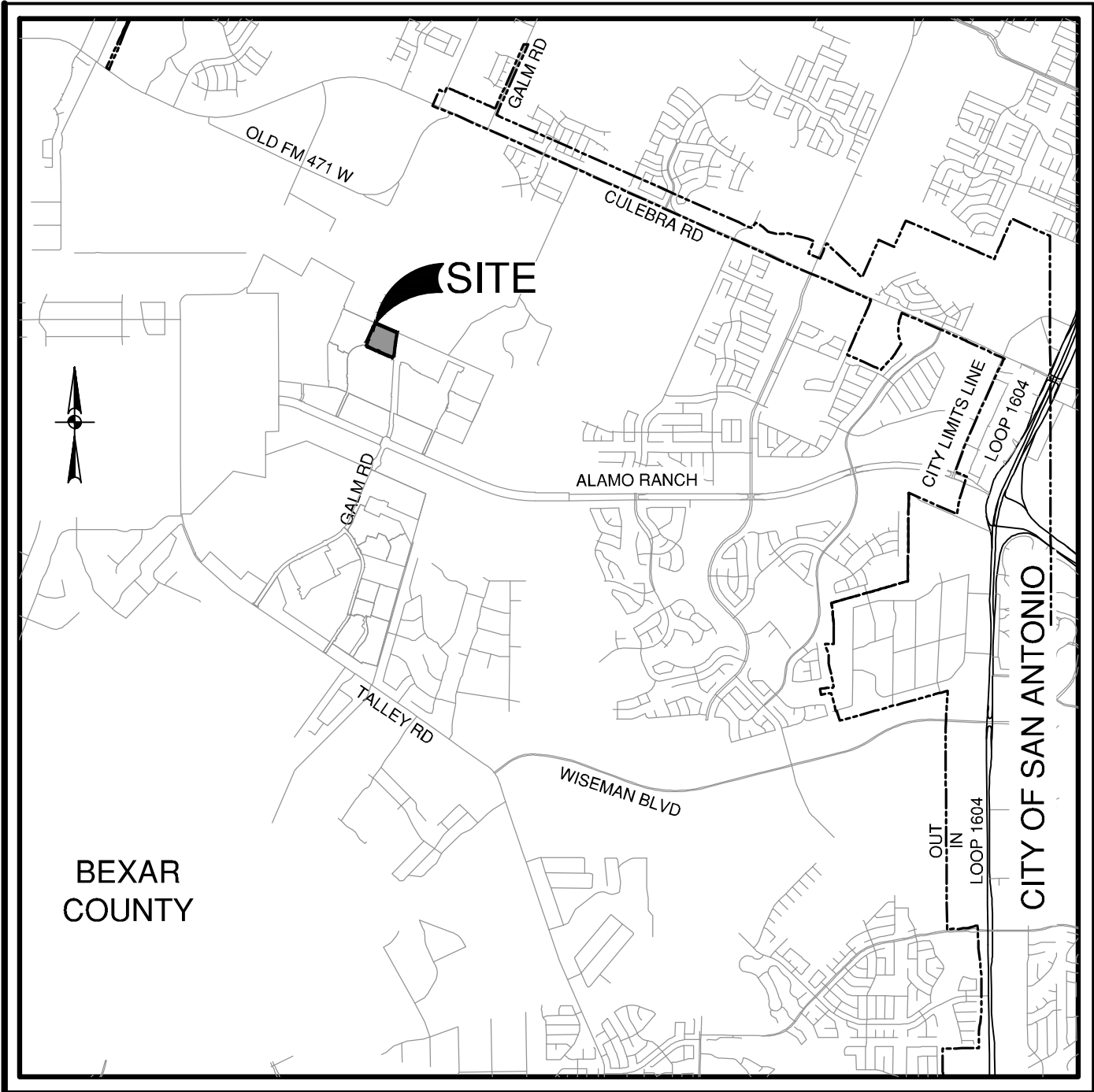


RIVERSTONE UNIT - G8

SAN ANTONIO, TEXAS

CIVIL CONSTRUCTION PLANS

SHEET INDEX	
Sheet Description	Sheet No.
COVER SHEET	C0.00
MASTER DRAINAGE PLAN	C1.00
DRAIN A PLAN & PROFILE	C1.01
DRAIN B PLAN & PROFILE	C1.02
DRAIN C PLAN & PROFILE	C1.03
DRAINAGE DETAILS	C1.10
PINE ISLAND BAYOU PLAN & PROFILE	C2.00
OLIVE ROCK RIDGE PLAN & PROFILE	C2.01
KIMBERLITE RIVER PLAN & PROFILE	C2.02
MUDSTONE PATH PLAN & PROFILE	C2.03
MALACHITE STREAM PLAN & PROFILE	C2.04
STREET DETAILS	C2.10
STREET DETAILS	C2.11
STREET DETAILS	C2.12
OVERALL SIGNAGE PLAN	C3.00
SIGNAGE DETAILS SHEET 1 OF 3	C3.10
SIGNAGE DETAILS SHEET 2 OF 3	C3.11
SIGNAGE DETAILS SHEET 3 OF 3	C3.12



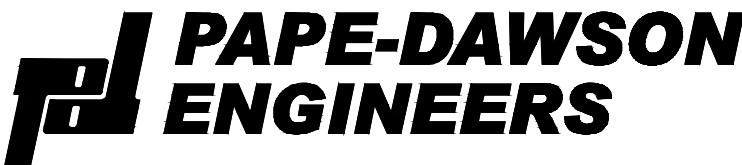
LOCATION MAP

NOT-TO-SCALE

PREPARED FOR:

CONTINENTAL HOMES OF TEXAS, L.P.
5419 N LOOP 1604 E
SAN ANTONIO, TX 78247

FEBRUARY 2023



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SHEET INDEX	
Sheet Description	Sheet No.
OVERALL WATER DISTRIBUTION PLAN	C4.00
WATER DISTRIBUTION PLAN DETAILS	C4.10
WATER DISTRIBUTION PLAN NOTES	C4.11
OVERALL SANITARY SEWER PLAN	C5.00
SANITARY SEWER LINE A PLAN & PROFILE	C5.01
SANITARY SEWER LINE B & C PLAN & PROFILE	C5.02
SANITARY SEWER LINE D PLAN & PROFILE	C5.03
SANITARY SEWER DETAILS	C5.10
SANITARY SEWER NOTES	C5.11
OVERALL UTILITY PLAN	C6.00
OVERALL GRADING PLAN	C7.00
STORM WATER POLLUTION PREVENTION PLAN	C8.00
STORM WATER POLLUTION PREVENTION PLAN DETAILS	C8.10

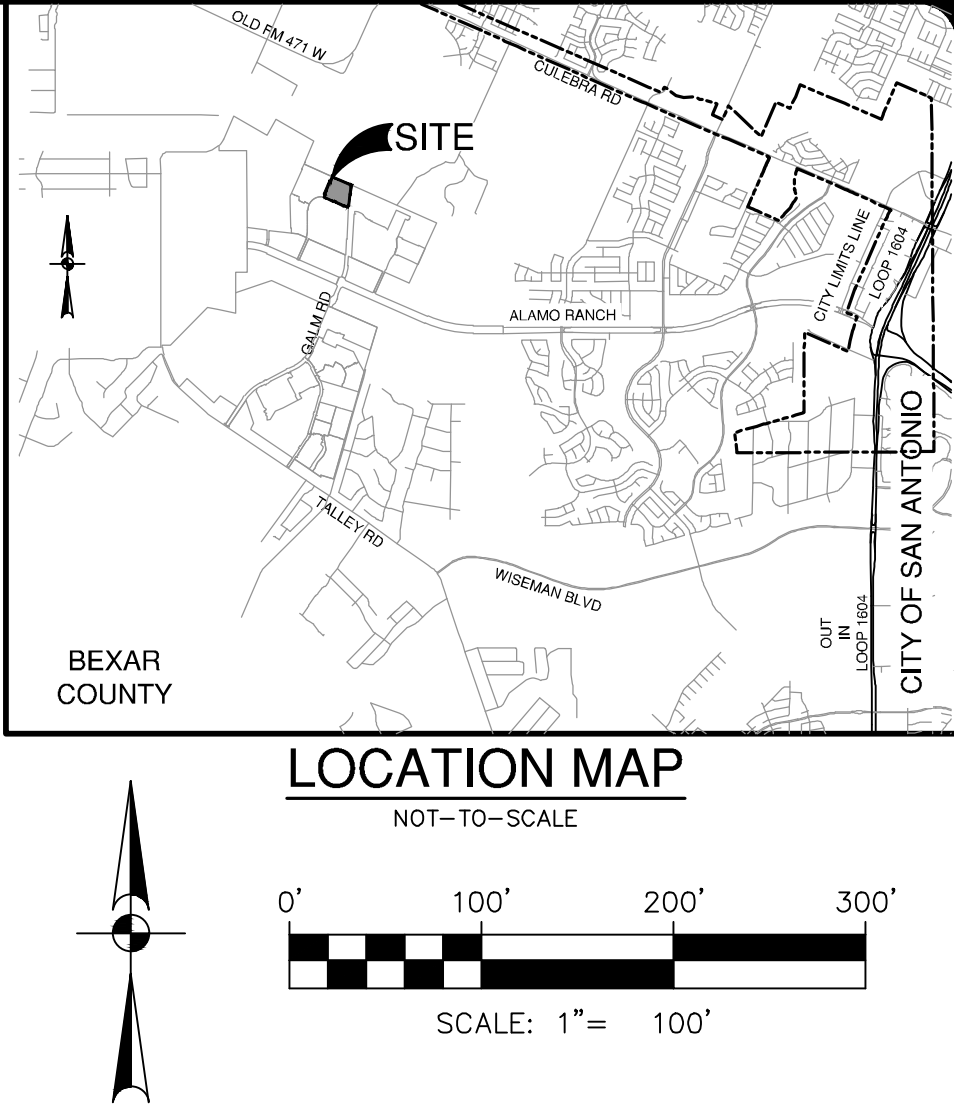
WATER (SAWS PRESSURE ZONE 8)

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.	
ADDRESS: 5419 N LOOP 1604 E	
CITY: SAN ANTONIO	STATE: TX ZIP: 78247
PHONE# PHONE #	FAX#
SAWS BLOCK MAP# 070602 TOTAL EDU'S 88 TOTAL ACREAGE 14.34	
TOTAL LINEAR FOOTAGE OF PIPE: 8" 12' - 101.50	
TOTAL LINEAR FOOTAGE OF PIPE: 8" 2.431 LF PLAT NO. 22-11800608	
NUMBER OF LOTS 88	SAWS JOB NO. 22-1216

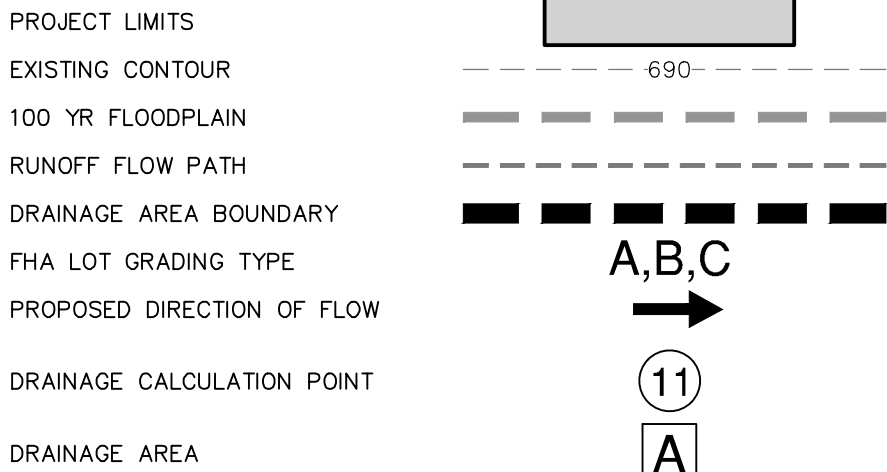
SEWER

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.	
ADDRESS: 5419 N LOOP 1604 E	
CITY: SAN ANTONIO	STATE: TX ZIP: 78247
PHONE# PHONE #	FAX#
SAWS BLOCK MAP# 070602 TOTAL EDU'S 88 TOTAL ACREAGE 14.34	
TOTAL LINEAR FOOTAGE OF PIPE: 8" 2.431 LF PLAT NO. 22-11800608	
NUMBER OF LOTS 88	SAWS JOB NO. 22-1213

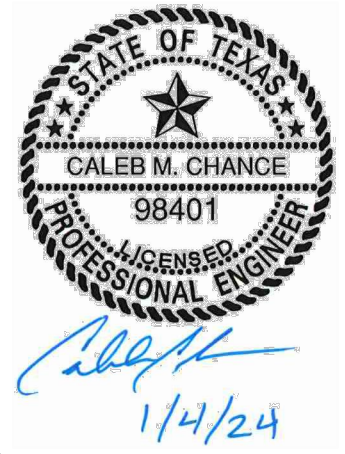
RIVERSTONE UNIT G8 - PROPOSED CONDITIONS DRAINAGE SUMMARY TABLE																						
					Overland Flow			Shallow Concentrated			Channel Flow (6 fps)			Total					Total Q ₂₅		Curb Inlet	
Point	Structure	Area	Total Flow Length (ft)	Total Area (ac)	Character of Ground	Slope %	L (ft)	Tc (min)	Slope %	L (ft)	Surface	Tc (min)	L (ft)	Tc (min)	Tc (min)	C	I	Q (cfs)	Frequency (yrs)	Total Q ₂₅ (Q+Intercept/Bypass)	Intercept	Bypass
1	Drain A	A	656	4.48	Avg. Grass	2.00%	100	12	2.00%	96	Unpaved	0.7	460	1.3	14	0.72	5.47	17.6	5			
																	7.60	24.5	25			
																	9.48	30.6	100			
2	Drain B	B	595	5.30	Avg. Grass	2.00%	100	12	2.00%	98	Unpaved	0.7	397	1.1	13	0.72	5.66	21.6	5			
																	7.89	30.1	25			
																	9.85	37.6	100			
3	Drain C	C	325	0.97	Avg. Grass	2.00%	66	11	2.00%	0	Unpaved	0.0	259	0.7	11	0.72	6.08	4.2	5			
																	8.50	5.9	25			
																	10.64	7.4	100			



MASTER DRAINAGE LEGEND



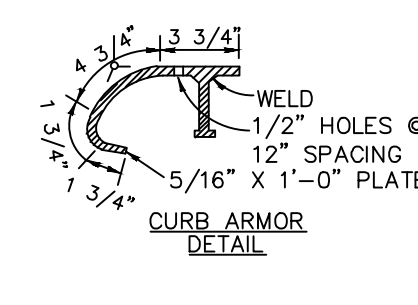
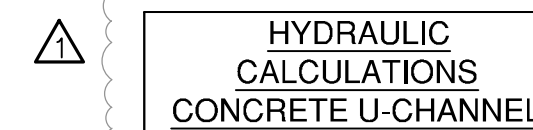
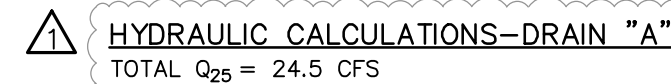
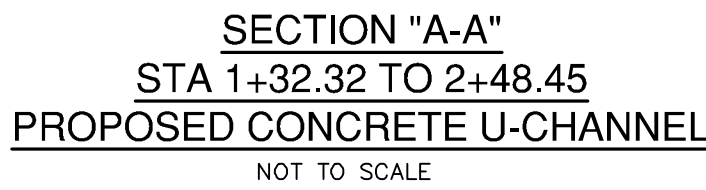
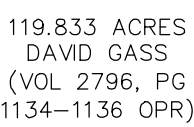
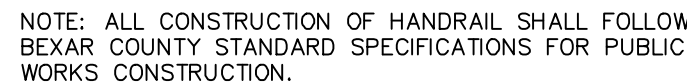
NO.	REVISION	DATE
1	FHA LOT GRADING, DRAINAGE AREA, AND CALCS REVISED	1/04/2024



PAPE-DAWSON ENGINEERS
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2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028600

RIVERSTONE UNIT - G8
SAN ANTONIO, TEXAS
MASTER DRAINAGE PLAN

PLAT NO.	22-11800608
JOB NO.	11680-58
DATE	MARCH 2023
DESIGNER	CB
CHECKED	BL DRAWN CB
SHEET	C1.00



- DRAINAGE & GRADING NOTES:

1. A BEAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEAR 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 AND EXPOSE ALL UTILITIES AND DRAINAGE STRUCTURES BY SIZE, GRADE AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
3. 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.
5. CONTRACTOR SHALL GROUT ALL CURB INLETS AND JUNCTION BOXES TO PROVIDE FOR POSITIVE DRAINAGE.
6. EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING 85% OF THE CHANNEL SURFACE. EARTHEN CHANNELS HAVE ESTABLISHED VEGETATION BY CITY OF SAN ANTONIO. CONTRACTOR 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 EMPLOYEE
OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT
IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL
INFORMATION AND THE ANTICIPATED INSTALLATION SITE WITHIN THE
PROJECT AREA FOR CONFORMANCE WITH ALL APPLICABLE GEOTECHNICAL
EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR
PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS.
THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS
AND/OR PROCEDURES SHALL BE FOR ADEQUATE PROTECTION OF THE
SAFETY PROTECTION THAT COMPLY WITH THE MINIMUM, OSHA STANDARDS
FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR
CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY
CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN
ACCORDANCE WITH OSHA STANDARDS PERTAINING TO PREVENTING
ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

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 THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 800-DIG-TESS MINIMUM OF 48 HOURS PRIOR TO THE START OF ANY CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.



**PAPE-DAWSON
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
20200 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
www.pape-dawson.com | www.pape-dawson.com

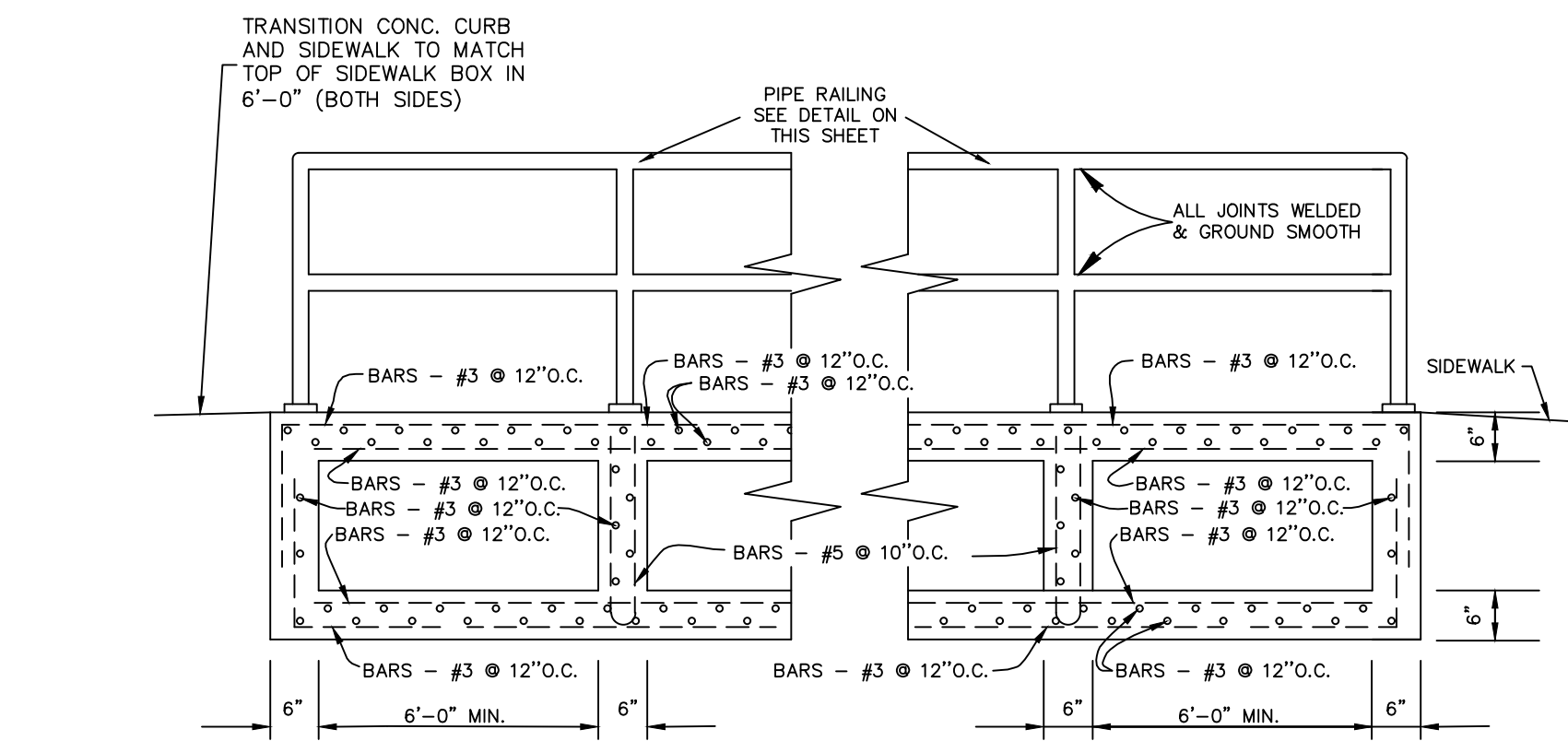
RIVERSTONE UNIT - G8
SAN ANTONIO, TEXAS

DRAIN A PLAN & PROFILE
STA 1+27.32 TO END

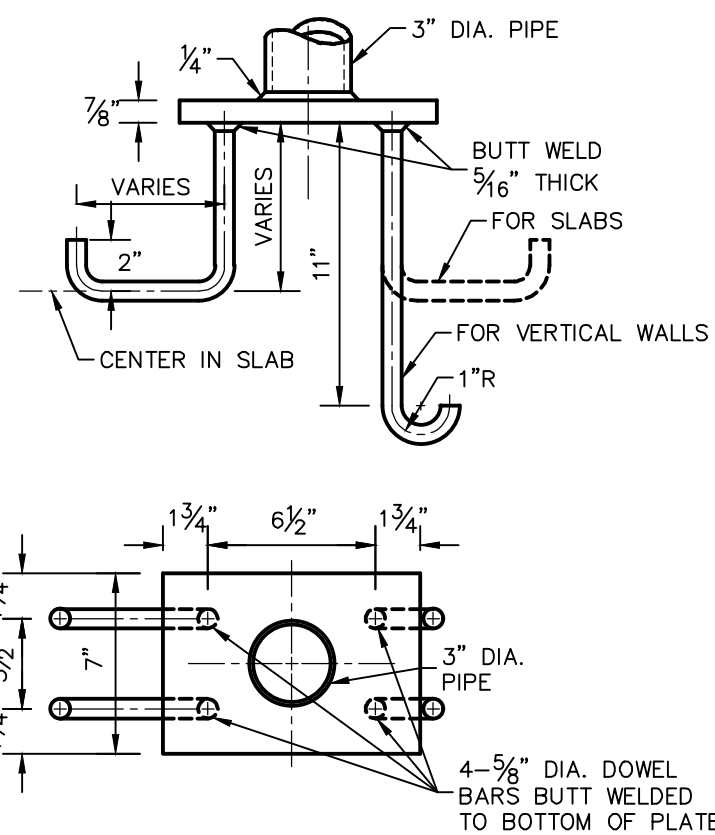
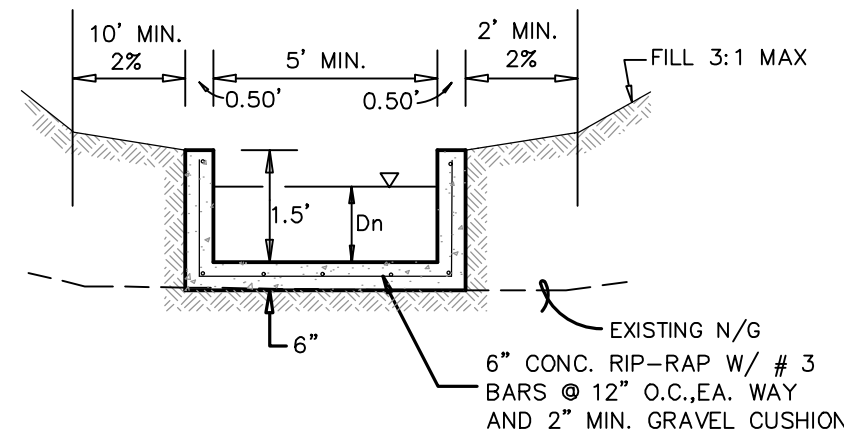
PLAT NO. 22-11800608
JOB NO. 11680-58
DATE MARCH 2023
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C1.01

Date: Jan 17, 2024, 11:59am User ID: aburcatis
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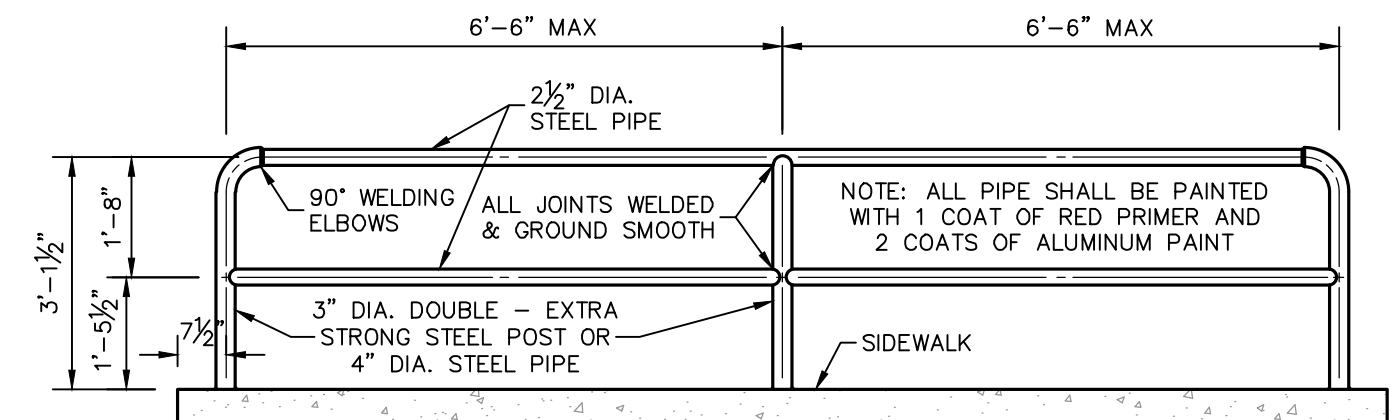


SECTION "A-A"
STA 1+32.16 TO 2+48.15
PROPOSED CONCRETE U-CHANNEL
NOT-TO-SCALE

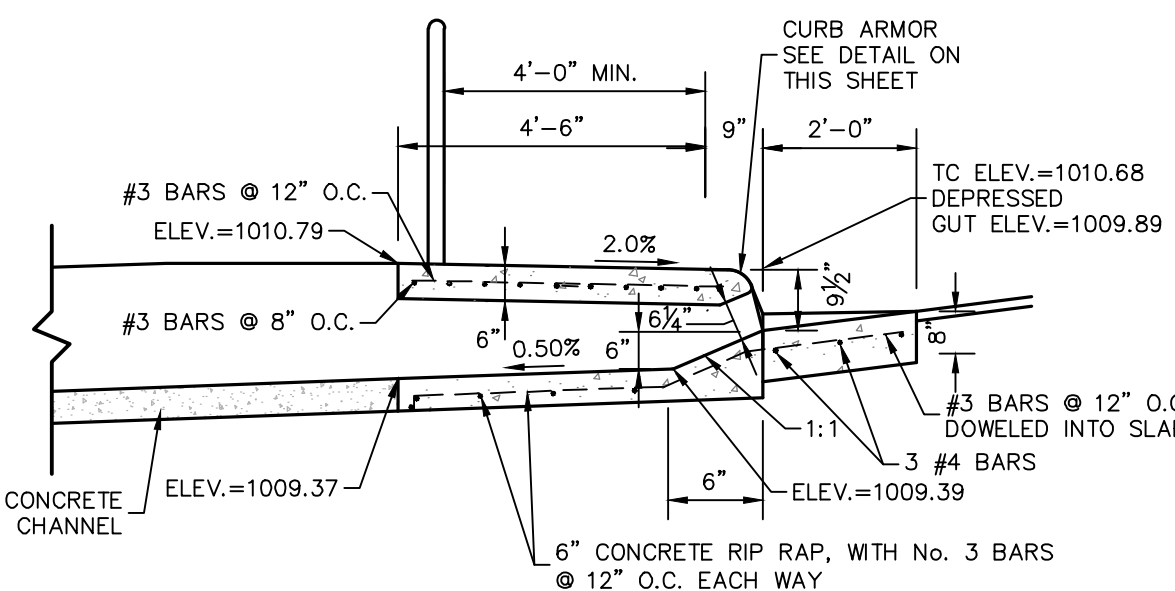


DETAIL OF 90°
WELDING ELBOW
NOT-TO-SCALE

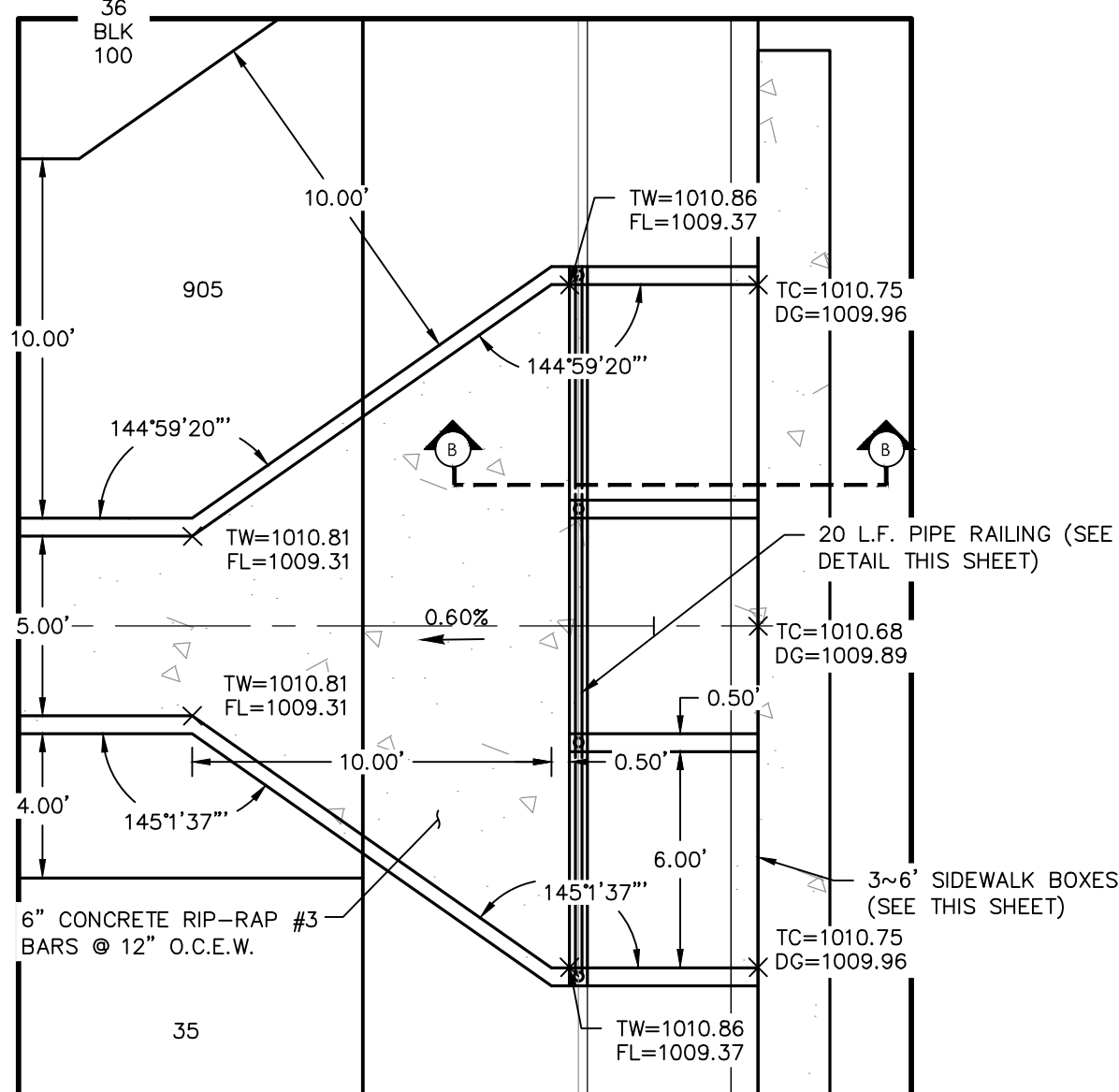
PIPE ANCHORAGE
DETAIL
NOT-TO-SCALE



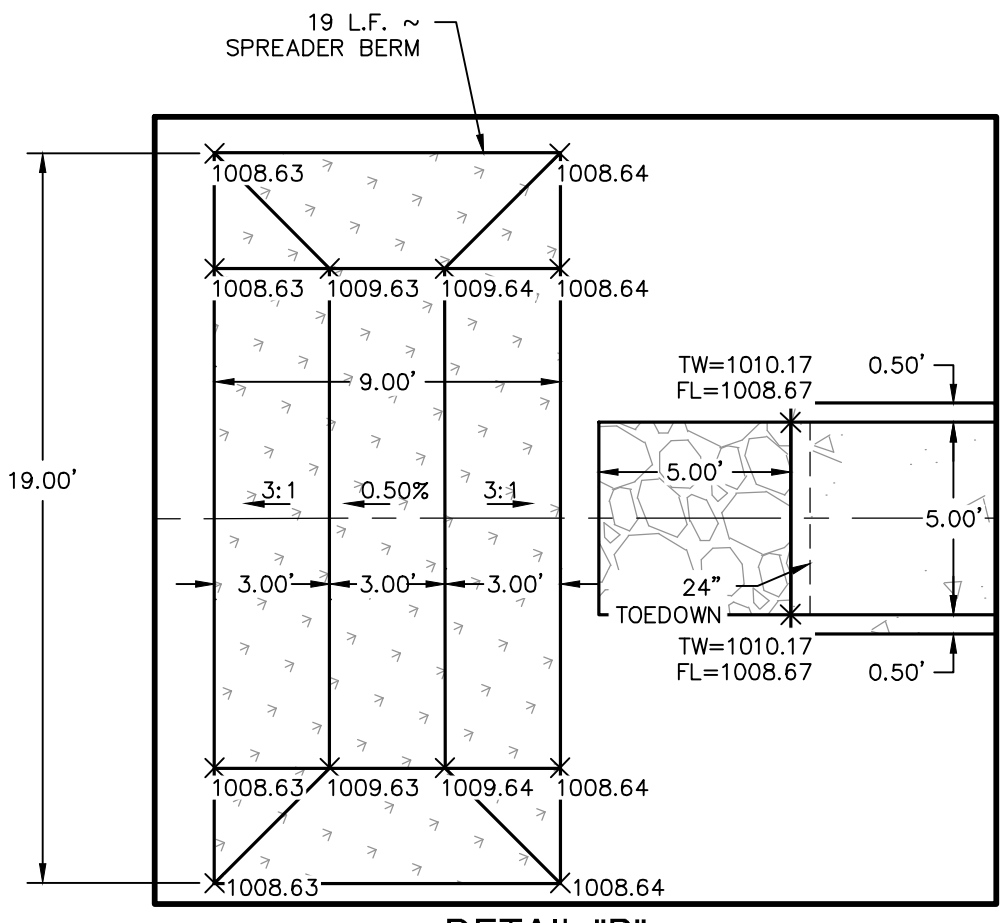
PIPE RAILING DETAIL
NOT-TO-SCALE



SIDWALK BOX DETAIL SECTION "B-B"
NOT-TO-SCALE

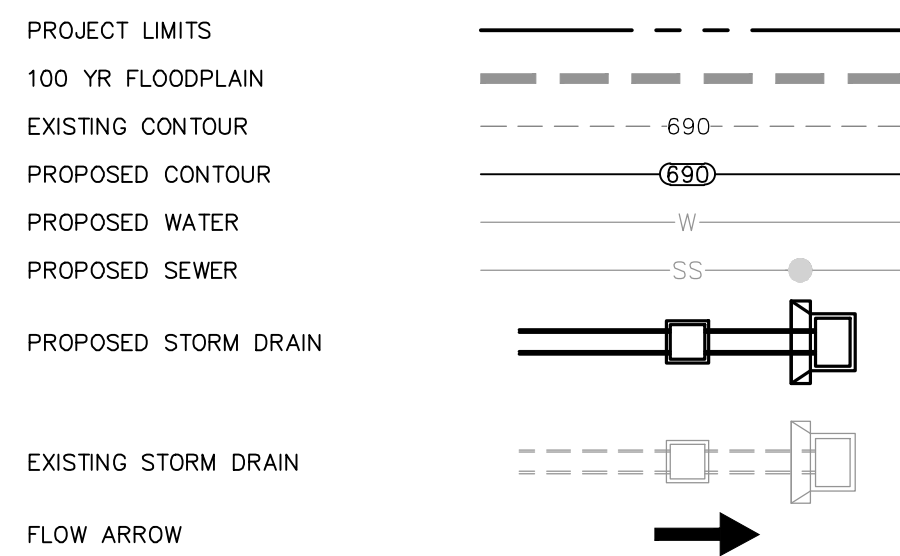


DETAIL "A"
SCALE: 1" = 5'



DETAIL "B"
SCALE: 1" = 5'

DRAINAGE LEGEND



HYDRAULIC CALCULATIONS- DRAIN "B"

TOTAL $Q_{25} = 30.1$ CFS

$$Q_{25} = CA\sqrt{2gh} \text{ (ORIFICE FLOW EQN.)}$$
$$A = L(0.50), h = 0.54, g = 32.2, c = 0.70$$
$$L = \frac{30.1 \text{ CFS}}{(0.70)(0.50)/2(32.2)(0.54)}$$
$$L = 14.58 \text{ FT} \quad \text{USE } 3 \sim 6 \text{ FT SIDEWALK BOXES}$$

CHECK WITH WEIR FORMULA

$$h = \left(\frac{Q}{(CL)} \right)^{2/3} = \left(\frac{30.1}{(3.087)(18)} \right)^{2/3} = 0.66 \text{ FT.}$$

$h = 0.66 < 0.79 \quad \text{OK}$

HYDRAULIC CALCULATIONS CONCRETE U-CHANNEL

STA. 1+32.16 TO 2+48.15

$$Q_{25} = 30.1 \text{ cfs}$$
$$B_w = 5'$$
$$n = 0.015$$
$$S = 0.60\%$$
$$D = 1.50'$$
$$D_n = 0.99'$$
$$V = 6.10 \text{ fps}$$

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

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 THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

**PAPE-DAWSON
ENGINEERS**

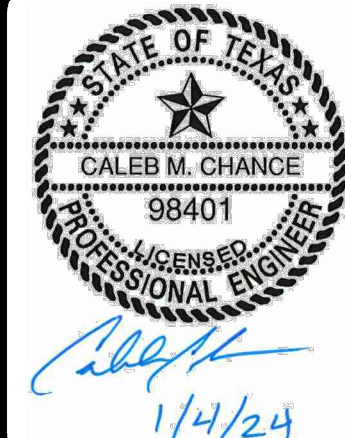
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #10088600

RIVERSTONE UNIT - G8
SAN ANTONIO, TEXAS

DRAIN B PLAN & PROFILE
STA. 1+27.16 TO END

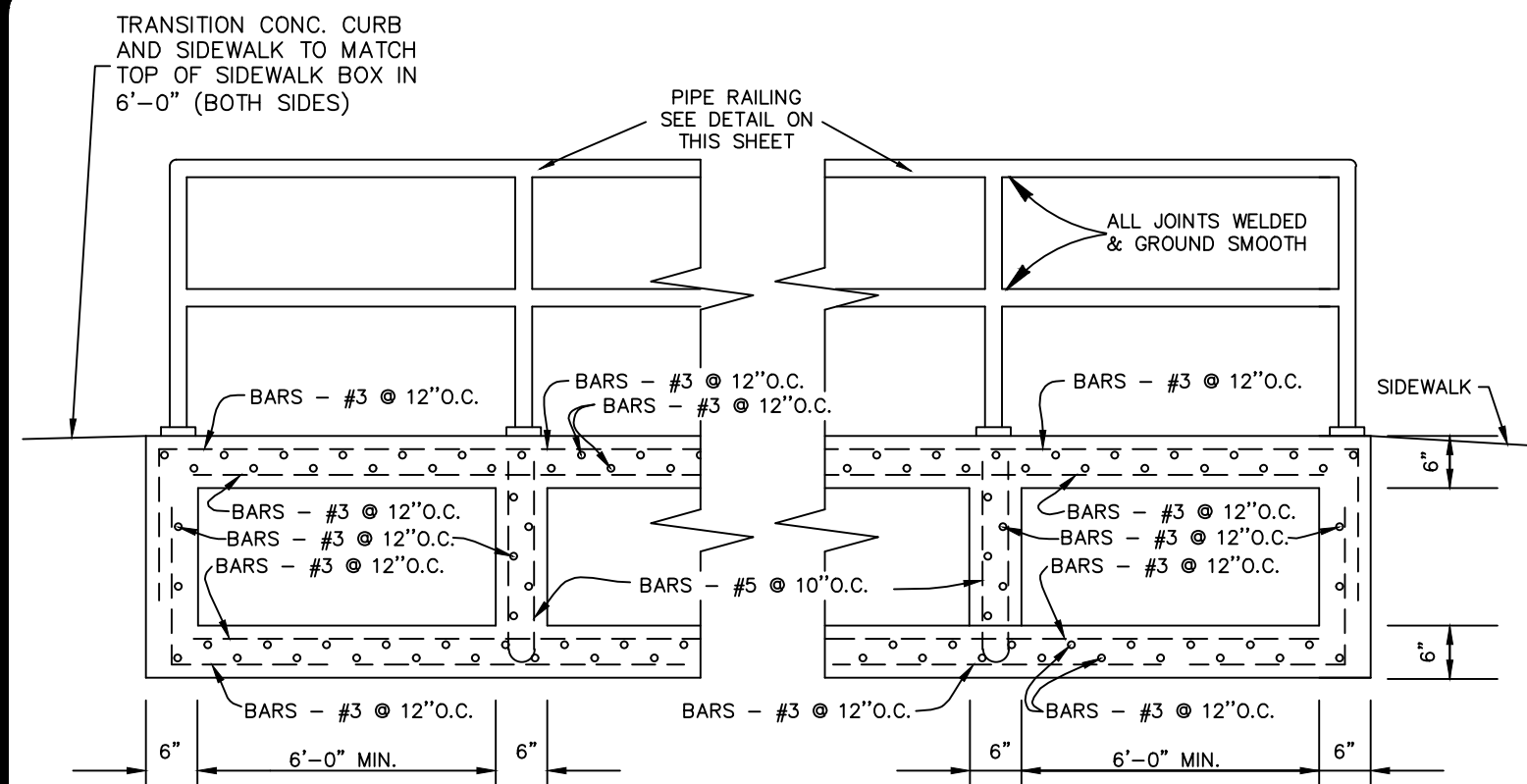
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JOB NO. 11680-58
DATE MARCH 2023
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C1.02

NO.	REVISION	DATE
1	1/04/2024	



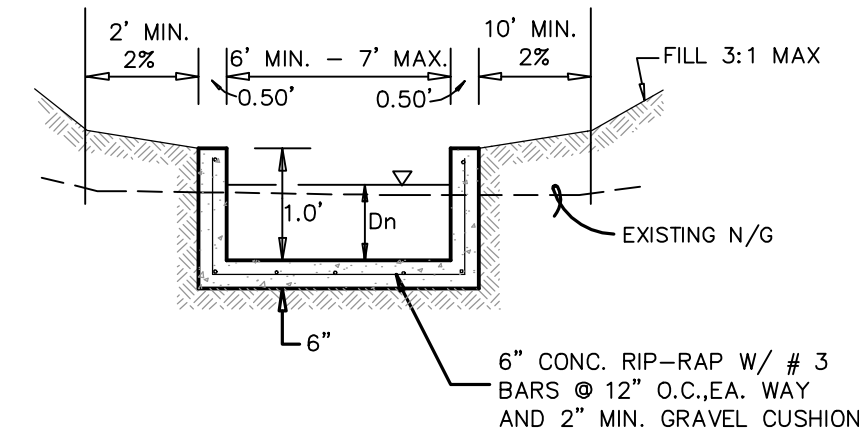
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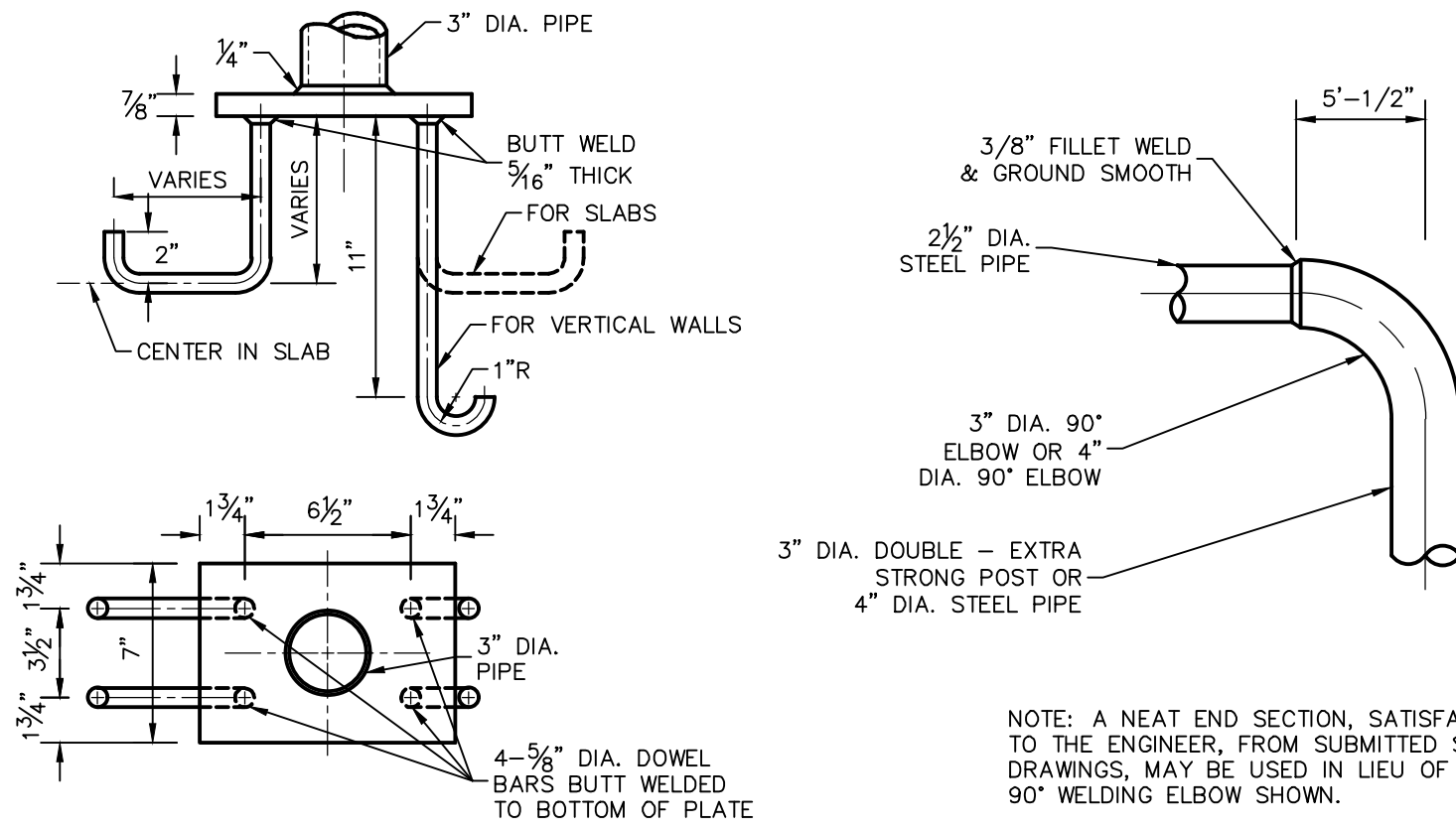


NOTE: ALL CONSTRUCTION OF HANDRAIL SHALL FOLLOW
BEXAR COUNTY STANDARD SPECIFICATIONS FOR PUBLIC
WORKS CONSTRUCTION.

