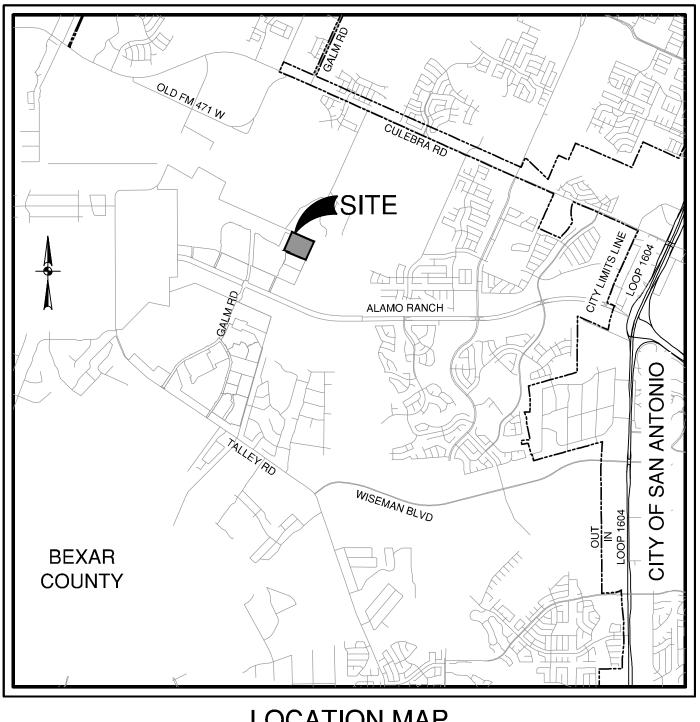
SAN ANTONIO, TEXAS

RIVERSTONE UNIT F3 CIVIL CONSTRUCTION PLANS

SHEET INDEX

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DRAIN B1 PLAN & PROFILE (STA. 1+04.98 TO 4+80.00)	C1.04
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SIGNAGE DETAILS	C3.10
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LOCATION MAP NOT-TO-SCALE

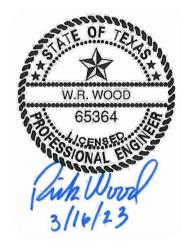
PREPARED FOR:

CONTINENTAL HOMES OF TEXAS, L.P. 5419 N LOOP E SAN ANTONIO, TEXAS 78218

MARCH 2023



2000 NW LOOP 410 I SAN ANTONIO, TX 78213 | 210.375.9000 TBPE FIRM REGISTRATION #470 I TBPLS FIRM REGISTRATION #10028800



DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS. L. ADDRESS: <u>5419 N LOOP E</u> ITY: SAN ANTONIO _STATE:__ TEXAS ____ ZIP:___ 78218 <u>082616</u> TOTAL EDU'S 103 SAWS BLOCK MAP# TOTAL LINEAR FOOTAGE OF PIPE:<u>8"— 3,557 LF</u> PLAT NO. <u>22—1180046</u> SAWS JOB NO. 22-117

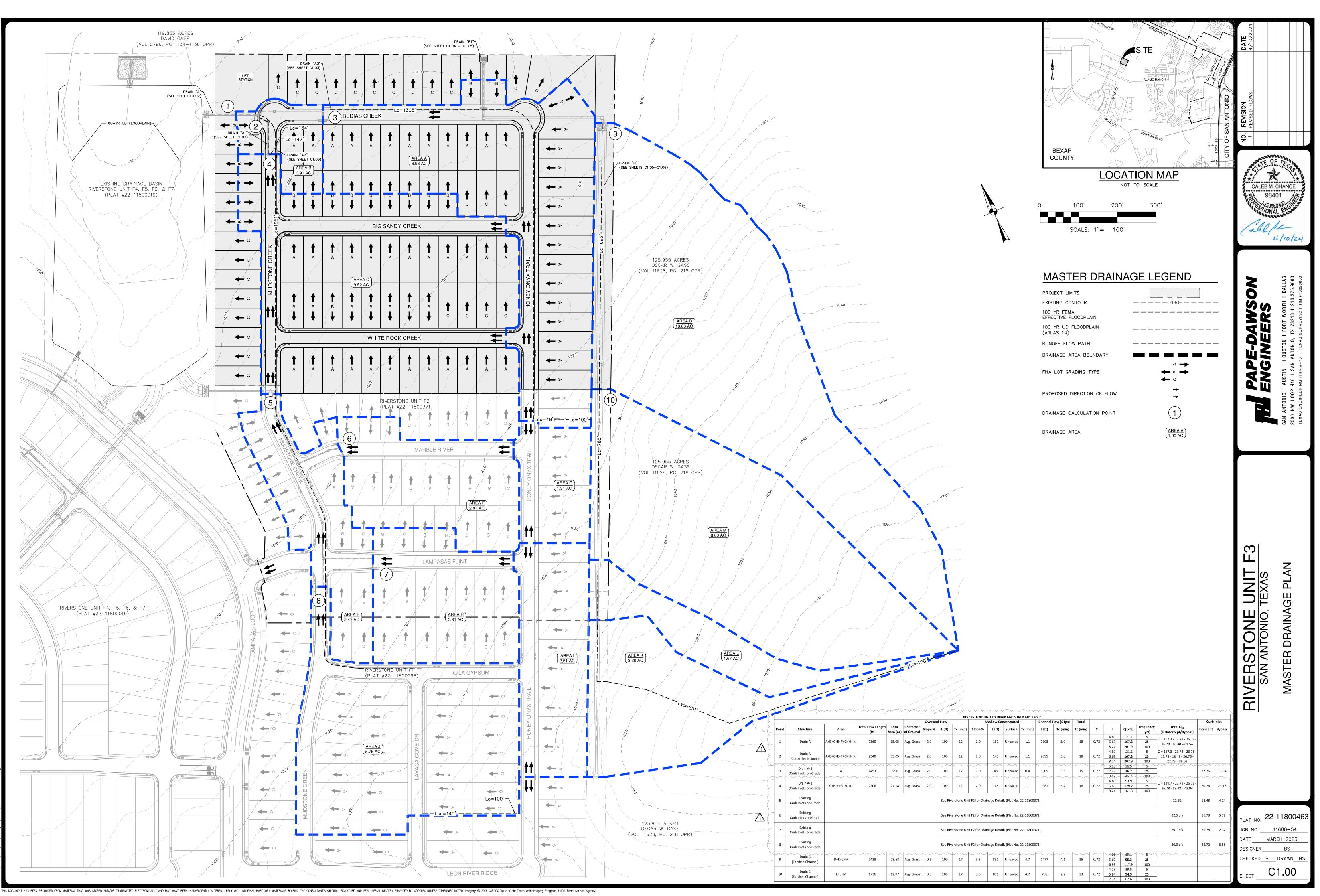
Sheet List Table

Sheet Description	Sheet No.
OVERALL WATER DISTRIBUTION PLAN	C4.00
WATER DISTRIBUTION PLAN DETAILS	C4.10
WATER DISTRIBUTION PLAN NOTES	C4.11
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OVERALL GRADING PLAN	C7.00
STORM WATER POLLUTION PREVENTION PLAN	C8.00
STORM WATER POLLUTION PREVENTION PLAN DETAILS	C8.10

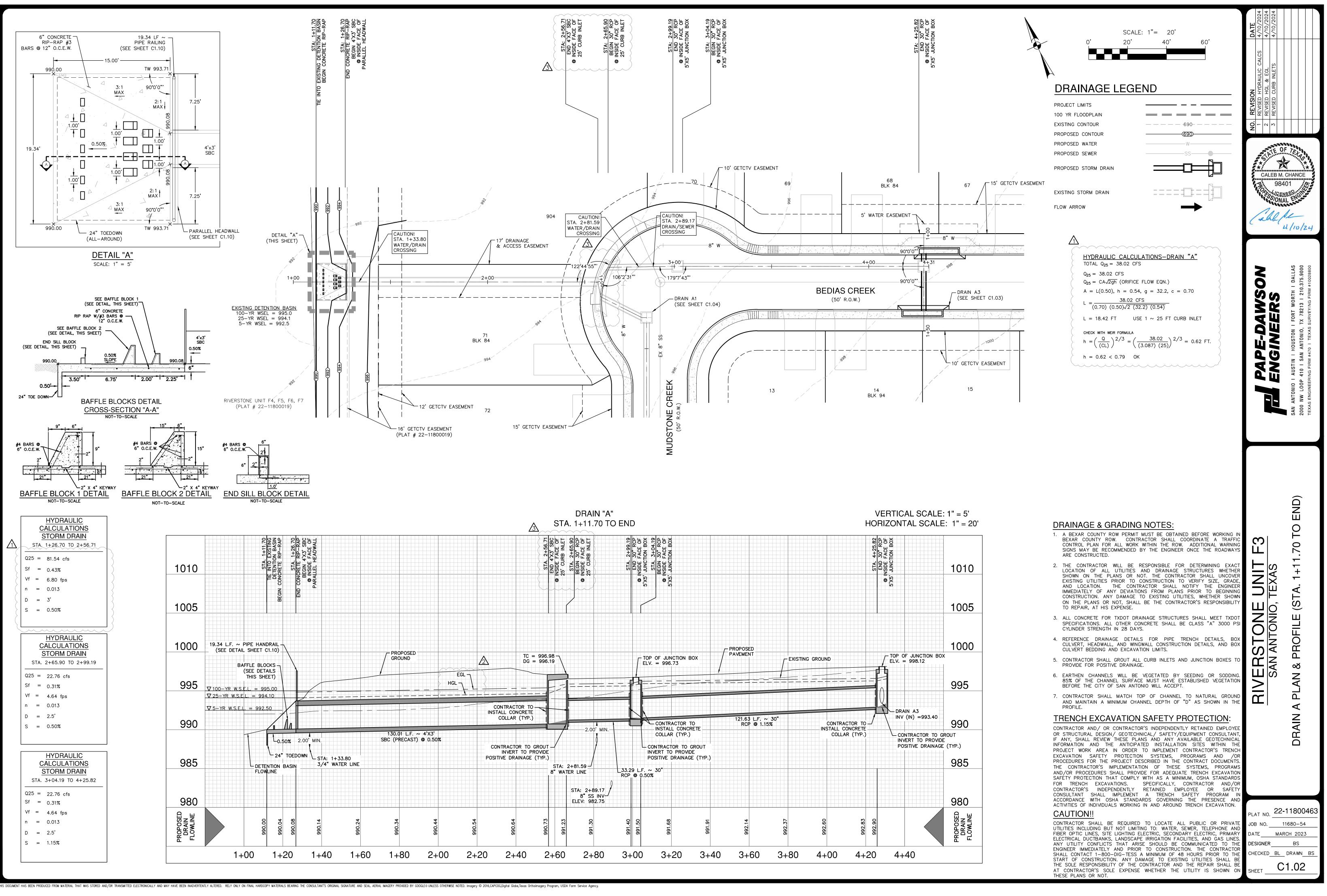
WATER (SAWS PRESSURE ZONE 8)

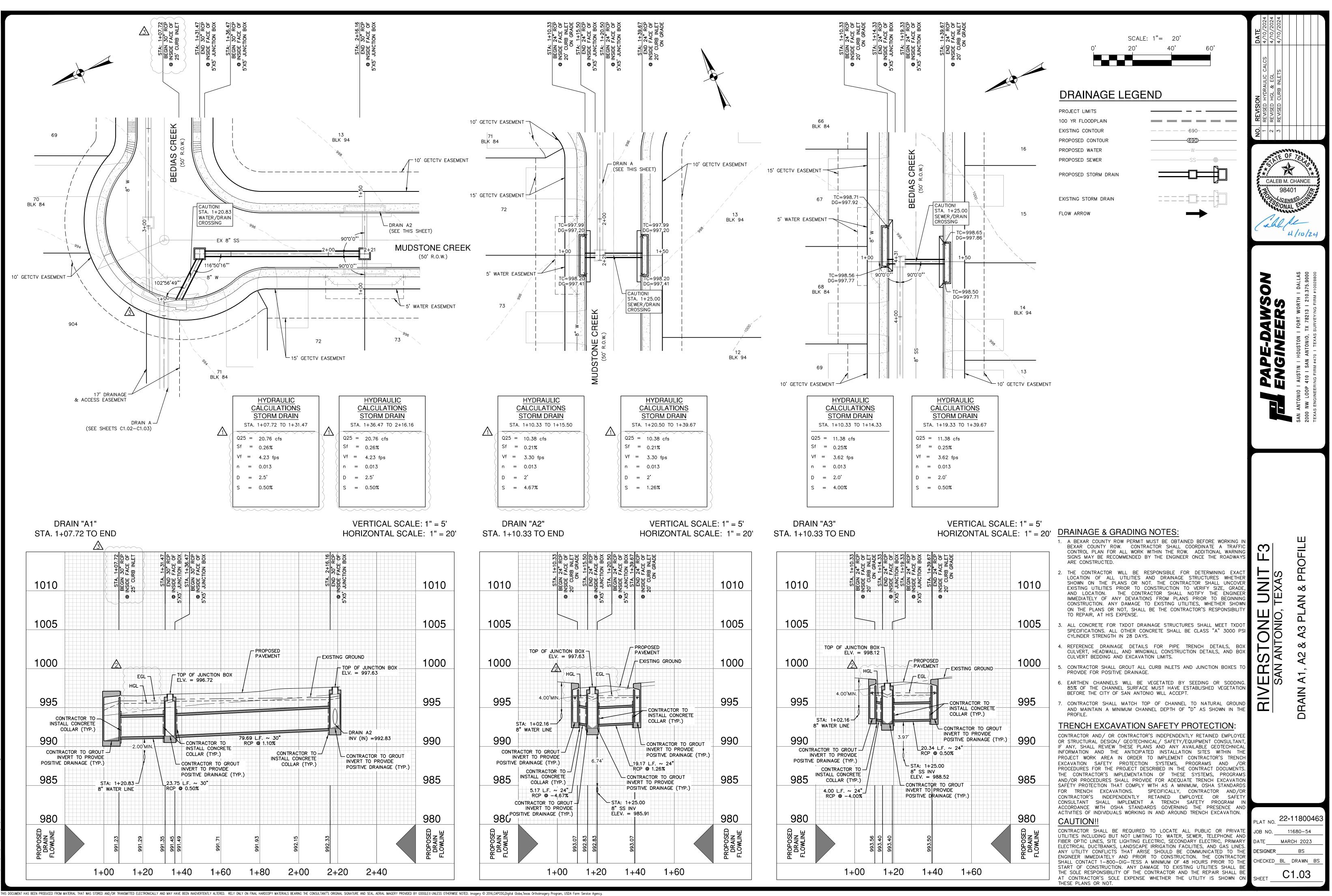
SEWER

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P. ADDRESS: 5419 N LOOP E SAN ANTONIO SAWS BLOCK MAP# TOTAL LINEAR FOOTAGE OF PIPE:<u>8"2,585 LF</u> PLAT NO.<u>22–118004</u> IUMBER OF LOTS.

