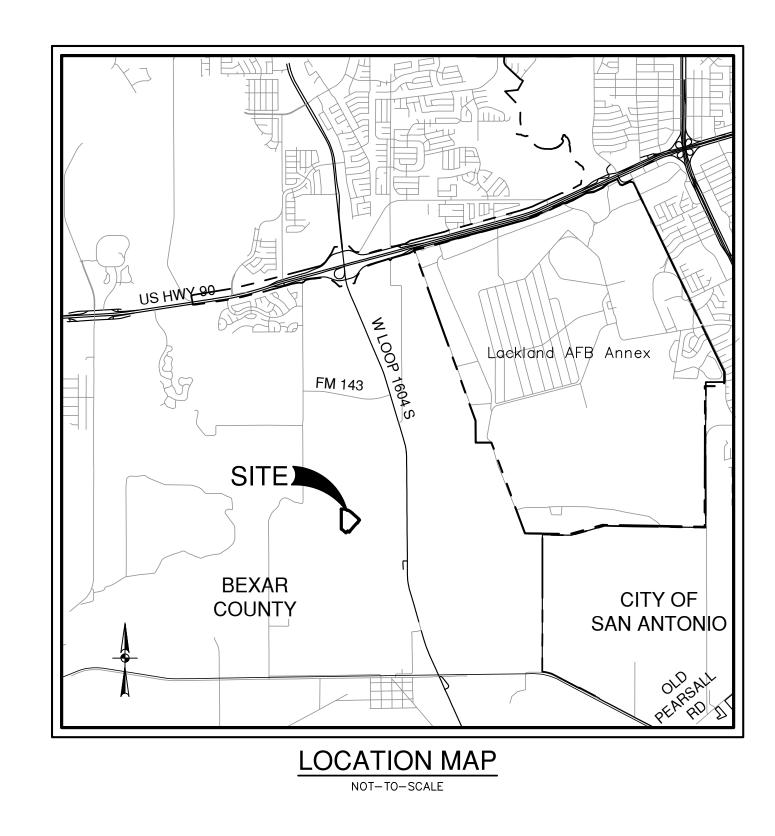
WESTLAKES UNIT 11

SAN ANTONIO, TEXAS

CIVIL CONSTRUCTION PLANS



PULTE HOMES OF TEXAS, L.P. 1718 DRY CREEK WAY, SUITE 120 SAN ANTONIO, TEXAS 78259

JUNE 2022





Sheet Title Sheet No. **COVER SHEET** C0.00 MASTER DRAINAGE PLAN C1.00 DRAIN A C1.01 DRAIN B C1.02 DRAIN C C1.03 DRAINAGE DETAILS C1.10 C1.11 DRAINAGE DETAILS C2.00 STILLHOUSE HOLLOW HAMRICK CIRCLE C2.01 C2.02 **SMITHERS AVENUE** C2.03 **BRANDY BRANCH** TYPICAL STREET DETAILS C2.10 TYPICAL STREET DETAILS C2.11 TYPICAL STREET DETAILS C2.12 OVERALL SIGNAGE PLAN C3.00 C3.10 SIGNAGE DETAILS C3.11 SIGNAGE DETAILS C3.12 SIGNAGE DETAILS OVERALL SANITARY SEWER PLAN C4.00 SANITARY SEWER LINE C C4.01 SANITARY SEWER LINE C C4.02 C4.03 SANITARY SEWER LINE D C4.04 SANITARY SEWER LINE D SANITARY SEWER LINE K C4.05 SANITARY SEWER LINE L C4.06 SANITARY SEWER LINE M C4.07 SANITARY SEWER LINE O C4.08 SANITARY SEWER DETAILS C4.10 C4.20 SANITARY SEWER NOTES OVERALL WATER DISTRIBUTION PLAN C5.00 WATER DISTRIBUTION PLAN DETAILS C5.10 C5.20 WATER DISTRIBUTION PLAN NOTES **OVERALL UTILITY PLAN** C6.00 **OVERALL UTILITY PLAN** C6.01 OVERALL GRADING PLAN C7.00 STORM WATER POLLUTION PREVENTION PLAN C8.00 STORM WATER POLLUTION PREVENTION PLAN DETAILS C8.10

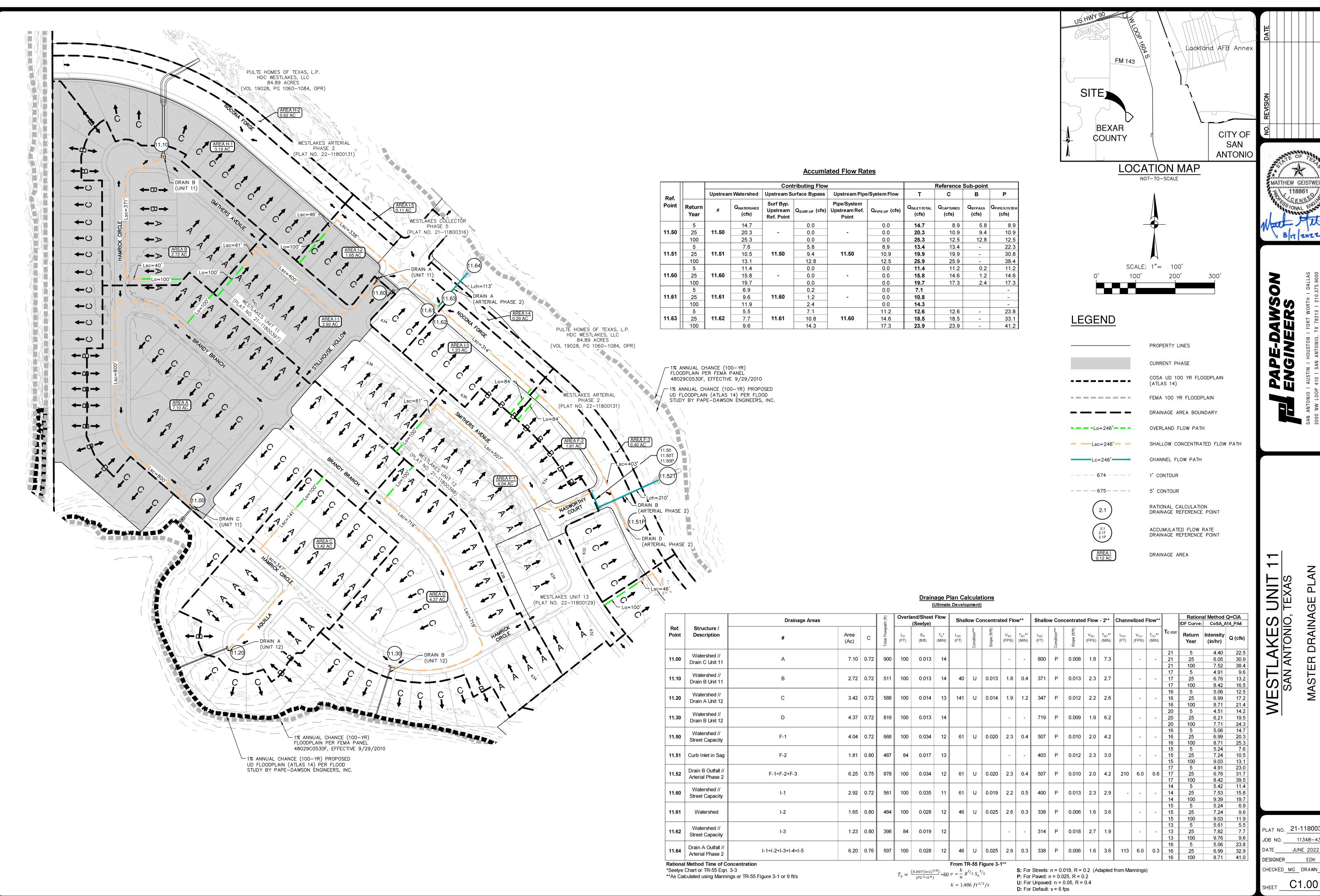
Sheet List Table

LIVE OAK SLOUGH-MEDINA RIVER WATERSHED SEWER: UPPER MEDINA RIVER SOUTH SEWERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME: PULTE HOMES OF TEXAS, L.P. ADDRESS: 1718 DRY CREEK WAY, SUITE 120 SAWS BLOCK MAP# 096-550 TOTAL EDU'S 79 TOTAL ACREAGE 15.76 TOTAL LINEAR FOOTAGE OF PIPE: <u>8"-3.369 LF</u> PLAT NO.<u>21-1180039</u> IUMBER OF LOTS 79 SAWS JOB NO. 22-1624

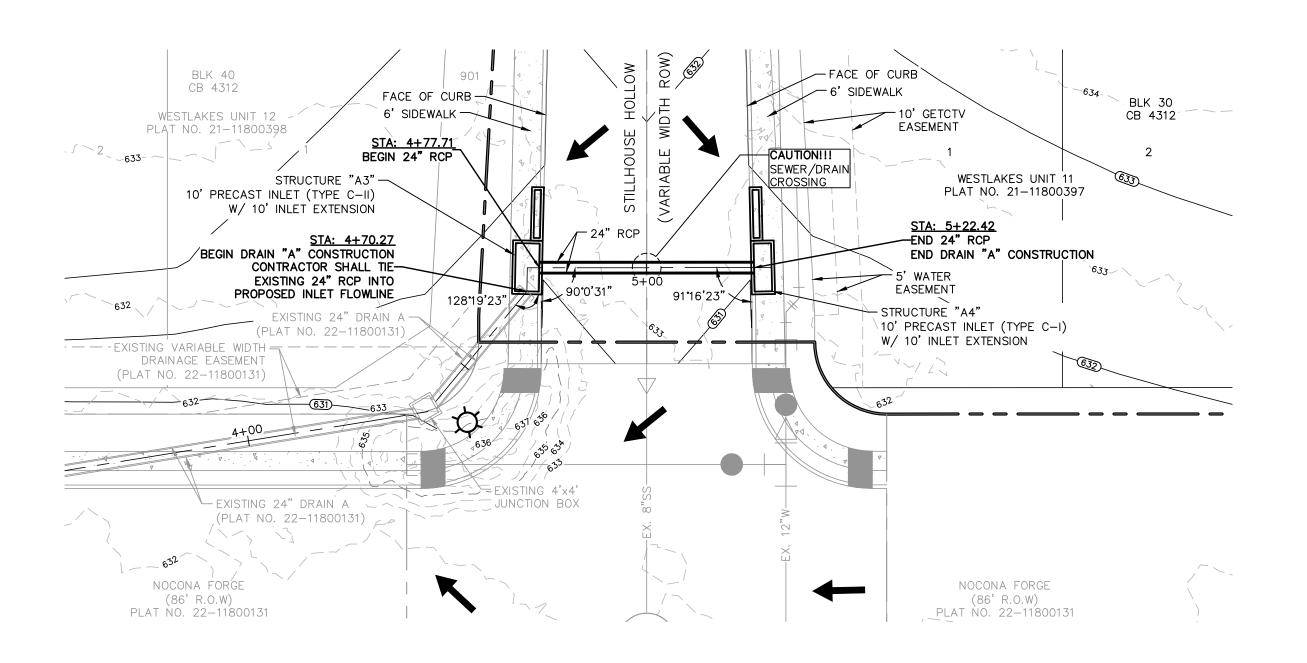
WATER (SAWS PRESSURE ZONE 4)

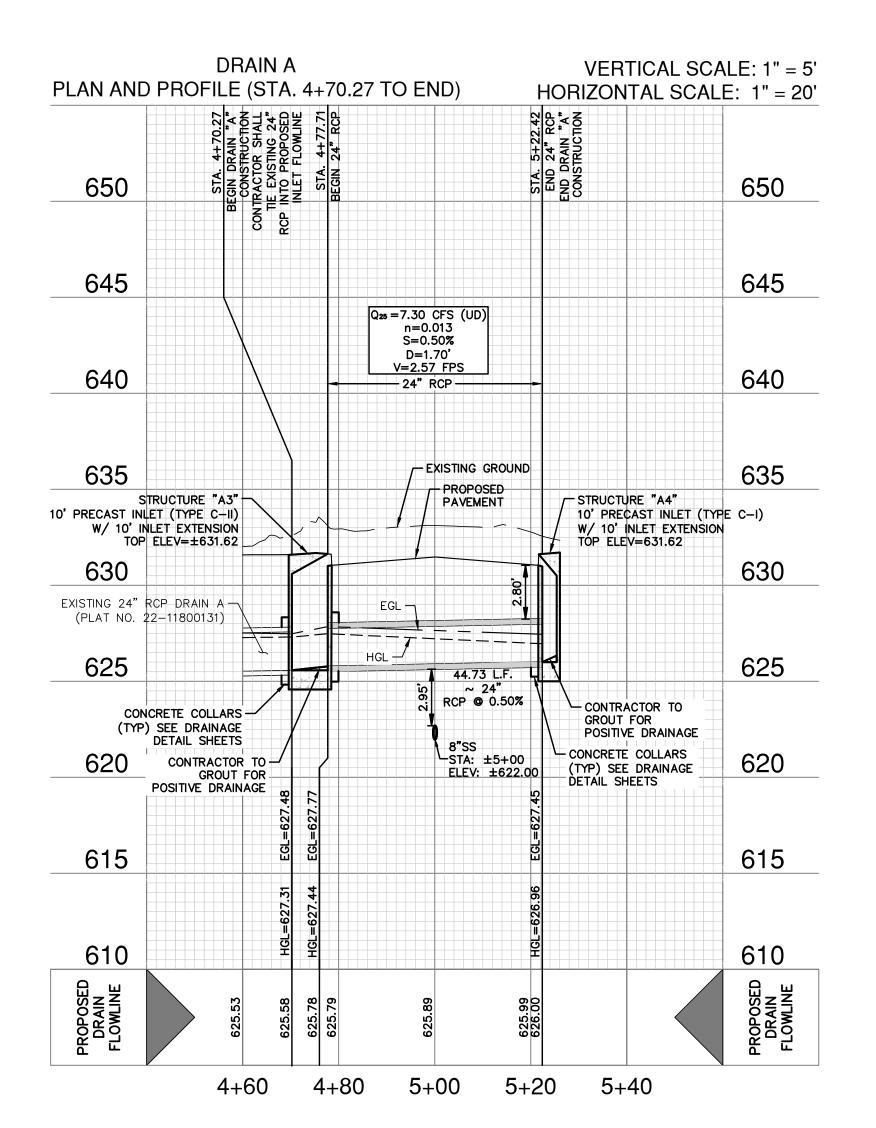
DEVELOPER'S NAME: PULTE HOMES OF TEXAS, L.P.
ADDRESS: 1718 DRY CREEK WAY, SUITE 120
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78259
PHONE# <u>(210) 496-1985</u> FAX#
SAWS BLOCK MAP# 096-550 TOTAL EDU'S 81 TOTAL ACREAGE 15.76
TOTAL LINEAR FOOTAGE OF PIPE: 8"-3,128 LF PLAT NO. 21-11800397
NUMBER OF LOTS 79 SAWS JOB NO. 22-1130

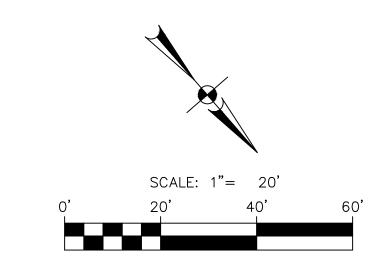


PLAT NO. 21-11800397 11348-43

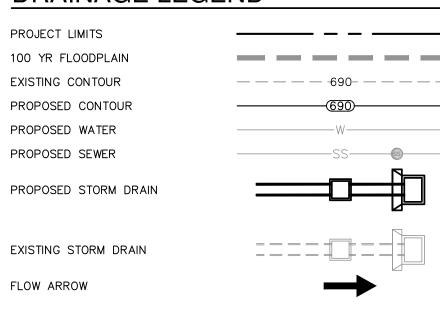
DESIGNER EDK CHECKED<u>MG</u> DRAWN<u>MG</u>G







DRAINAGE LEGEND



STRUCTURE "A3" & "A4" 20' ON-GRADE CURB INLET HYDRAULIC CALCULATION

Q₂₅ = 15.8 CFS (POINT 11.60) Q_{25/2} = 7.9 CFS S = 1.80% L = 20' Qcaptured = 7.3 CFS

PAPE-D

80

DRAINAGE & GRADING NOTES:

- A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
- 2. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
- ALL CONCRETE FOR TXDOT DRAINAGE STRUCTURES SHALL MEET TXDOT SPECIFICATIONS. ALL OTHER CONCRETE SHALL BE CLASS "A" 3000 PSI CYLINDER STRENGTH IN 28 DAYS.
- 4. REFERENCE DRAINAGE DETAILS FOR PIPE TRENCH DETAILS, BOX CULVERT, HEADWALL, AND WINGWALL CONSTRUCTION DETAILS, AND BOX CULVERT BEDDING AND EXCAVATION LIMITS.
- CONTRACTOR SHALL GROUT ALL CURB INLETS AND JUNCTION BOXES T PROVIDE FOR POSITIVE DRAINAGE.
- 6. EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING, 85% OF THE CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.
- 7. CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH OF "D" AS SHOWN IN THE PROFILE.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /OI PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFÉTY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OF 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. CAUTION!!

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WESTLAKES UNIT SAN ANTONIO, TEXAS

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DR/ PROFILE

AND

PLAT NO. 21-11800397

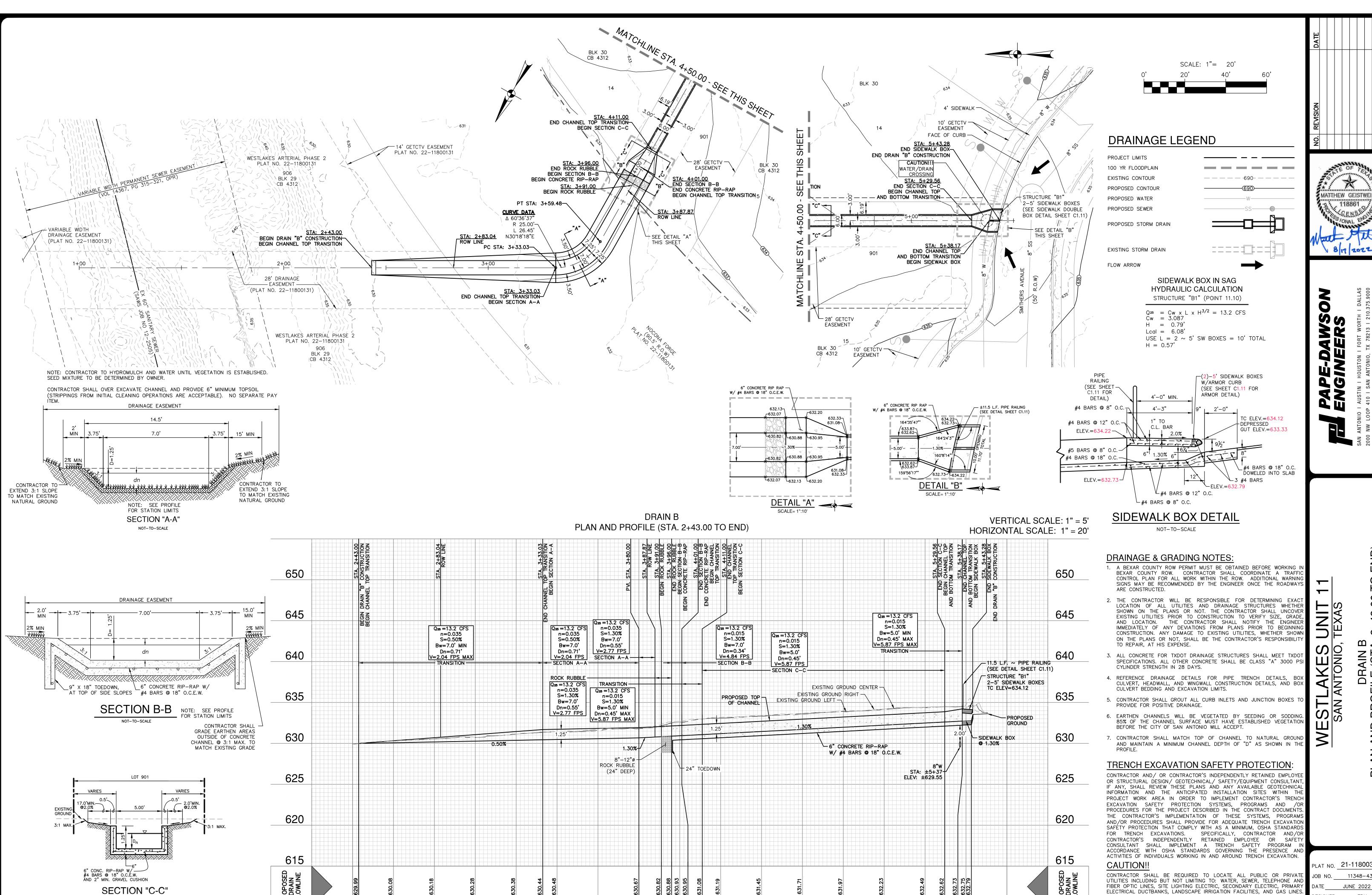
JOB NO. 11348-43

DATE JUNE 2022

DESIGNER EDK

HECKED MG DRAWN MGG

IIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL. AERIAL IMAGERY PROVIDED BY GOOGL® UNLESS OTHERWISE NOTED. Imagery © 2016,CAPCOG,Digital Globe,Texas Orthoimagery Program, USDA Farm Service Agency.



4+20

4+00

3+20

3+40

3+60

3+80

NOT TO SCALE

IS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL AERIAL IMAGERY PROVIDED BY GOOGLE® UNLESS OTHERWISE NOTED. Imagery © 2016,CAPCOG,Digital Globe,Texas Orthoimagery Program, USDA Farm Service Agency.

DR/ PROFILE AND

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LAT NO. 21-11800397 11348-43 JUNE 2022

DESIGNER EDK HECKED MG DRAWN MG0 C1.02

ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE

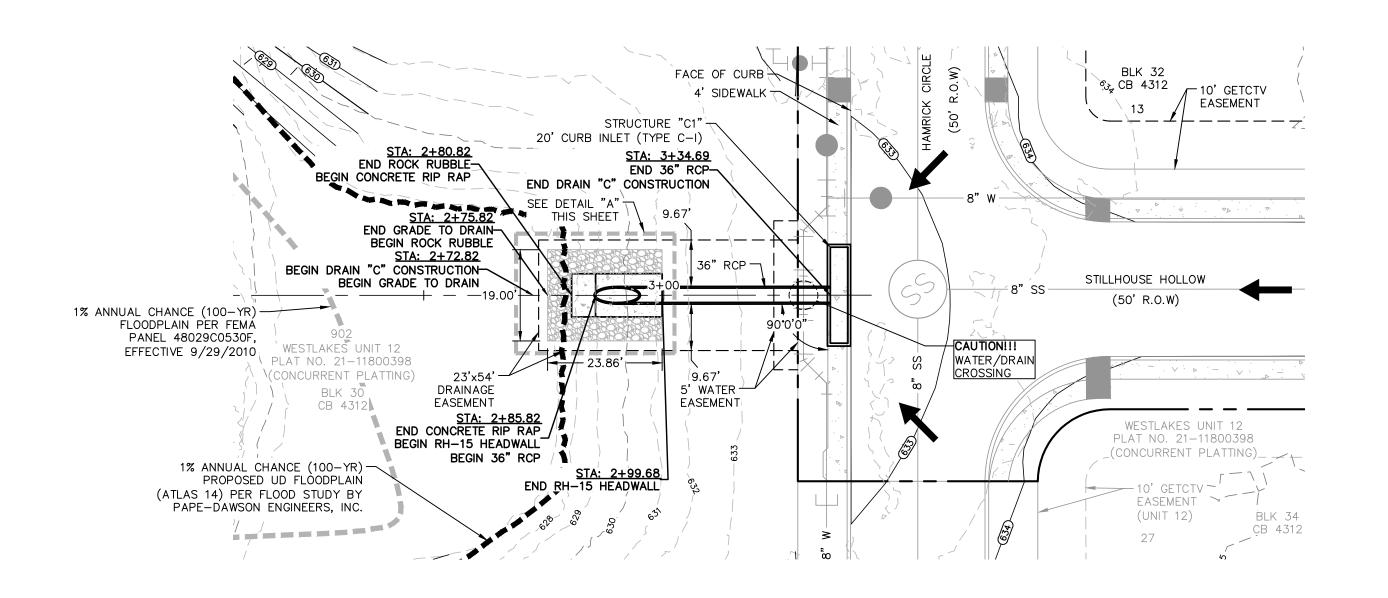
SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO 1

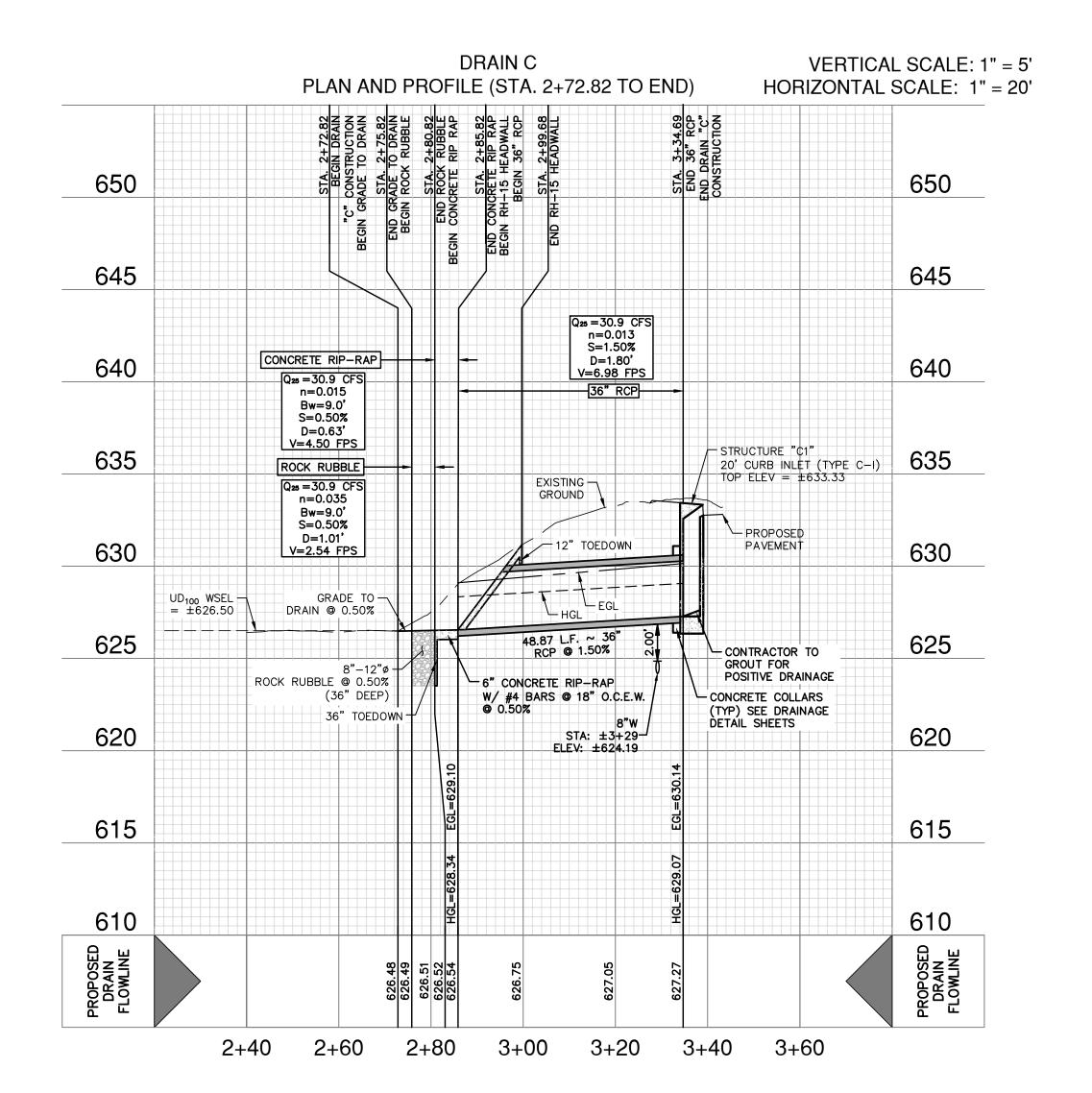
START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL E

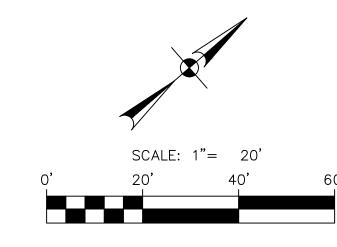
THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL B AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN OF

THESE PLANS OR NOT.

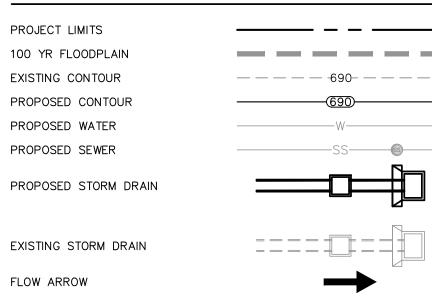
ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR





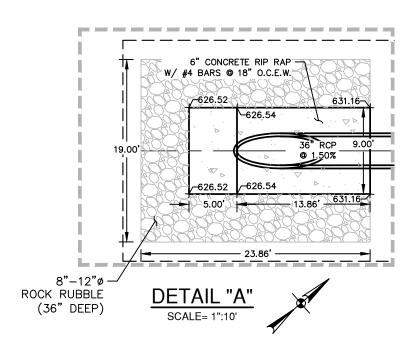


DRAINAGE LEGEND



CURB INLET IN SAG HYDRAULIC CALCULATION

 $Q^{25} = Cw \times L \times H^{3/2} = 30.9 \text{ CFS}$ Cw = 3.087H = 0.79Lcal = 14.25USE L = 20'H = 0.63'



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DR/ PROFILE (

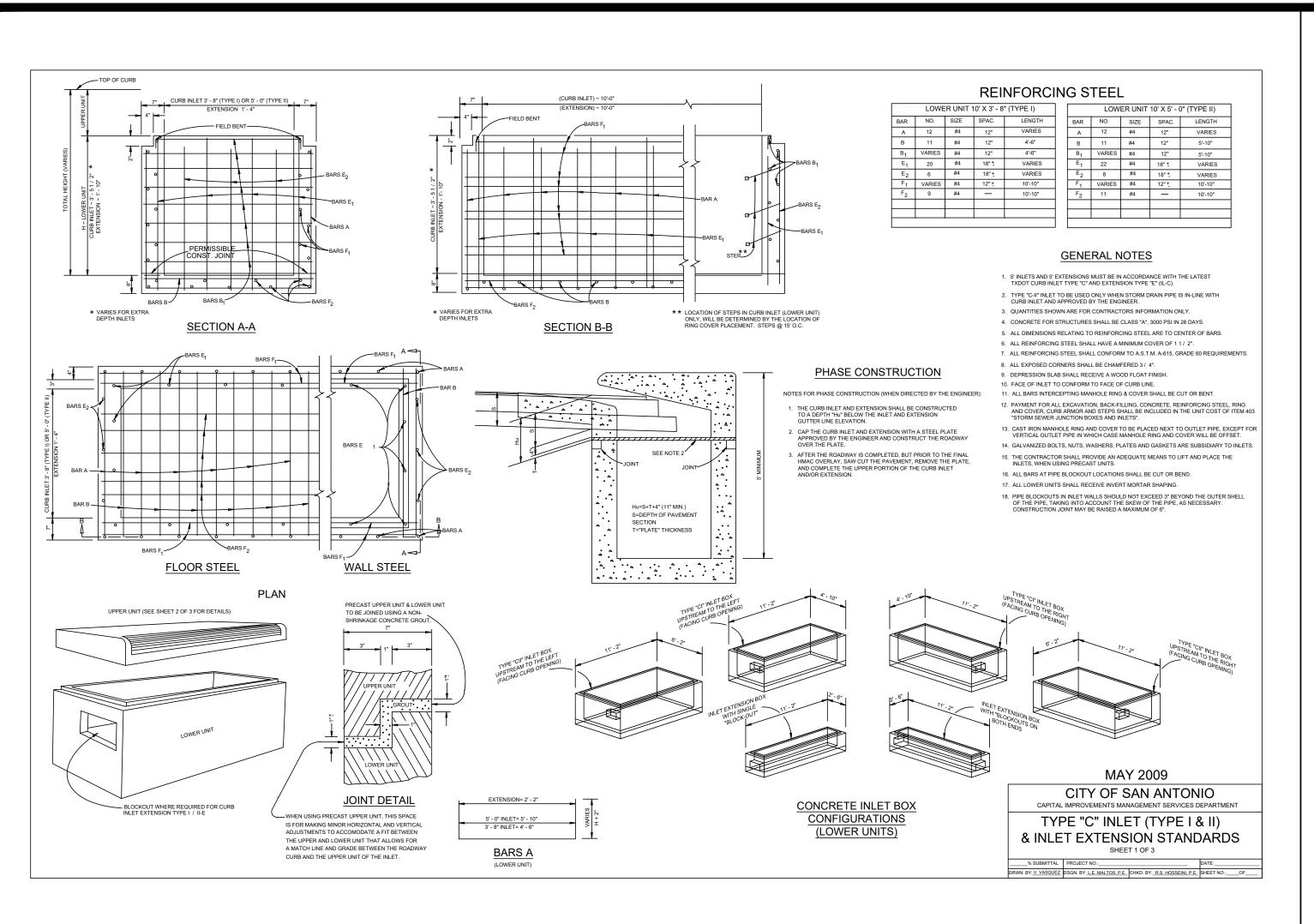
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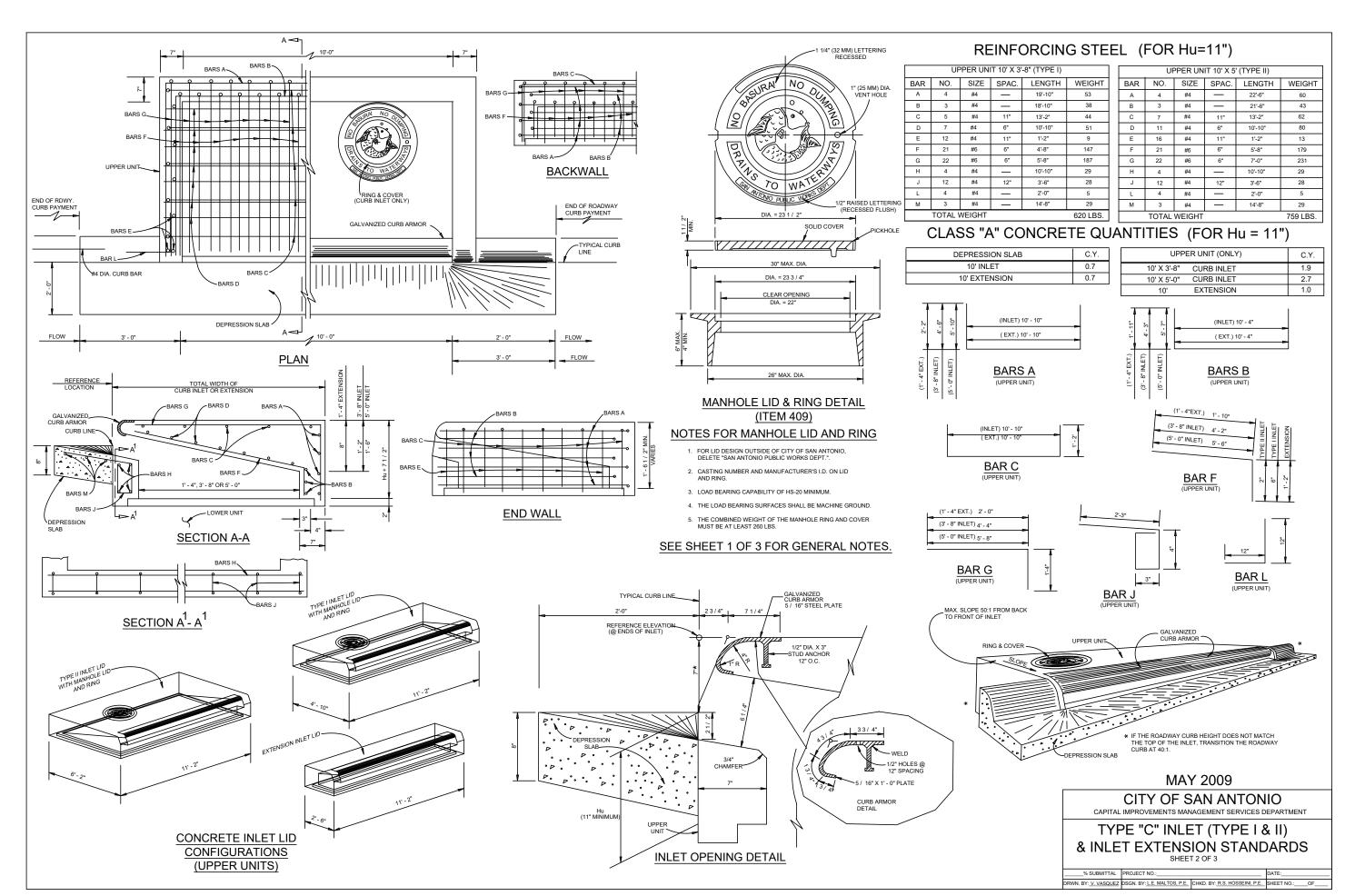
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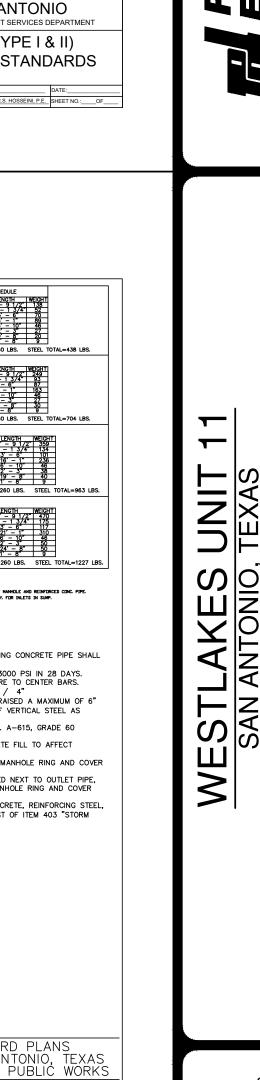
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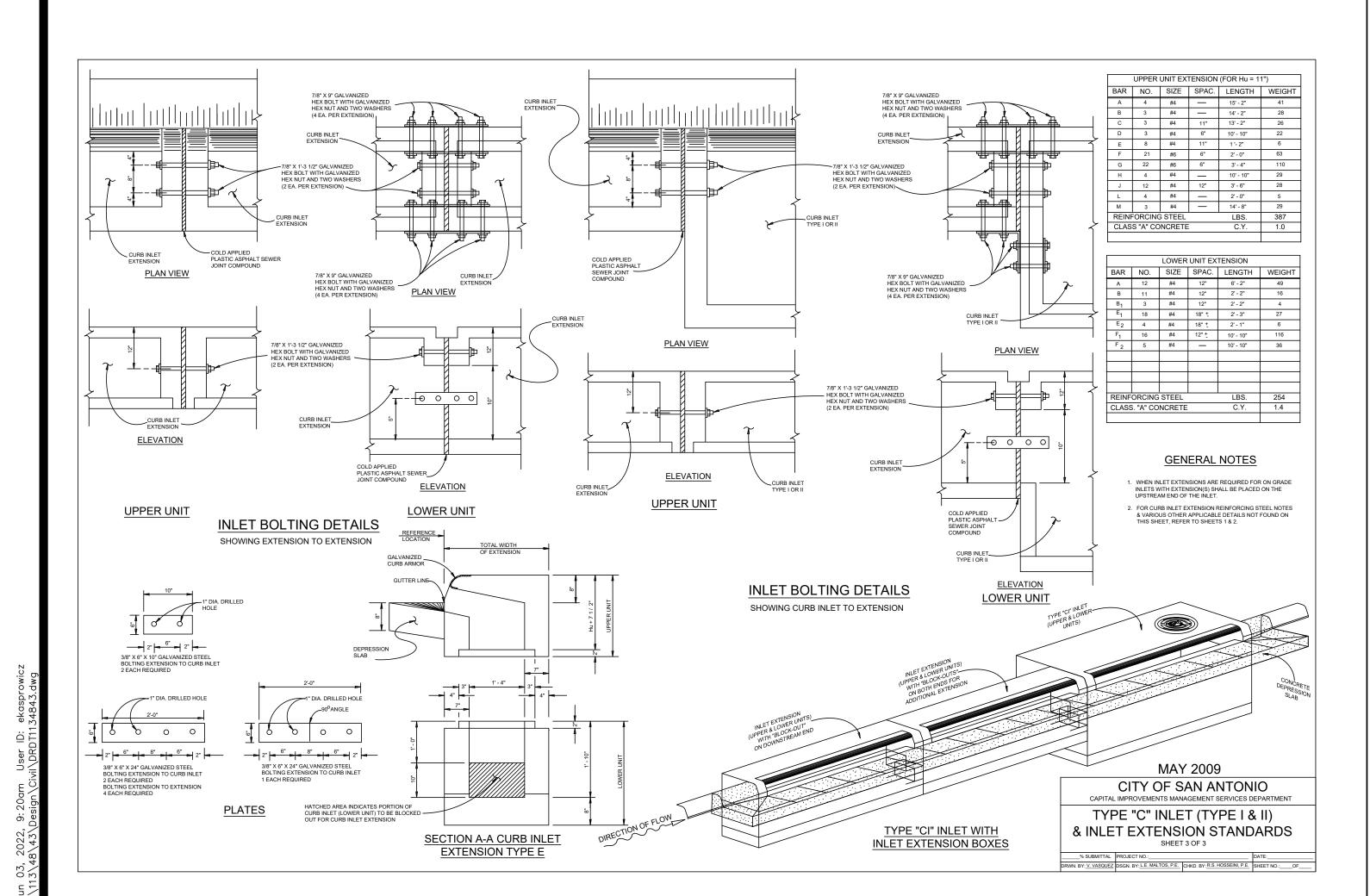
PLAT NO. 21-11800397 JOB NO. 11348-43