SIDEWALK BOX
NOT-TO-SCALE

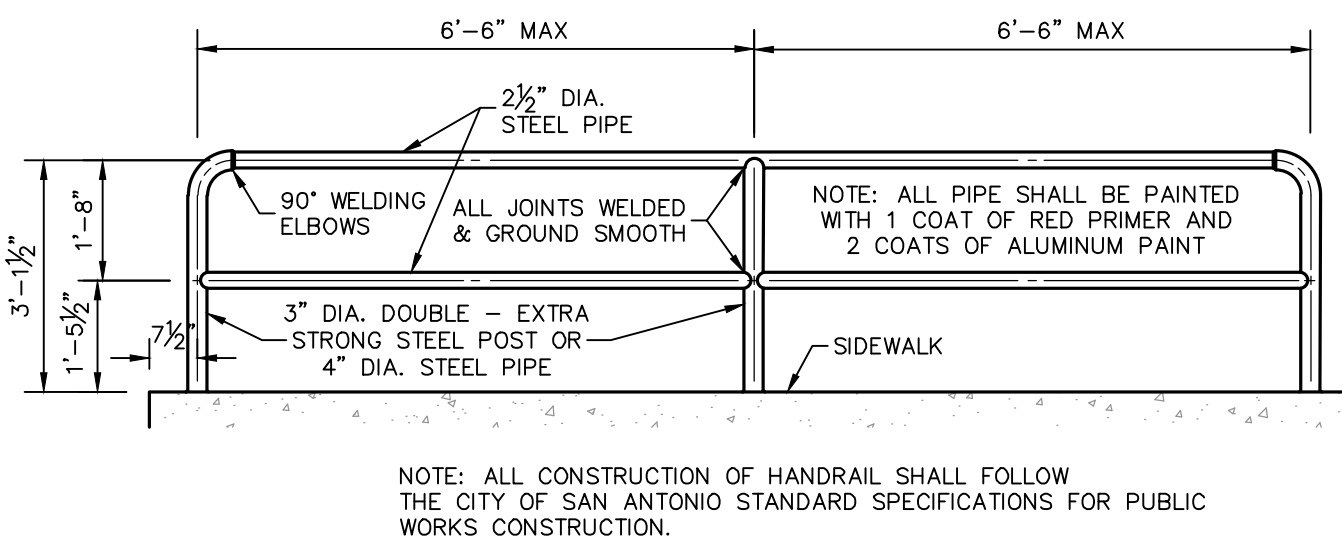


SECTION "A-A"
STA 1+40.02 TO 1+51.29
PROPOSED CONCRETE U-CHANNEL
NOT TO SCALE

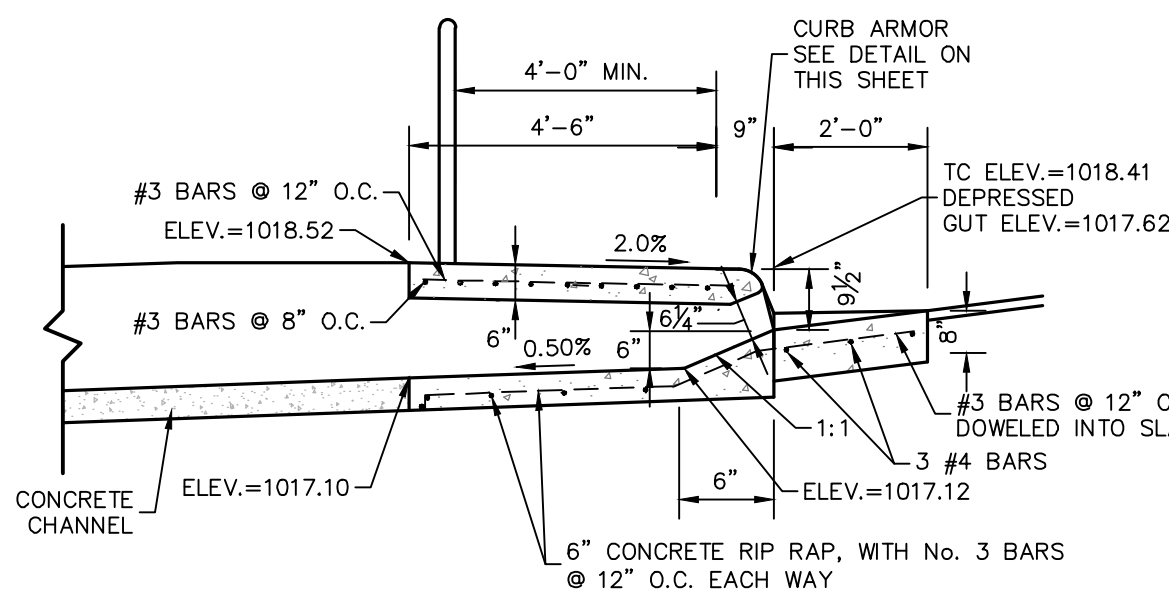


**PIPE ANCHORAGE
DETAIL**
NOT-TO-SCALE

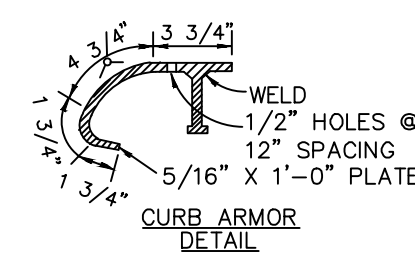
**DETAIL OF 90°
WELDING ELBOW**
NOT-TO-SCALE



PIPE RAILING DETAIL
NOT-TO-SCALE

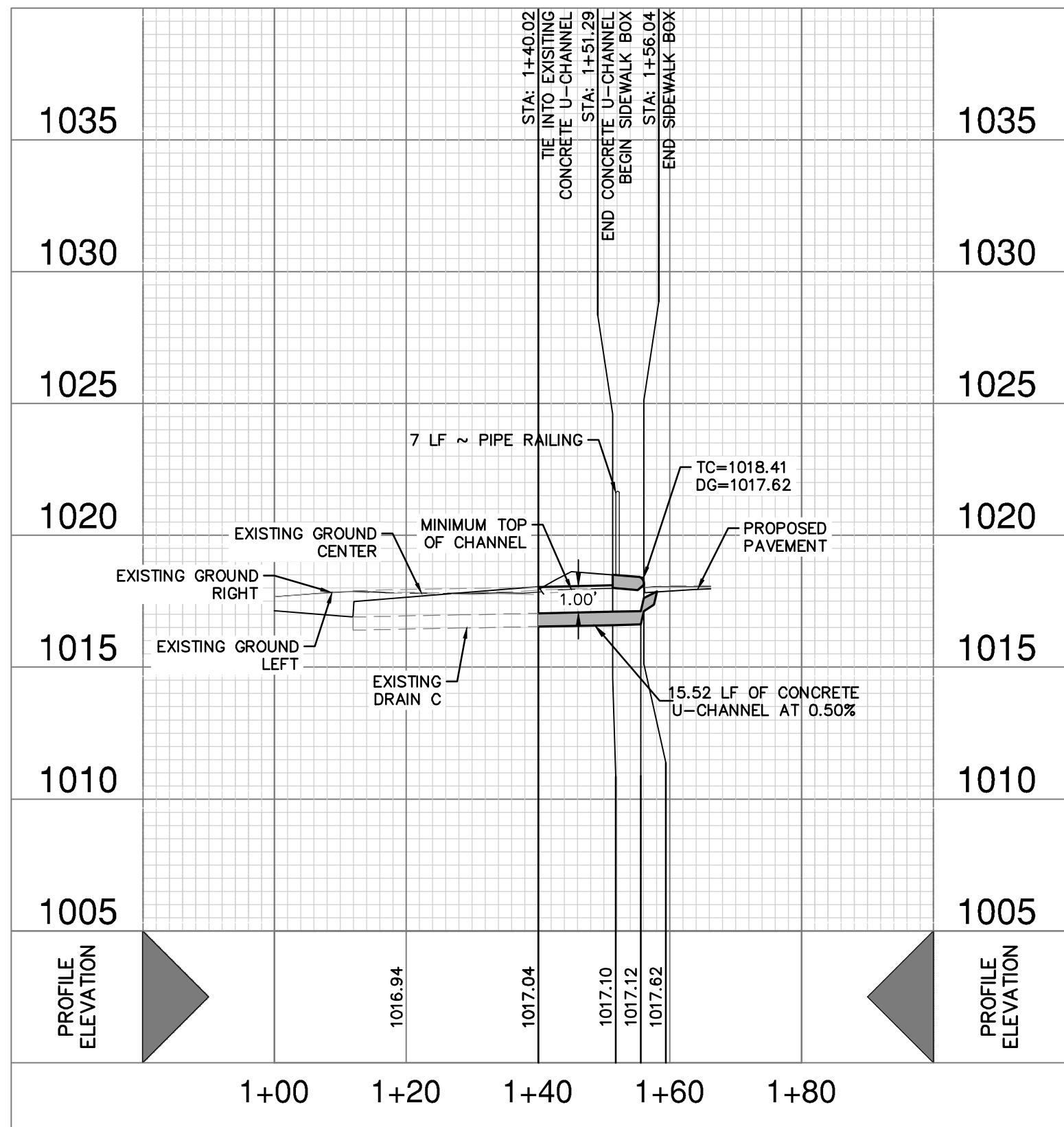


SIDEWALK BOX DETAIL SECTION "B-B"
NOT-TO-SCALE

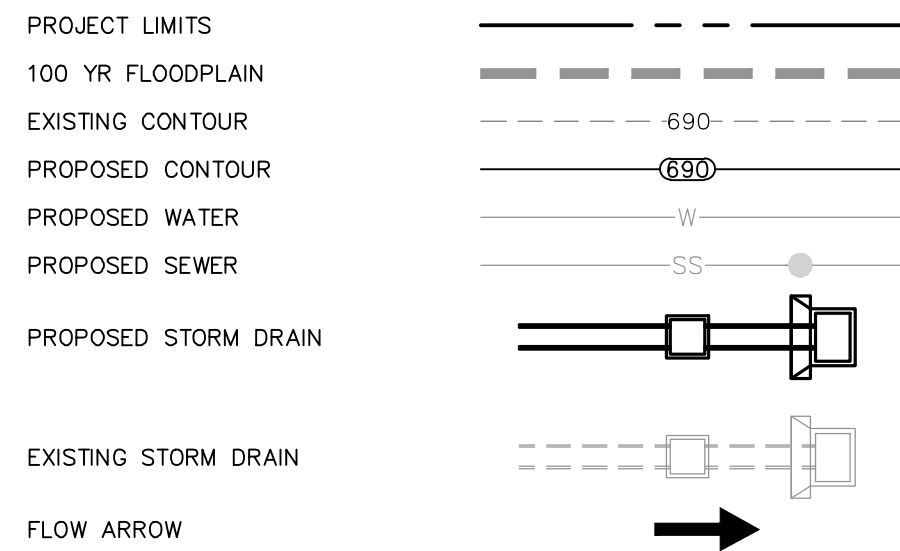


DRAIN "C"
STA. 1+40.02 TO END

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



DRAINAGE LEGEND



HYDRAULIC CALCULATIONS-DRAIN "C"

TOTAL Q₂₅ = 5.9 CFS

$$Q_{25} = CA\sqrt{2gh} \quad (\text{ORIFICE FLOW EQN.})$$

$$A = L(0.50), h = 0.54, g = 32.2, c = 0.70$$

$$L = \frac{5.9 \text{ CFS}}{(0.70)(0.50)/2(32.2)(0.54)}$$

$$L = 2.86 \text{ FT} \quad \text{USE } 1 \sim 6 \text{ FT SIDEWALK BOXES}$$

CHECK WITH WEIR FORMULA

$$h = \left(\frac{Q}{(CL)} \right)^{2/3} = \left(\frac{5.9}{(3.087)(6)} \right)^{2/3} = 0.47 \text{ FT.}$$

$$h = 0.47 < 0.79 \quad \text{OK}$$

HYDRAULIC CALCULATIONS CONCRETE U-CHANNEL

STA. 1+40.02 TO 1+51.29

$$Q_{25} = 5.9 \text{ cfs}$$

$$B_w = 6'$$

$$n = 0.015$$

$$S = 0.50\%$$

$$D = 1.00'$$

$$D_n = 0.32'$$

$$V = 3.07 \text{ fps}$$

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

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 THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

**PAPE-DAWSON
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10088600

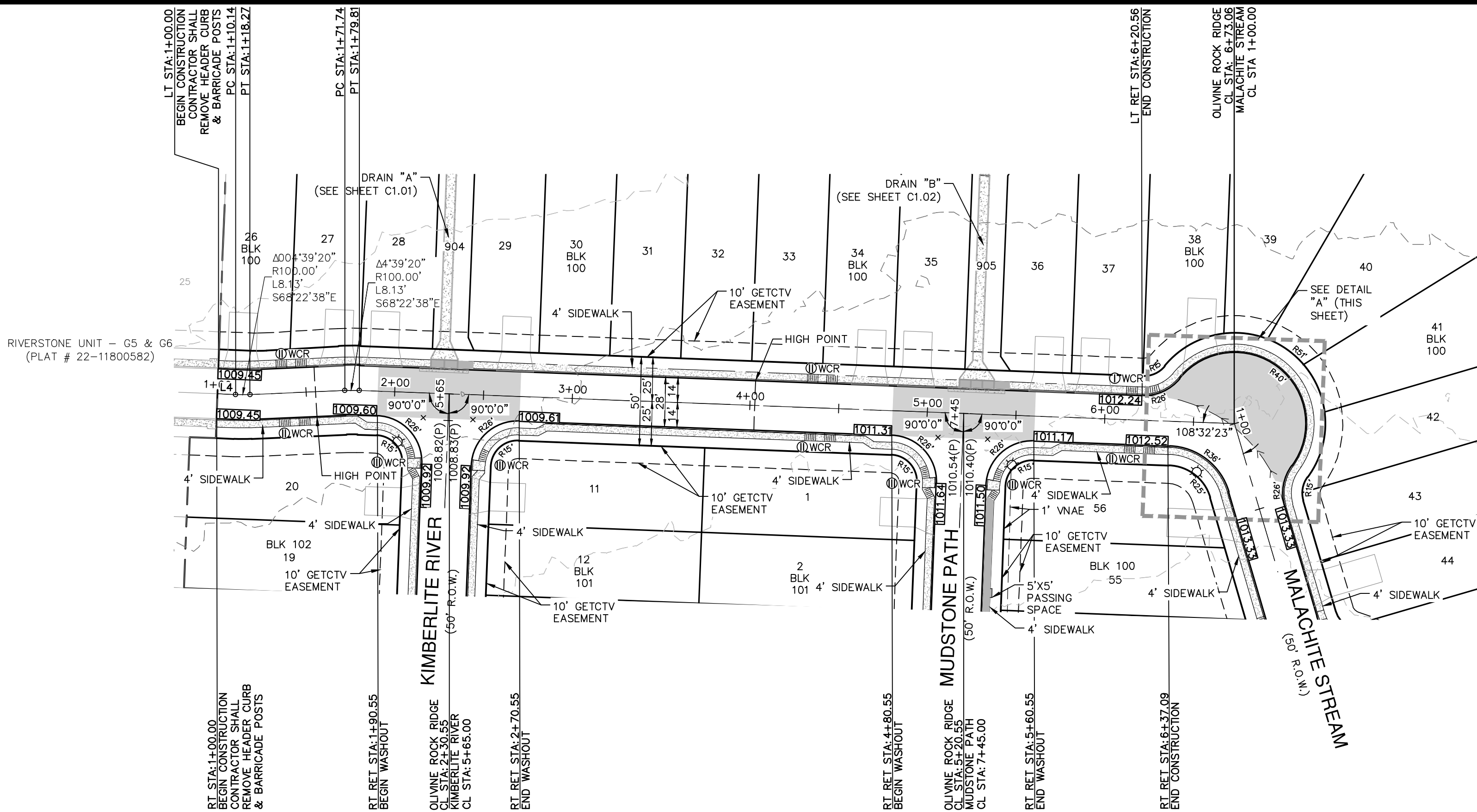
RIVERSTONE UNIT - G8
SAN ANTONIO, TEXAS

DRAIN C PLAN & PROFILE
STA. 1+40.02 TO END

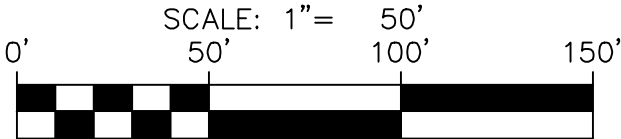
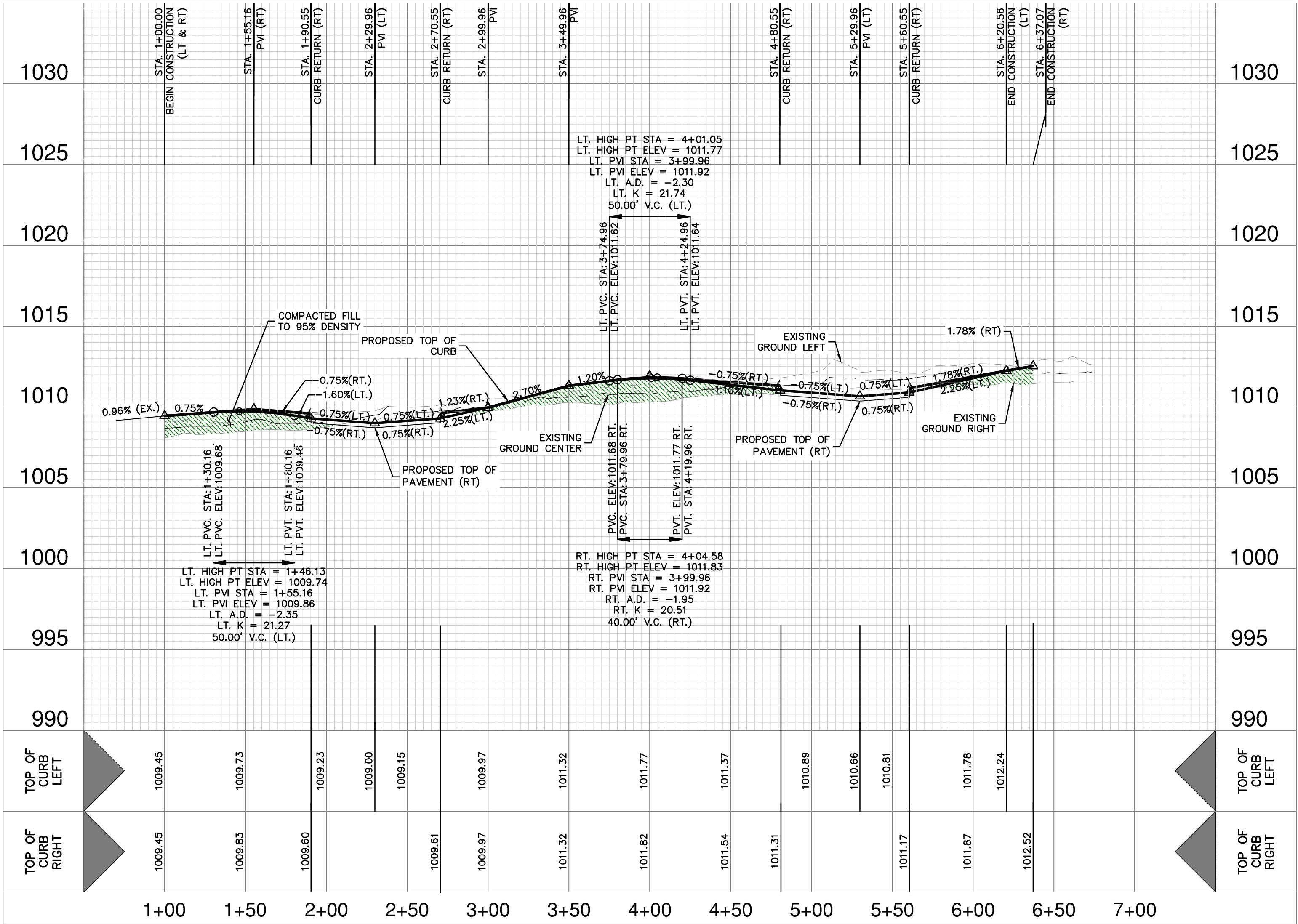
PLAT NO. 22-11800608
JOB NO. 11680-58
DATE JANUARY 2023
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C1.03

Date: Mar 16, 2023, 11:59am User: jh_chenrds
File: P:\16180\58\Design\Chen\ST1168058 - OLIVINE ROCK RIDGE.dwg

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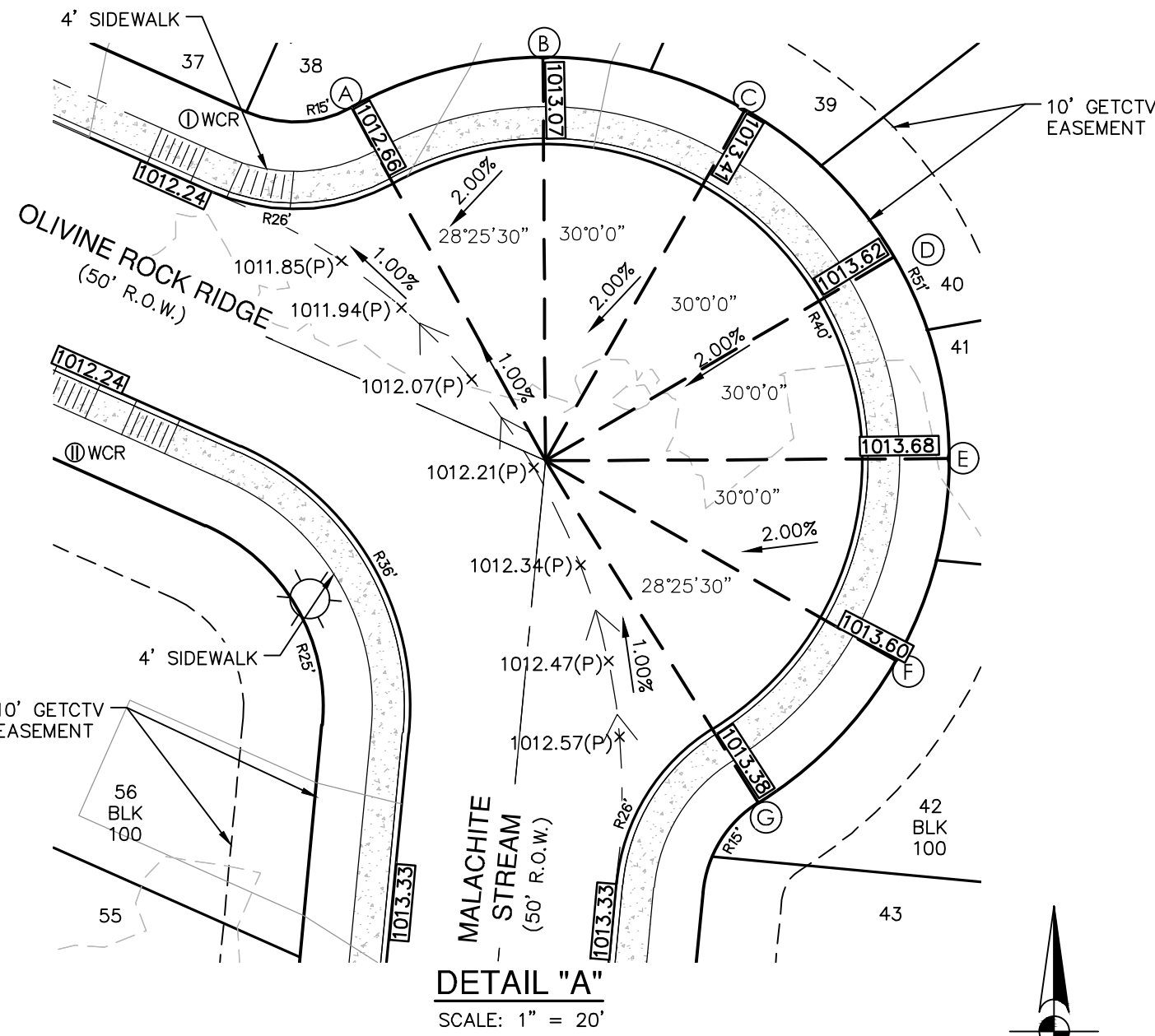


OLIVINE ROCK RIDGE
STA. 1+00.00 TO END



STREET LEGEND

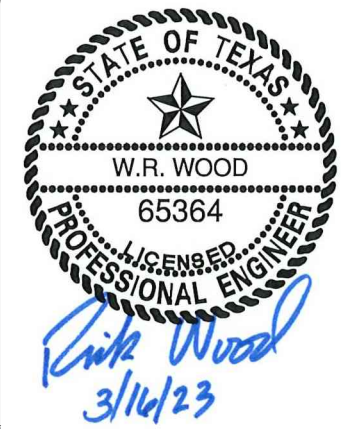
- PROJECT LIMITS
MAINTAIN GUTTER
EXISTING CONTOUR
WHEELCHAIR RAMP
CENTERLINE
RADIUS POINT
POINT OF CURVATURE
POINT OF TANGENCY
RETURN
DRAINAGE FLOW ARROW
TOP OF CURB SPOT ELEVATION
PAVEMENT ELEVATION
WASHOUT CROWN SECTION
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)
SIDEWALK (DEVELOPER'S RESPONSIBILITY)
DRIVEWAY
5'-5' ADA PASSING SPACE (DEVELOPER'S RESPONSIBILITY)



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DATE	



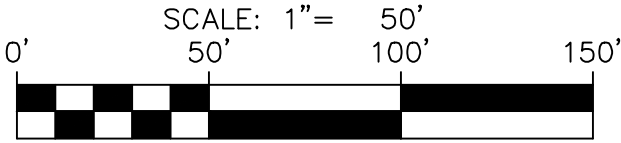
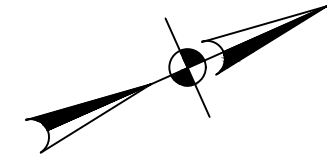
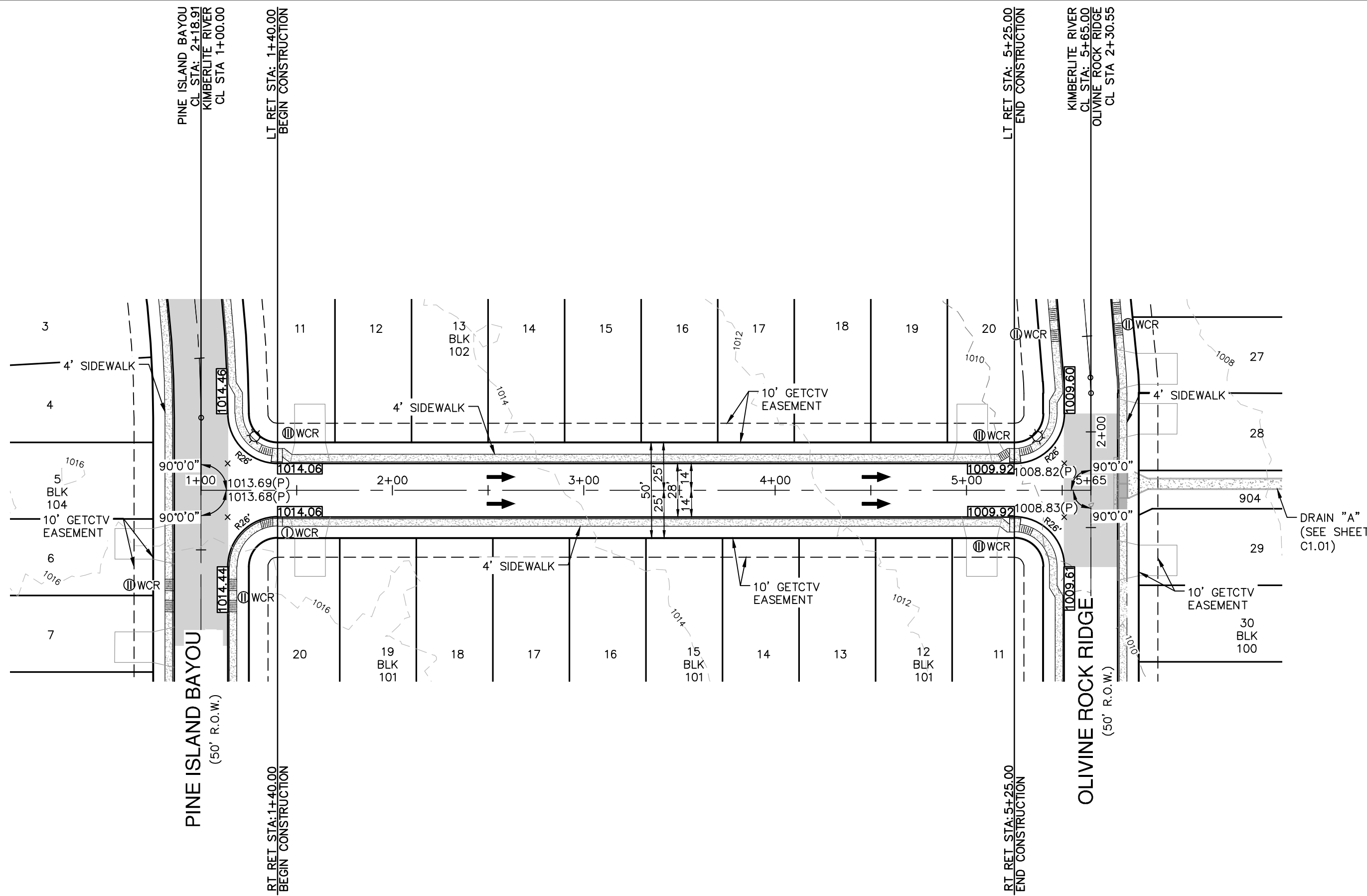
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2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008800

RIVERSTONE UNIT - G8
SAN ANTONIO, TEXAS
OLIVINE ROCK RIDGE PLAN & PROFILE
(STA 1+00.00 TO END)

PLAT NO.	22-11800608
JOB NO.	11680-58
DATE	JANUARY 2023
DRAWN	CB
CHECKED	BL
DRAWN	CB
SHEET	C2.01

Date: Mar 16, 2023, 12:00pm User: jh - abnsmkts
File: P:\16180\SSA\Design\Chn\ST1168055 - Kimberlite River.dwg

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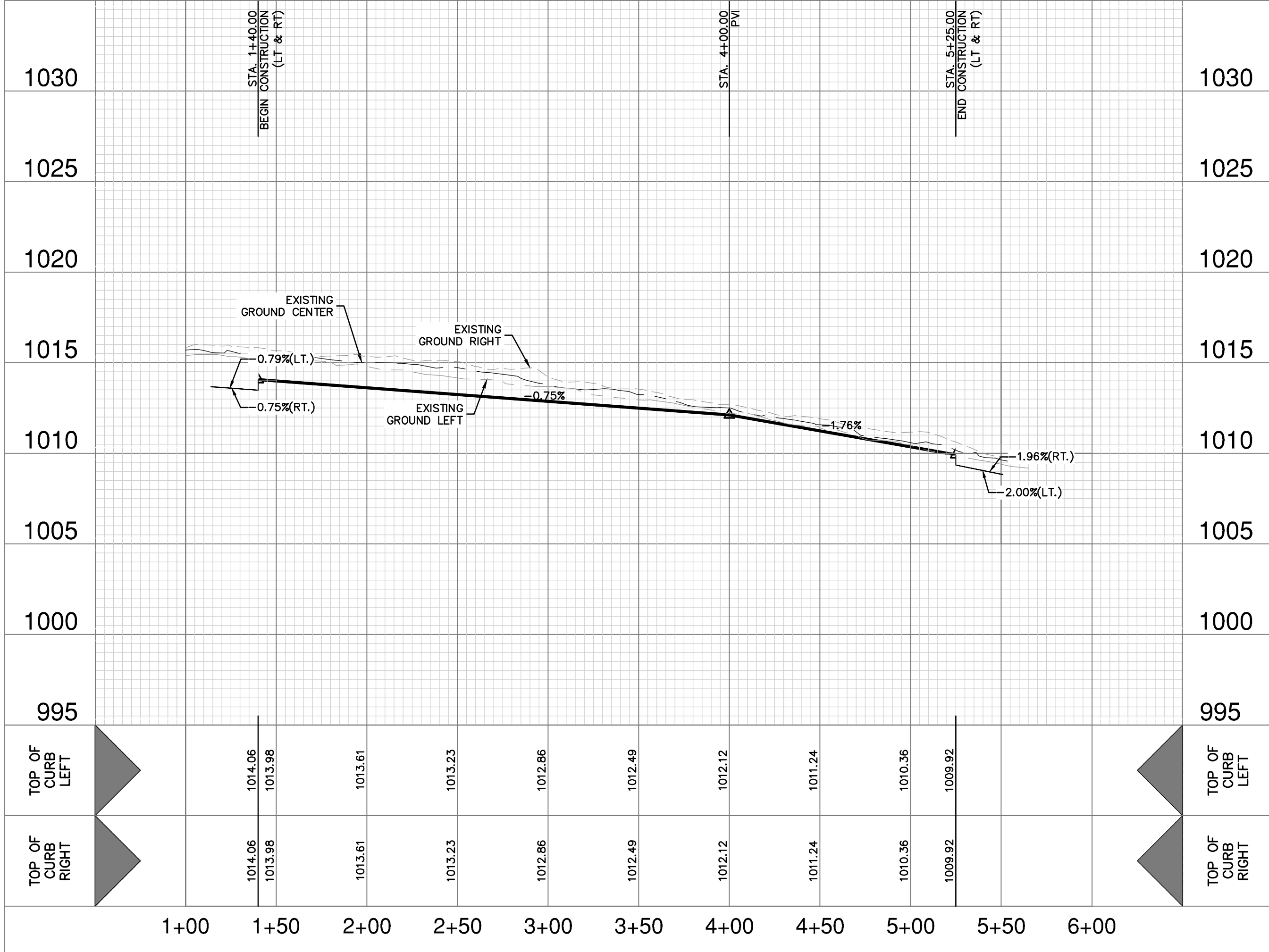


STREET LEGEND

PROJECT LIMITS	---
MAINTAIN GUTTER	→
EXISTING CONTOUR	970' ---
WHEELCHAIR RAMP	⊕
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) x
WASHOUT CROWN SECTION	857.00(P) x
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	857.00(P) x
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	857.00(P) x
DRIVEWAY	---

KIMBERLITE RIVER
STA. 1+40.00 TO END

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



STREET NOTES:

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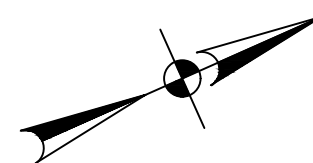
DATE	
NO.	REVISION



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RIVERSTONE UNIT - G8
SAN ANTONIO, TEXAS
KIMBERLITE RIVER PLAN & PROFILE
STA. 1+40.00 TO END

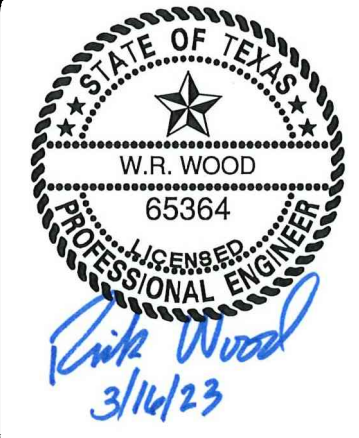
PLAT NO.	22-11800608
JOB NO.	11680-58
DATE	JANUARY 2023
DRAWN	CB
CHECKED	BL
DATE	C2.02



- | | |
|--|--|
| PROJECT LIMITS | |
| MAINTAIN GUTTER | |
| EXISTING CONTOUR | |
| WHEELCHAIR RAMP | |
| CENTERLINE | |
| RADIUS POINT | |
| POINT OF CURVATURE | |
| POINT OF TANGENCY | |
| RETURN | |
| DRAINAGE FLOW ARROW | |
| TOP OF CURB SPOT ELEVATION | |
| PAVEMENT ELEVATION | |
| WASHOUT CROWN SECTION | |
| SIDEWALK (HOMEOWNER'S RESPONSIBILITY) | |
| SIDEWALK (DEVELOPER'S RESPONSIBILITY) | |
| DRIVEWAY | |
| 5'x5' ADA PASSING SPACE (DEVELOPER'S RESPONSIBILITY) | |



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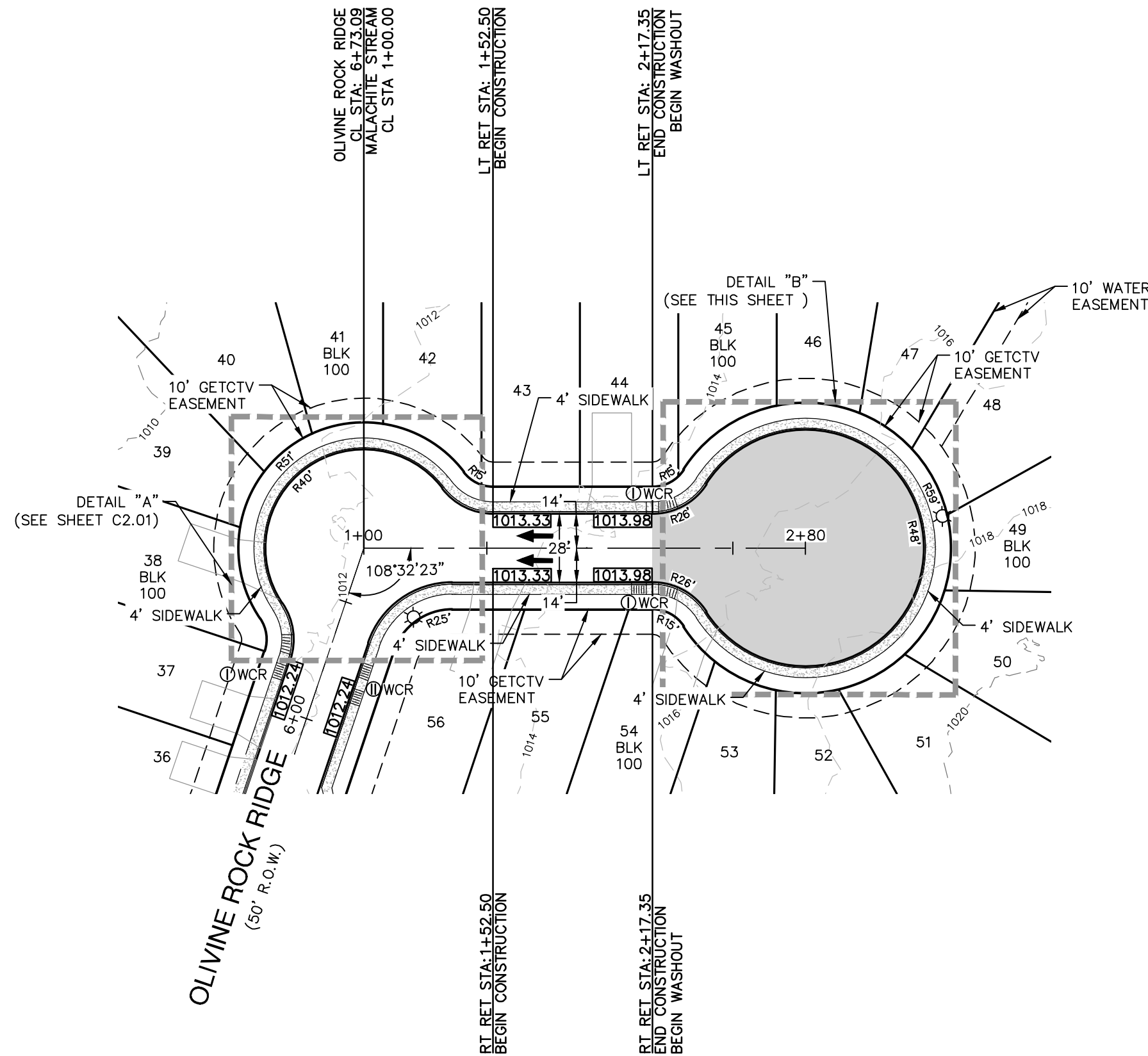
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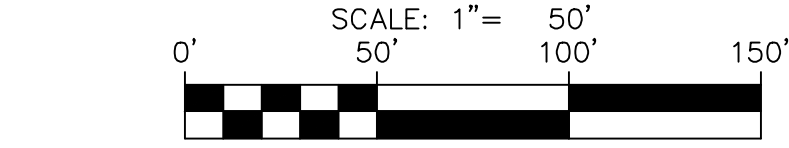
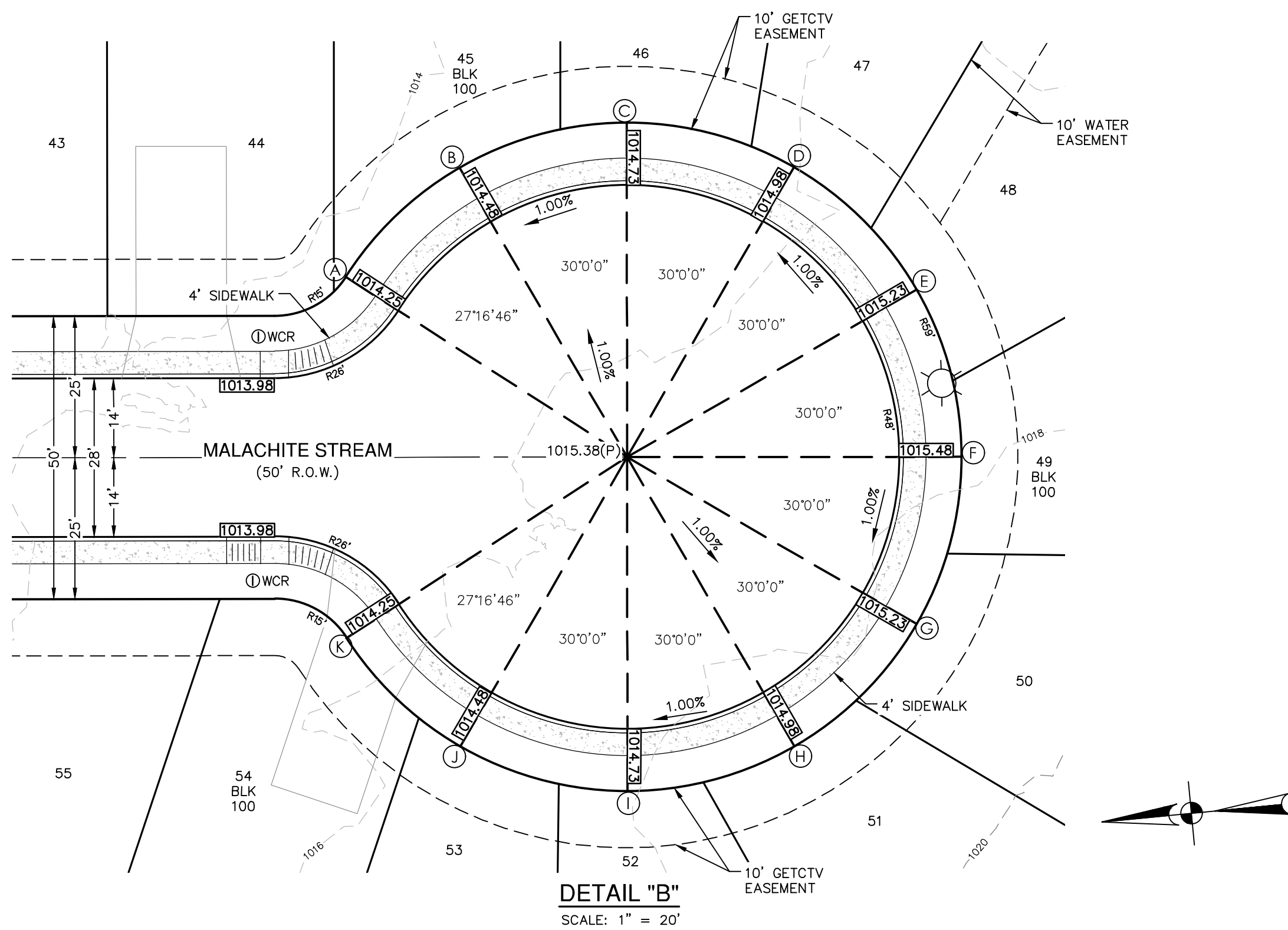
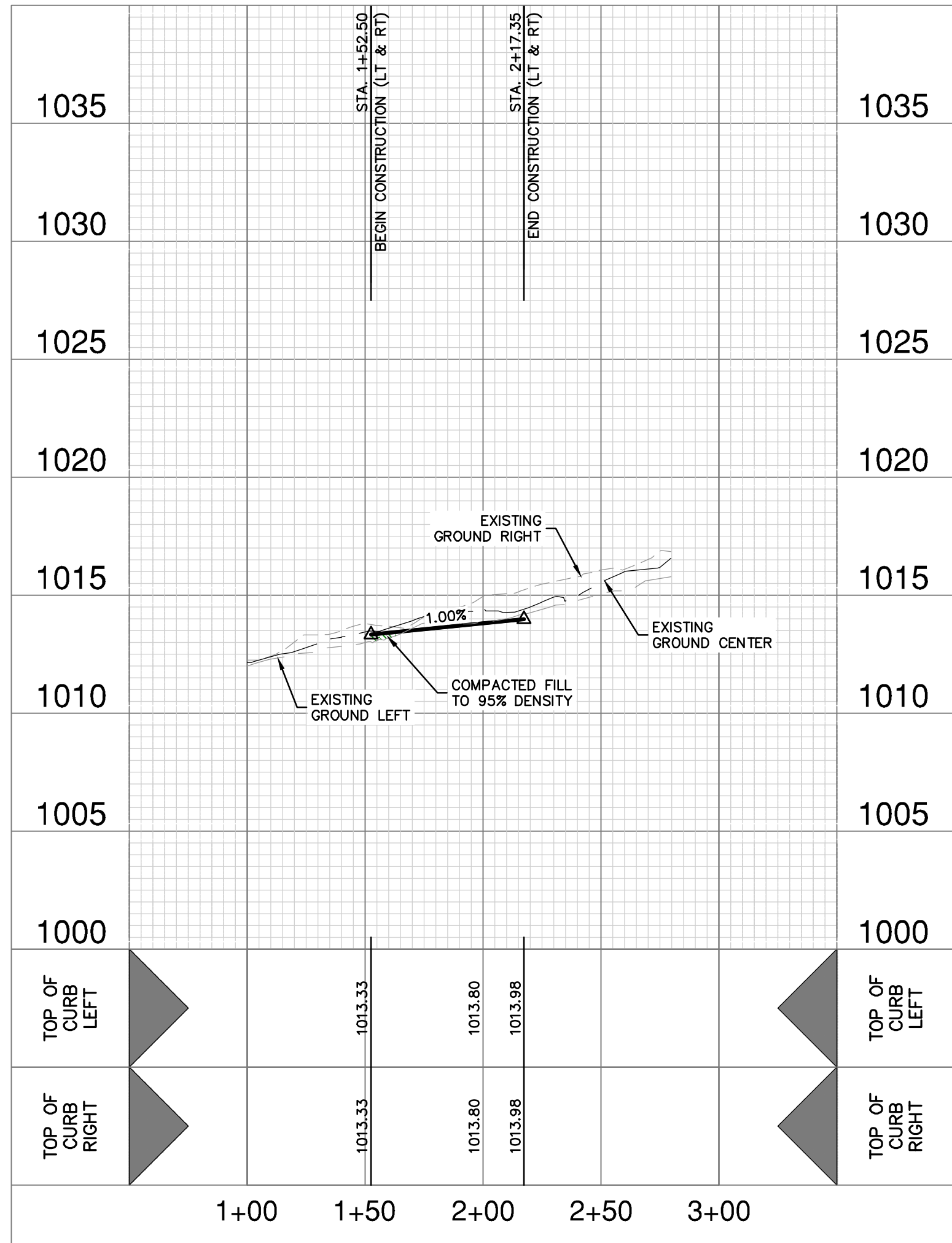
RIVERSTONE UNIT - G8
SAN ANTONIO, TEXAS