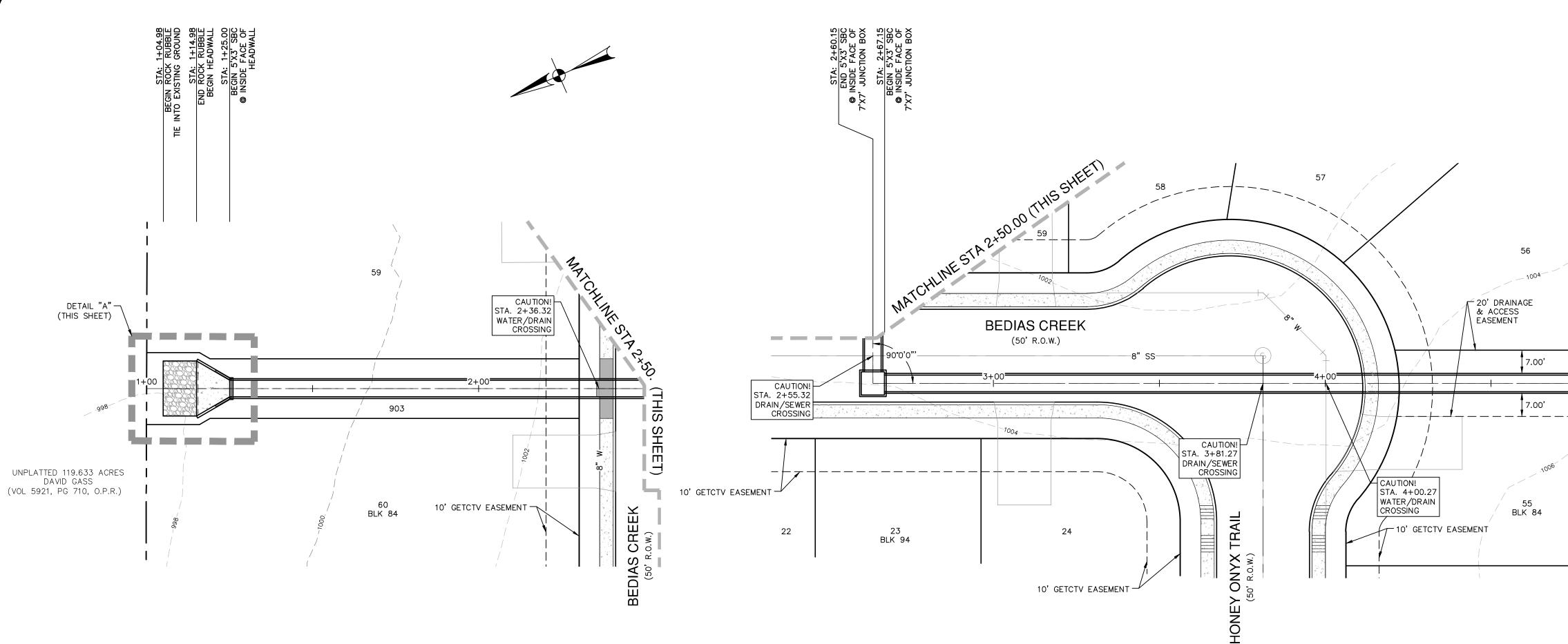


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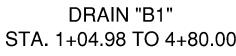


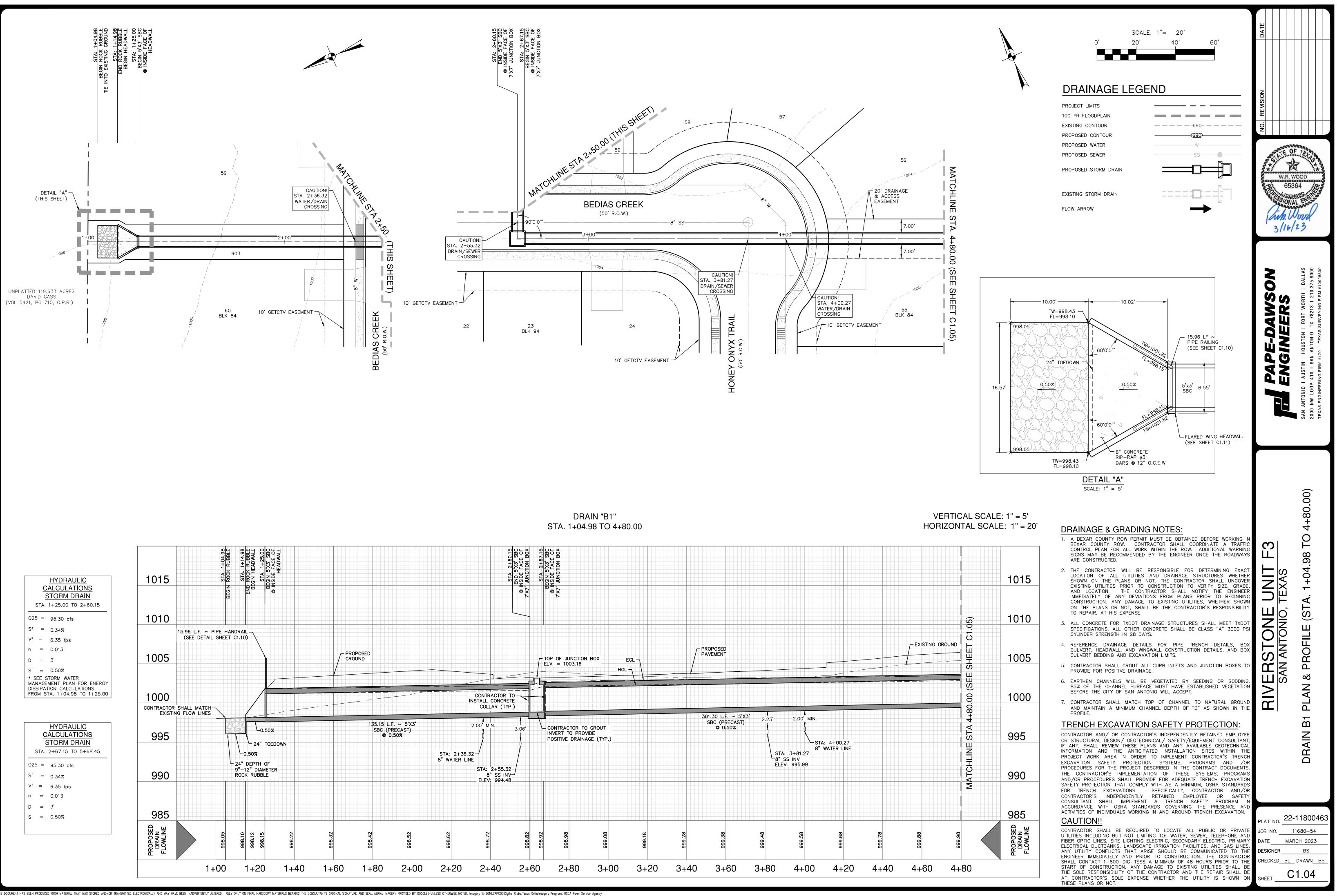
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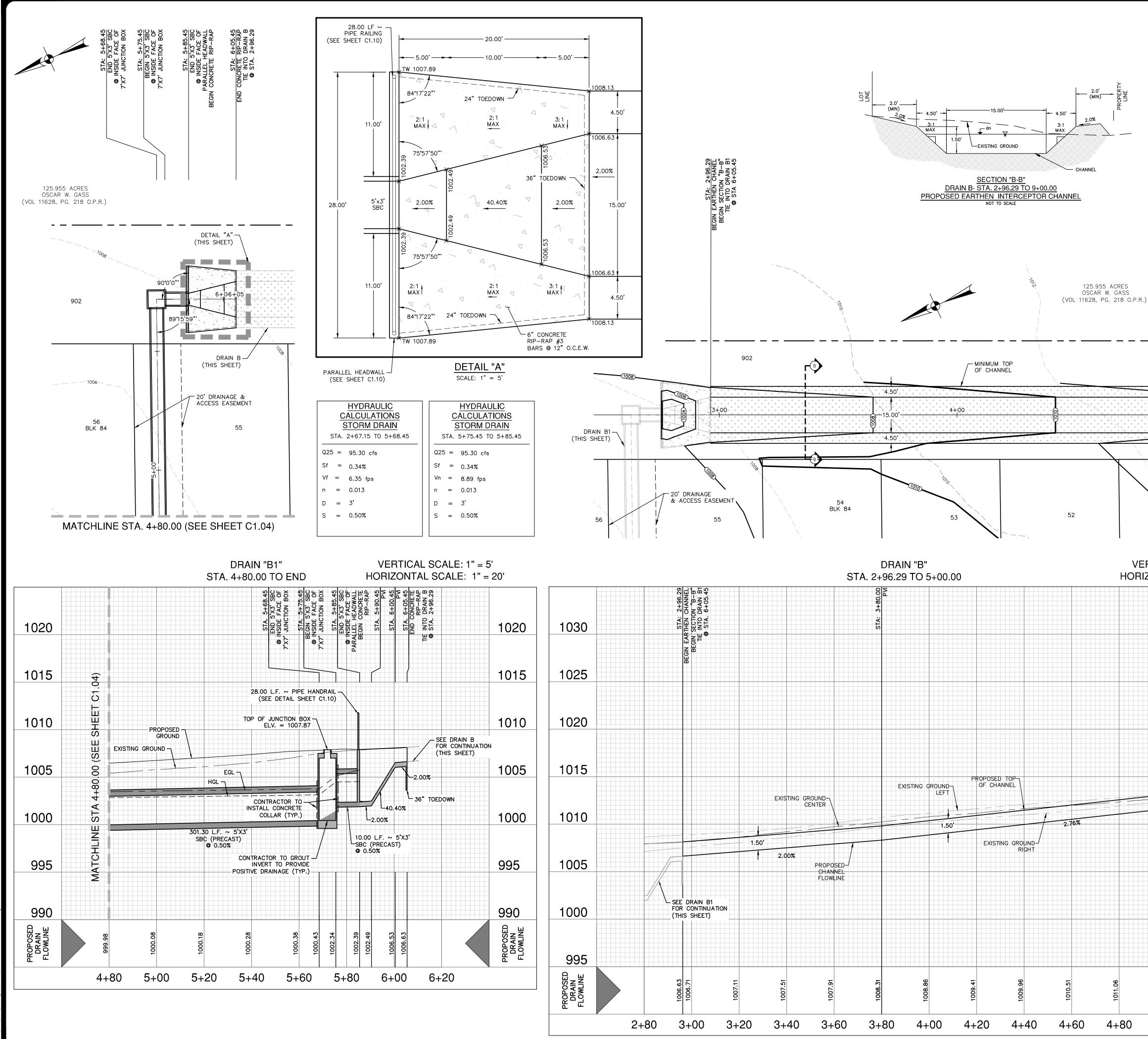


5	ALCULATIONS STORM DRAIN 1+25.00 TO 2+60.15					
Q25 =	95.30 cfs					
Sf =	0.34%					
Vf =	6.35 fps					
n =	0.013					
D =	3'					
S =	0.50%					
* SEE STORM WATER MANAGEMENT PLAN FOR ENERGY DISSIPATION CALCULATIONS FROM STA 1+04.98 TO 1+25.00						
DISSIPAT FROM S	TION CALCULATIONS TA. 1+04.98 TO 1+25.00 HYDRAULIC					
DISSIPAT FROM S	TION CALCULATIONS TA. 1+04.98 TO 1+25.00					
DISSIPAT FROM S	TION CALCULATIONS TA. 1+04.98 TO 1+25.00 HYDRAULIC ALCULATIONS					
DISSIPAT FROM S	TION CALCULATIONS TA. 1+04.98 TO 1+25.00 HYDRAULIC ALCULATIONS STORM DRAIN					
DISSIPAT FROM S	TION CALCULATIONS TA. 1+04.98 TO 1+25.00 HYDRAULIC ALCULATIONS STORM DRAIN 2+67.15 TO 5+68.45					
DISSIPAT FROM S <u>C</u> <u>S</u> STA. Q25 =	TION CALCULATIONS TA. 1+04.98 TO 1+25.00 HYDRAULIC ALCULATIONS STORM DRAIN 2+67.15 TO 5+68.45 95.30 cfs					
DISSIPAT FROM S STA. Q25 = Sf =	HYDRAULIC ALCULATIONS ALCULATIONS STORM DRAIN 2+67.15 TO 5+68.45 95.30 cfs 0.34%					
DISSIPAT FROM S $\frac{C}{S}$ STA. Q25 = Sf = Vf = n =	HYDRAULIC ALCULATIONS TORM DRAIN 2+67.15 TO 5+68.45 95.30 cfs 0.34% 6.35 fps					
DISSIPAT FROM S STA. Q25 = Sf = Vf = n = D =	HYDRAULIC ALCULATIONS STORM DRAIN 2+67.15 TO 5+68.45 95.30 cfs 0.34% 6.35 fps 0.013					

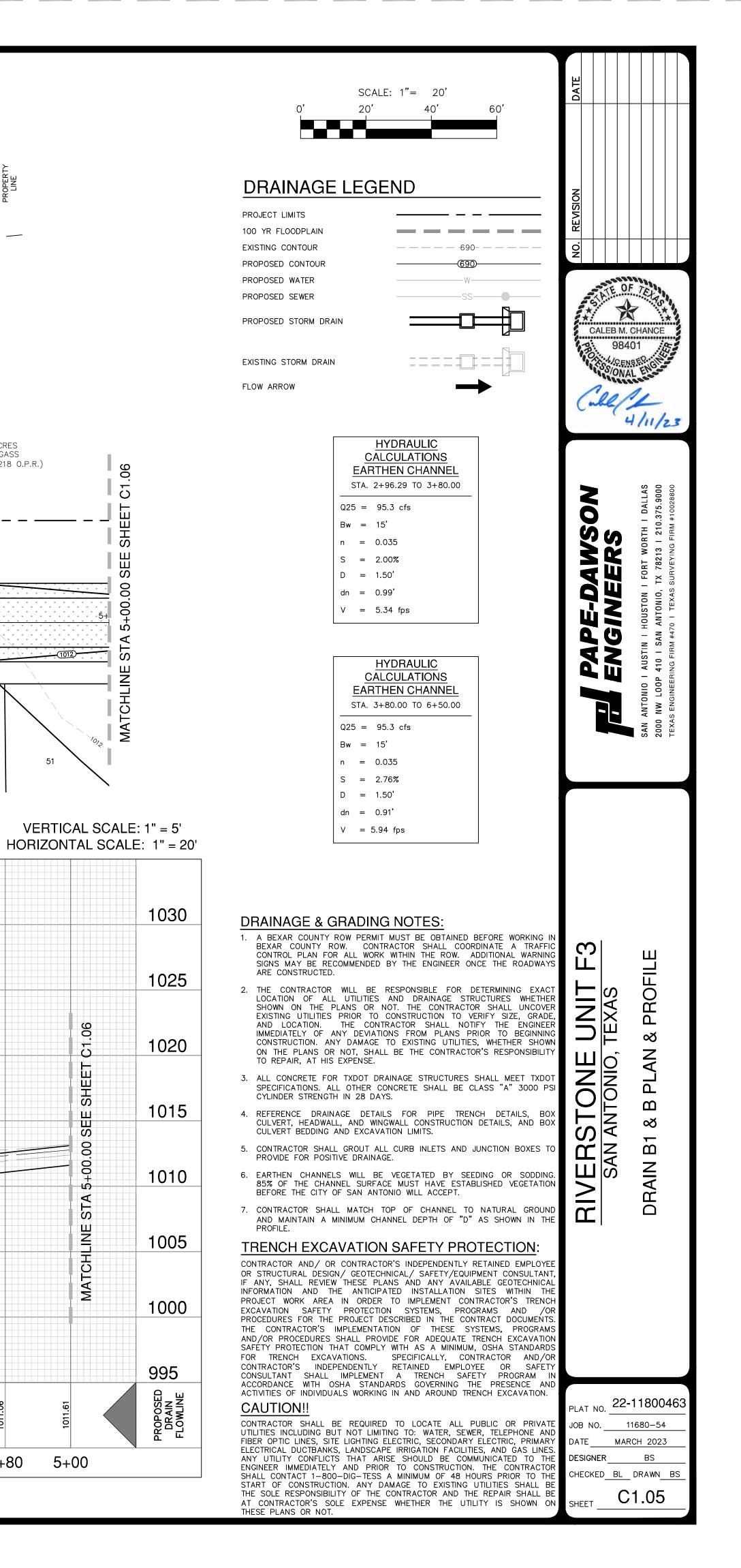
1015		BEGIN ROCK RUBBLE STA. 1+14.98 END ROCK RUBBLE BEGIN HEADWALL STA. 1+25.00 BECIN 5'X3' SBC @ INSIDE FACE OF	HEADWALL		
1010					
	15.96 L.F. ~ PIPE H (SEE DETAIL SHEI	HANDRAIL - ET C1.10)			
1005					
1000 CONTRACTOR EXIST	R SHALL MATCH-				
995		0.50%		135.15 L. SBC (F © (.F. ~ 5'X3' PRECAST) D.50%
			OWN		S
990		- 24" DEPTH OF 9"-12" DIAMETEF ROCK RUBBLE	ξ		8" 8"
990 985		24" DEPTH OF 9"-12" DIAMETER	R		
	998.05	24" DEPTH OF 9"-12" DIAMETER	998.32 998.32	998.42	8" 60 88 22 88 20 88 8 88 88 88 88 88 88 88 88 88 88 8 8