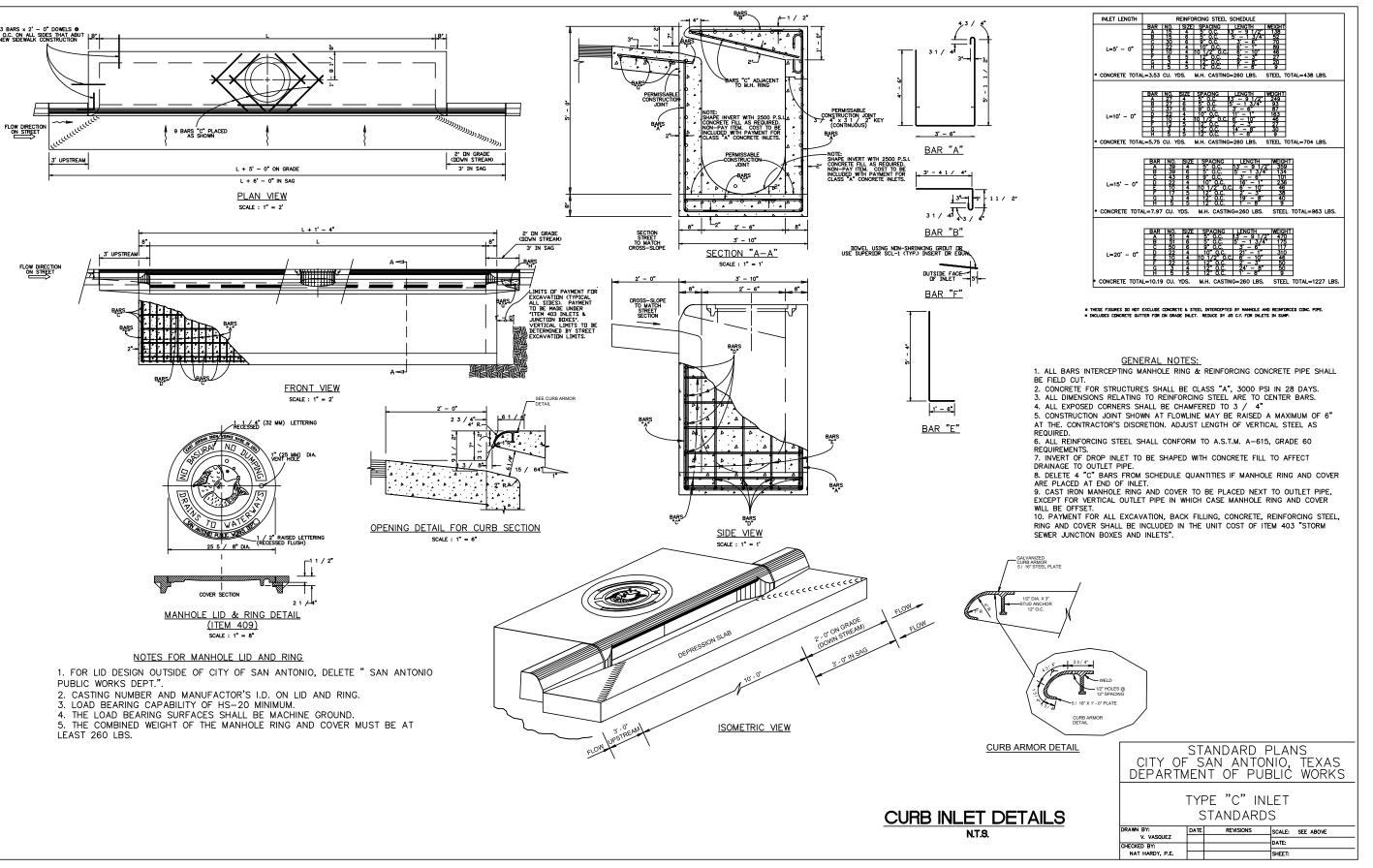
JUNE 2022 DESIGNER EDK HECKED MG DRAWN MGC











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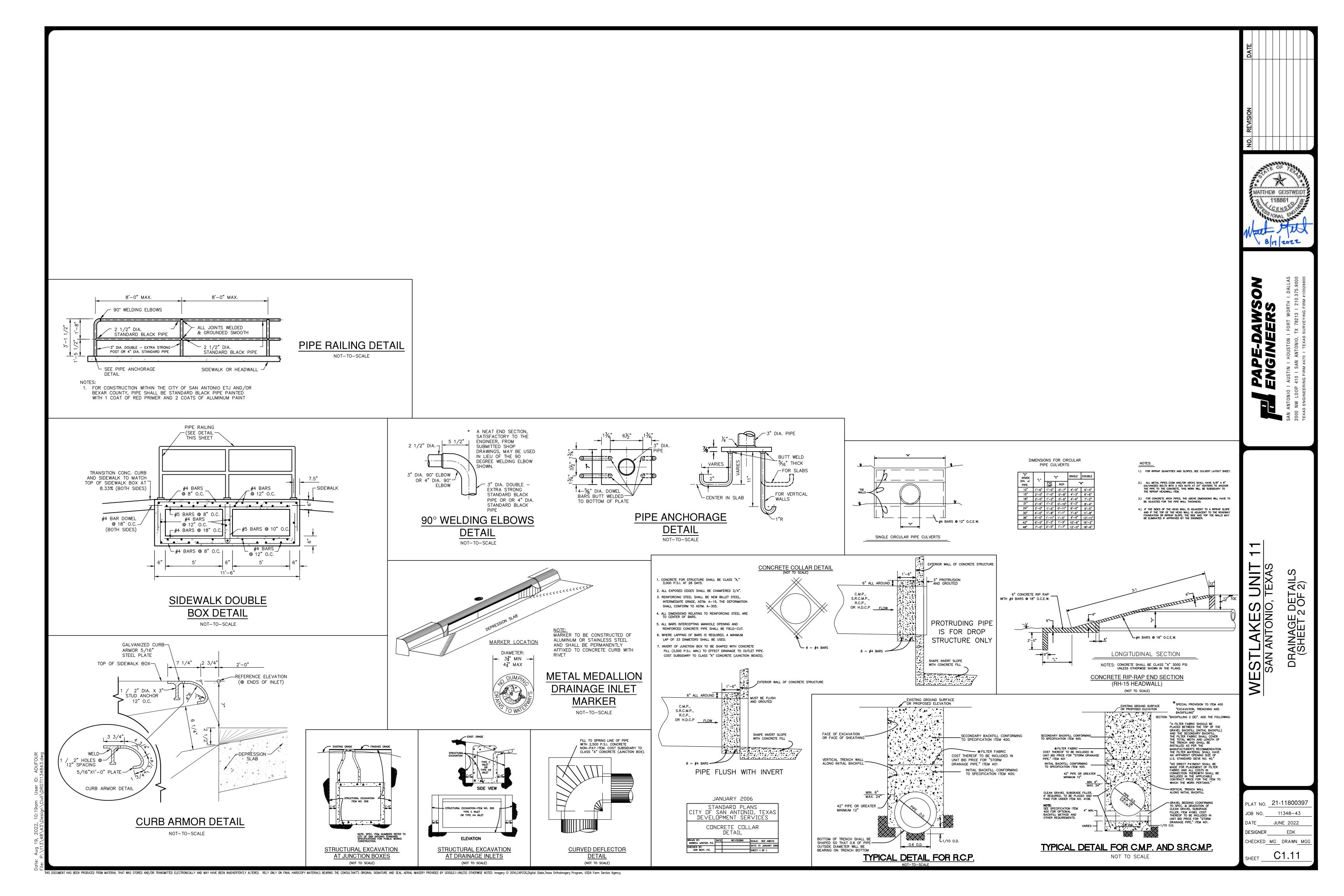
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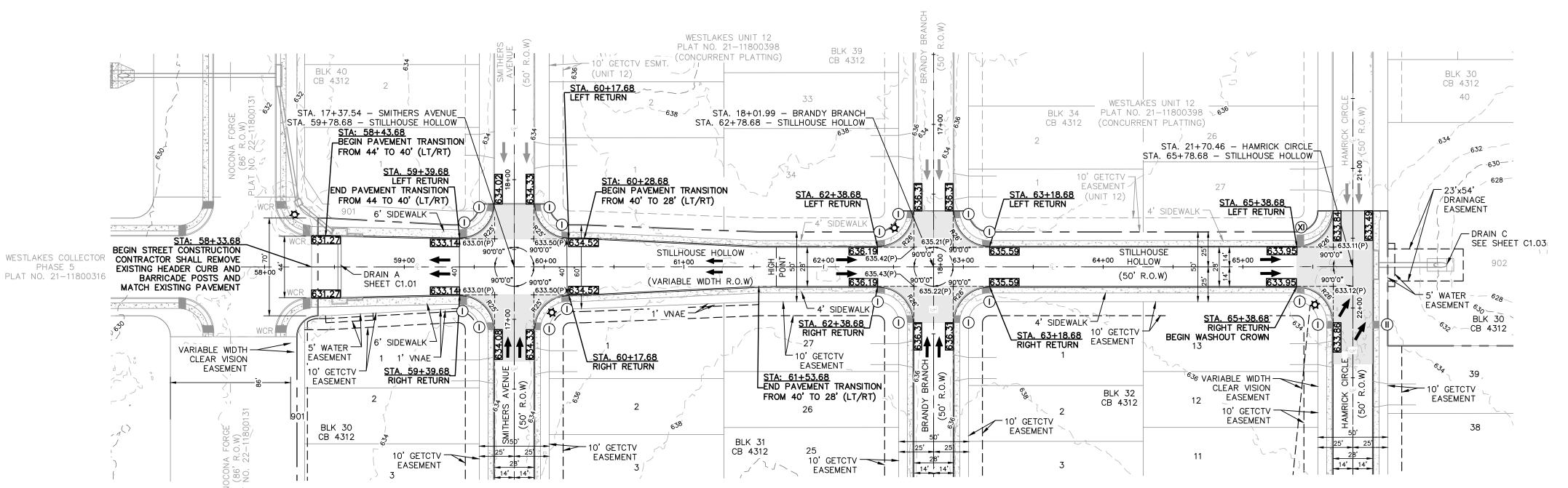
LAT NO. 21-11800397 11348-43 JUNE 2022 DESIGNER EDK CHECKED MG DRAWN MGC

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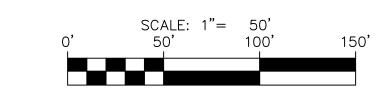
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)RAINAGE DET/ (SHEET 1 OF 2

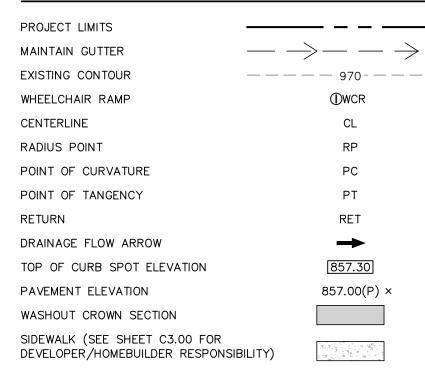








STREET LEGEND



GETCTV GAS, ELECTRIC, TELEPHONE, CABLE TV

VNA VEHICULAR NON-ACCESS

EASEMENT ESMT

DRIVEWAY

EASEMENT ESMT
CLEAR VISION CVSN

0

STREET NOTES:

- 1. A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
- 2. CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT TIE—IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
- 3. SIDEWALKS SHALL BE CONSTRUCTED 3—FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
- 4. NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
- 5. 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.
- 6. CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (Q)(6).
- 7. THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN.
- 8. FILL MATERIAL SHOULD BE NATIVE ON—SITE MATERIAL, FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2.0 AND A PI MAXIMUM OF 40. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. LIME APPLICATION RATE SHOULD BE RE—EVALUATED FOR THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.

LAKES UNIT

WESTLAKES UNITSAN ANTONIO, TEXAS STILLHOUSE HOLLOW PLAN AND PROFILE (STA. 58+33.

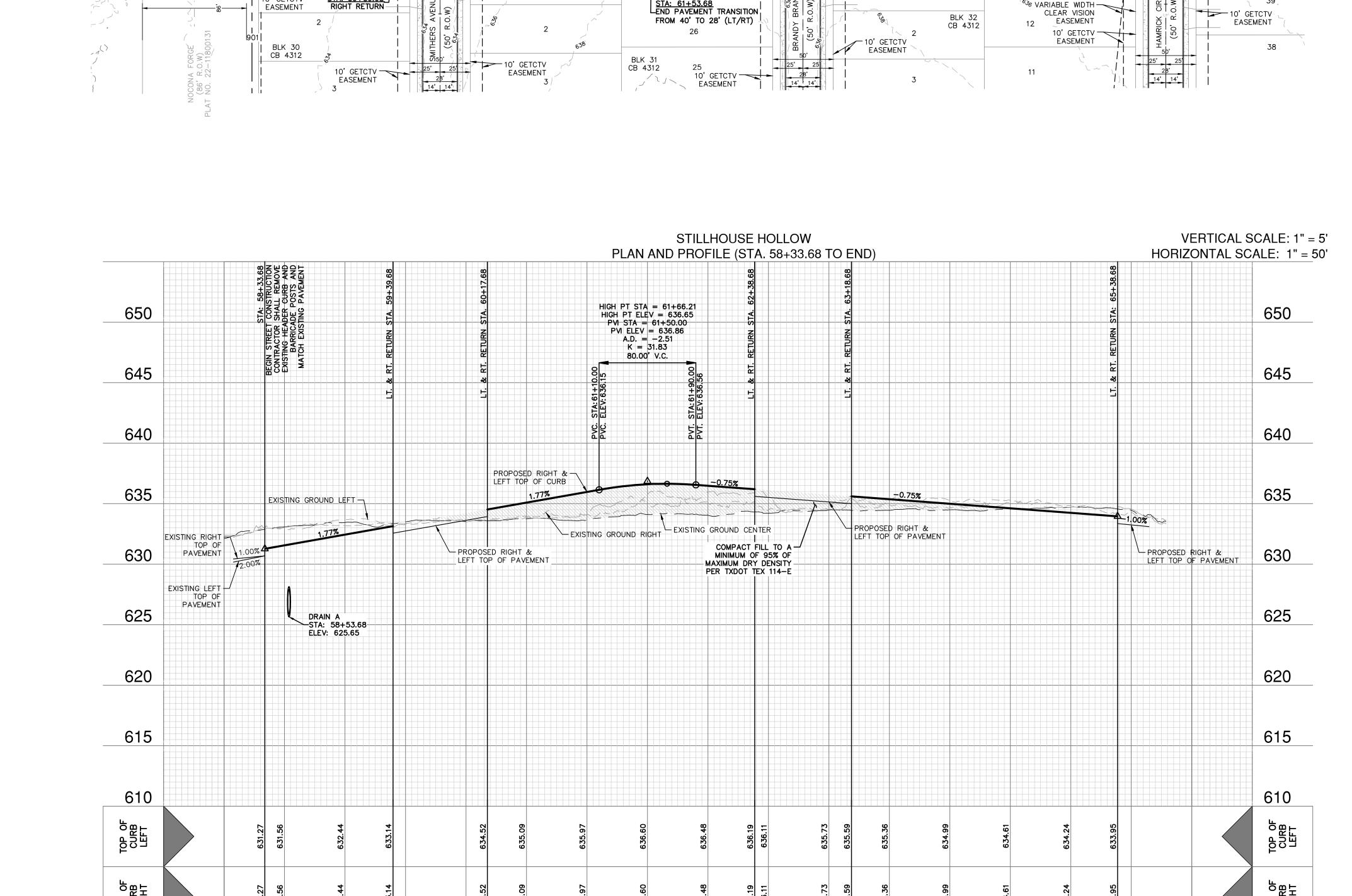
PLAT NO. 21-11800397

JOB NO. 11348-43

DATE JUNE 2022

DESIGNER EDK

CHECKED MG DRAWN MGG
CHEET C2.00



65+00

66+00

58+00

59+00

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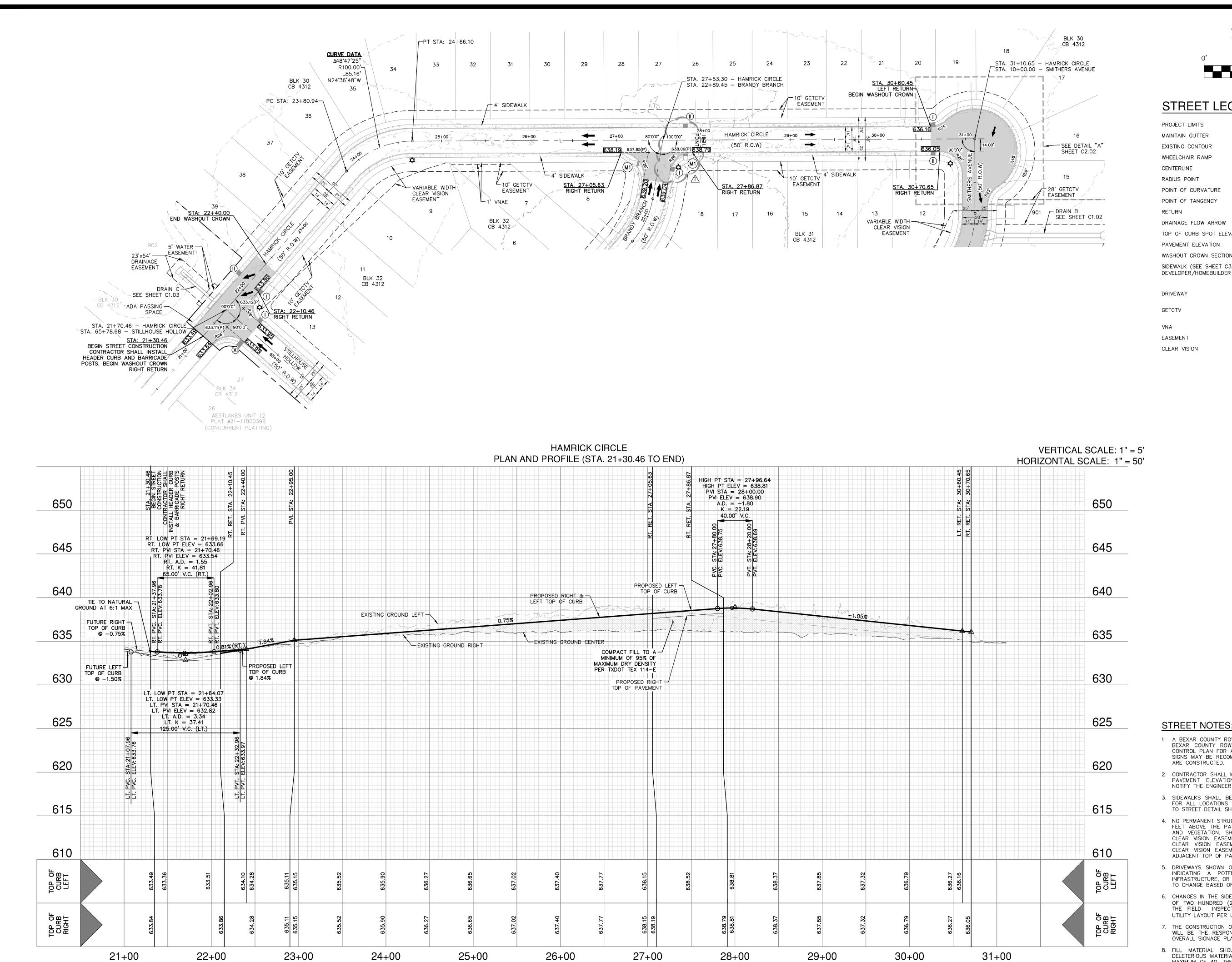
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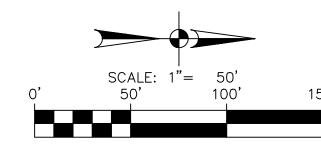
61+00

62+00

63+00

64+00





STREET LEGEND

RET DRAINAGE FLOW ARROW 857.30 TOP OF CURB SPOT ELEVATION 857.00(P) × WASHOUT CROWN SECTION SIDEWALK (SEE SHEET C3.00 FOR DEVELOPER/HOMEBUILDER RESPONSIBILITY)

GAS, ELECTRIC, TELEPHONE, CABLE TV VEHICULAR NON-ACCESS

ESMT CVSN

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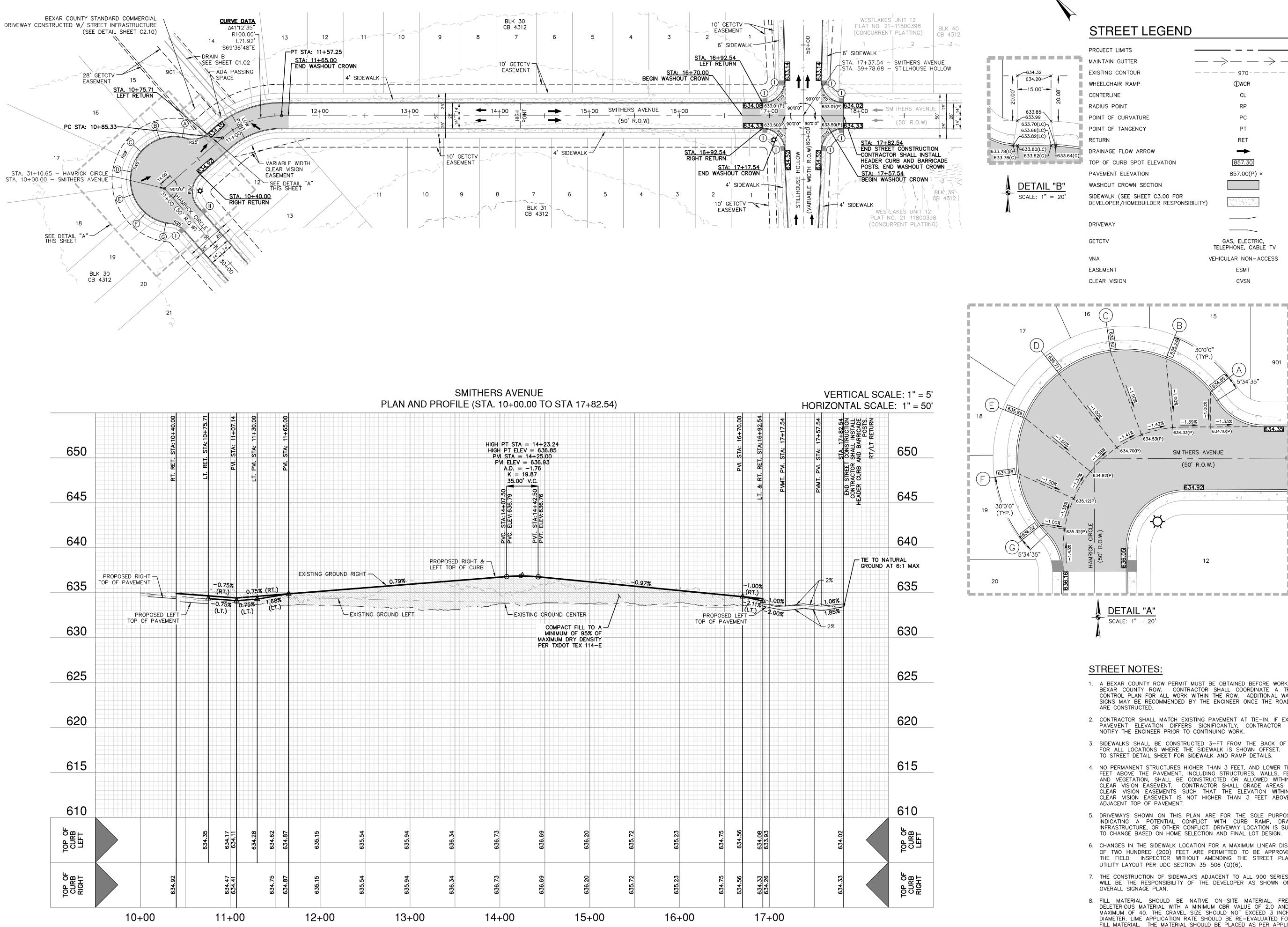
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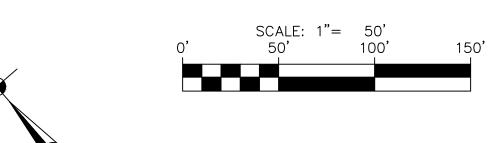
UNIT HAMRICK CIRCL PROFILE (STA. 21+ LAKES ANTONIO,

PLAT NO. 21-11800397 11348-43

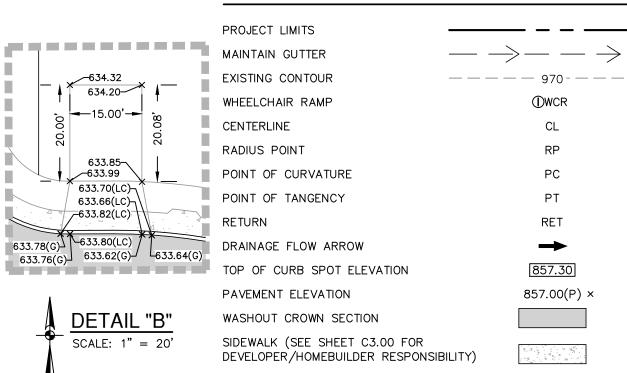
JUNE 2022 ESIGNER EDK

CHECKED MG DRAWN MGC C2.01





STREET LEGEND



DRIVEWAY VNA

EASEMENT CLEAR VISION

GAS, ELECTRIC, TELEPHONE, CABLE TV ESMT CVSN

VEHICULAR NON-ACCESS

634.35

80

SMITHERS AVENU PROFILE (STA. 10+00.00

LAT NO. 21-11800397 11348-43

AND

JUNE 2022 EDK

ESIGNER HECKED MG DRAWN MGC C2.02

STREET NOTES:

DETAIL "A"

SCALE: 1" = 20'

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634.33(P) 634.10(P)

SMITHERS AVENUE

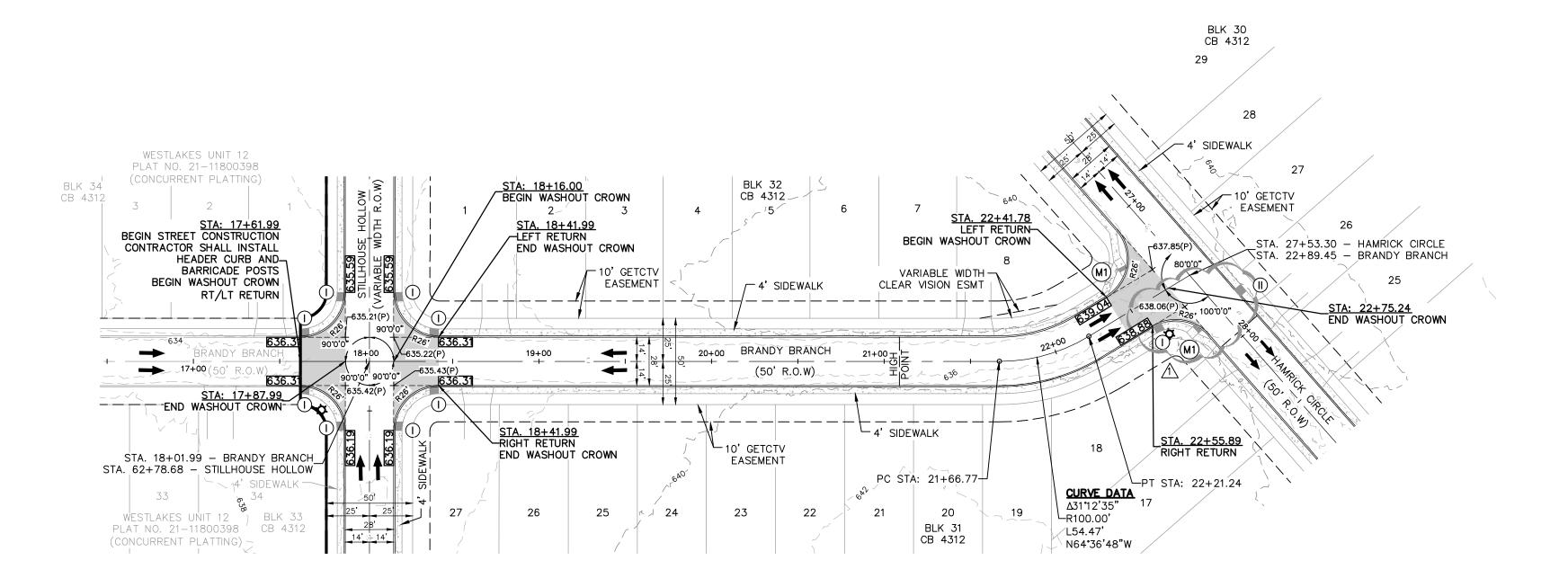
(50' R.O.W.)

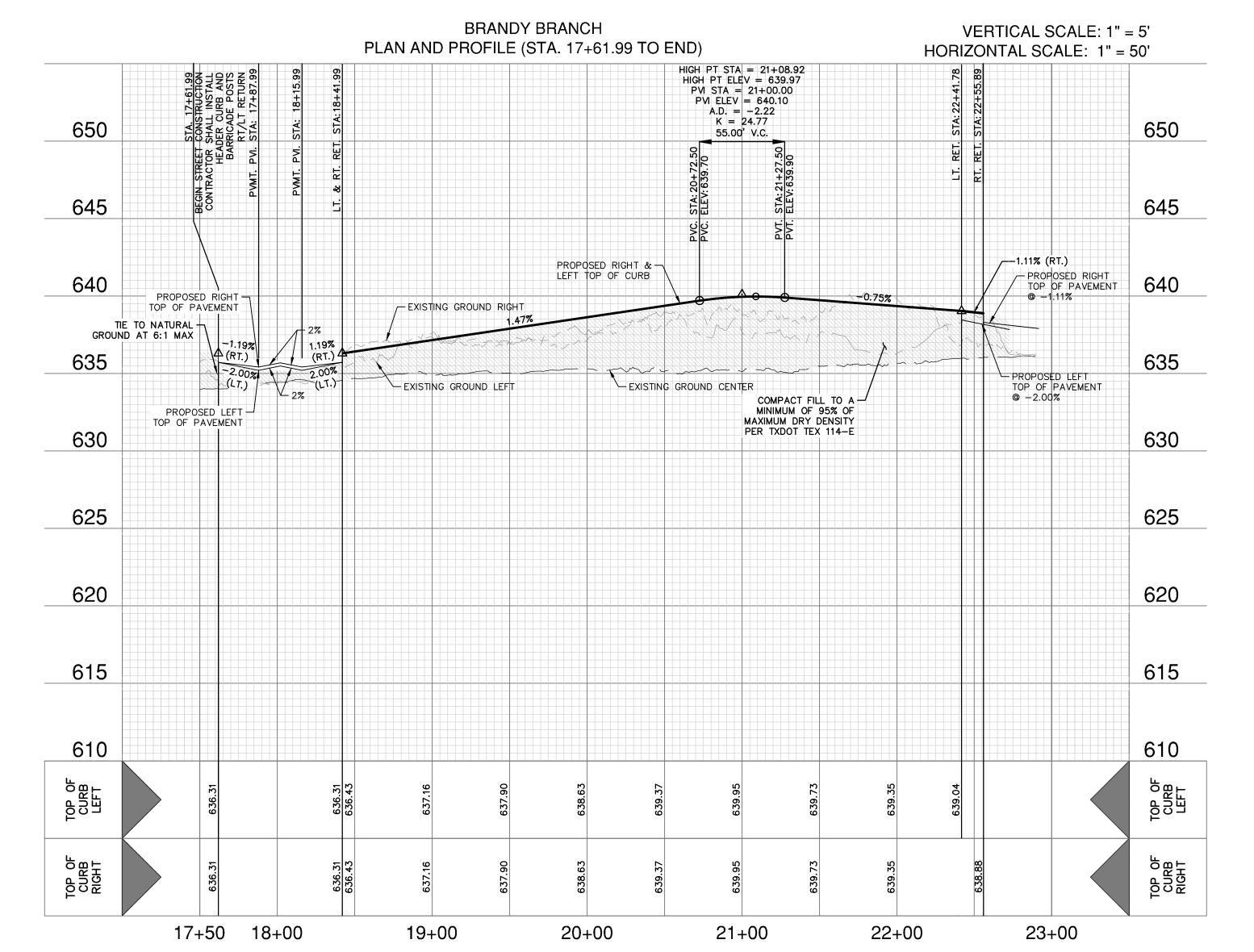
634.92

- 2. CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT TIE—IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
- 3. SIDEWALKS SHALL BE CONSTRUCTED 3-FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER

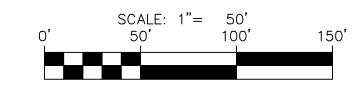
TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.

- 4. NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
- 5. 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.
- 6. CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (Q)(6).
- 7. THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN.
- 8. FILL MATERIAL SHOULD BE NATIVE ON—SITE MATERIAL, FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2.0 AND A PI MAXIMUM OF 40. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. LIME APPLICATION RATE SHOULD BE RE-EVALUATED FOR THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.