MUDSTONE PATH PLAN & PROFILE
STA. 1+55.00 TO END

PLAT NO. 22-11800608
 JOB NO. 11680-58
 DATE JANUARY 2023
 DESIGNER CB
 CHECKED BL DRAWN CB
 SHEET C2.03



MALACHITE STREAM
STA. 1+52.50 TO END
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



STREET LEGEND

PROJECT LIMITS	→
MAINTAIN GUTTER	→
EXISTING CONTOUR	---
WHEELCHAIR RAMP	⊕
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) x
WASHOUT CROWN SECTION	857.00(P) x
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	857.00(P) x
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DRIVEWAY	---

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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1028800

RIVERSTONE UNIT - G8
SAN ANTONIO, TEXAS
MALACHITE STREAM PLAN & PROFILE
STA. 1+52.50 TO END

PLAT NO. 22-11800608
JOB NO. 11680-58
DATE JANUARY 2023
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C2.04

PAVEMENT SECTION DETAIL							
STREET NAME	STATION	TYPE "D" HMAC	CRUSHED LIMESTONE BASE	SUBGRADE	GEOGRID (TENSAR TRIAX TXS)	CBR	STRUCTURAL NUMBER
MUDSTONE PATH	1+55.00 TO 5+10.00	3"	19"	*	NO	4	3.98
MUDSTONE PATH	5+10.00 TO END	2"	10"	*	NO	4	2.28
PINE ISLAND BAYOU	1+00.00 TO END	2"	10"	*	NO	4	2.28
OLIVINE ROCK RIDGE	1+00.00 TO END	2"	10"	*	NO	4	2.28
KIMBERLITE RIVER	1+40.00 TO END	2"	10"	*	NO	4	2.28
MALACHITE STREAM	1+52.50 TO END	2"	10"	*	NO	4	2.28

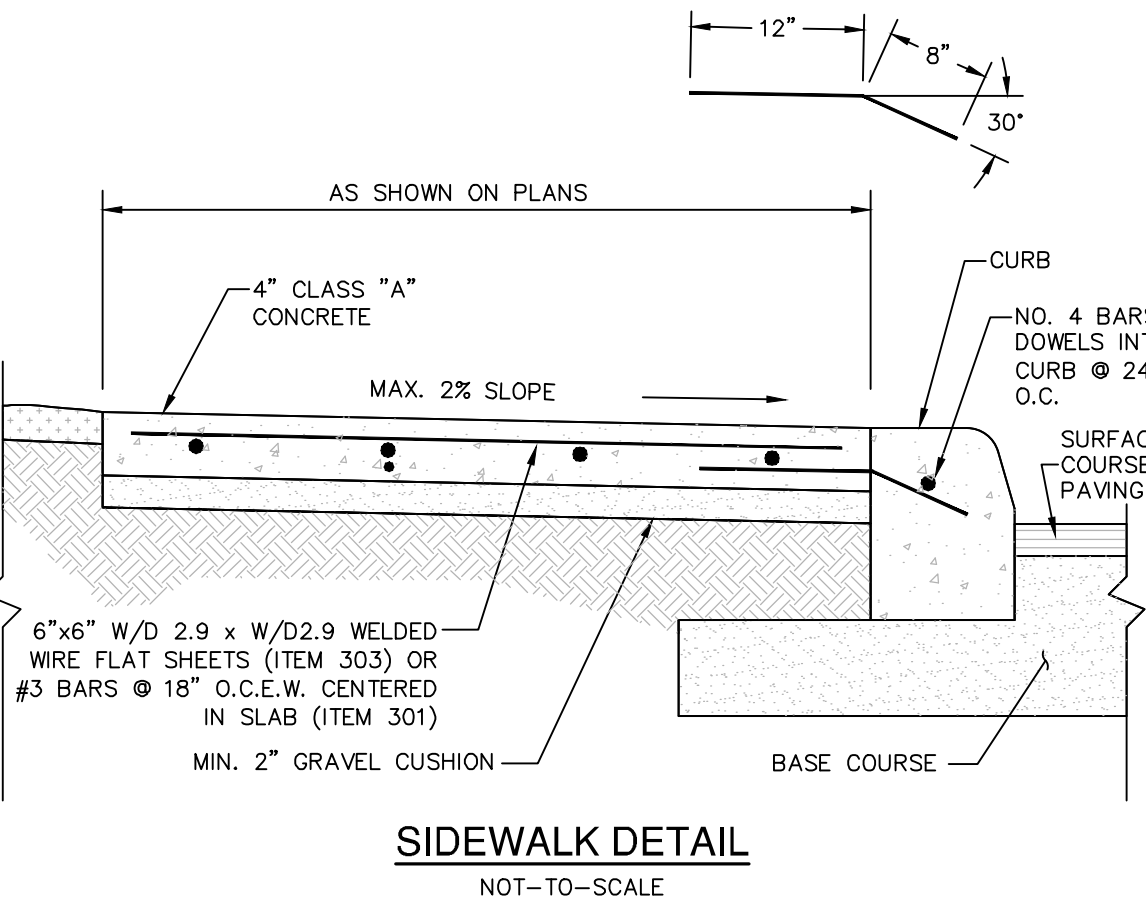
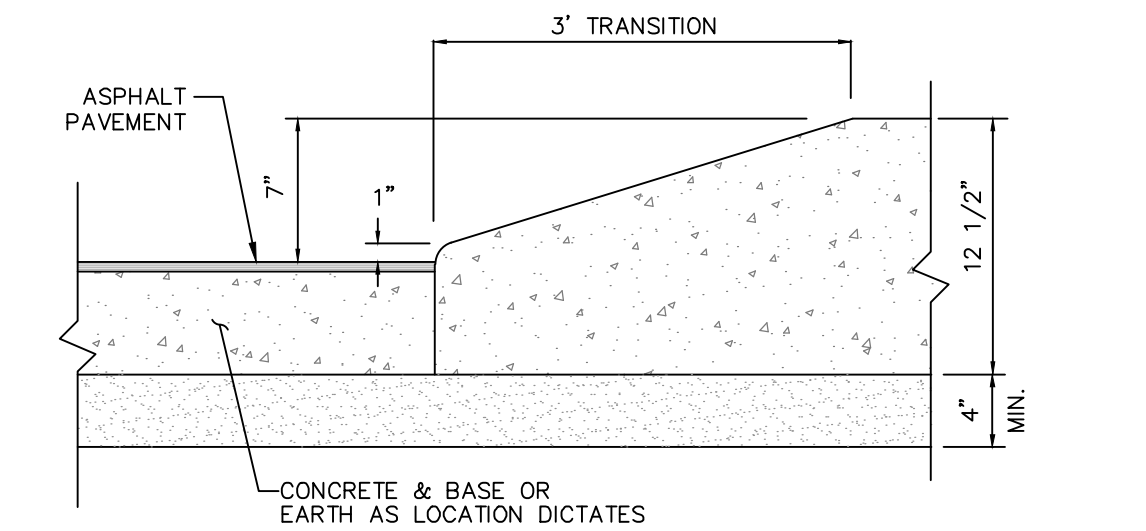
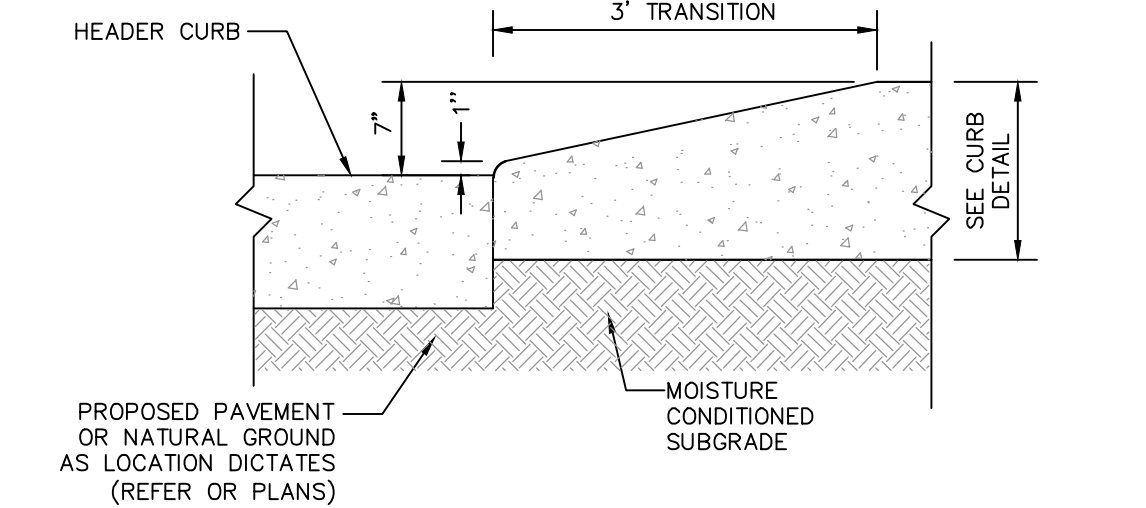
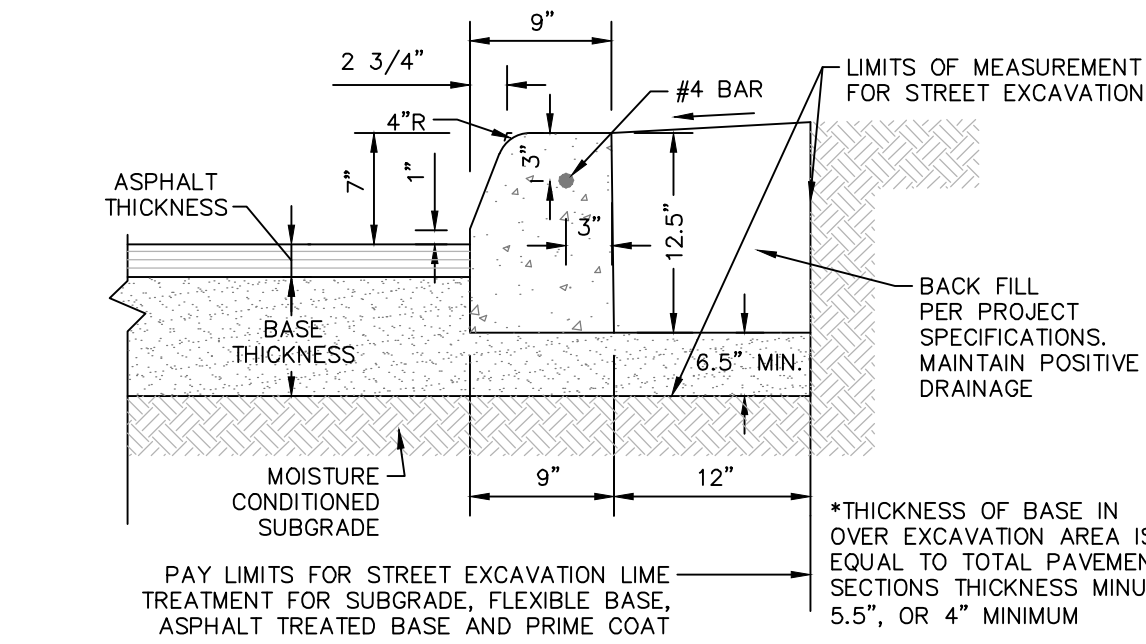
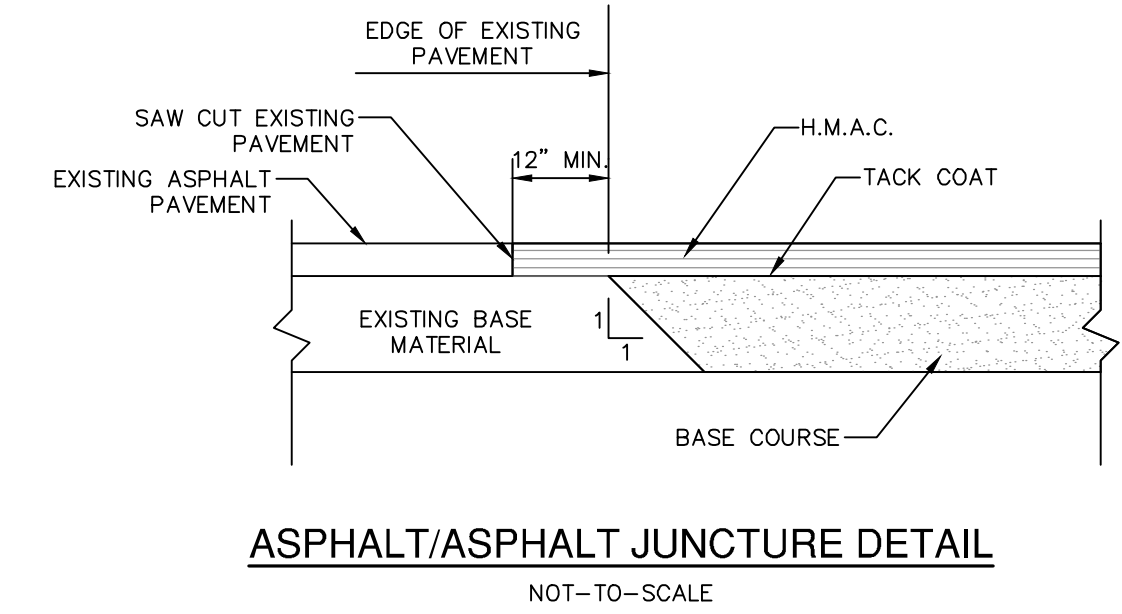
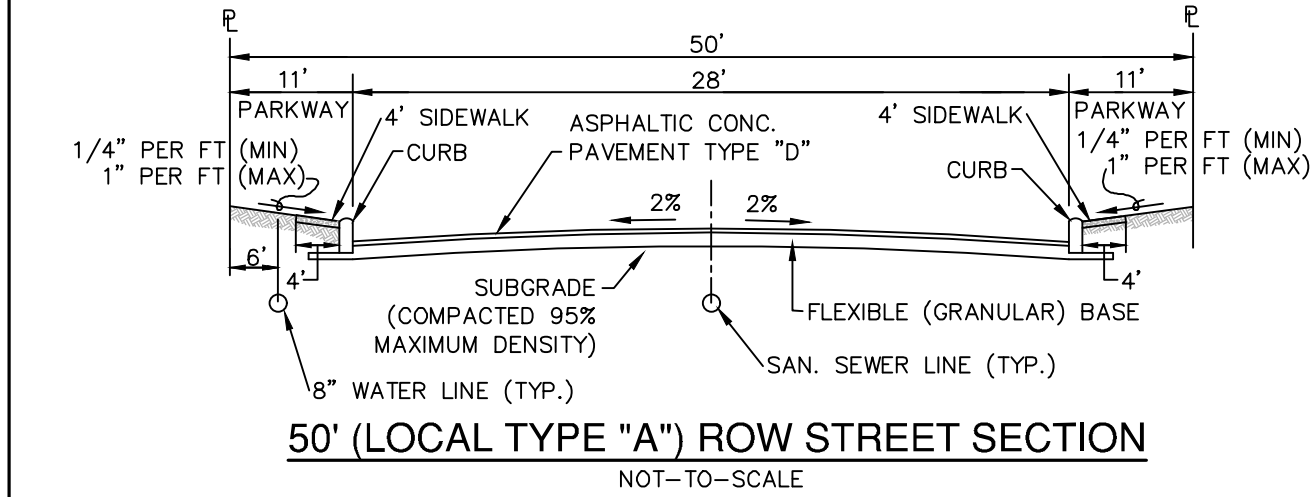
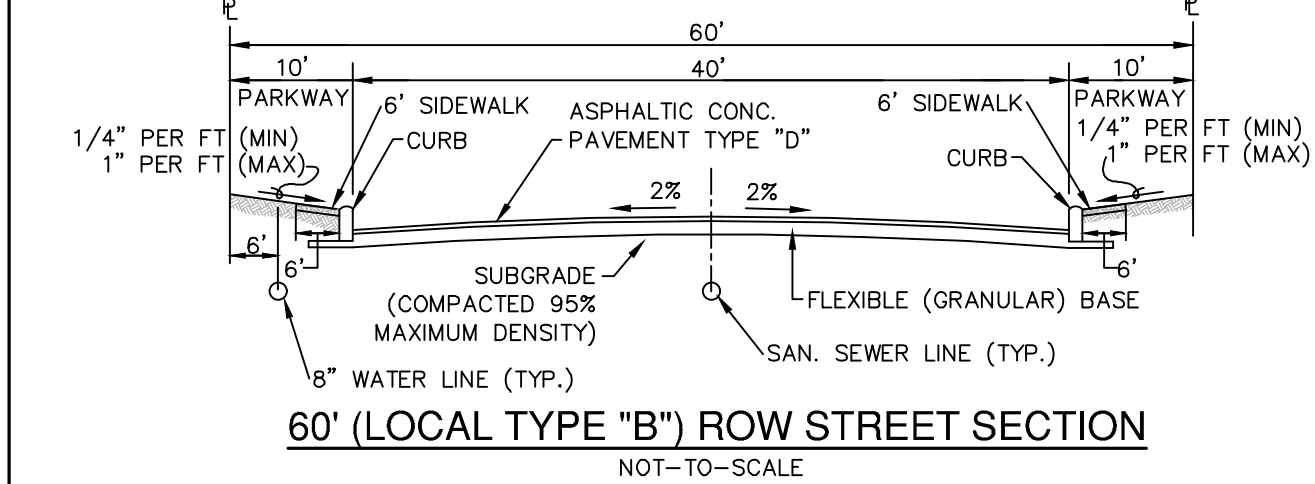
SUBGRADE NOTES (*):

- CUT AND FILL DATA ARE NOT AVAILABLE AT THIS TIME
- BASED ON THE REVIEW OF GEOLOGIC AND SOILS MAP, WE ANTICIPATE THE FINAL PAVEMENT SUBGRADE PLASTICITY INDEX VALUE TO BE LESS THAN OR EQUAL TO 20.
- IF THE SUBGRADE PLASTICITY INDEX VALUES ARE LESS THAN OR EQUAL TO 20, AS PER CITY OF SAN ANTONIO OR BEXAR COUNTY REQUIREMENTS, SUBGRADE STABILIZATION IS NOT NEEDED.
- IF FILL IS USED TO RAISE THE GRADE, FILL MATERIAL UNDERNEATH THE PAVEMENT SHOULD BE APPROVED FILL MATERIAL, FREE OF DELETERIOUS MATERIAL AND WITH A MINIMUM CBR VALUE OF 4.0 AND A MAXIMUM PLASTICITY INDEX VALUE OF 20. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES
- HOWEVER, IF THE FINAL STREET SUBGRADE PLASTICITY INDEX VALUES ARE GREATER THAN 20, THEN ONE OF THE FOLLOWING OPTIONS MAY BE FOLLOWED:
 - REMOVE THE CLAYS SOILS (WITH PLASTICITY INDEX VALUES GREATER THAN 20) AND REPLACE WITH FILL MATERIAL WITH PLASTICITY INDEX VALUES LESS THAN OR EQUAL TO 20. IF SUBGRADE STABILIZATION IS REQUIRED, THE FOLLOWING SPECIFICATIONS MUST BE MET. THE CONTRACTOR SHALL COORDINATE WITH THE GEOTECHNICAL ENGINEER IN THE FIELD FOR SUBGRADE TREATMENT.
 - TREAT THE SUBGRADE:
 - THE SUBGRADE SHOULD BE TREATED TO A DEPTH OF 6 INCHES USING 6 ½ PERCENT LIME CONTENT
 - THE SUBGRADE SOILS SHOULD BE TESTED FOR SOIL SULFATE CONTENT PRIOR TO TREATMENT. IF THE SOIL SULFATE CONTENT IS OVER 3000 PPM, AN ALTERNATE PROCEDURE WILL BE REQUIRED.
 - THE SUBGRADE MAY ALSO BE TREATED USING CEMENT.
 - APPLICATION RATES SHOULD BE DETERMINED AT THE TIME OF CONSTRUCTION.
 - LIME APPLICATION RATE OF 27 LBS PER SQ YARD FOR 6- INCH DEPTH OF TREATMENT MAY BE USED FOR PLANNING AND BUDGETING PURPOSES. THE LIME/CEMENT APPLICATION RATES SHOULD BE DETERMINED AT THE TIME OF CONSTRUCTION.

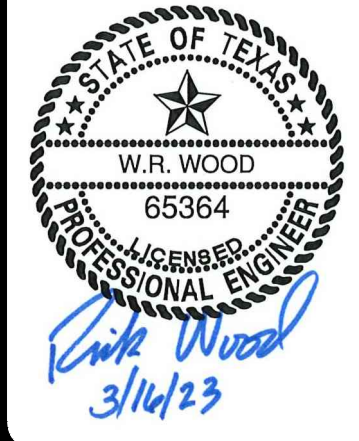
GENERAL NOTES:

- CONTRACTOR SHALL REFERENCE THE PROJECT PAVEMENT DESIGN REPORT NO. **SI91159-P-R1** PREPARED BY **INTEC** DATED **05/20/2021**
- 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.
- GEOTECHNICAL ENGINEER SHOULD VERIFY THE STREET SUBGRADE AT THE TIME OF CONSTRUCTION PRIOR TO PLACEMENT OF AGGREGATE BASE.
- THE FLEXIBLE BASE COURSE SHOULD BE CRUSHED LIMESTONE CONFORMING TO TXDOT STANDARD SPECIFICATIONS, ITEM 247, TYPE A, GRADES 1 OR 2.
- 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 COVERED.
- 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 REQUIRED.
- WHERE PAVEMENT SUBGRADE IS LOCATED WITHIN 2- FEET OF THE EXISTING GROUND SURFACE (STRATUM 1 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.

NOTE:
PAVEMENT DESIGN IS IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERING REPORT PREPARED FOR RIVERSTONE SUBDIVISION BY INTEC. PROJECT NUMBER: **SI91159-P-R1** DATED: **05/20/2021**



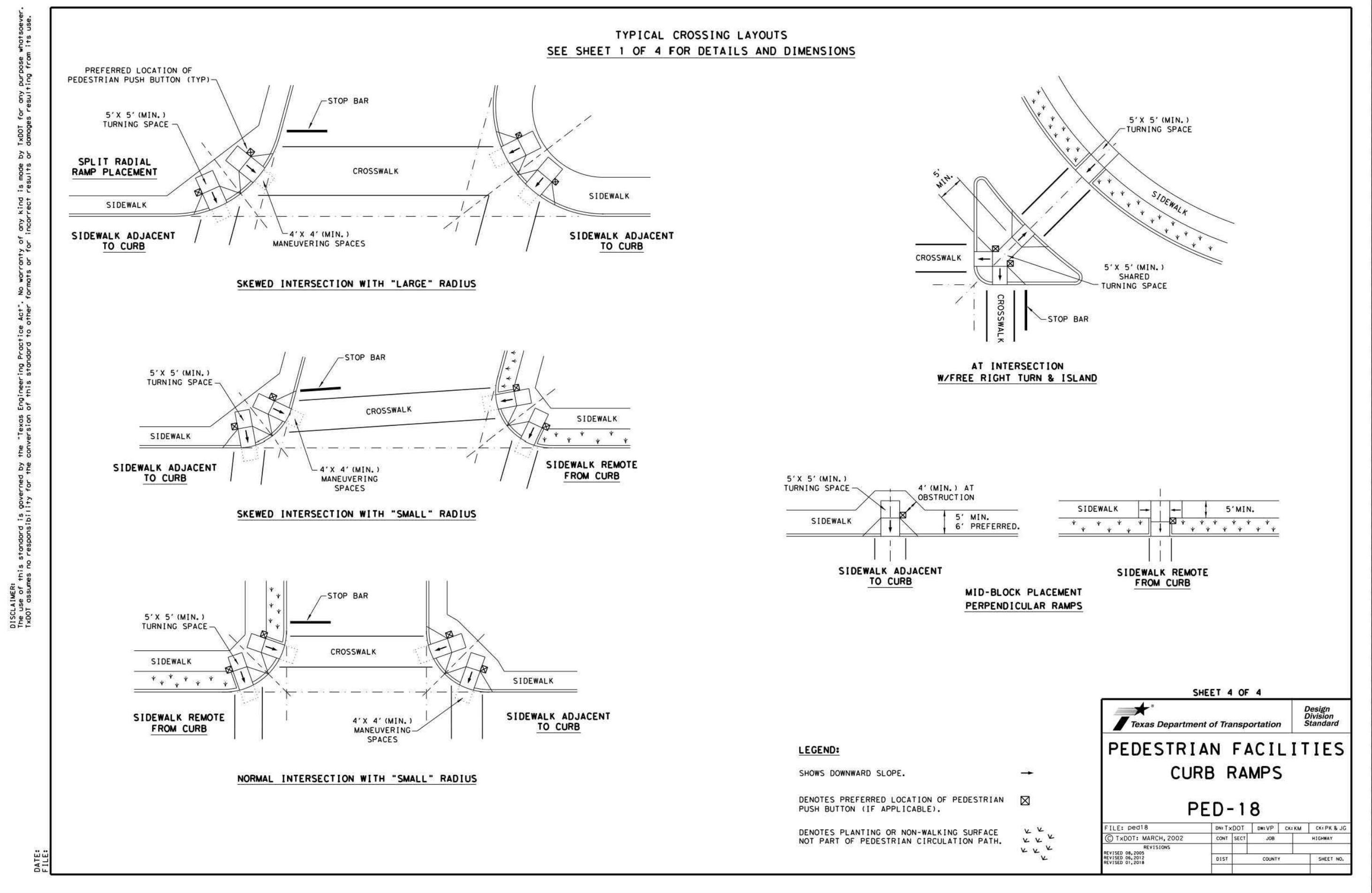
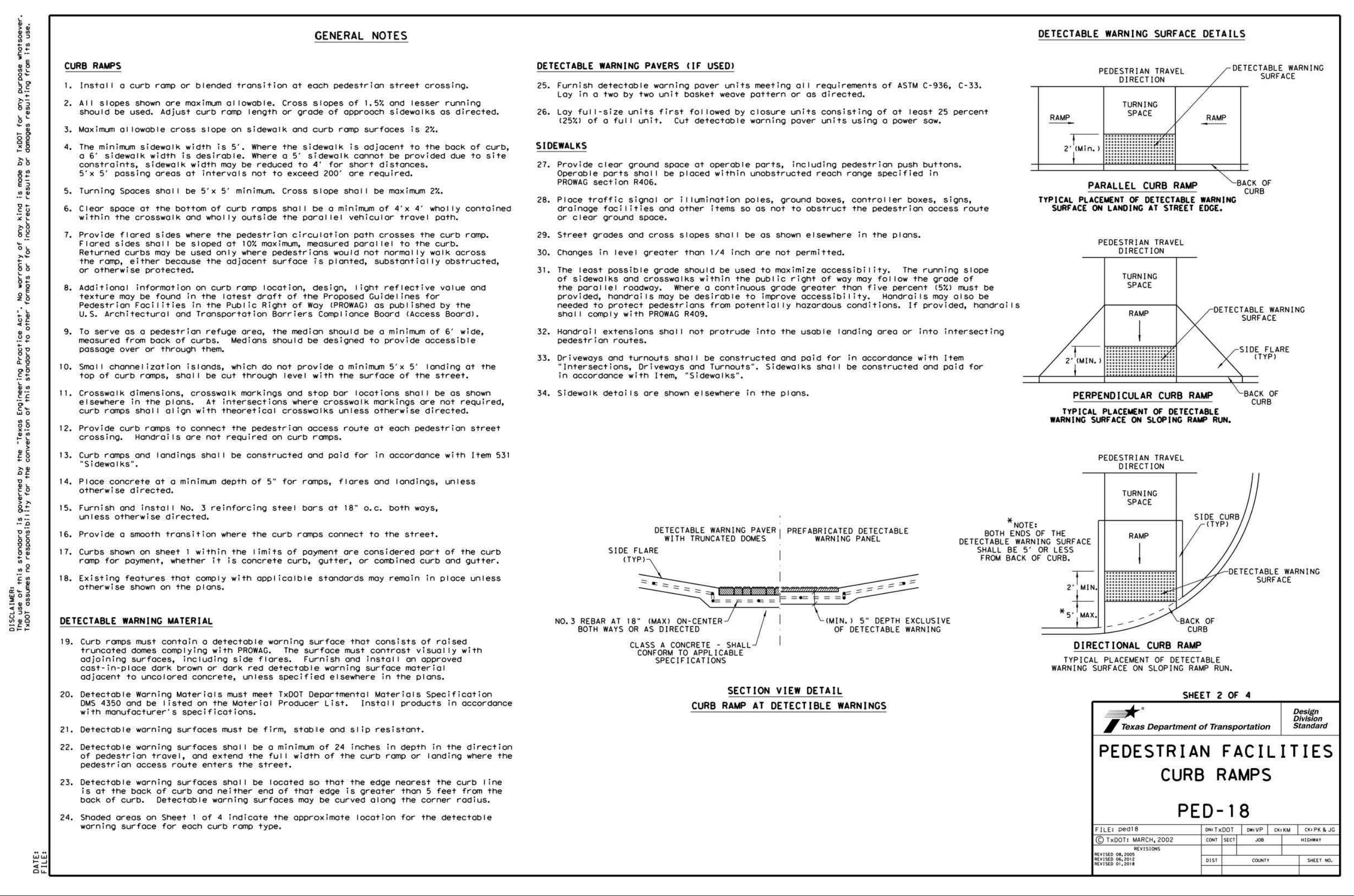
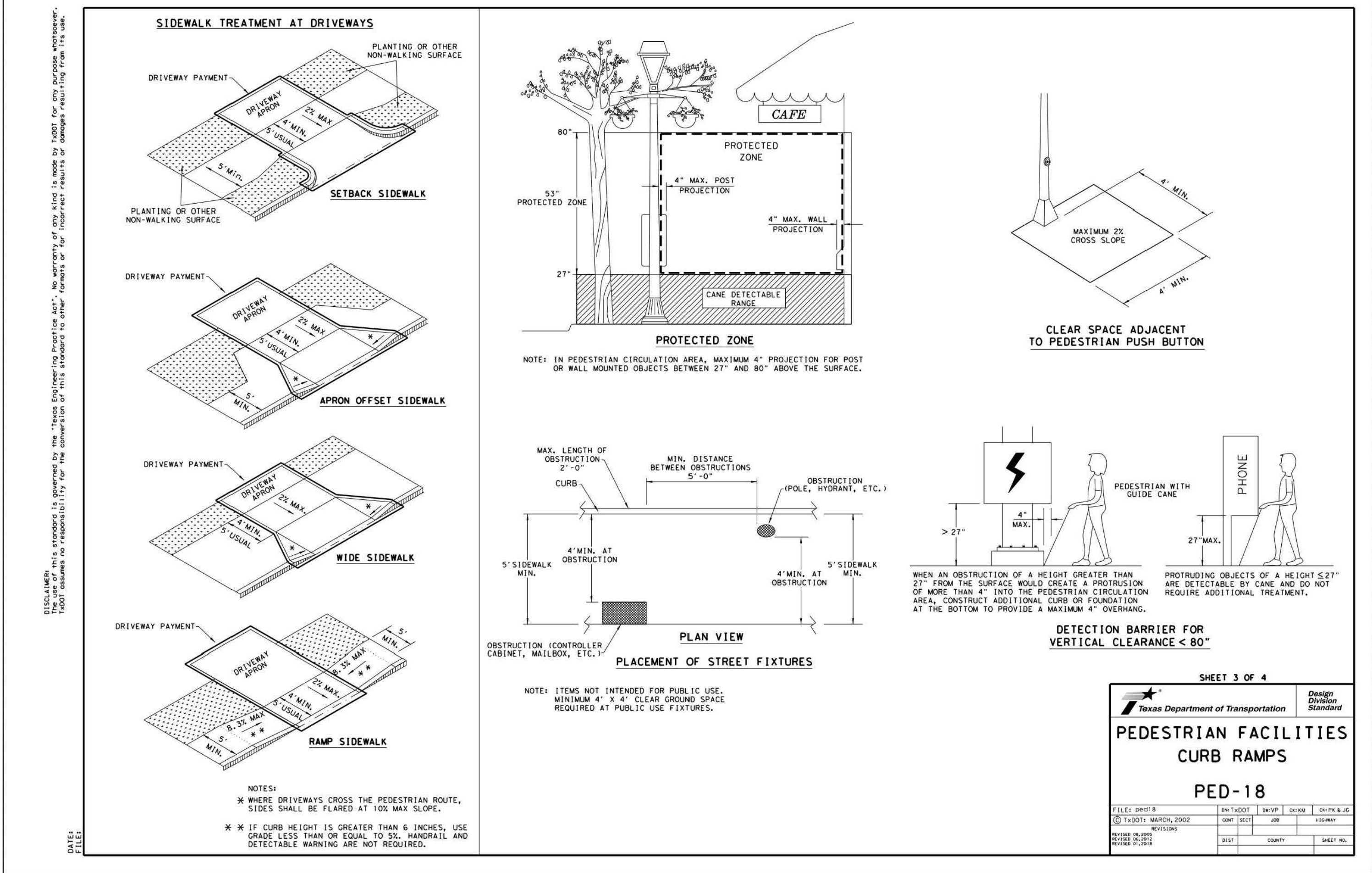
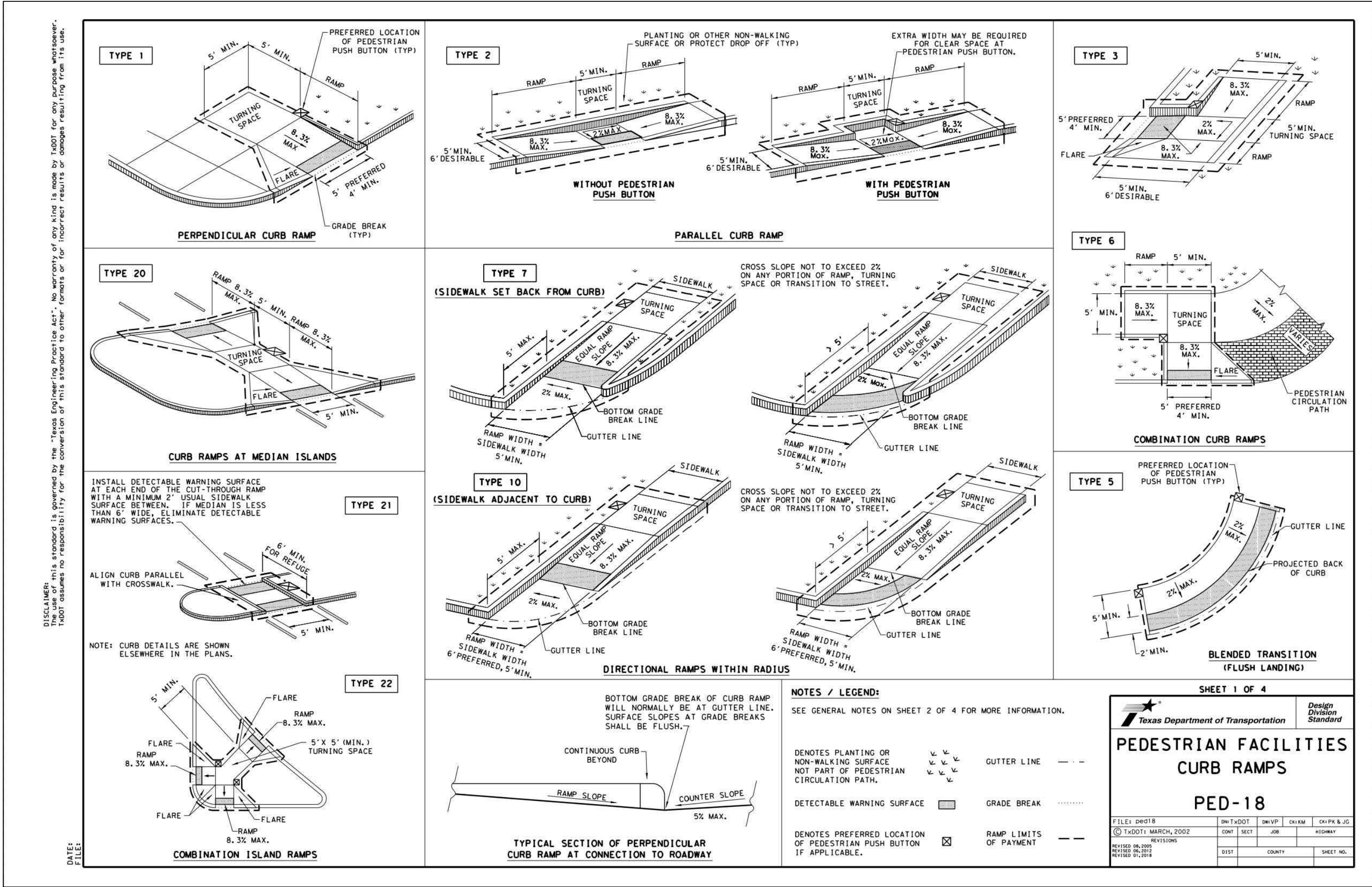
DATE	
NO.	
REVISION	



PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008800

RIVERSTONE UNIT - G8
SAN ANTONIO, TEXAS
STREET DETAILS

PLAT NO.	22-11800608
JOB NO.	11680-58
DATE	JANUARY 2023
DESIGNER	CB
CHECKED	BL
DRAWN	CB
SHEET	C2.10



STATE OF TEXAS
 CALEB M. CHANCE
 98401
 PROFESSIONAL ENGINEER
 10/31/22

PAPE-DAWSON ENGINEERS
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78211 | 210.375.9000
 TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

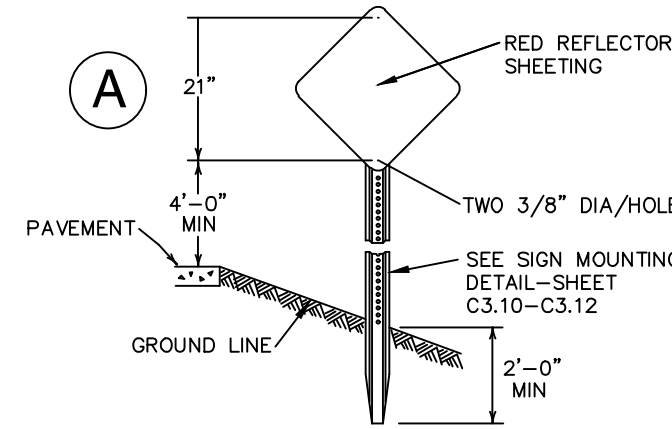
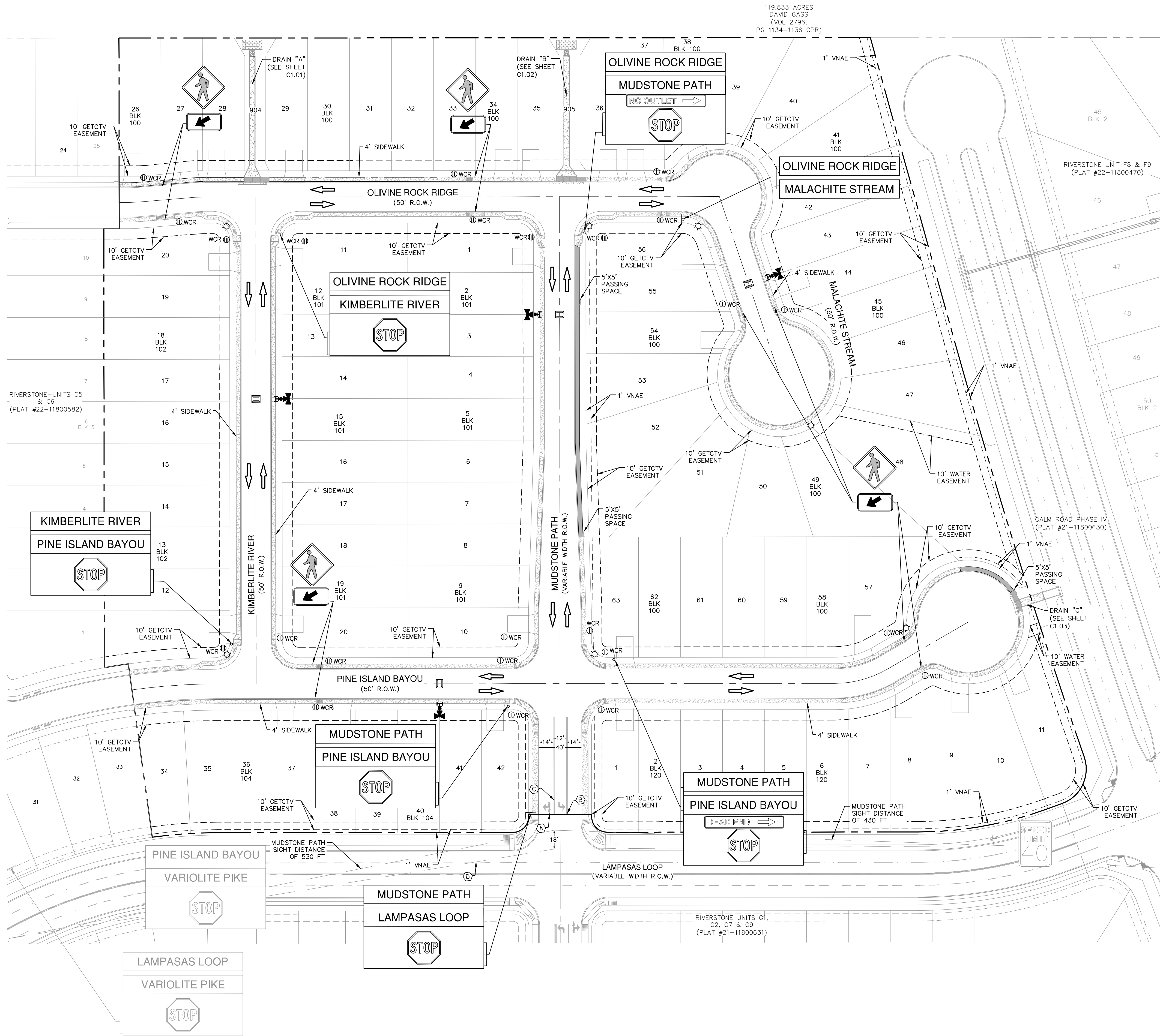
RIVERSTONE UNIT - G8
 SAN ANTONIO, TEXAS

STREET DETAILS

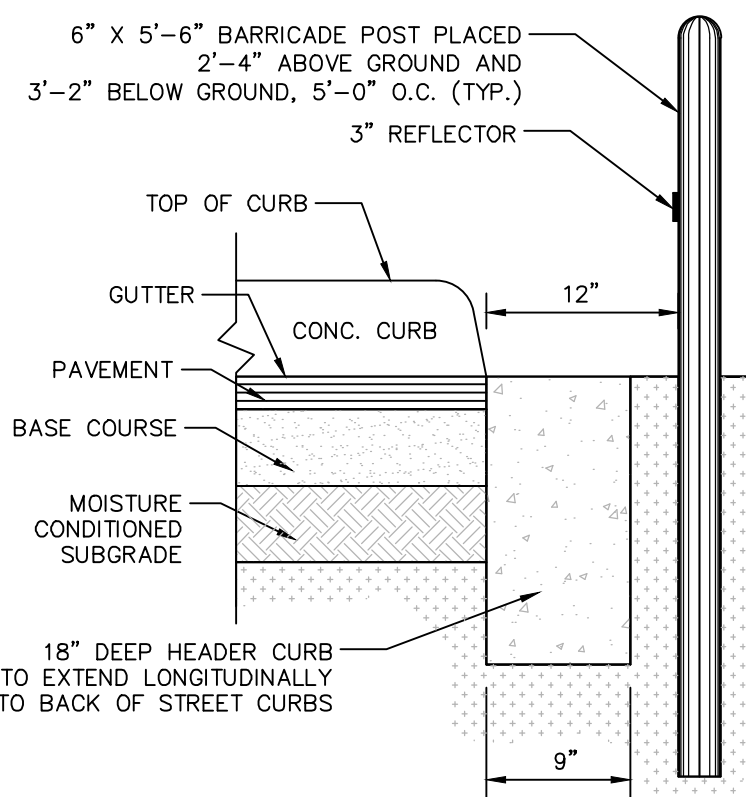
PLAT NO. 22-11800608
 JOB NO. 11680-58
 DATE OCTOBER 2022
 DESIGNER CB
 CHECKED BL DRAWN CB
 SHEET C2.11

Date: Mar 16, 2023, 12:02pm User: jh_ahmstrs
File: P:\16180\SSA\Design\CHN\SSA-1180063.dwg

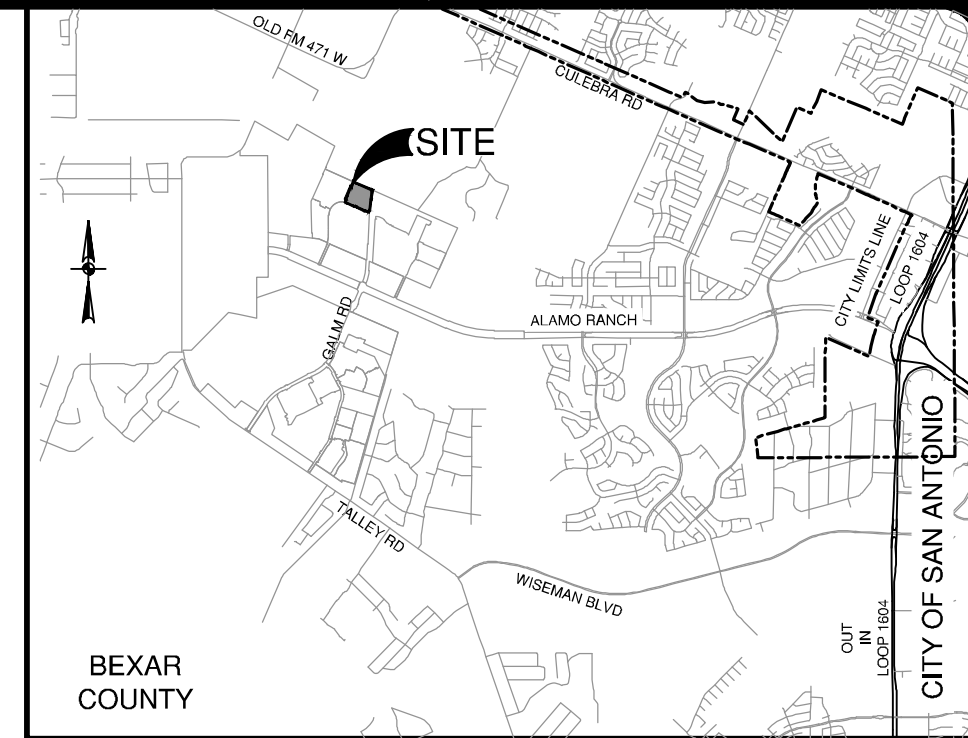
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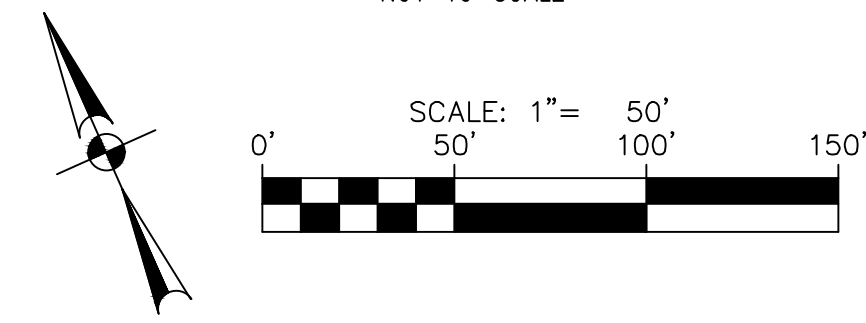
UNITS MOUNTED ON 0.080" THICK SHEET ALUMINUM
CONFORMING WITH ASTM B-209 ALLOY
6061-T6.
TYPE 4 OM4-3
18" x 18"
OBJECT MARKER TYPE 4
NOT-TO-SCALE


















HEADER CURB & BARRICADE POST DETAIL
NOT-TO-SCALE



LOCATION MAP
NOT-TO-SCALE



SYMBOL		ITEM NUMBER
	UNIT BOUNDARY	
	TRAFFIC FLOW ARROW	
	SIDEWALK (HOMEBUILDER RESPONSIBILITY)	
	SIDEWALK (SITEWORK CONTRACTOR RESPONSIBILITY)	
	5'x5' ADA PASSING SPACE (DEVELOPER'S RESPONSIBILITY)	
	TYPE II BLUE RAISED PAVEMENT MARKERS – NO SEPARATE PAY ITEM (N.T.S.)	
	END OF ROAD MARKER OM4-3	
	HEADER CURB W/ BARRICADE POSTS	
	R1-1 30"x30"	531.3
	STREET NAME	531.57
	CLEAR VISION TRIANGLE	
	W11-2 30"x30"	
	W16-7P 24"x12"	
	W14-2A	
	W 14-1A	

BEXAR COUNTY ROW NOTES:
A BEXAR COUNTY 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.