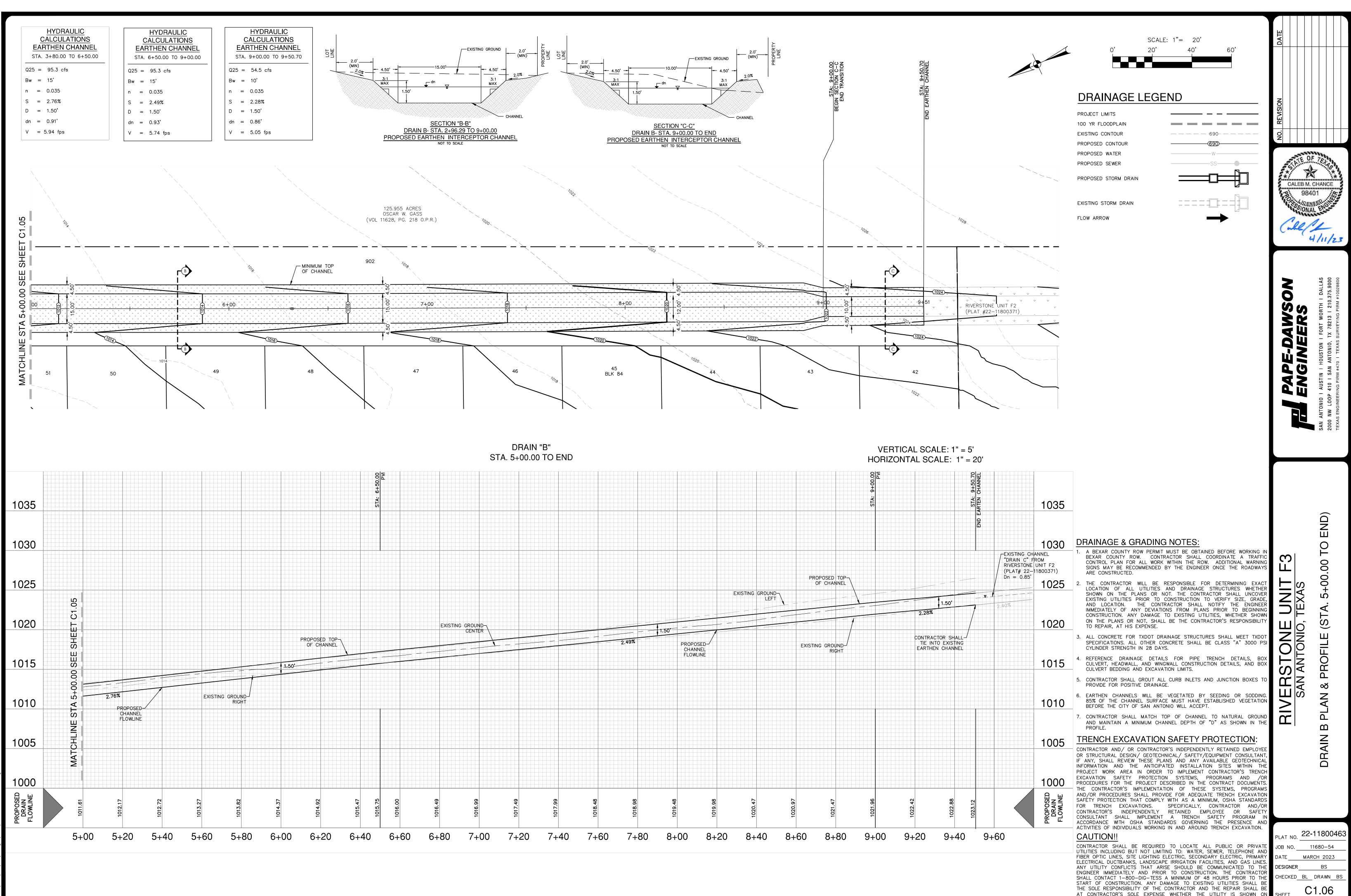






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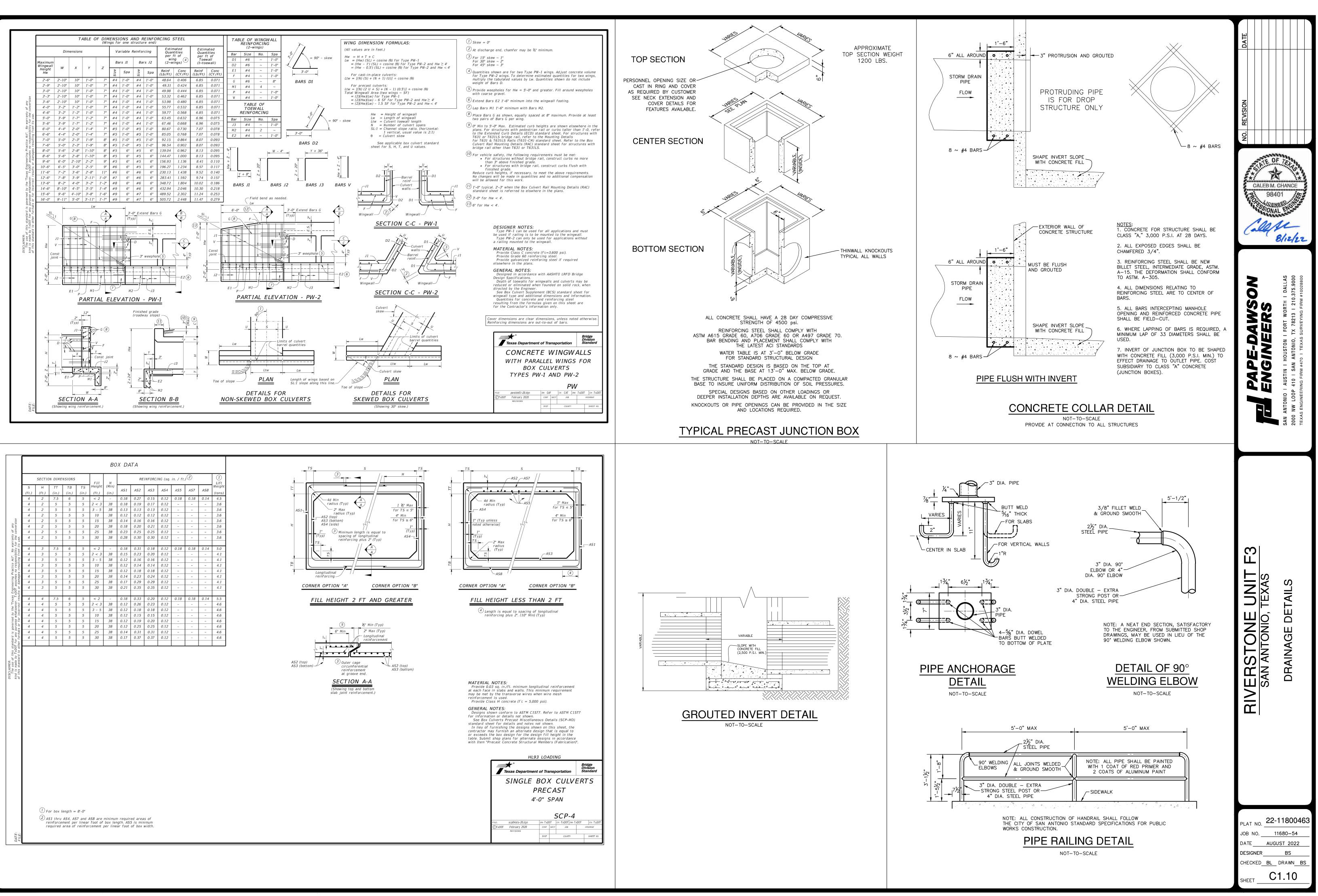


AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON

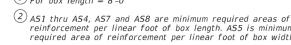
THESE PLANS OR NOT.

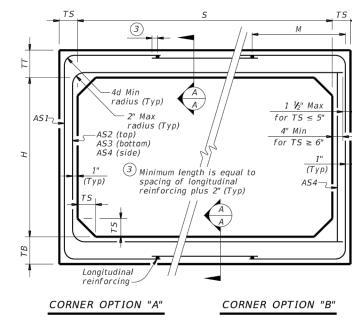
SHEET

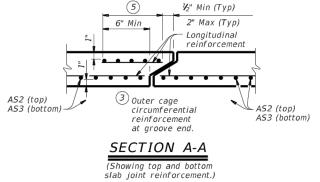


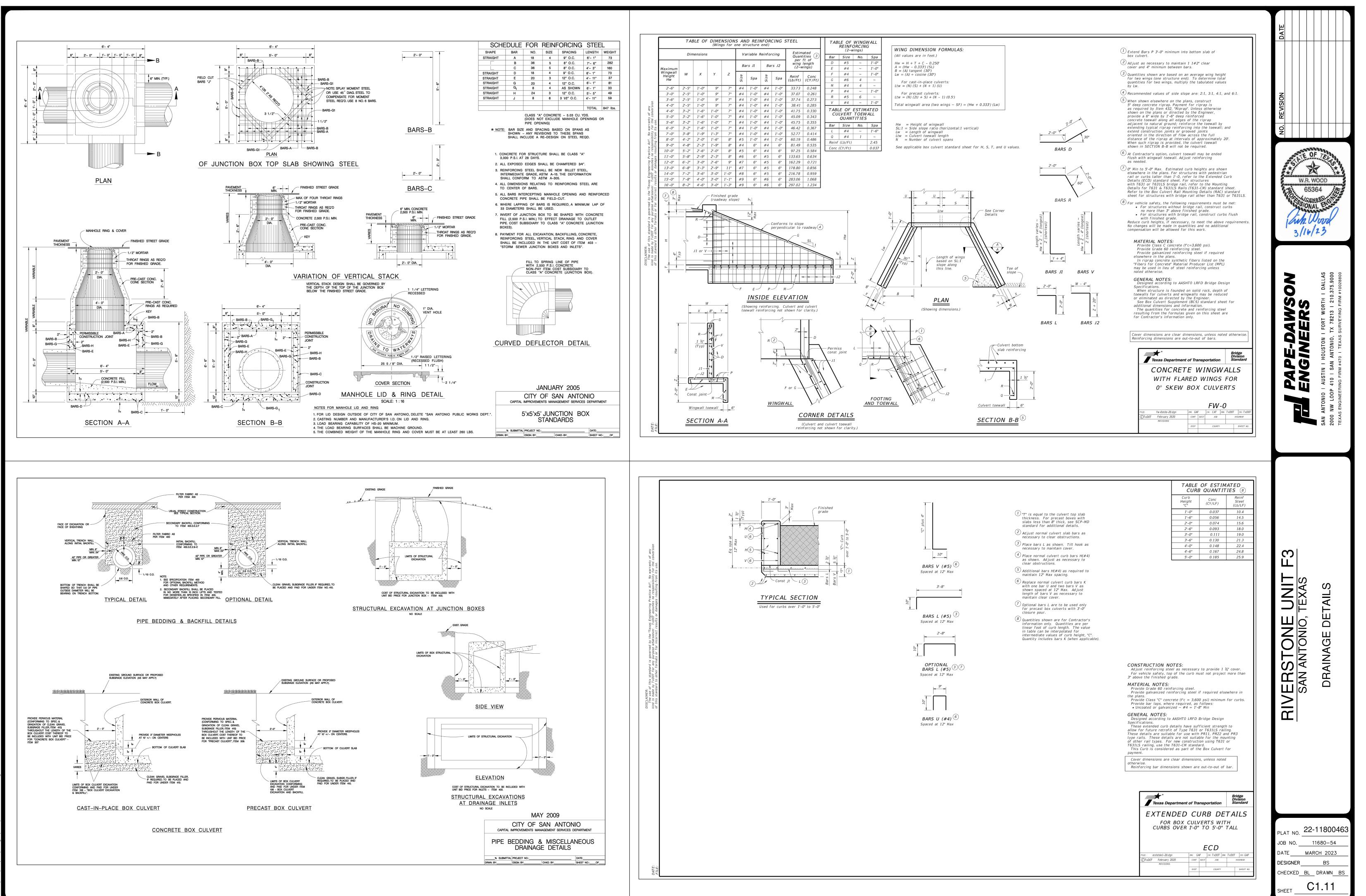


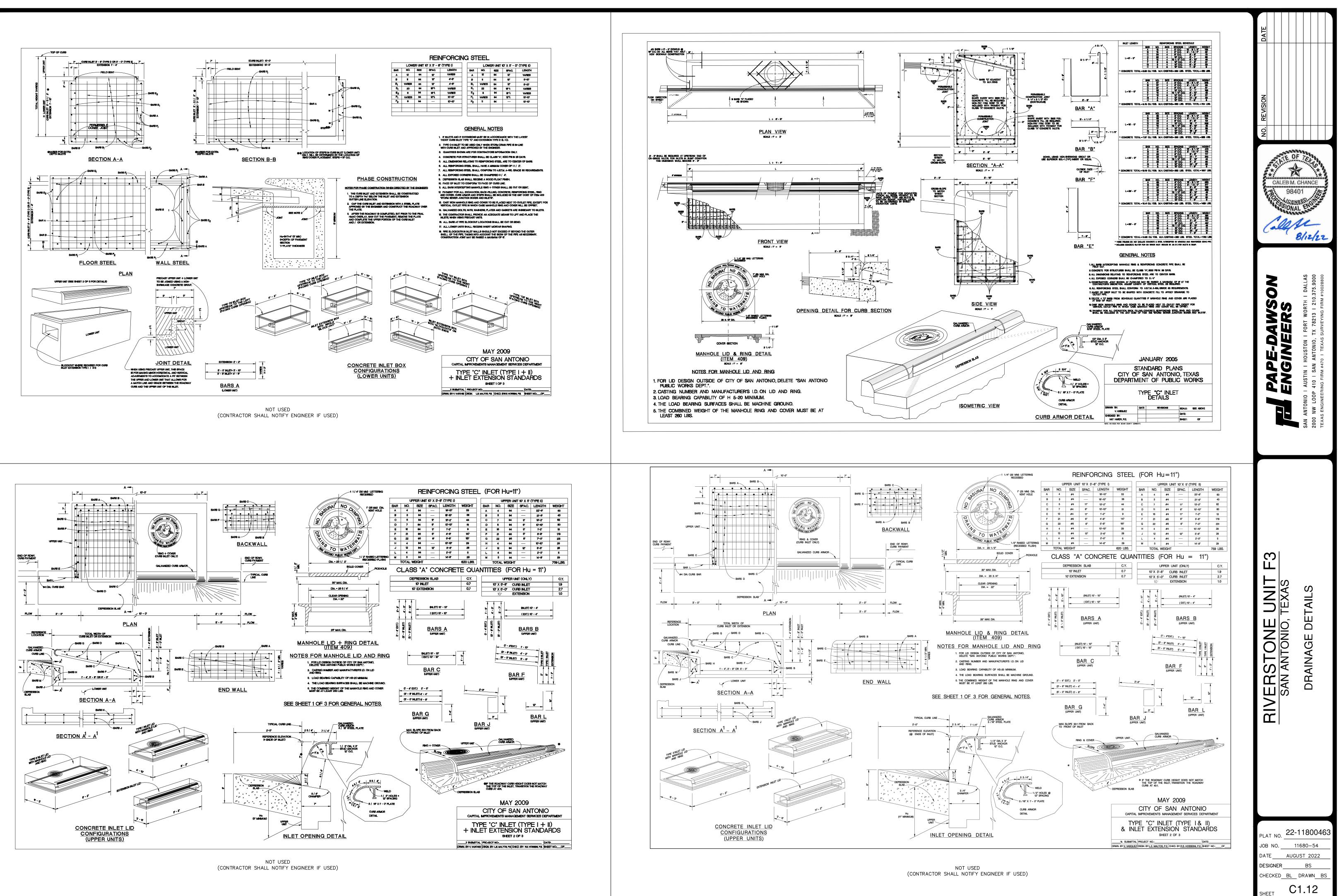
	SECTIO	N DIME	NSIONS		Fill	м		RE	INFORC	ING (sq.	in. / ft.)2	
5 (ft.)	Н (ft.)	TT (in.)	ТВ (in.)	TS (in.)	Height (ft.)	(Min) (in.)	AS1	A52	A53	A54	A55	AS7	A58
4	2	7.5	6	5	< 2	-	0.18	0.27	0.15	0.12	0.18	0.18	0.14
4	2	5	5	5	2 < 3	38	0.18	0.19	0.17	0.12	-	-	-
4	2	5	5	5	3 - 5	38	0.13	0.13	0.13	0.12	-	-	-
4	2	5	5	5	10	38	0.12	0.12	0.12	0.12	-	-	-
4	2	5	5	5	15	38	0.14	0.16	0.16	0.12	-	-	-
4	2	5	5	5	20	38	0.18	0.20	0.21	0.12	-	-	-
4	2	5	5	5	25	38	0.23	0.25	0.25	0.12	-	-	-
4	2	5	5	5	30	38	0.28	0.30	0.30	0.12	-	-	-
4	3	7.5	6	5	< 2	-	0.18	0.31	0.18	0.12	0.18	0.18	0.14
4	3	5	5	5	2 < 3	38	0.15	0.23	0.20	0.12	-	-	-
4	3	5	5	5	3 - 5	38	0.12	0.16	0.16	0.12	-	-	-
4	3	5	5	5	10	38	0.12	0.14	0.14	0.12	-	-	-
4	3	5	5	5	15	38	0.12	0.18	0.18	0.12	-	-	-
4	3	5	5	5	20	38	0.14	0.23	0.24	0.12	-	-	-
4	3	5	5	5	25	38	0.17	0.29	0.29	0.12	-	-	-
4	3	5	5	5	30	38	0.21	0.35	0.35	0.12	-	-	-
4	4	7.5	6	5	< 2	-	0.18	0.33	0.20	0.12	0.18	0.18	0.14
4	4	5	5	5	2 < 3	38	0.12	0.26	0.23	0.12	-	-	-
4	4	5	5	5	3 - 5	38	0.12	0.18	0.18	0.12	-	-	-
4	4	5	5	5	10	38	0.12	0.15	0.15	0.12	-	-	-
4	4	5	5	5	15	38	0.12	0.19	0.20	0.12	-	-	-
4	4	5	5	5	20	38	0.12	0.25	0.25	0.12	-	-	-
4	4	5	5	5	25	38	0.14	0.31	0.31	0.12	-	-	-
4	4	5	5	5	30	38	0.17	0.37	0.37	0.12	-	-	-