STREET LEGEND

PROJECT LIMITS	
MAINTAIN GUTTER	$- \rightarrow \rightarrow -$
EXISTING CONTOUR	970
WHEELCHAIR RAMP	() WCR
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	-
TOP OF CURB SPOT ELEVATION	857.30
PAVEMENT ELEVATION	857.00(P) ×
WASHOUT CROWN SECTION	
SIDEWALK (SEE SHEET C3.00 FOR DEVELOPER/HOMEBUILDER RESPONSIBI	LITY)

GETCTV GAS, ELECTRIC, TELEPHONE, CABLE TV

VNA

EASEMENT ESMT
CLEAR VISION CVSN

VEHICULAR NON-ACCESS

PAPE-DAN ENGINEER

80

MATTHEW GEISTWEID

5/25/2023

STLAKES UNIT 11 SAN ANTONIO, TEXAS

BRANDY BRANCH ROFILE (STA. 17+61

AND

STREET NOTES:

- A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
- CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT TIE—IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
- 3. SIDEWALKS SHALL BE CONSTRUCTED 3—FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
- 4. NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
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- 6. CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (Q)(6).
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PLAT NO. 21-11800397

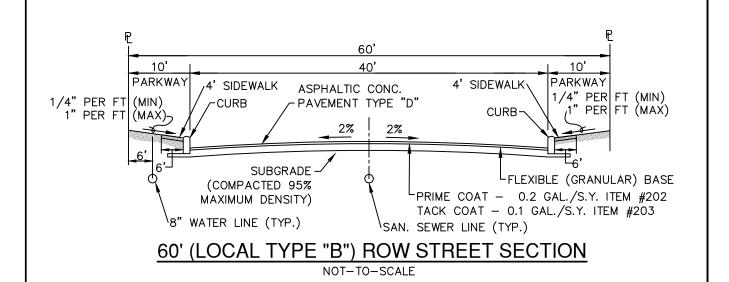
JOB NO. 11348-43

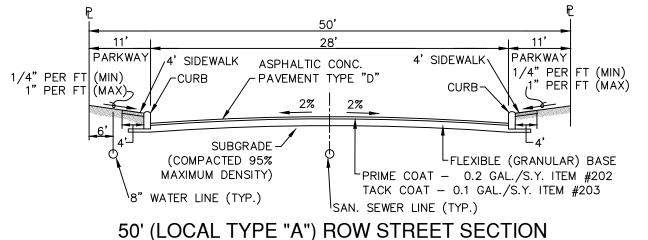
DATE JUNE 2022

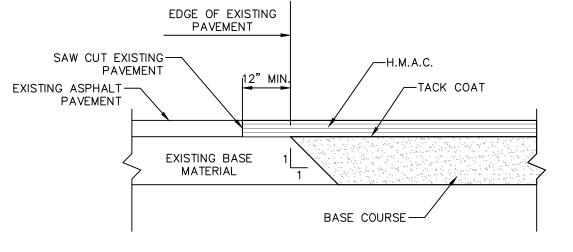
DESIGNER EDK

CHECKED MG DRAWN MGG
SHEET C2.03

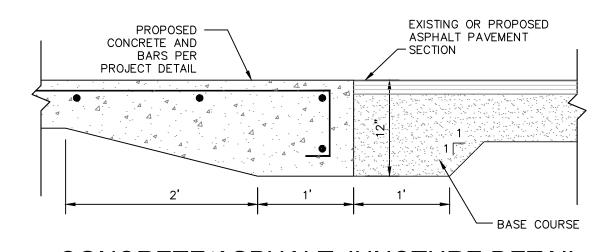
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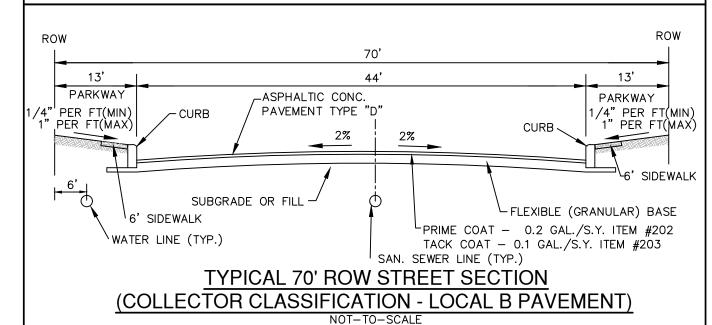


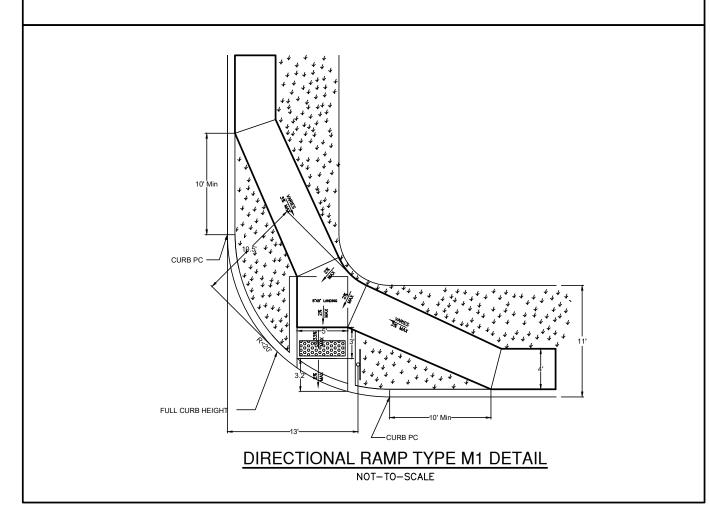


ASPHALT/ASPHALT JUNCTURE DETAIL NOT-TO-SCALE



CONCRETE/ASPHALT JUNCTURE DETAIL NOT-TO-SCALE





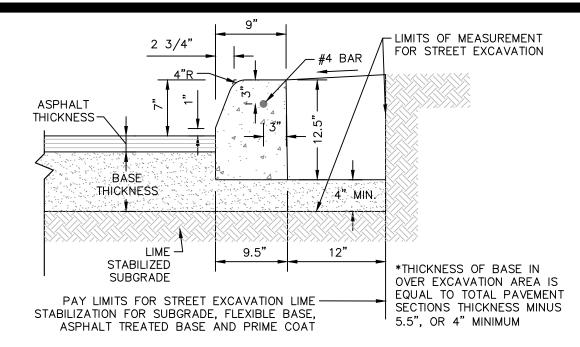
			PAVEMEN	NT SECTIO	N DETAIL			
STREET NAME	STATION	TYPE "D" HMAC	TYPE "C" HMAC	CRUSHED LIMESTONE BASE	STABILIZED SUBGRADE	GEOGRID (TENSAR TRIAX TX5)	CBR	STRUCTURAL NUMBER
STILLHOUSE HOLLOW (LOCAL B DEPTH)	58+33.68 TO 61+53.68	1.5"	2.5"	18.5"	8"	NO	2.0	4.99
STILLHOUSE HOLLOW (LOCAL A DEPTH)	61+53.68 TO 65+64.68	2"		11"	6"	NO	2.0	2.90
SMITHERS AVENUE	10+00.00 TO 17+17.54 17+57.54 TO 17+82.54	2"		11"	6"	NO	2.0	2.90
SMITHERS AVENUE (LOCAL B DEPTH)	17+17.54 TO 17+57.54	1.5"	2.5"	18.5"	8"	NO	2.0	4.99
BRANDY BRANCH	17+61.99 TO 17+87.99 18+15.99 TO 22+75.23	2"		11"	6"	NO	2.0	2.90
HAMRICK CIRCLE	21+30.46 TO 31+10.65	2"		11"	6"	NO	2.0	2.90

GENERAL NOTES:

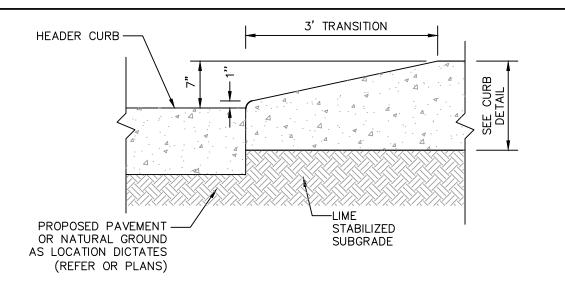
- CONTRACTOR SHALL REFERENCE THE PROJECT PAVEMENT DESIGN REPORT **\$221068** PREPARED BY INTEC DATED **FEBRUARY 26, 2022.**
- 2. CONTRACTOR SHALL RETAIN A GEOTECHNICAL ENGINEER TO VERIFY THE SUB GRADE CONDITION PRIOR TO PLACING ANY BASE MATERIAL. GEOTECHNICAL ENGINEER SHALL DETERMINE THE SUB GRADE CONDITION AND IF LIME STABILIZATION IS REQUIRED.
- 3. GEOTECHNICAL ENGINEER SHOULD VERIFY THE STREET SUBGRADE AT THE TIME OF CONSTRUCTION PRIOR TO PLACEMENT OF AGGREGATE BASE.
- 4. THE FLEXIBLE BASE COURSE SHOULD BE CRUSHED LIMESTONE CONFORMING TO TXDOT STANDARD SPECIFICATIONS, ITEM 247, TYPE A, GRADES 1 OR 2.
- 5. THE MOISTURE CONTENT OF THE FILL SHOULD BE MAINTAINED WITHIN THE RANGE OF OPTIMUM WATER CONTENT TO 3 PERCENTAGE POINTS ABOVE THE OPTIMUM WATER CONTENT UNTIL PERMANENTLY
- 6. IN THE EVENT THAT THE CLAY FILL USED IS DIFFERENT THAN THE EXISTING SUBGRADE, THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT COULD BE INVALIDATED AND THE DESIGN ENGINEER MUST BE CONSULTED TO DETERMINE IF ADDITIONAL CBR TESTING AND THICKER PAVEMENT SECTIONS ARE
- 7. WHERE PAVEMENT SUBGRADE IS LOCATED WITHIN 2-FEET OF THE EXISTING GROUND SURFACE (STRATUM CLAYS), MOISTURE CONDITIONED SUBGRADE WILL BE REQUIRED. GEOTECHNICAL ENGINEER SHOULD VERIFY THE STREET SUBGRADE AT THE TIME OF CONSTRUCTION PRIOR TO PLACEMENT OF AGGREGATE BASE TO DETERMINE WHERE THE MOISTURE CONDITIONED SUBGRADE IS NEEDED. REFERENCE GEOTECHNICAL ENGINEERING REPORT FOR MORE INFORMATION.
- 8. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL MATERIAL TESTING WITH THE PROJECT GEOTECHNICAL ENGINEER. TESTING SHALL BE PAID FOR BY THE OWNER.
- 9. FILL MATERIAL SHOULD BE NATIVE ON-SITE MATERIAL, FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2 AND A MAXIMUM PI OF 35. 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 OR COUNTY GUIDELINES. CONTRACTOR TO VERIFY EXACT SPECIFICATIONS WITH PROJECT GEOTECHNICAL ENGINEERING REPORT.
- 10. A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN THE BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED. STREET SUBGRADE NOTES:
- 1. IF THE STREET SUBGRADE PLASTICITY INDEX VALUE IS GREATER THAN 20, SUBGRADE STABILIZATION IS NEEDED AS PER CITY OF SAN ANTONIO REQUIREMENTS.
- 2. IF THE SUBGRADE PLASTICITY INDEX VALUE IS 20 OR LESS. SUBGRADE STABILIZATION IS NOT NEEDED. THE SUBGRADE SHOULD BE MOISTURE CONDITIONED (COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AT A MINIMUM MOISTURE CONTENT OF OPTIMUM PLUS 2 PERCENT (TEX114E)).
- 3. THE SUBGRADE SHOULD BE STABILIZED USING 6.0 PERCENT LIME TO A DEPTH OF 6 AND 8 INCHES AS
- 4. THE SUBGRADE SOILS SHOULD BE TESTED FOR SOIL SULFATE CONTENT PRIOR TO STABILIZATION. IF THE SOIL SULFATE CONTENT IS GREATER THAN 3000 PPM, AN ALTERNATE PROCEDURE / RECOMMENDATION
- 5. LIME APPLICATION RATE OF 30.0 LBS PER SQ YARD FOR 6 INCH STABILIZATION DEPTH AND 40.0 LBS PER SQ YARD FOR 8 INCH STABILIZATION DEPTH IS RECOMMENDED.

6. APPROVED FILL MATERIAL SHOULD BE USED TO RAISE THE GRADE. THE FILL SHOULD BE FREE OF

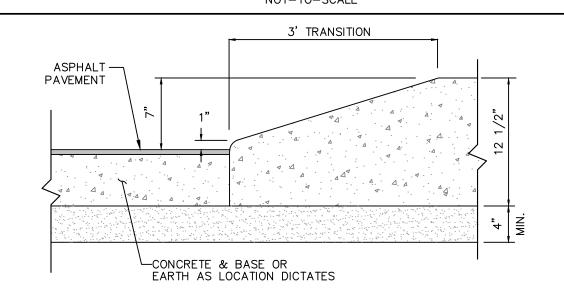
- DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2.0 AND A MAXIMUM PI OF 35. LIME APPLICATION RATES SHOULD BE RE-EVALUATED AND TESTED FOR SULFATE CONTENT PRIOR TO USE OF THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.
- 7. THE SUBGRADE, PRIOR TO PLACEMENT OF FILL, SHOULD BE PROOF ROLLED TO IDENTIFY WEAK AREAS. ANY IDENTIFIED WEAK AREAS SHOULD BE RECOMPACTED.
- FOR LIME STABILIZATION CONSTRUCTION VERIFICATION THE FOLLOWING SHALL BE CONDUCTED ON THE FIELD: 1. AFTER INITIAL MIXING THE SOIL-LIME MIXTURE SHALL MELLOW FOR A PERIOD OF TWO TO THREE (2-3)DAYS. MAINTAIN MOISTURE DURING MELLOWING.
- 2. AFTER MELLOWING AND FINAL MIXING, THE PULVERIZATION SHALL BE CHECKED USING THE FOLLOWING CRITERIA (REMOVE NON-SLAKING AGGREGATES RETAINED ON THE 3 INCH SIEVE FROM THE SAMPLE): MINIMUM PASSING 1¾" SIEVE 100
- MINIMUM PASSING ¾ SIEVE MINIMUM PASSING NO. 4 SIEVE
- 3. SAMPLE SOIL-LIME MIXTURE FOR DETERMINATION OF MAXIMUM DRY DENSITY (MDD). IN THE LABORATORY, MOLD SPECIMENS TO 95% OF MDD AT OPTIMUM MOISTURE CONTENT AND VERIFY UCS TO BE AT LEAST 160 PSI IN ACCORDANCE WITH PROCEDURE OUTLINED IN THE BEXAR COUNTY FLEXIBLE PAVEMENT DESIGN CRITERIA GUIDE FOR MIXTURE DESIGN.
- 4. COMPACT AND CHECK FIELD DENSITY (MINIMUM OF 95% OF MDD REQUIRED).
- 5. CURE FOR AN ADDITIONAL 2 TO 5 DAYS (TOTAL MELLOWING AND CURING TIME SHOULD TOTAL AT LEAST
- 6. VERIFY DEPTH OF LIME STABILIZED LAYER TO DEPTH AS NOTED ON PLAN TO WITHIN ± 1.0 INCH.



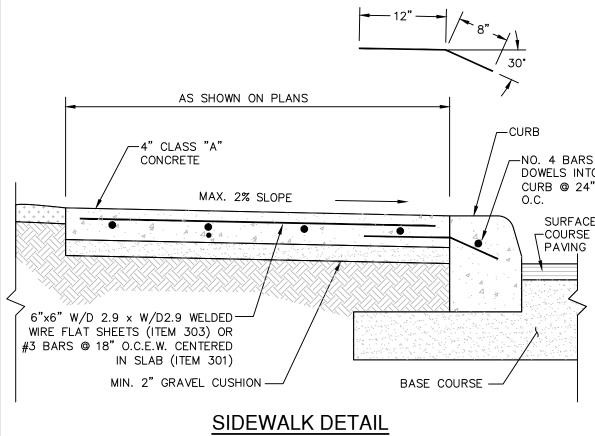
CONCRETE CURB DETAIL NOT-TO-SCALE



CURB TRANSITION DETAIL (FROM HEADER CURB TO STANDARD CURB NOT-TO-SCALE



CURB TRANSITION DETAIL (FROM PAVEMENT TO STANDARD CURB) NOT-TO-SCALE



TYPE 11 \vee \vee \vee \vee LANDING CURB V — V 2% SIDEWALK RAMP 8.3% SIDEWALK LANDING MAX. 2% RAMP 8.3%

NOT-TO-SCALE

OFFSET PARALLEL CURB RAMP DETAIL

NOT-TO-SCALE

JUNE 2022 DESIGNER CHECKED MG DRAWN MGC C2.10

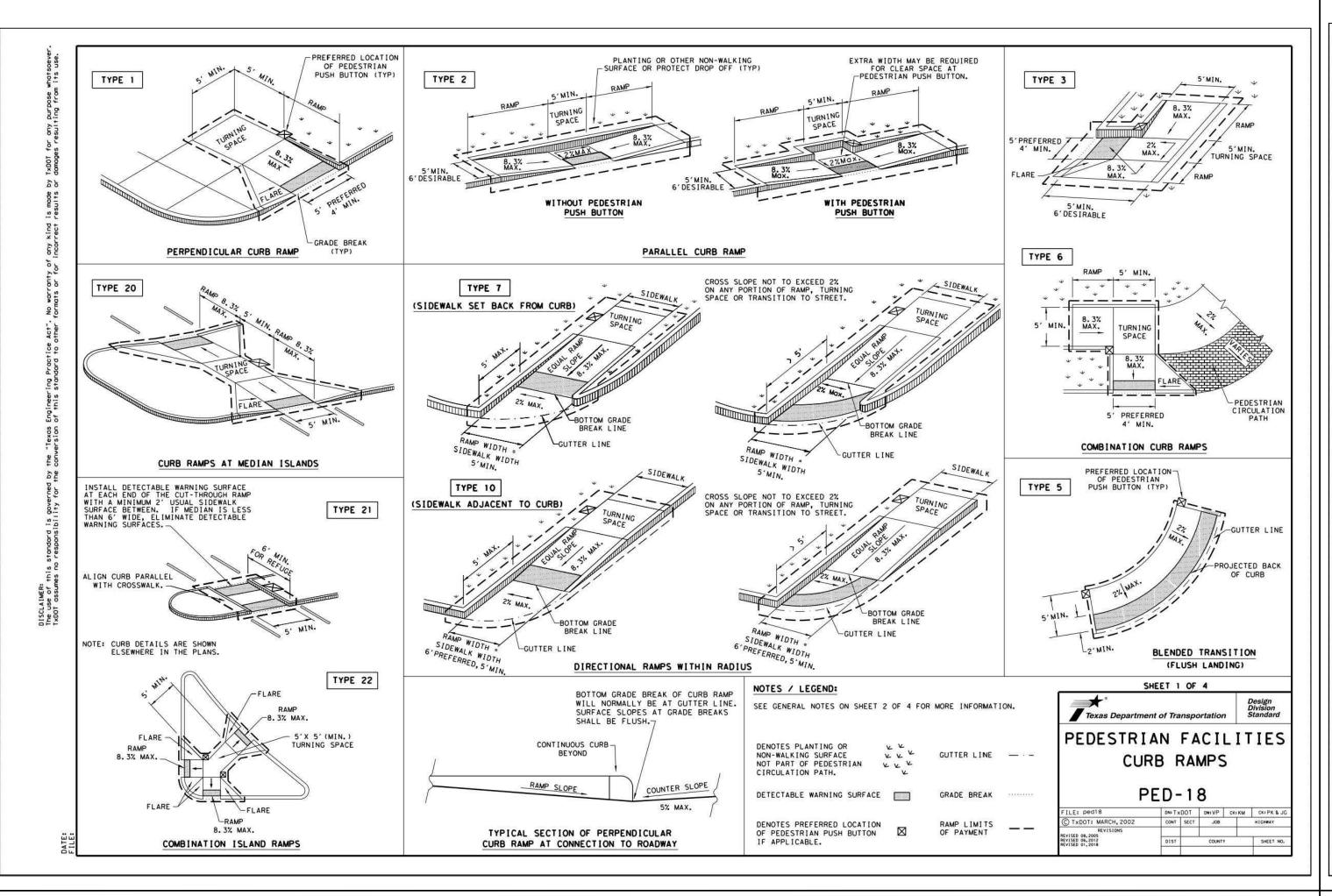
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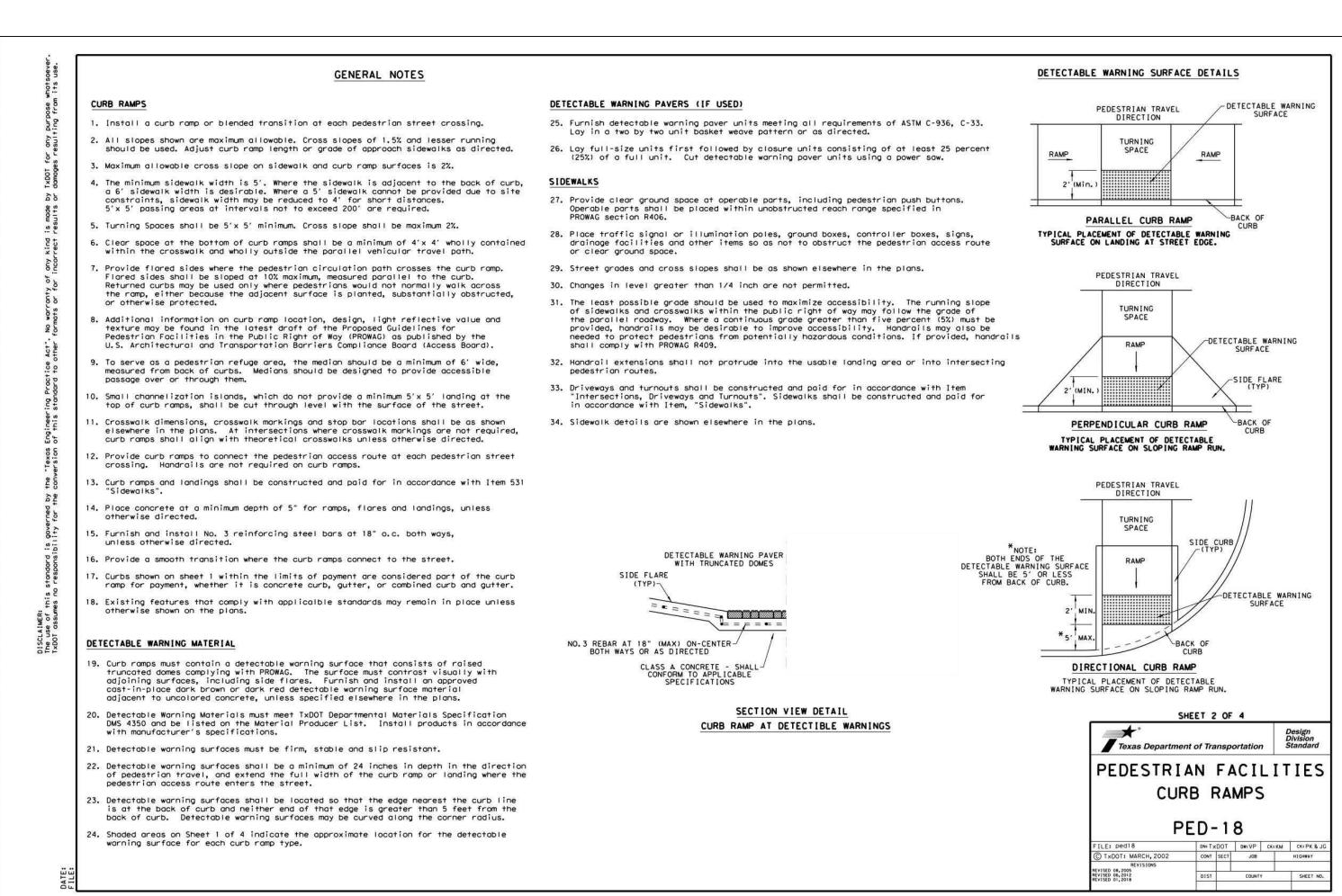
11348-43

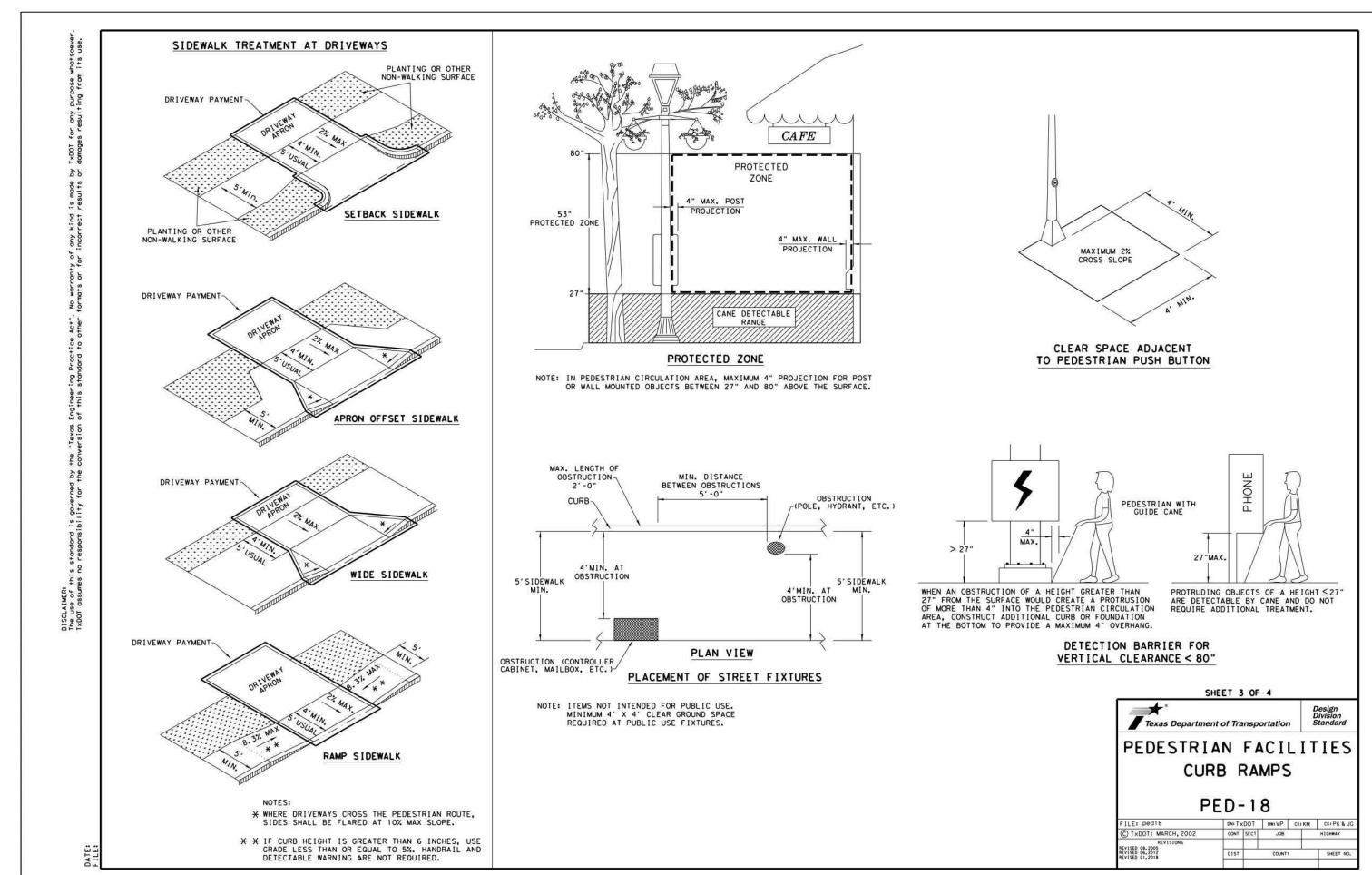
MATTHEW GEISTWEID

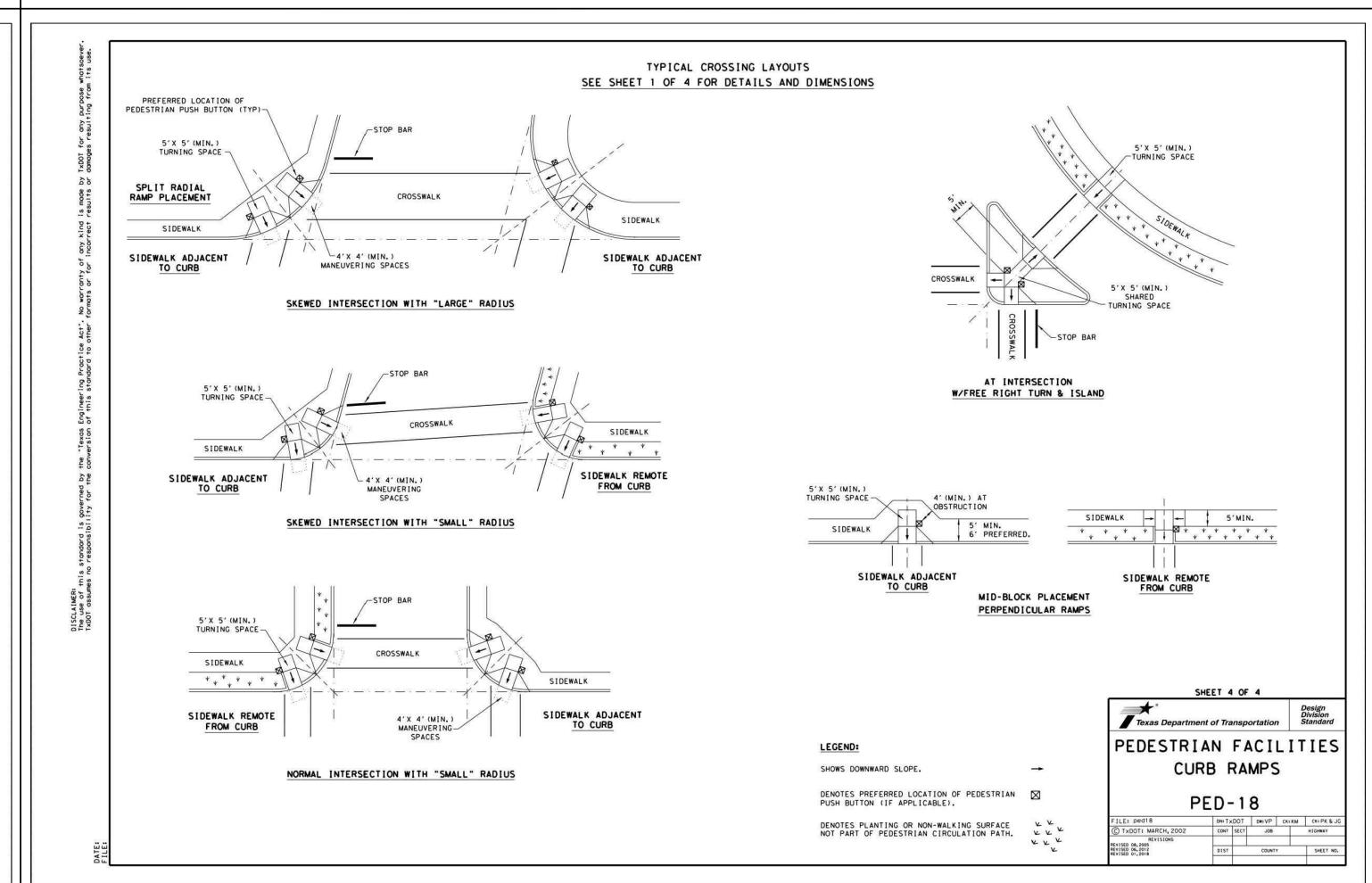
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E-DAWSON
INTERES
IOUSTON I FORT WORTH I DALLAS
ANTONIO, TX 78213 I 210.375.9000
O I TEXAS SURVEYING FIRM #10028800

EUGENE H. DAWSON III

PAP ENGLIANIO I AUSTIN I H

WESTLAKES UNIT 11
SAN ANTONIO, TEXAS
TYPICAL STREET DETAILS
(SHEET 2 OF 3)

PLAT NO. 21-11800397

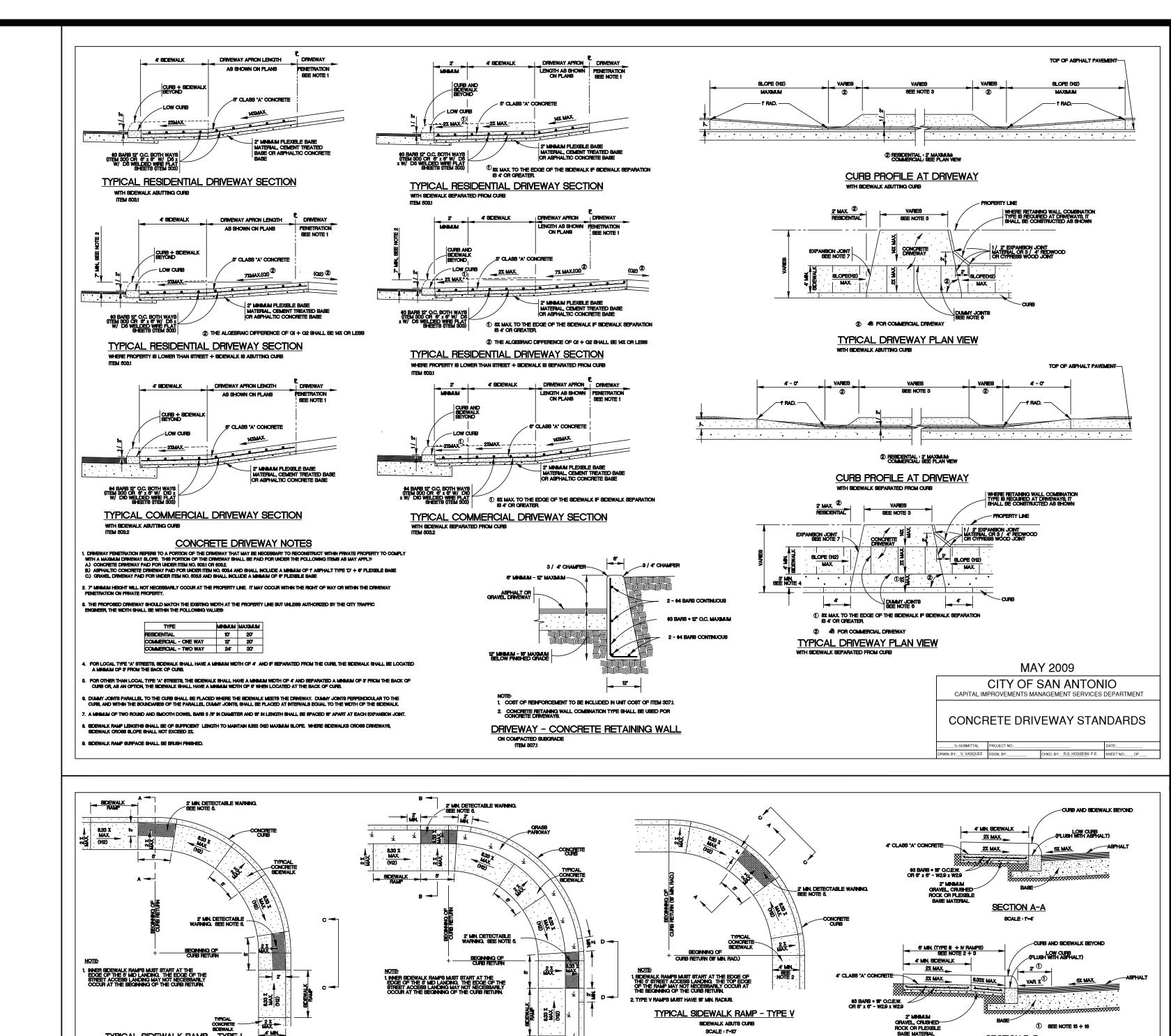
JOB NO. 11348-43

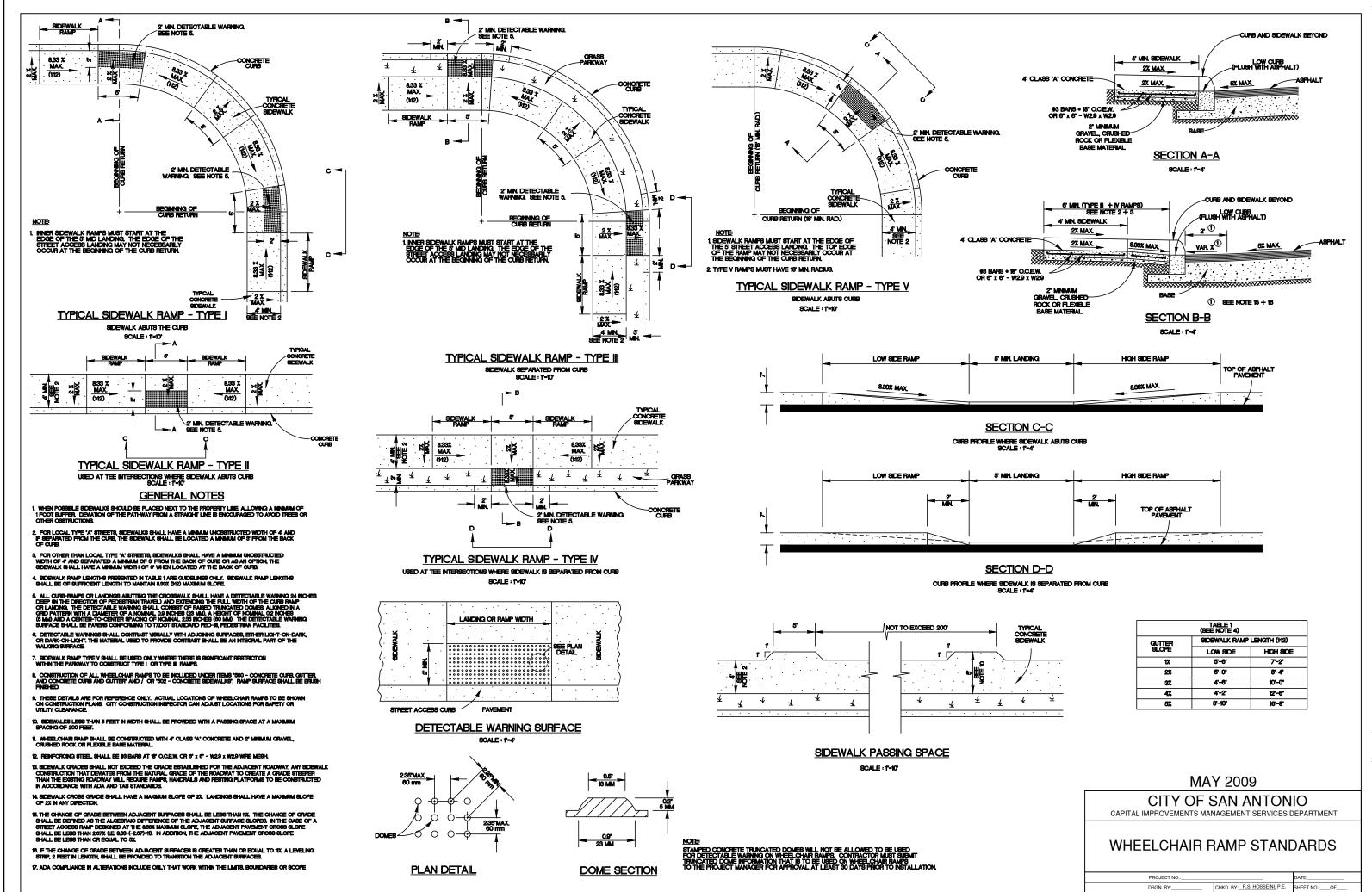
DATE JUNE 2022

DESIGNER EDK

_{сет} С2.11

HECKED MG DRAWN MGC





LAKES ANTONIO, WE

YPICAL STREET DE (SHEET 3 OF 3)