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

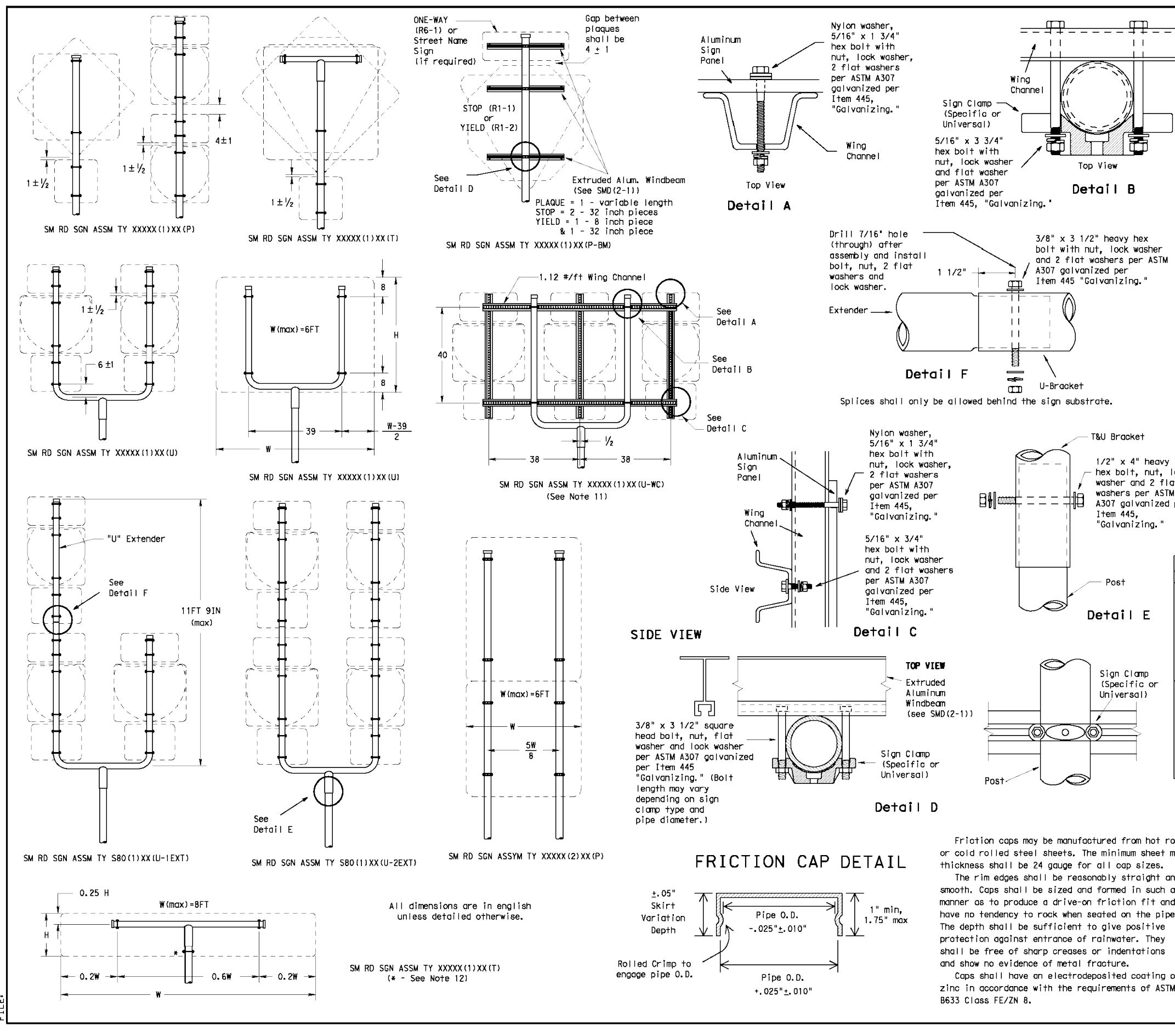
TRENCH EXCAVATION SAFETY PROTECTION:
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK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

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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

RIVERSTONE UNIT - G8
SAN ANTONIO, TEXAS
OVERALL SIGNAGE PLAN

PLAT NO.	22-11800608
JOB NO.	11680-58
DATE	JANUARY 2023
DESIGNER	CB
CHECKED	BL
DRAWN	CB
SHEET	C3.00

DISCLAIMER: The use of this drawing is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by the State of Texas or the Texas Department of Transportation for any use of this drawing other than that for which it was prepared. The user of this drawing shall be responsible for obtaining all necessary permits and for complying with all applicable laws and regulations.



Texas Department of Transportation
Traffic Operations Division

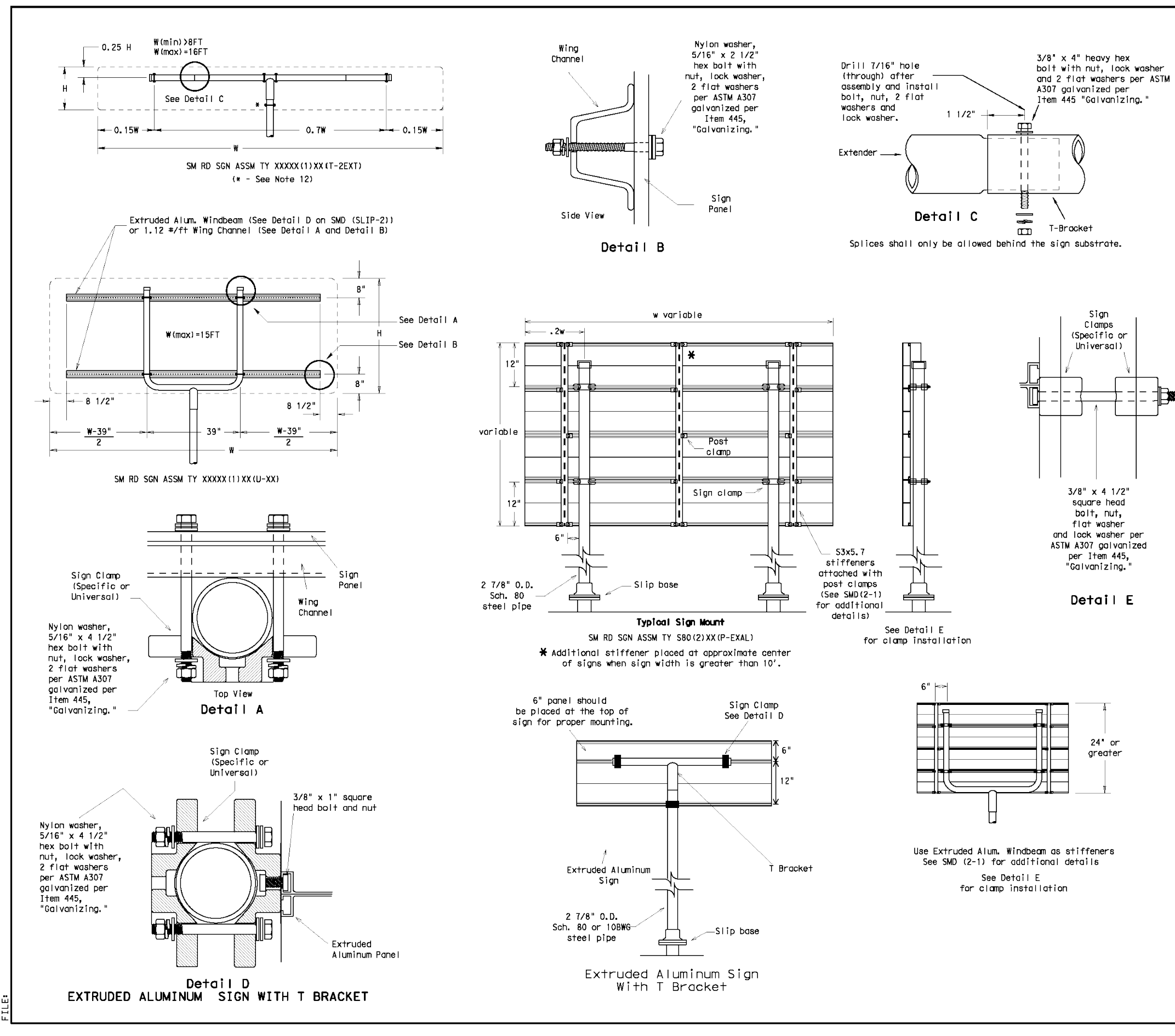
SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

SMD (SLIP-2)-08

9-08

DATE	REVISION	BY	CHKD	APPD	REASON
9-08	1	TEST	QUALITY	DESIGN	NEW

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Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

SMD (SLIP-3)-08

9-08

DATE	REVISION	BY	CHKD	APPD	REASON
9-08	1	TEST	QUALITY	DESIGN	NEW

SIGN SUPPORT DESCRIPTIVE CODES
(Quantities listed correspond to project estimate and quantity sheet)

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

Post Type

TP = Fiberglass Reinforced Plastic Pipe (see SMD(SLP-1))
TW = Thin-Walled Tubing (see SMD(SLP-1))
10BW = 10 BW Tubing (see SMD(SLP-1) to (SLIP-3))
S80 = Schedule 80 Pipe (see SMD(SLP-1) to (SLIP-3))

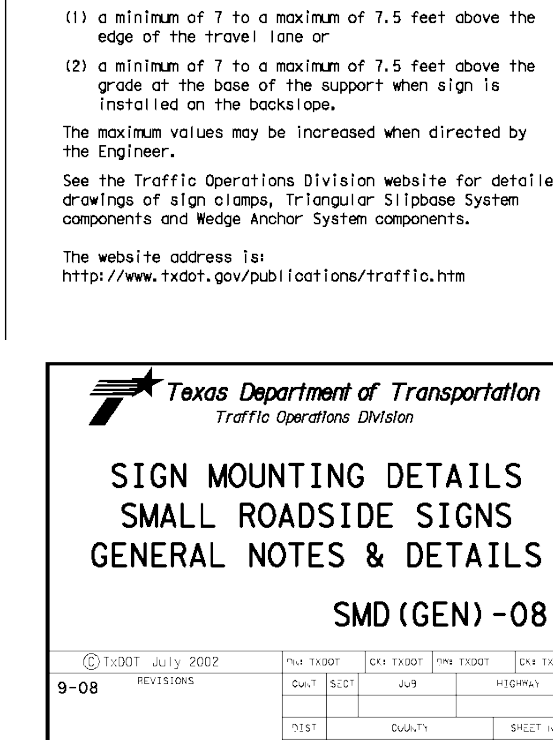
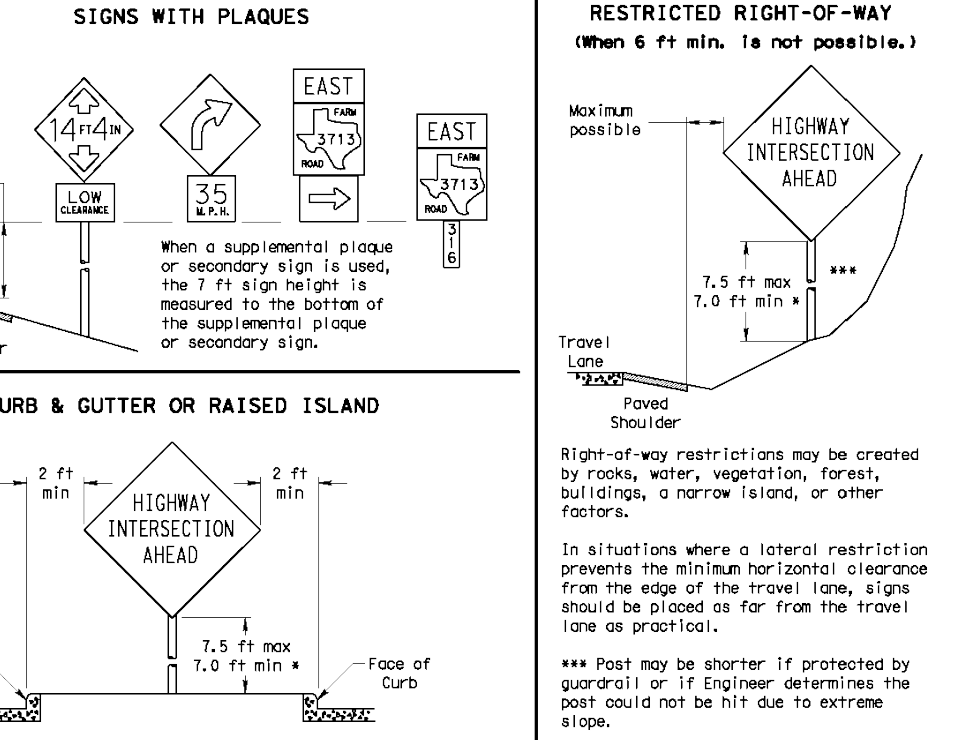
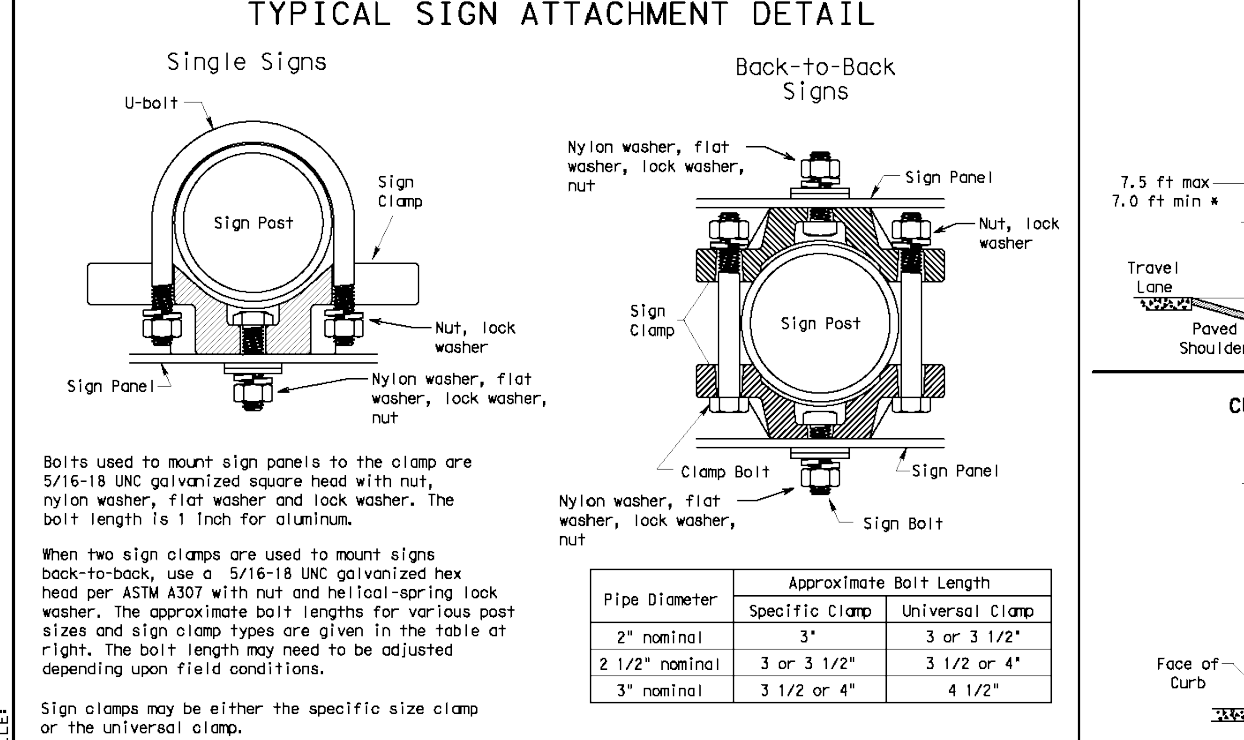
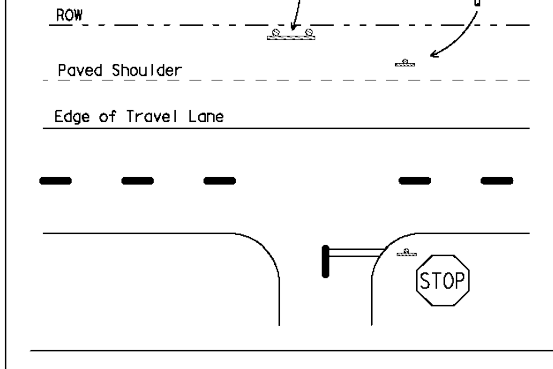
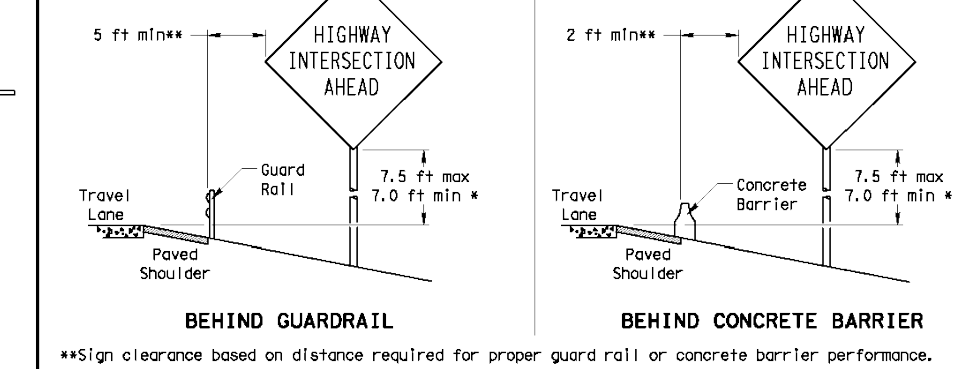
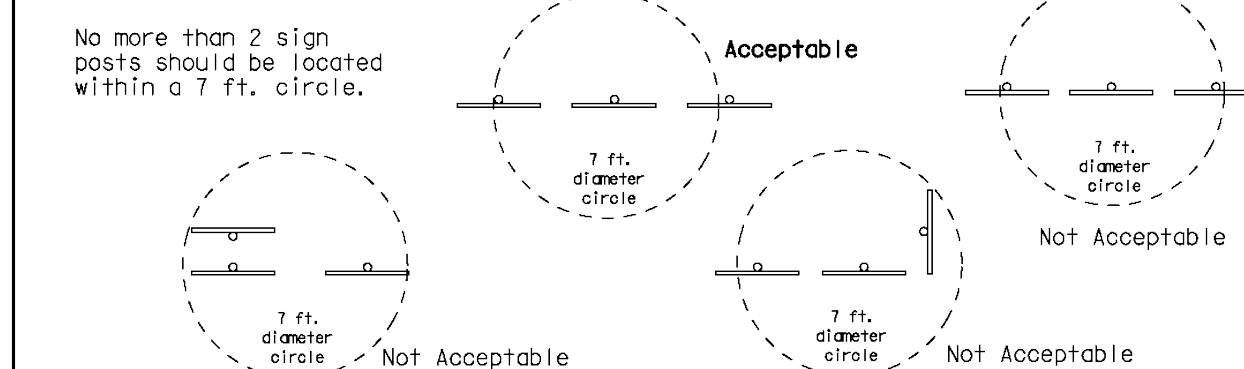
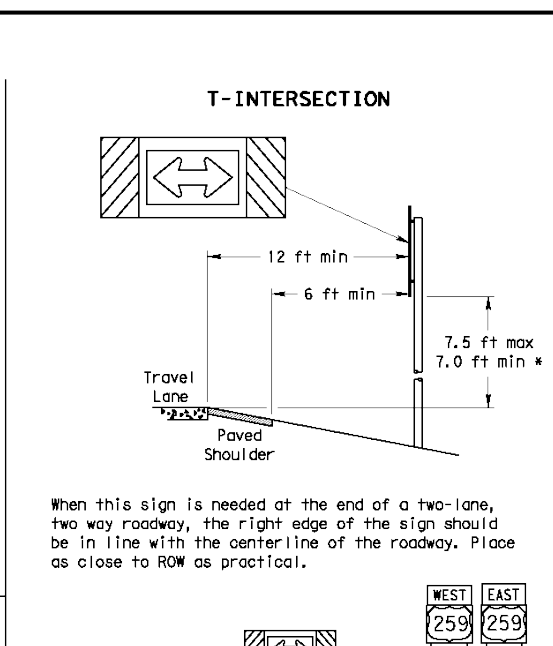
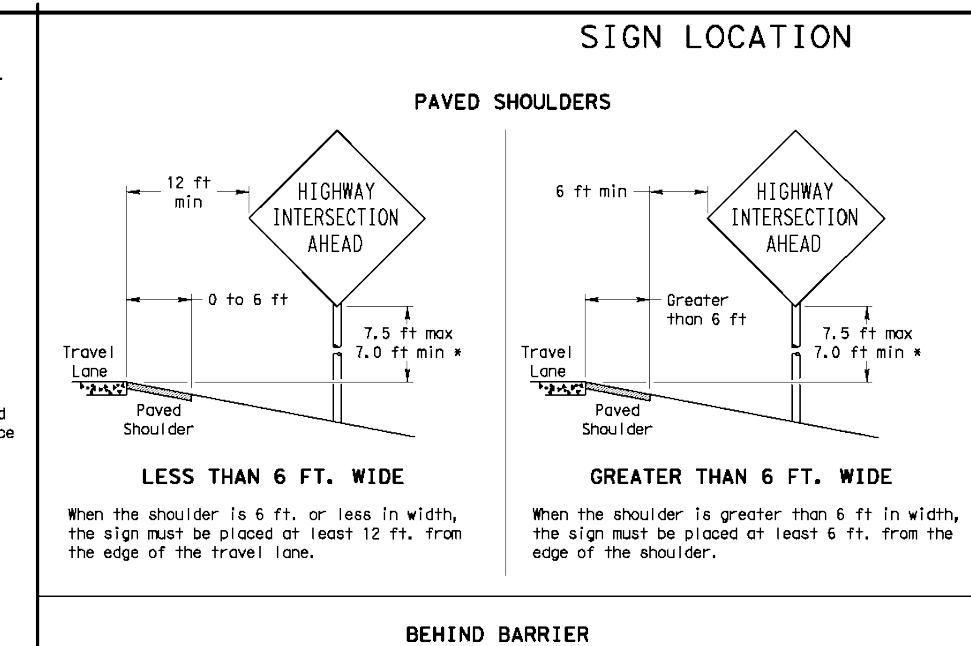
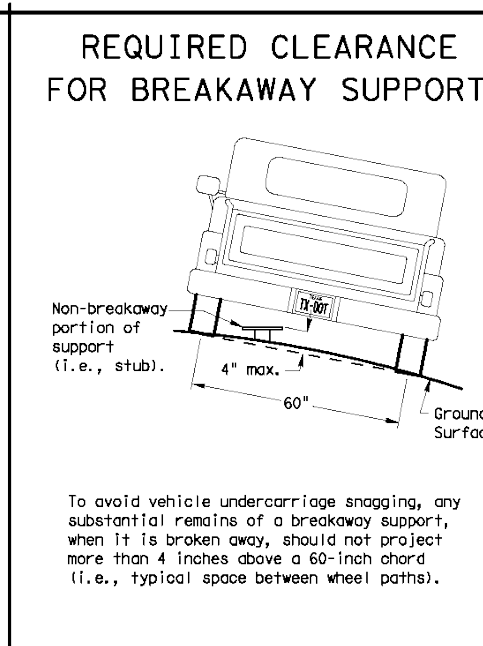
Number of Posts (1 or 2)

Anchor Type

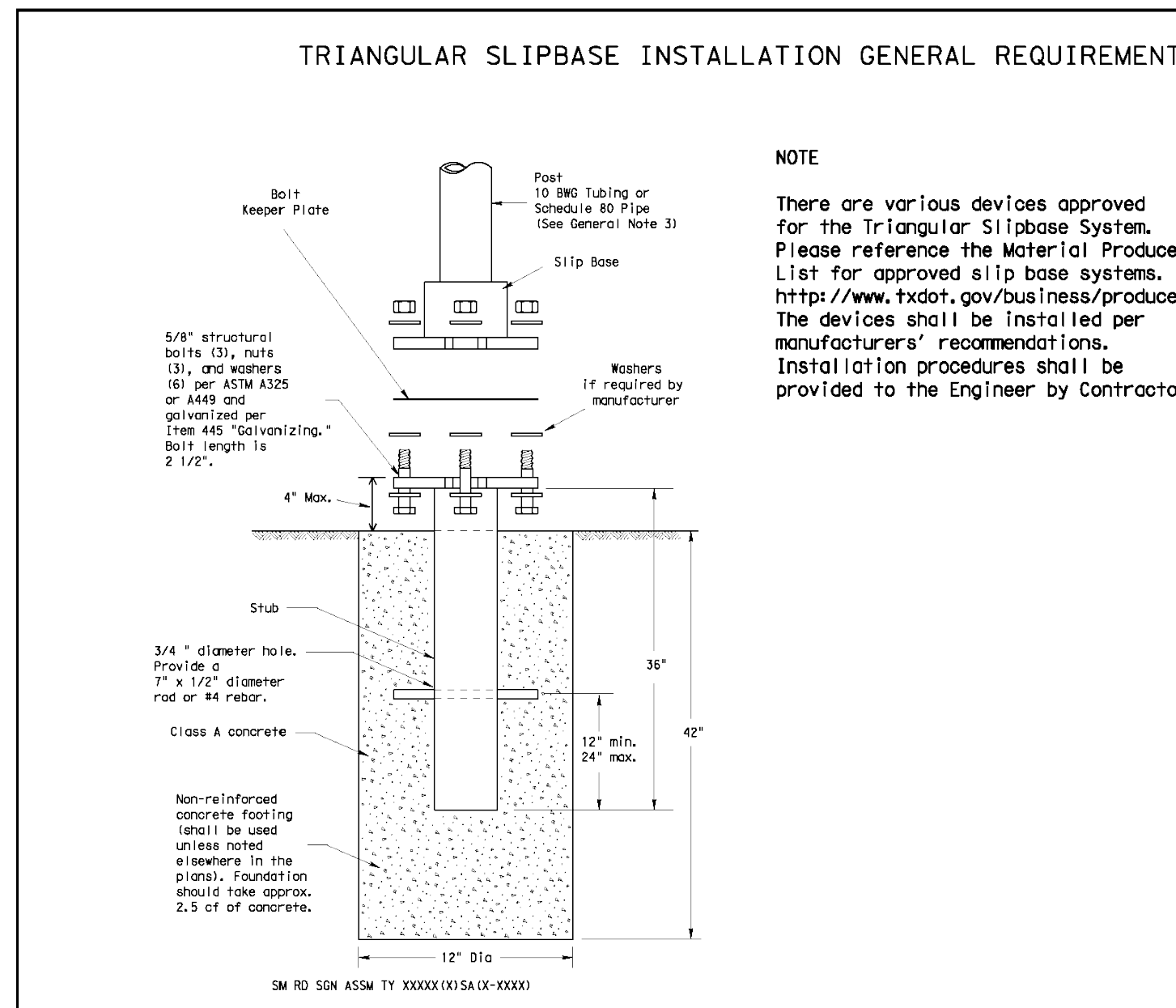
UA = Universal Anchor - Corroated (see SMD(SLP-1) and (TW1))
UB = Universal Anchor - Bolted down (see SMD(SLP-1) and (TW1))
W = Wedge Anchor Steel (see SMD(SLP-1))
WA = Wedge Anchor Plastic (see SMD(SLP-1))
SA = Slab Anchor - Corroated (see SMD(SLP-1) to (SLIP-3))
SB = Slab Anchor - Bolted down (see SMD(SLP-1) to (SLIP-3))

Sign Mounting Description

P = Precast, "P" (see SMD(SLP-1) to (SLIP-3), (TW1), (TP1))
T = Precast, "T" (see SMD(SLP-1) to (SLIP-3), (TW1))
U = Precast, "U" (see SMD(SLP-1) to (SLIP-3), (TW1))
EXT = Number of Extensions (see SMD(SLP-1) to (SLIP-3), (TW1))
S = Extruded Wing Beam (see SMD(SLP-1) to (SLIP-3))
W = 1/2 x 1/2 Wing Channel (see SMD(SLP-1) to (SLIP-3))
EAL = Extruded Aluminum Sign Panels (see SMD(SLP-1))



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NOTE

There are various devices approved for the Triangular Slipbase System. Please reference the Material Producer List for approved slip base systems. The devices shall be installed per manufacturer's recommendations. Installation procedures shall be provided to the Engineer by Contractor.

GENERAL NOTES:

1. Slip base shall be permanently marked to indicate manufacturer, method, design, and location of working or subject to approval of the TxDOT Traffic Standards Engineer.
2. Material used as post with this system shall conform to the following specifications:
 - 10 BW Tubing (12.875" outside diameter)
 - 0.124" nominal wall thickness
 - Seamless or electric-resistance welded steel tubing or pipe
 - Steel shall be A513 or 55 per ASTM A513 or ASTM A513-08
 - Other steels may be used if they meet the following:
 - 55,000 PSI minimum tensile strength
 - 70,000 PSI minimum tensile strength
 - 20% minimum elongation in 2"
 - Wall thickness (uncoated) shall be within the range of 0.122" to 0.138"
 - Outside diameter (uncoated) shall be within the range of 2.867" to 2.887"
 - Galvanization per ASTM A123 or ASTM A653-02, or pre-treated steel hot-dip (ASTM A653), except tube outside diameter weld seam by metalizing with zinc wire per ASTM B835.
 - Schedule 80 Pipe (12.875" outside diameter)
 - 0.274" nominal wall thickness
 - Steel tubing per ASTM A500 or C
 - Other seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used if they meet the following:
 - 45,000 PSI minimum tensile strength
 - 62,000 PSI minimum tensile strength
 - 21% minimum elongation in 2"
 - Wall thickness (uncoated) shall be within the range of 0.248" to 0.264"
 - Outside diameter (uncoated) shall be within the range of 2.855" to 2.895"
3. See the Traffic Operations Division website for detailed drawings of sign clamps and Texas Universal Triangular Slipbase System components. The website address is: <http://www.tdot.gov/publications/traffic.htm>
4. Sign supports shall not be galvanized except where shown. Sign support posts shall not be galvanized.

ASSEMBLY PROCEDURE

Foundation

1. Prepare 12-inch diameter by 42-inch deep hole. If solid rock is encountered, the depth of the foundation may be reduced such that it is embedded a minimum of 18 inches into the solid rock.
2. The Engineer may permit portions of concrete less than 6 cubic yards to be placed in a portable, motor-driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Concrete shall be Class 4.
3. Push the pipe and end of the slip base stub into the center of the concrete. Rotate the stub back and forth while pushing it down into the concrete to assure contact between the concrete and stub.
4. Continue to push the stub into the concrete until it is between 2 to 4 inches above the ground.
5. Push the stub. Allow a minimum of 4 days to set, and then remove the stub from the concrete and stub.
6. The triangular slipbase system is multidirectional and is designed to release when struck from any direction.

Support

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

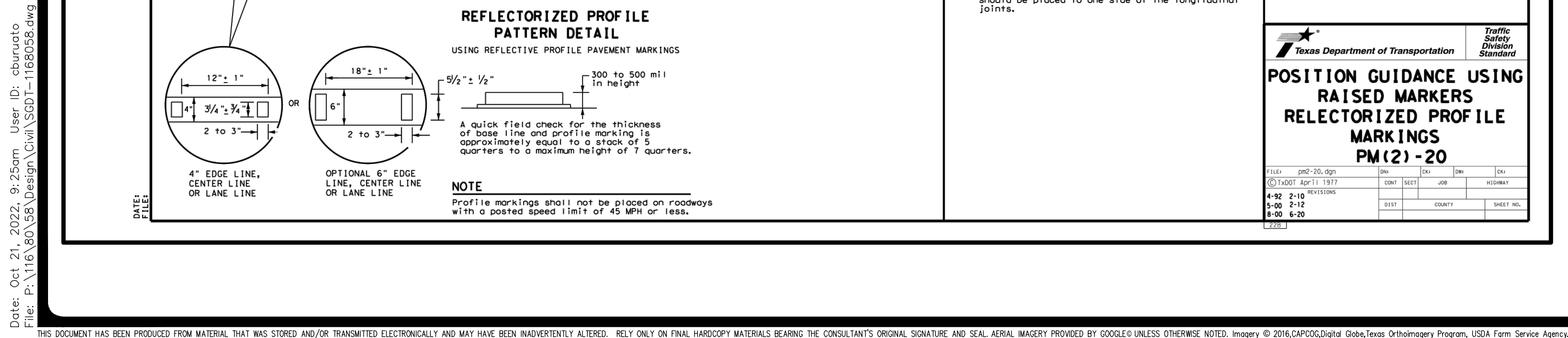
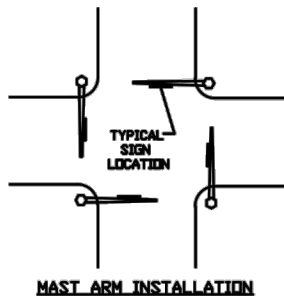
Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

SMD (SLIP-1)-08

9-08

DATE	REVISION	BY	CHKD	APPD	REASON
9-08	1	TEST	QUALITY	DESIGN	NEW

* ACRYLIC ELECTRONIC CUTTABLE FILM

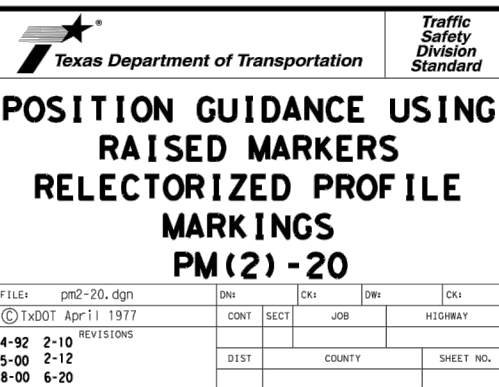
SIGN FACE MATERIALS
SHALL CONFORM TO:
STANDARD SPECIFICATIONS FOR
CONSTRUCTION OF ROADS &
BRIDGES ON FEDERAL HIGHWAY
PROJECTS - PP-03 U.S.
CUSTOMARY UNITS SECTION 718
GENERAL SERVICES
ADMINISTRATION FEDERAL
SPECIFICATIONS L-S-300C
ASTM D 4956 - 09e1

EXAMINER NO.	EXAMINER NO.
CHARGED NO.	DATE
FILE NO.	
SHEET <u>1</u>	

Street Name Sign Details



DESIGN BY:	DESIGN BY:
CHECKED BY:	DATE:
FILE NO.:	
SHEET <u>1</u>	



STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED
PROFESSIONAL ENGINEER

Caleb M. Chance
10/21/22

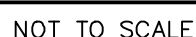
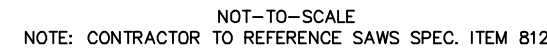
PAPE-DAWSON
ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028600

RIVERSTONE UNIT - G8
SAN ANTONIO, TEXAS

SIGNAGE DETAILS SHEET 3 OF 3

PLAT NO. 22-11800608
JOB NO. 11680-58
DATE OCTOBER 2022
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C3.12



1 ~ STANDARD FIRE HYDRANT
1 - 8" X 6" ANCHOR TEE, M.J.
6" D.I. PIPE, CUT AS REQ'D
1 - 6" 1/4 ANCHOR BEND, M.J.
1 - 6" GATE VALVE, M.J.
1 - 6" VALVE BOX, COMPLETE
(SEE SAWS DETAIL DD-834-01 SHEET 2 OF 2)

8" VALVE CONSTRUCTED WITH SAWS JOB NUMBER 22-1206
SHALL REMAIN CLOSED UNTIL NEW MAINS HAVE BEEN
DISINFECTED BY CONTRACTOR AND ACCEPTED BY SAWS
CONTRACTOR SHALL TIE TO EXISTING 8" STUBOUT
(SAWS JOB NO. 22-1206)
_ AFTER DISINFECTION BY CONTRACTOR AND ACCEPTANCE BY
SAWS

2" TEMPORARY BLOWOFF ASSEMBLY
SEE SAWS DWG DD-844-01 SHEET 1 OF 4

1 - 8" SOLID SLEEVE, MJ

8" VALVE CONSTRUCTED WITH SAWS JOB NUMBER 22-1048
SHALL REMAIN CLOSED UNTIL NEW MAINS HAVE BEEN
DISINFECTED BY CONTRACTOR AND ACCEPTED BY SAWS

CONTRACTOR SHALL TIE TO EXISTING 12" STUBOUT
(SAWS JOB NO. 22-1048)
AFTER DISINFECTION BY CONTRACTOR AND ACCEPTANCE BY
SAWS

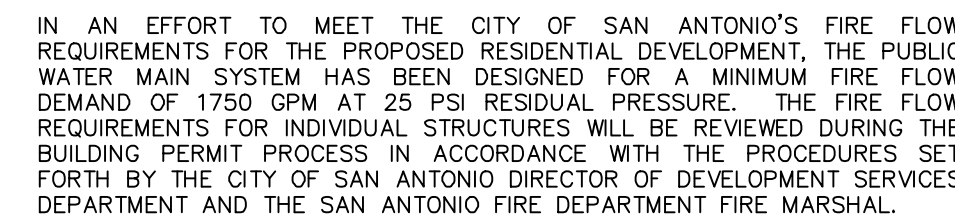
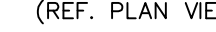
2" TEMPORARY BLOWOFF ASSEMBLY
SEE SAWS DWG DD-844-01 SHEET 1 OF 4

1 - 8" SOLID SLEEVE, MJ

8" VALVE CONSTRUCTED WITH SAWS JOB NUMBER 21-1262
SHALL REMAIN CLOSED UNTIL NEW MAINS HAVE BEEN
DISINFECTED BY CONTRACTOR AND ACCEPTED BY SAWS

CONTRACTOR SHALL TIE TO EXISTING 16" WATERLINE
(SAWS JOB NO. 21-1262)
AFTER DISINFECTION BY CONTRACTOR AND ACCEPTANCE BY
SAWS.

2" TEMPORARY BLOWOFF ASSEMBLY
SEE SAWS DWG DD-844-01 SHEET 1 OF 4



A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY RIGHTS-OF-WAY.

PRESSURE REDUCING VALVE TO BE INSTALLED ON CUSTOMER'S SIDE OF METER BY HOMEBUILDER.

CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 985 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 985 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). *PRV ARE REQUIRED FOR SUCH LOT(S), ONLY SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED.

*NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE (PRV).

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESSES OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH NO JOINTS ON EACH SIDE OF THE FITTING. JOINT RESTRAINTS AND RETAINER GLANDS SHALL BE CALCULATED BY SAWS APPROVED PROGRAMS. THERE SHALL BE NO SEPARATE PAID ITEMS FOR RETAINER GLANDS AND JOINT RESTRAINING HARNESSES AND GASKETS BUT SHALL BE SUBSIDIARY TO THE UNIT COST PER LINEAL FOOT OF PIPE INSTALLED.