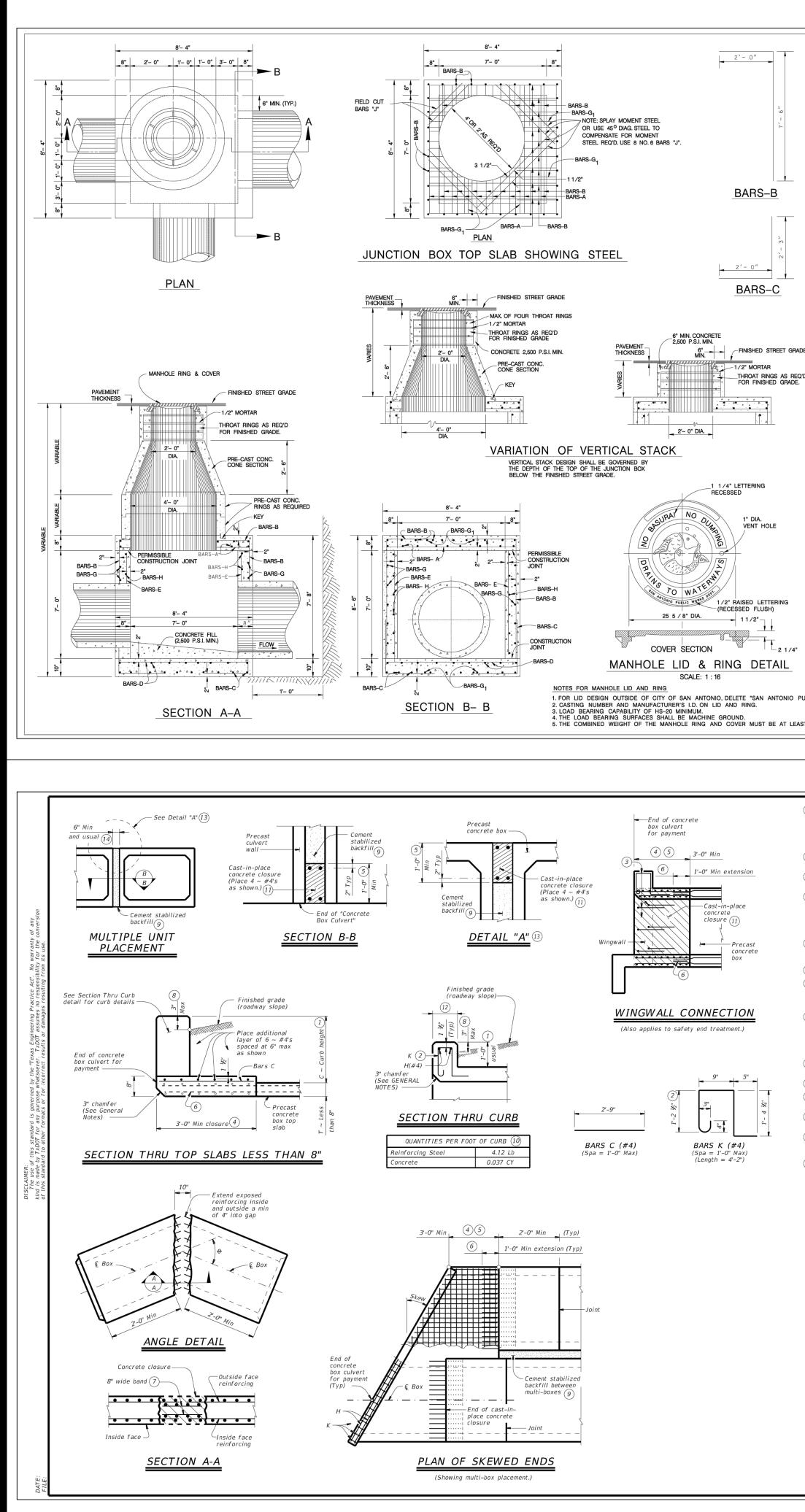








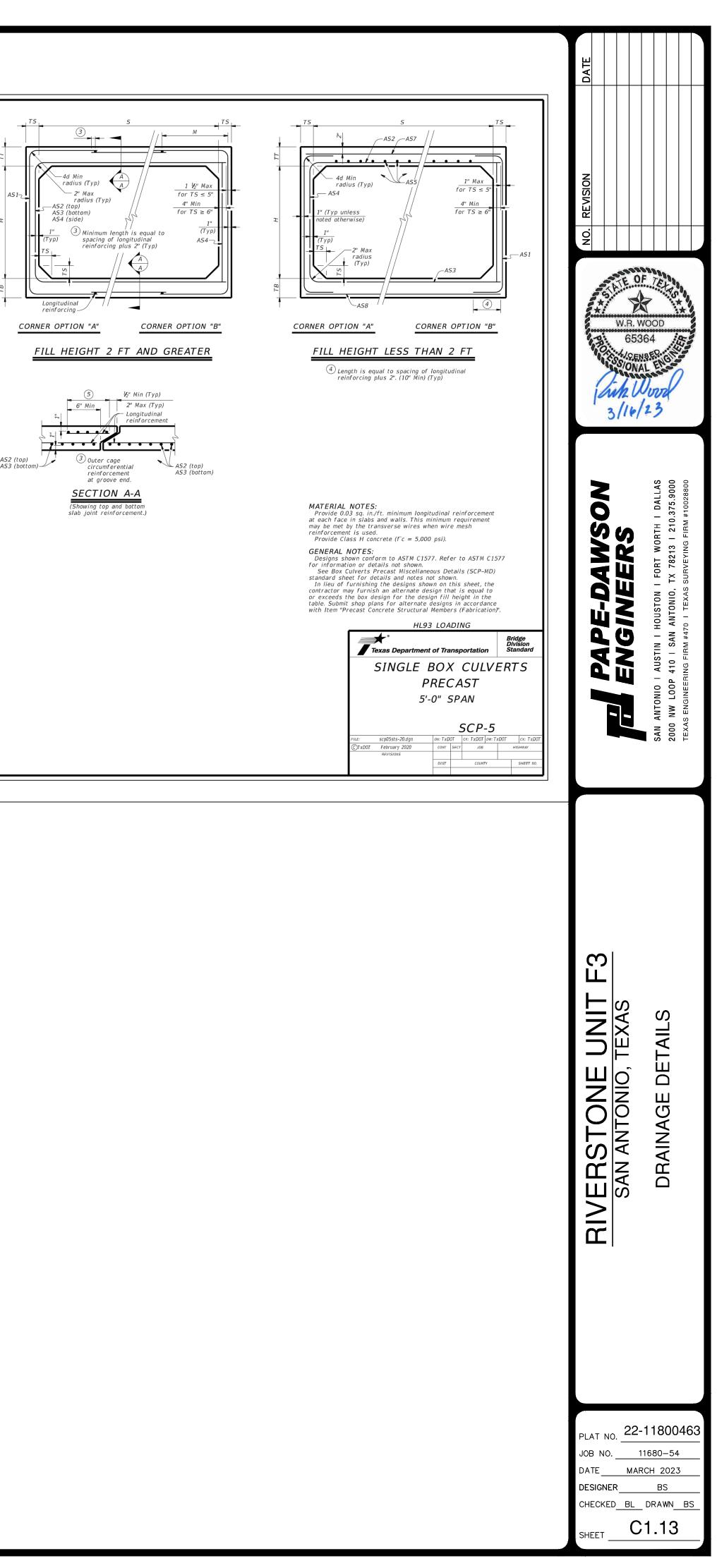


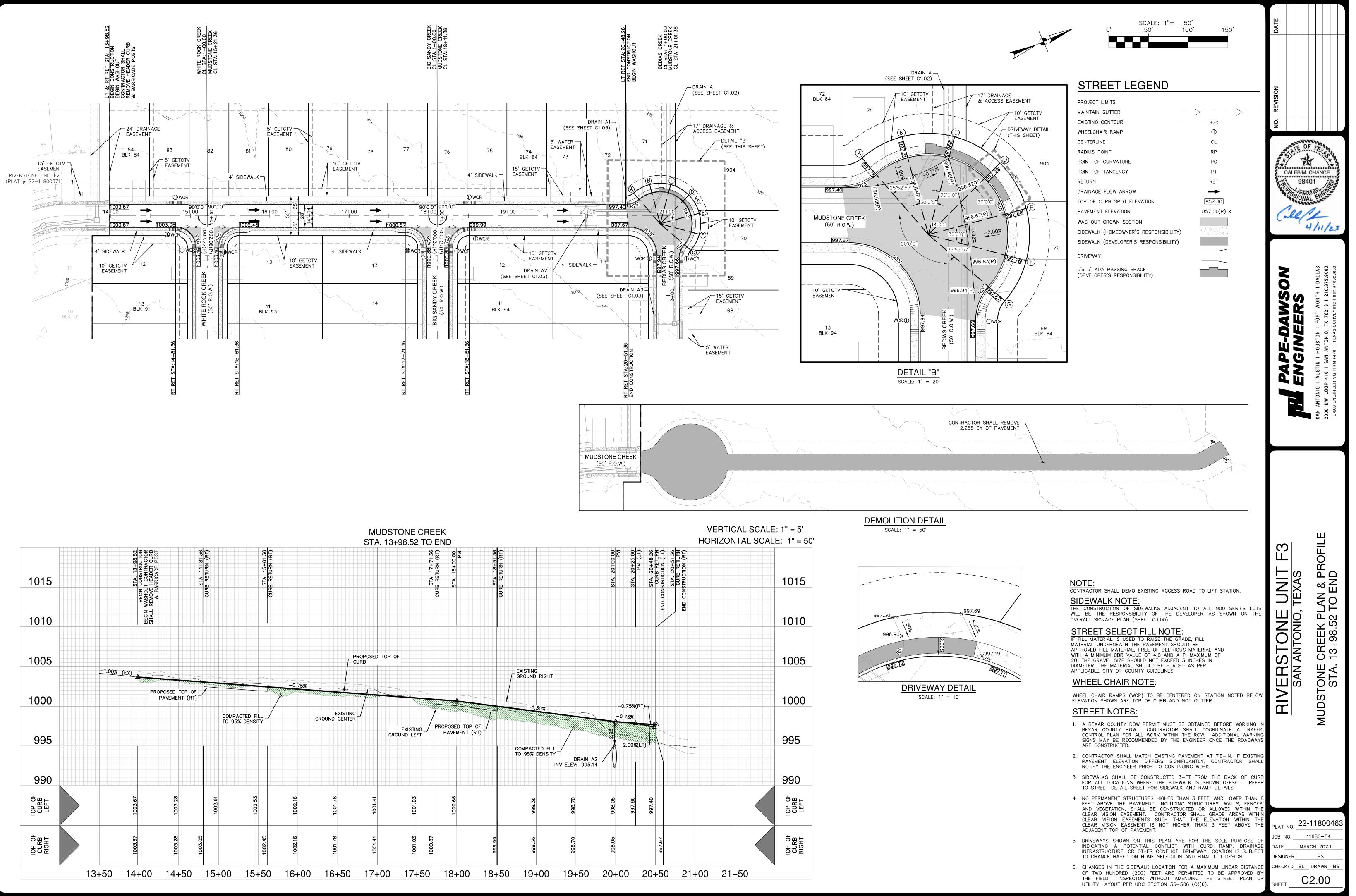


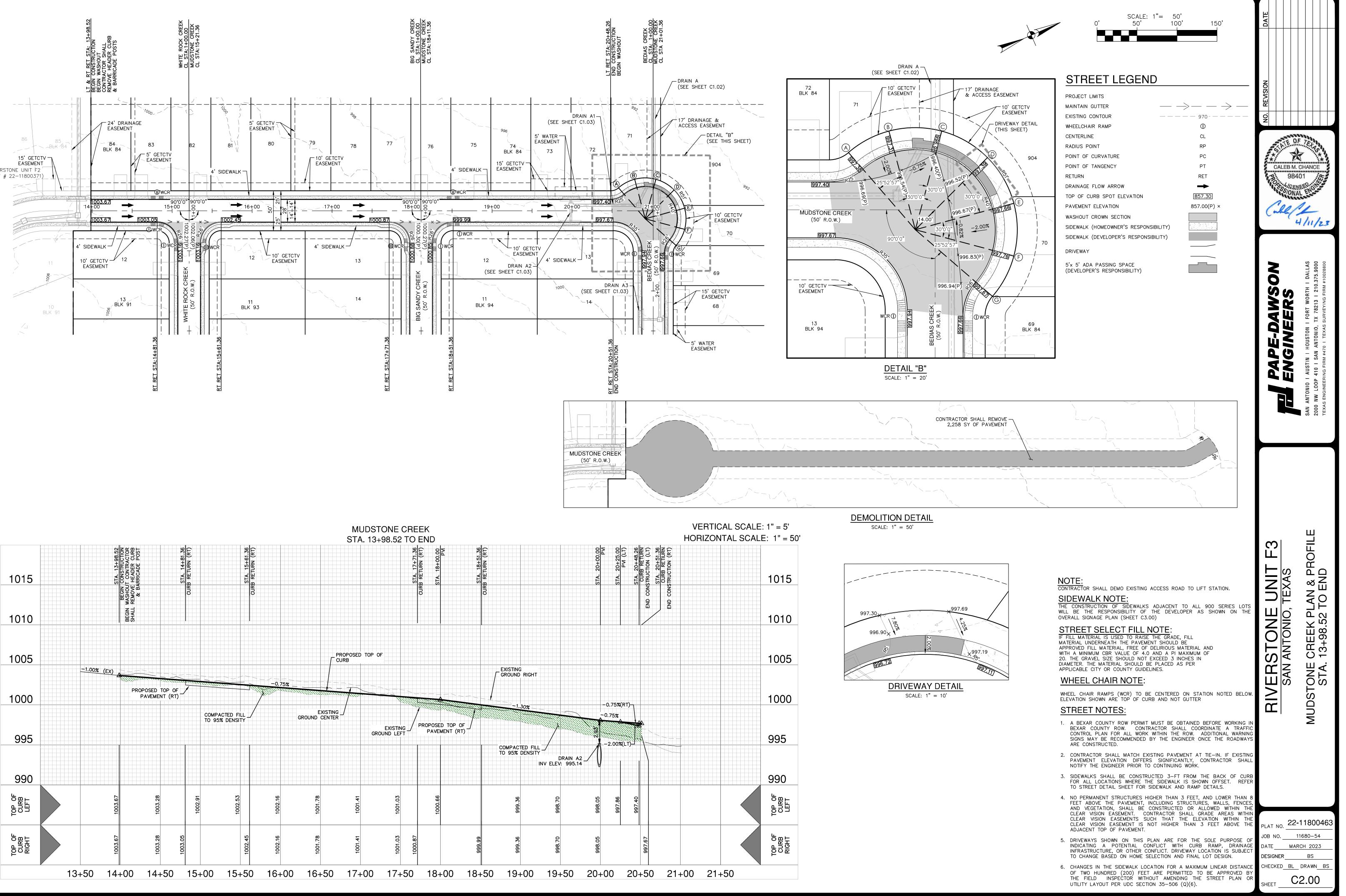
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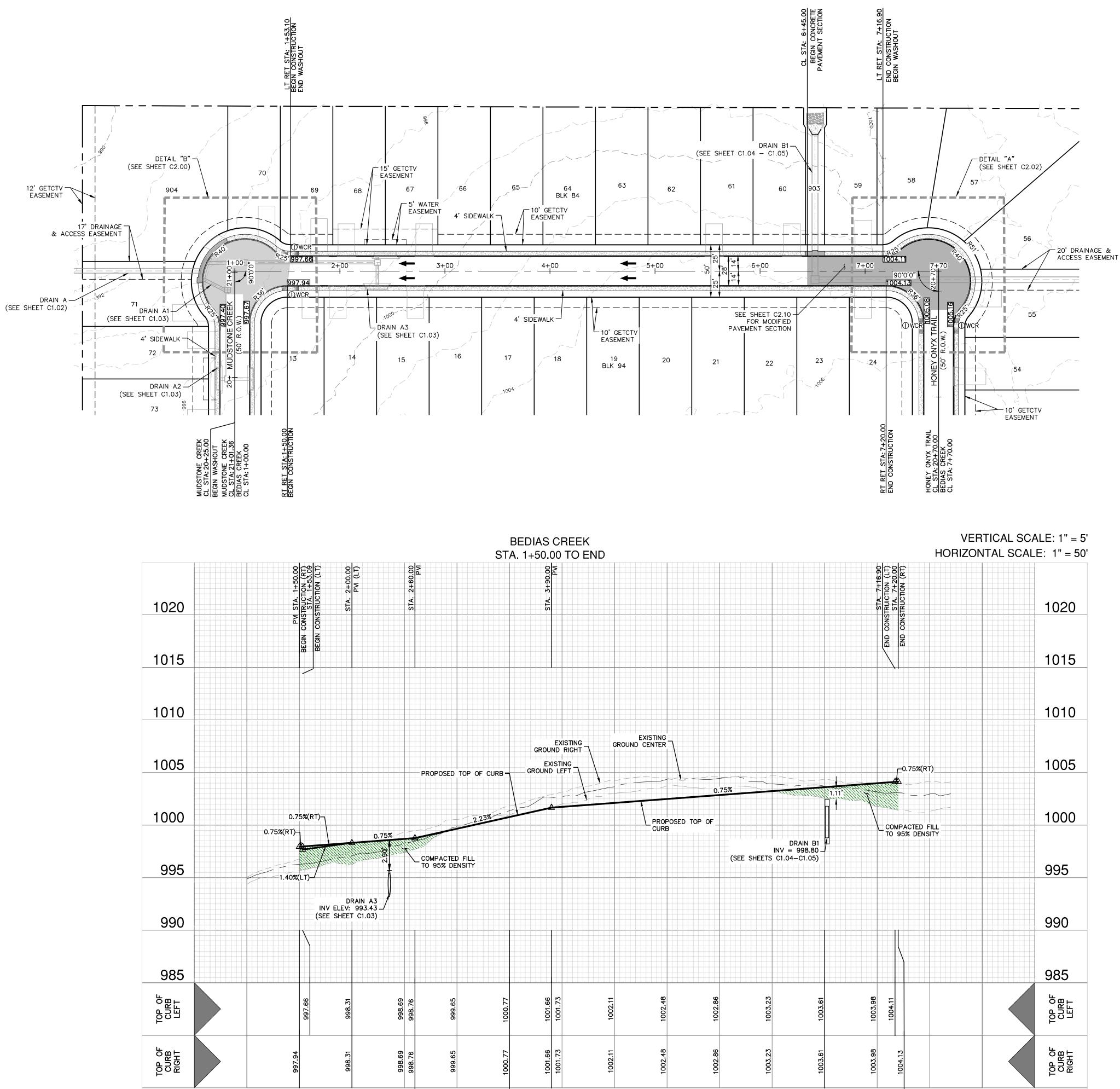
SCHEDULE FOR REINFORCING STEEL SHAPE BAR NO. SIZE SPACING LENGTH WEIGHT						В	OX DA	AT A							
STRAIGHT A 24 4 9" O.C. 8'-1" 130 Image: Ima			ECTION DIM	ENSIONS TB	Fi TS Hei					ING (sq.				1) Lift Weight	
STRAIGHT E 28 3 12" O.C. 6'-11" 73 STRAIGHT G 28 4 12" O.C. 8'-6" 151 STRAIGHT G 28 4 AS SHOWN 8'-1" 43	((ft.) (1 5	ft.) (in.) 2 8 2 6	(in.) 7 6	(in.) (ft 6 < 6 2 <	2 -	AS1 0.19 0.22	A52 0.27 0.20	A53 0.18 0.16	AS4 0.14 0.14	AS5 0.19 -	AS7 0.19 -	AS8 0.17 -	(tons) 6.0 5.1	
STRAIGHT H 32 3 12" O.C. 7'- 5" 89 STRAIGHT J 8 6 3 1/2" O.C. 4'- 11" 59		5 5	2 6 2 6 2 6	6 6 6	6 3 - 6 1 6 1.	0 36	0.16 0.15 0.20	0.14 0.14 0.18	0.14 0.14 0.18	0.14 0.14 0.14	-	-		5.1 5.1 5.1	
CLASS "A" CONCRETE – 9.16 C.U. YDS. (DOES NOT EXCLUDE MANHOLE OPENINGS OR PIPE OPENING)	y of any conversi	5 5	2 6 2 6 2 6	6 6 6	6 2 6 2	0 36 5 36	0.26 0.33 0.39	0.23 0.29 0.34	0.24 0.29 0.35	0.14 0.14 0.14		-		5.1 5.1 5.1	τ
* <u>NOTE:</u> BAR SIZE AND SPACING BASED ON SPANS AS SHOWN - ANY REVISIONS TO THESE SPANS SHALL INCLUDE A RE-DESIGN ON STEEL REQD.	No warr lity for om its u	5	3 8 3 6	7	6 < 6 2 <	2 -	0.19	0.31	0.21	0.14	0.19	0.19	0.17	6.6 5.7	
1. CONCRETE FOR STRUCTURE SHALL BE CLASS "A"	ctice Act" respons esulting	5 5	3 6 3 6 3 6 3 6	6 6 6	6 3 - 6 1	· 5 36 0 36	0.14 0.14	0.17 0.16	0.15 0.16 0.17 0.22	0.14 0.14 0.14 0.14	-	-	-	5.7 5.7 5.7 5.7	1 ^B
3,000 P.S.I. AT 28 DAYS. 2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4". 3. REINFORCING STEEL SHALL BE NEW BILLET STEEL,	eering Pr assumes r damages	5 5	3 6 3 6	6 6	6 2 6 2	0 35 5 35	0.16 0.21 0.26	0.21 0.27 0.34	0.28 0.34	0.14 0.14	-	-	-	5.7 5.7	Ť
INTERMEDIATE GRADE, ASTM A-15. THE DEFORMATION SHALL CONFORM TO ASTM A-305. 4. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.	exas Eng r. TxD01 results	5	3 6 4 8	6 7	6 3 6 <	2 -	0.31	0.41	0.41	0.14	- 0.19	-	- 0.17	5.7 7.2	
 ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD-CUT. WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 	ed by the whatsoe	5 5	4 6 4 6 4 6	6 6 6	6 2 < 6 3 - 6 10	- 5 45 0 36	0.16 0.14 0.14	0.27 0.19 0.18	0.22 0.18 0.18	0.14 0.14 0.14				6.3 6.3 6.3	
33 DIAMETERS SHALL BE USED. 7. INVERT OF JUNCTION BOX TO BE SHAPED WITH CONCRETE FILL (2,500 P.S.I. MIN.) TO EFFECT DRAINAGE TO OUTLET PIPE. COST SUBSIDIARY TO CLASS "A" CONCRETE (JUNCTION	is gover my purpo rmats or	5 5	4 6 4 6 4 6	6 6 6	6 1. 6 2. 6 2.	0 35 5 35	0.14 0.17 0.21	0.23 0.30 0.37	0.24 0.31 0.38	0.14 0.14 0.14	-	-		6.3 6.3 6.3	
BOXES). D 8. PAYMENT FOR ALL EXCAVATION, BACKFILLING, CONCRETE, REINFORCING STEEL, VERTICAL STACK, RING AND COVER	is standa xDOT for to other i	5	4 6 5 8	6 7	6 3 6 <	2 -	0.25	0.44	0.45 0.26	0.14	- 0.19	-	- 0.17	6.3 7.8	
SHALL BE INCLUDED IN THE UNIT COST OF ITEM 403 – "STORM SEWER JUNCTION BOXES AND INLETS".	umer: use of t made by standard	5 5	5 6 5 6 5 6	6 6 6	6 2 < 6 3 - 6 1	· 5 45 0 45	0.14 0.14 0.14	0.29 0.21 0.19	0.24 0.20 0.20	0.14 0.14 0.14	-	-		6.9 6.9 6.9	AS AS
FILL TO SPRING LINE OF PIPE WITH 2,500 P.S.I. CONCRETE NON-PAY ITEM. COST SUBSIDIARY TO	DISC T kind of th	5 5	5 6 5 6 5 6	6 6 6	6 1. 6 2. 6 2.	0 35 5 35	0.14 0.15 0.18	0.24 0.31 0.38	0.25 0.32 0.39	0.14 0.14 0.14				6.9 6.9 6.9	
CLASS "A" CONCRETE (JUNCTION BOX).		5	5 6	6	6 3	0 35	0.21	0.46	0.47	0.14	-	-	-	6.9	
CURVED DEFLECTOR DETAIL															
JANUARY 2005															
CITY OF SAN ANTONIO CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT		(1	For box	length =	8'-0"										
PUBLIC WORKS DEPT.". 7'X7'X7' JUNCTION BOX STANDARDS	ய்ப்		reinforce	ement per	7 and AS8 a linear foot reinforceme	of box le	ngth. AS:	5 is mín	imum						
ST 260 LBS.	DATE														
(1) O" Min to 5'-O" Max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail, or curbs taller than 1'-O, refer to the Extended Curb Details (ECD) standard sheet. For structures with T631 or T631LS bridge rail, refer to the Mounting Details for T631 & T631LS Rails (T631-CM)															