EUGENE H. DAWSON III

6/3/2022

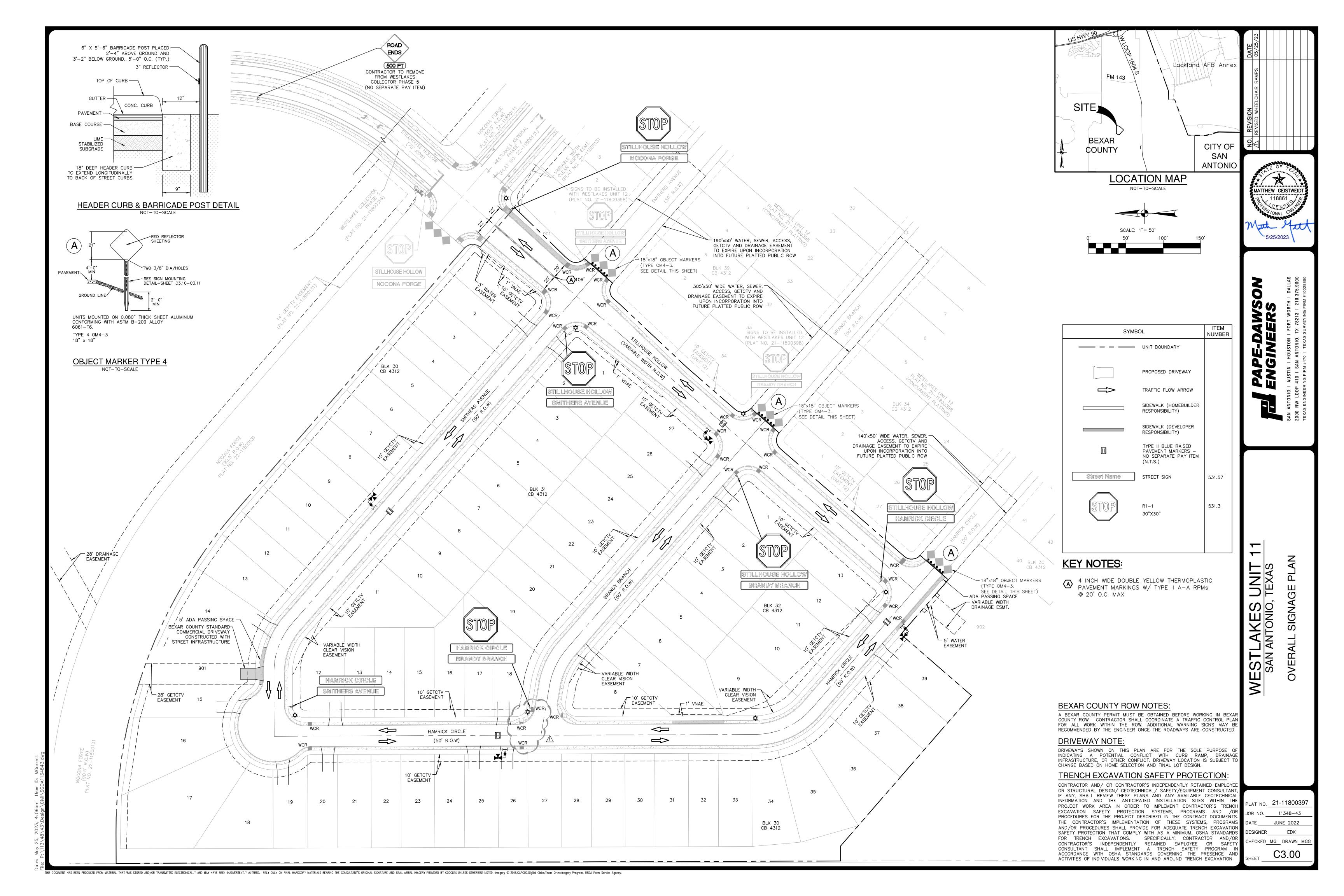
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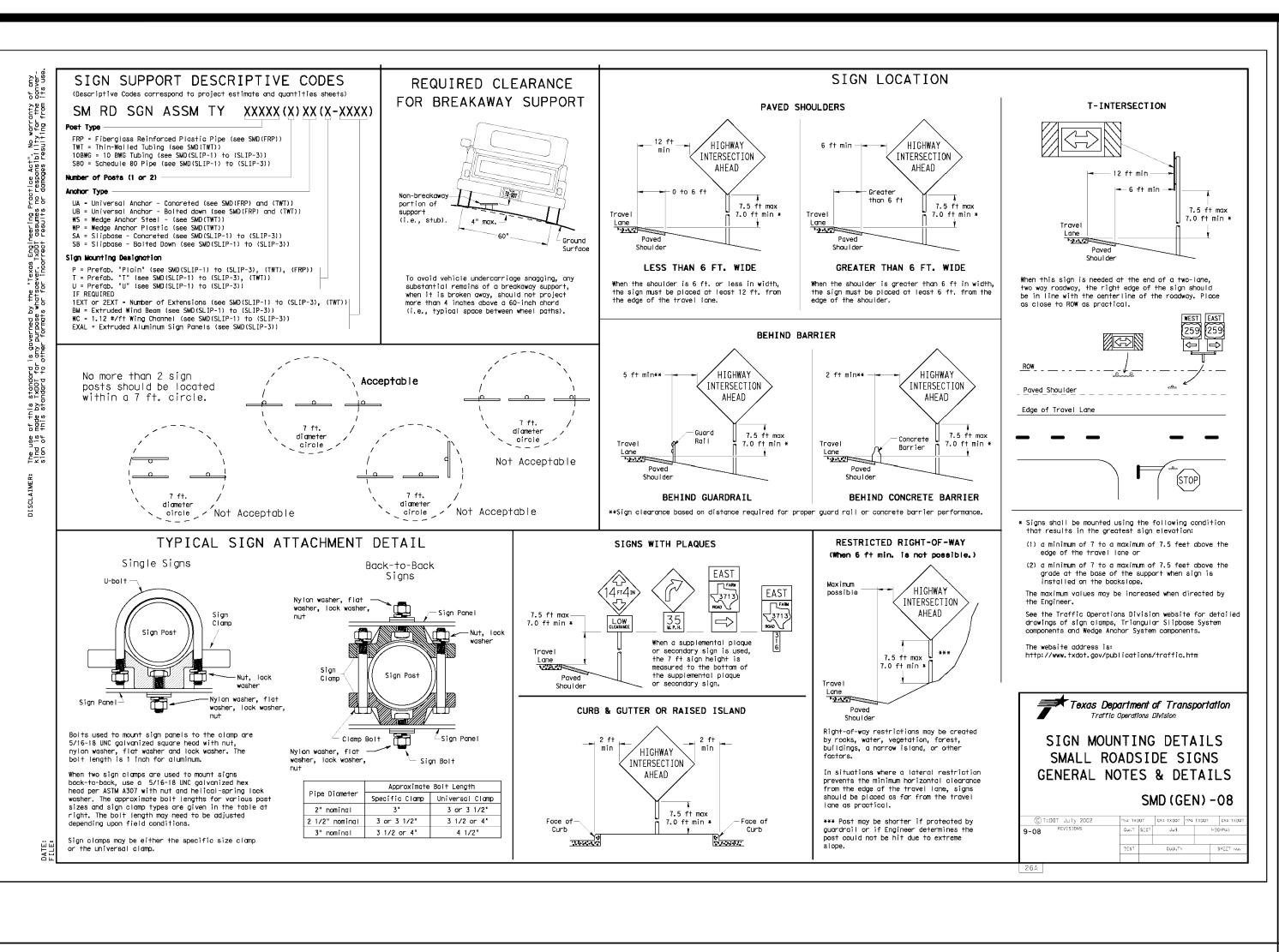
PAPE-DAWS

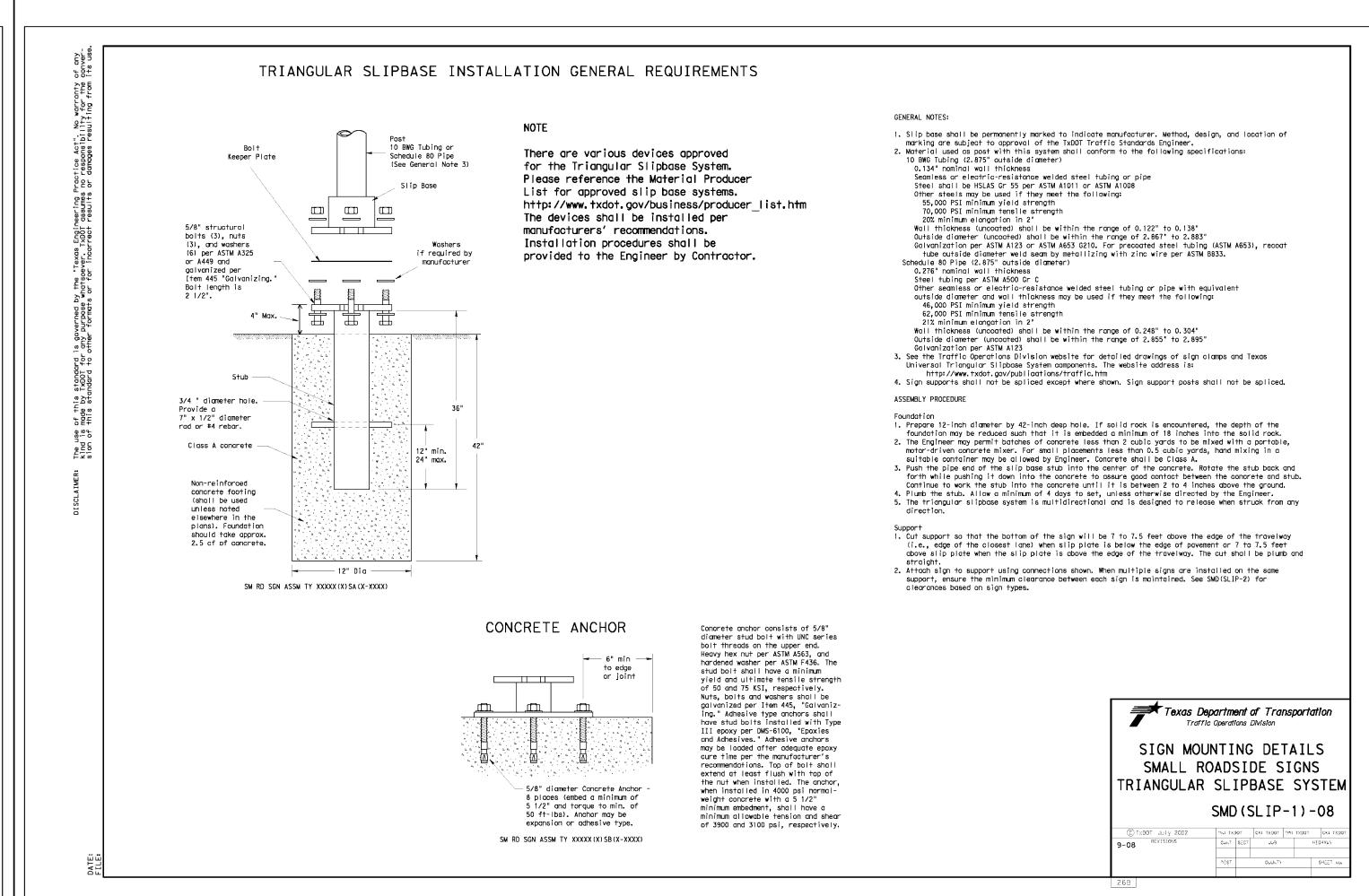
PLAT NO. 21-11800397 JOB NO. 11348-43 JUNE 2022 DESIGNER EDK :HECKED<u>MG</u> DRAWN<u>MGG</u>

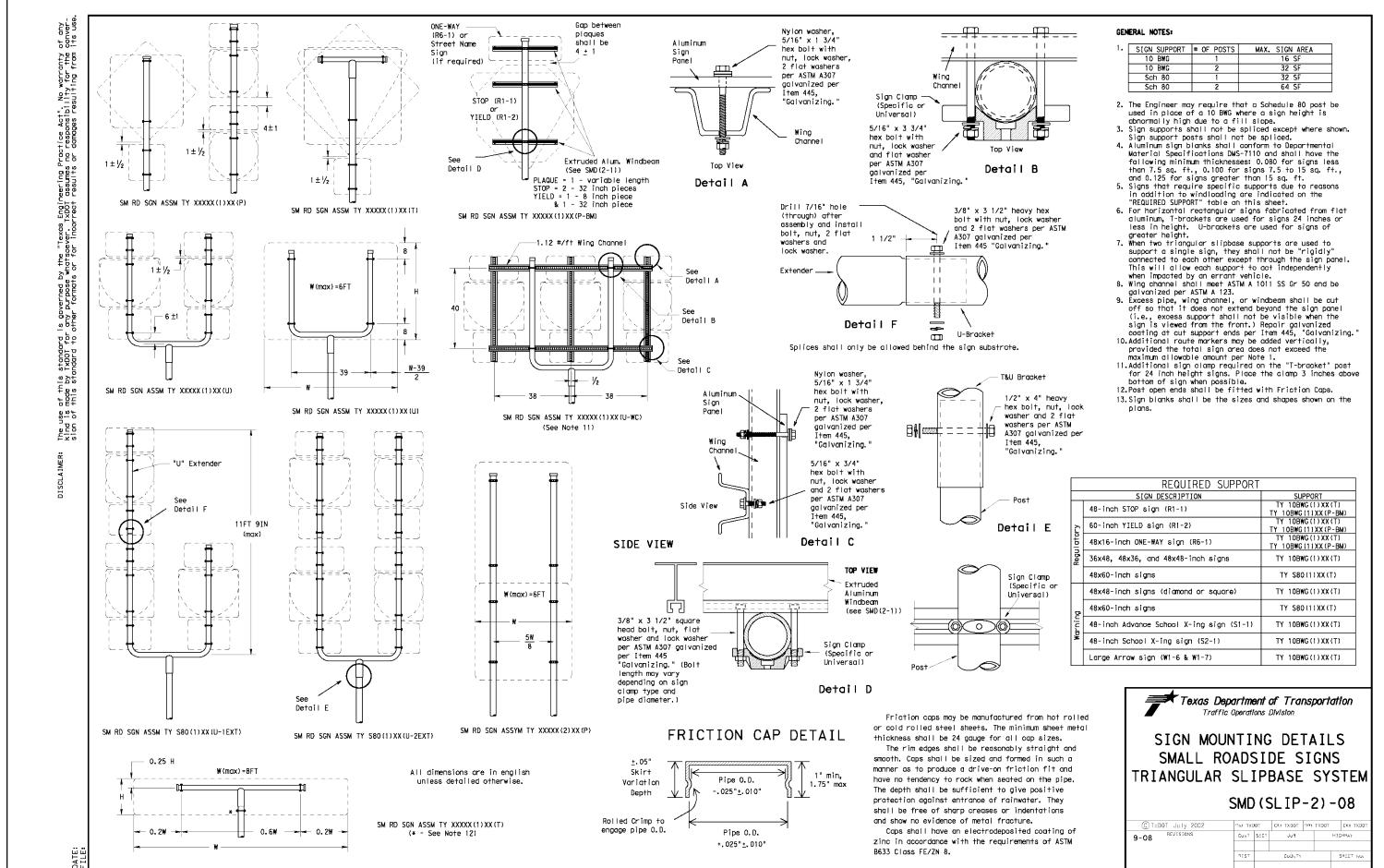
C2.12

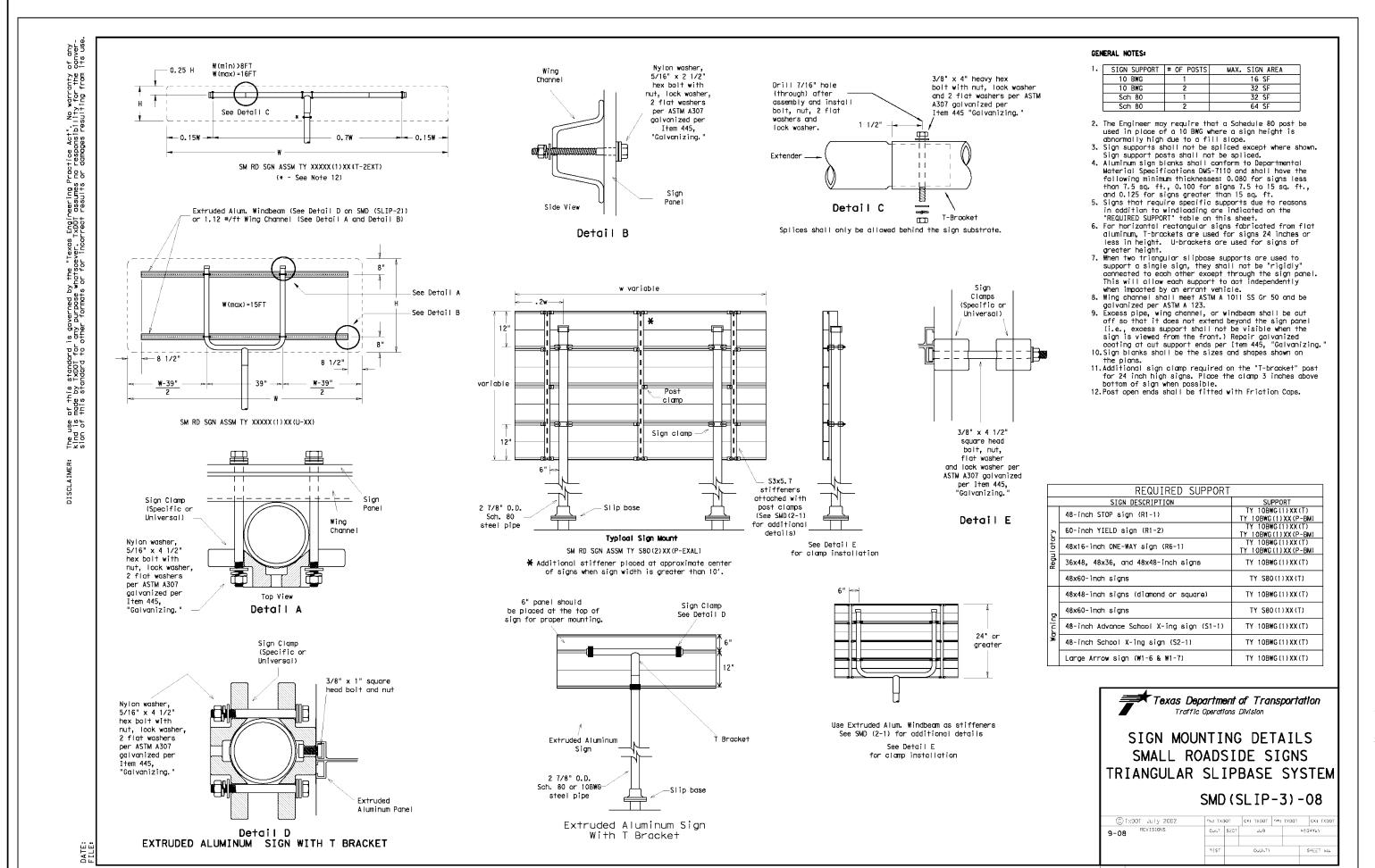
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IGNAGE (SHEE

EUGENE H. DAWSON III

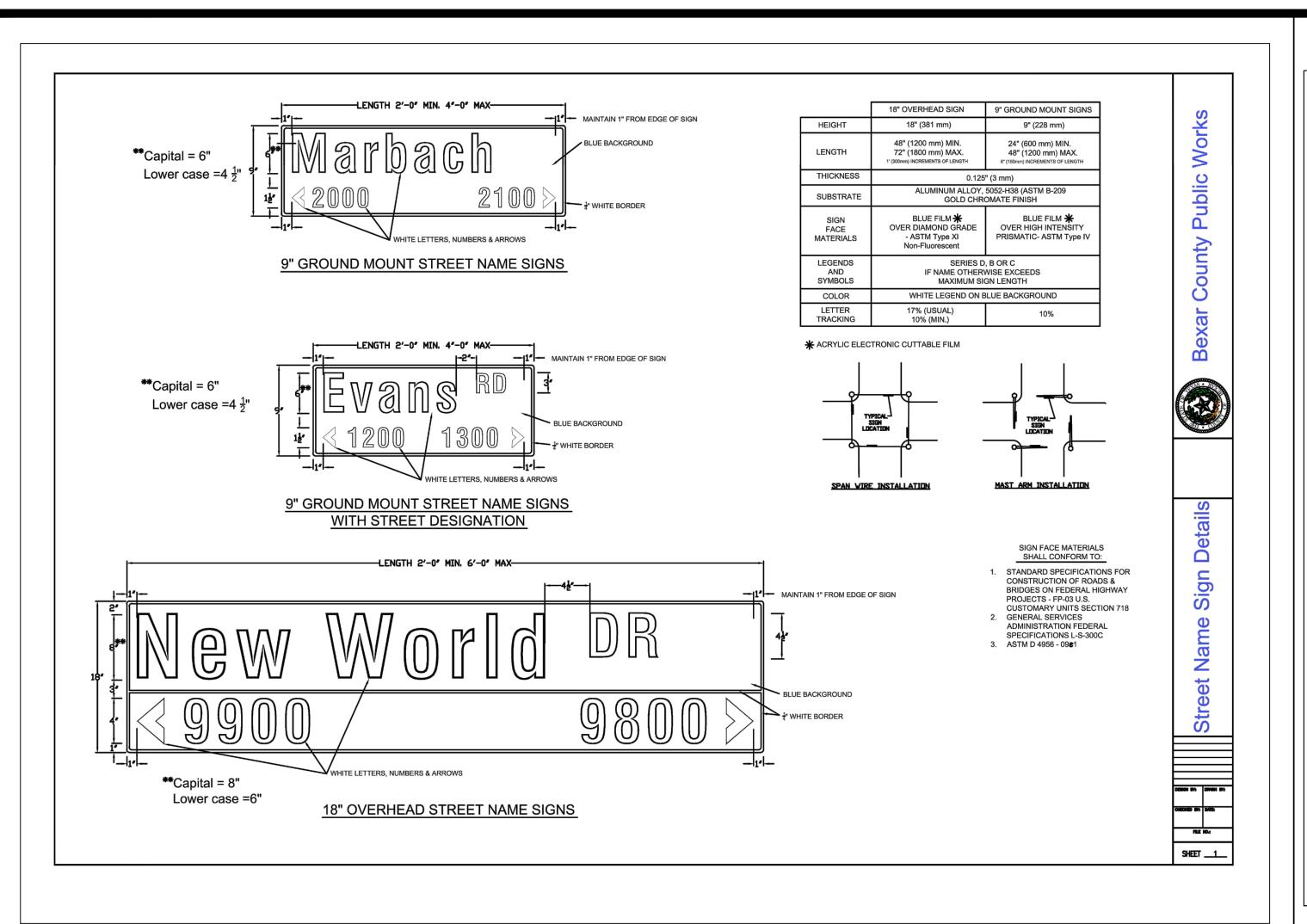
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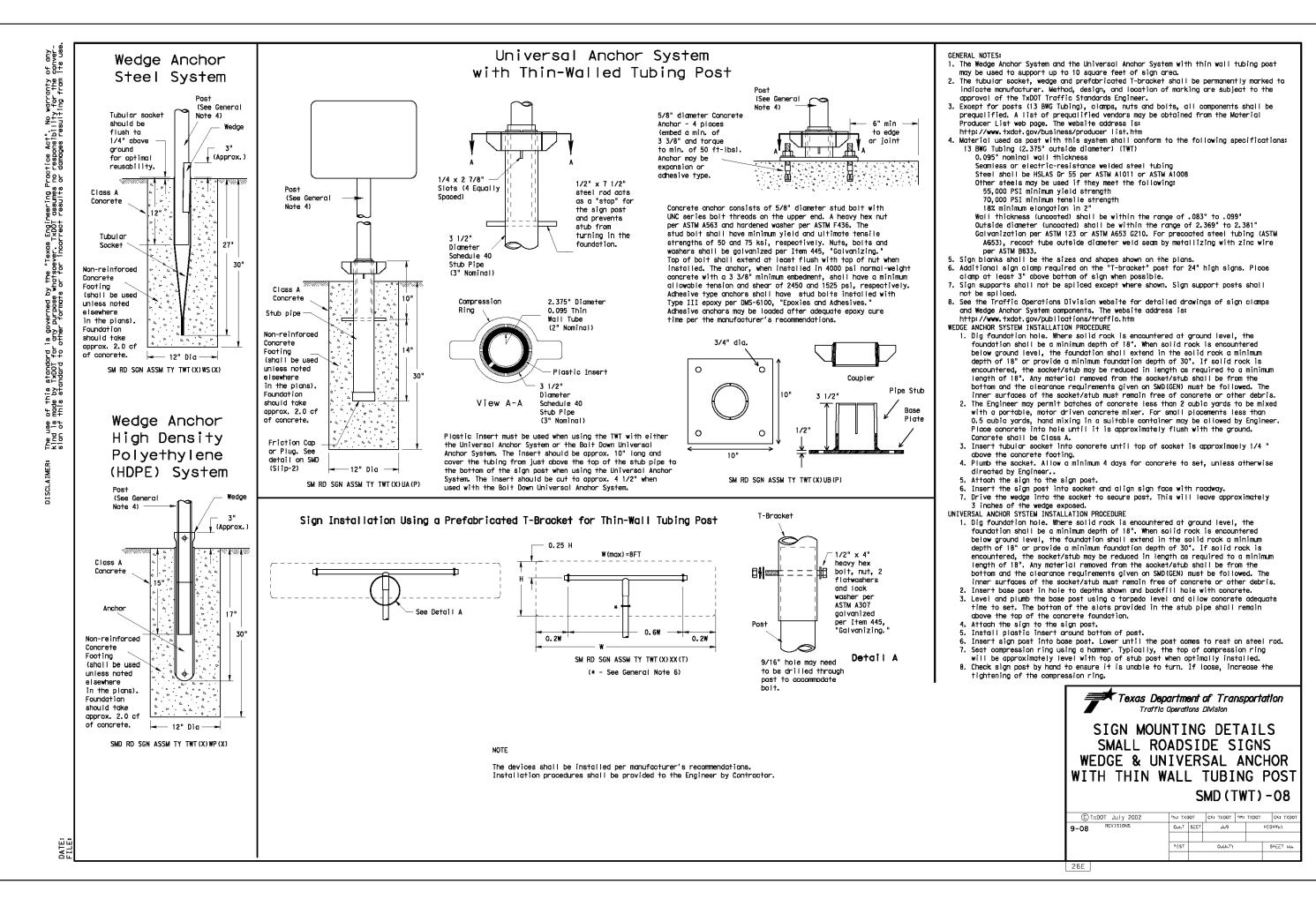
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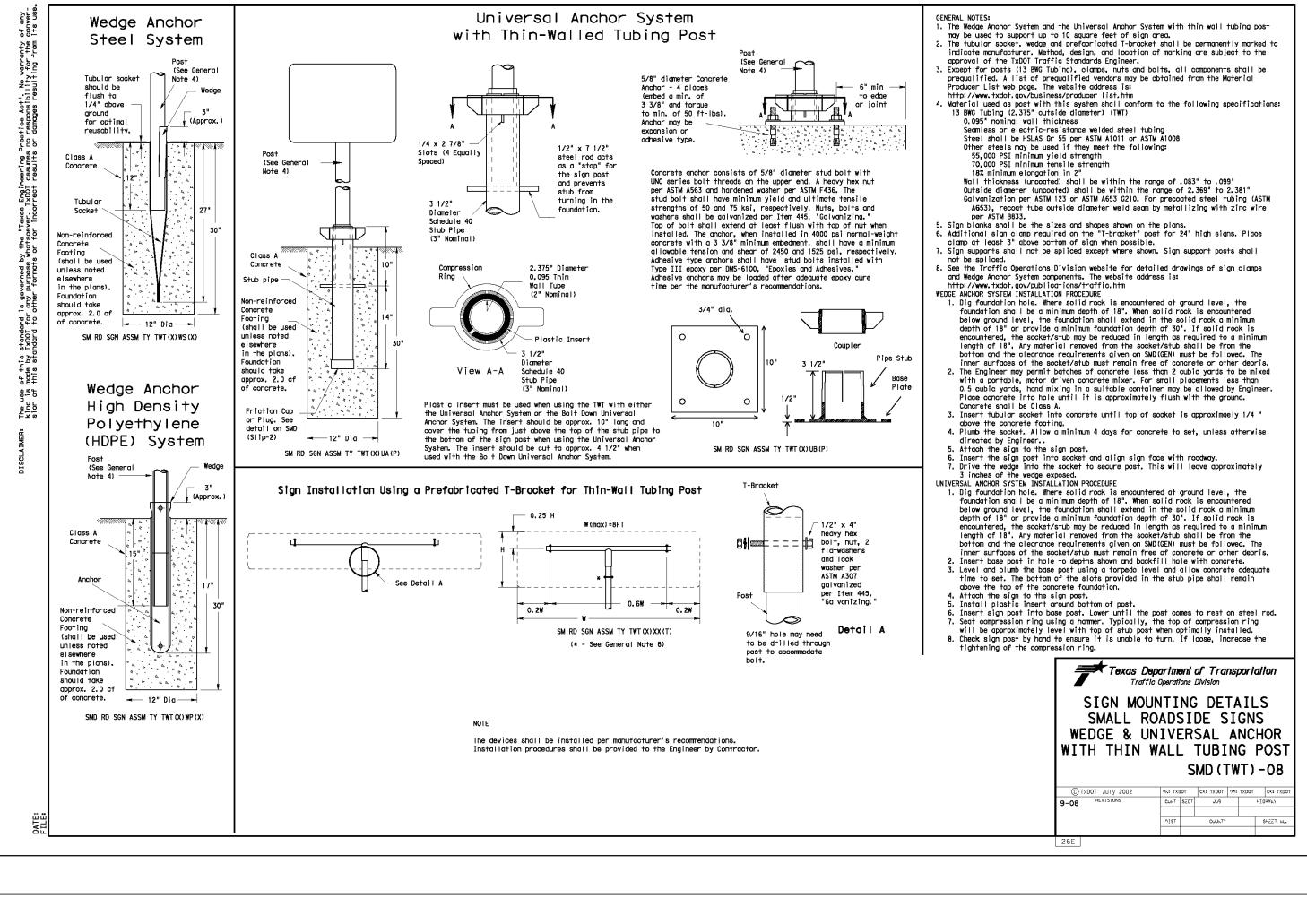
AT NO. 21-11800397 11348-43 DESIGNER EDK HECKED MG DRAWN MG

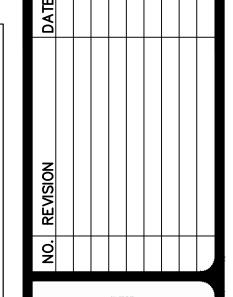
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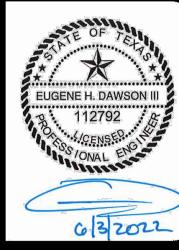
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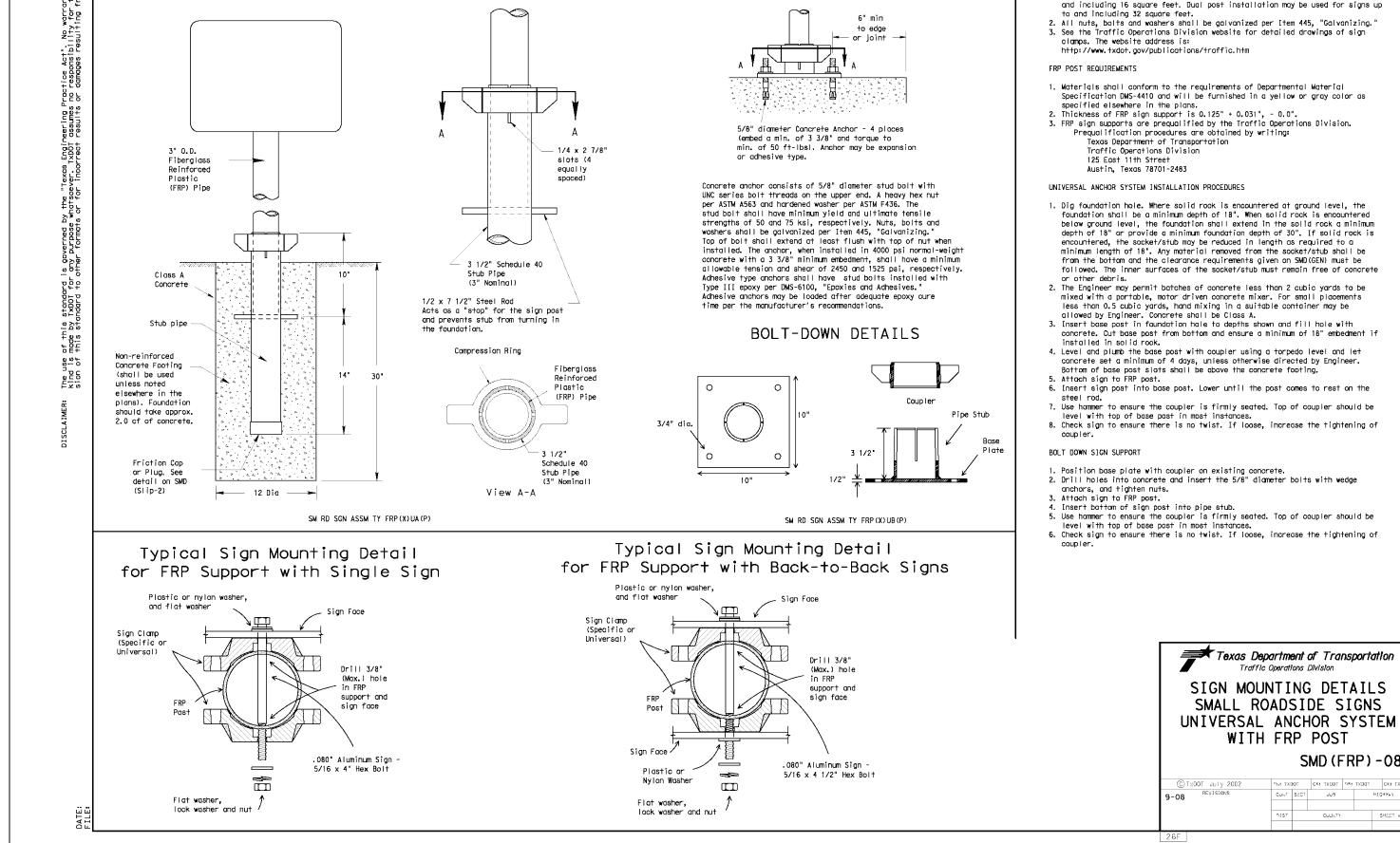
SIGNAGE (SHEET