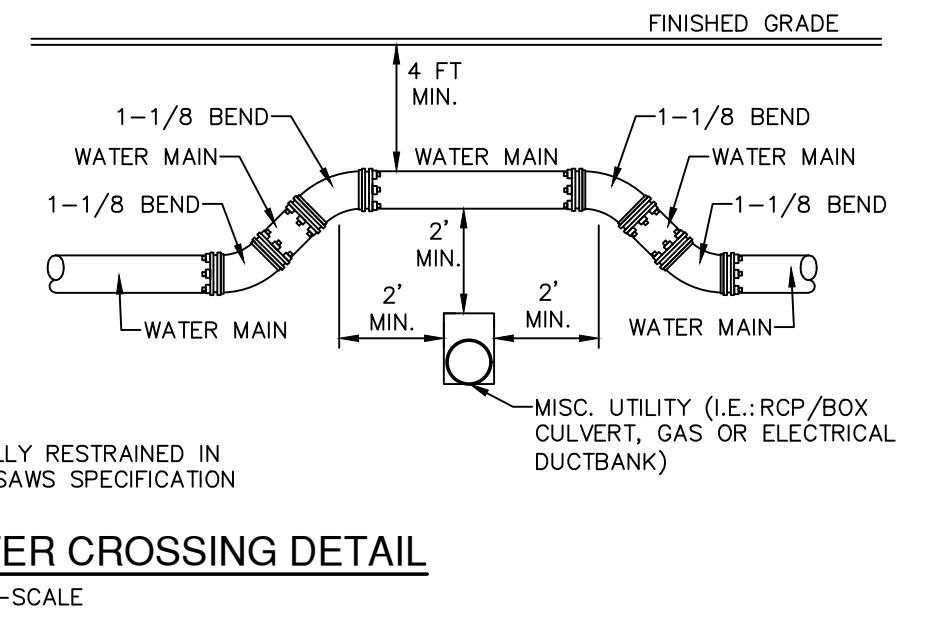
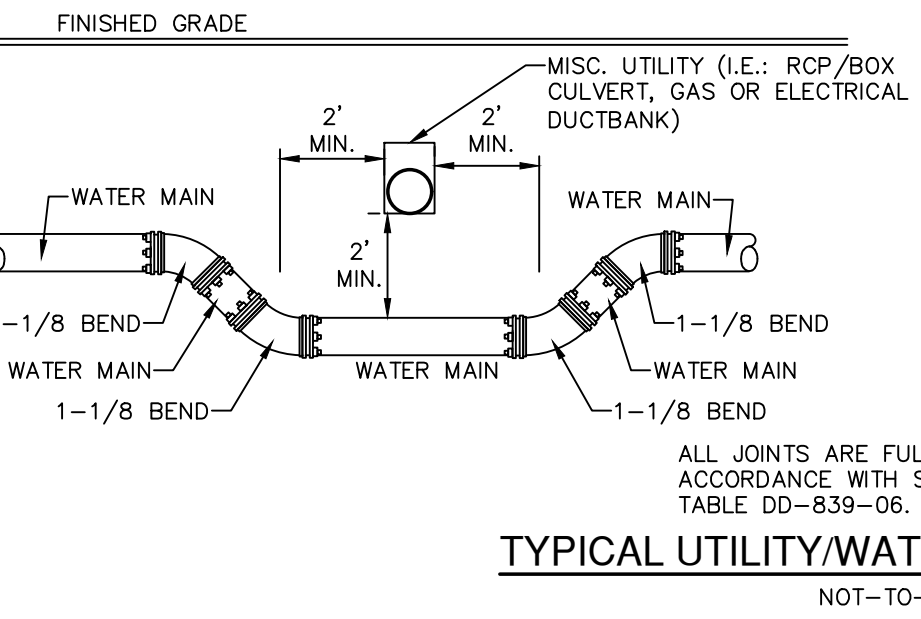
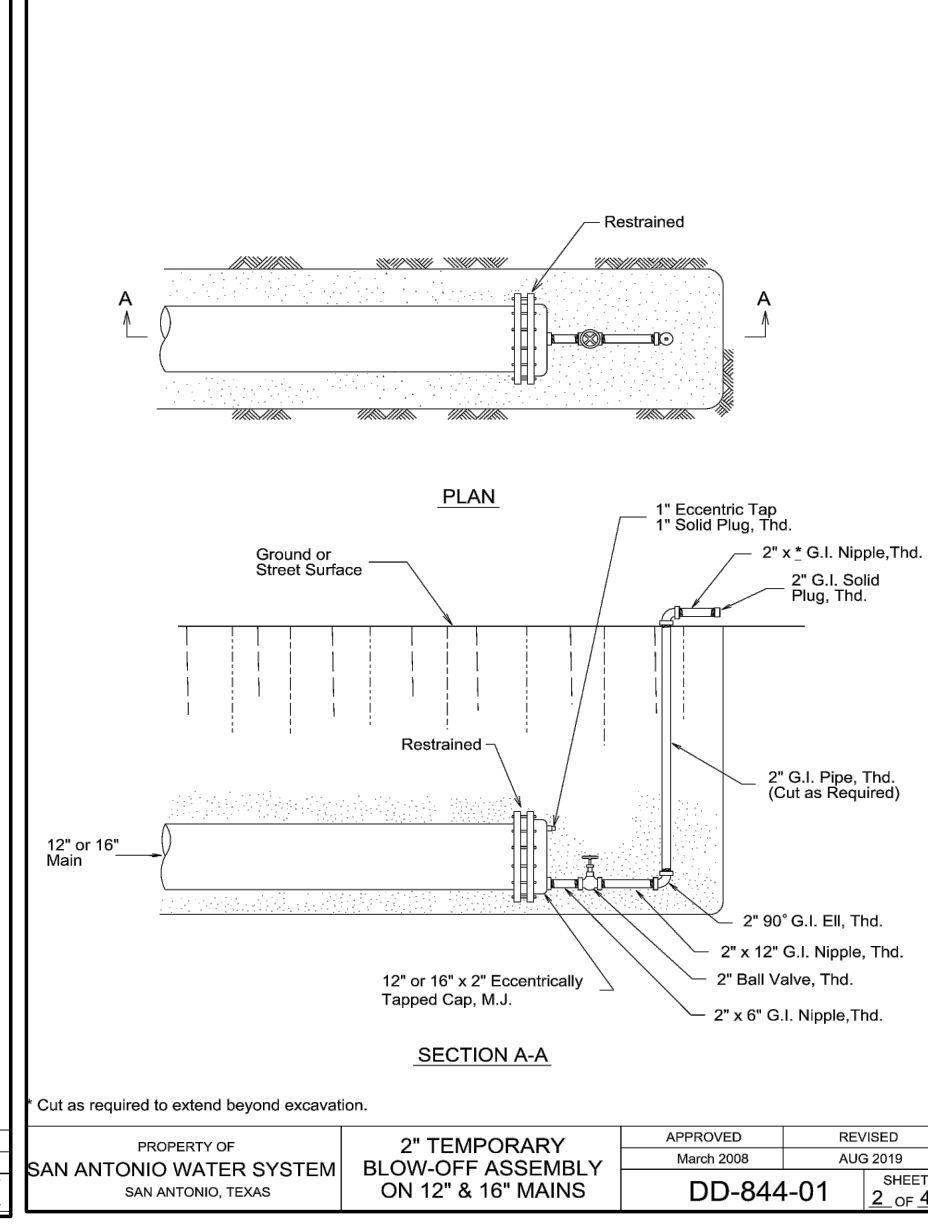
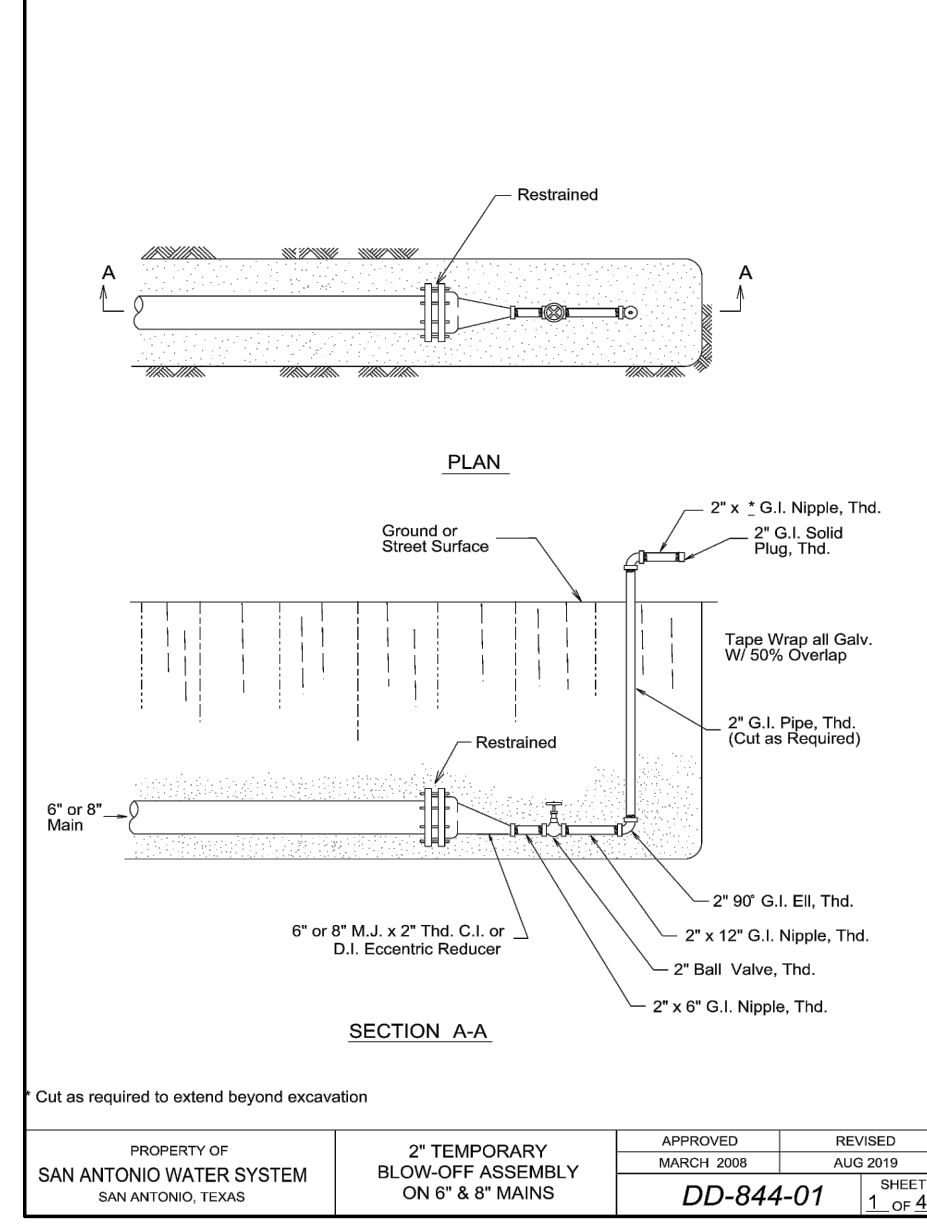
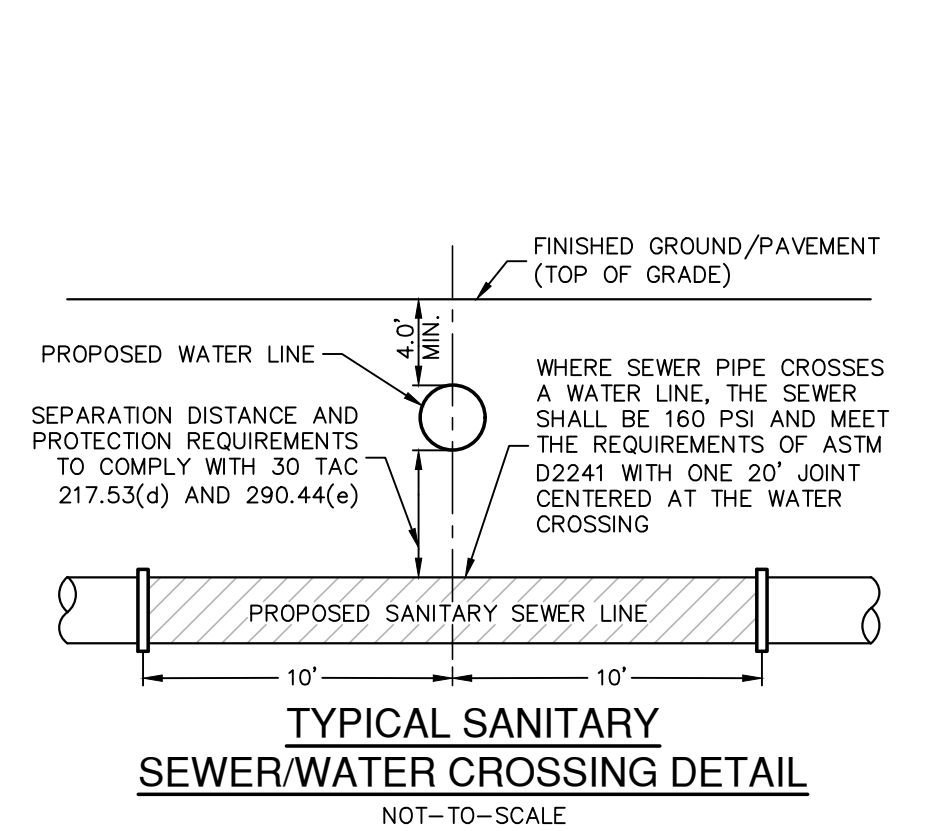
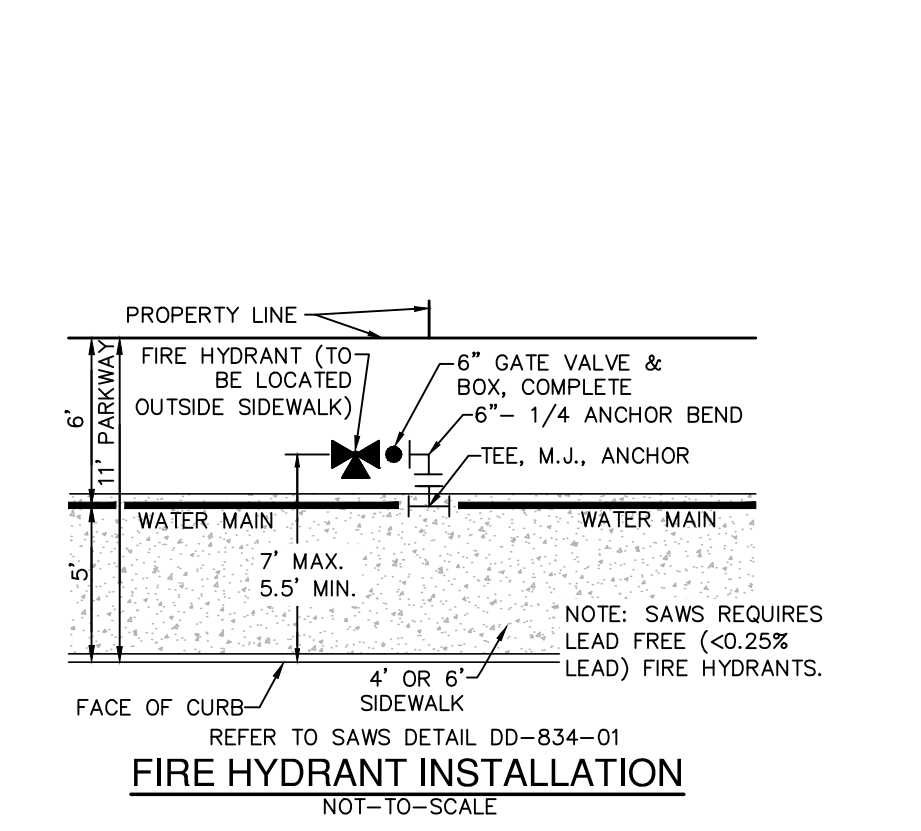
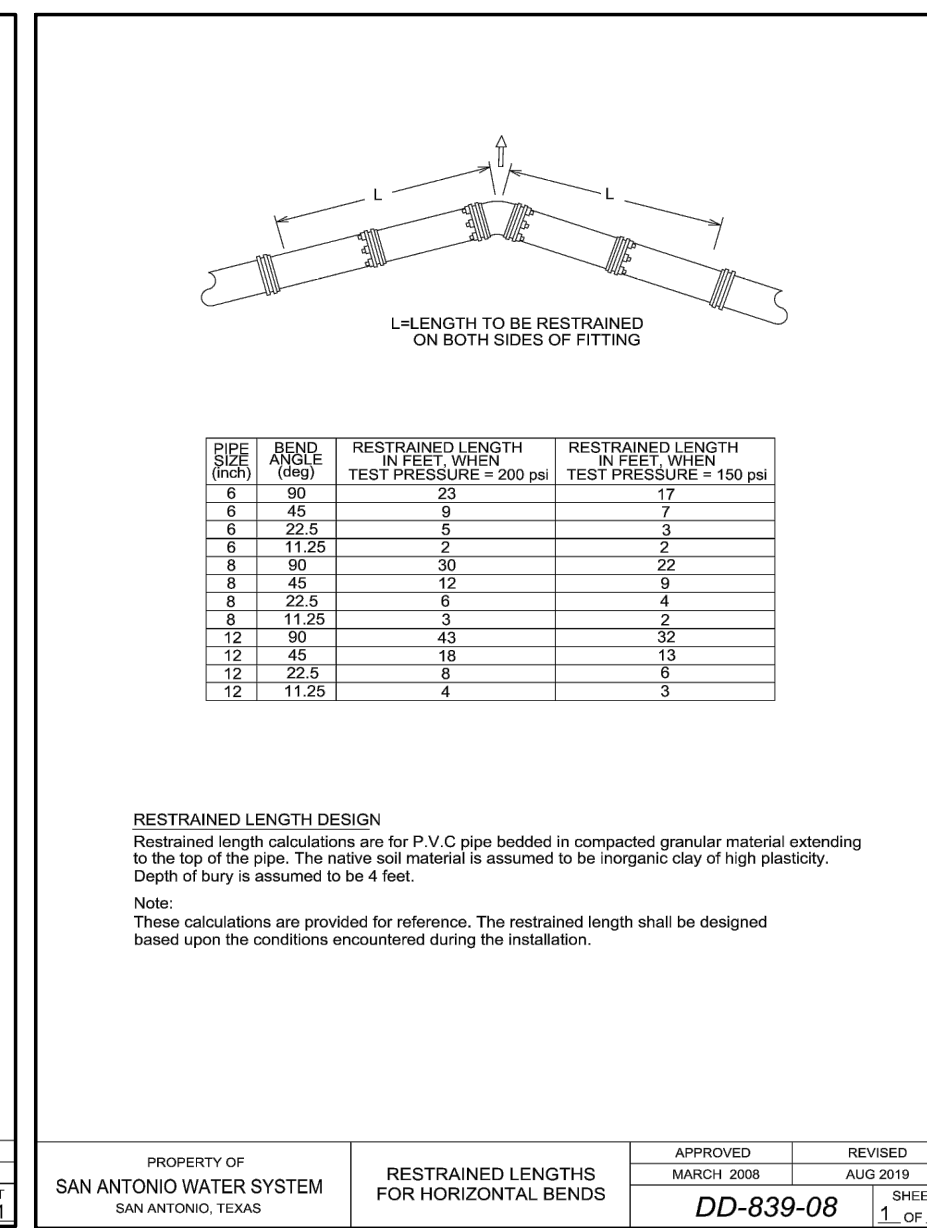
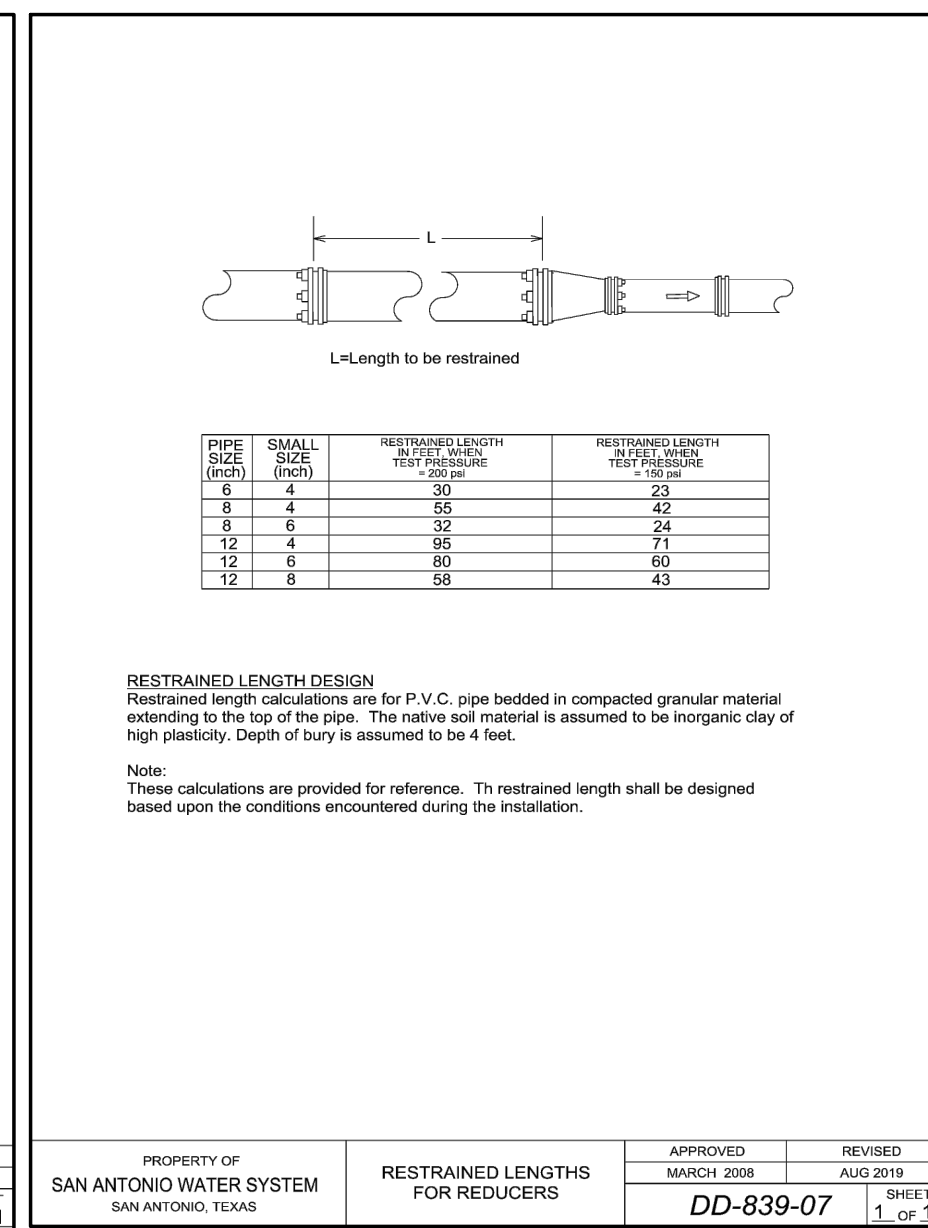
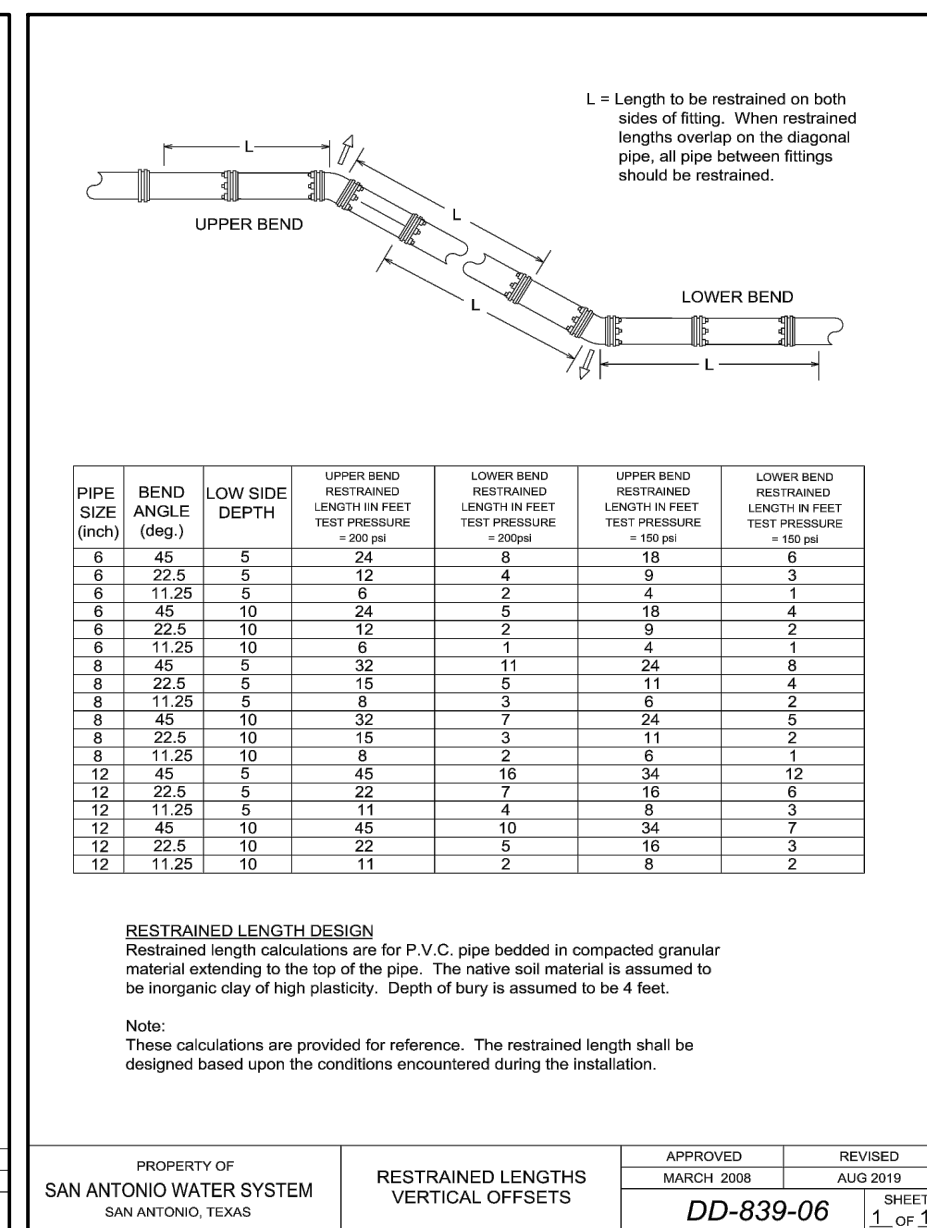
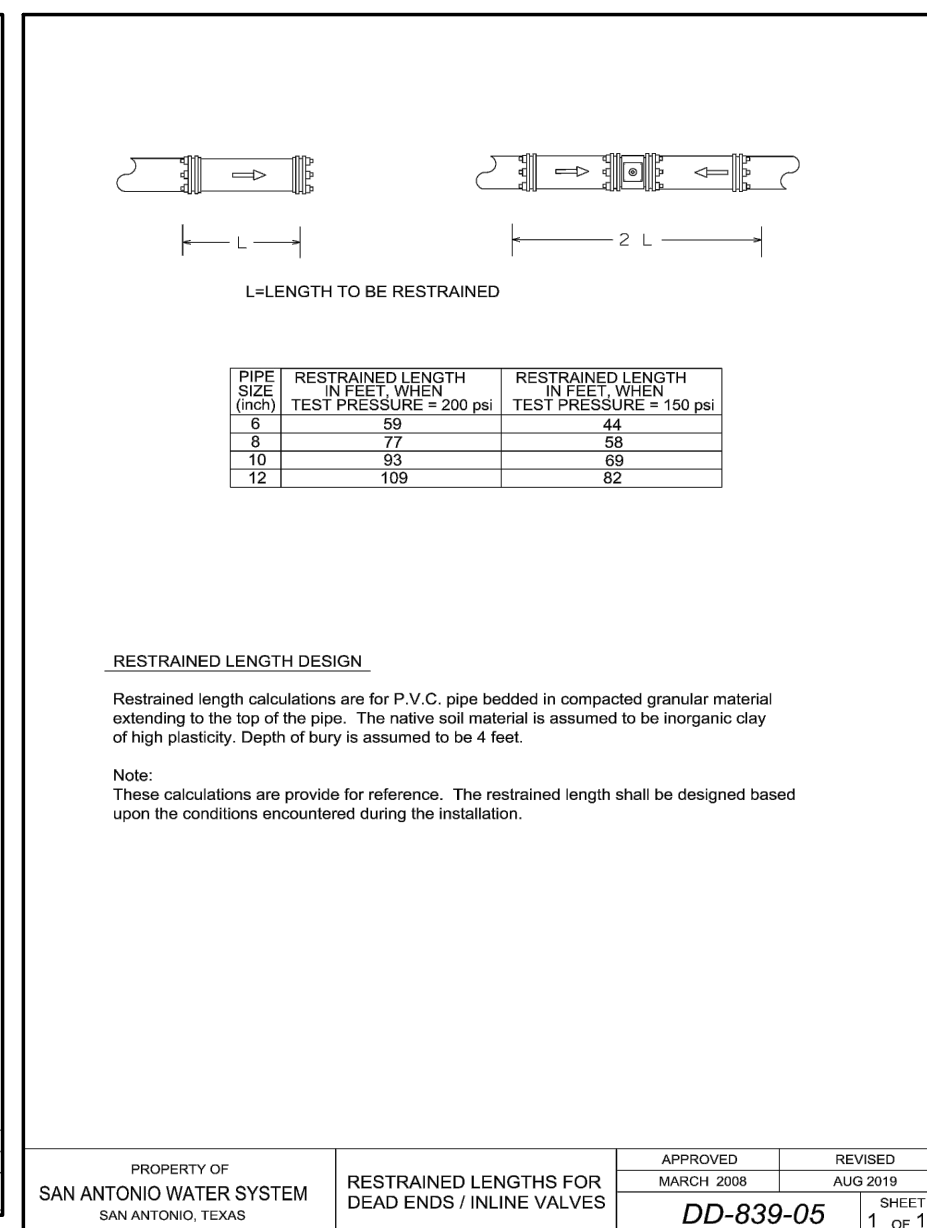
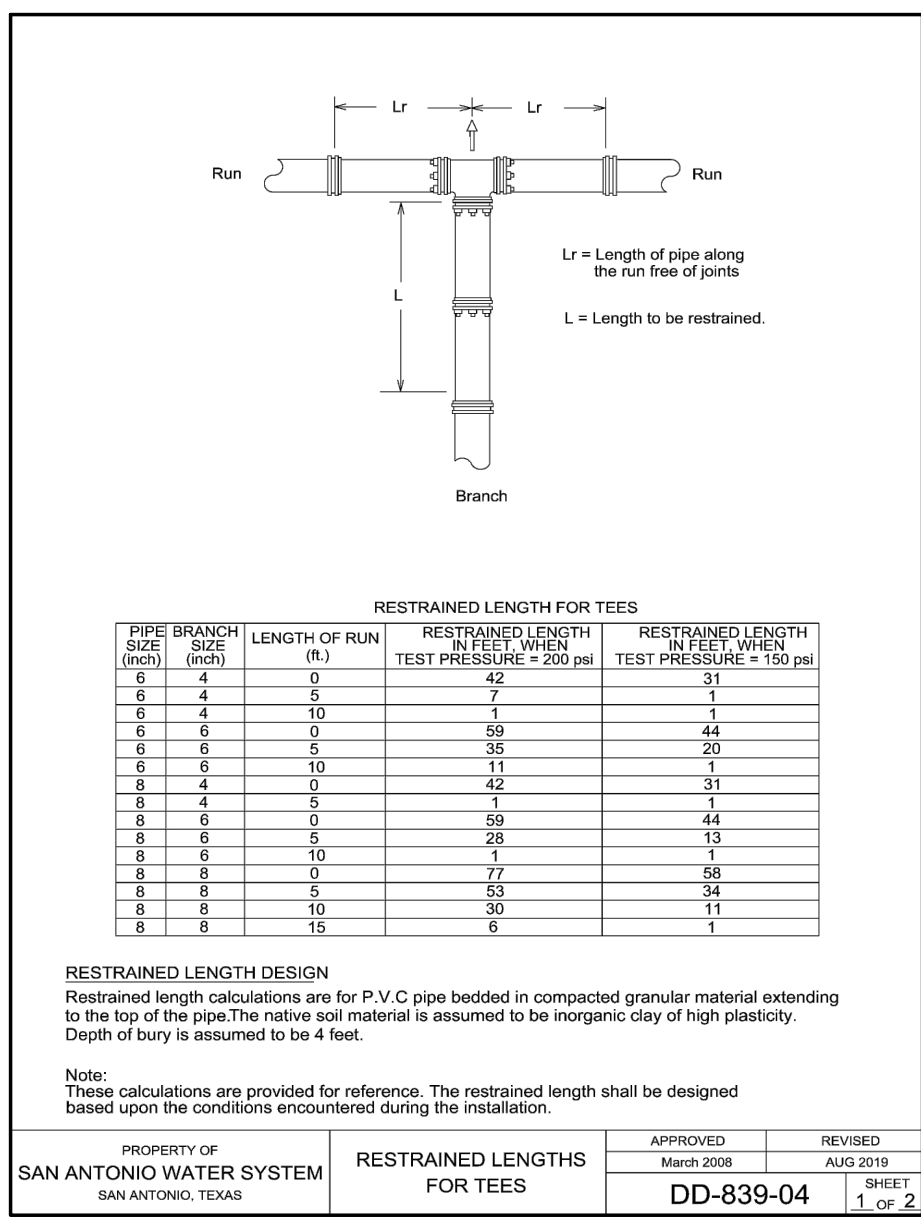
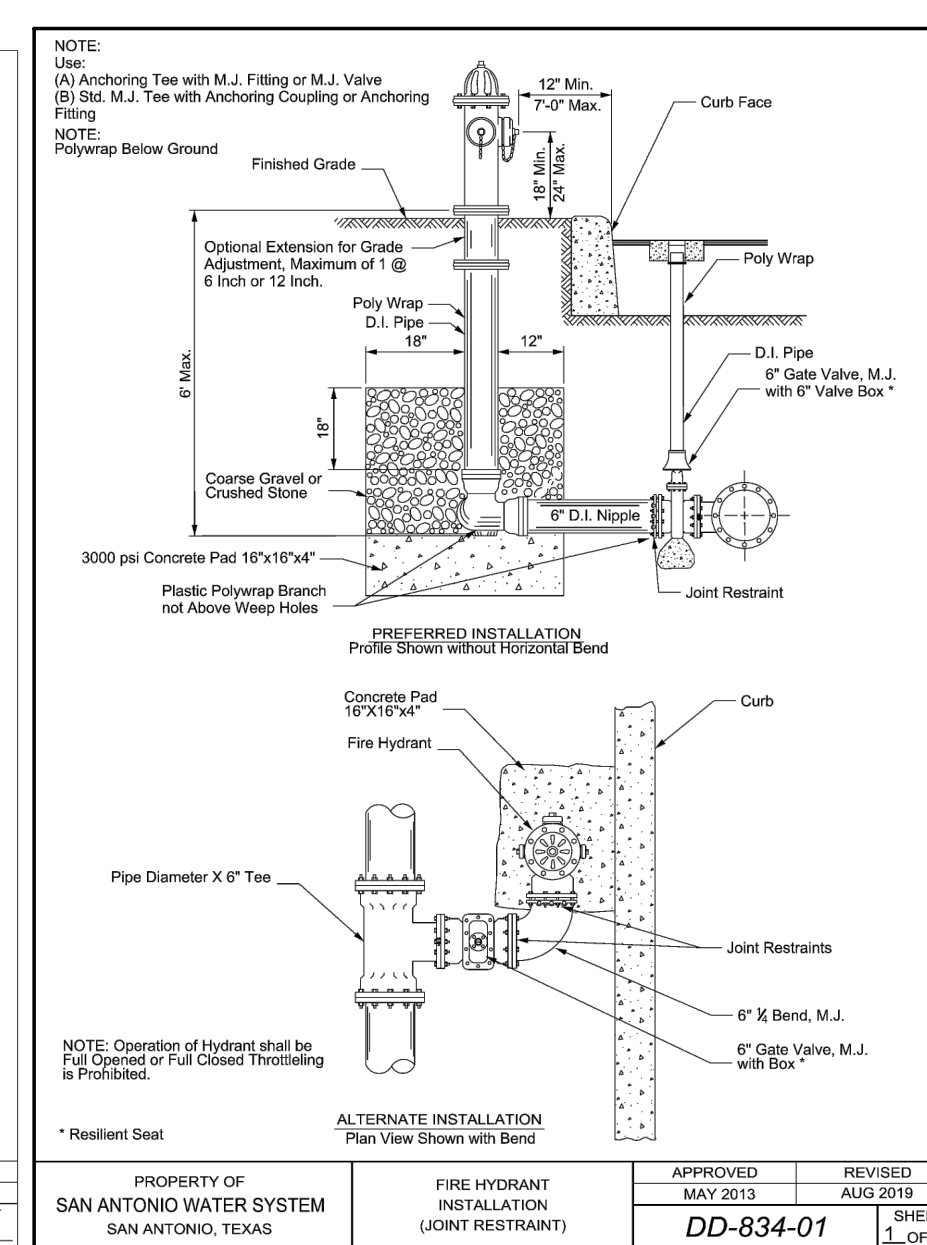
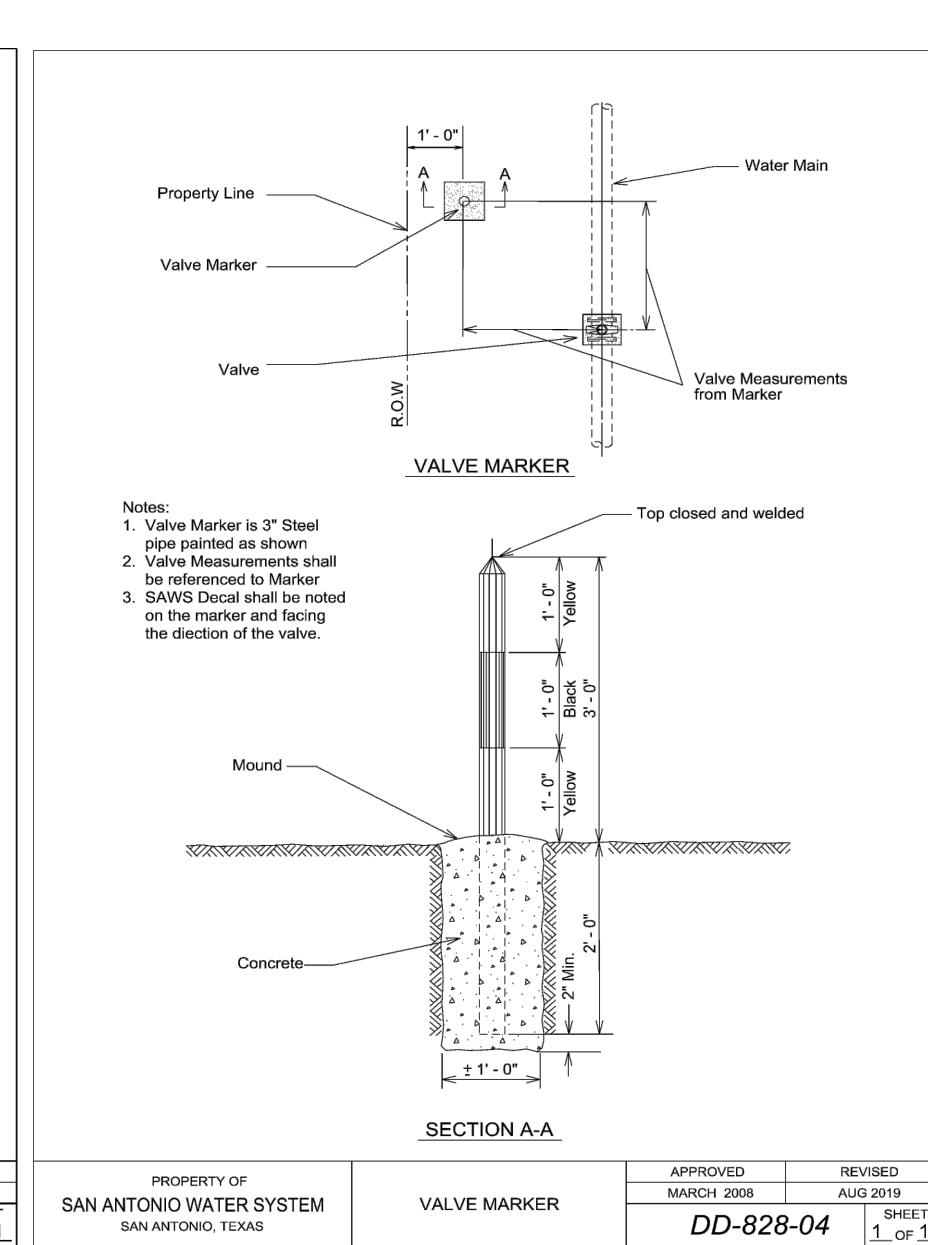
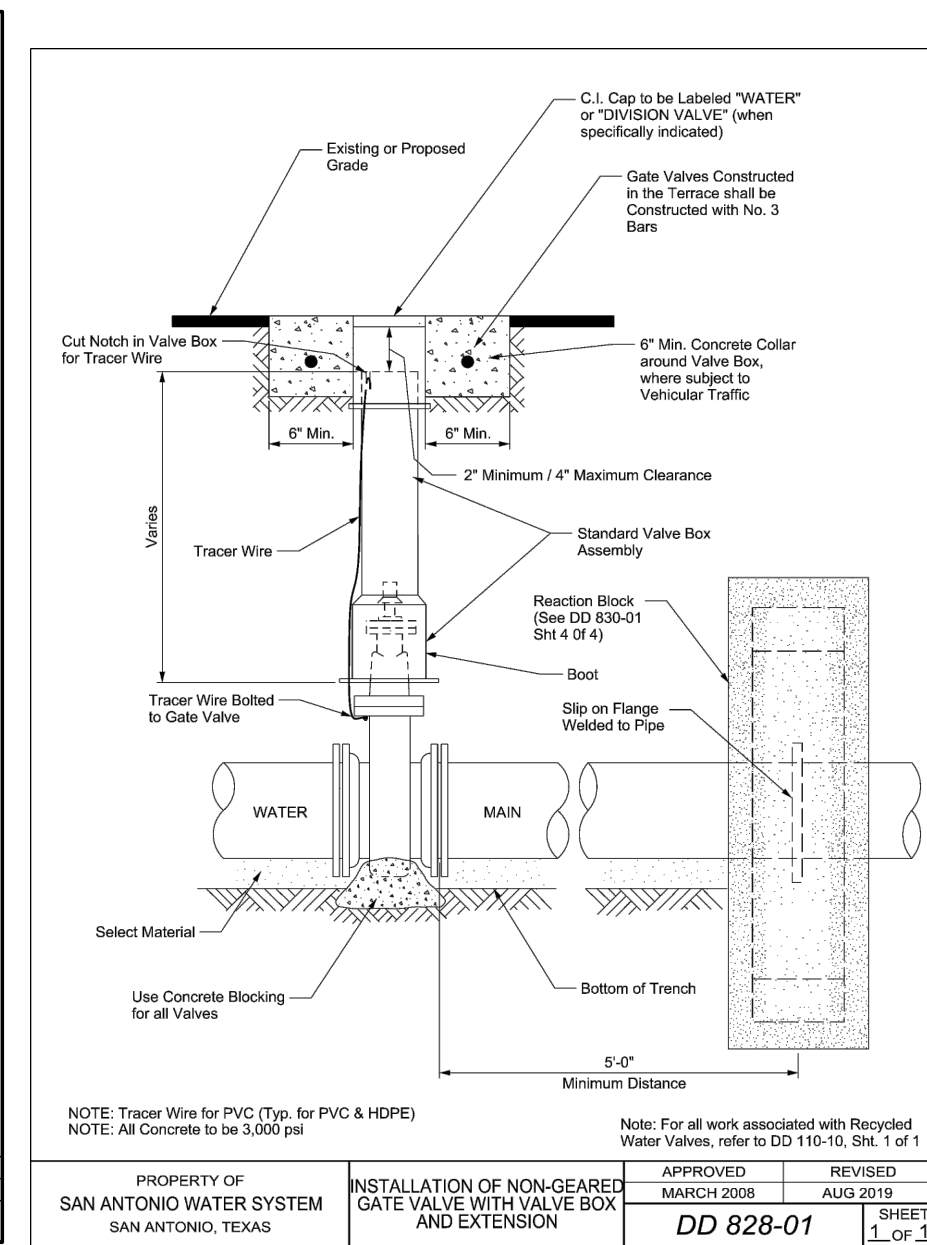
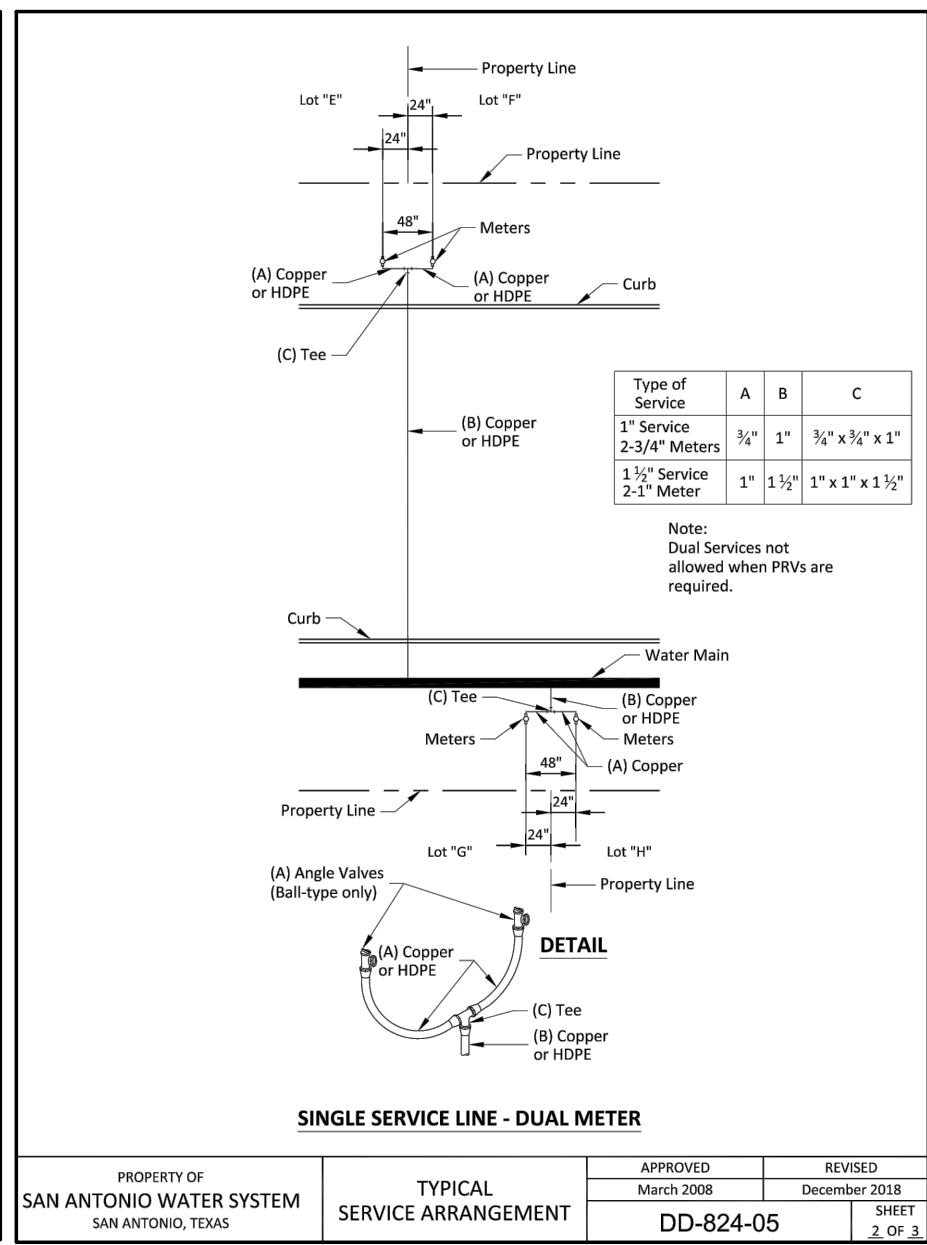
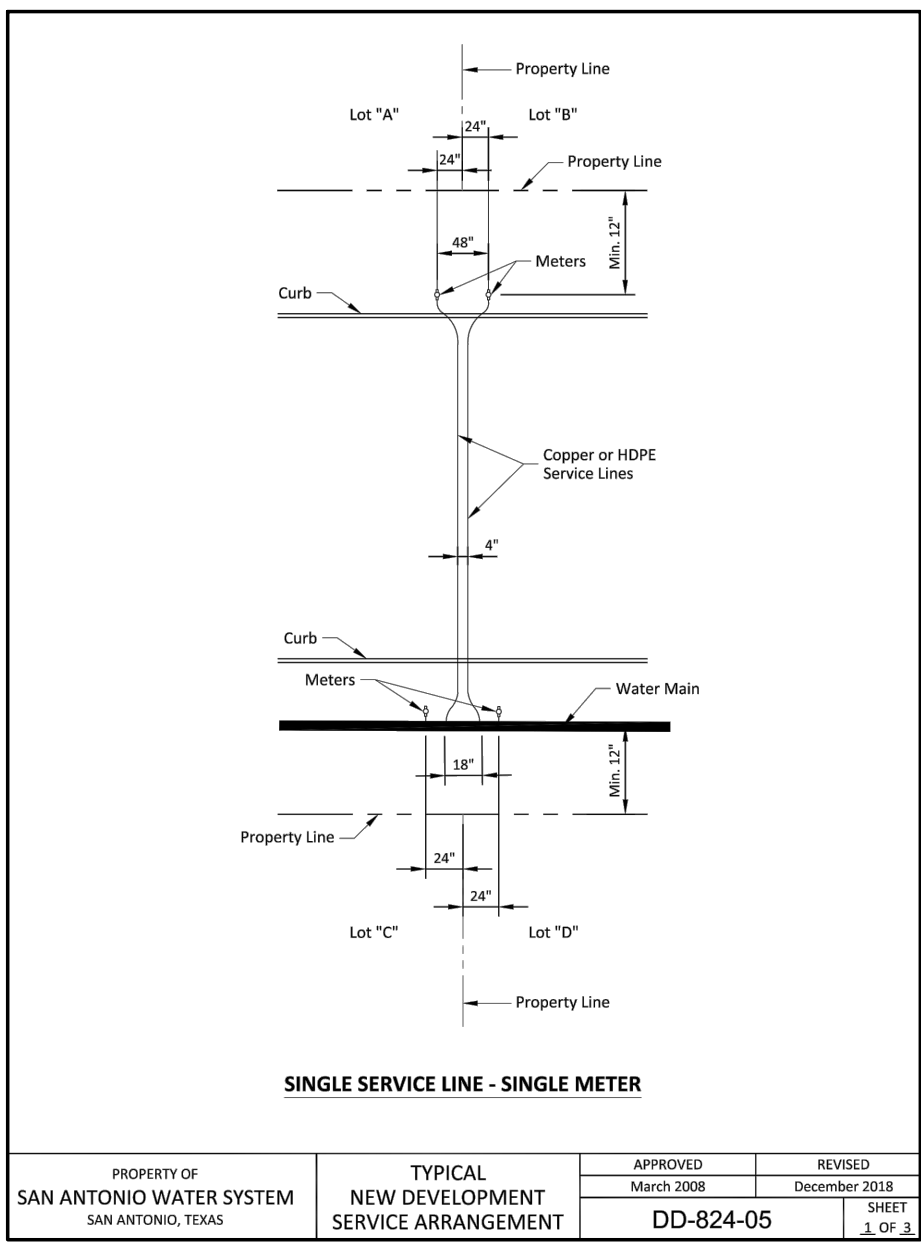
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

TOTAL LINEAR FOOTAGE OF PIPE: 8'

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000

OVERALL WATER DISTRIBUTION PLAN

PLAT NO. 22-11800608
JOB NO. 11680-58
DATE MARCH 2023
DESIGNER CB
CHECKED DRAWN CB
SHEET C4.00



WATER (SAWS PRESSURE ZONE 8)

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

ADDRESS: 5419 N LOOP 1604 E

CITY: SAN ANTONIO STATE: TX ZIP: 78247

PHONE: 210-501-1015 FAX: 210-501-1015

SAWS BLOCK MAP# 070602 TOTAL EDU'S 88 TOTAL ACREAGE 14.34

TOTAL LINEAR FOOTAGE OF PIPE 2,805 LF PLAT NO. 22-11800608

NUMBER OF LOTS 88 SAWS JOB NO. 22-1216

PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS

2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000

TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

RIVERSTONE UNIT - G8

SAN ANTONIO, TEXAS

WATER DISTRIBUTION PLAN DETAILS

PLAT NO. 22-11800608

JOB NO. 11680-58

DATE JANUARY 2023

DESIGNER CB

CHECKED BL DRAWN CB

SHEET C4.10

SAWS CONSTRUCTION NOTES
(LAST REVISED JANUARY 2022)

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," TAC TITLE 30 PART 1 CHAPTER 290.
- B. CURRENT TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE".
- C. CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION".
- D. CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".
- E. CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).
2. THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE APPROVED COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP) FROM THE CONSULTANT AND HAS BEEN NOTIFIED BY SAWS CONSTRUCTION INSPECTION DIVISION TO PROCEED WITH THE WORK AND HAS ARRANGED A MEETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK REQUIREMENTS. WORK COMPLETED BY THE CONTRACTOR WITHOUT AN APPROVED COUNTER PERMIT AND/OR A GCP WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE EXPENSE OF THE CONTRACTORS AND/OR THE DEVELOPER.
3. THE CONTRACTOR SHALL OBTAIN THE SAWS STANDARD DETAILS FROM THE SAWS WEBSITE, HTTP://WWW.SAWS.ORG/BUSINESS_CENTER/SPECS. UNLESS OTHERWISE NOTED WITHIN THE DESIGN PLANS.
4. THE CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION (210) 233-2973, ON NOTIFICATION PROCEDURES THAT WILL BE USED TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO BEGINNING ANY WORK.
5. LOCATION AND DEPTH OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO SAWS.
6. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES AT LEAST 1-2 WEEKS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES. REQUESTING MARKERS 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 CONSTWKRREQ@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 CONSTWKRREQ@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 ACCORDINGLY.
- FOR WATER MAINS 12" OR HIGHER: SAWS EMERGENCY OPERATIONS CENTER (210) 233-2014
2. ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS- CONTAINING MATERIAL (ACM), MAY BE LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCURS. SUCH WORK IS TO BE MADE UNDER SPECIAL SPECIFICATION ITEM NO. 3000, "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE".
3. VALVE REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN, THE CONTROL VALVE LOCATED ON THE ABANDONING BRANCH WILL BE REMOVED AND REPLACED WITH A CAP/PLUG. (NSP)
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 985 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 985 FEET, THE DEVELOPER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AN APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CODE OF THE CITY OF SAN ANTONIO. NO DUAL SERVICES ALLOWED FOR ANY LOT(S) IF *PRV IS/ARE REQUIRED FOR SUCH LOT(S). ONLY SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED. *NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE (PRV).
7. PIPE DISINFECTION WITH DRY HTH FOR PROJECTS LESS THAN 800 LINEAR FEET. (ITEM NO. 847.3): MAINS SHALL BE DISINFECTED WITH DRY HTH WHERE SHOWN IN THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE INSPECTOR, AND SHALL NOT EXCEED A TOTAL LENGTH OF 800 FEET. THIS METHOD OF DISINFECTION WILL ALSO BE FOLLOWED FOR MAIN REPAIRS. THE CONTRACTOR SHALL UTILIZE ALL APPROPRIATE SAFETY MEASURE TO PROTECT HIS PERSONNEL DURING DISINFECTION OPERATIONS.
8. BACKFLOW PREVENTION DEVICES:
- ALL IRRIGATION SERVICES WITHIN RESIDENTIAL AREAS ARE REQUIRED TO HAVE BACKFLOW PREVENTION DEVICES.
 - ALL COMMERCIAL BACKFLOW PREVENTION DEVICES MUST BE APPROVED BY SAWS PRIOR TO INSTALLATION.
9. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED, AND SAWS HAS RELEASED THE MAIN FOR TIE-IN AND USE.
10. DIVISION VALVES: DIVSION VALVES SHOWN ON PLANS OR NOT SHOWN ON PLANS BUT FOUND IN THE FIELD SHALL ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF AND ONLY WITH PRIOR WRITTEN APPROVAL OF THE SAWS DIRECTOR OF PRODUCTION AND OPERATIONS AND PROPER COORDINATION WITH ALL SAWS DEPARTMENTS. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE INSPECTOR A MINIMUM OF TWO WEEKS IN ADVANCE TO START THE COORDINATION PROCESS AND WILL BE INFORMED BY THE INSPECTOR WHEN THE DIVISION VALVE WILL BE OPERATED BY THE SAWS DISTRIBUTION AND COLLECTION STAFF. THE DIVISION VALVE CAN ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF MEMBER NOT THE INSPECTOR OR THE CONTRACTOR. OPERATION OF A DIVISION VALVE WITHOUT THE EXPRESS PRIOR WRITTEN APPROVAL OF THE SAWS DISTRIBUTION AND COLLECTION STAFF WILL CONSTITUTE A MATERIAL BREACH OF ANY WRITTEN SAWS CONTRACT OR PERMIT IN ADDITION TO SUBJECTING THE CONTRACTOR TO LIABILITY FOR ANY AND ALL FINES, FEES, OR OTHER DAMAGES, DIRECT OR CONSEQUENTIAL, THAT MAY ARISE FROM OR BE CAUSED BY THE OPERATION OF THE VALVE WITHOUT PRIOR WRITTEN PERMISSION. PLEASE BE INFORMED THAT THE APPROVAL OF THE OPERATION OR OPENING OR CLOSING OF A DIVISION VALVE CAN TAKE SEVERAL WEEKS FOR APPROVAL. DIVISION VALVES WILL ALSO HAVE A VALVE LID LABELED DIVISION VALVE AND A LOCKING MECHANISM INSTALLED WITH A KEY. THE LOCK AND KEY MECHANISM WILL BE PAID FOR BY THE CONTRACTOR BUT WILL BE INSTALLED BY SAWS DISTRIBUTION AND COLLECTION STAFF.