 standard sheet. Refer to the Box Culvert Rail Mounting Details (RAC) standard sheet for structures with bridge rail other than T631 or T631LS. For curbs less than 1'-0" high, tilt Bars K or reduce bar height as necessary to maintain cover. For curbs less than 3" high, Bars K may be omitted. 															
(3) Extend curb, wingwall, or safety end treatment reinforcing into concrete closure. Bend or trim, as necessary, any reinforcing that does not fit into closure area.															
(4) Provide a 3'-0" Min cast-in-place concrete closure. Break back boxes in the field or cast boxes short. Provide bands of reinforcing in the closure that are the same size and spacing as in the precast box section. Provide #4 longitudinal reinforcement spaced at 12 inches Max within the closure. Except where shown otherwise, construct the cast-in-place closure flush with the inside and outside															
faces of the precast box section. 5 For multiple unit placements, adjust the length of the closure for the interior walls as necessary. Provide a 3-0" Min cast-in-place closure in the top slab, bottom slab,															
and exterior wall. See Section B-B detail when interior walls are cast full length. (6) Extend precast box reinforcing a minimum of 1'-0" into concrete closure (Typ). (7) Place bands of reinforcing matching the inside and outside face reinforcing in the															
gaps of the top and bottom slabs. Place a band matching the outside face reinforcing of the wall in the gaps of the walls (placed in the outside face only). Tack weld the bands to the exposed reinforcing at each point of contact.															
 (8) For vehicle safety, the following requirements must be met: For structures without bridge rail, construct curbs no more than 3" above finished grade. For structures with bridge rail, construct curbs flush with finished grade. 															
Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work. (9) Cement stabilized backfill between boxes is considered part of the box culvert for payment.															
 10 All curb concrete and reinforcing is considered part of the box culvert for payment. (1) Any additional concrete and reinforcing required for the closures will be considered 															
 (12) 1'-O" typical. 2'-3" when the Box Culvert Rail Mounting Details (RAC) standard sheet is referred to elsewhere in the plans. 															
(13) For multiple unit placement with overlay, with 1 to 2 course surface treatment, or with the top slab as the final riding surface, provide wall closure as shown in Detail "A".															
(14) This dimension may be increased with approval of the Engineer to allow the precast boxes to be tunneled or jacked in accordance with Item 476, "Jacking, Boring, or Tunneling Pipe or Box". No payment will be made for any additional material in the gap between adjacent boxes.															
MATERIAL NOTES: Provide Grade 60 reinforcing steel.															
Provide ASTM A1064 welded wire reinforcement. Provide Class C concrete ($f'c = 3,600$ psi) for the closures. Provide cement stabilized backfill meeting the requirements of Item 400, "Excavation and Backfill for Structures." Any additional concrete required for the closures will be considered															
subsidiary to the box culvert. GENERAL NOTES: Designed according to AASHTO LRFD Bridge Design Specifications.															
Refer to the Single Box Culverts Precast (SCP) standard sheets for details and notes not shown. Chamfer the bottom edge of the top slab closure 3 inches at culvert closure ends.															
Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing bars dimensions are out-to-out of bars.															
HL93 LOADING Bridge Division Standard															
BOX CULVERTS															
PRECAST MISCELLANEOUS DETAILS															
SCP-MD															
FILE: scpmdst5-20.dgn DN: GAF CK: LNW DW: BWH/TxD0T CK: GAF CTxD0T February 2020 Cont SECT JOB HIGHWAY REVISIONS DIST COUNTY SHEET NO.															
ULSY COUNTY SHEET NO.															