1. FRP sign supports for a single type sign support may be used for signs up to

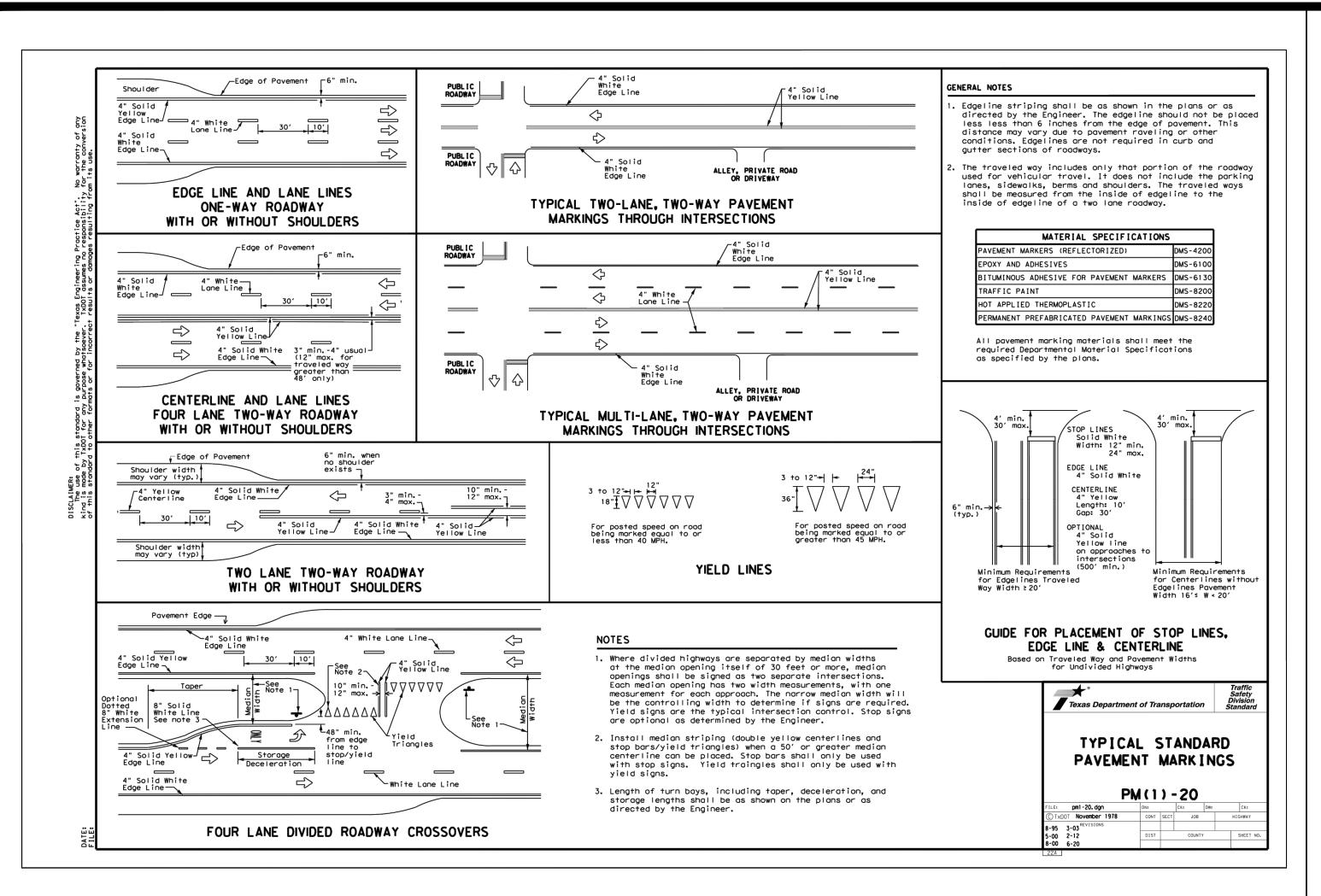
11348-43 JUNE 2022 DESIGNER EDK HECKED MG DRAWN MG0

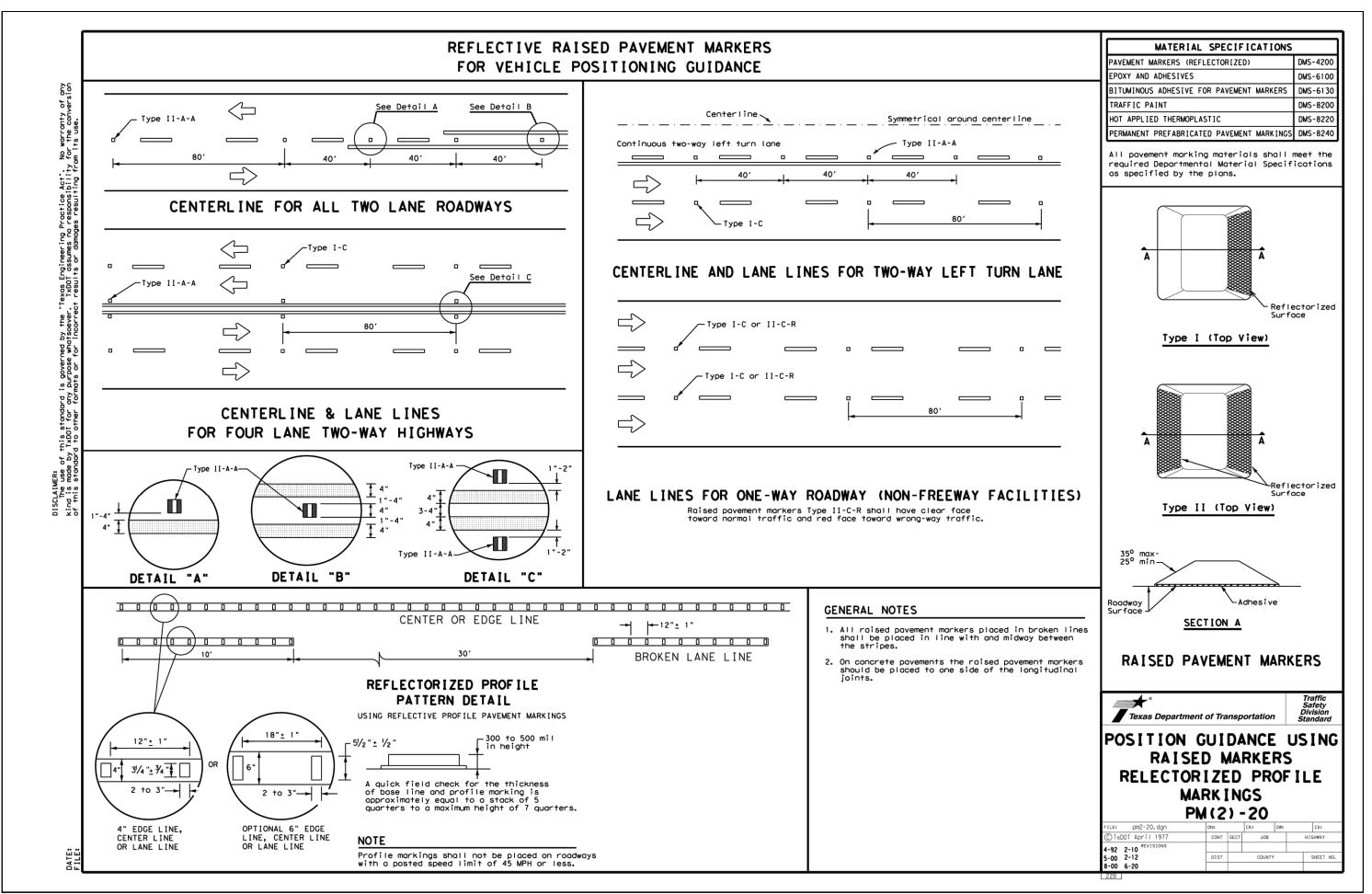
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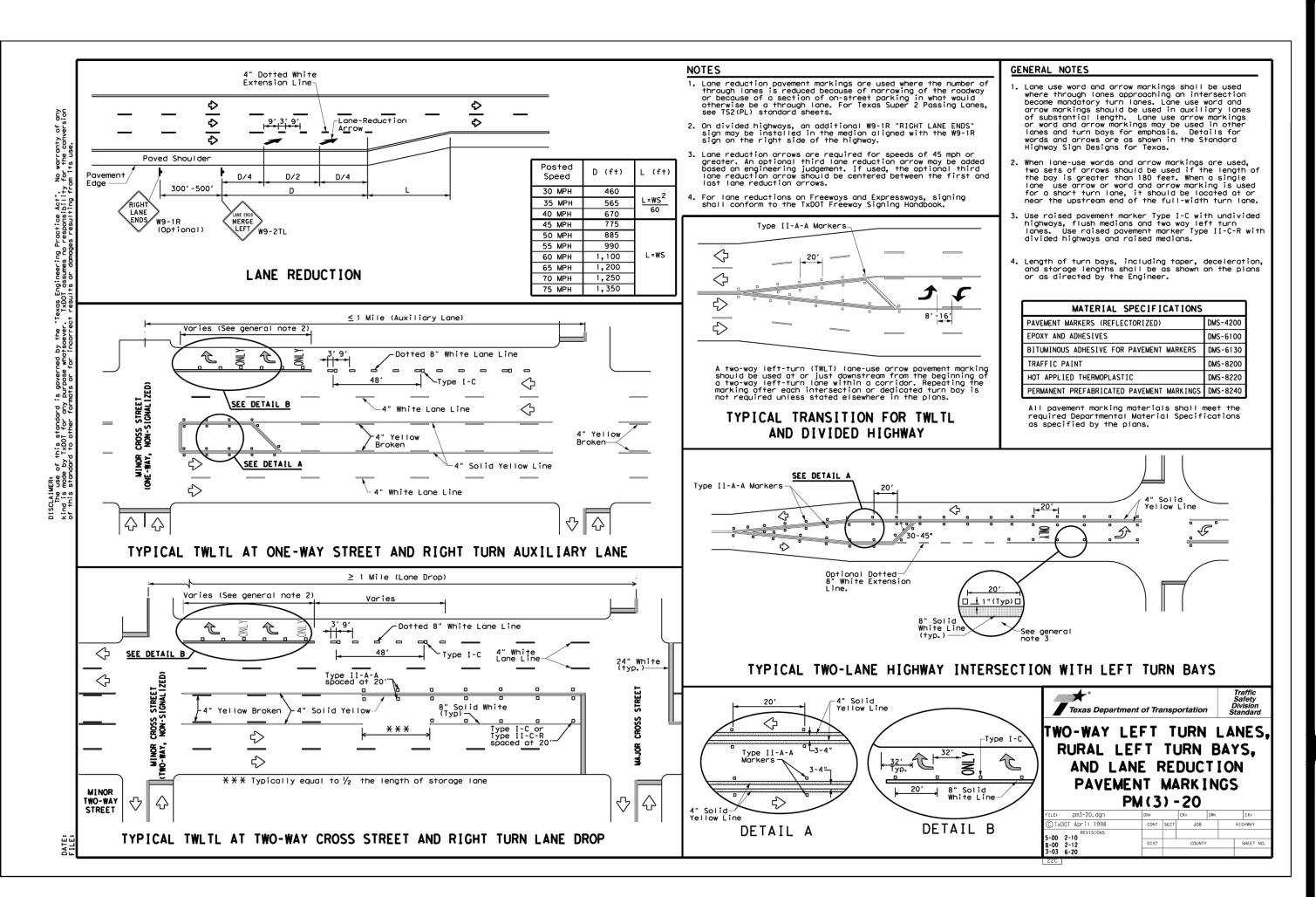
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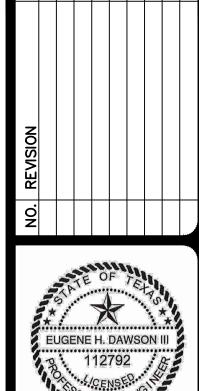


Universal Anchor System with Fiberglass Reinforced Plastic (FRP) Post







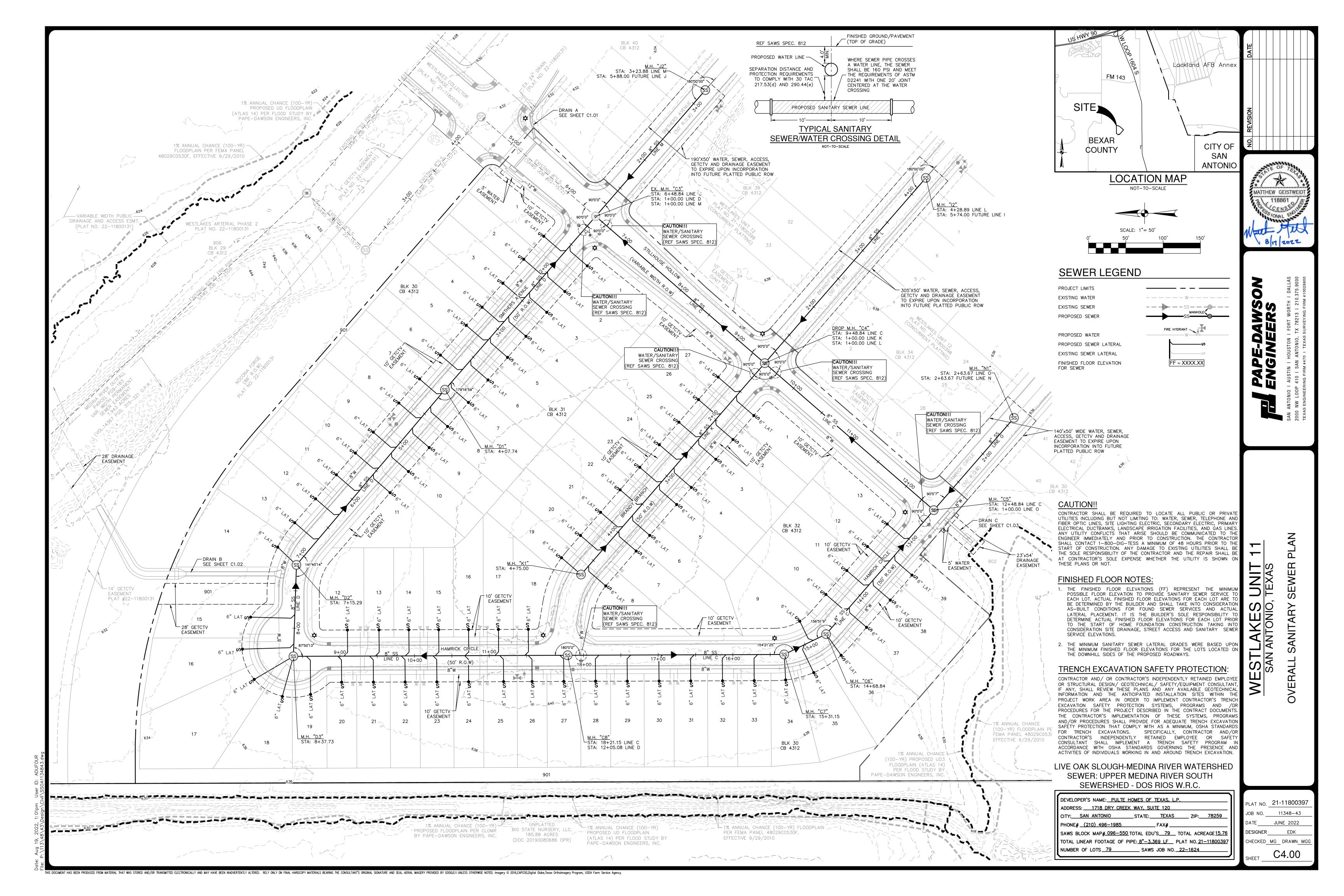


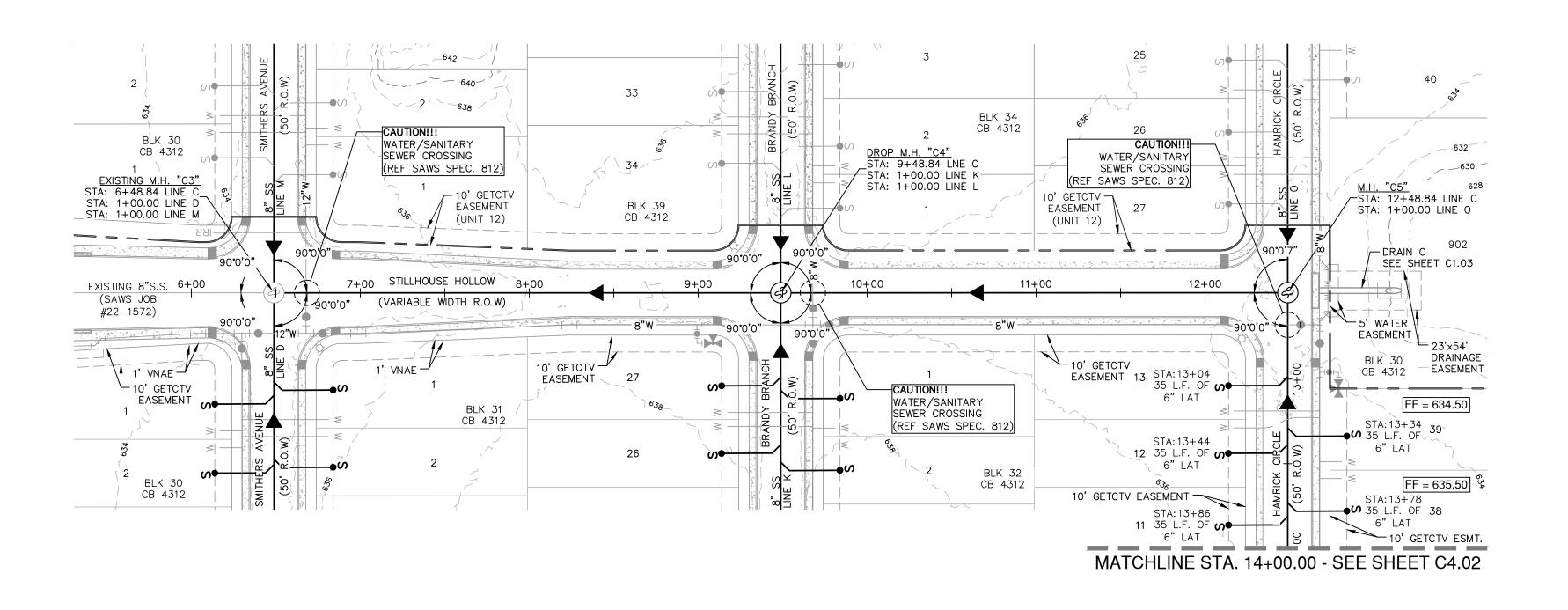


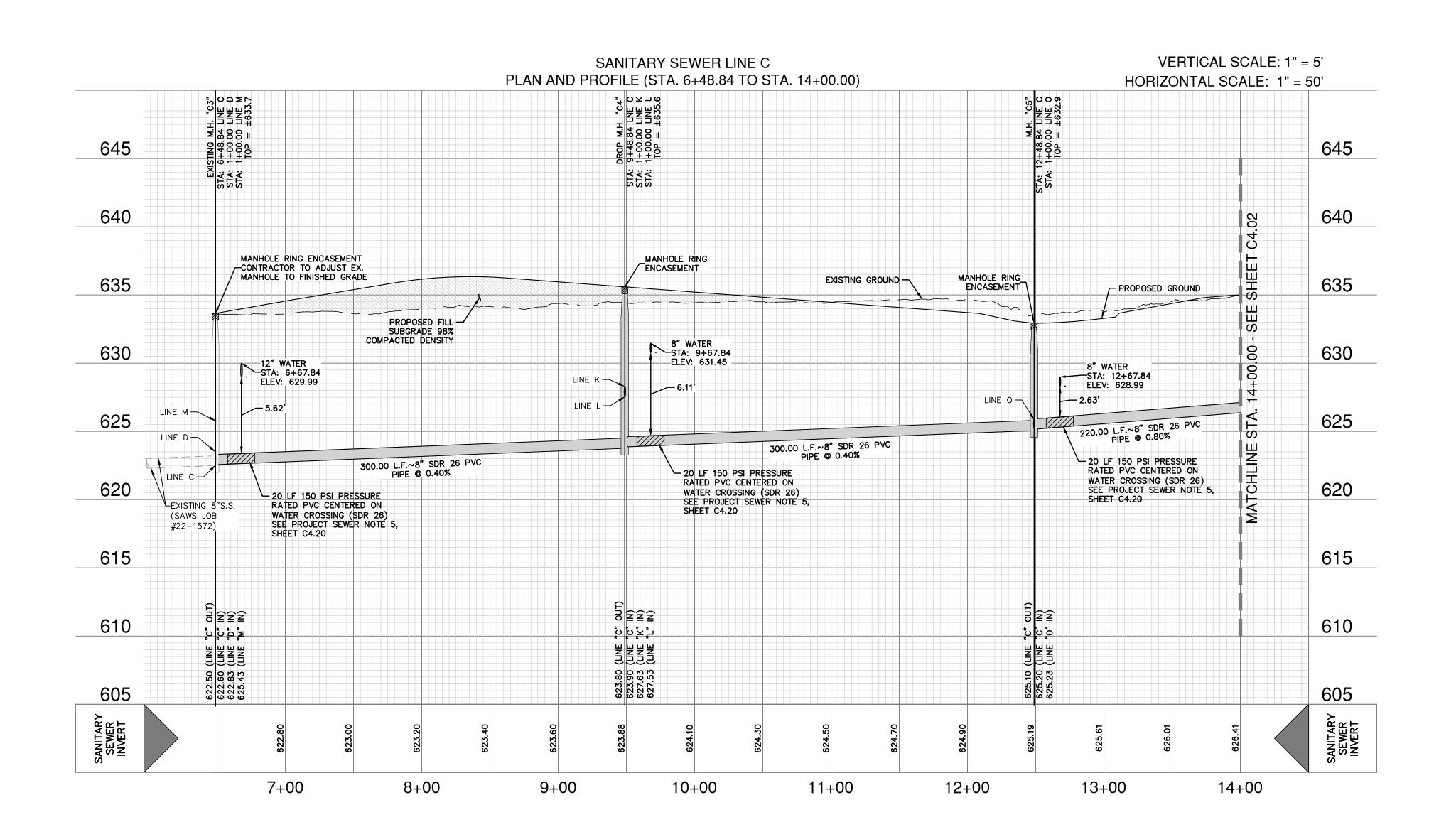
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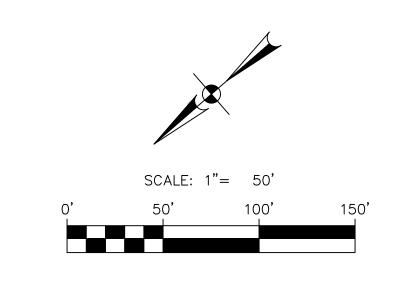
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PLAT NO. 21-11800397 11348-43 ESIGNER HECKED MG DRAWN MG0 C3.12









SEWER LEGEND

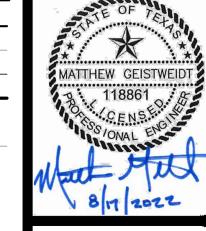
PROPOSED WATER

PROPOSED SEWER LATERAL

FINISHED FLOOR ELEVATION FOR SEWER

PROJECT LIMITS EXISTING WATER EXISTING SEWER PROPOSED SEWER

FF = XXXX.XX



PAPE-DAWSON ENGINEERS

SEWER LINE (7. 6+48.84 TO 3.

SANITAF PROFILE (§

AND

FINISHED GROUND/PAVEMENT (TOP OF GRADE) WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER SEWER/WATER CROSSING DETAIL

CROSSING

CAUTION!!

REF. SAWS SPEC. ITEM 812

PROPOSED WATER LINE —

SEPARATION DISTANCE AND PROTECTION REQUIREMENTS

TO COMPLY WITH 30 TAC

217.53(d) AND 290.44(e)

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

PROPOSED SANITARY SEWER LINE

TYPICAL SANITARY

NOT-TO-SCALE

TRENCH EXCAVATION SAFETY PROTECTION:

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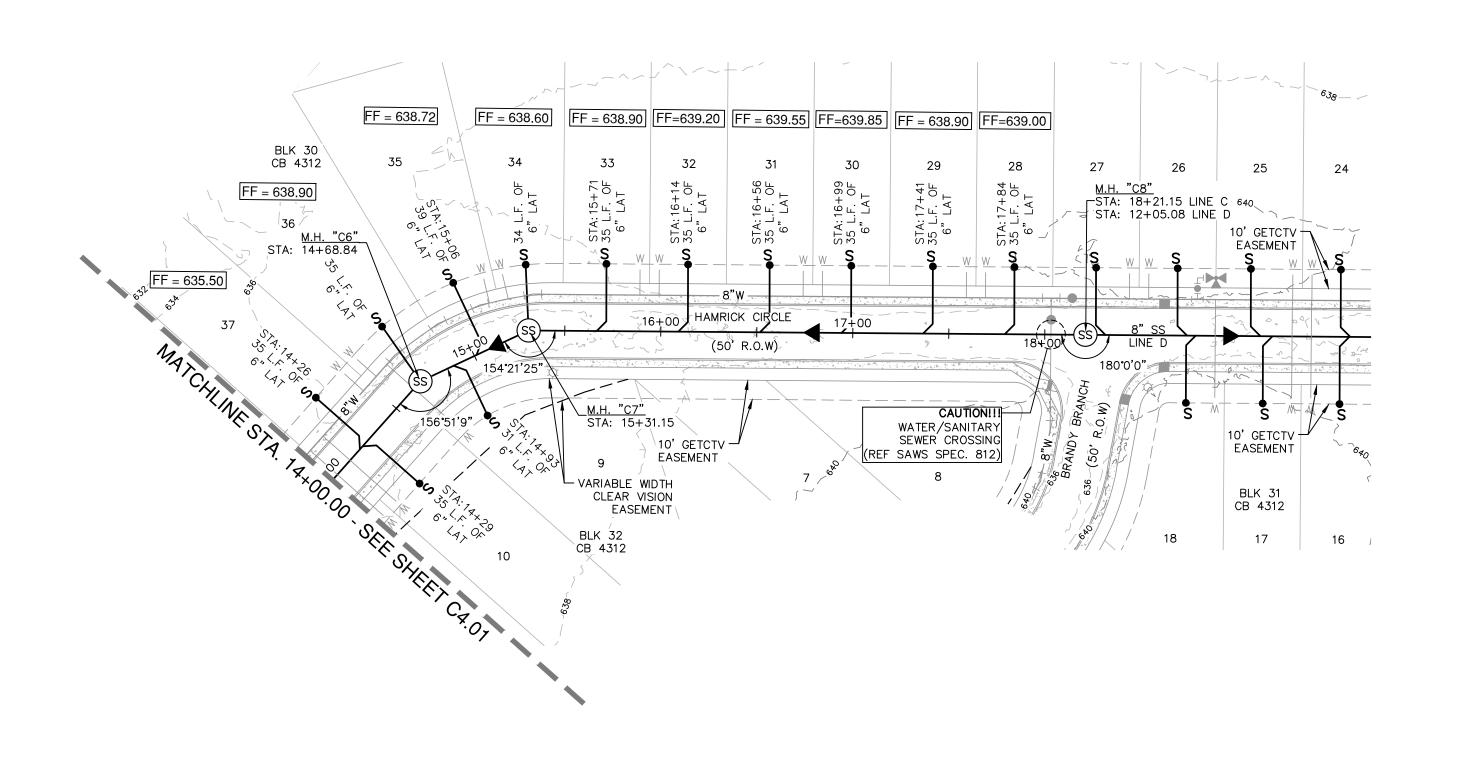
LIVE OAK SLOUGH-MEDINA RIVER WATERSHED SEWER: UPPER MEDINA RIVER SOUTH SEWERSHED - DOS RIOS W.R.C.

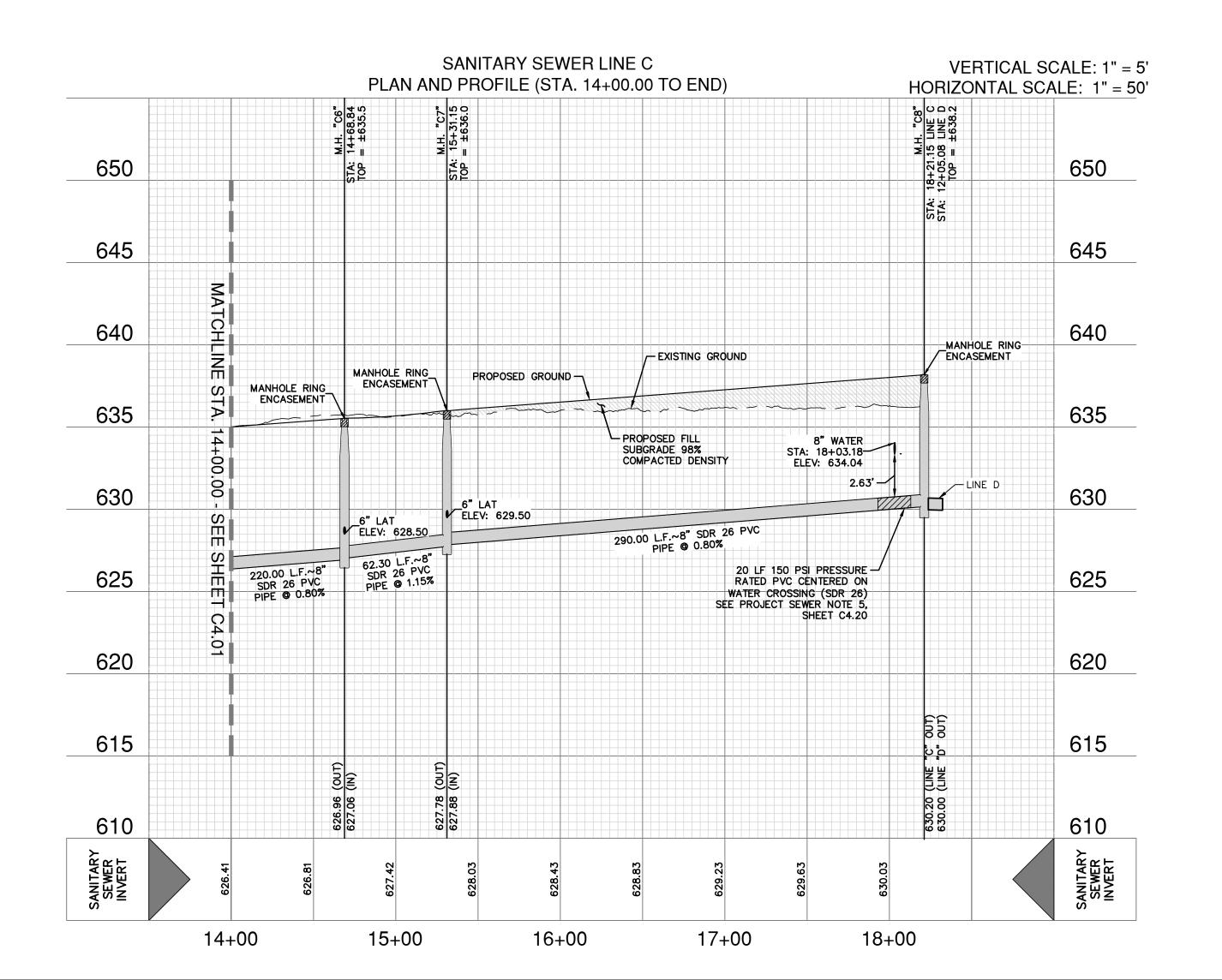
- 1	DEVELOPER'S NAME: PULTE HOMES OF TEXAS, L.P.
1	ADDRESS: 1718 DRY CREEK WAY, SUITE 120
	CITY: SAN ANTONIO STATE: TEXAS ZIP: 78259
	PHONE# <u>(210) 496-1985</u> FAX#
	SAWS BLOCK MAP# 096-550 TOTAL EDU'S 79 TOTAL ACREAGE 15.76
	TOTAL LINEAR FOOTAGE OF PIPE: 8"-3,369 LF PLAT NO.21-11800397

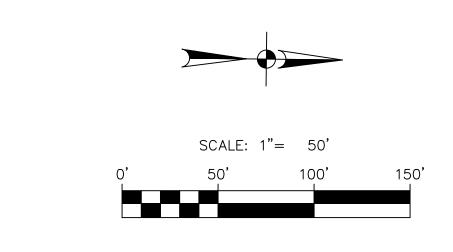
NUMBER OF LOTS 79 SAWS JOB NO. 22-1624

LAT NO. 21-11800397 11348-43 JUNE 2022 DESIGNER EDK

HECKED MG DRAWN MGC





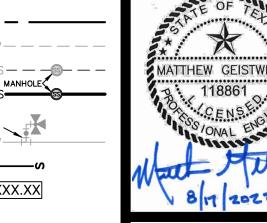


SEWER LEGEND

PROJECT LIMITS EXISTING WATER EXISTING SEWER PROPOSED SEWER

PROPOSED WATER PROPOSED SEWER LATERAL FINISHED FLOOR ELEVATION FOR SEWER

FF = XXXX.XX



PAPE-DAWSON ENGINEERS

S/ AND

FINISHED GROUND/PAVEMENT (TOP OF GRADE) REF. SAWS SPEC. ITEM 812 PROPOSED WATER LINE — WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET SEPARATION DISTANCE AND PROTECTION REQUIREMENTS THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER TO COMPLY WITH 30 TAC 217.53(d) AND 290.44(e) CROSSING PROPOSED SANITARY SEWER LINE TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

CAUTION!!