PROJECT WATER NOTES

1. MACHINE CHLORINATION BY THE S.A.W.S.
2. ALL 8", 12" AND 16" PIPE SHALL BE P.V.C. C-900 CLASS 235 DR 18.
3. ALL MAINS SHALL BE HYDROSTATICALLY TESTED BY THE CONTRACTOR, AS PROVIDED FOR IN THE SPECIAL CONDITIONS.
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 IT 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.
5. 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.
8. WATER METER BOXES IF APPLICABLE SHALL BE INSTALLED NINE FEET FROM FACE OF CURB TO CENTER OF THE METER BOX.
9. 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.
11. 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.
14. SAWS REQUIRES LEAD FREE (< 0.25%) FIRE HYDRANTS.
15. UNLESS OTHERWISE NOTED ALL SERVICES SHALL BE 3/4" WITH 5/8" METER.

WATER (SAWS PRESSURE ZONE 8)

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.			
ADDRESS: 5419 N LOOP 1604 E			
CITY: SAN ANTONIO	STATE: TX	ZIP: 78247	
PHONE#	PHONE #	FAX#	
SAWS BLOCK MAP# 070602 TOTAL EDU'S 88 TOTAL ACREAGE 14.34			
TOTAL LINEAR FOOTAGE OF PIPE: 8' - 2,805 LF PLAT NO. 22-11800608			
NUMBER OF LOTS 88		SAWS JOB NO. XXXX-XX	

DATE	NO.	REVISION



Caleb M. Chance
10/31/22

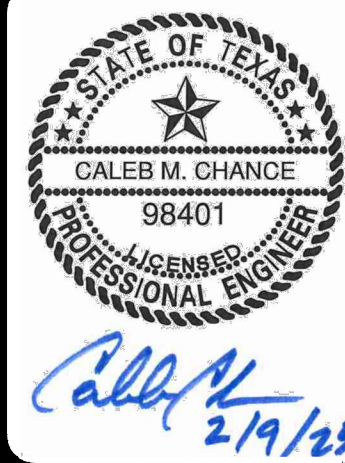
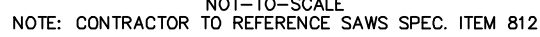
**PAPE-DAWSON
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

RIVERSTONE UNIT - G8
SAN ANTONIO, TEXAS

WATER DISTRIBUTION PLAN NOTES

PLAT NO.	22-11800608
JOB NO.	11680-58
DATE	OCTOBER 2022
DESIGNER	CB
CHECKED	BL DRAWN CB
SHEET	C4.11



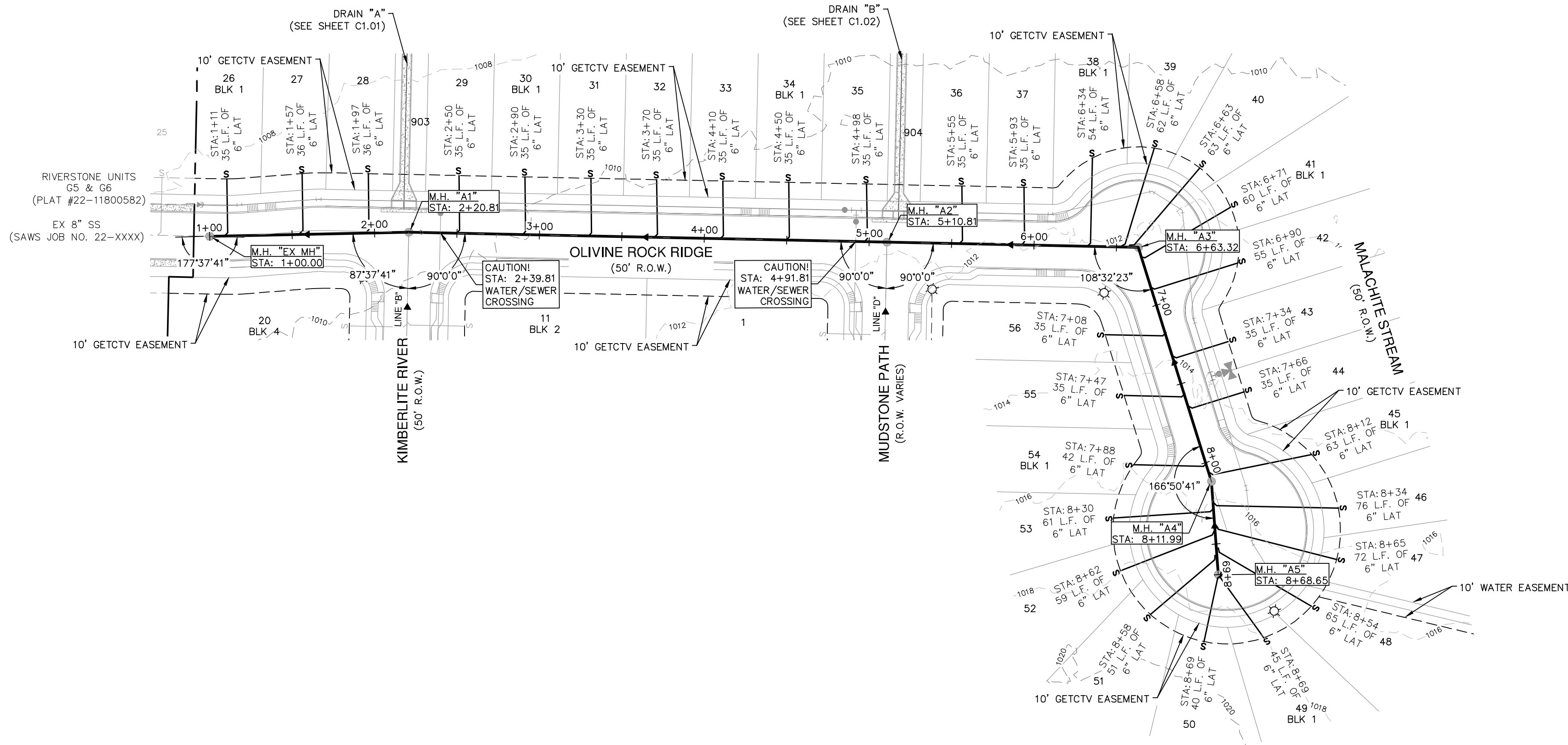
SEWER	
DEVELOPER'S NAME: <u>CONTINENTAL HOMES OF TEXAS, L.P.</u>	
ADDRESS: <u>5419 N LOOP 1604 E</u>	
CITY: <u>SAN ANTONIO</u>	STATE: <u>TX</u> ZIP: <u>78247</u>
PHONE# <u>PHONE #</u>	FAX# _____
SAWS BLOCK MAP# <u>070802</u> TOTAL EDU# <u>B8</u> TOTAL ACREAGE <u>14.34</u>	
TOTAL LINEAR FOOTAGE OF PIPE: <u>8" 2,431 LF</u> PLAT NO. <u>22-11800608</u>	
NUMBER OF LOTS <u>B8</u>	SAWS JOB NO. <u>22-1713</u>

RIVERSTONE UNIT - G8
SAN ANTONIO, TEXAS
OVERALL SANITARY SEWER PLAN

PLAT NO. 22-1180060
JOB NO. 11680-58
DATE JANUARY 2023
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C5.00

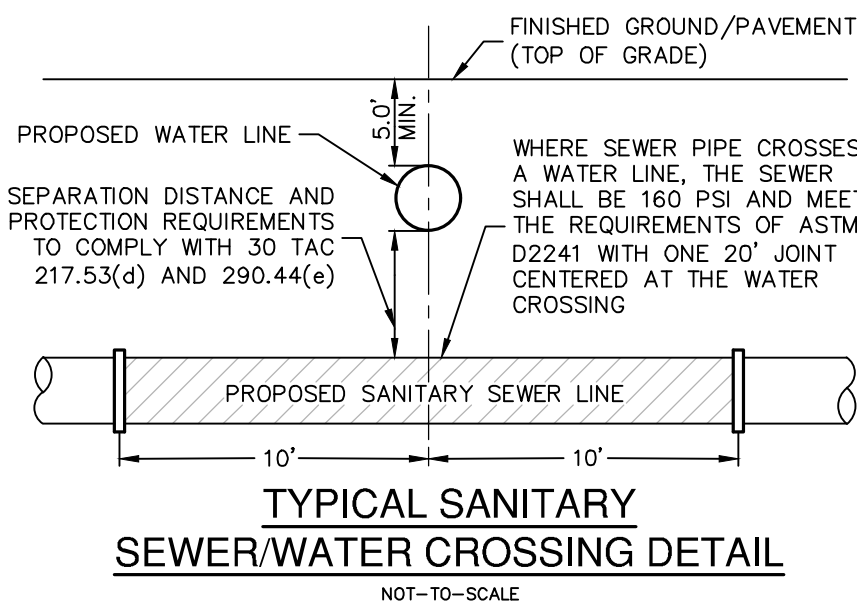
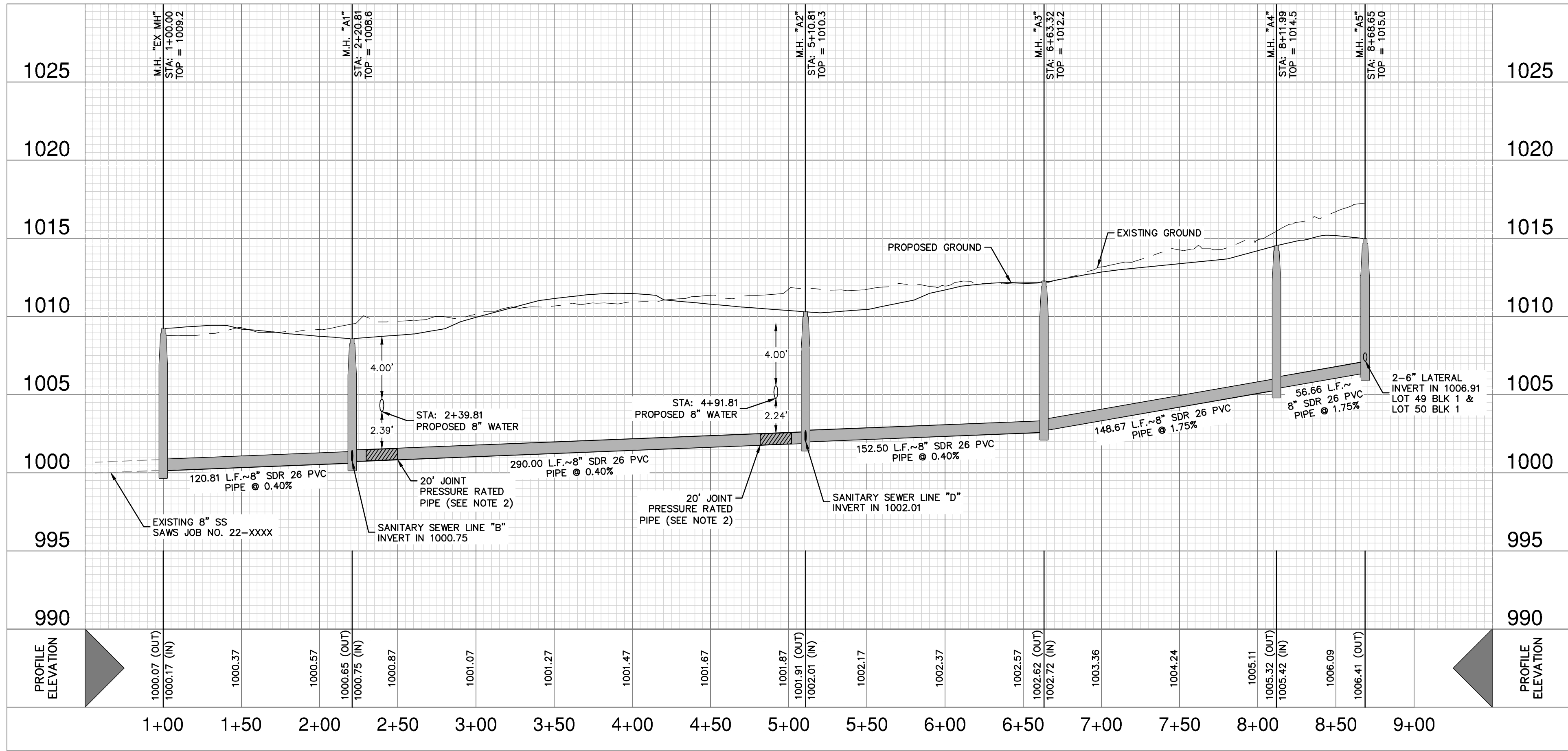
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SANITARY SEWER LINE "A"
STA. 1+00.00 TO END

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



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 THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND 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/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

SEWER

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP 1604 E
CITY: SAN ANTONIO STATE: TX ZIP: 78247
PHONE: PHONE # FAX #
SAWS BLOCK MAP# 070602 TOTAL EDU'S 88 TOTAL ACREAGE 14.34
TOTAL LINEAR FOOTAGE OF PIPE: 8" 2,431 LF PLAT NO. 22-11800608
NUMBER OF LOTS 88 SAWS JOB NO. XXXX-XX

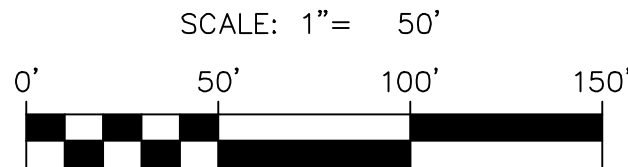
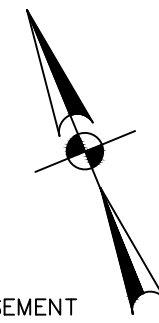
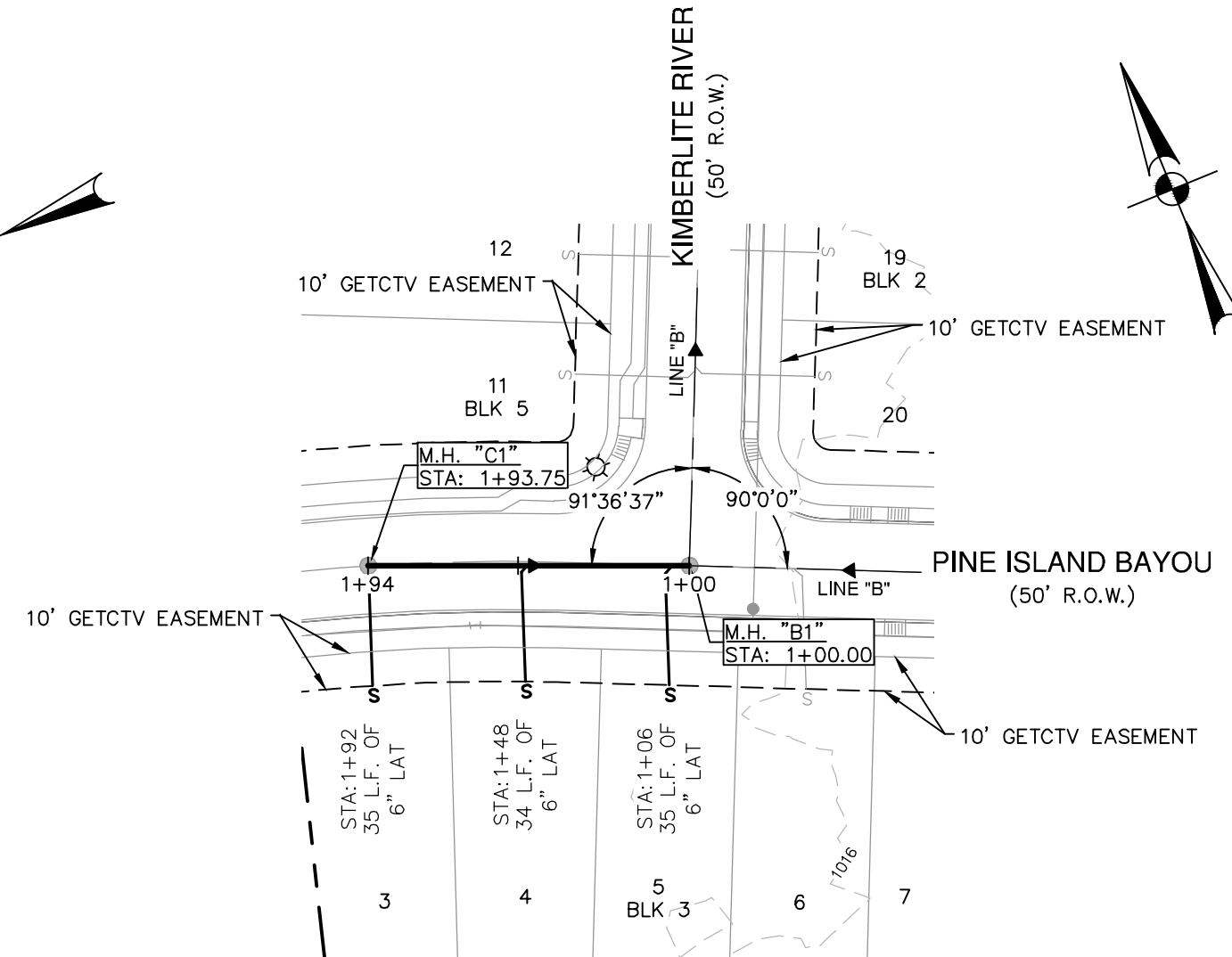
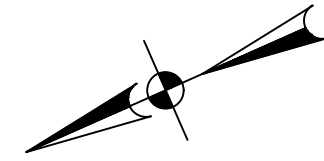
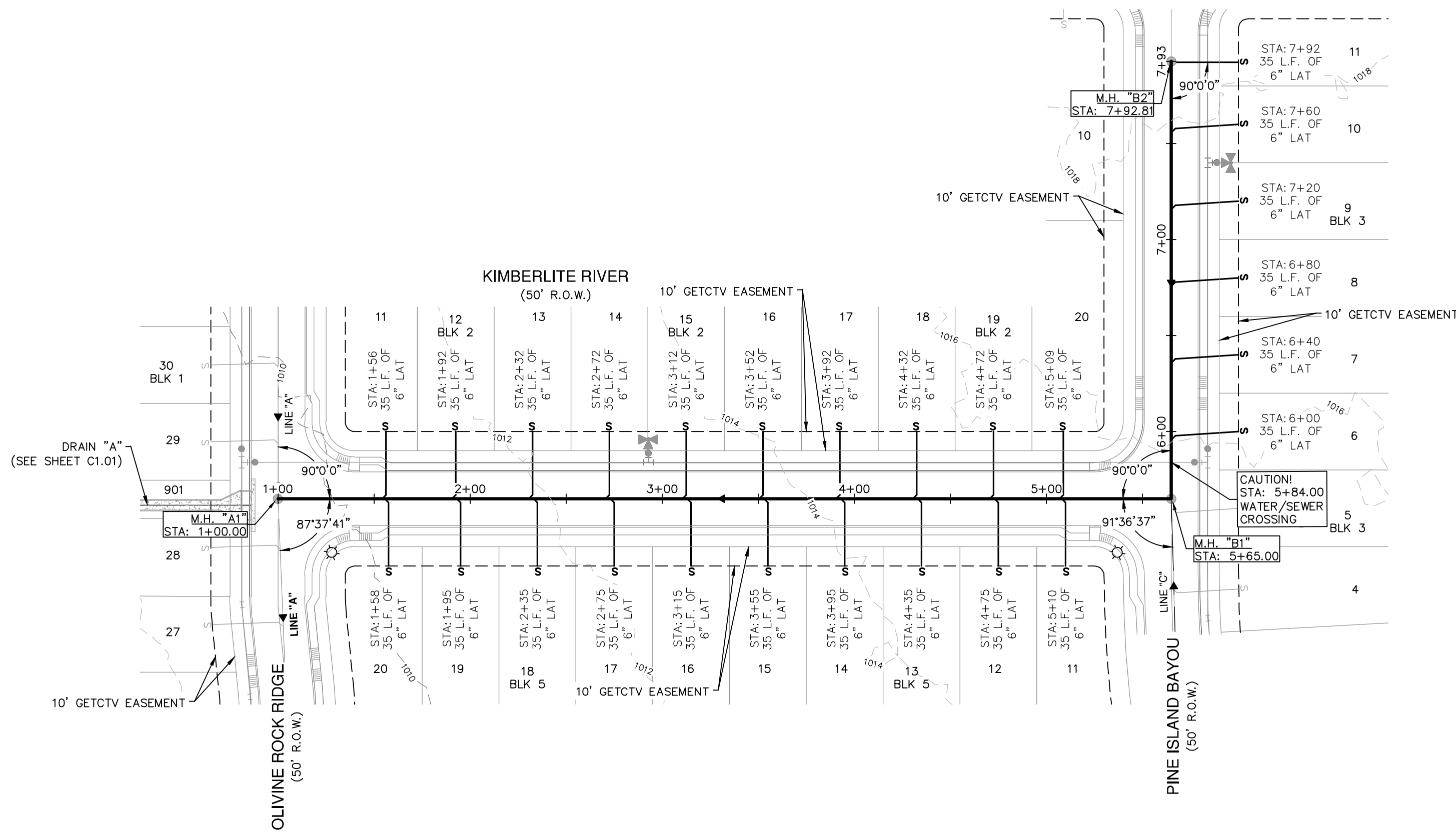
PAPE-DAWSON
ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008890

RIVERSTONE UNIT - G8
SAN ANTONIO, TEXAS
SANITARY SEWER LINE A PLAN & PROFILE
STA. 1+00.00 TO END

PLAT NO. 22-11800608
JOB NO. 11680-58
DATE OCTOBER 2022
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C5.01

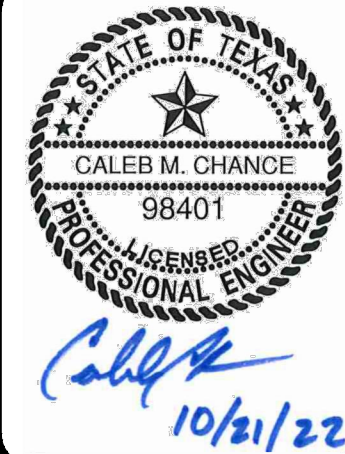
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SEWER LEGEND

PROJECT LIMITS	
EXISTING WATER	
EXISTING SEWER	
PROPOSED SEWER	
PROPOSED WATER	
PROPOSED SEWER LATERAL	

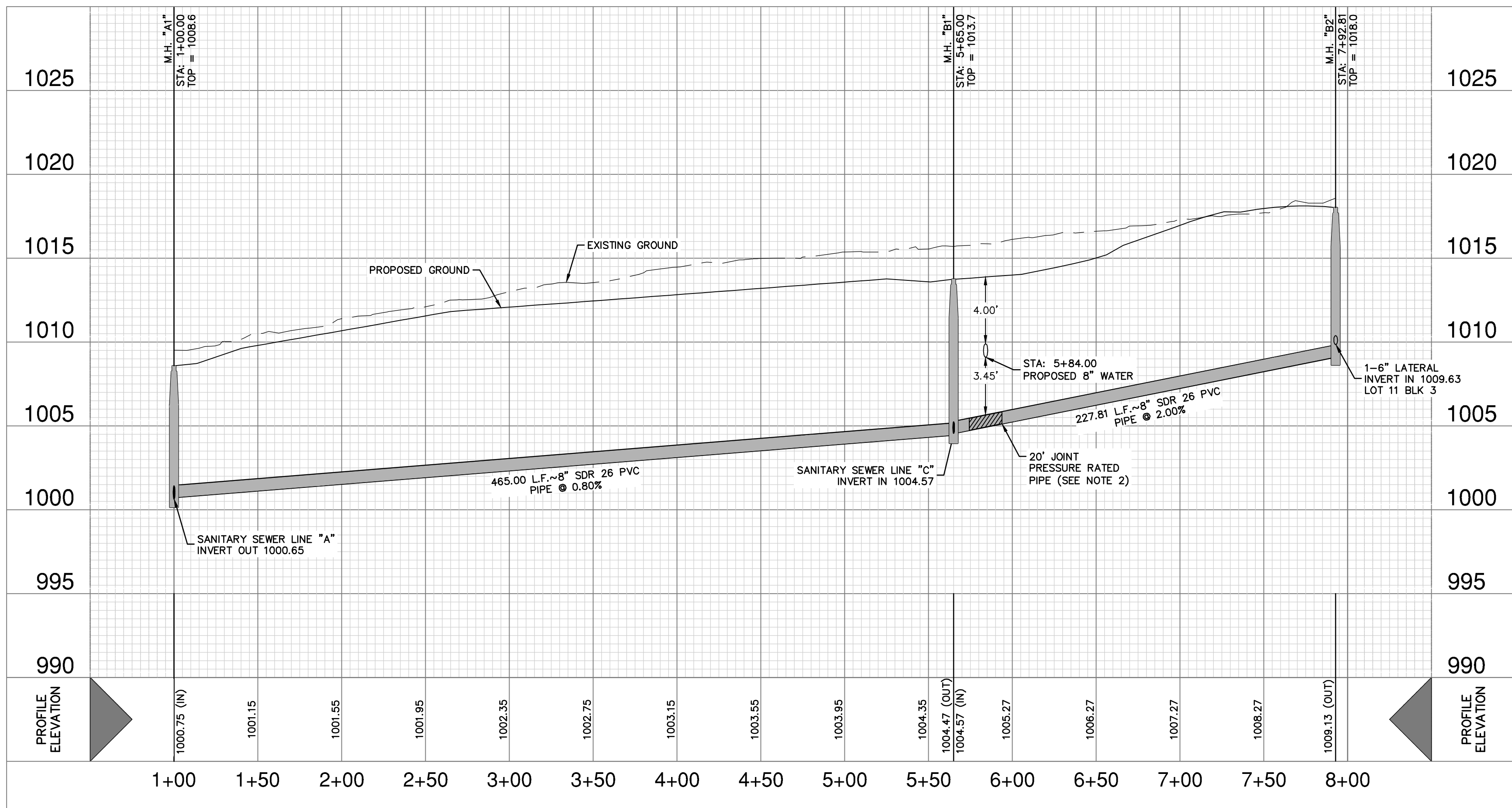


PAPE-DAWSON
ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

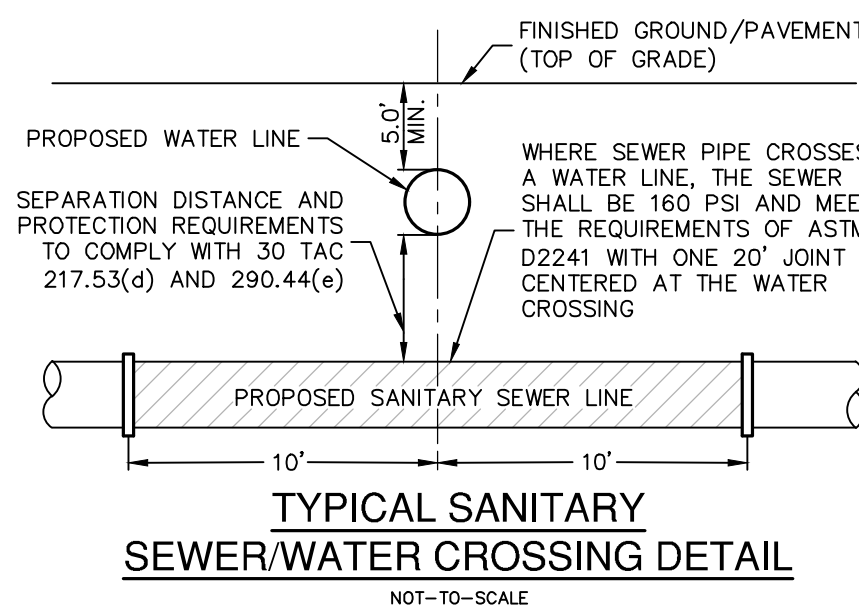
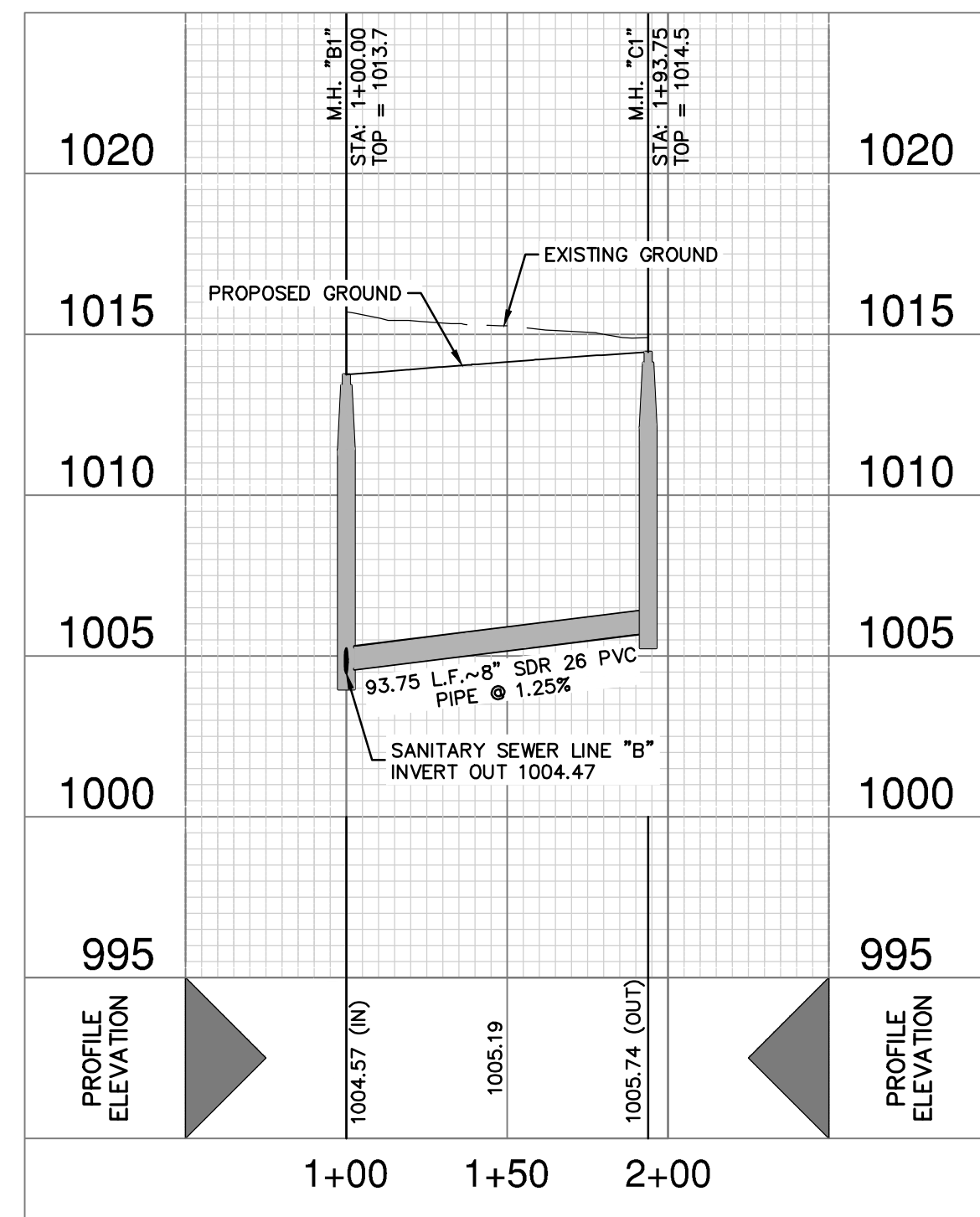
SANITARY SEWER LINE "B"
STA. 1+00.00 TO END

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



SANITARY SEWER LINE "C"
STA. 1+00.00 TO END

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



CAUTION!!

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TRENCH EXCAVATION SAFETY PROTECTION:

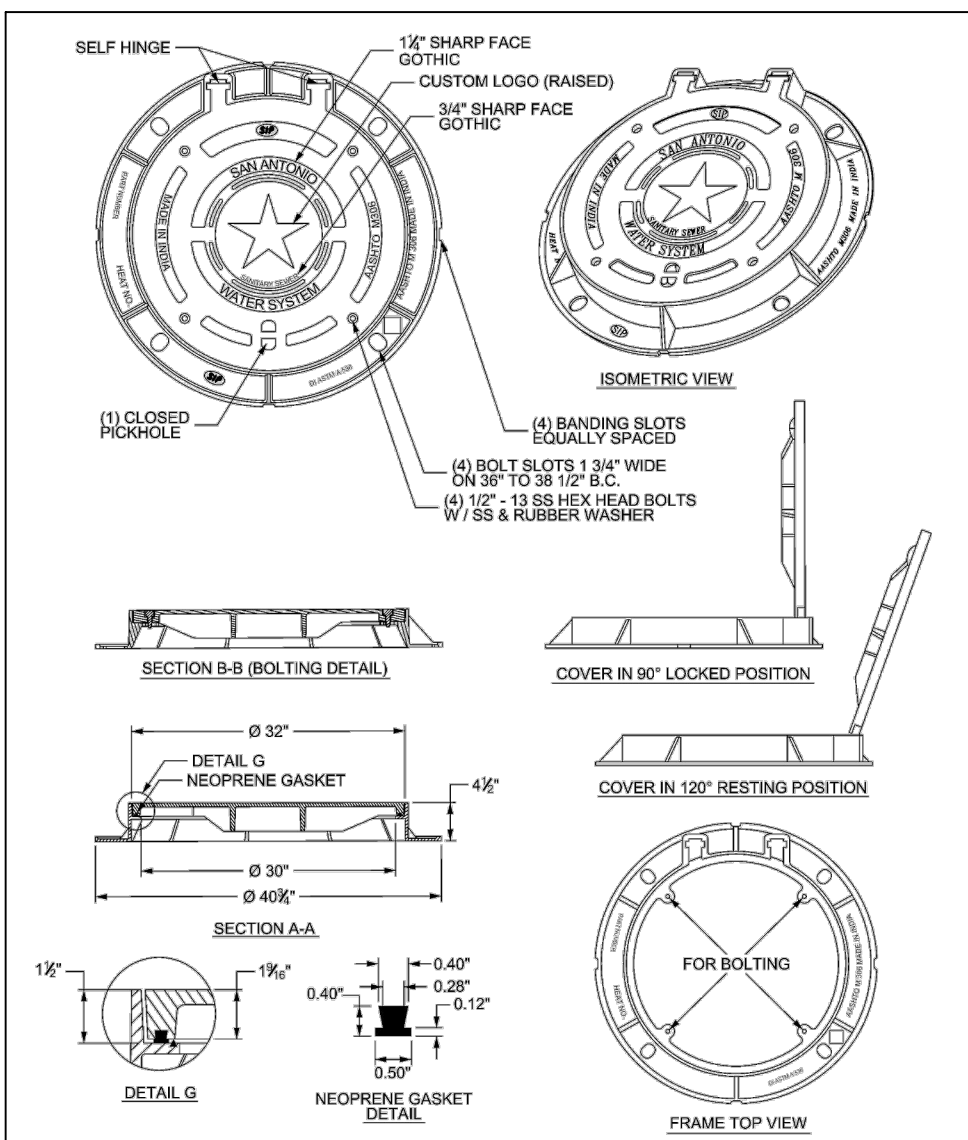
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

SEWER

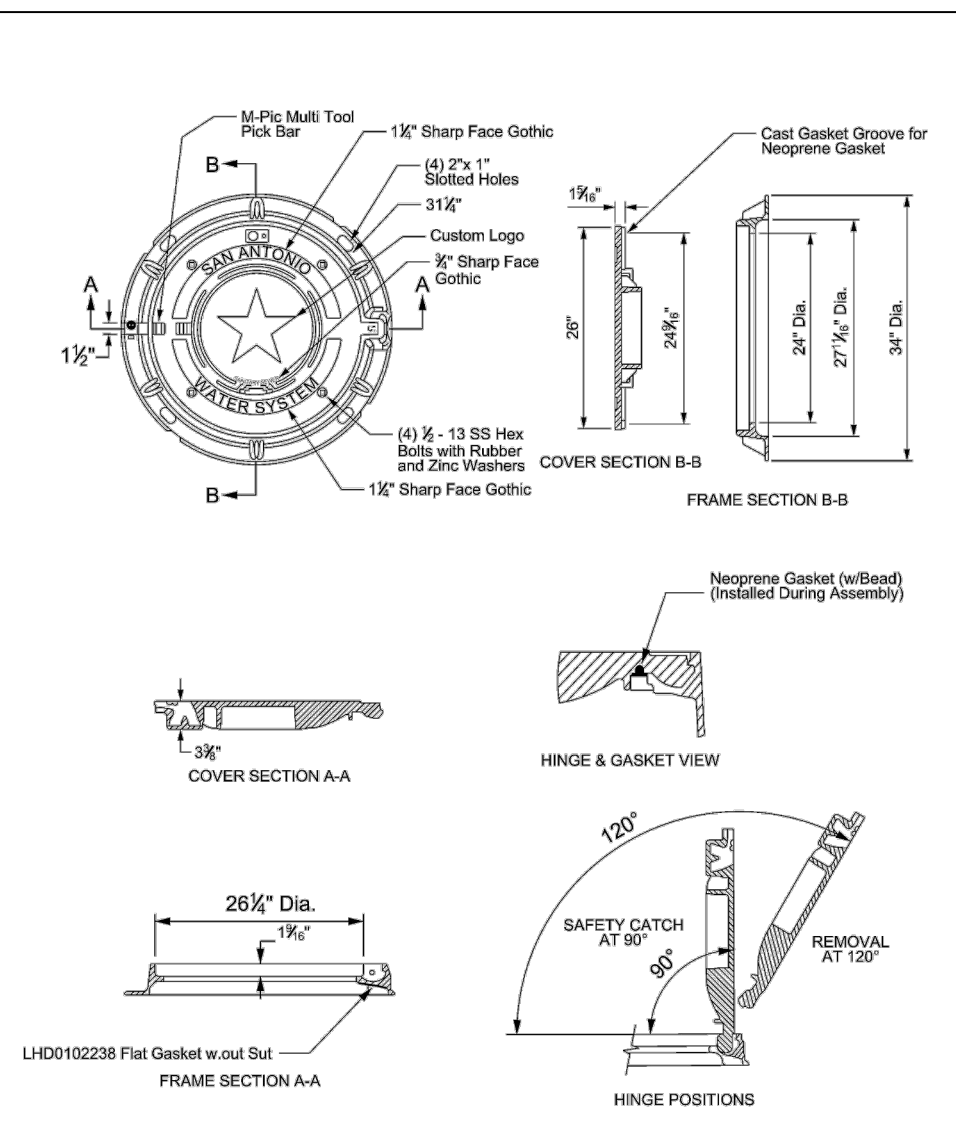
DEVELOPER'S NAME:	CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS:	5419 N LOOP 1604 E
CITY:	SAN ANTONIO
STATE:	TX
ZIP:	78247
PHONE #	PHONE #
FAX #	FAX #
SAWS BLOCK MAP #	070602
TOTAL EDU'S	88
TOTAL ACREAGE	14.34
TOTAL LINEAR FOOTAGE OF PIPE:	8" 2,431 LF
PLAT NO.	22-11800608
NUMBER OF LOTS	88
SAWS JOB NO.	XXXX-XX

RIVERSTONE UNIT - G8
SAN ANTONIO, TEXAS
SANITARY SEWER LINE B & C PLAN & PROFILE
SS LINE B - STA. 1+00.00 TO END
SS LINE C - STA. 1+00.00 TO END

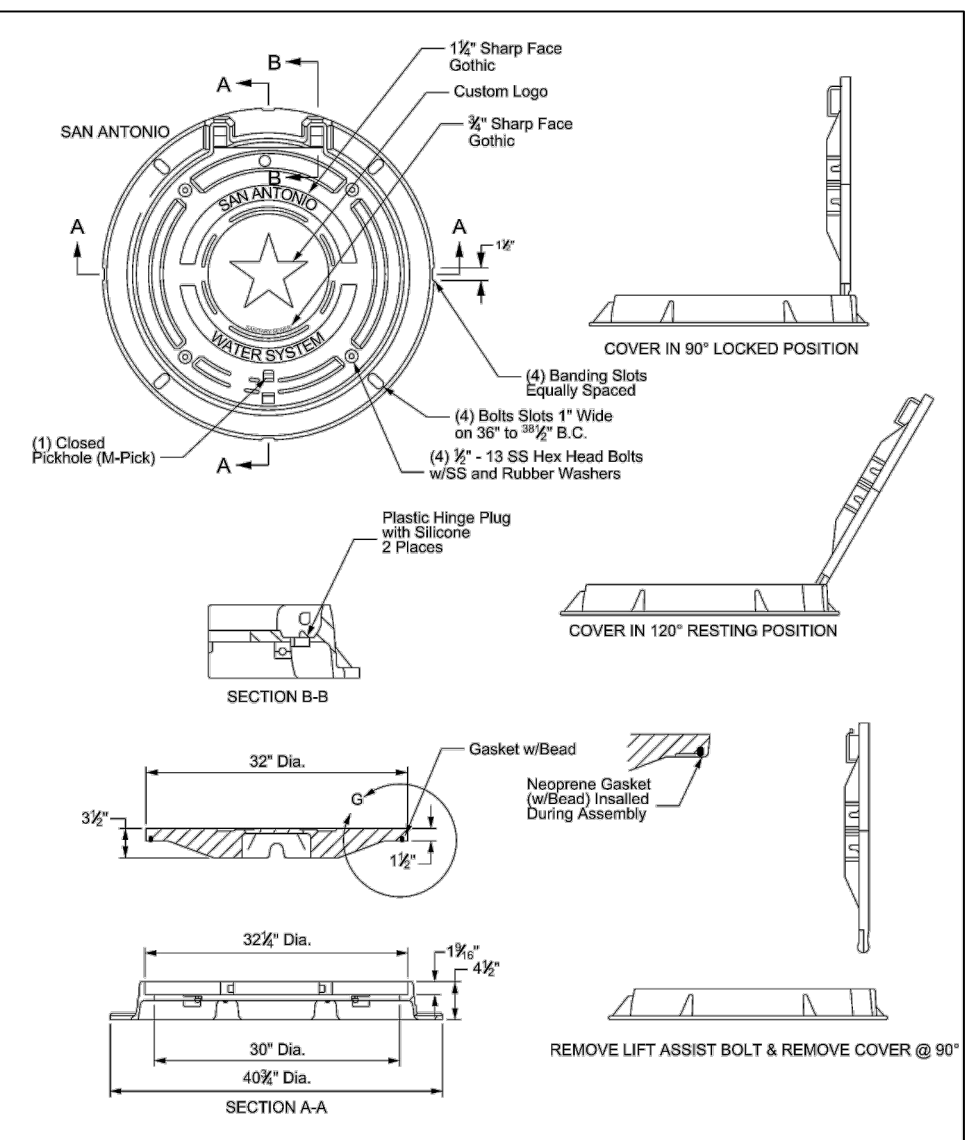
PLAT NO. 22-11800608
JOB NO. 11680-58
DATE OCTOBER 2022
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C5.02