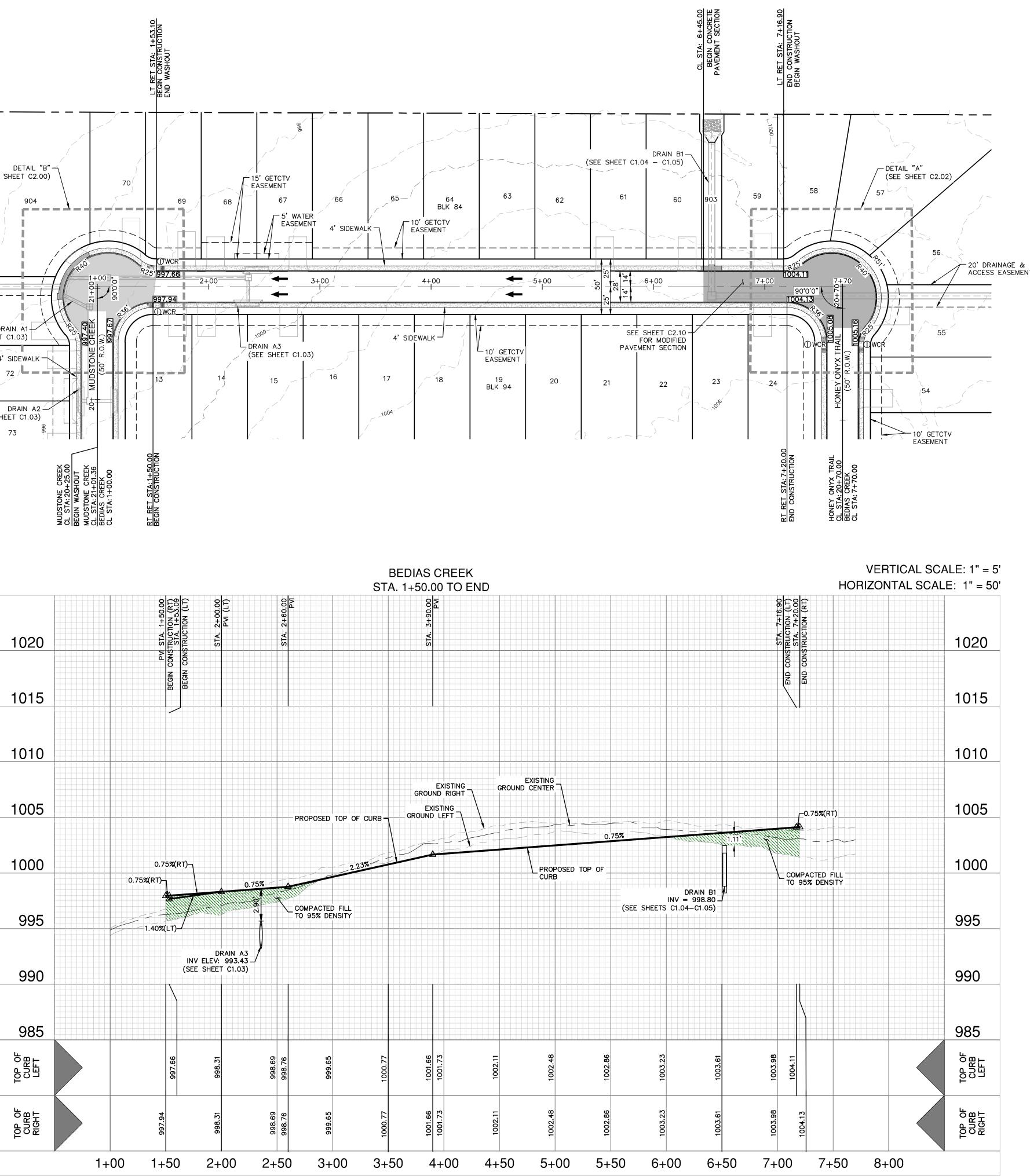






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	50' 100' 150'
STREET LEGEND	
PROJECT LIMITS	
MAINTAIN GUTTER	$\rightarrow \rightarrow -$
EXISTING CONTOUR	970
WHEELCHAIR RAMP	\bigcirc
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	→
TOP OF CURB SPOT ELEVATION	857.30
PAVEMENT ELEVATION	857.00(P) ×
WASHOUT CROWN SECTION	
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	

DRIVEWAY

5'x 5' ADA PASSING SPACE (DEVELOPER'S RESPONSIBILITY)



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SIDEWALK NOTE:

THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN (SHEET C3.00)

STREET SELECT FILL NOTE:

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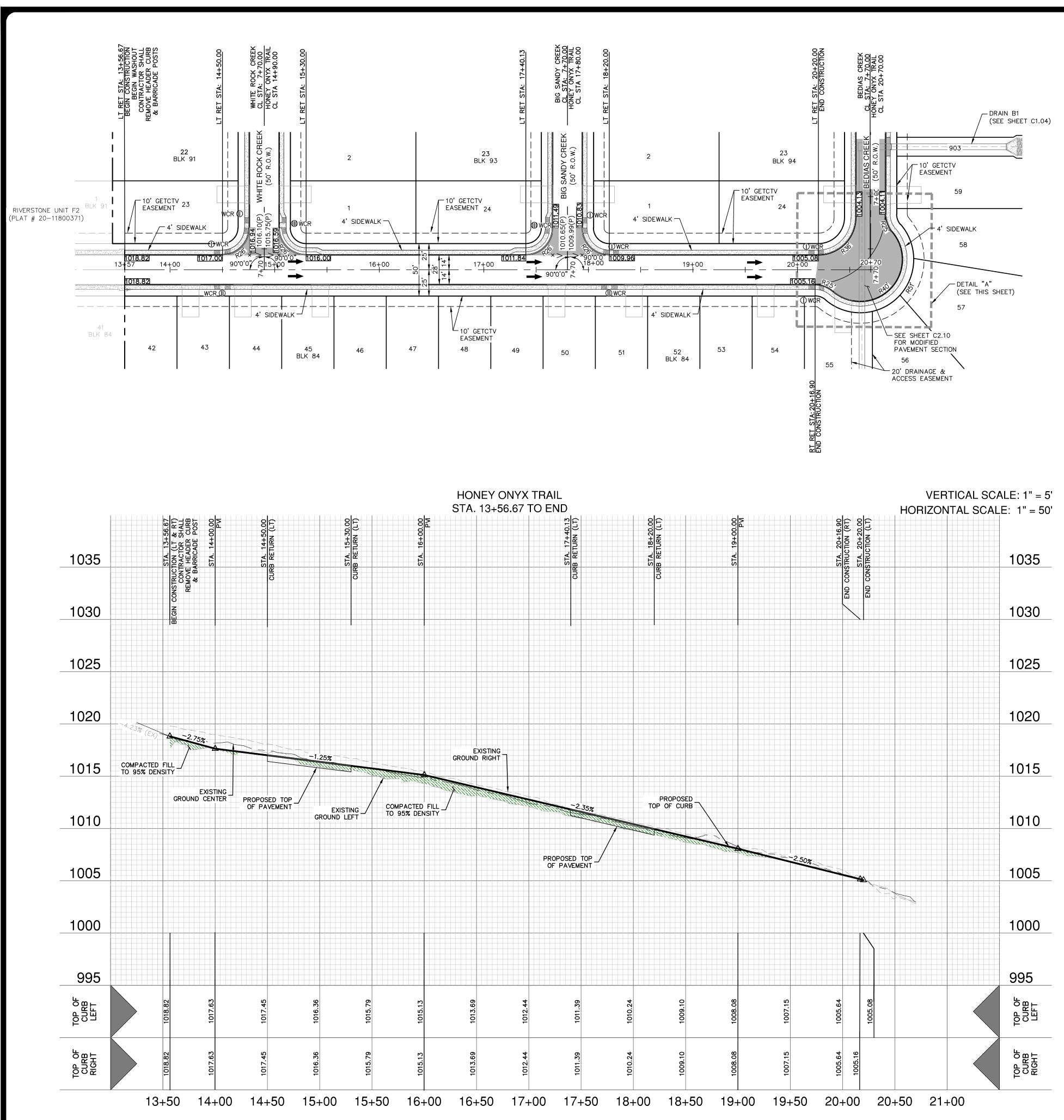
WHEEL CHAIR RAMPS (WCR) TO BE CENTERED ON STATION NOTED BELOW. ELEVATION SHOWN ARE TOP OF CURB AND NOT GUTTER

STREET NOTES:

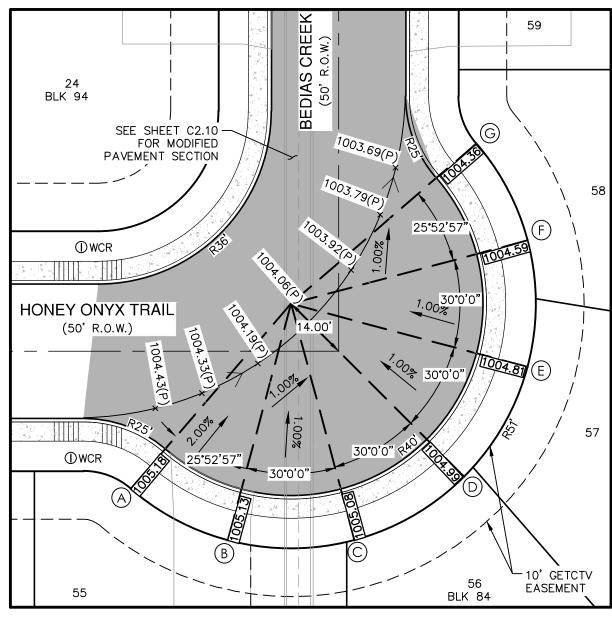
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- 3. SIDEWALKS SHALL BE CONSTRUCTED 3-FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
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RIVERSTONE UNIT F3	BEDIAS CREEK PLAN & PROFILE
SAN ANTONIO, TEXAS	STA. 1+50.00 TO END
PLAT NO	11800463 1680-54 CH 2023 BS DRAWN BS 2.01

HEET



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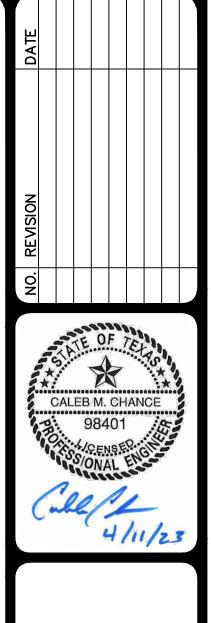
DETAIL "A" SCALE: 1" = 20'



STREET LEGEND PROJECT LIMITS \longrightarrow \longrightarrow \longrightarrow \longrightarrow \longrightarrow MAINTAIN GUTTER EXISTING CONTOUR ____ 970 - ___ -WHEELCHAIR RAMP CENTERLINE CL RADIUS POINT RF POINT OF CURVATURE PC POINT OF TANGENCY ΡT RETURN RET DRAINAGE FLOW ARROW \rightarrow 857.30 TOP OF CURB SPOT ELEVATION 857.00(P) × PAVEMENT ELEVATION WASHOUT CROWN SECTION SIDEWALK (HOMEOWNER'S RESPONSIBILITY) SIDEWALK (DEVELOPER'S RESPONSIBILITY) ____ DRIVEWAY ____

SCALE: 1"= 50' 50' 100'

150'



LLAS 9000

DAI 75.

SAN

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NO

PAPE-DAWS ENGINEERS

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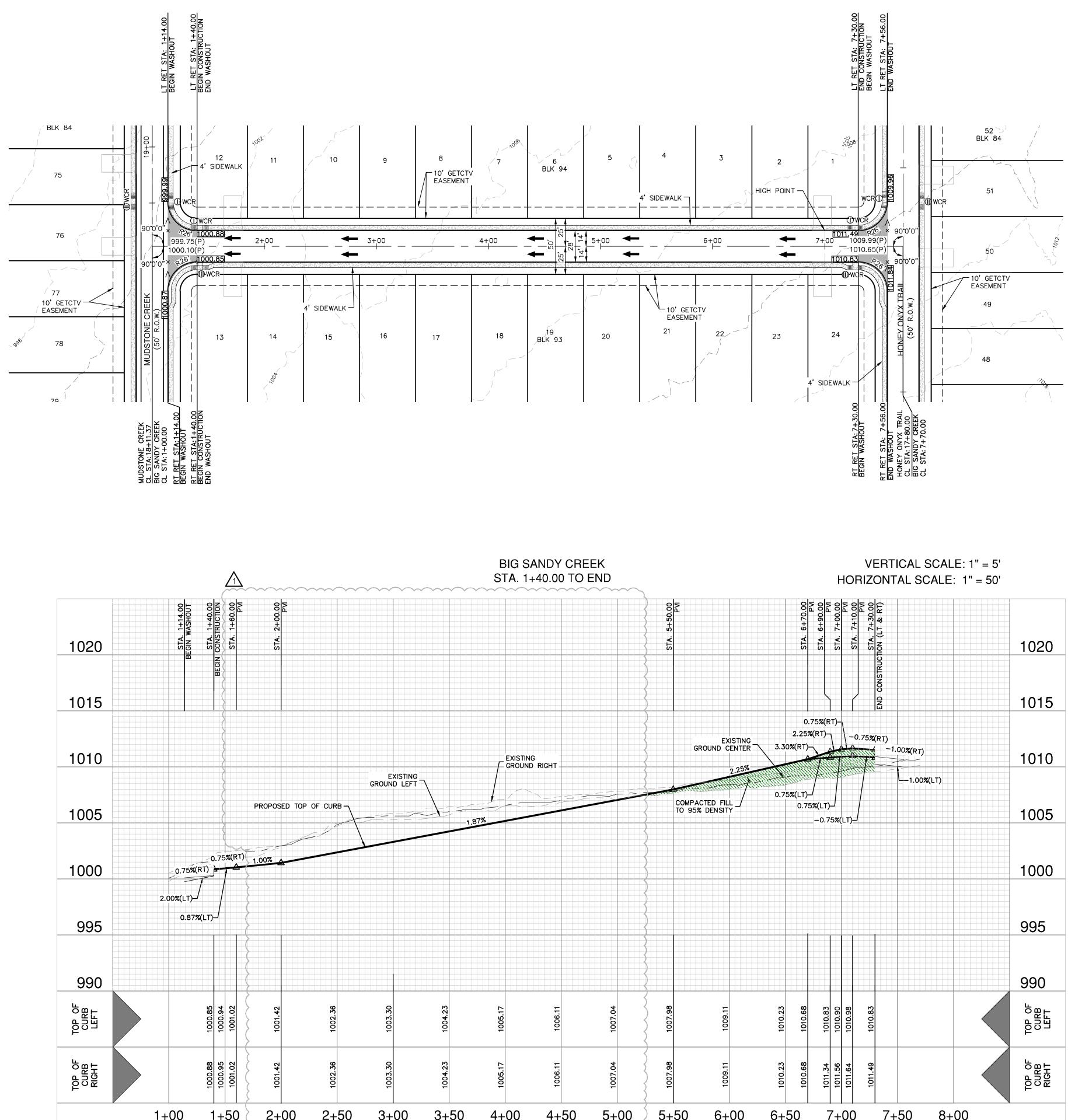
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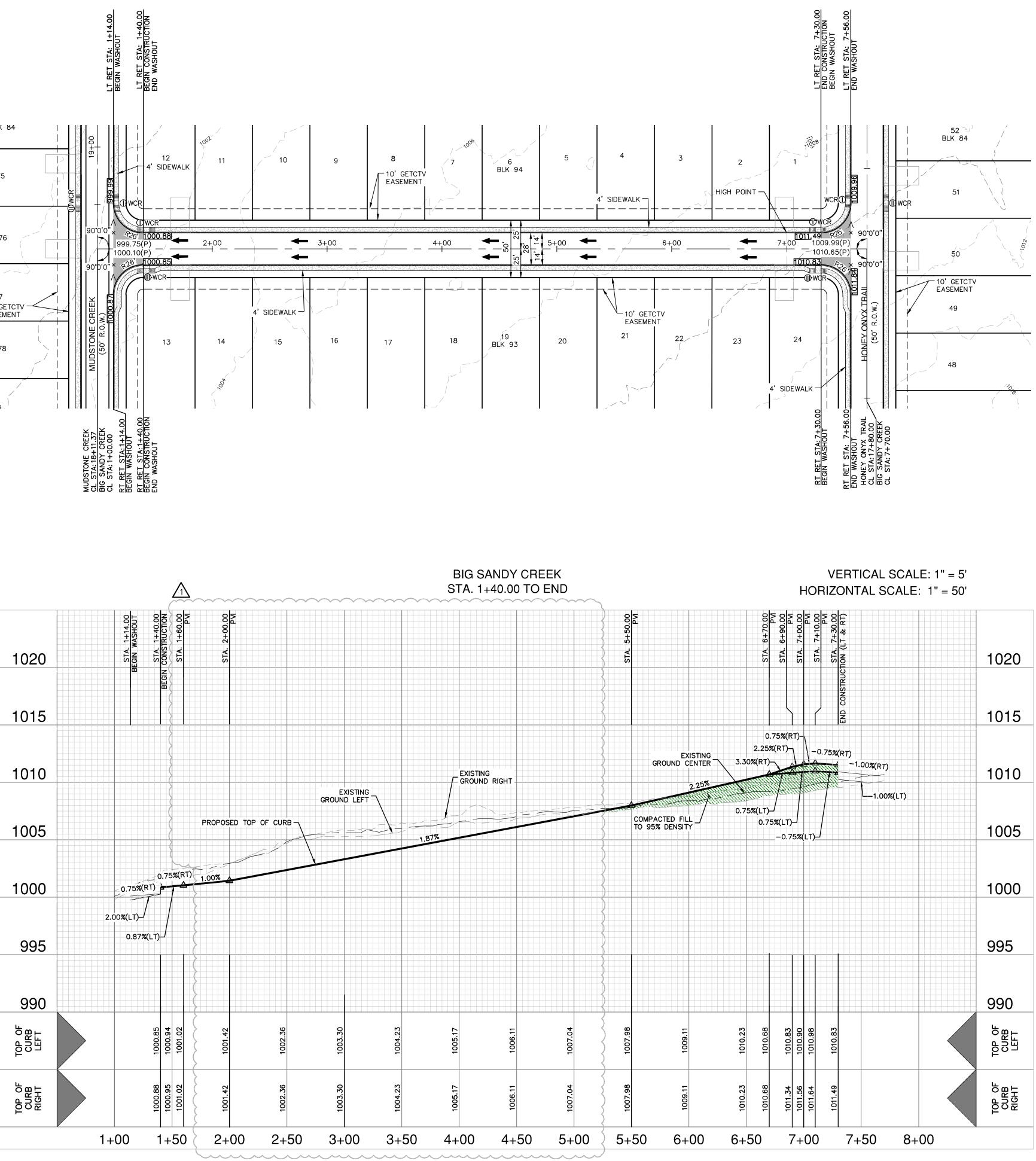
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RIVERSTONE UNIT F3 SAN ANTONIO. TEXAS	HONEY ONYX TRAIL PLAN & PROFILE STA. 13+56.67 TO END
	22-11800463
	11680-54 MARCH 2023
DESIGNER	
	L DRAWN BS