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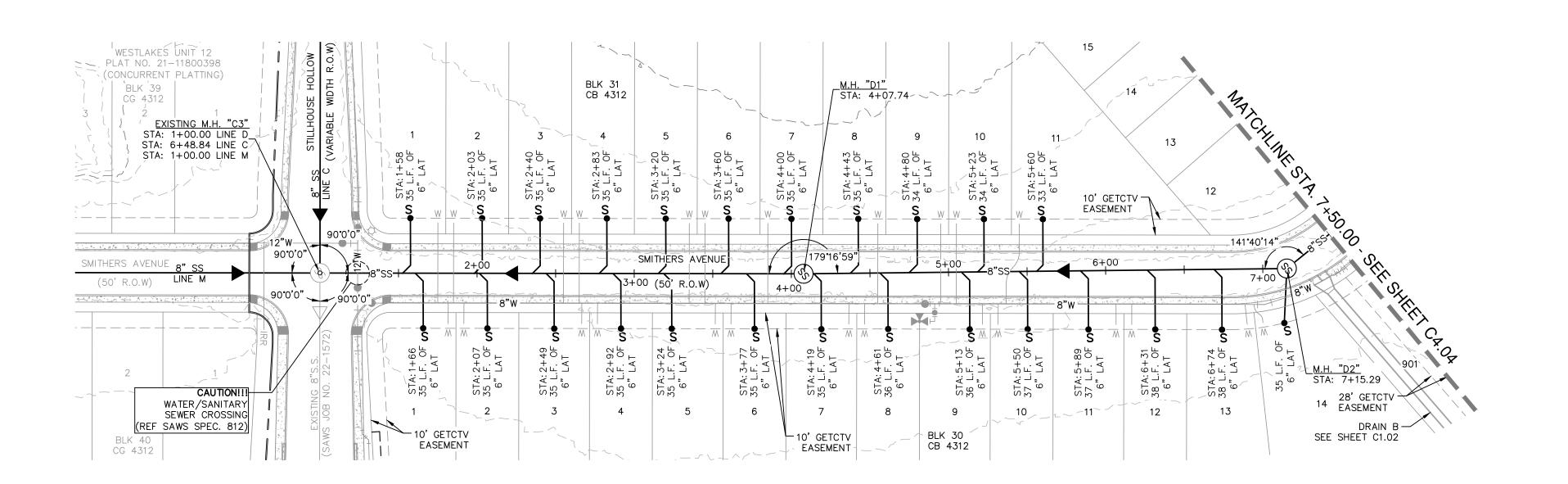
NOT-TO-SCALE

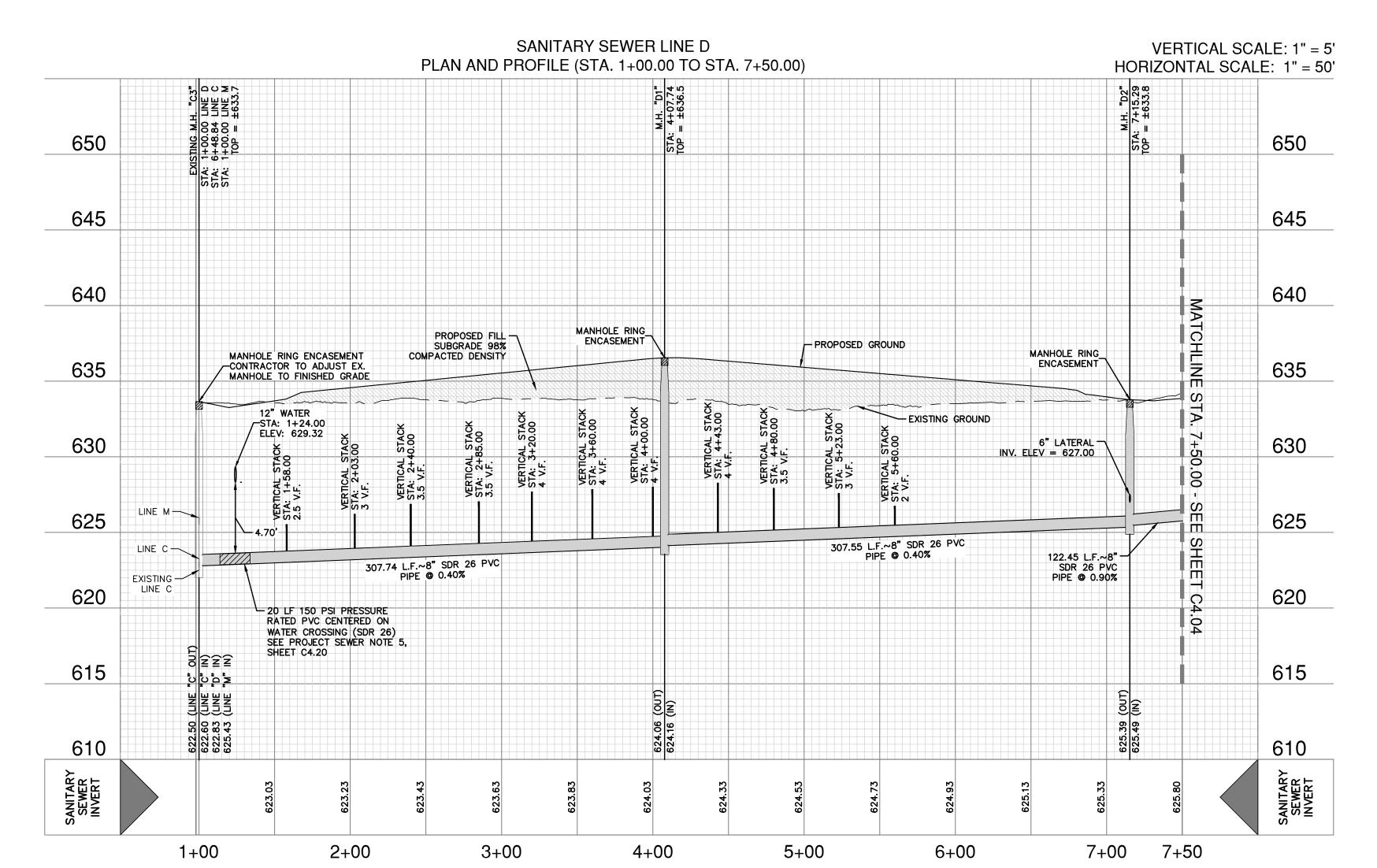
TRENCH EXCAVATION SAFETY PROTECTION:

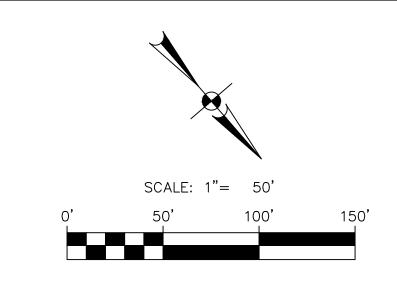
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PHONE# <u>(210) 496-1985</u> FAX#		
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IE: PULTE HOMES OF TEXAS, L.P.	1	PLAT NO.	21-118	3(
DNIO STATE: TEXAS ZIP: 78259		JOB NO	11348	}-
96-1985 FAX#		DATE	JUNE 2	0
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DTAGE OF PIPE: <u>8"-3,369 LF</u> PLAT NO. <u>21-1180039</u> 7		CHECKED_	MG DRA	٧
79 SAWS JOB NO. 22-1624			CAC	٦



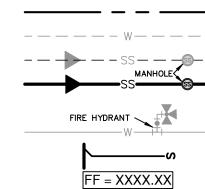


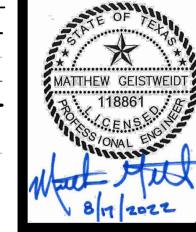


SEWER LEGEND

PROJECT LIMITS EXISTING WATER EXISTING SEWER PROPOSED SEWER

PROPOSED WATER PROPOSED SEWER LATERAL FINISHED FLOOR ELEVATION FOR SEWER





PAPE-DAWSON ENGINEERS

SANIT, PROFILE

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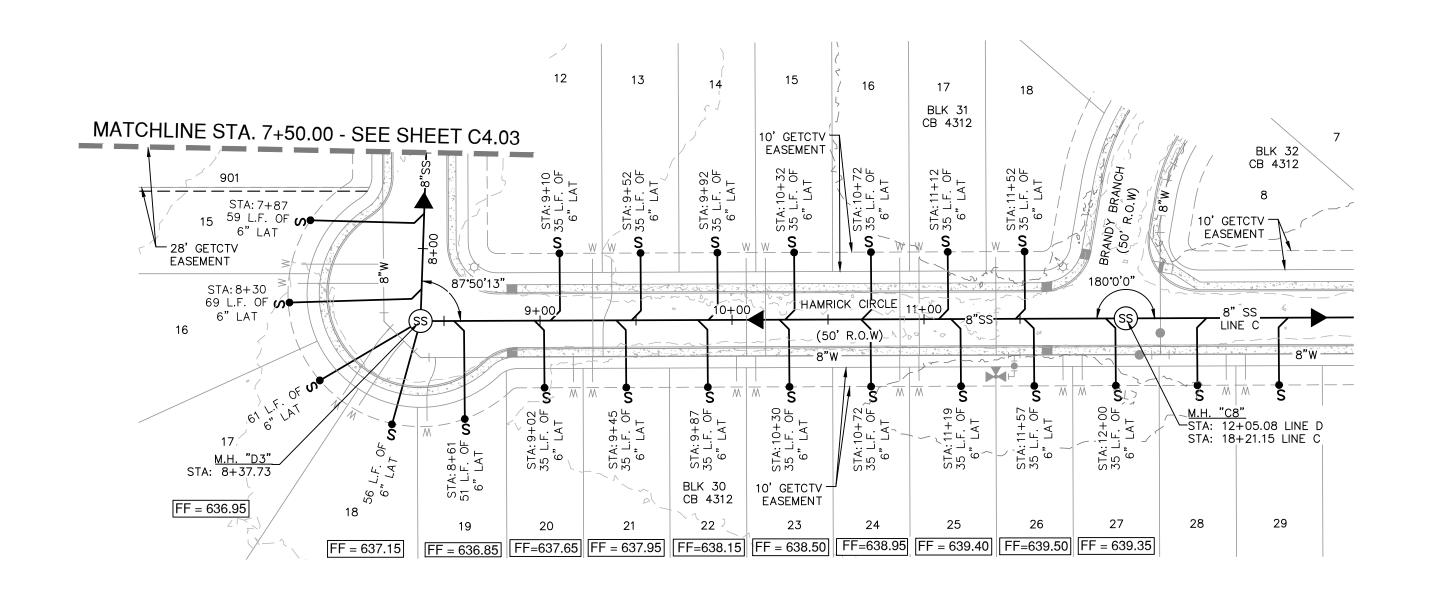
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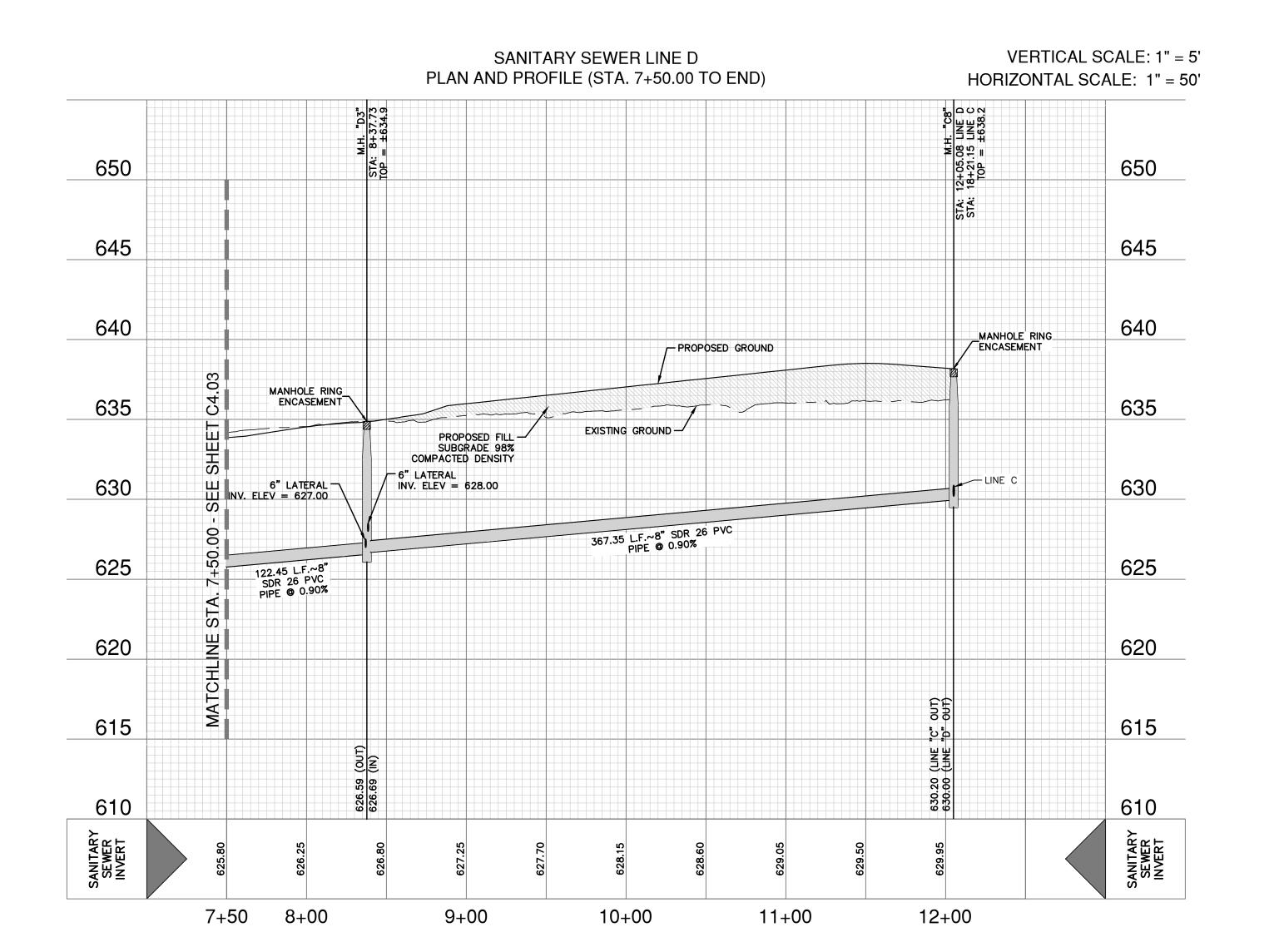
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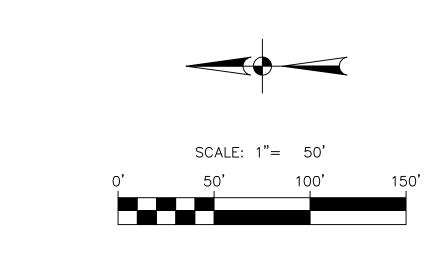
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NUMBER OF LOTS 79 SAWS JOB NO. 22-1624	-
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	7			
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1718 DRY CREEK WAY. SUITE 120 SAN ANTONIO STATE: TEXAS ZIP: 78259		JOB NO	11348-43	
(210) 496-1985 FAX#		DATE	JUNE 2022	
DCK MAP <u># 096-550</u> TOTAL EDU'S <u>79</u> TOTAL ACREAGE <u>15.76</u>		DESIGNER_	EDK	
IEAR FOOTAGE OF PIPE: <u>8"-3.369 LF</u> PLAT NO. <u>21-11800397</u>		CHECKED_	MG_DRAWN_M	1GG
OF LOTS <u>79</u> SAWS JOB NO. <u>22-1624</u>			C_{1}	

HIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL AERIAL IMAGERY PROVIDED BY GOOGLE® UNLESS OTHERWISE NOTED. Imagery © 2016,CAPCOG,Digital Globe,Texas Orthoimagery Program, USDA Farm Service Agency.



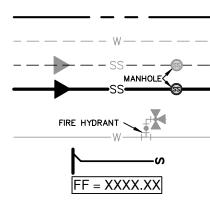




SEWER LEGEND

PROJECT LIMITS EXISTING WATER EXISTING SEWER PROPOSED SEWER

PROPOSED WATER PROPOSED SEWER LATERAL FINISHED FLOOR ELEVATION FOR SEWER





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SANITARY (

PAPE-DAWSON ENGINEERS

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

CAUTION!!

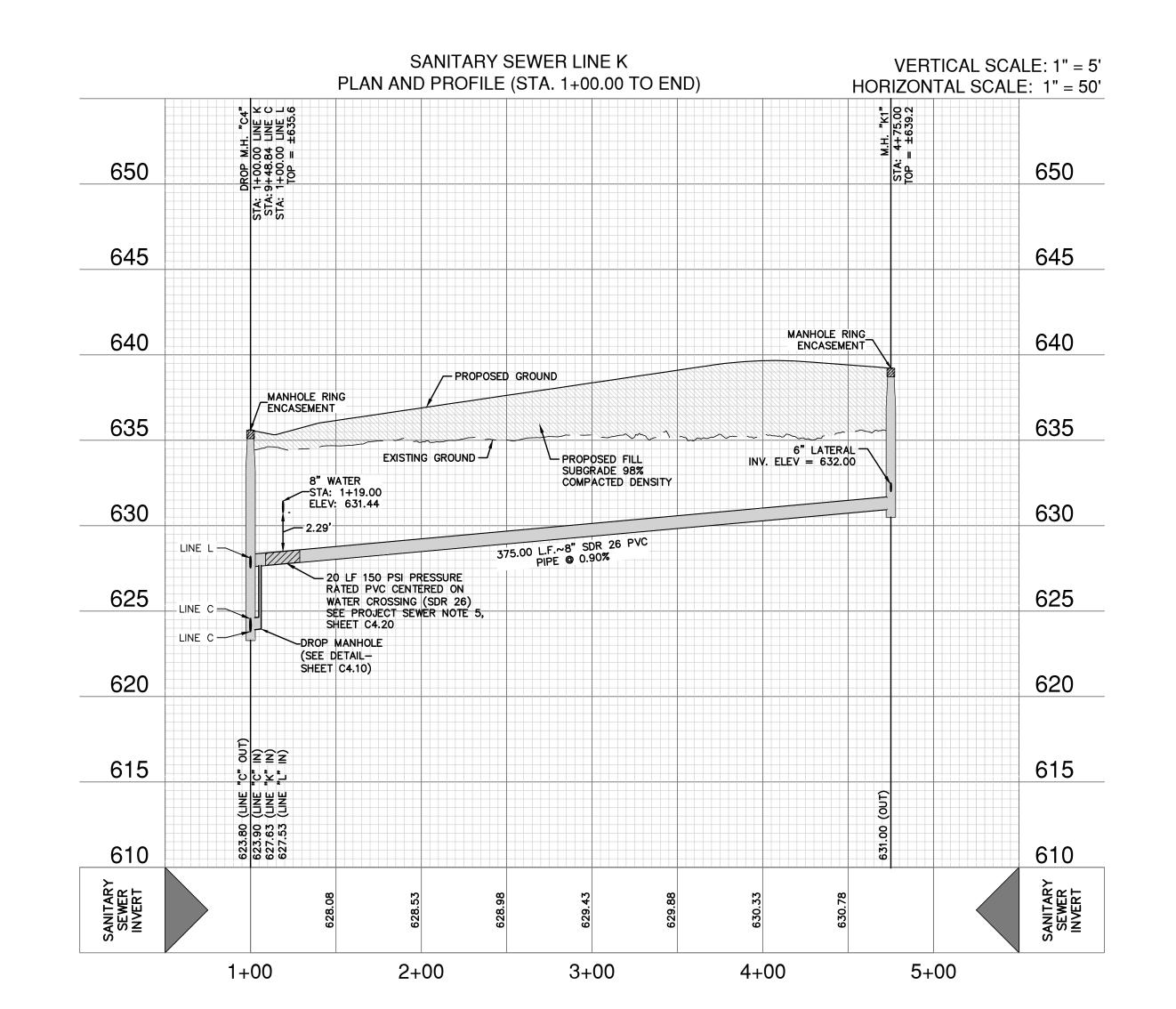
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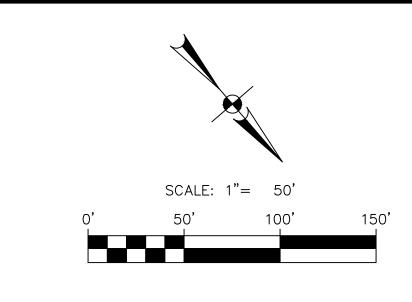
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OMES OF TEXAS, L.P.	. :	DI AT NO	21-1180039
WAY, SUITE 120		PLAT NO.	21 1100000
STATE: TEXAS ZIP: 78259		JOB NO	11348-43
FAX#		DATE	JUNE 2022
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SAWS IOR NO 22-1624			

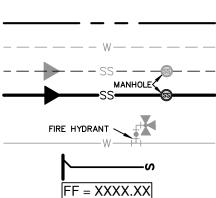




SEWER LEGEND

PROJECT LIMITS EXISTING WATER EXISTING SEWER PROPOSED SEWER

PROPOSED WATER PROPOSED SEWER LATERAL FINISHED FLOOR ELEVATION FOR SEWER





PAPE-DAWSON ENGINEERS

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SANITARY BAND PROFILE

PLAT NO. 21-11800397 JOB NO. 11348-43

CHECKED<u>MG</u> DRAWN<u>MG</u>C

DESIGNER

JUNE 2022

EDK

FINISHED GROUND/PAVEMENT TOP OF GRADE) REF. SAWS SPEC. ITEM 812 WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER CROSSING

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

CAUTION!!

PROPOSED WATER LINE —

SEPARATION DISTANCE AND PROTECTION REQUIREMENTS

TO COMPLY WITH 30 TAC

217.53(d) AND 290.44(e)

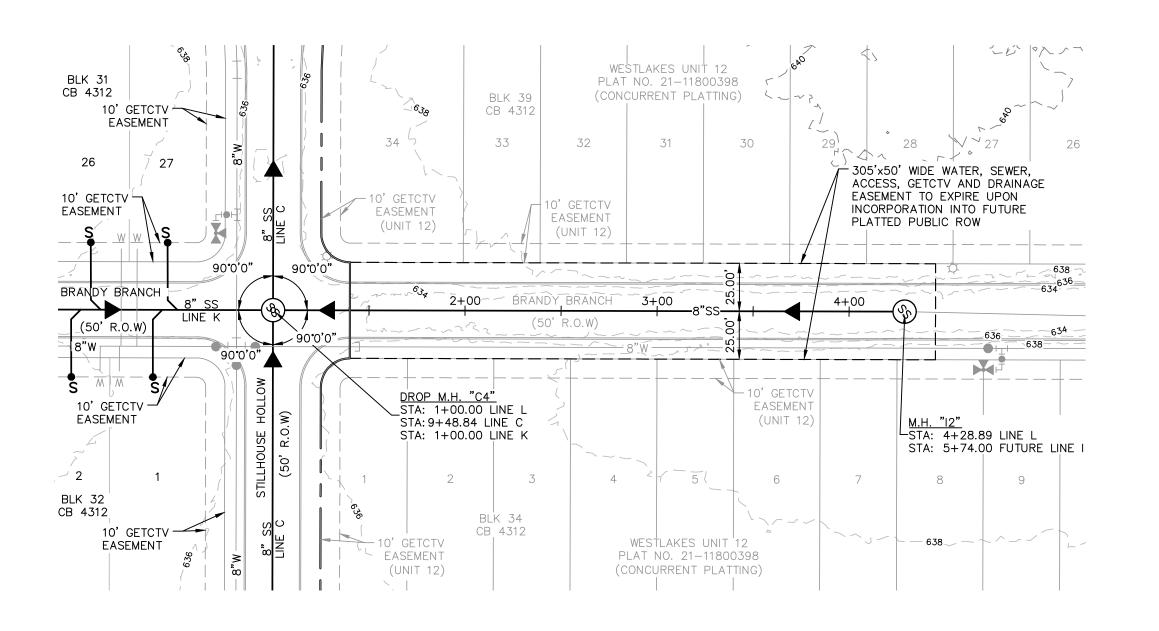
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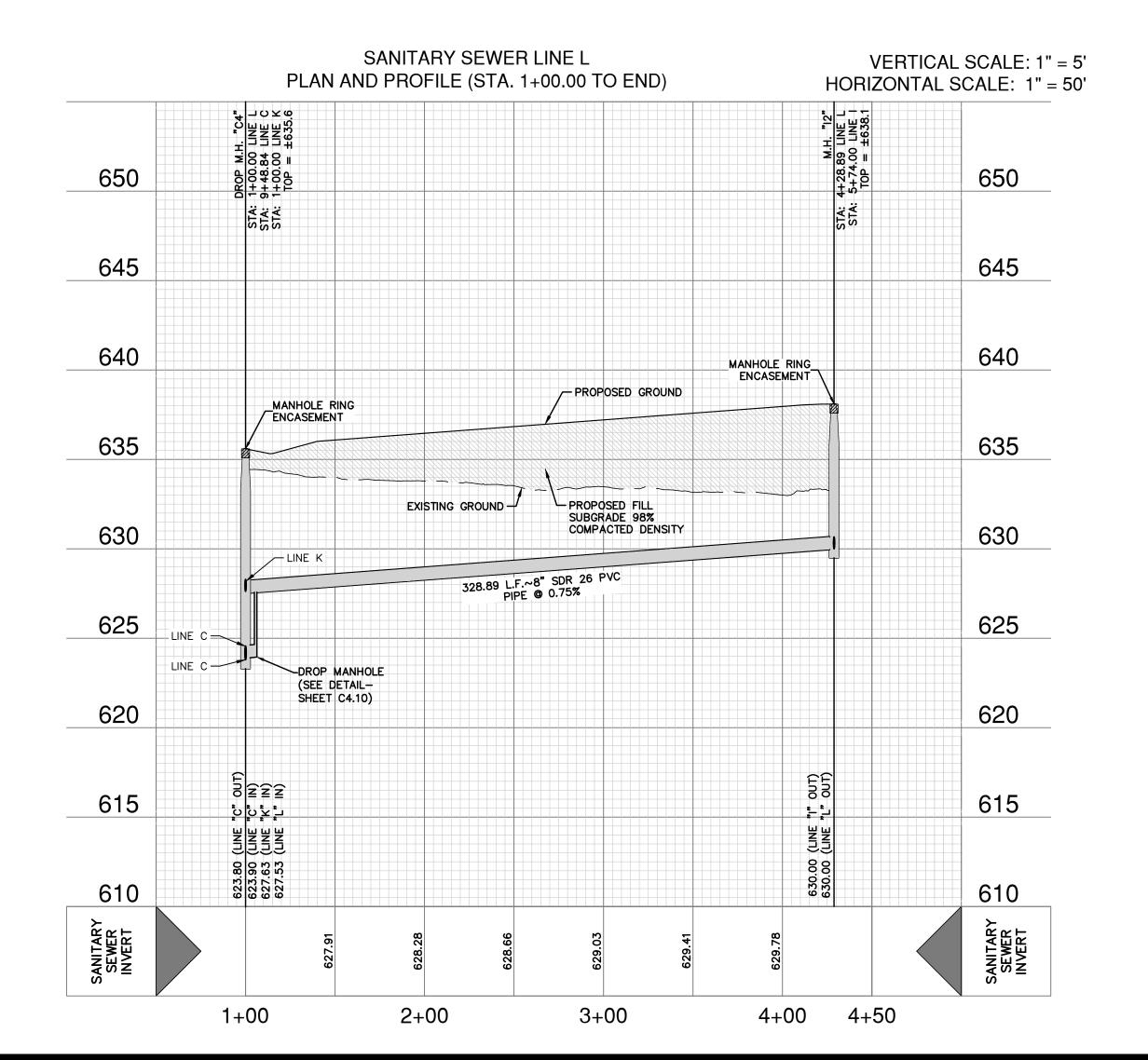
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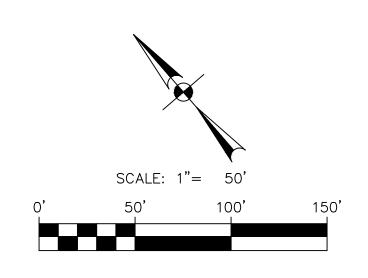
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NUMBER OF LOTS 79 SAWS JOB NO. 22-1624

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SEWER LEGEND

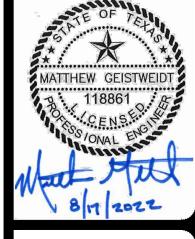
PROJECT LIMITS EXISTING WATER EXISTING SEWER PROPOSED SEWER

PROPOSED WATER

PROPOSED SEWER LATERAL

FINISHED FLOOR ELEVATION FOR SEWER

FIRE HYDRANT FF = XXXX.XX



PAPE-DAWSON ENGINEERS

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SANITARY SEWER AND PROFILE (STA. 1

FINISHED GROUND/PAVEMENT TOP OF GRADE)

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

CAUTION!!

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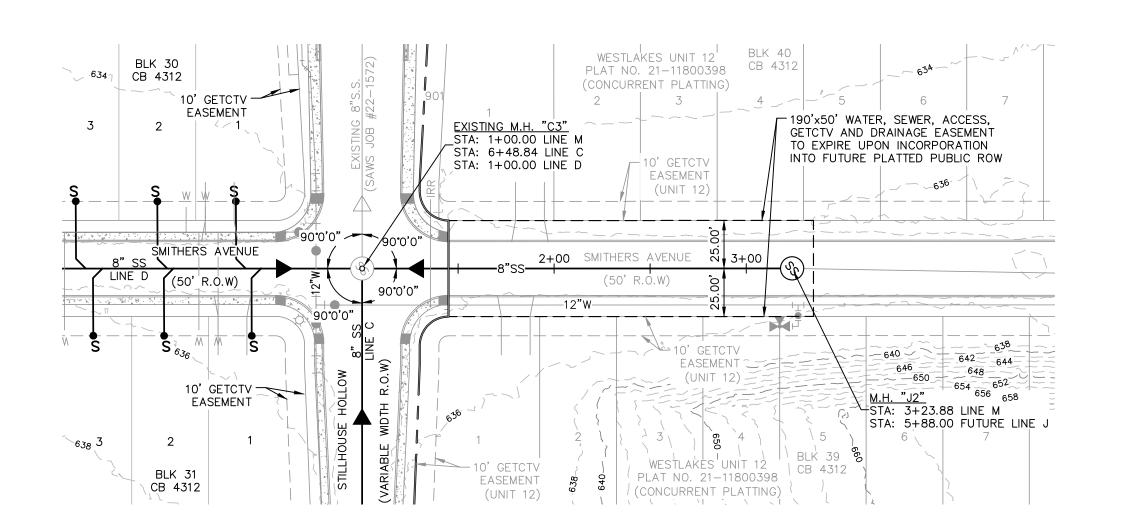
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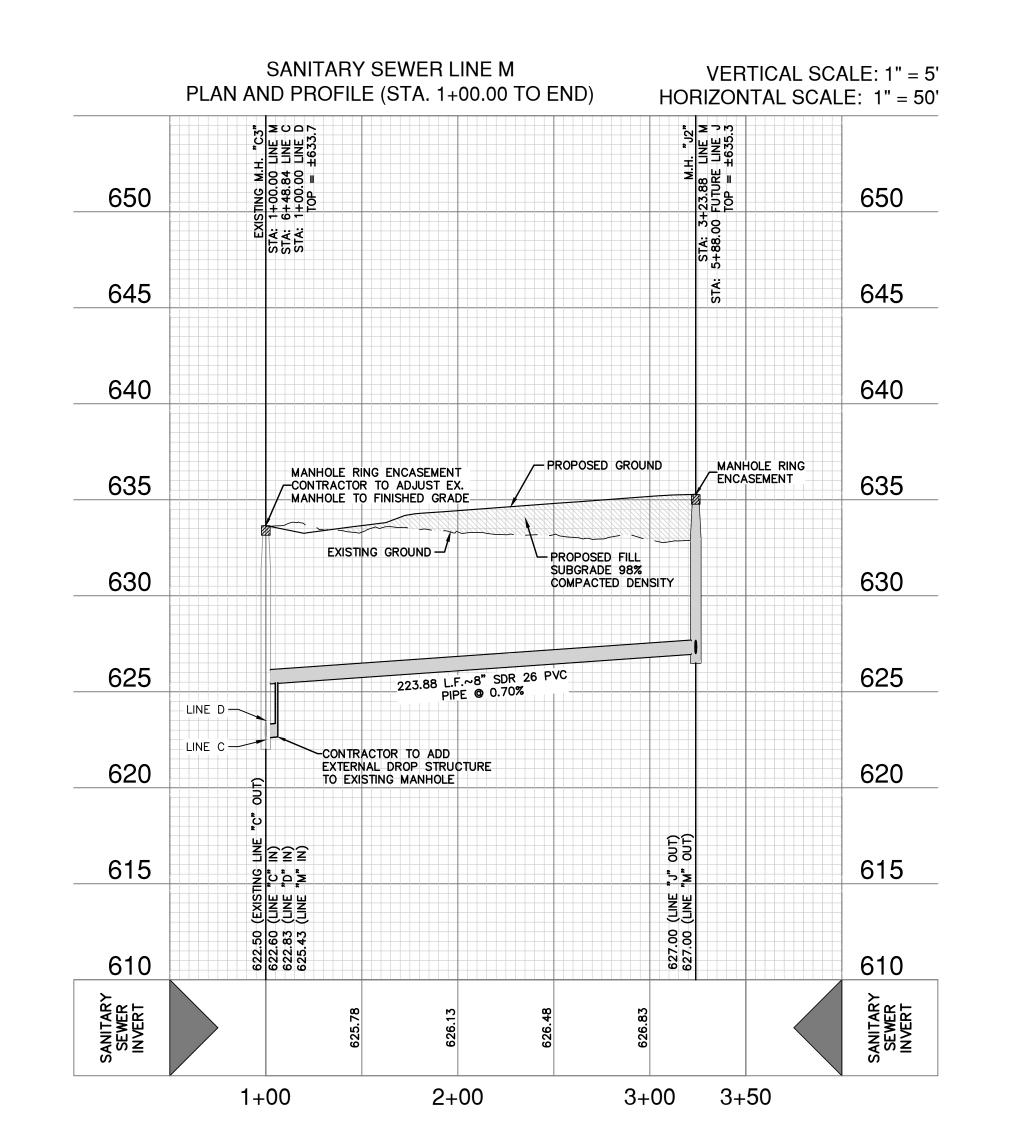
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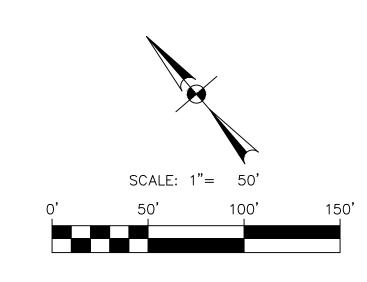
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RESS: 1718 DRY CREEK WAY, SUITE 120 : SAN ANTONIO STATE: TEXAS ZIP: 78259	JOB NO	11348-43
NE# <u>(210) 496–1985</u> FAX#	DATE	JUNE 2022
S BLOCK MAP# 096-550 TOTAL EDU'S 79 TOTAL ACREAGE 15.76	DESIGNER_	EDK
AL LINEAR FOOTAGE OF PIPE: 8"-3,369 LF PLAT NO. 21-11800397	CHECKED_	MG DRAWN MGG
BER OF LOTS 79 SAWS JOB NO. 22-1624		C4.06







SEWER LEGEND

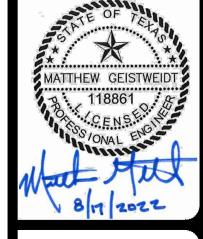
PROJECT LIMITS EXISTING WATER EXISTING SEWER PROPOSED SEWER

PROPOSED WATER

PROPOSED SEWER LATERAL

FINISHED FLOOR ELEVATION FOR SEWER

FF = XXXX.XX



PAPE-DAWSON ENGINEERS

FINISHED GROUND/PAVEMENT (TOP OF GRADE) REF. SAWS SPEC. ITEM 812 PROPOSED WATER LINE — WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET SEPARATION DISTANCE AND PROTECTION REQUIREMENTS THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER TO COMPLY WITH 30 TAC 217.53(d) AND 290.44(e) CROSSING PROPOSED SANITARY SEWER LINE TYPICAL SANITARY

SEWER/WATER CROSSING DETAIL NOT-TO-SCALE

CAUTION!!

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

TRENCH EXCAVATION SAFETY PROTECTION:

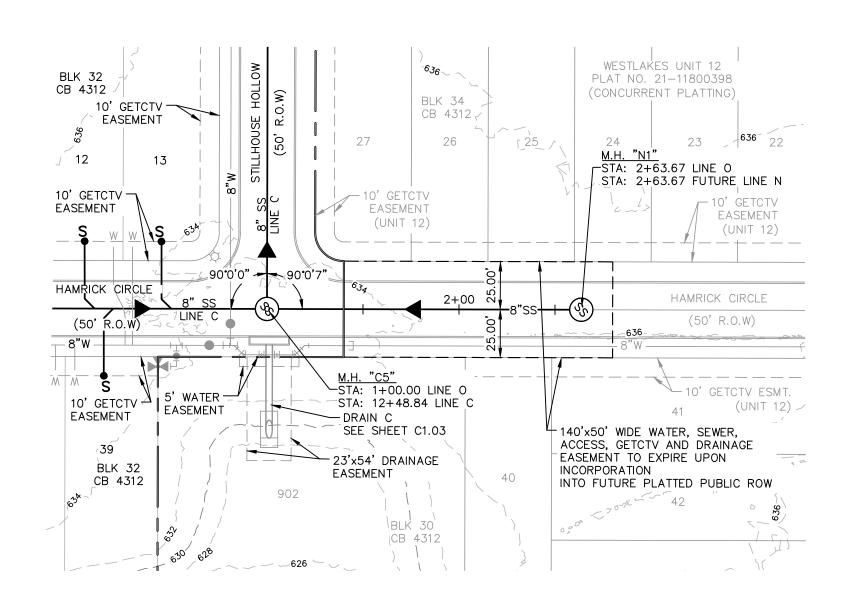
CONTRACTOR AND / OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYED OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN TH PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

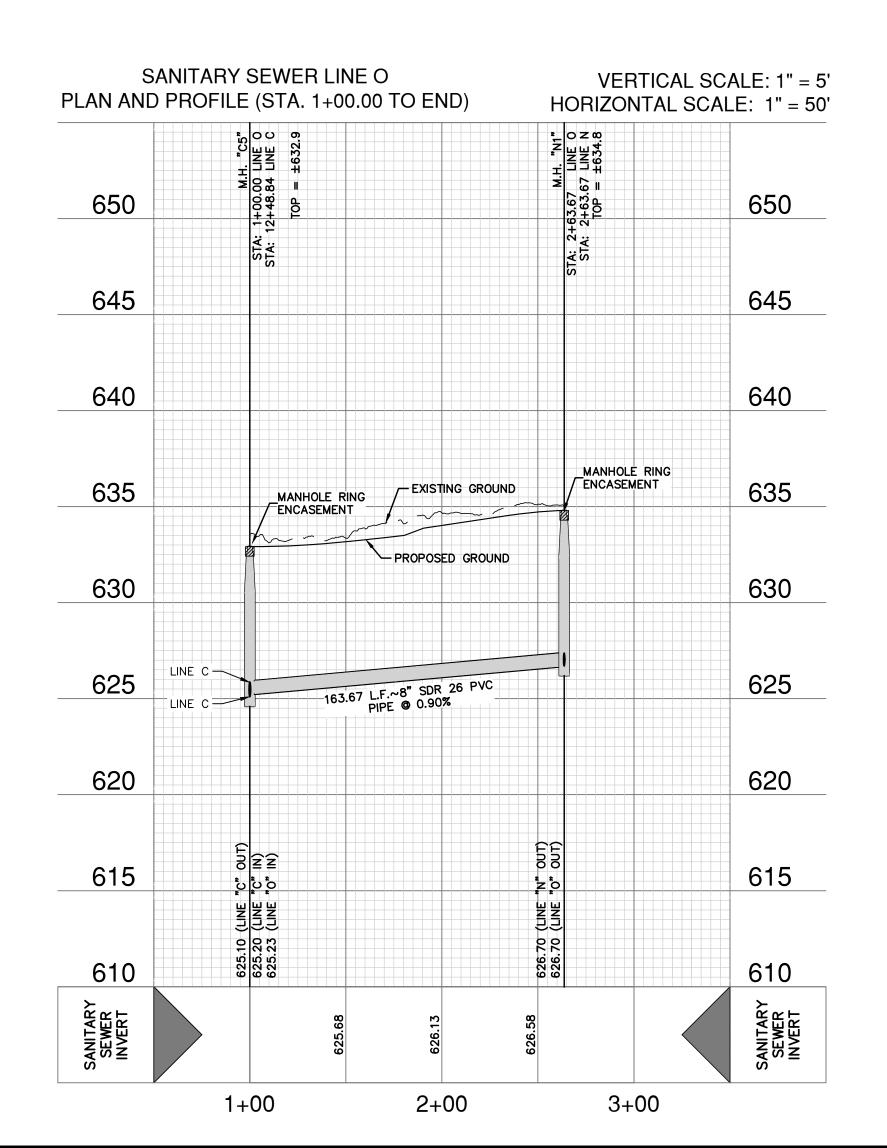
LIVE OAK SLOUGH-MEDINA RIVER WATERSHED SEWER: UPPER MEDINA RIVER SOUTH SEWERSHED - DOS RIOS W.R.C.