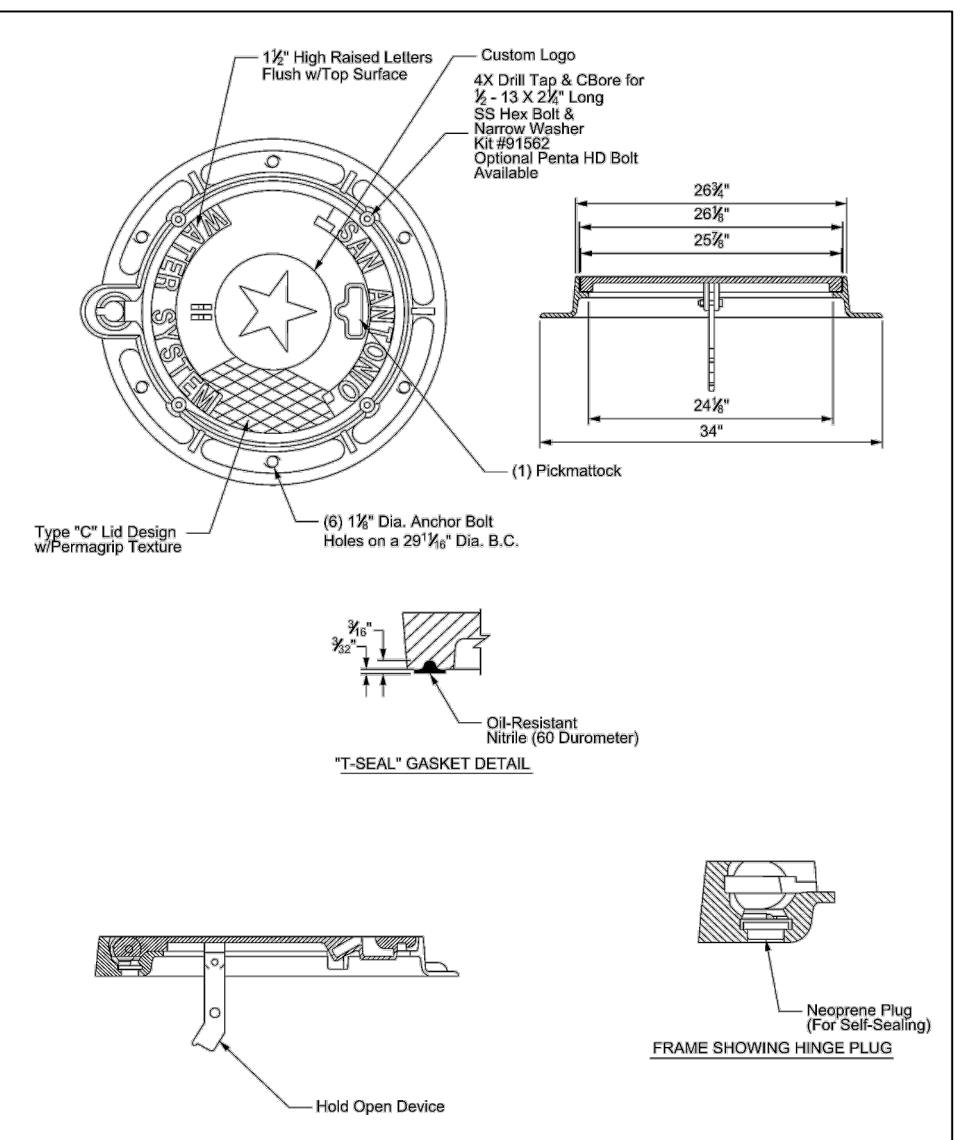
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	30" MANHOLE RING AND COVER DETAIL	APPROVED MARCH 2008 DD 852-07	REVISED AUG 2019 SHEET 1 OF 5
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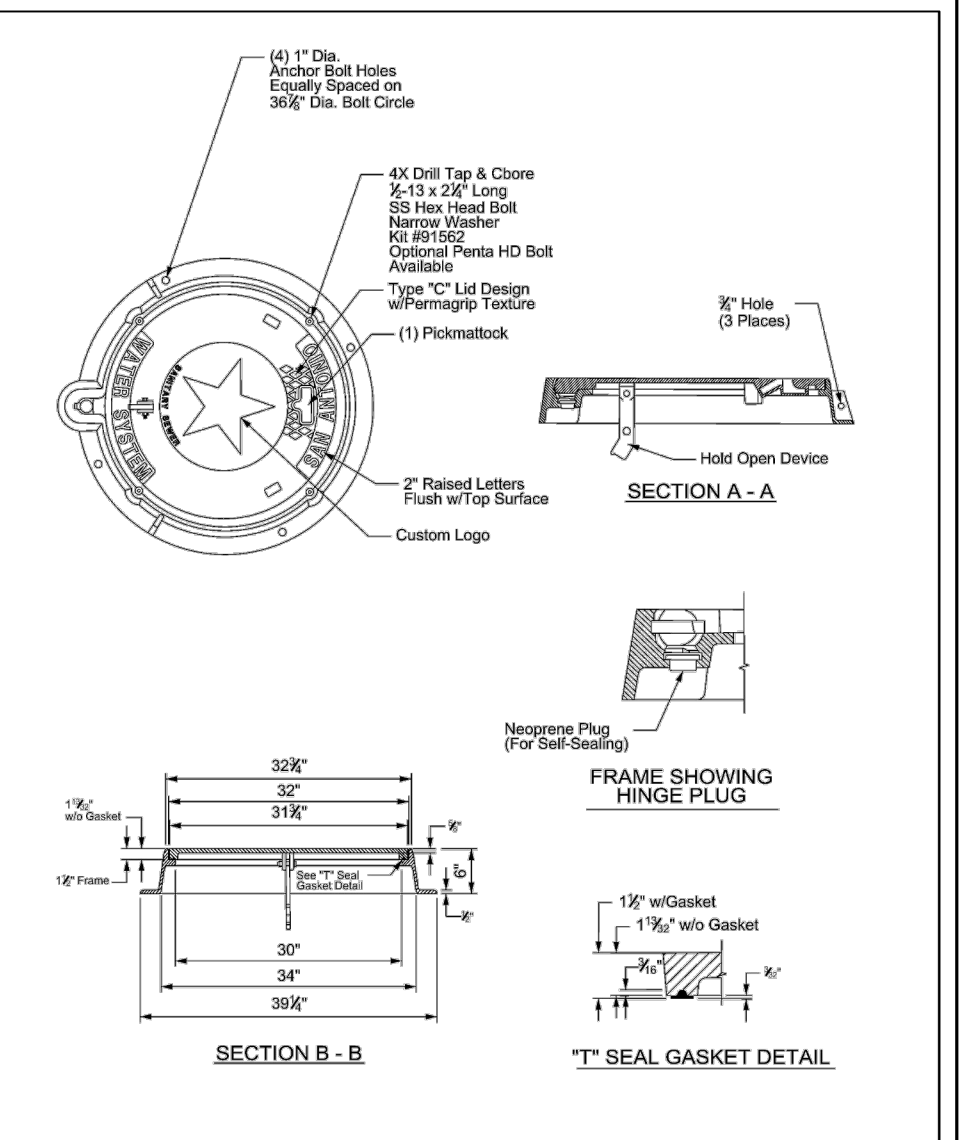
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	MANHOLE RING AND COVER DETAIL	APPROVED MARCH 2008 DD 852-07	REVISED AUG 2019 SHEET 2 OF 5
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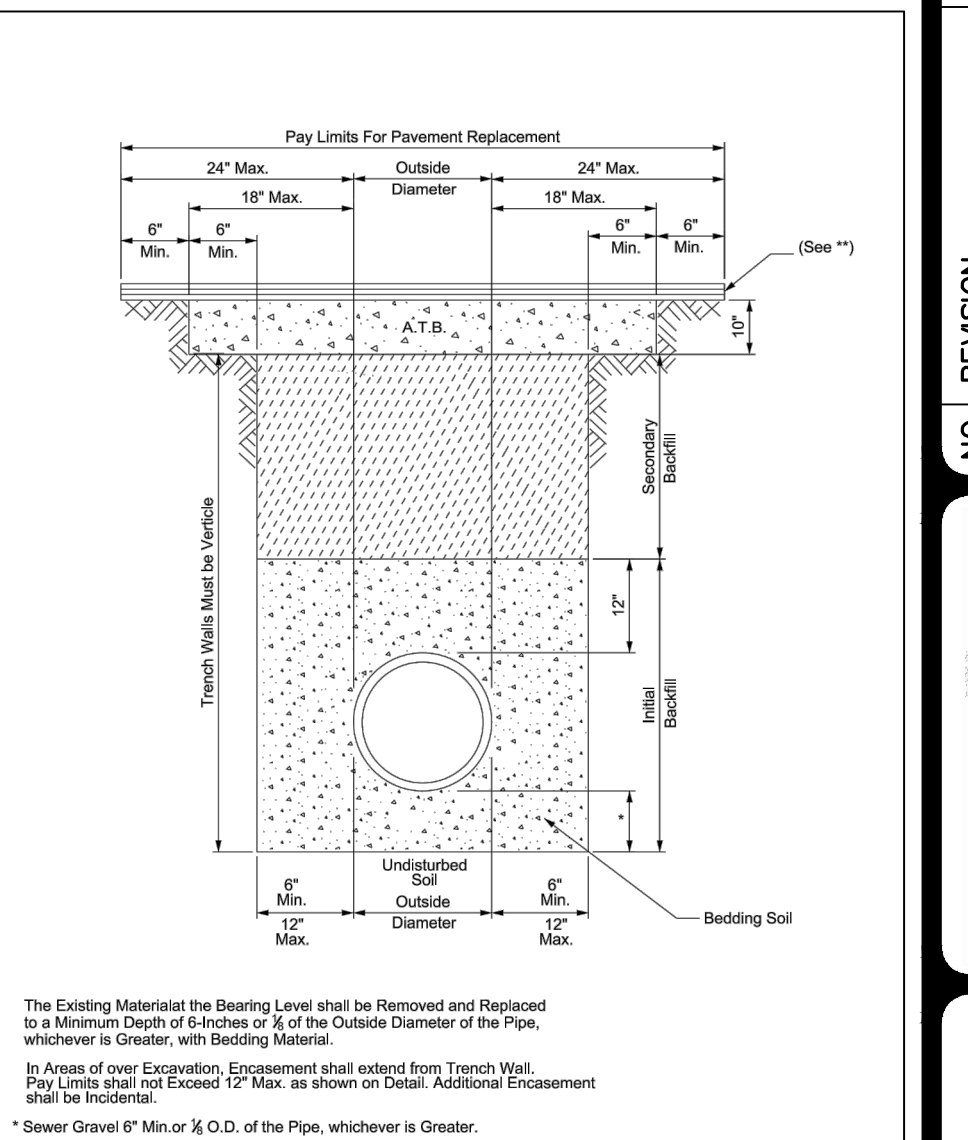
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	MANHOLE RING AND COVER DETAIL	APPROVED MARCH 2008 DD 852-07	REVISED AUG 2019 SHEET 3 OF 5
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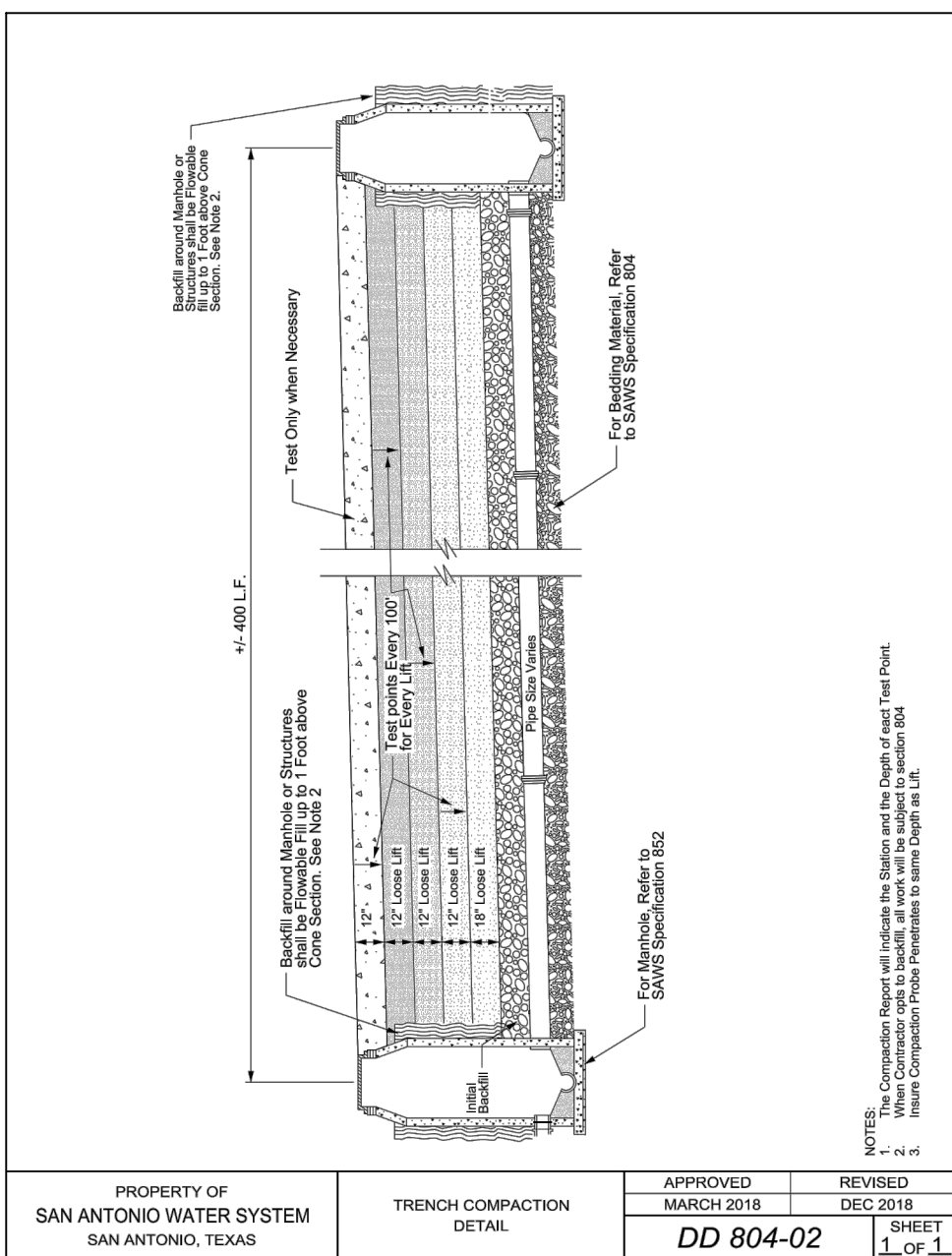
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	MANHOLE RING AND COVER DETAIL	APPROVED MARCH 2008 DD 852-07	REVISED AUG 2019 SHEET 4 OF 5
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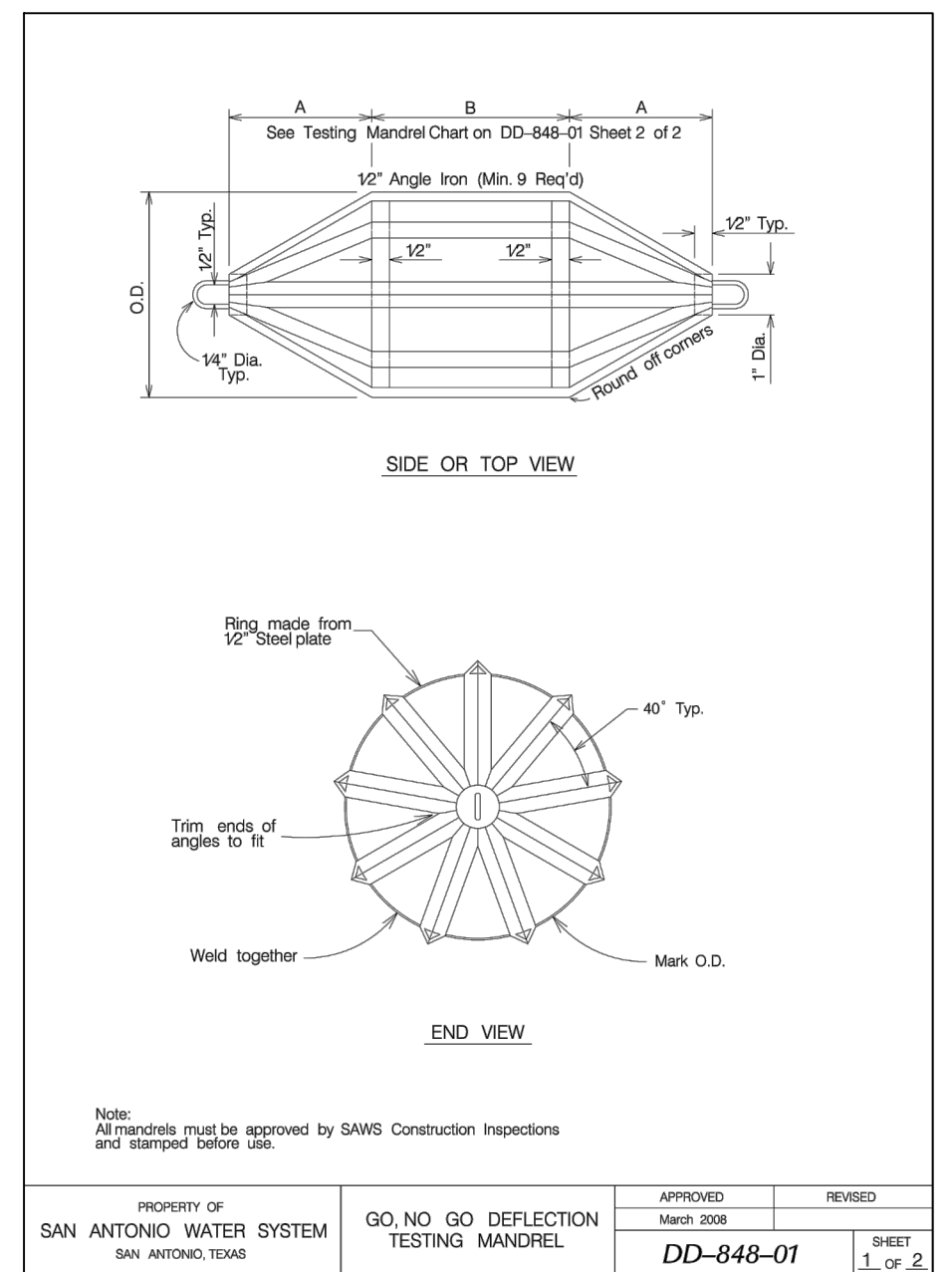
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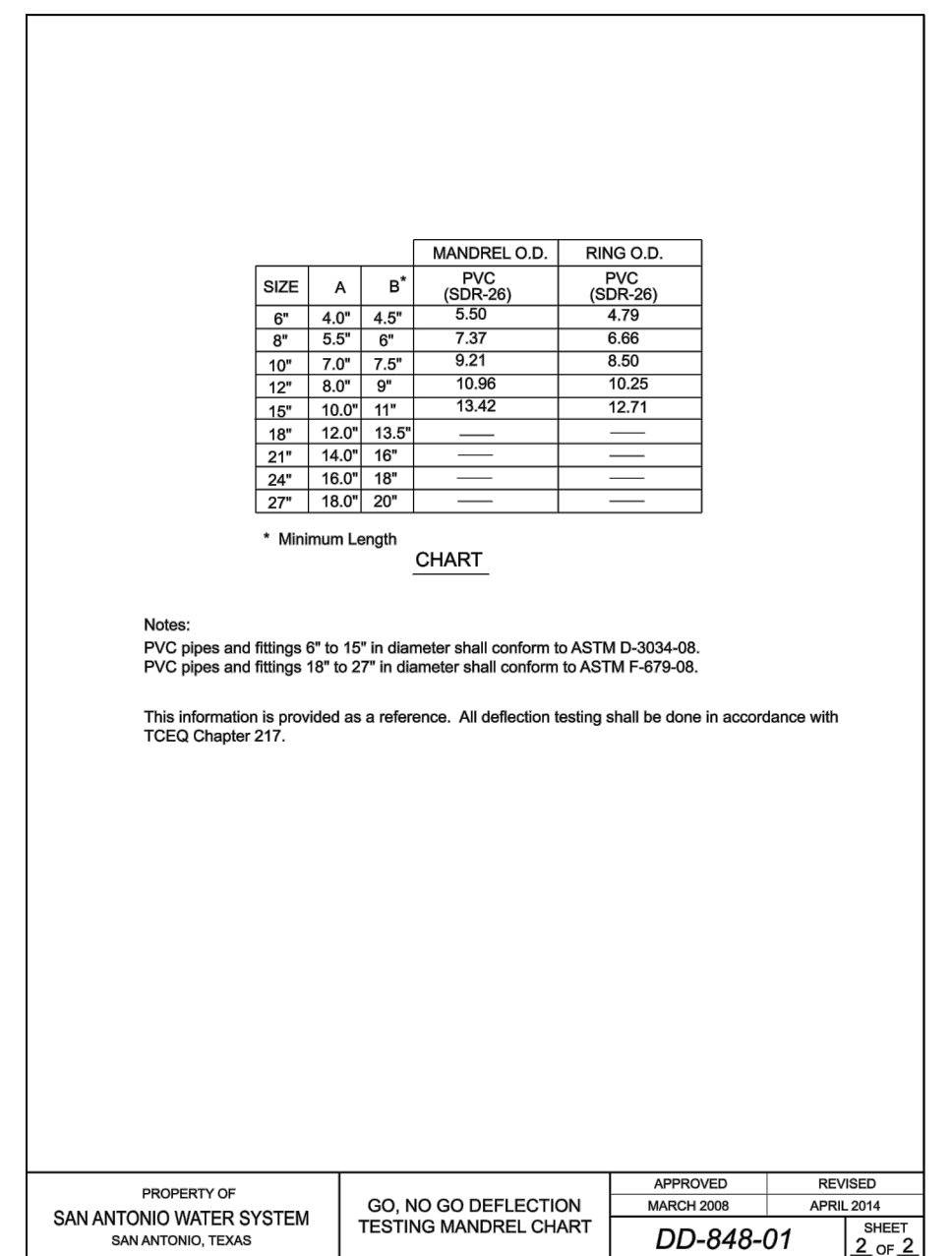
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	SANITARY SEWER PIPE LAID IN TRENCH	APPROVED MARCH 2008 DD-804-01	REVISED DEC 2018 SHEET 1 OF 1
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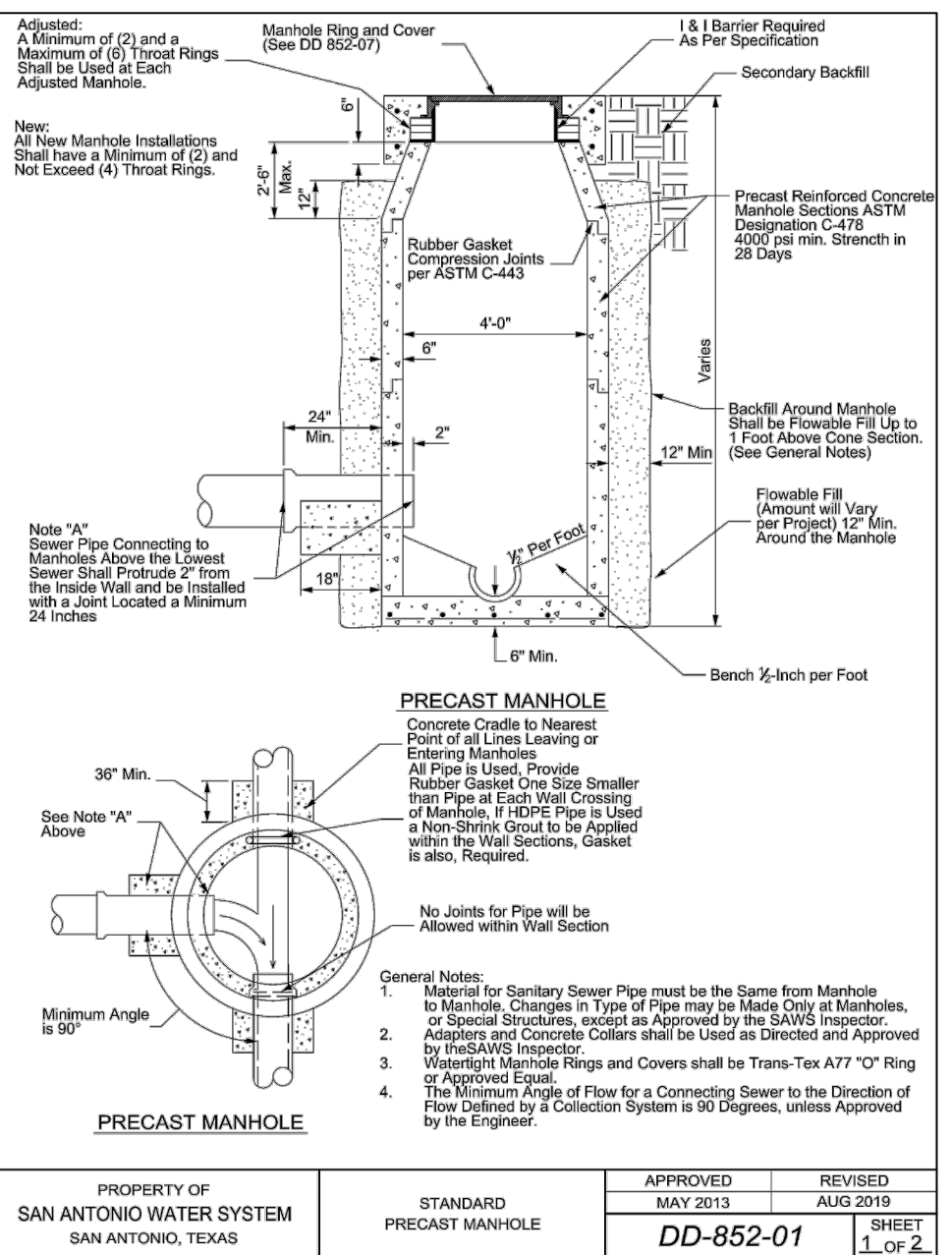
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	TRENCH COMPACTION DETAIL	APPROVED MARCH 2008 DD 804-02	REVISED DEC 2018 SHEET 1 OF 1
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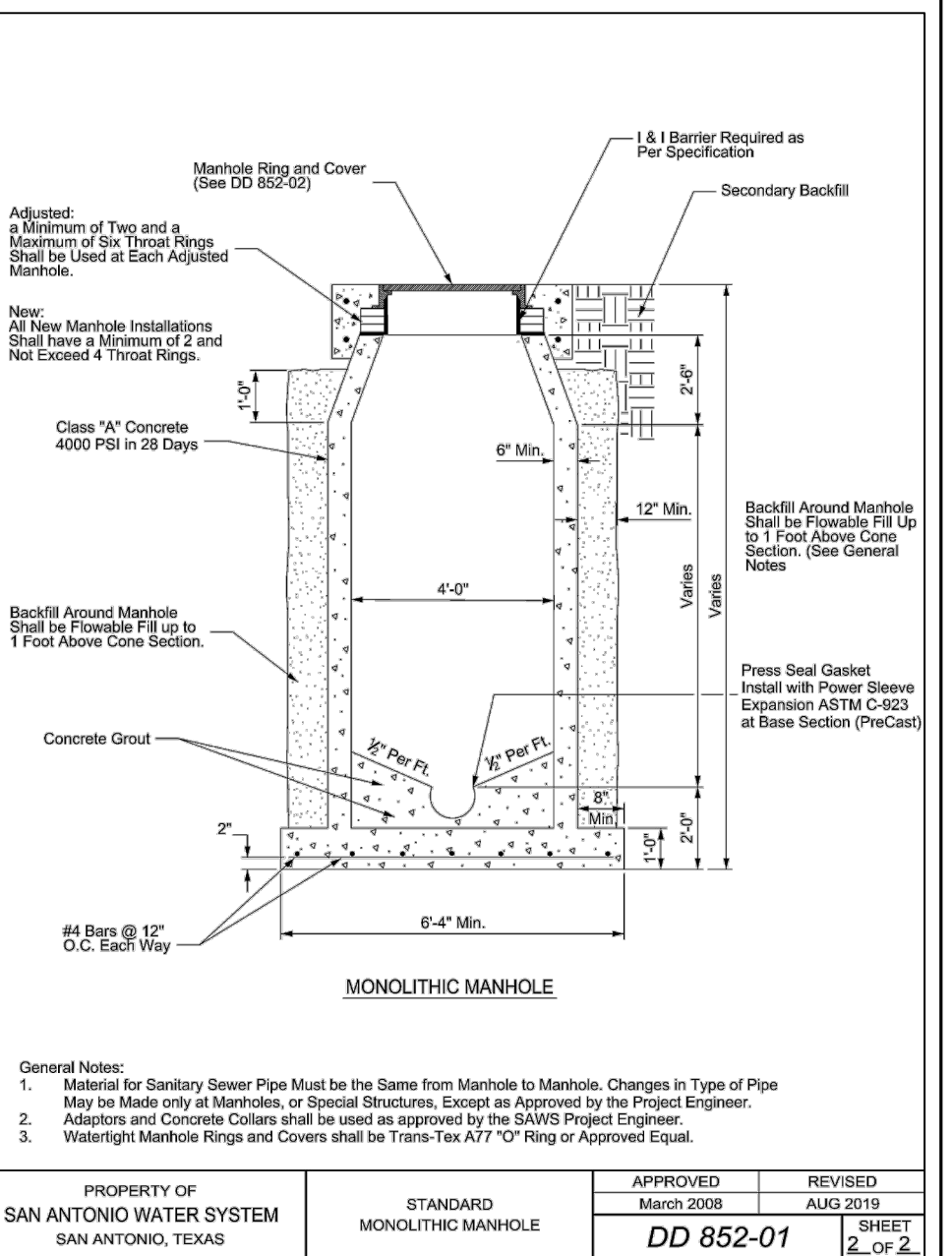
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	GO, NO GO DEFLECTION TESTING MANDREL CHART	APPROVED MARCH 2008 DD-848-01	REVISED APRIL 2014 SHEET 2 OF 2
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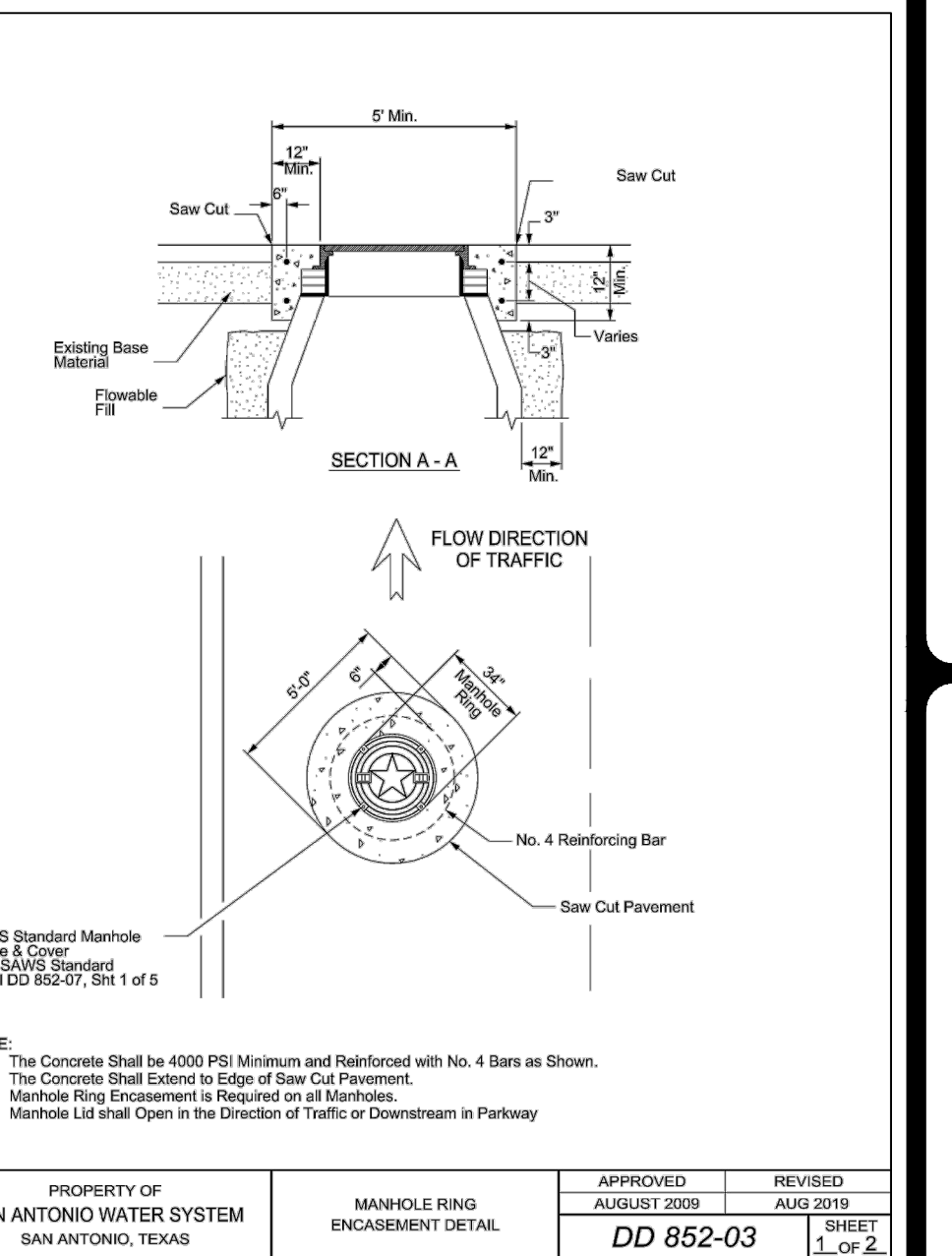
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	GO, NO GO DEFLECTION TESTING MANDREL CHART	APPROVED MARCH 2008 DD-848-01	REVISED APRIL 2014 SHEET 2 OF 2
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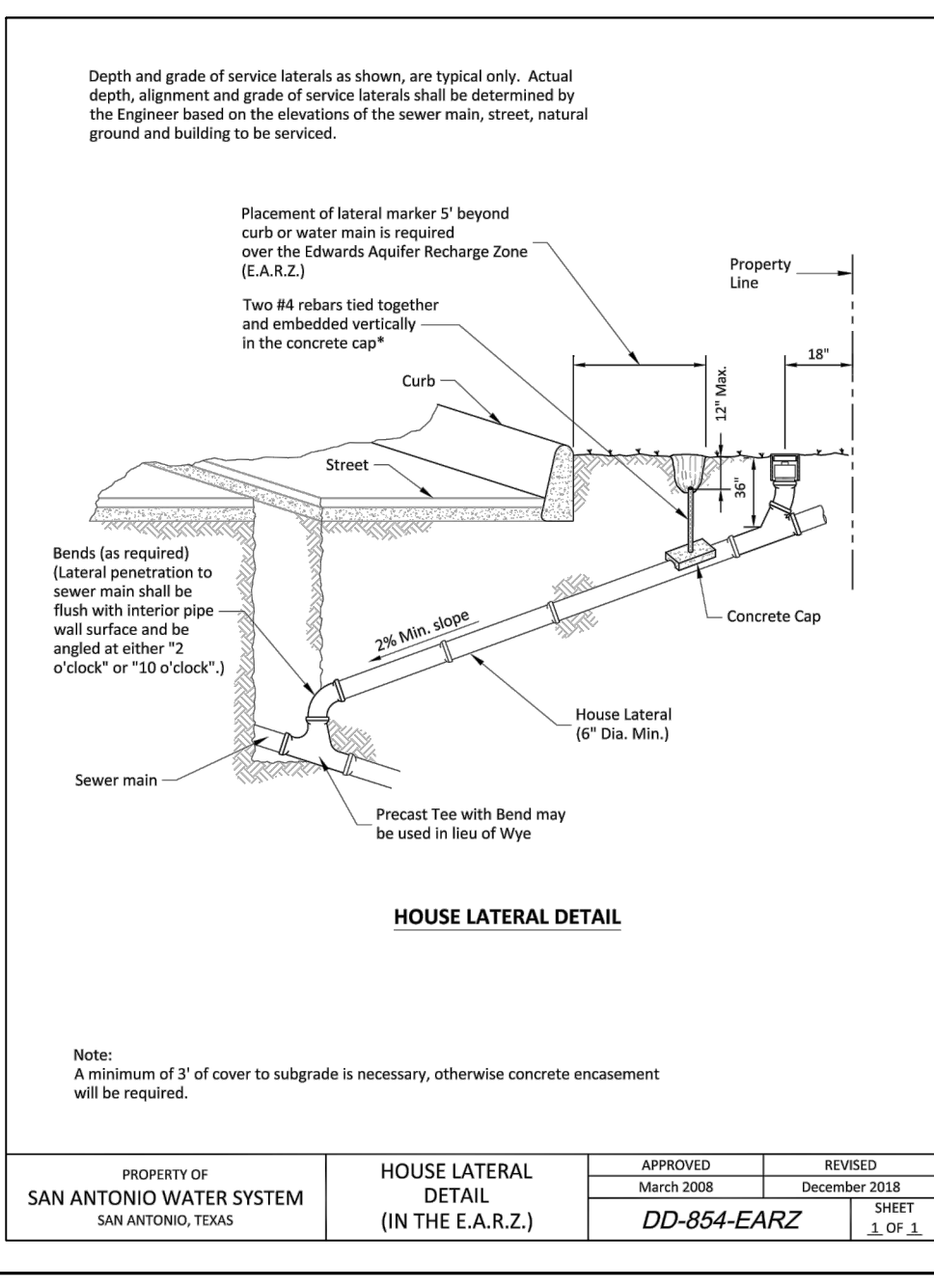
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	STANDARD PRECAST MANHOLE	APPROVED MARCH 2008 DD-852-01	REVISED AUG 2019 SHEET 1 OF 2
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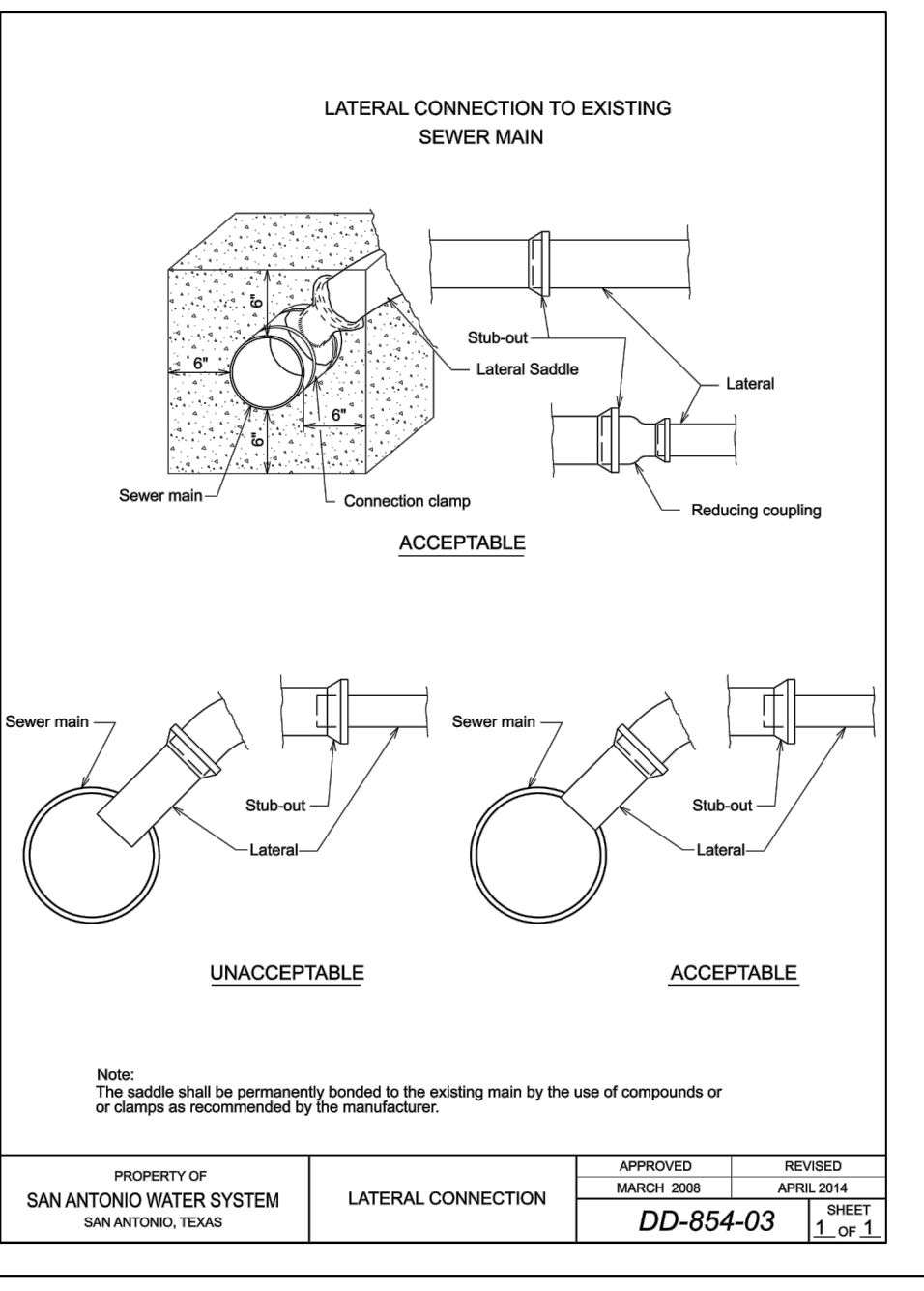
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	STANDARD MONOLITHIC MANHOLE	APPROVED MARCH 2008 DD 852-01	REVISED AUG 2019 SHEET 2 OF 2
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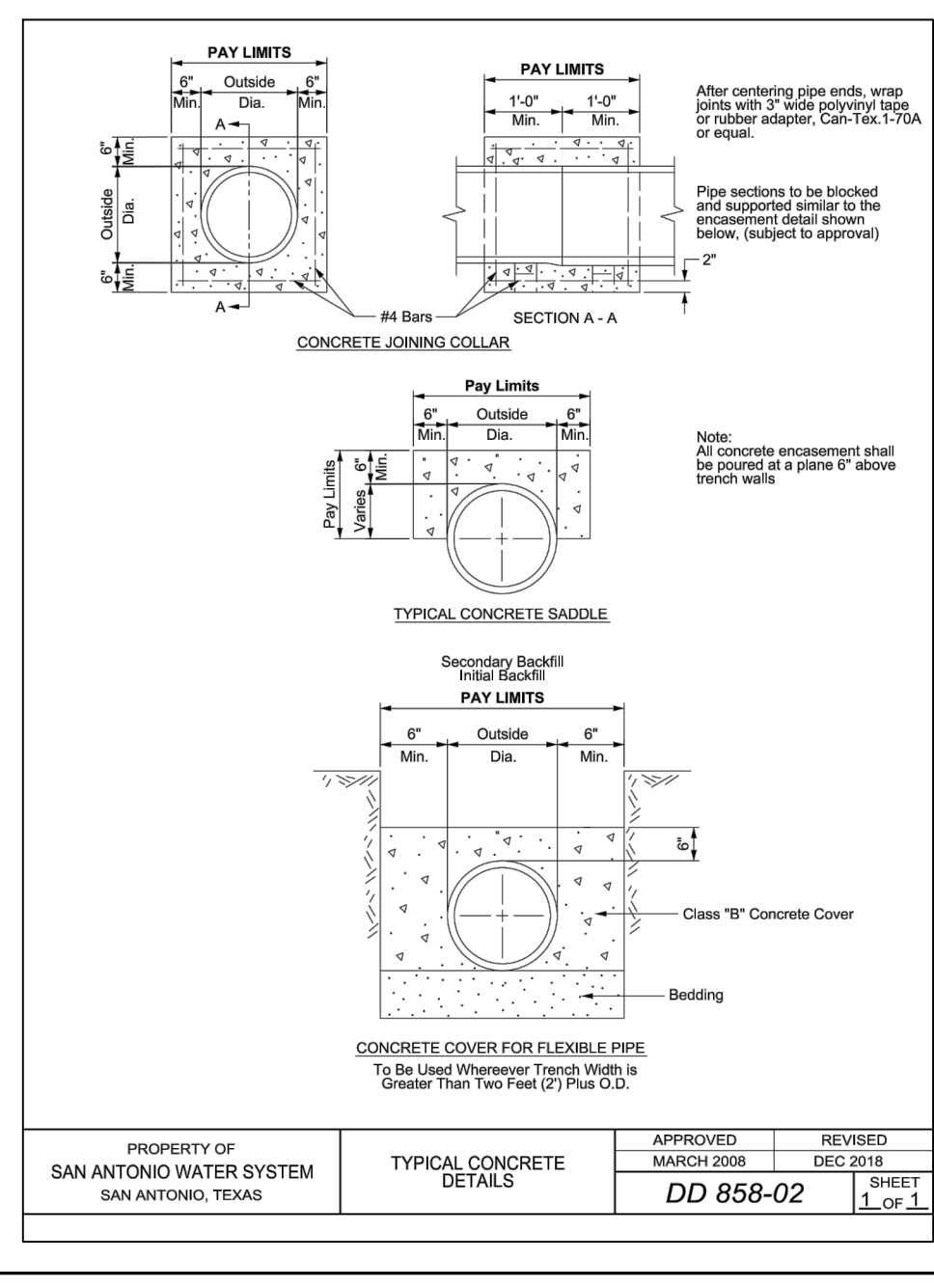
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	MANHOLE RING ENCASUREMENT DETAIL	APPROVED MARCH 2008 DD 852-03	REVISED AUG 2019 SHEET 1 OF 2
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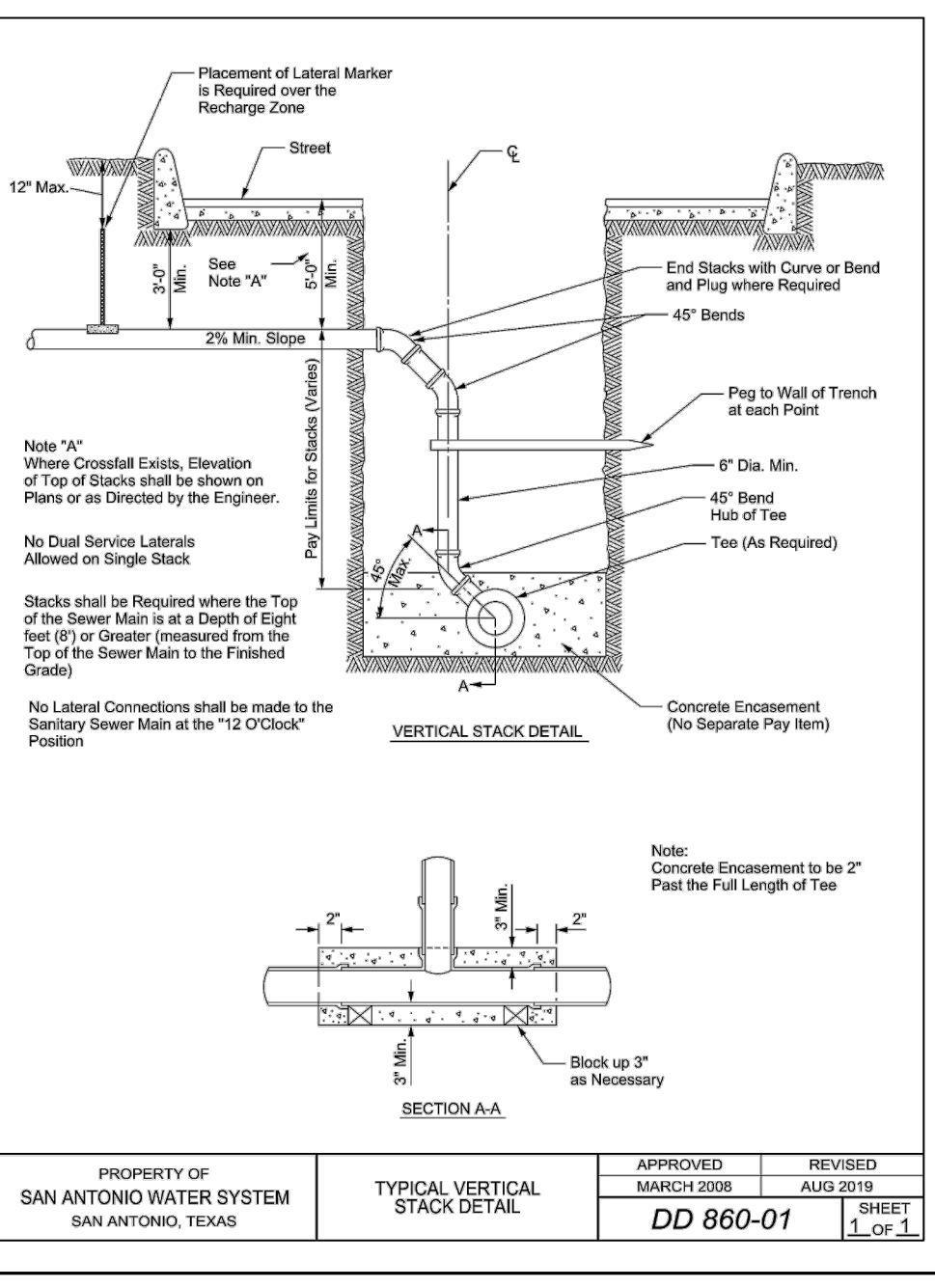
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	HOUSE LATERAL DETAIL (IN THE E.A.R.Z.)	APPROVED MARCH 2008 DD-854-EARZ	REVISED DECEMBER 2018 SHEET 1 OF 1
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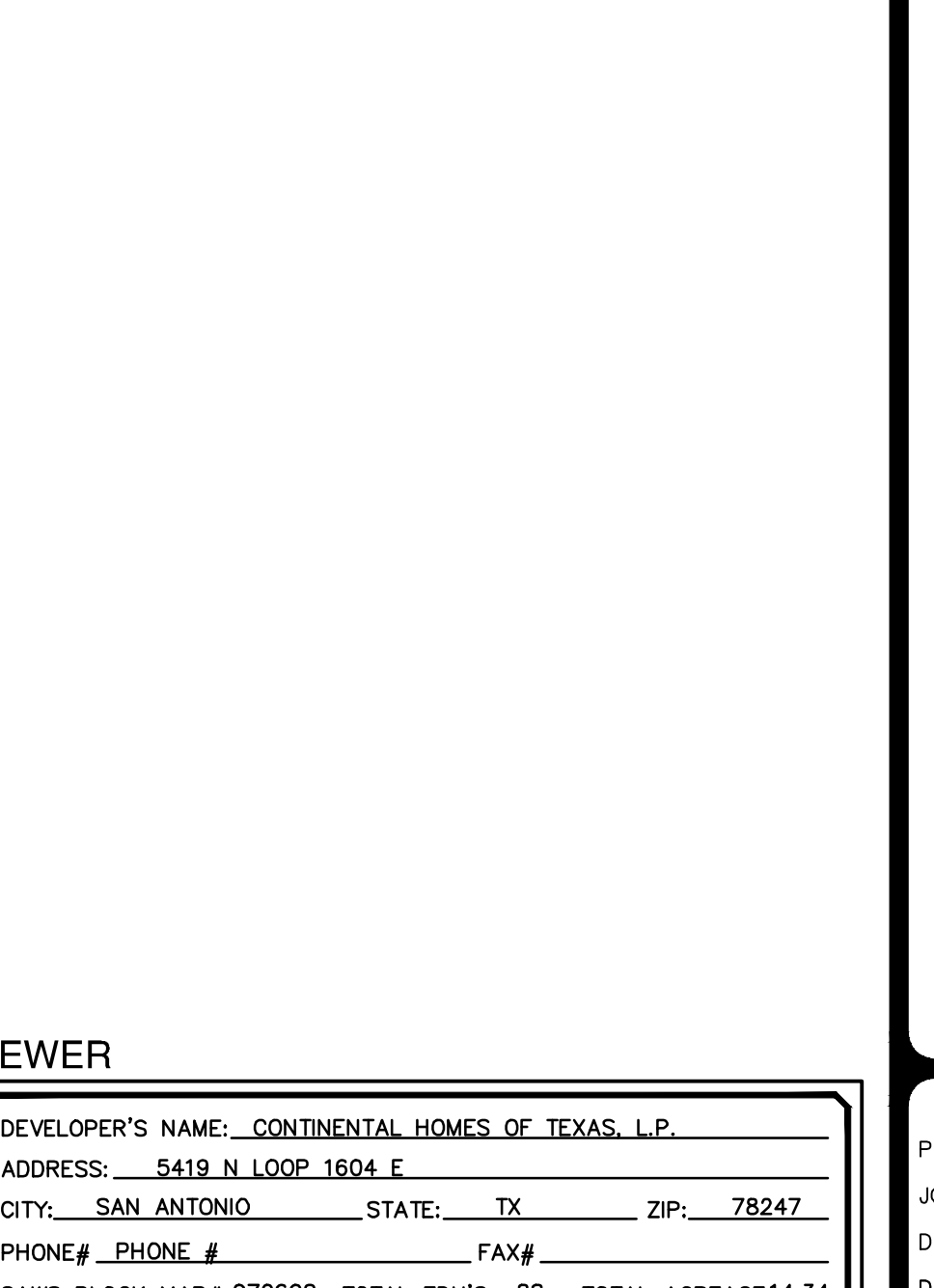
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	LATERAL CONNECTION	APPROVED MARCH 2008 DD-854-03	REVISED APRIL 2014 SHEET 1 OF 1
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PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	TYPICAL CONCRETE SADDLE	APPROVED MARCH 2008 DD 858-02	REVISED DEC 2018 SHEET 1 OF 1
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PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	TYPICAL VERTICAL STACK DETAIL	APPROVED MARCH 2008 DD 860-01	REVISED AUG 2019 SHEET 1 OF 1
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PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	SANITARY SEWER DETAILS	APPROVED MARCH 2008 DD 860-01	REVISED AUG 2019 SHEET 1 OF 1
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DATE

NO.