C2.02 HEET







SCALE: 0'50'	1"= 50' 100' 150'
STREET LEGEN)
PROJECT LIMITS MAINTAIN GUTTER EXISTING CONTOUR	$ \longrightarrow \longrightarrow \longrightarrow \longrightarrow \longrightarrow \longrightarrow \longrightarrow \longrightarrow$
WHEELCHAIR RAMP CENTERLINE	D CL
RADIUS POINT	RP

POINT OF CURVATURE

POINT OF TANGENCY

DRAINAGE FLOW ARROW

PAVEMENT ELEVATION

WASHOUT CROWN SECTION

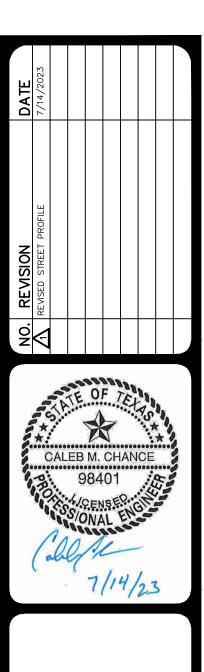
TOP OF CURB SPOT ELEVATION

SIDEWALK (HOMEOWNER'S RESPONSIBILITY) SIDEWALK (DEVELOPER'S RESPONSIBILITY)

RETURN

DRIVEWAY

	PC
857.30	PT
	RET
	→
57.00(P) ×	857.30
	57.00(P) ×



LLAS 9000 PAPE-DAWSON ENGINEERS 75. N - SAN ΝŇ

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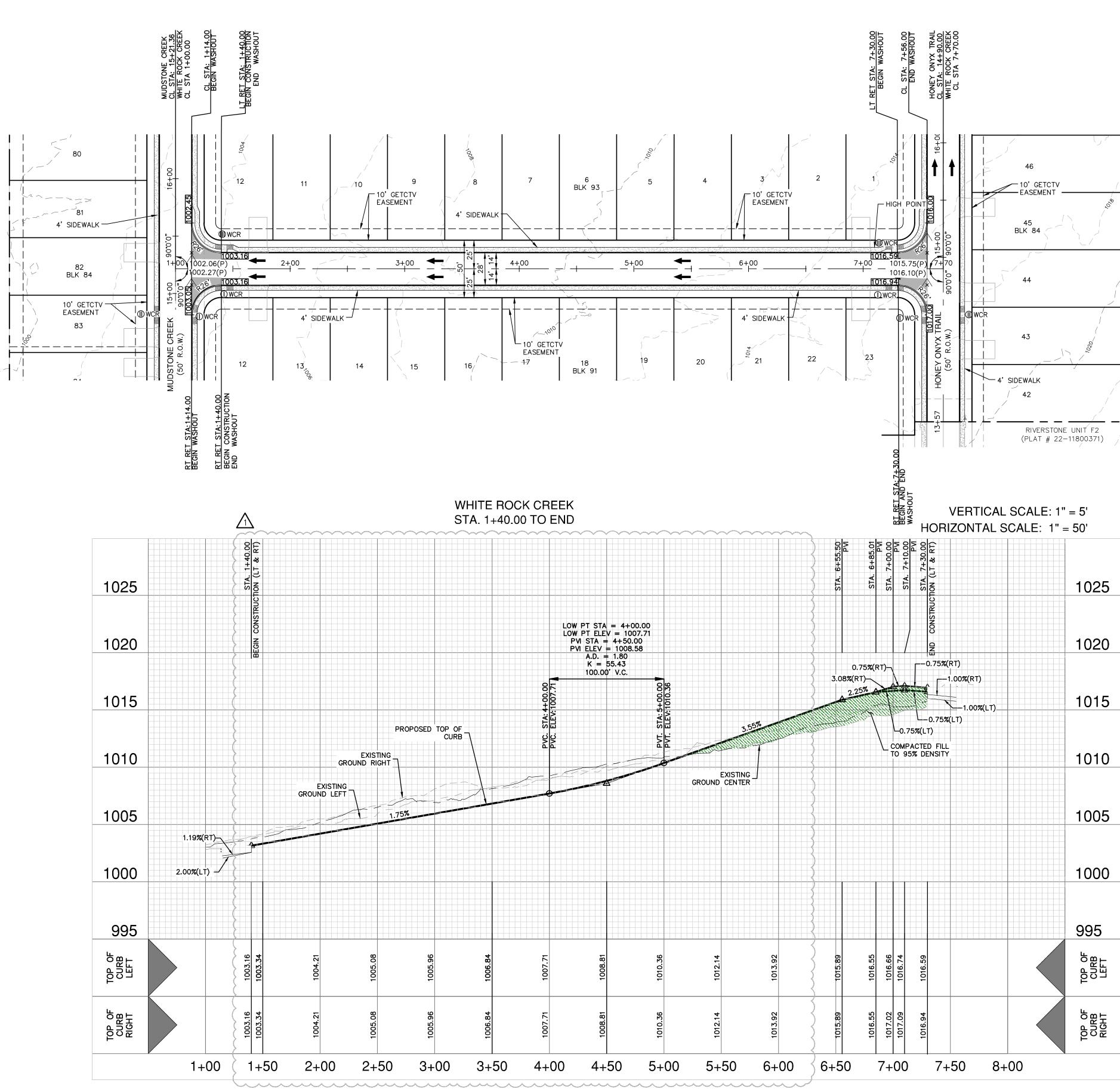
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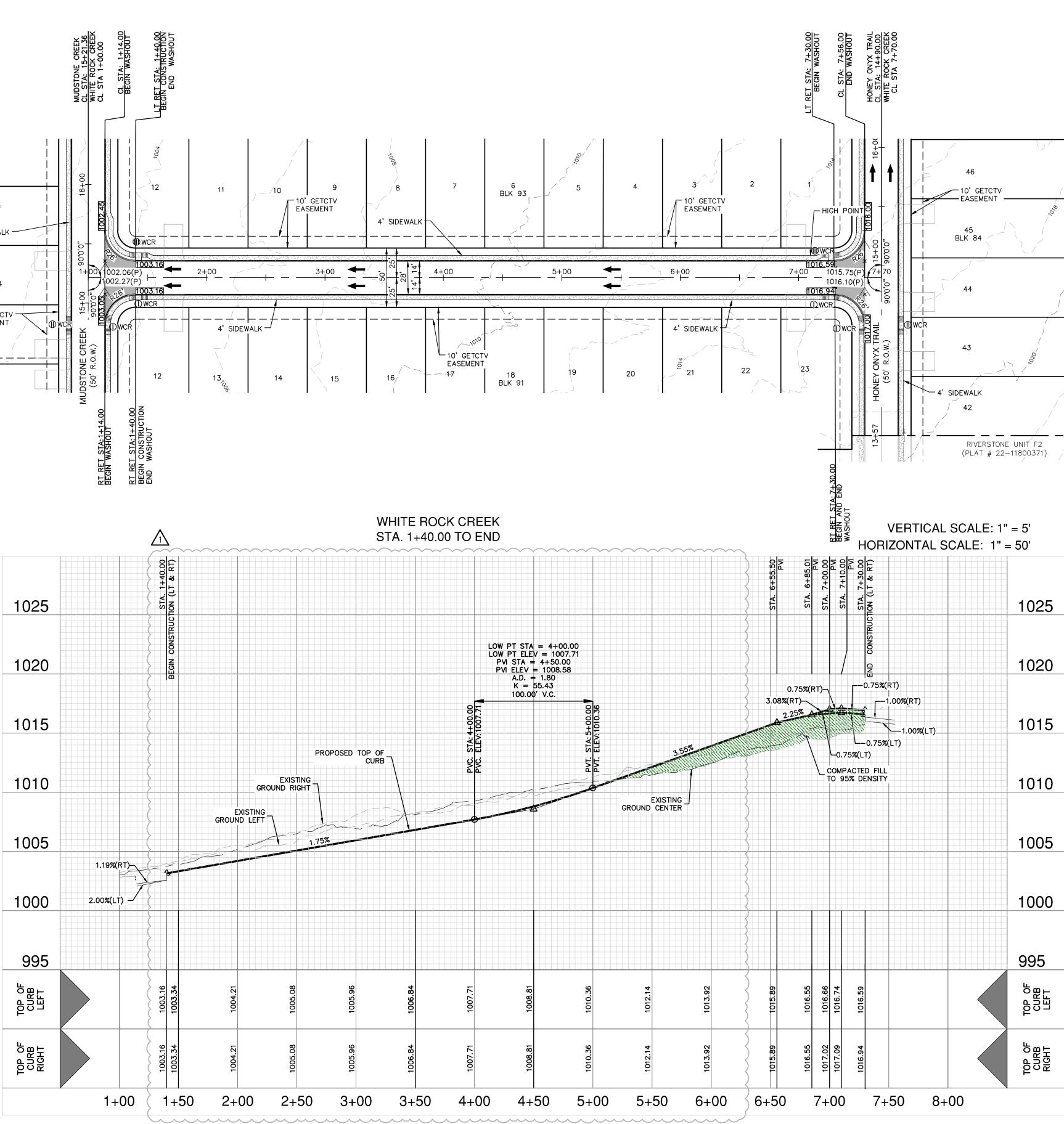
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RIVERSTONE UNIT F3 SAN ANTONIO, TEXAS	BIG SANDY CREEK PLAN & PROFILE STA 1+40.00 TO END
JOB NO	
DESIGNER CHECKEDBL	_ DRAWN_BS_
SHEET (2.03





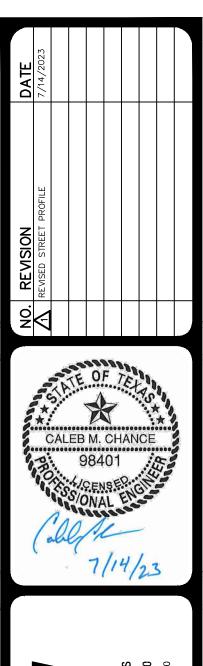
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0'	SCALE: 1"=	= 50' 100'	150'

STREET LEGEND

PROJECT LIMITS	
MAINTAIN GUTTER	$\rightarrow \rightarrow -$
EXISTING CONTOUR	970
WHEELCHAIR RAMP	\bigcirc
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	→
TOP OF CURB SPOT ELEVATION	857.30
PAVEMENT ELEVATION	857.00(P) ×
WASHOUT CROWN SECTION	
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	
DRIVEWAY	



DALLAS 75.9000 PAPE-DAWSON ENGINEERS ONIO, AN⁻ 3TIN I ⊢ I SAN 410 NW NW

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PLAT NO. 22-11800463
JOB NO 11680-54
JOB NO. 11680-54 DATE MARCH 2023
DESIGNER BS CHECKED BL DRAWN BS

C2.04 SHEET

		PA	EMENT S	SECTION D	DETAIL			
STREET NAME	STATION	REINFORCED CONCRETE	TYPE "D" HMAC	TYPE ^{"B"} HMAC	CRUSHED LIMESTONE BASE	SUBGRADE	GEOGRID (TENSAR TRIAX TX5)	STRUCTURAL NUMBER
MUDSTONE CREEK	13+98.52 TO END	_	2.00"	_	10"	*	NO	2.28
BEDIAS CREEK	1+50.00 TO 6+45.00	_	2.00"	_	10"	*	NO	2.28
BEDIAS CREEK	6+45.00 TO END	6.00"	-	Ι	_	*	NO	_
HONEY ONYX TRAIL	13+56.67 TO 20+16.90	-	2.00"	-	10"	*	NO	2.28
HONEY ONYX TRAIL	20+16.90 TO END	6.00"	-	I	_	*	NO	_
BIG SANDY CREEK	1+40.00 TO END	_	2.00"	_	10"	*	NO	2.28
WHITE ROCK CREEK	1+40.00 TO END	_	2.00"	_	10"	*	NO	2.28

	CONCRETE PAVEMENT REINFORCEMENT
REINFORCEMENT	#3 REINFORCING STEEL BARS (GRADE 60) AT 18 INCHES ON CENTER EACH WAY AND #4 AT 12 INCHES ON CENTER EACH WAY FOR 10 INCH THICK
CONTRACTION JOINT SPACING	10 FEET EACH WAY FOR 6 INCH THICK CONCRETE 12 FEET EACH WAY FOR 8 INCH THICK CONCRETE 15 FEET EACH WAY FOR 10 INCH THICK CONCRETE THE SAW CUTS SHOULD BE PLANNED BASED ON FEATURES SUCH AS INLETES, MANHOLES, VALVES, ETC. THE SAW CUTS ARE RECOMMENDED TO BE SAME DAY.
CONTRACTION JOINT DEPTH	AT LEAST ONE-FOURTH (1/4) OF PAVEMENT THICKNESS
CONTRACTION JOINT WIDTH	ONE-FOURTH (1/4) INCH OR AS REQUIRED BY JOINT SEALANT MANUFACTURER
EXPANSION JOINT	EXPANSION JOINTS ARE NOT RECOMMENDED
ISOLATION JOINT	FEATURES SUCH AS CONCRETE INLET STRUCTURES, MAN-HOLES, AND VALVE COVERS SHOULD BE ISOLATED USING ISOLATION JOINTS

SUBGRADE NOTES (*):