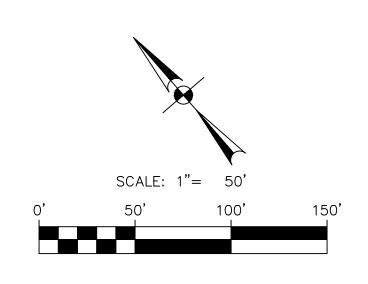
	DEVELOPER'S NAME: PULTE HOMES OF TEXAS, L.P.
	ADDRESS: 1718 DRY CREEK WAY, SUITE 120
	CITY: SAN ANTONIO STATE: TEXAS ZIP: 78259
	PHONE# <u>(210) 496-1985</u> FAX#
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	TOTAL LINEAR FOOTAGE OF PIPE: 8"-3.369 LF PLAT NO.21-11800397
	NUMBER OF LOTS <u>79</u> SAWS JOB NO. <u>22-1624</u>
- 11	

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	PLAT NO.	21-	118000	397
259	JOB NO.	1	1348–43	3
200	DATE	JUN	NE 2022	
<u> 15.76</u>	DESIGNER		EDK	
3003 <u>9</u> 7	CHECKED	MG	DRAWN	MG
	_		_	

SANITARY BAND PROFILE







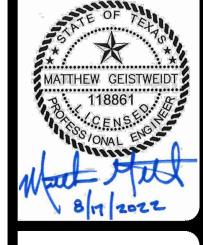
SEWER LEGEND

PROJECT LIMITS EXISTING WATER EXISTING SEWER PROPOSED SEWER

PROPOSED WATER

PROPOSED SEWER LATERAL FINISHED FLOOR ELEVATION FOR SEWER

FF = XXXX.XX



PAPE-DAWSON ENGINEERS

END)

LINE O +00.00

SANITARY SEWER AND PROFILE (STA. 1

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NOT-TO-SCALE

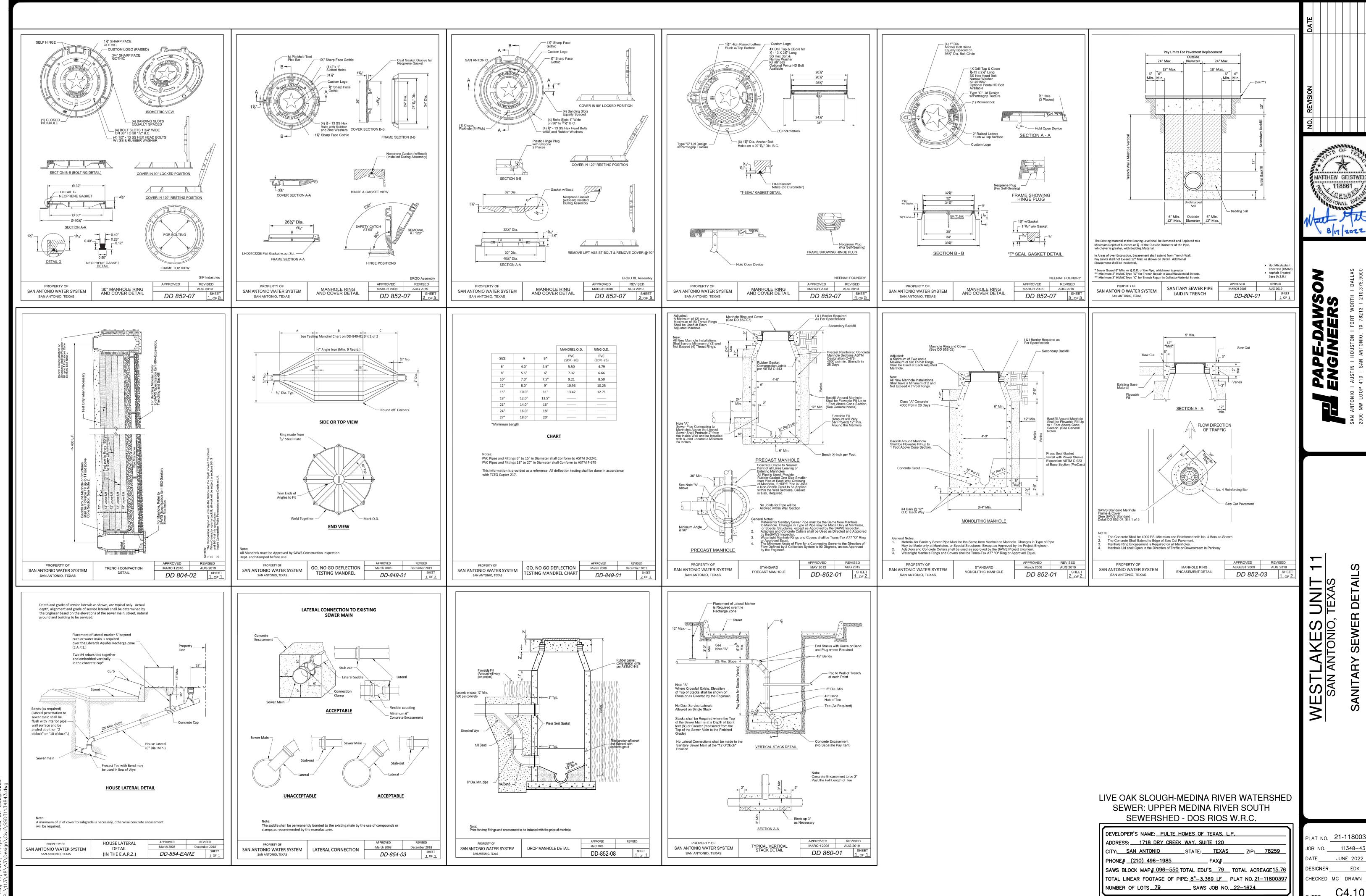
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LIVE OAK SLOUGH-MEDINA RIVER WATERSHED SEWER: UPPER MEDINA RIVER SOUTH SEWERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME: PULIE	HOMES OF TEXAS, L.P.		
ADDRESS: 1718 DRY CREE	EK WAY, SUITE 120		
CITY: SAN ANTONIO	STATE:TEXAS	ZIP:	78259
PHONE# (210) 496-1985	•		
SAWS BLOCK MAP# 096-550	OTOTAL EDU'S 79 TO	TAL ACR	EAGE <u>15.76</u>
TOTAL LINEAR FOOTAGE OF	PIPE: <u>8"-3,369 LF</u> PL	AT NO. <u>21</u>	<u> –11800397</u>
NUMBER OF LOTS 79	SAWS JOB NO2	2-1624	

PLAT NO. 21-11800397 JOB NO. 11348-43 DATE JUNE 2022 DESIGNER CHECKED MG DRAWN MGG



_{LAT NO.} 21-11800397 11348-43 JUNE 2022 EDK

CHECKED MG DRAWN MGC

		SAV
		SAWS GENER
		1. ALL MATERIALS ALL CONTRACT SHALL E COMPLY WITH THE FOLLOWING AS APP
		A. CURRENT TEXA CRITERIA FOR CODE (TAC) WATER", TAC TO B. CURRENT TXE HIGHWAYS, STE C. CURRENT "SAN WATER AND SAN D. CURRENT CITY WORKS CONSTE
		E. CURRENT CITY (UECM). 2. THE CONTRACTOR THEY OBTAIN A CONSTRUCTION PER SAWS CONSTRUCTION ARRANGED A MEEREQUIREMENTS. WO COUNTER PERMIT REPLACEMENT AT T
		3. THE CONTRACTOR WEBSITE, HTTP://NOTED WITHIN THE
		4. THE CONTRACTOR INSPECTION DIVISION (210) 233-2973, AFFECTED HOME F BEGINNING ANY WO
		5. LOCATION AND DEF THE PLANS ARE DEPTHS MUST BE F CONSTRUCTION. IT UTILITY SERVICE LI DURING CONSTRUCT
		6. THE CONTRACTOR : AND DRAINAGE S' WHETHER SHOWN O LOCATES REQUEST FOLLOWING CONTAC
		SAWS UTILITY COSA DRAINAG COSA TRAFFIC COSA TRAFFIC TEXAS STATE
		7. THE CONTRACTOR CURBS, STREETS, I ORIGINAL OR BETT PROJECT'S CONSTRI
		8. ALL WORK IN TEXA COUNTY RIGHT—OF CONSTRUCTION SPE 9. THE CONTRACTOR
		GOVERNING MUNICIF 10. THE CONTRACTOR FLOOD PLAIN WITHO
		11. HOLIDAY WORK: CO SAWS RECOGNIZED CONSTWORKREQ@SA WEEKEND WORK: (
		WEEKEND WORK: (CONSTRUCTION DEF REQUEST SHOULD E ANY AND ALL SAWS APPROVAL WILL BE
		12. COMPACTION NOTE MEETING THE COM PAYING FOR THE I BE DONE AT ONE I SAWS INSPECTOR A LIFT PER 400 LINEA AND FINALIZED BY PROVIDING ALL NEC
		AND FINALIZED BY PROVIDING ALL NEC

SAWS CONSTRUCTION NOTES (LAST REVISED JULY 2017)

NERAL SECTION

- AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS LL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND HE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE
- TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE AC) TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING" ÀC TITLE 30 PART 1 CHAPTER 290.
- TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF STREETS AND DRAINAGE". "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR D SANITARY SEWER CONSTRUCTION".
- CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC ONSTRUCTION".
- CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL"
- TOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL A COPY OF THE APPROVED COUNTER PERMIT OR GENERAL PERMIT (GCP) FROM THE CONSULTANT AND HAS BEEN NOTIFIED BY UCTION INSPECTION DIVISION TO PROCEED WITH THE WORK AND HAS MEETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK WORK COMPLETED BY THE CONTRACTOR WITHOUT AN APPROVED RMIT AND/OR A GCP WILL BE SUBJECT TO REMOVAL AND AT THE EXPENSE OF THE CONTRACTORS AND/OR THE DEVELOPER.
- TOR SHALL OBTAIN THE SAWS STANDARD DETAILS FROM THE SAWS ://www.saws.org/business_center/specs. unless otherwise
- CTOR IS TO MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION 973, ON NOTIFICATION PROCEDURES THAT WILL BE USED TO NOTIFY ME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO
- DEPTH OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON RE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM RUCTION AT NO COST TO SAWS.
- TOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES STRUCTURES AT LEAST 1-2 WEEKS PRIOR TO CONSTRUCTION WN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR UESTING PIPE LOCATION MARKERS ON SAWS FACILITIES. TH NTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:
 - LITY LOCATES: HTTP://WWW.SAWS.ORG/SERVICE/LOCATES
 - AINAGE (210) 207-0724 OR (210) 207-6026 AFFIC SIGNAL OPERATIONS (210) 206-8480
 - AFFIC SIGNAL DAMAGES (210) 207-3951 TATE WIDE ONE CALL LOCATOR 1-800-545-6005 OR 811
- TOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, TS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS BETTER CONDITION IF DAMAGES ARE MADE AS A RESULT OF THE
- TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AND/OR BEXAR OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE SPECIFICATIONS AND PERMIT REQUIREMENTS.
- CTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER JNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.
- TOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR MITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.
- CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON PROJECT SEWER NOTES ZED HOLIDAYS. REQUEST SHOULD BE SENT TO

K: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK. JLD BE SENT TO CONSTWORKREQ@SAWS.ORG.

SAWS UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.

- NOTE (ITEM 804): THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPÀCTION RÉQUIREMENTS ON ALL TRENCH BACKFILL AND FOR IE TESTS PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL NE LOCATION POINT RANDOMLY SELECTED, OR AS INDICATED BY THE OR AND/OR THE TEST ADMINISTRATOR, PER EACH 12-INCH LOOSE LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY NECESSARY DOCUMENTED TEST RESULTS.
- TESTING REPORTS SHALL BE FORWARDED TO SAWS CONSTRUCTION

SAWS SEWER NOTES

- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SANITARY SEWER OVERFLOW (SSO) OCCURS AS A RESULT OF THEIR WORK. ALL CONTRACTOR PERSONNEL RESPONSIBLE FOR SSO PREVENTION AND CONTROL SHALL BE TRAINED ON PROPER RESPONSE. SHOULD AN SSO OCCUR, THE CONTRACTOR SHALL:
 - A. IDENTIFY THE SOURCE OF THE SSO AND NOTIFY SAWS EMERGENCY OPERATIONS CENTER (EOC) IMMEDIATELY AT (210) 233-2014. PROVIDE
 - THE ADDRESS OF THE SPILL AND AN ESTIMATED VOLUME OR FLOW. 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, TCEQ AND/OR ANY OTHER FEDERAL, STATE OR LOCAL AGENCIES.

NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR THIS WORK. ALL WORK SHALL BE DONE ACCORDING TO GUIDELINES SET BY THE TCEQ

. IF BYPASS PUMPING IS REQUIRED, THE CONTRACTOR SHALL PERFORM SUCH WORK IN ACCORDANCE WITH SAWS STANDARD SPECIFICATION FOR WATER AND SANITARY SEWER CONSTRUCTION, ITEM NO. 864, "BYPASS PUMPING".

PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING FORCE MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT (210) 233-2973 AT LEAST ONE WEEK IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS: THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.

SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241, TAC 217.53 AND TCEQ 290.44(E)(4)(B). CONTRACTOR SHALL CENTER A 20' JOINT OF 160 PSI PRESSURÉ RATED PVC AT THE PROPOSED WATER CROSSING.

- ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE FINISHED GRADE OF THE PROJECT'S IMPROVEMENTS. (NSPI)
- 6. SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER: ALL SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER, RECYCLED WATER, PETROLEUM PRODUCTS, OR CHEMICALS MUST BE REPORTED IMMEDIATELY TO THE SAWS INSPECTOR ASSIGNED TO THE COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP). THIS REQUIREMENT APPLIES TO EVERY SPILL, OVERFLOW, OR DISCHARGE RÉGARDLESS OF SIZE.
- MANHOLE AND ALL PIPE TESTING (INCLUDING THE TV INSPECTION) MUST BE PERFORMED AND PASSED PRIOR TO FINAL FIELD ACCEPTANCE BY SAWS CONSTRUCTION INSPECTION DIVISION, AS PER THE SAWS SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION.
- . ALL PVC PIPE OVER 14 FEET OF COVER SHALL BE EXTRA STRENGTH WITH MINIMUM PIPE STIFFNESS OF 115 PSI.

- ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO 10' PAST THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2" X 4" STAKE, FOUR (4) FEET LONG, TWO 2) FEET DEEP INTO THE GROUND AT THE END OF EACH SERVICE. NO SEPARATE PAY ITEM.
- CONTRACTOR TO INSTALL CLEANOUTS AT THE END OF ALL SEWER LATERALS, PER LATERAL DETAIL SHEET C4.10.
- . NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- ALL 6" SEWER LATERALS WILL BE SET AT 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
- WHEN HORIZONTAL DISTANCE BETWEEN SEWER PIPES AND WATER MAIN IS LESS THAN 9 FOOT OF SEPARATION, SEWER MAIN SHALL BE INSTALLED WITH 150 PSI (MIN) PRESSURE PIPE AND FITTINGS IN ACCORDANCE WITH SAWS CONSTRUCTION CRITERIA FOR CONSTRUCTION OF SEWER MAINS IN THE VICINITY OF WATER MAINS.
- . CONTRACTOR SHALL ENSURE THAT MANHOLES OUTSIDE OF PAVED AREAS ARE SET WITH TOP ELEVATIONS 6" ABOVE FINISHED GRADE WITH CONCRETE
- 7. ALL SEWER PIPES SHALL BE 8" PVC (SDR 26), UNLESS OTHERWISE NOTED.
- 8. CONTRACTOR IS TO VERIFY EXISTING INVERT OF EXISTING SANITARY SEWER MAINS AND ALERT ENGINEER IMMEDIATELY OF ANY DIFFERENCE FROM INVERT SHOWN ON PLANS.
- 9. CONTRACTOR SHALL PROTECT ALL EXISTING FENCES. ANY FENCE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR
- 10. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
- I. CONCRETE RING ENCASEMENT TO BE INSTALLED ON ALL MANHOLES AND, WITHIN LIMITS OF PAVEMENT, BE INSTALLED TO THE TOP OF THE BASE LAYER WITH A MINIMUM OF 2" OF ASPHALT ON TOP OF THE RING ENCASEMENT.
- 12. MANHOLE OPENING INCREASED TO 30" AS PER TAC CHAPTER 217.55.
- 13. ALL SEWER PIPE LATERALS SHALL BE SDR 26 (CLASS 160) PVC PIPE.
- 14. IF THE GIVEN TOP OF MANHOLE ELEVATION DOES NOT AGREE ON ACTUAL GROUND SURFACE OR FINISH PAVEMENT, THE CONTRACTOR SHALL ADJUST ELEVATIONS SUCH THAT THE TOP OF MANHOLE SHALL BE 0.5' ABOVE EXISTING GROUND, OR FLUSH TO FINISH ASPHALT PAVEMENT.
- 15. ALL MANHOLES CONSTRUCTED OVER THE EDWARDS AQUIFER RECHARGE ZONE SHOULD BE WATERTIGHT.

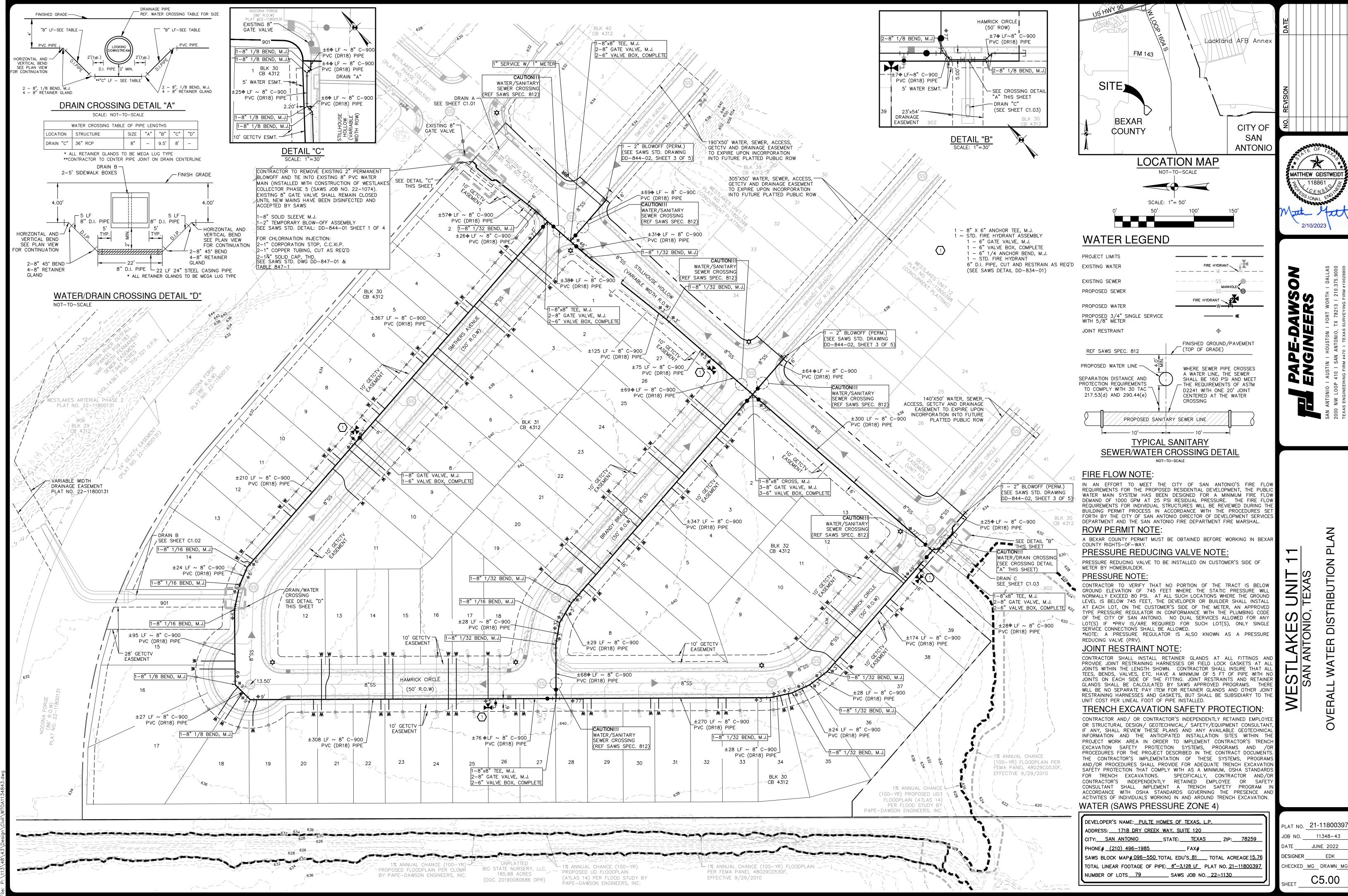
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DEVELOPER'S NAME: PULTE HOMES OF TEXAS, L.P.
ADDRESS: 1718 DRY CREEK WAY, SUITE 120
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78259
PHONE# <u>(210) 496-1985</u> FAX#
SAWS BLOCK MAP# 096-550 TOTAL EDU'S 79 TOTAL ACREAGE 15.76
TOTAL LINEAR FOOTAGE OF PIPE: 8"-3.369 LF PLAT NO.21-11800397
NUMBER OF LOTS 79 SAWS JOB NO. 22-1624

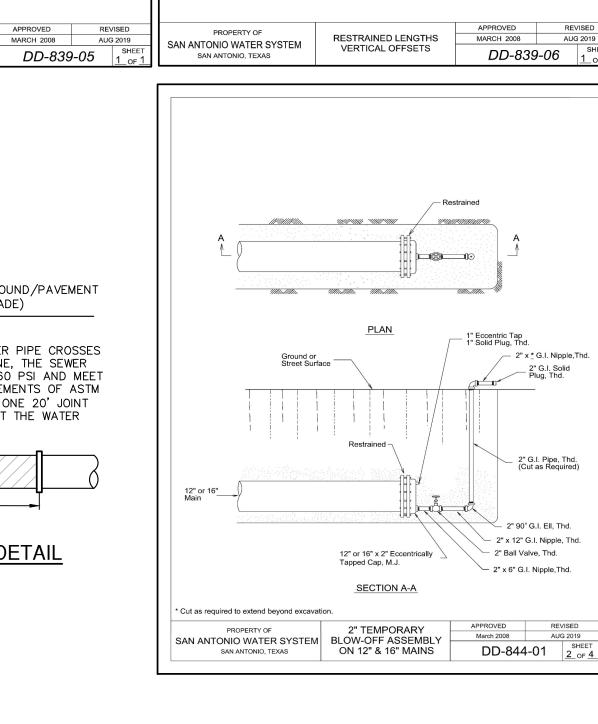


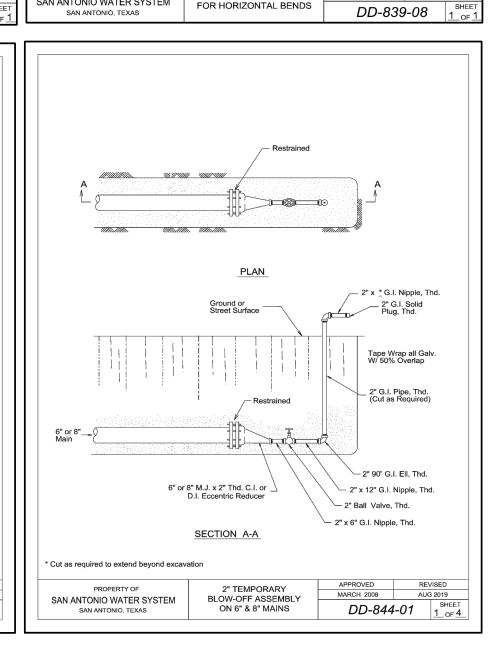
500

_{.AT NO.} 21-11800397 11348-43 JUNE 2022 DESIGNER EDK HECKED MG DRAWN MGC



AT NO. 21-11800397 11348-43





Use:
(A) Anchoring Tee with M.J. Fitting or M.J. Valve
(B) Std. M.J. Tee with Anchoring Coupling or Anchoring

Adjustment, Maximum of 1 @ 6 Inch or 12 Inch.

ALTERNATE INSTALLATION Plan View Shown with Bend

FIRE HYDRANT

(JOINT RESTRAINT)

L=LENGTH TO BE RESTRAINED ON BOTH SIDES OF FITTING

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.

RESTRAINED LENGTHS

These calculations are provided for reference. The restrained length shall be designed

based upon the conditions encountered during the installation.

3000 psi Concrete Pad 16"x16"x4"

Resilient Seat

SAN ANTONIO WATER SYSTEM

RESTRAINED LENGTH DESIGN

SAN ANTONIO WATER SYSTEM

Depth of bury is assumed to be 4 feet.

SAN ANTONIO, TEXAS

___ D.I. Pipe

— 6" ¼ Bend, M.J.

MAY 2013

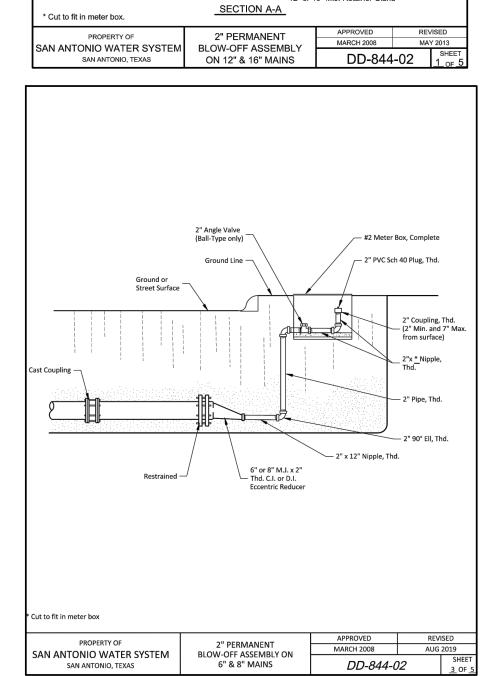
DD-834-01

MARCH 2008 AUG 2019

6" Gate Valve, M.J.

— with Box *

└─ Joint Restraint



WATER (SAWS PRESSURE ZONE 4)

DEVELOPER'S NAME: PULTE HOMES OF TEXAS, L.P.

_____STATE: <u>TEXAS</u> ZIP: <u>78259</u>

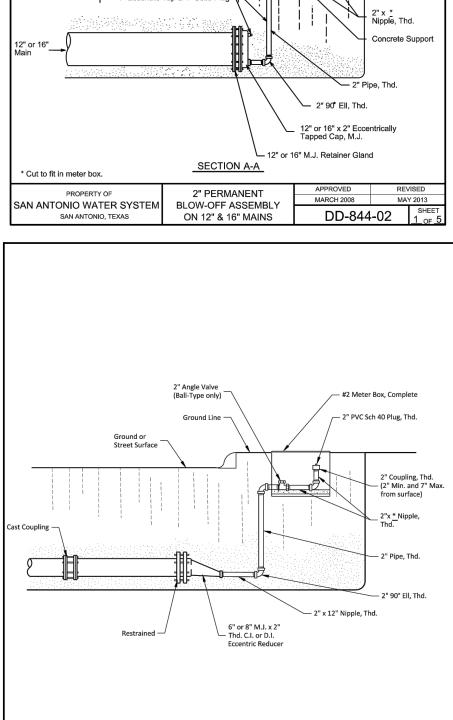
ADDRESS: 1718 DRY CREEK WAY, SUITE 120

PHONE# (210) 496-1985 FAX#_

SAWS BLOCK MAP# 096-550 TOTAL EDU'S 81 TOTAL ACREAGE 15.76 TOTAL LINEAR FOOTAGE OF PIPE: 8"-3,128 LF PLAT NO. 21-11800397

NUMBER OF LOTS 79 SAWS JOB NO. 22-1130

CITY: SAN ANTONIO



L = Length to be restrained.

REVISED AUG 2019

March 2008

DD-839-04

#2 Meter Box, Complete 6" Valve Box &

- 2" PVC SCH 40 Plug, T

RESTRAINED LENGTH FOR TEES

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.

RESTRAINED LENGTHS

FOR TEES

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

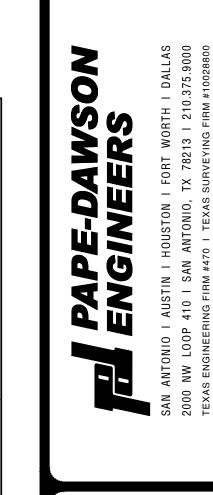
All pipe must be wrapped with a 50% overlap with pipe tape.

RESTRAINED LENGTH DESIGN

AN ANTONIO WATER SYSTEM

SAN ANTONIO, TEXAS

Depth of bury is assumed to be 4 feet.



MATTHEW GEISTWEID

, 118861

LAT NO. 21-11800397 11348-43 JUNE 2022 DESIGNER EDK CHECKED MG DRAWN MGC

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL AERIAL IMAGERY PROVIDED BY GOOGL® UNLESS OTHERWISE NOTED. Imagery © 2016,CAPCOG,Digital Globe,Texas Orthoimagery Program, USDA Farm Service Agency.

PROPERTY LINE

OUTSIDE SIDEWALK)

BE LOCATED

7' MAX. 5.5' MIN.

SIDEWALK

FIRE HYDRANT INSTALLATION

REFER TO SAWS DETAIL DD-834-01

∠6" GATE VALVE &

√6"- 1/4 ANCHOR BEND

BOX, COMPLETE

FIRE HYDRANT (TO

FINISHED GROUND/PAVEMENT (TOP OF GRADE) REF. SAWS SPEC. ITEM 812 PROPOSED WATER LINE -WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SEPARATION DISTANCE AND SHALL BE 160 PSI AND MEET PROTECTION REQUIREMENTS THE REQUIREMENTS OF ASTM TO COMPLY WITH 30 TAC D2241 WITH ONE 20' JOINT 217.53(d) AND 290.44(e) CENTERED AT THE WATER CROSSING *NOTE: SAWS REQUIRES PROPOSED SANITARY SEWER LINE LEAD FREE (<0.25% $^-$ LEAD) FIRE HYDRANTS. TYPICAL SANITARY SEWER/WATER CROSSING DETAIL NOT-TO-SCALE

C.I. Cap to be Labeled "WATER" or "DIVISION VALVE" (when specifically indicated)

- 2" Minimum / 4" Maximum Clearance

- Bottom of Trench

Minimum Distance

2 L ----

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

- Gate Valves Constructed in the Terrace shall be Constructed with No. 3 Bars

Valve Marker -

Notes: 1. Valve Marker is 3" Steel

pipe painted as shown

2. Valve Measurements shall
be referenced to Marker

3. SAWS Decal shall be noted

on the marker and facing the diection of the valve.

SAN ANTONIO WATER SYSTEM

SAN ANTONIO, TEXAS

<u></u> L——→ *f*

UPPER BEND

PIPE BEND LOW SIDE SIZE ANGLE DEPTH

VALVE MARKER

SECTION A-A

VALVE MARKER

Top closed and welded

MARCH 2008

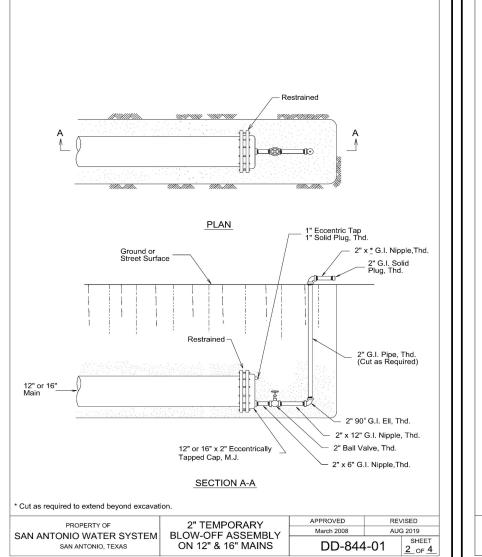
L = Length to be restrained on both sides of fitting. When restrained lengths overlap on the diagonal

pipe, all pipe between fittings should be restrained.

LOWER BEND

DD-828-04

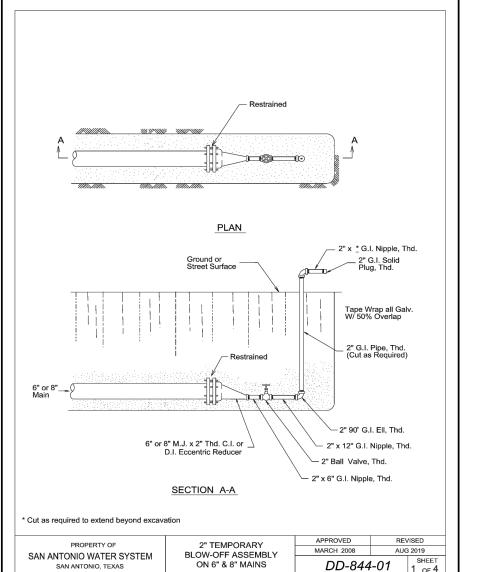
AUG 2019



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.

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



(LAST REVISED JULY 2017)

SAWS GENERAL SECTION

- 1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE:
- A.CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) 'DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING

WATER AND SANITARY SEWER CONSTRUCTION".

- 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
- 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 (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 IHE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIFLD 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.
- 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.
- 11. 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.

SAWS WATER NOTES

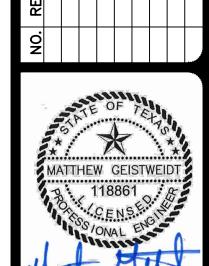
- 1. PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT LEAST ONE WEEK IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS; THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK 3. ALL MAINS SHALL BE HYDROSTATICALLY TESTED BY THE CONTRACTOR. AS ACCORDINGLY.
 - FOR WATER MAINS 12" OR HIGHER: SAWS EMERGENCY OPERATIONS CENTER (210) 233-2014
- ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS- CONTAINING MATERIAL (ACM), MAY BE LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCURS. SUCH WORK IS TO BE MADE UNDER SPECIAL SPECIFICATION ITEM NO. 3000, "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE".
- VALVE REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN, THE CONTROL VALVE LOCATED ON THE ABANDONING BRANCH WILL BE REMOVED AND REPLACED WITH A CAP/PLUG. (NSPI)
- 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 745 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 745 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: PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE
- 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 14. SAWS REQUIRES LEAD FREE (< 0.25%) FIRE HYDRANTS. UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED, AND SAWS HAS RELEASED THE MAIN FOR TIE-IN AND USE.
- 10. DIVISION VALVES: DIVISION VALVES SHOWN ON PLANS OR NOT SHOWN ON PLANS BUT FOUND IN THE FIELD SHALL ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF AND ONLY WITH PRIOR WRITTEN APPROVAL OF THE SAWS DIRECTOR OF PRODUCTION AND OPERATIONS AND PROPER COORDINATION WITH ALL SAWS DEPARTMENTS. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE INSPECTOR A MINIMUM OF TWO WEEKS IN ADVANCE TO START THE COORDINATION PROCESS AND WILL B INFORMED BY THE INSPECTOR WHEN THE DIVISION VALVE WILL BE OPERATED BY THE SAWS DISTRIBUTION AND COLLECTION STAFF. THE DIVISION VALVE CAN ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF MEMBER NOT THE INSPECTOR OR THE CONTRACTOR. OPERATION OF A DIVISION VALVE WITHOUT THE EXPRESS PRIOR WRITTEN APPROVAL OF THE SAWS DISTRIBUTION AND COLLECTION STAFF WILL CONSTITUTE A MATERIAL BREACH OF ANY WRITTEN SAWS CONTRACT OR PERMIT IN ADDITION TO SUBJECTING THE CONTRACTOR TO LIABILITY FOR ANY AND ALL FINES. FEES. OR OTHER DAMAGES, DIRECT OR CONSEQUENTIAL, THAT MAY ARISE FROM OR BE CAUSED BY THE OPERATION OF THE VALVE WITHOUT PRIOR WRITTEN PERMISSION. PLEASE BE INFORMED THAT THE APPROVAL OF THE OPERATION OR OPENING OR CLOSING OF A DIVISION VALVE CAN TAKE SEVERAL WEEKS FOR APPROVAL. DIVISION VALVES WILL ALSO HAVE A VALVE LID LABELED DIVISION VALVE AND A LOCKING MECHANISM INSTALLED WITH A KEY. THE LOCK AND KEY MECHANISM WILL BE PAID FOR BY THE CONTRACTOR BUT WILL BE INSTALLED BY SAWS DISTRIBUTION AND COLLECTION STAFF.

PROJECT WATER NOTES

1. MACHINE CHLORINATION BY THE S.A.W.S.

PROVIDED FOR IN THE SPECIAL CONDITIONS.

- ALL 8" AND 12" PIPE SHALL BE P.V.C. C-900 CLASS 235 DR 18.
- 4. THE WATER LINES WILL BE SET FROM THE STREET HUBS BEFORE THIS CONTRACT BEGINS. STREET CUT SHEETS WILL BE SUPPLIED TO THE CONTRACTOR. THERE SHOULD BE NO ADDITIONAL STAKES REQUIRED, AND I SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE SITE AND VERIFY THAT ALL STAKES REQUIRED FOR HIS WORK ARE IN PLACE AT THE TIME THE CONSTRUCTION BEGINS. IF ANY STAKES ARE MISSING THE ENGINEER SHOULD BE NOTIFIED IMMEDIATELY. AFTER CONSTRUCTION BEGINS, ALL CONSTRUCTION STAKES, MARKS, ETC., SHALL BE CAREFULLY PRESERVED BY THE CONTRACTOR, AND IN CASE OF DESTRUCTION OR REMOVAL BY THE CONTRACTOR, HIS EMPLOYEE OR ANY OTHER MEANS, SUCH STAKES, MARKS, ETC., SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH ALL THE FINAL MEASUREMENTS, TAPS AND LENGTH OF SERVICE CONNECTIONS.
- 6. THE LOT CORNERS WILL BE SET BY THE ENGINEER FOR INSTALLATION OF ALL WATER SERVICES. THESE LOT CORNERS SHALL BE CAREFULLY PRESERVED BY THE CONTRACTOR SO THE METER BOXES CAN BE SET IN PHASE II. ANY LOT CORNER DESTROYED OR REMOVED BY THE CONTRACTOR, HIS EMPLOYEES, OR BY ANY OTHER MEANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- 7. STREETS WILL HAVE BEEN EXCAVATED DOWN TO SUBGRADE AND THE PARKWAY WILL BE CUT DOWN TO TOP OF CURB BY THE STREET CONTRACTOR, PRIOR TO CONSTRUCTION OF THE WATER MAINS. IT WILL BE THE UTILITY CONTRACTOR'S RESPONSIBILITY TO PROVIDE A PAD FOR HIS EQUIPMENT.
- WATER METER BOXES IF APPLICABLE SHALL BE INSTALLED NINE FEET FROM FACE OF CURB TO CENTER OF THE METER BOX.
- ALL GARBAGE OR SPOIL MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT HIS EXPENSE.
- 10. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED AND THE S.A.W.S. RELEASES THE MAIN FOR TIE-IN AND USE.
- . UNIT PRICE BID FOR "STANDARD FIRE HYDRANT ASSEMBLY" SHALL INCLUDE FIRE HYDRANT, 6-INCH GATE VALVE AND 6-INCH VALVE BOX COMPLETE, ANCHOR BEND, AND ALL 6-INCH DI PIPE REQUIRED (DI PIPE REQUIRED SHALL INCLUDE ALL PIPE FROM THE TEE ON THE MAIN LINE TO THE FIRE HYDRANT).
- 12. WHEN SEWER LINES ARE INSTALLED IN THE VICINITY OF WATER MAINS, SUCH INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE TEXAS NATURAL RESOURCE CONSERVATION COMMISSION "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS" (1988 OR ANY REVISIONS THERETO).
- 13. A CLEAR SPACE SHALL BE PROVIDED AROUND ALL FIRE HYDRANTS. THIS AREA SHOULD HAVE A MINIMUM DIAMETER OF 3.0' AND BE CLEAN OF VERTICAL OBSTRUCTIONS, VALVES, AND METER BOXES.
- 15. UNLESS OTHERWISE NOTED ALL SERVICES SHALL BE 3/4" WITH 5/8" METER.