REVISION

STATE OF TEXAS

CALEB M. CHANCE

98401

PROFESSIONAL ENGINEER

10/31/22

PAPE-DAWSON

ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS

2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000

TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10088600

RIVERSTONE UNIT - G8

SAN ANTONIO, TEXAS

SANITARY SEWER DETAILS

PLAT NO.

22-11800608

JOB NO.

11680-58

DATE

OCTOBER 2022

DESIGNER

CB

CHECKED

BL

DRAWN

CB

SHEET

C5.10

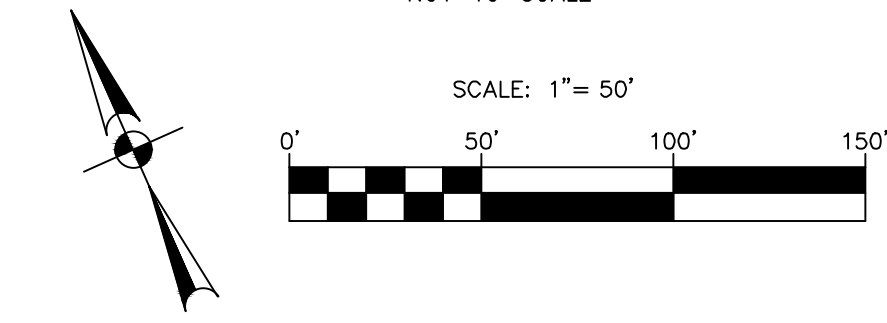
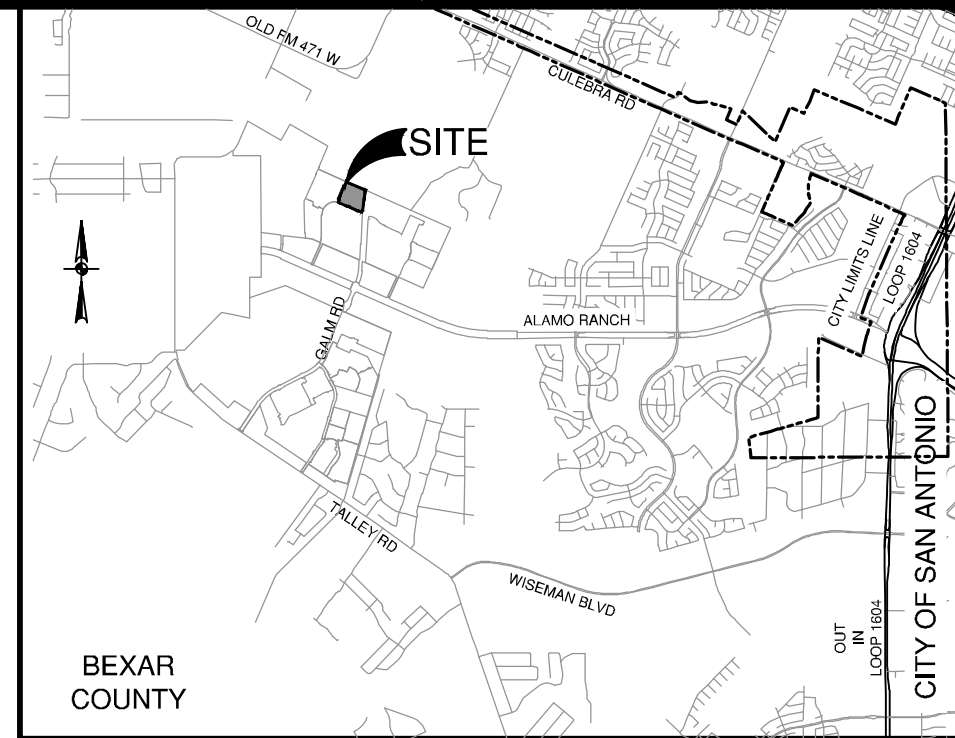
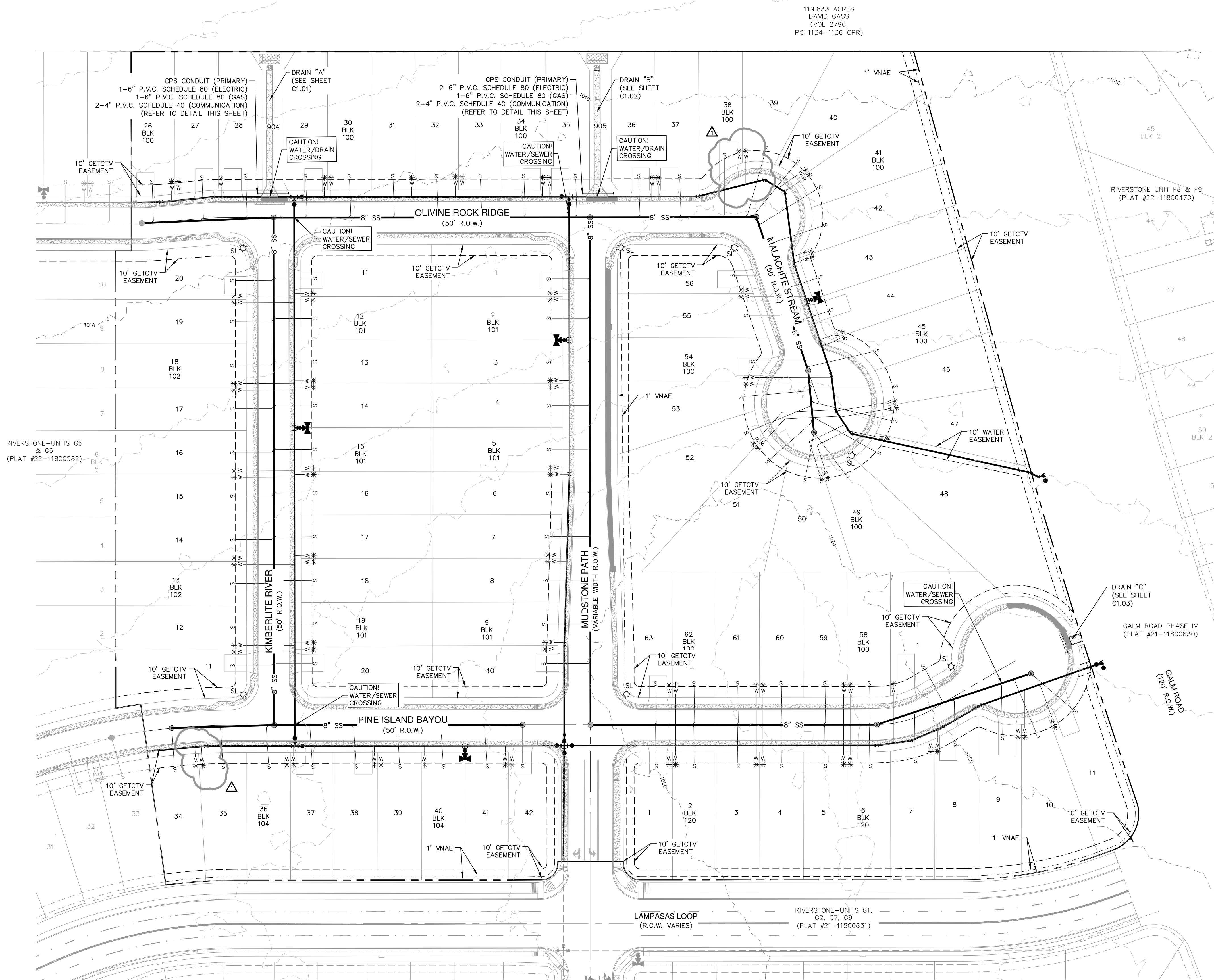
(LAST REVISED JANUARY 2022)

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP 1604 E
CITY: SAN ANTONIO STATE: TX ZIP: 78247
PHONE# PHONE # FAX#
SAWS BLOCK MAP#070602 TOTAL EDU'S 88 TOTAL ACRES 14.34
TOTAL LINEAR FOOTAGE OF PIPE: "8" 2.431 LF PLAT NO. 22-1180060
NUMBER OF LOTS 88 SAWS JOB NO. XXXX-XX

PLAT NO. 22-11800608
 JOB NO. 11680-58
 DATE OCTOBER 2022
 DESIGNER CB
 CHECKED BL DRAWN CB
 SHEET C5.11

Date: Mar 18, 2024, 4:47pm User ID: agence
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UTILITY LEGEND	
PROJECT LIMITS	---
EXISTING WATER	---
EXISTING SEWER	---
PROPOSED SEWER	---
PROPOSED WATER	---
PROPOSED WYE & LATERAL	---
SINGLE WATER SERVICE	---
DUAL WATER SERVICE	---
STREET LIGHTS	---
GAS, ELECTRIC, TELEPHONE & CABLE TELEVISION EASEMENT	---

- CONDUIT NOTES:**
- CONTRACTOR SHALL INSTALL PERMANENT MARKERS IN PROPOSED CURB WHERE CONDUITS CROSS THE ROADWAY (BOTH SIDES).
 - CONDUITS SHALL BE PVC WITH MINIMUM BURY OF 36 INCHES BELOW PROPOSED FINISHED GRADE. SCHEDULE 80 TO BE USED FOR GPS CONDUITS, ALL OTHER CONDUITS ARE SCHEDULE 40.
 - ALL CONDUITS SHALL BE EXTENDED BEHIND CURBS OR PROPOSED SIDEWALKS A MINIMUM OF 3 FEET AND CAPPED FOR FUTURE USE.
 - ALL CONDUIT SLEEVES TO BE USED FOR ELECTRIC, GAS, OR TELECOMMUNICATION UTILITY CROSSINGS SHALL BE INSTALLED TO MEET OR EXCEED DESIGN REQUIREMENTS FOR THE UTILITY AGENCY WHICH THEY ARE SERVING, INCLUDING BUT NOT LIMITED TO THE DEPTH, TRENCH PLACEMENT, AND PROXIMITY TO OTHER UTILITIES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING AND INSTALLING THE CONDUIT SLEEVES TO MEET THESE SPECIFICATIONS INCLUDING COORDINATING WITH THE UTILITY AGENCY FOR ANY REQUIRED INSPECTIONS.

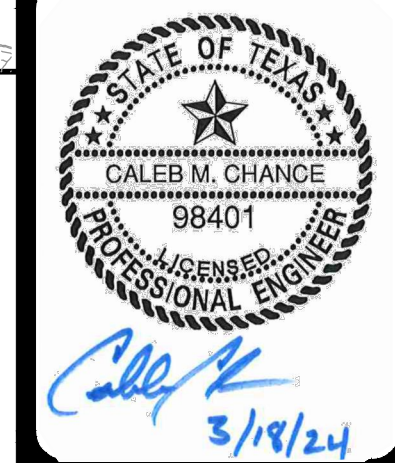
TRENCH EXCAVATION SAFETY PROTECTION:

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CAUTION!!

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NO.	REVISION	DATE
1	REVISED WATER SERVICES	



PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

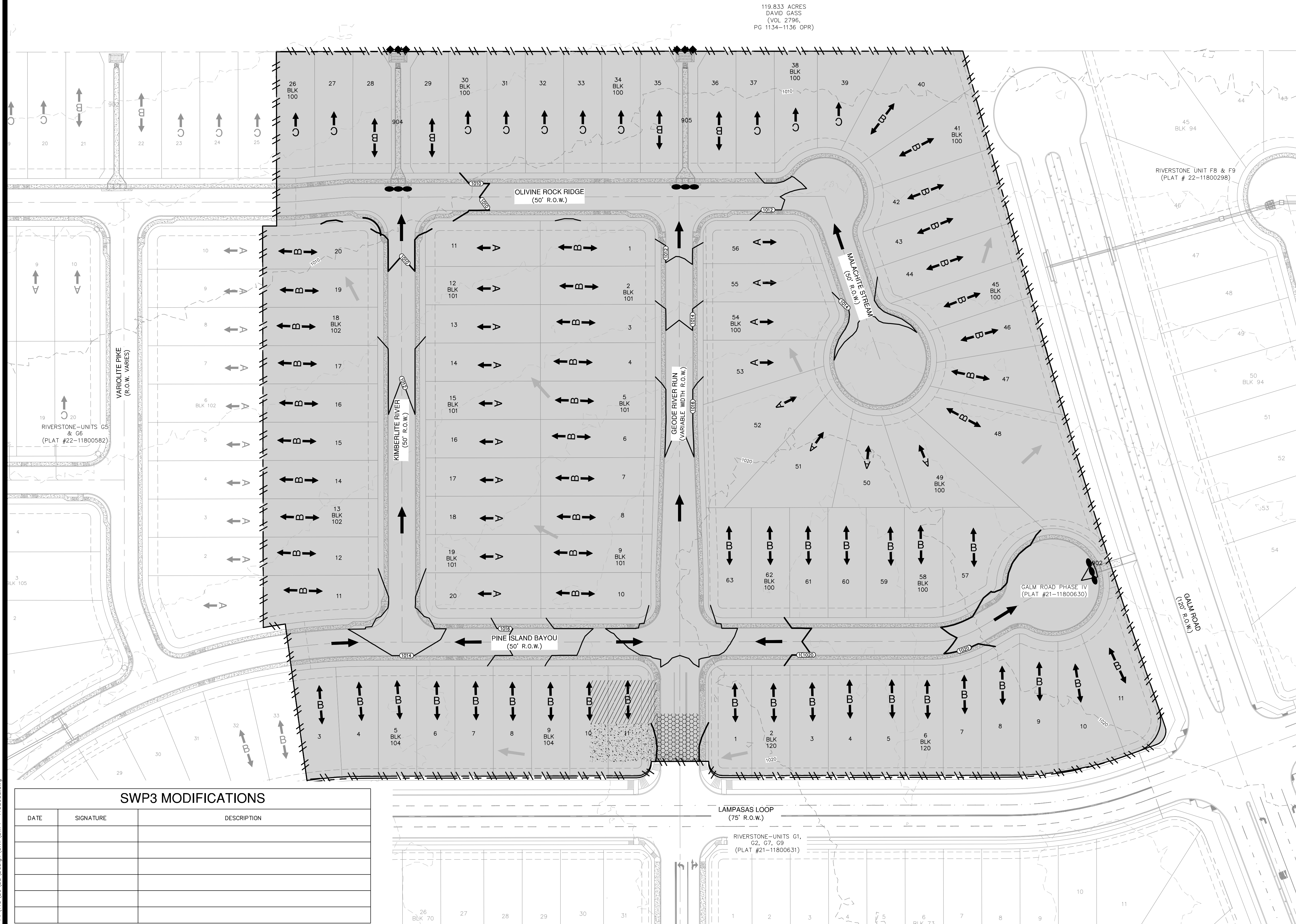
RIVERSTONE UNIT - G8
SAN ANTONIO, TEXAS
OVERALL UTILITY PLAN

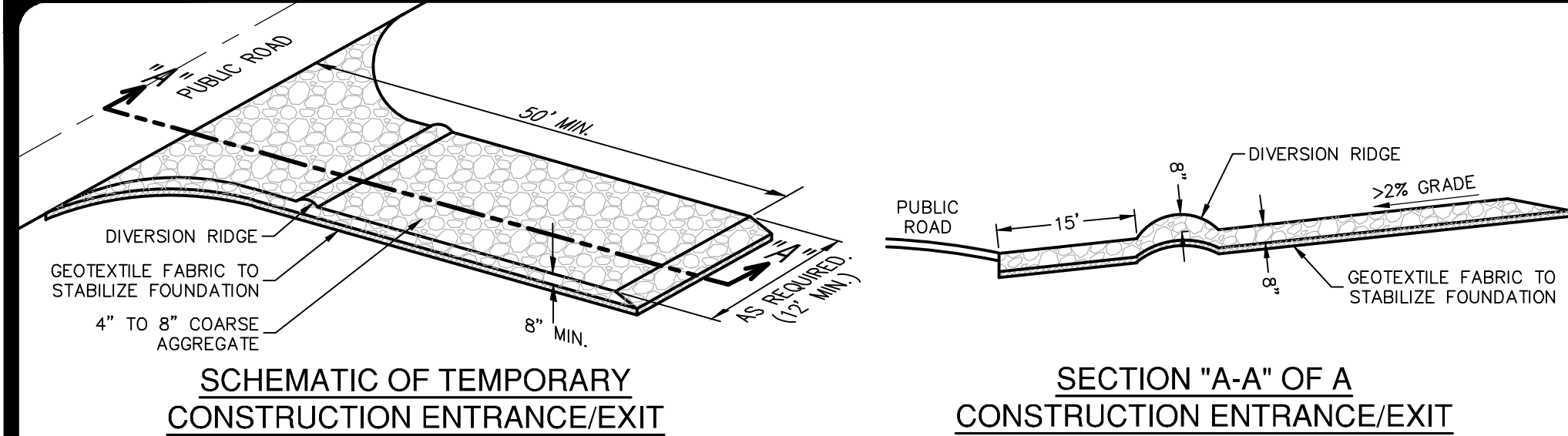
PLAT NO.	22-11800608
JOB NO.	11680-58
DATE	MARCH 2023
DESIGNER	CB
CHECKED	BL DRAWN
SHEET	C6.00

Date: Feb 10, 2023, 9:00am, User ID: C467ATC
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SWP3 MODIFICATIONS		
DATE	SIGNATURE	DESCRIPTION



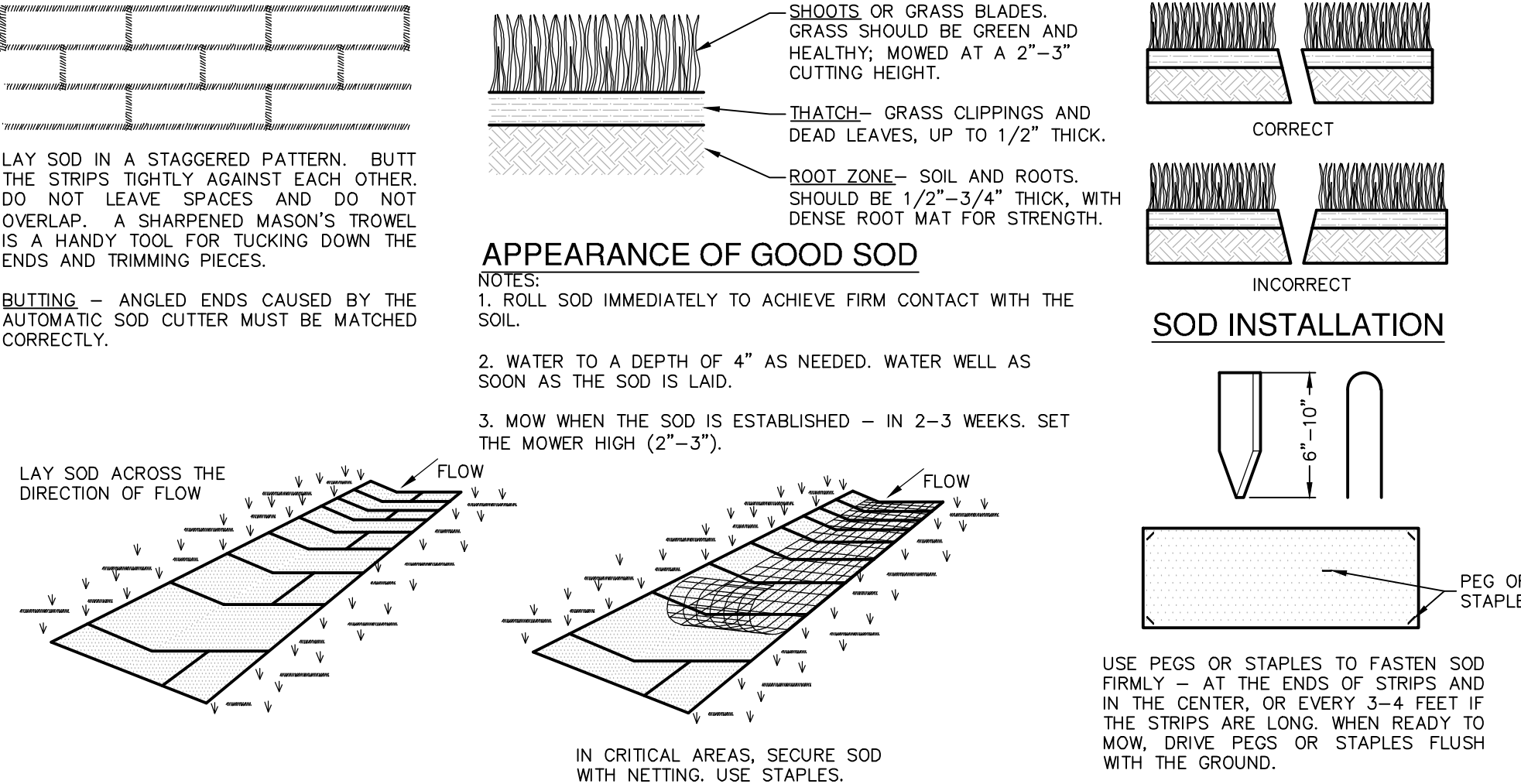


- MATERIALS**
1. THE AGGREGATE SHOULD CONSIST OF 4-INCH TO 8-INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
 2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8-INCHES.
 3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD², A MULLEN BURST RATING OF 140 LB/IN², AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
 4. IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM OF 4-INCH DIAMETER WASHED STONE OR COMMERCIAL ROCK SHOULD BE INCLUDED IN THE PLANS. DIVERT WASTEWATER TO A SEDIMENT TRAP OR BASIN.

- INSTALLATION**
1. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
 2. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
 3. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
 4. IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE, 6-INCHES TO 8-INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD.
 5. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
 6. PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
 7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.
 8. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.

STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL

NOT-TO-SCALE



- MATERIALS**
1. SOD SHOULD BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4" INCH (± 1/4" INCH) AT THE TIME OF CUTTING. THIS THICKNESS SHOULD EXCLUDE SHOOT GROWTH AND THATCH.
 2. PIECES OF SOD SHOULD BE CUT TO THE SUPPLIER'S STANDARD WIDTH AND LENGTH, WITH A MAXIMUM ALLOWABLE DEVIATION IN ANY DIMENSION OF 5%. TORN OR UNEVEN PADS SHOULD NOT BE ACCEPTABLE.
 3. STANDARD SIZE SECTIONS OF SOD SHOULD BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT, THEIR SIZE AND SHAPE WHEN SUBSEQUENT ROWS ARE LAYED. SOD 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. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS.

SITE PREPARATION

1. PRIOR TO SOD PREPARATION, AREAS TO BE SODDED SHOULD BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLAN.
2. THE SURFACE SHOULD BE CLEARED OF ALL TRASH, DEBRIS AND OF ALL ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.
3. 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, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. ON SLOPING LAND, THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE CONTOUR.

INSTALLATION IN CHANNELS

1. 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 AREAS.

SOD INSTALLATION DETAIL

NOT-TO-SCALE

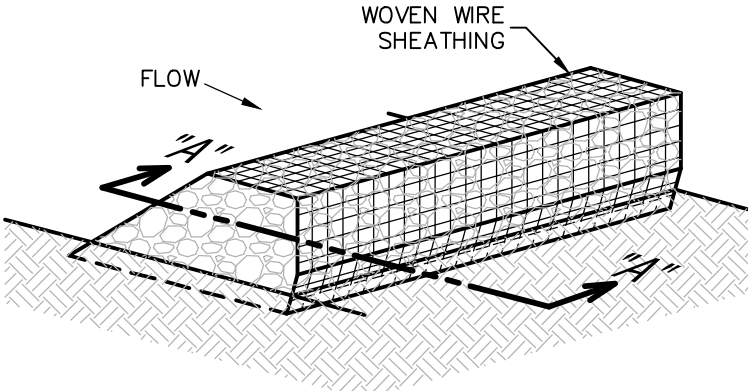
COMMON TROUBLE POINTS

1. INADEQUATE RUNOFF CONTROL-SEDIMENT WASHES ONTO PUBLIC ROAD.
2. STONE TOO SMALL OR GEOTEXTILE FABRIC ABSENT, RESULTS IN MUDDY CONDITION AS STONE IS PRESSED INTO SOIL.
3. 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

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

ISOMETRIC PLAN VIEW



ROCK BERMS

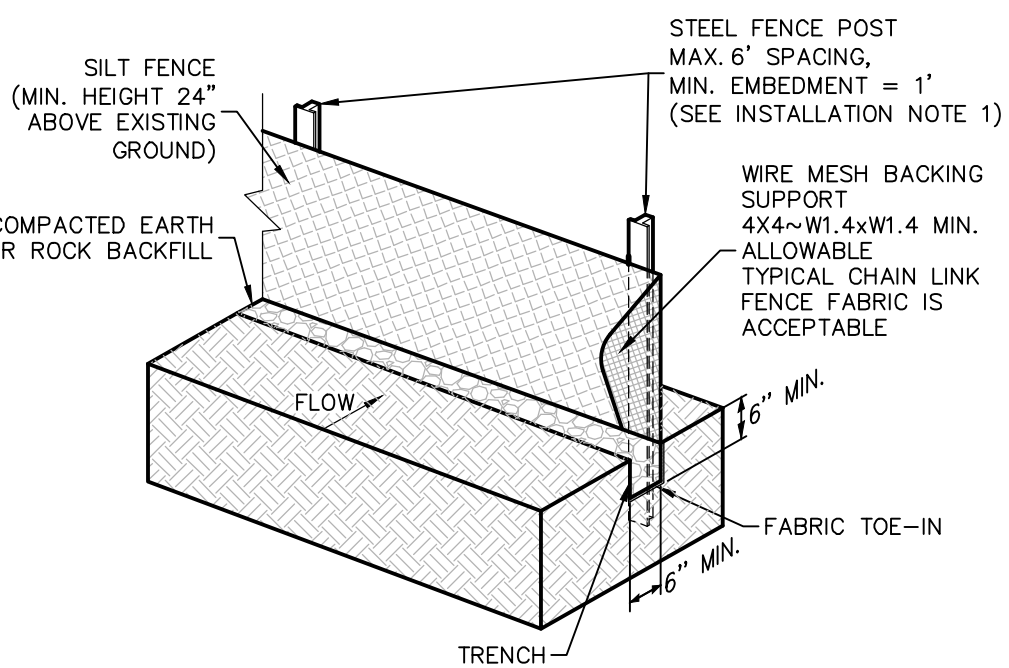
THE PURPOSE OF A ROCK BERM IS TO SERVE AS A CHECK DAM IN AREAS OF CONCENTRATED FLOW, TO INTERCEPT SEDIMENT-LADEN RUNOFF, DETAIN THE SEDIMENT AND RELEASE THE WATER IN SHEET FLOW. THE ROCK BERM SHOULD BE USED WHEN THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 5 ACRES. ROCK BERMS ARE USED IN AREAS WHERE THE 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 EROSION AND SEDIMENT CONTROL MEASURES FARTHER UP THE WATERSHED.

INSPECTION AND MAINTENANCE GUIDELINES

1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.
2. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER THAT WILL NOT CAUSE ANY ADDITIONAL SILTATION.
3. REPAIR ANY LOOSE WIRE SHEATHING.
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, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
6. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

ROCK BERM DETAIL

NOT-TO-SCALE



ISOMETRIC PLAN VIEW

SILT FENCE

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.

MATERIALS

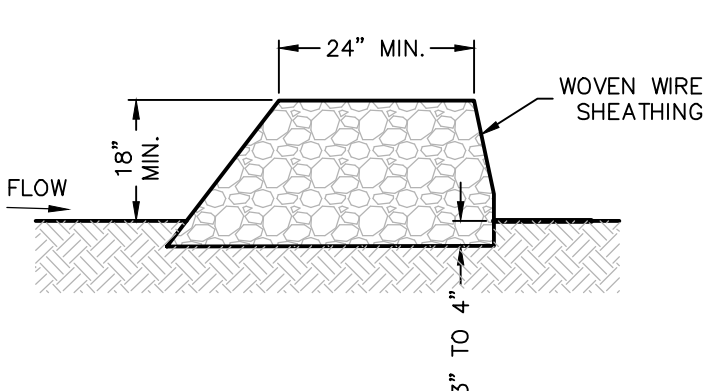
1. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN², ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NUMBER 30.
2. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR Y-BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM WEIGHT 1.25 LB/FT, AND BRINDELL HARDNESS EXCEEDING 140.
3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

INSTALLATION

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 ¼ ACRE/100 FEET OF FENCE.

SILT FENCE DETAIL

NOT-TO-SCALE



SECTION "A-A"

MATERIALS

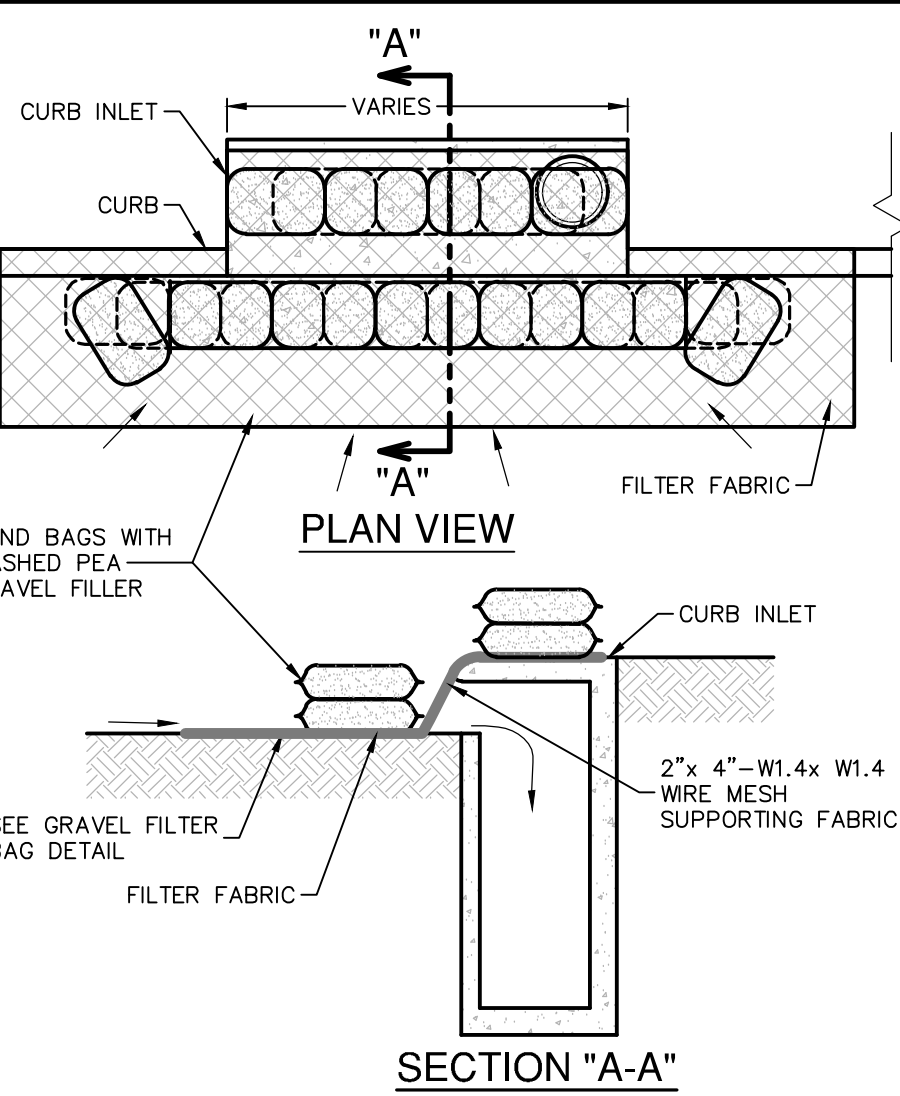
1. THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT RINGS.
2. CLEAN, OPEN GRADED 3-INCH TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-INCH TO 8-INCH DIAMETER ROCKS MAY BE USED.

INSTALLATION

1. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH OPENINGS.
2. 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

1. 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).

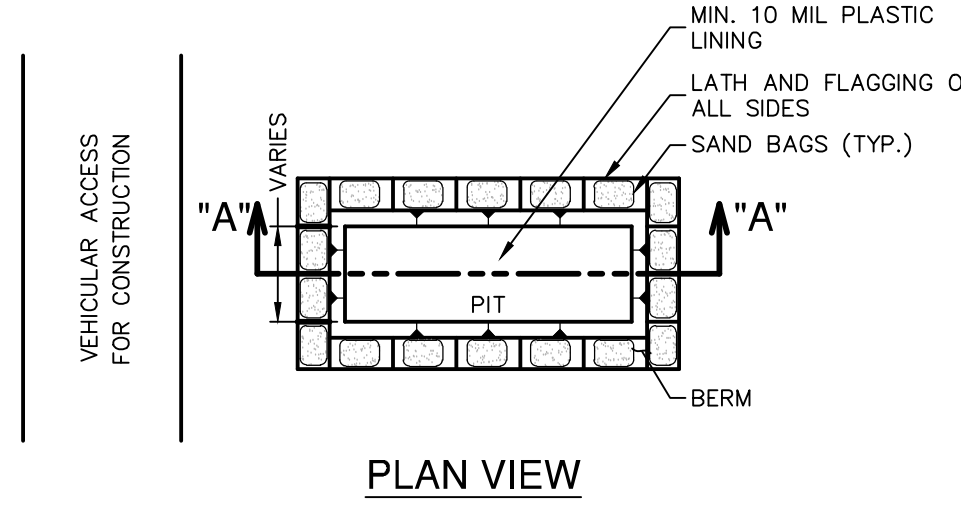


GENERAL NOTES

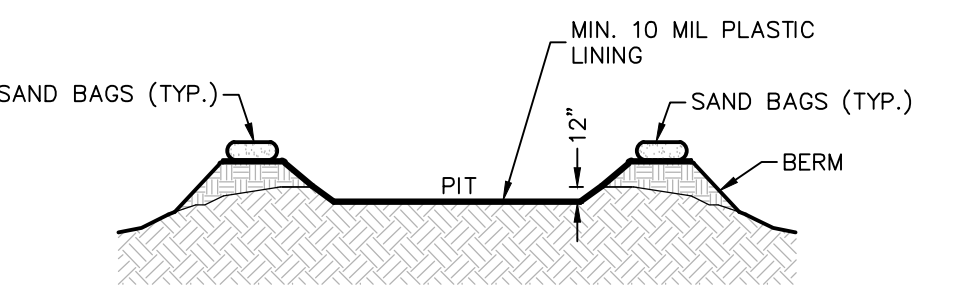
1. CONTRACTOR TO INSTALL 2"x4"-W1.4xW1.4 WIRE MESH SUPPORTING FILTER FABRIC OVER THE INLET OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR WIRE TIES AT THIS LOCATION. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD BE PLACED ON TOP OF WIRE MESH ON TOP OF THE INLET AS SHOWN ON THIS DETAIL 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.
2. THE BAGS SHOULD BE TIGHTLY ABUTTED AROUND EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.
3. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
4. INSPECT FILTER FABRIC AND PATCH OR REPLACE IF TORN OR MISSING.
5. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

BAGGED GRAVEL CURB INLET PROTECTION DETAIL

NOT-TO-SCALE



PLAN VIEW



SECTION "A-A"

GENERAL NOTES

1. 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.
3. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.
4. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES OR WATER BODIES.
5. 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.

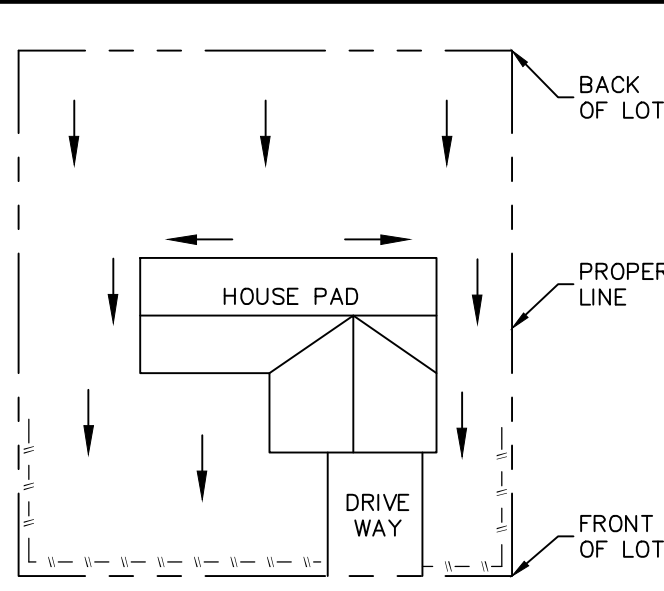
MAINTENANCE

1. WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF.
2. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF.
3. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.

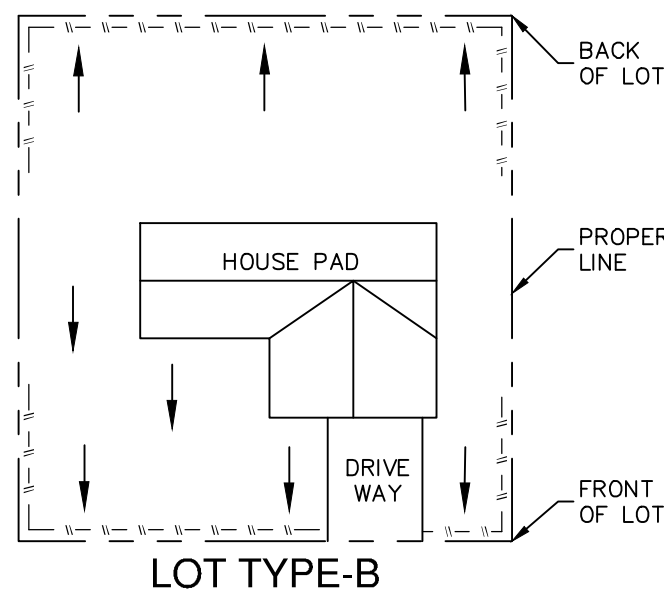
CONCRETE TRUCK WASHOUT

PIT DETAIL

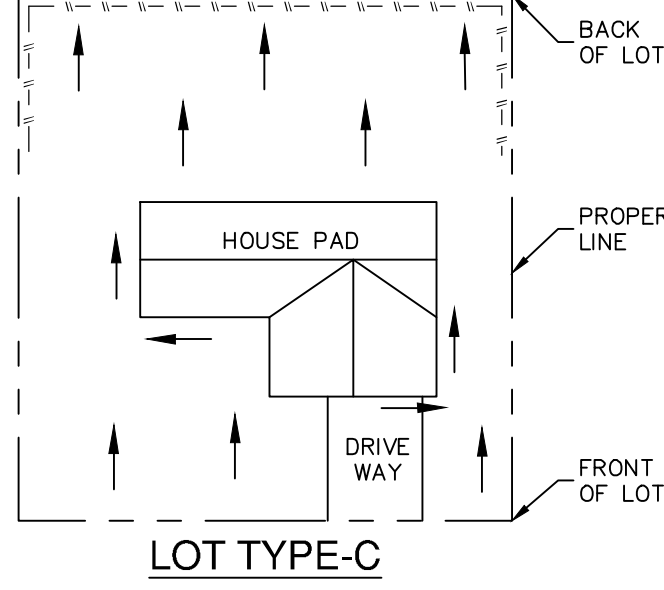
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LOT TYPE-A



LOT TYPE-B



LOT TYPE-C

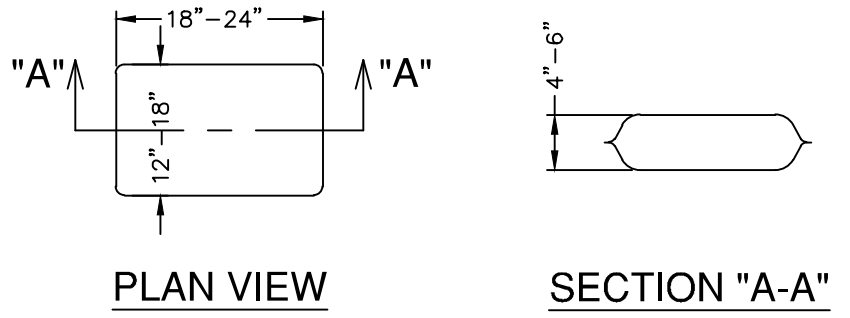
NOTE: SILT FENCE TO BE INSTALLED PER THESE DETAILS AND LOCATED ON THE DOWNDRAIN SIDE OF EACH LOT LINE OR LIMITS OF CLEARING AS GENERALLY SHOWN ON THE OVERALL SITE PLAN.

LEGEND

--- SILT FENCE DRAINAGE FLOW

TYPICAL HOUSE LOT LAYOUTS

NOT-TO-SCALE



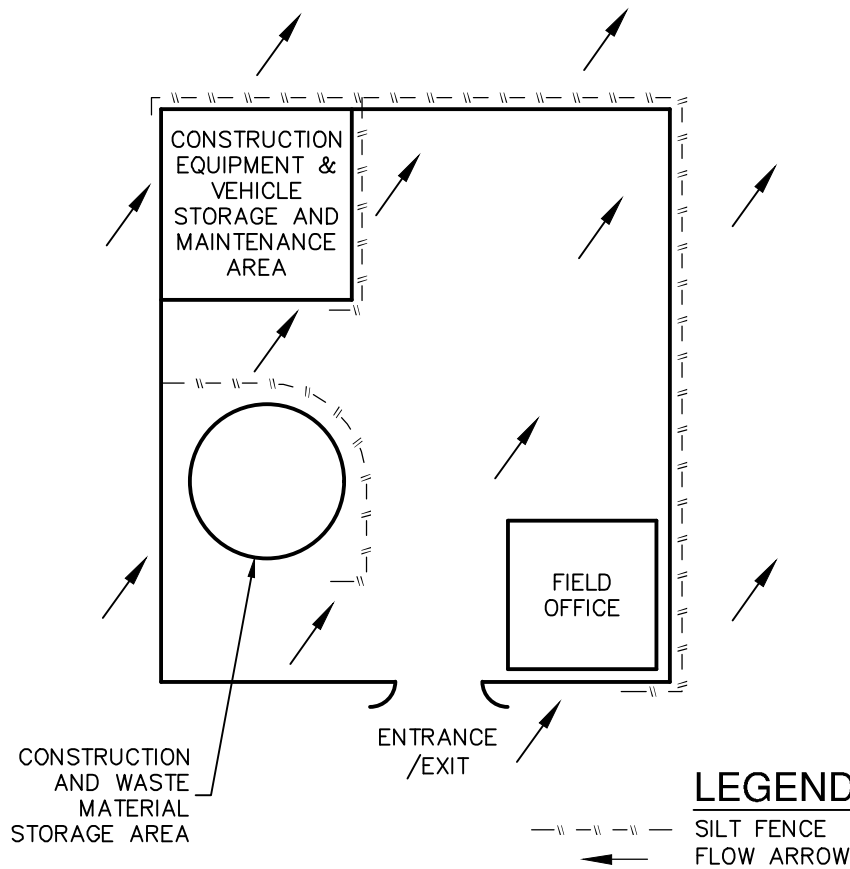
PLAN VIEW

SECTION "A-A"

- NOTES:
1. 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%.
 2. 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 NOT BE USED TO FILL THE FILTER BAGS.

GRAVEL FILTER BAG DETAIL

NOT-TO-SCALE



LEGEND

--- SILT FENCE FLOW ARROWS

CONSTRUCTION STAGING AREA

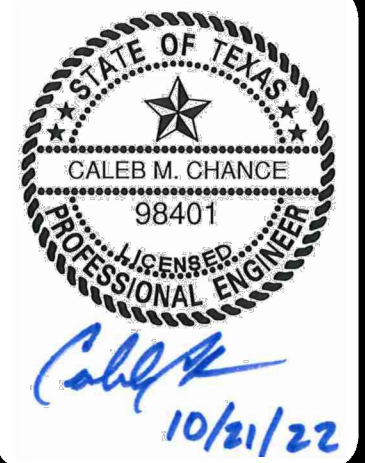
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THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE TPDES-STORM WATER POLLUTION PREVENTION PLAN (SWP3) REGULATIONS.

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.

EXHIBIT 3

DATE	
NO.	
REVISION	



PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

RIVERSTONE UNIT - G8
SAN ANTONIO, TEXAS

STORM WATER POLLUTION PREVENTION PLAN DETAILS

PLAT NO.	22-11800608
JOB NO.	11680-58
DATE	OCTOBER 2022
DRAWN	CB
CHECKED	BL
SHEET	C8.10