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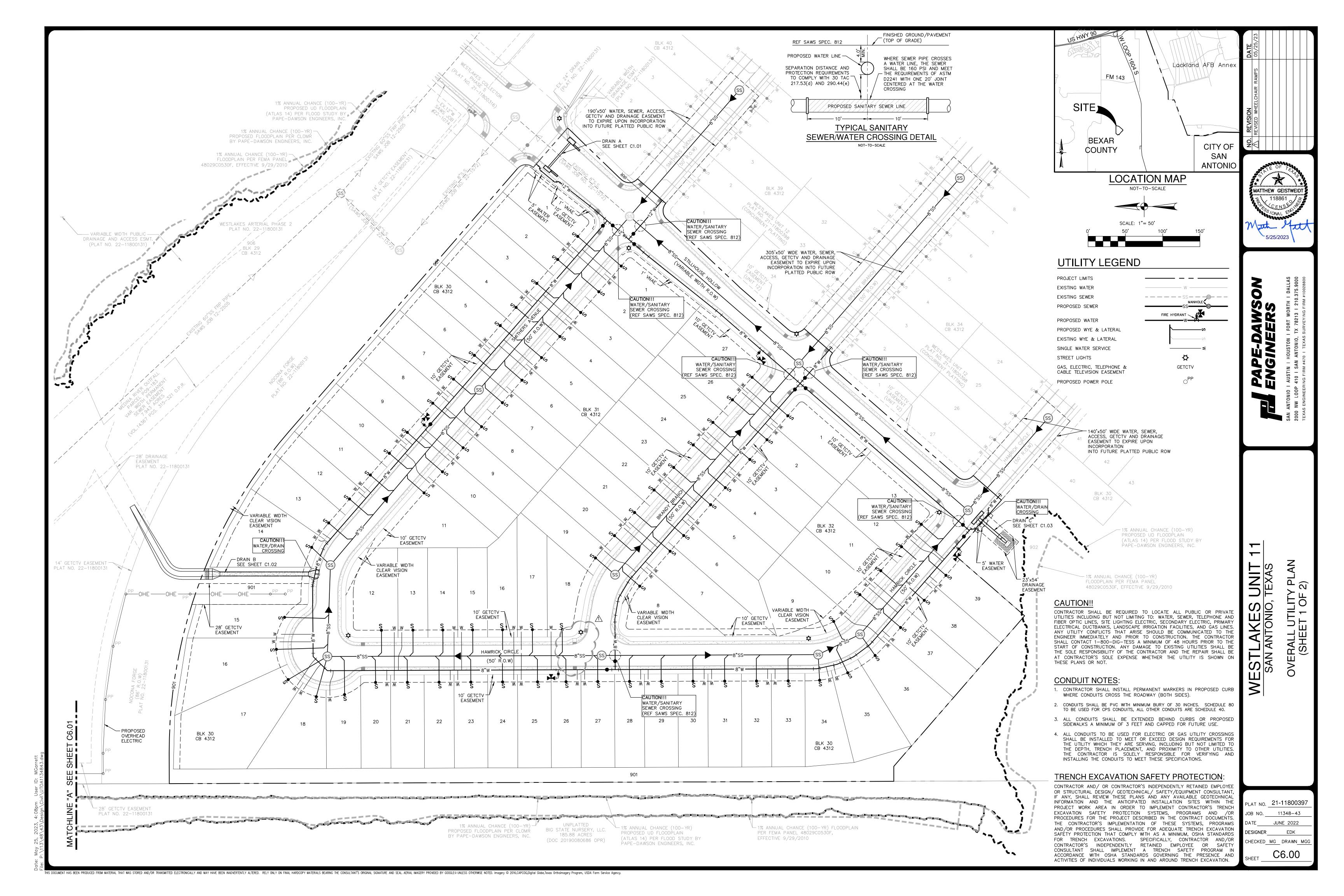
WATER (SAWS PRESSURE ZONE 4)

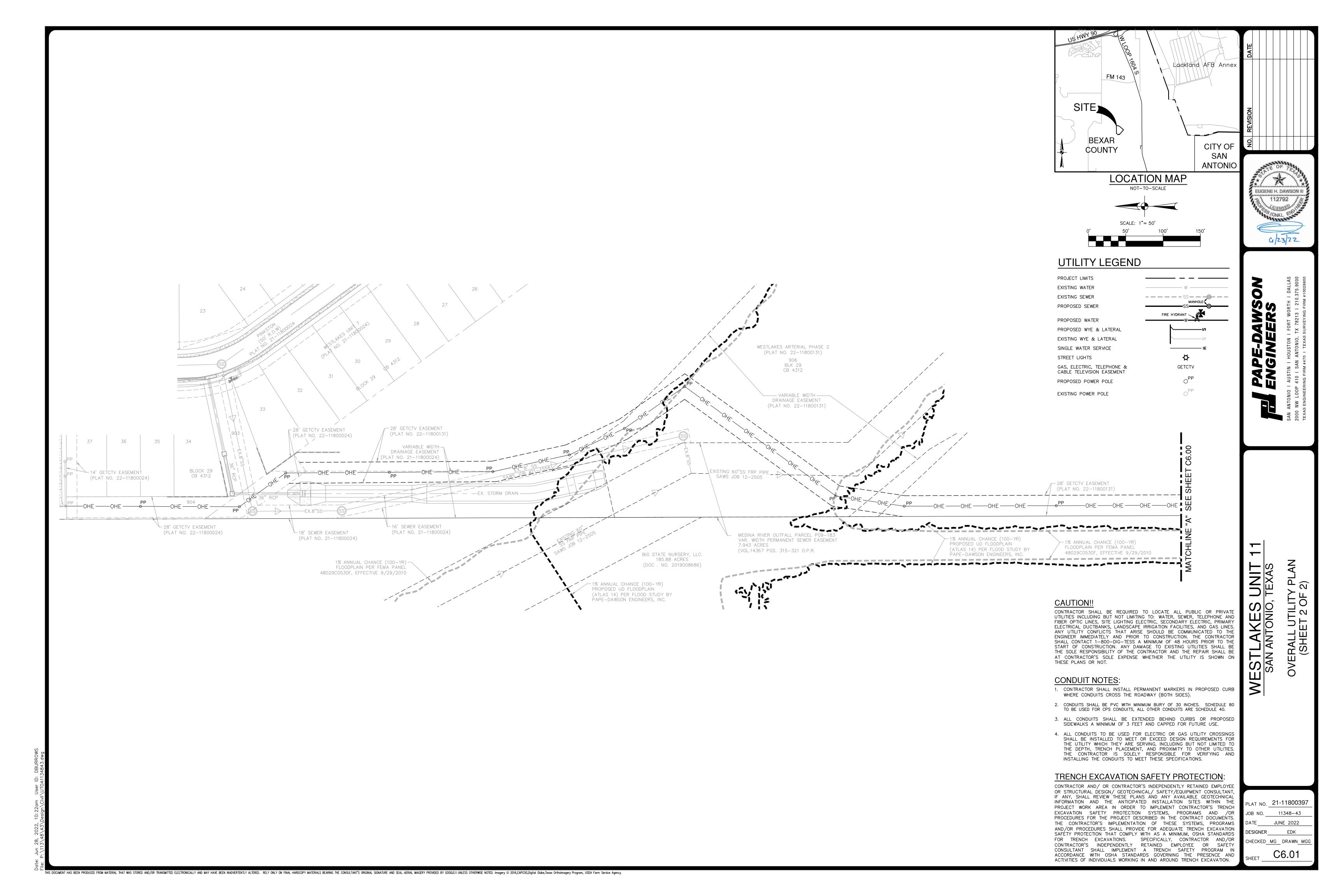
DEVELOPER'S NAME: PULTE HOMES OF TEXAS, L.P. ADDRESS: 1718 DRY CREEK WAY, SUITE 120 CITY: SAN ANTONIO STATE: TEXAS ZIP: 78259 PHONE# (210) 496-1985 FAX#

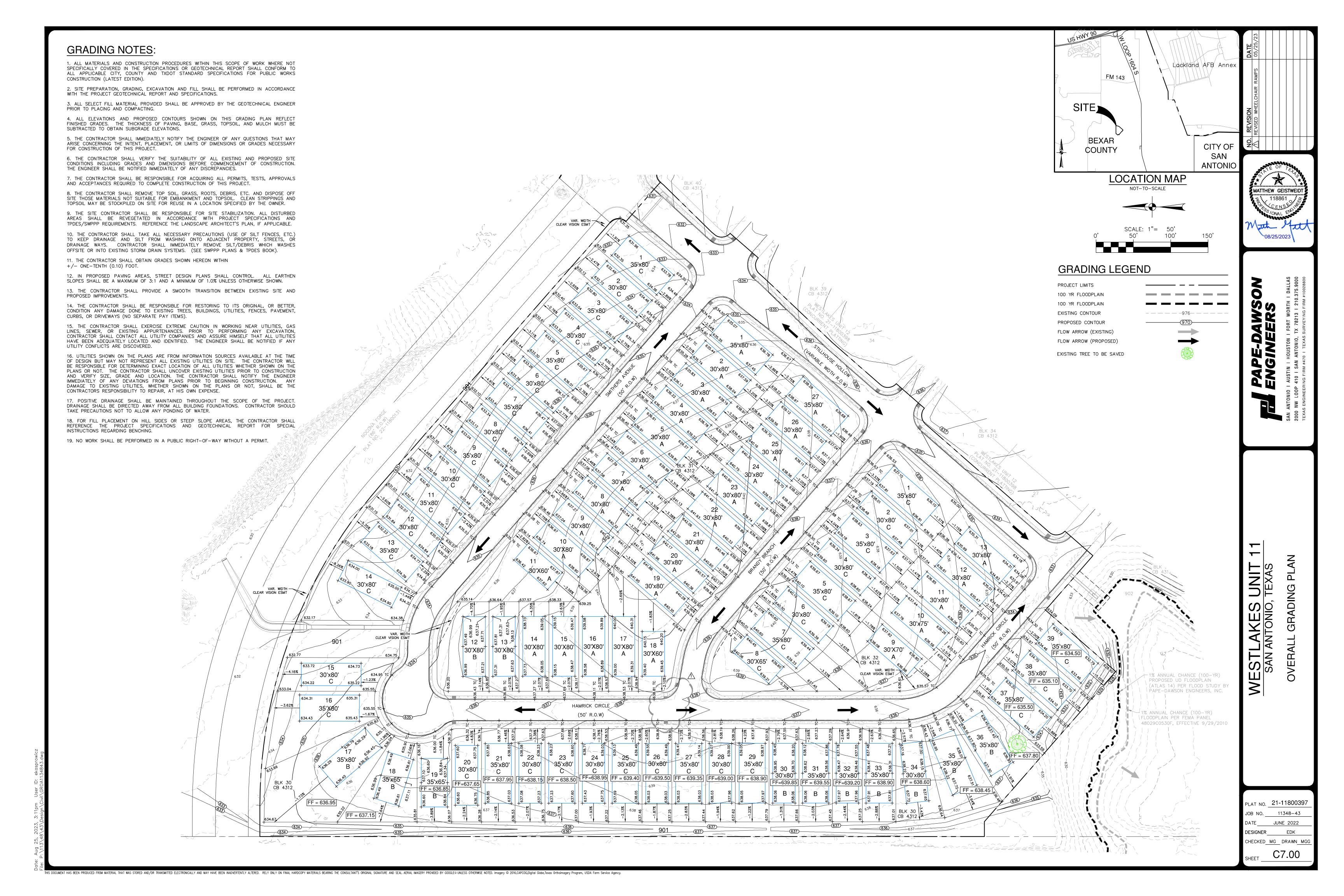
SAWS BLOCK MAP# 096-550 TOTAL EDU'S 81 TOTAL ACREAGE 15.76 TOTAL LINEAR FOOTAGE OF PIPE: 8"-3,128 LF PLAT NO. 21-11800397 NUMBER OF LOTS 79 SAWS JOB NO. 22-1130

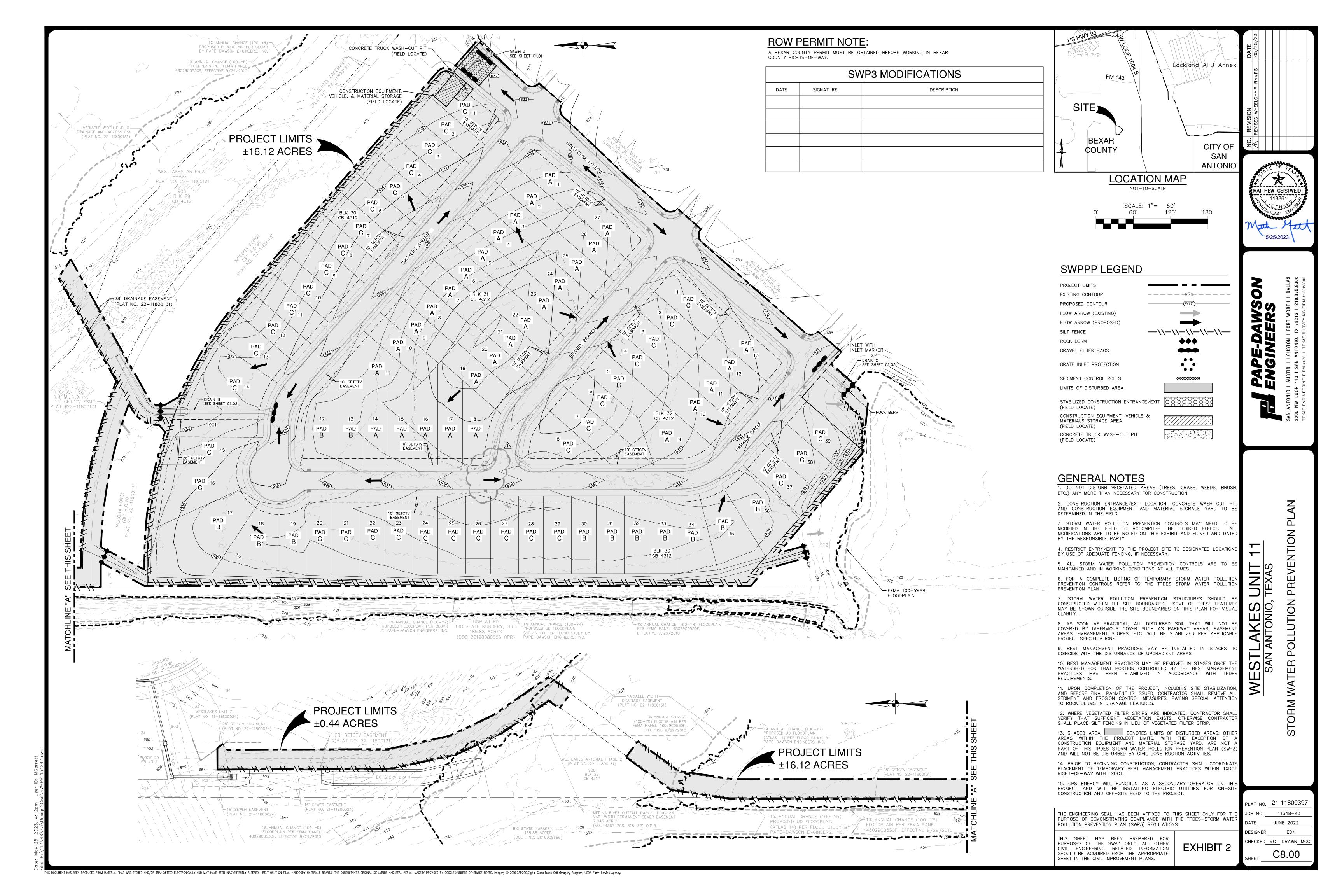
AT NO. 21-11800397 11348-43 JUNE 2022 DESIGNER EDK CHECKED MG DRAWN MG

5 DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL. AERIAL IMAGERY PROVIDED BY GOOGLE® UNLESS OTHERWISE NOTED. Imagery © 2016,CAPCOG,Digital Globe,Texas Orthoimagery Program, USDA Farm Service Agency.









SCHEMATIC OF TEMPORARY CONSTRUCTION ENTRANCE/EXIT

MATERIALS

8-INCHES.

THE AGGREGATE SHOULD CONSIST OF 4-INCH 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

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 OF

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-INCHES TO 8-INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT

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.

GEOTEXTILE FABRIC TO STABILIZE FOUNDATION

SECTION "A-A" OF A CONSTRUCTION ENTRANCE/EXIT

COMMON TROUBLE POINTS 1. INADEQUATE RUNOFF CONTROL-SEDIMENT WASHES ONTO PUBLIC ROAD.

. STONE TOO SMALL OR GEOTEXTILE FABRIC ABSENT, RESULTS IN MUDDY CONDITION AS STONE IS PRESSED INTO SOIL.

. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC—EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY. 4. PAD NOT FLARED SUFFICIENTLY AT ROAD SURFACE, RESULTS IN MUD BEING

TRACKED ON TO ROAD AND POSSIBLE DAMAGE TO ROAD. 5. UNSTABLE FOUNDATION - USE GEOTEXTILE FABRIC UNDER PAD AND/OR IMPROVE FOUNDATION DRAINAGE.

INSPECTION AND MAINTENANCE GUIDELINES THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES

USED TO TRAP SEDIMENT 2. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.

3. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. 4. WHEN WASHING IS REQUIRED. IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR

5. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

INCORREC^{*}

SOD INSTALLATION

USE PEGS OR STAPLES TO FASTEN SOD

FIRMLY - AT THE ENDS OF STRIPS AND

IN THE CENTER, OR EVERY 3-4 FEET IF

MOW, DRIVE PEGS OR STAPLES FLUSH

THE STRIPS ARE LONG. WHEN READY TO

WOVEN WIRE SHEATHING

ISOMETRIC PLAN VIEW

THE PURPOSE OF A ROCK BERM IS TO SERVE AS A CHECK DAM IN AREAS

OF CONCENTRATED FLOW, TO INTERCEPT SEDIMENT-LADEN RUNOFF, DETAIN

THE SEDIMENT AND RELEASE THE WATER IN SHEET FLOW. THE ROCK BERM

SHOULD BE USED WHEN THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 5

ACRES. ROCK BERMS ARE USED IN AREAS WHERE THE VOLUME OF RUNOFF

IS TOO GREAT FOR A SILT FENCE TO CONTAIN. THEY ARE LESS EFFECTIVE

FOR SEDIMENT REMOVAL THAN SILT FENCES, PARTICULARLY FOR FINE

PARTICLES, BUT ARE ABLE TO WITHSTAND HIGHER FLOWS THAN A SILT FENCE.

AS SUCH, ROCK BERMS ARE OFTEN USED IN AREAS OF CHANNEL FLOWS

(DITCHES, GULLIES, ETC.). ROCK BERMS ARE MOST EFFECTIVE AT REDUCING

BED LOAD IN CHANNELS AND SHOULD NOT BE SUBSTITUTED FOR OTHER

. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE

RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY

2. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES

AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER THAT

4. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION

5. THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO

FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS,

6. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS

EROSION AND SEDIMENT CONTROL MEASURES FARTHER UP THE WATERSHED.

INSPECTION AND MAINTENANCE GUIDELINES

ROCK BERMS

INSPECTIONS SHOULD BE MADE.

WILL NOT CAUSE ANY ADDITIONAL SILTATION.

WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

ARE STABILIZED AND ACCUMULATED SILT REMOVED.

3. REPAIR ANY LOOSE WIRE SHEATHING.

WOVEN WIRE SHEATHING

SECTION "A-A"

MATERIALS

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

2. CLEAN, OPEN GRADED 3-INCH TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-INCH TO 8-INCH DIAMETER ROCKS MAY BE

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

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 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

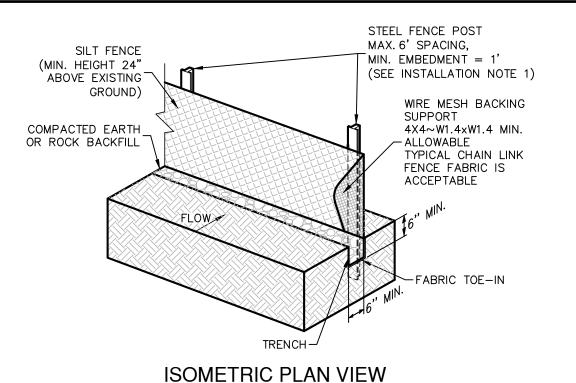
INCHES DEEP TO PREVENT FAILURE OF THE CONTROL. COMMON TROUBLE POINTS

. INSUFFICIENT BERM HEIGHT OR LENGTH (RUNOFF QUICKLY ESCAPES OVER THE TOP OR AROUND THE SIDES OF BERM).

2. BERM NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING AROUND ONE SIDE).

ROCK BERM DETAIL

NOT-TO-SCALE



STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL

<u>SHOOTS</u> OR GRASS BLADES.

HEALTHY: MOWED AT A 2"-3"

CUTTING HEIGHT

GRASS SHOULD BE GREEN AND

- THATCH- GRASS CLIPPINGS AND

-ROOT ZONE - SOIL AND ROOTS.

DEAD LEAVES, UP TO 1/2" THICK.

SEDIMENT BASIN

NOT-TO-SCALE

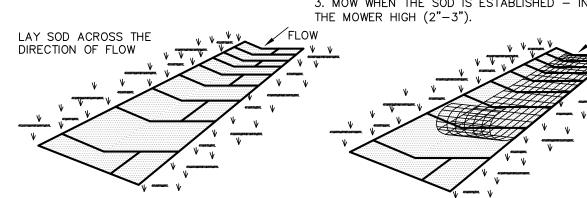
THE STRIPS TIGHTLY AGAINST EACH OTHER. DO NOT LEAVE SPACES AND DO NOT OVERLAP. A SHARPENED MASON'S TROWEL IS A HANDY TOOL FOR TUCKING DOWN THE ENDS AND TRIMMING PIECES.



SHOULD BE 1/2"-3/4" THICK, WITH DENSE ROOT MAT FOR STRENGTH. APPEARANCE OF GOOD SOD

 ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE SOIL.

2. WATER TO A DEPTH OF 4" AS NEEDED. WATER WELL AS SOON AS THE SOD IS LAID. 3. MOW WHEN THE SOD IS ESTABLISHED - IN 2-3 WEEKS. SET



(± 1/4" INCH) AT THE TIME OF CUTTING. THIS THICKNESS SHOULD EXCLUDE

SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN

IN CRITICAL AREAS, SECURE SOD WITH NETTING. USE STAPLES.

WITH THE GROUND. GENERAL INSTALLATION (VA. DEPT. OF CONSERVATION, 1992

SOD SHOULD NOT BE CUT OR LAID IN EXCESSIVELY WET OR DRY WEATHER. SOD ALSO SHOULD NOT BE LAID ON SOIL SURFACES THAT ARE FROZEN. 2. DURING PERIODS OF HIGH TEMPERATURE, THE SOIL SHOULD BE LIGHTLY LENGTH, WITH A MAXIMUM ALLOWABLE DEVIATION IN ANY DIMENSION OF 5%. IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD, TO COOL THE SOIL AND REDUCE ROOT BURNING AND DIEBACK.

> FIRST ROW OF SOD SHOULD BE LAID IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND BUTTING TIGHTLY AGAINST EACH OTHER. LATERAL JOINTS SHOULD BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. CARE SHOULD BE EXERCISED TO ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS (SEE FIGURE ABOVE).

> 4. ON SLOPES 3:1 OR GREATER, OR WHEREVER EROSION MAY BE A PROBLEM, SOD SHOULD BE LAID WITH STAGGERED JOINTS AND SECURED BY STAPLING OF OTHER APPROVED METHODS. SOD SHOULD BE INSTALLED WITH THE LENGTH PERPENDICULAR TO THE SLOPE (ON CONTOUR).

5. AS SODDING OF CLEARLY DEFINED AREAS IS COMPLETED, SOD SHOULD BE ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER OBJECTS THAT WOULD ROLLED OR TAMPED TO PROVIDE FIRM CONTACT BETWEEN ROOTS AND SOIL. 6. AFTER ROLLING, SOD SHOULD BE IRRIGATED TO A DEPTH SUFFICIENT THAT THE UNDERSIDE OF THE SOD PAD AND THE SOIL 4 INCHES BELOW THE SOD IS

> UNTIL SUCH TIME A GOOD ROOT SYSTEM BECOMES DEVELOPED, IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHOULD BE PERFORMED AS OFTEN AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF AT LEAST 4

> 8. THE FIRST MOWING SHOULD NOT BE ATTEMPTED UNTIL THE SOD IS FIRMLY ROOTED, USUALLY 2-3 WEEKS. NOT MORE THAN ONE THIRD OF THE GRASS LEAF SHOULD BE REMOVED AT ANY ONE CUTTING.

INSPECTION AND MAINTENANCE GUIDELINES SOD SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAIN EVENT TO LOCATE AND REPAIR ANY DAMAGE.

2. DAMAGE FROM STORMS OR NORMAL CONSTRUCTION ACTIVITIES SUCH AS TIRE RUTS OR DISTURBANCE OF SWALE STABILIZATION SHOULD BE REPAIRED AS

SOD INSTALLATION DETAIL

SILT FENCE

STAPLE

A SILT FENCE IS A BARRIER CONSISTING OF GEOTEXTILE FABRIC SUPPORTED BY METAL POSTS TO PREVENT SOIL AND SEDIMENT LOSS FROM A SITE. WHEN PROPERLY USED. SILT FENCES CAN BE HIGHLY EFFECTIVE AT CONTROLLING SEDIMENT FROM DISTURBED AREAS. THEY CAUSE RUNOFF TO POND, ALLOWING HEAVIER SOLIDS TO SETTLE OUT. IF NOT PROPERLY INSTALLED, SILT FENCES ARE NOT LIKELY TO BE EFFECTIVE.

THE PURPOSE OF A SILT FENCE IS TO INTERCEPT AND DETAIN WATER-BORN SEDIMENT FROM UNPROTECTED AREAS OF A LIMITED EXTENT. SILT FENCE IS USED DURING THE PERIOD OF CONSTRUCTION NEAR THE PERIMETER OF A DISTURBED AREA TO INTERCEPT SEDIMENT WHILE ALLOWING WATER TO PERCOLATE THROUGH. THIS FENCE SHOULD REMAIN IN PLACE UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. SILT FENCE SHOULD NOT BE USED WHERE THERE IS A CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY. IF CONCENTRATED FLOW OCCURS AFTER INSTALLATION, CORRECTIVE ACTION MUST BE TAKEN SUCH AS PLACING A ROCK BERM IN THE AREAS OF CONCENTRATED FLOW.

SILT FENCING WITHIN THE SITE MAY BE TEMPORARILY MOVED DURING THE DAY TO ALLOW CONSTRUCTION ACTIVITY PROVIDED IT IS REPLACED AND PROPERLY ANCHORED TO THE GROUND AT THE END OF THE DAY. SILT FENCES ON THE PERIMETER OF THE SITE OR AROUND DRAINAGE WAYS SHOULD NOT BE MOVED AT ANY TIME.

I. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC 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 NUMBER 30.

. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR Y-BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM WEIGHT 1.25 LB/FT, AND BRINDELL HARDNESS

3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

1. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF 1-FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.

2. LAY OUT FENCING DOWN—SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS 1/4 ACRE/100 FEET OF FENCE.

3. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.

4. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL. 5. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT

POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE

POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET 6. SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

COMMON TROUBLE POINTS FENCE NOT INSTALLED ALONG THE CONTOUR CAUSING WATER TO CONCENTRATE AND FLOW OVER THE FENCE.

2. FABRIC NOT SEATED SECURELY TO GROUND (RUNOFF PASSING UNDER FENCE).

3. FENCE NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING

4. FENCE TREATING TOO LARGE AN AREA, OR EXCESSIVE CHANNEL FLOW (RUNOFF OVERTOPS OR COLLAPSES FENCE).

INSPECTION AND MAINTENANCE GUIDELINES 1. INSPECT ALL FENCING WEEKLY, AND AFTER RAINFALL.

2. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.

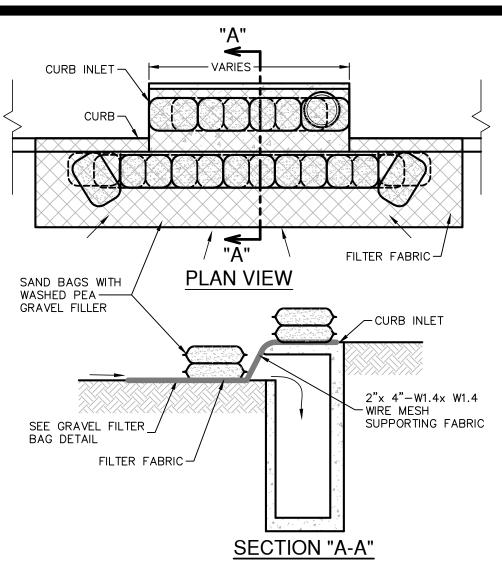
3. REPLACE TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.

4. REPLACE OR REPAIR SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER DIKE MAY BE PREFERABLE TO A SILT FENCE AT COMMON VEHICLE ACCESS POINTS.

WHEN CONSTRUCTION IS COMPLETE, THE SEDIMENT SHOULD BE DISPOSED OF IN A MANNER THAT WILL NOT CAUSE ADDITIONAL SILTATION AND THE PRIOR LOCATION OF THE SILT FENCE SHOULD BE REVEGETATED. THE FENCE ITSELF SHOULD BE DISPOSED OF IN AN APPROVED LANDFILL.

SILT FENCE DETAIL

NOT-TO-SCALE



GENERAL NOTES

A MANNER THAT IT WILL NOT ERODE.

CONTRACTOR TO INSTALL 2"x4"-W1.4xW1.4 WIRE MESH SUPPORTING FILTER FABRIC OVER THE INLET OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR WIRE TIES AT THIS LOCATION. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD BE PLACED ON TOP OF WIRE MESH ON TOP OF THE INLET AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SANDBAGS FILLED WITH WASHED PEA GRAVEL SHOULD ALSO BE PLACED ALONG THE GUTTER AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SAND BAGS TO BE STACKED TO FORM A CONTINUOUS BARRIER AROUND INLETS.

THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.

INSPECTION AND MAINTENANCE GUIDELINES . INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE

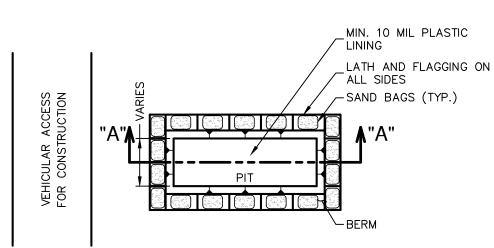
2. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH

3. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND

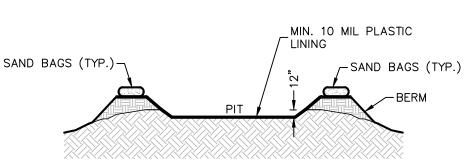
4. INSPECT FILTER FABRIC AND PATCH OR REPLACE IF TORN OR MISSING. 5. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

BAGGED GRAVEL CURB INLET PROTECTION DETAIL

NOT-TO-SCALE



PLAN VIEW



SECTION "A-A'

GENERAL NOTES

FROM STORM WATER RUNOFF.

DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE. 2. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION

4. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES OR WATER BODIES.

TEMPORARY CONCRETE WASHOUT FACILITY SHOULD BE CONSTRUCTED WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.

MATERIALS

PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL IN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL

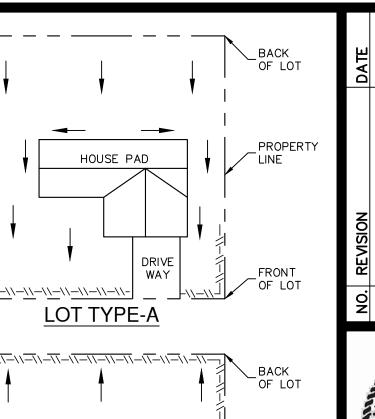
MAINTENANCE

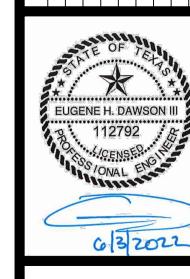
WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED

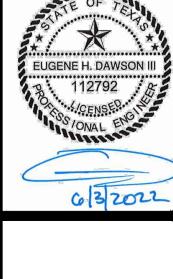
HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.

CONCRETE TRUCK WASHOUT PIT DETAIL

NOT-TO-SCALE







-\\-\\- SILT FENCE DRAINAGE FLO

LEGENI

SECTION "A-A"

PROPERT

PROPERT

TYPICAL HOUSE LOT LAYOUTS NOT-TO-SCALE

LOT TYPE-C

NOTE: SILT FENCE TO BE INSTALLED PER

DOWNGRADIENT SIDE OF EACH LOT LINE

THESE DETAILS AND LOCATED ON THE

OR LIMITS OF CLEARING AS GENERALLY

SHOWN ON THE OVERALL SITE PLAN.

PLAN VIEW

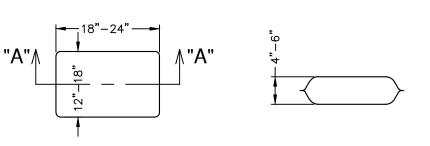
HOUSE PAD

LOT TYPE-B

HOUSE PAD

WAY

WAY

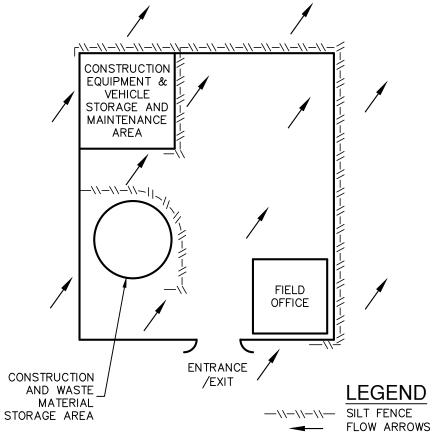


THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE. POLYETHYLENE OR POLYAMIDE WOVEN FABRIC, MIN. UNIT WEIGHT OF 4 OUNCES/SY. HAVE A MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70%.

THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM WASHED PEA GRAVEL TO COARSE GRAVEL (0.31 TO 0.75 INCH DIAMETER). 3. SAND SHALL <u>NOT</u> BE USED TO FILL THE FILTER BAGS.

GRAVEL FILTER BAG DETAIL

NOT-TO-SCALE



CONSTRUCTION STAGING AREA

NOT-TO-SCALE

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE TPDES-STORM WATER POLLUTION PREVENTION PLAN (SWP3) REGULATIONS.

THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF THE SWP3 ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

JUNE 2022 ESIGNER

HECKED MG DRAWN MG C8.10

_{.AT NO.} 21-11800397

INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.

FERTILIZE ACCORDING TO SOIL TESTS. FERTILIZER NEEDS CAN BE

DETERMINED BY A SOIL TESTING LABORATORY OR REGIONAL RECOMMENDATIONS CAN BE MADE BY COUNTY AGRICULTURAL EXTENSION AGENTS. FERTILIZER

SHOULD BE WORKED INTO THE SOIL TO A DEPTH OF 3 INCHES WITH A DISC,

SOON AS PRACTICAL.

RUNOFF AWAY FROM THE PUBLIC ROAD.

PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD

LAY SOD IN A STAGGERED PATTERN. BUTT

ANGLED ENDS CAUSED BY THE

AUTOMATIC SOD CUTTER MUST BE MATCHED

MATERIALS 1. SOD SHOULD BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4" INCH

SHOOT GROWTH AND THATCH.

2. PIECES OF SOD SHOULD BE CUT TO THE SUPPLIER'S STANDARD WIDTH AND TORN OR UNEVEN PADS SHOULD NOT BE ACCEPTABLE. STANDARD SIZE SECTIONS OF SOD SHOULD BE STRONG ENOUGH TO

SUSPENDED FROM A FIRM GRASP ON ONE END OF THE SECTION. 4. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS.

PRIOR TO SOIL PREPARATION, AREAS TO BE SODDED SHOULD BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLAN. THE SURFACE SHOULD BE CLEARED OF ALL TRASH, DEBRIS AND OF ALL

SITE PREPARATION

SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. ON SLOPING LAND, THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE CONTOUR.

INSTALLATION IN CHANNELS SOD STRIPS IN WATERWAYS SHOULD BE LAID PERPENDICULAR TO THE DIRECTION OF FLOW. CARE SHOULD BE TAKEN TO BUTT ENDS OF STRIPS TIGHTLY (SEE FIGURE ABOVE).

2. AFTER ROLLING OR TAMPING, SOD SHOULD BE PEGGED OR STAPLED TO RESIST WASHOUT DURING THE ESTABLISHMENT PERIOD. MESH OR OTHER NETTING MAY BE PEGGED OVER THE SOD FOR EXTRA PROTECTION IN CRITICAL

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HIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL AERIAL IMAGERY PROVIDED BY GOOGLE® UNLESS OTHERWISE NOTED. IMAGERY PROVIDED BY GOOGLE® UNLESS OTHERWISE NOTED BY GOOGLE® UNLESS OTHERWISE NOTED. IMAGERY PROVIDED BY GOOGLE® UNLESS OTHERWISE NOTED BY GOOGLE® UNLESS OTHERWISE NOT