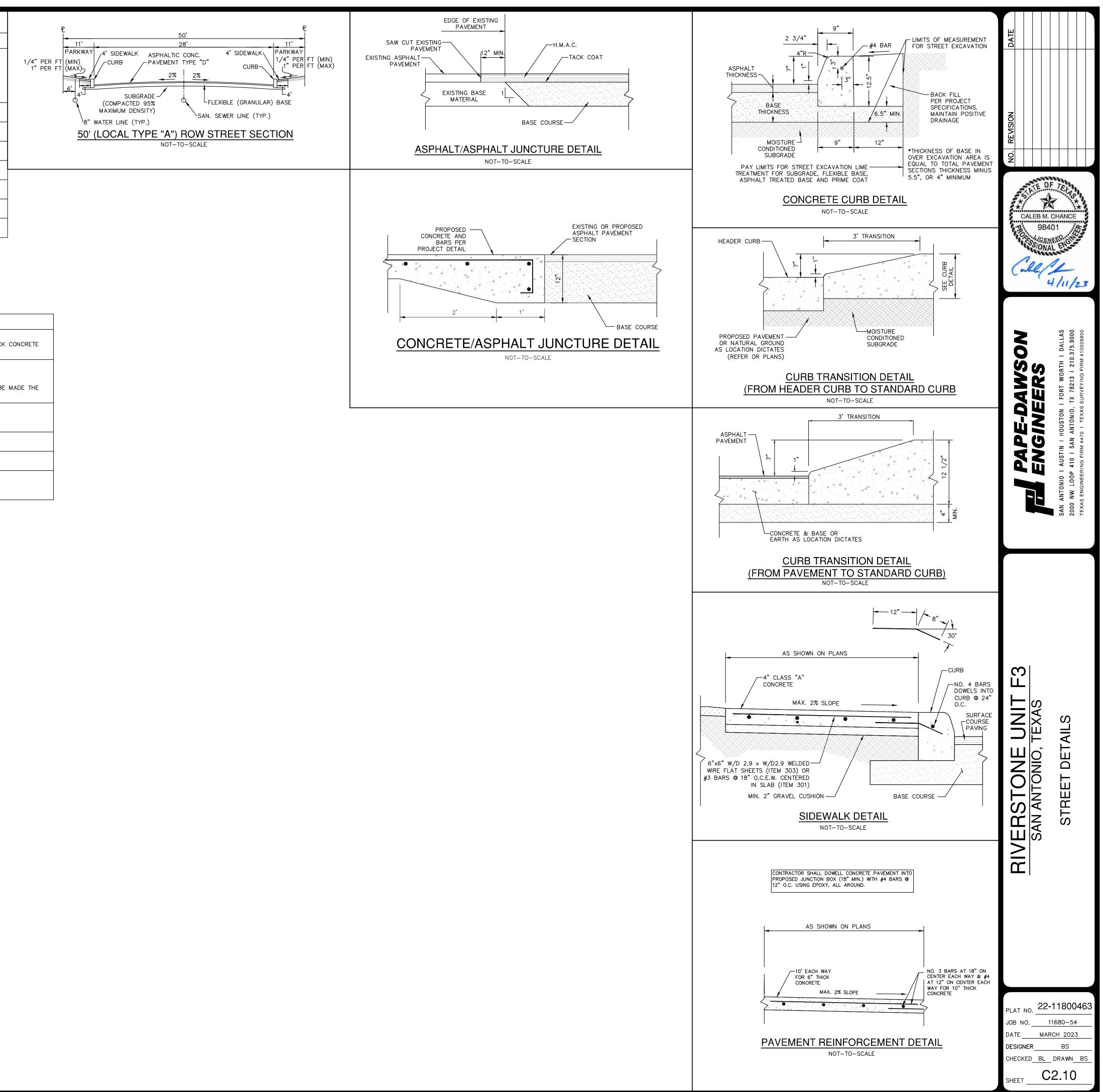
- 1. CUT AND FILL DATA ARE NOT AVAILABLE AT THIS TIME
- 2. BASED ON THE REVIEW OF GEOLOGIC AND SOILS MAP, WE ANTICIPATE THE FINAL PAVEMENT SUBGRADE PLASTICITY INDEX VALUE TO BE LESS THAN OR EQUAL TO 20.
- 3. IF THE SUBGRADE PLASTICITY INDEX VALUES ARE LESS THAN OR EQUAL TO 20, AS PER CITY OF SAN ANTONIO OR BEXAR COUNTY REQUIREMENTS, SUBGRADE STABILIZATION IS NOT NEEDED.
- 4. 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
- 5. 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.

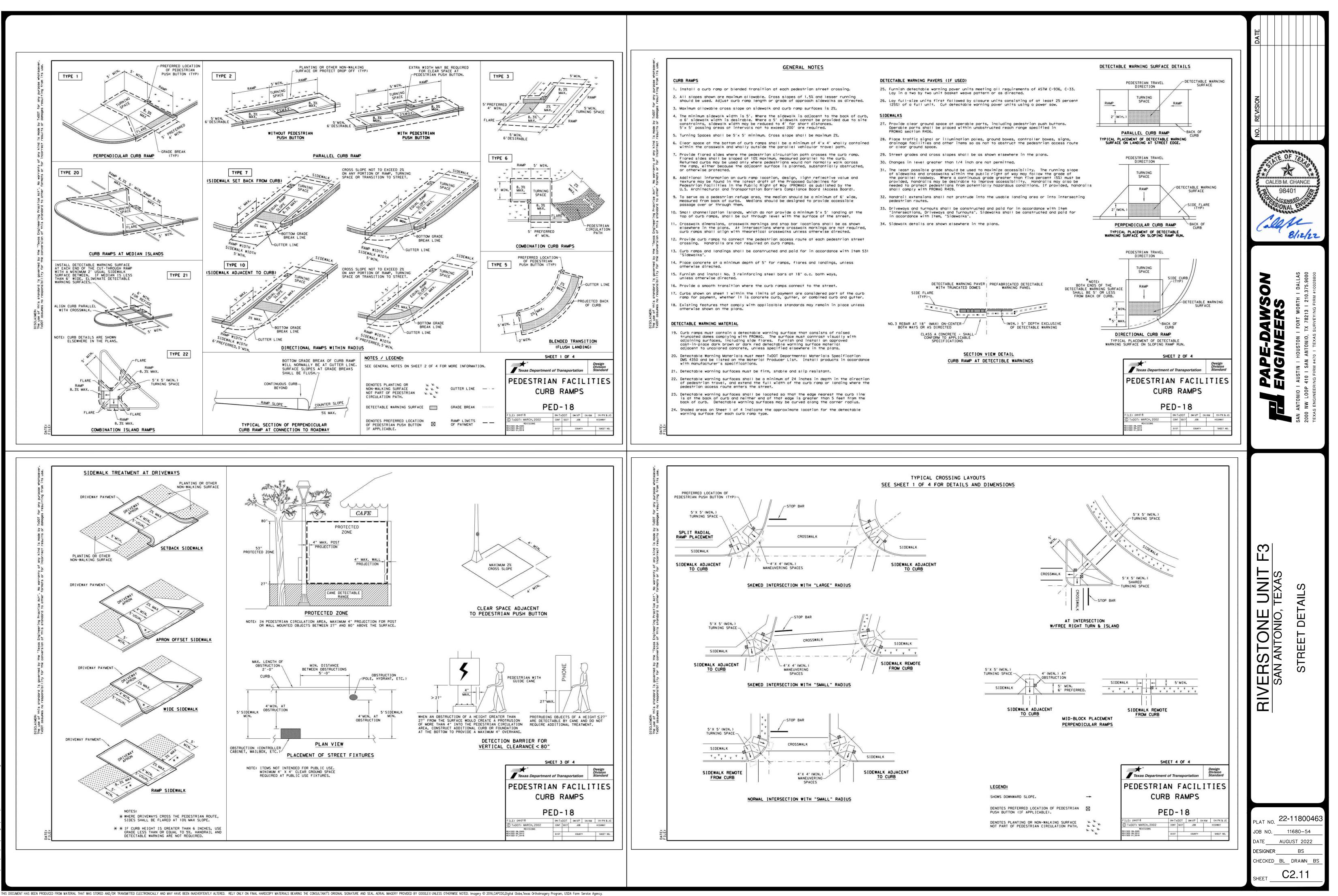
GENERAL NOTES:

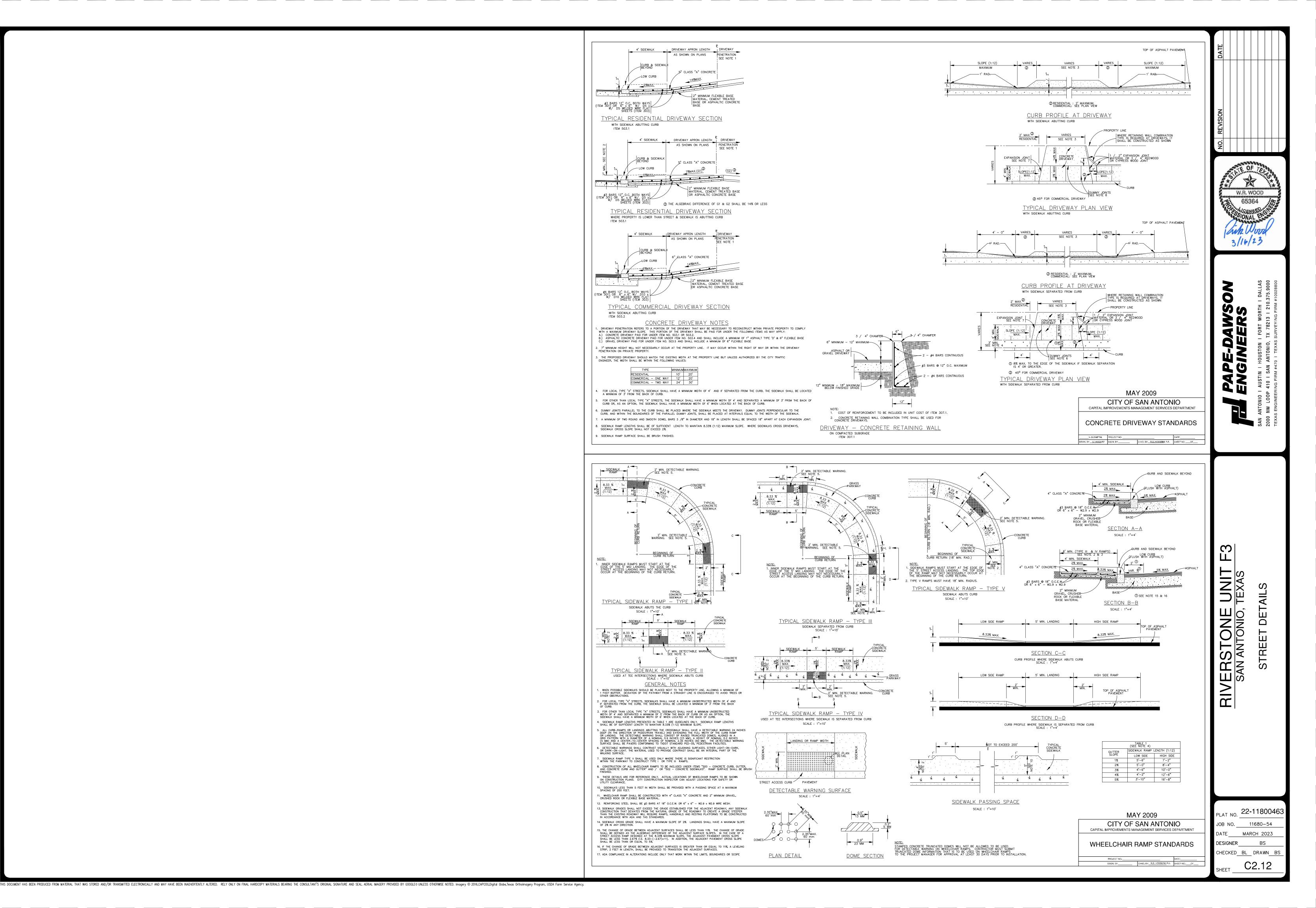
- CONTRACTOR SHALL REFERENCE THE PROJECT PAVEMENT DESIGN REPORTS PREPARED BY INTEC DATED MAY 20, 2021 (INTEC PROJECT# S191159-P-R1) & JANUARY 24, 2022 (INTEC PROJECT# S191159-P-A6).
- CONTRACTOR SHALL RETAIN A GEOTECHNICAL ENGINEER TO VERIFY THE SUB GRADE CONDITION PRIOR TO PLACING ANY BASE MATERIAL. GEOTECHNICAL ENGINEER SHALL DETERMINE THE SUB GRADE CONDITION AND IF LIME STABILIZATION IS REQUIRED.
- 3. GEOTECHNICAL ENGINEER SHOULD VERIFY THE STREET SUBGRADE AT THE TIME OF CONSTRUCTION PRIOR TO PLACEMENT OF AGGREGATE BASE.
- 4. THE FLEXIBLE BASE COURSE SHOULD BE CRUSHED LIMESTONE CONFORMING TO TXDOT STANDARD SPECIFICATIONS, ITEM 247, TYPE A, GRADES 1 OR 2.
- 5. THE MOISTURE CONTENT OF THE FILL SHOULD BE MAINTAINED WITHIN THE RANGE OF OPTIMUM WATER
- CONTENT TO 3 PERCENTAGE POINTS ABOVE THE OPTIMUM WATER CONTENT UNTIL PERMANENTLY COVERED. 6. IN THE EVENT THAT THE CLAY FILL USED IS DIFFERENT THAN THE EXISTING SUBGRADE, THE
- RECOMMENDATIONS IN THE GEOTECHNICAL REPORT COULD BE INVALIDATED AND THE DESIGN ENGINEER MUST BE CONSULTED TO DETERMINE IF ADDITIONAL CBR TESTING AND THICKER PAVEMENT SECTIONS ARE REQUIRED.
- 7. 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.

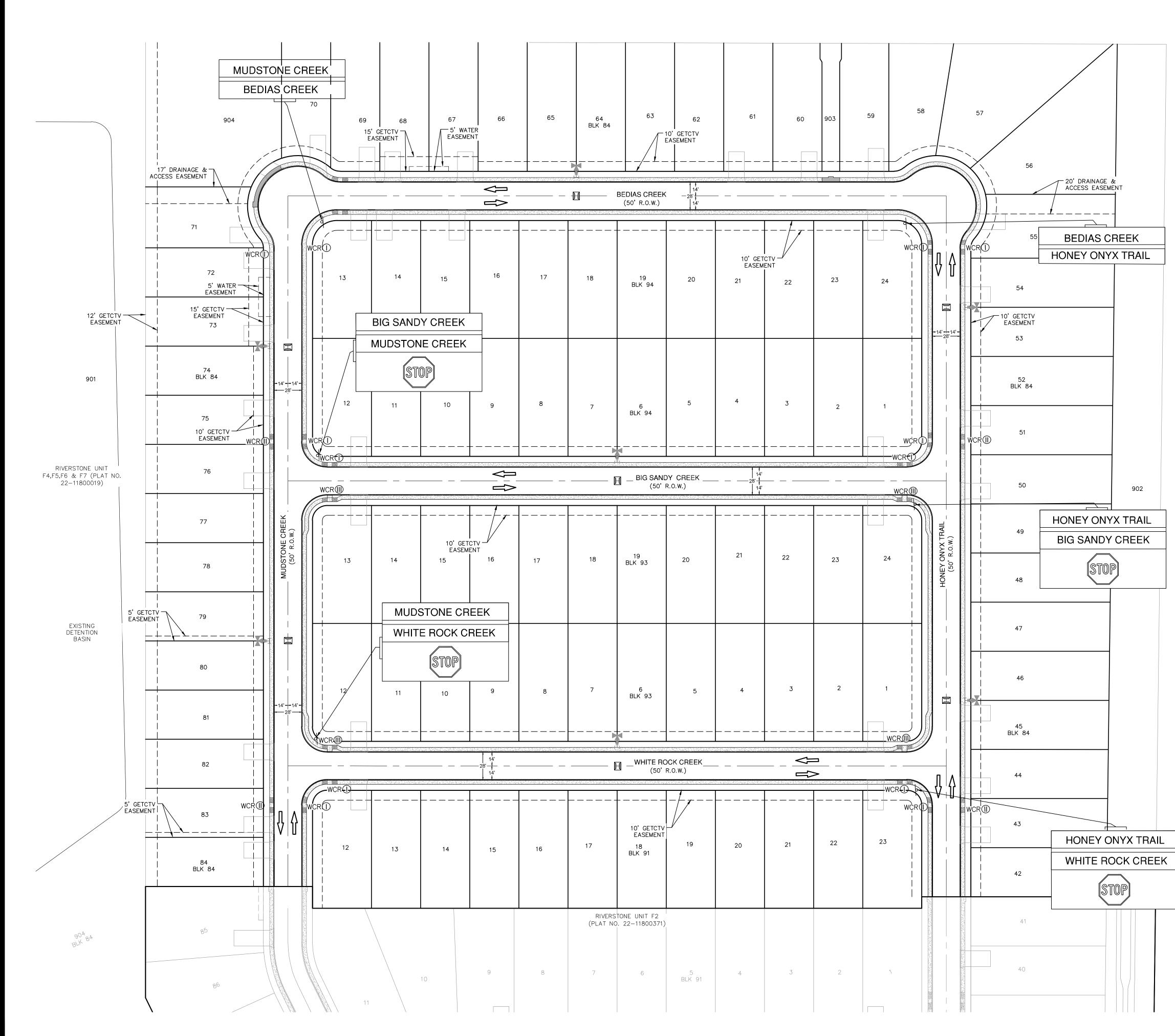
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PAVEMENT DESIGN IS IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERING REPORTS PREPARED FOR RIVERSTONE SUBDIVISION BY INTEC. PROJECT NUMBERS: S191159-P-R1 DATED: 05/20/21 & S191159-P-A6 DATED: 1/24/22.

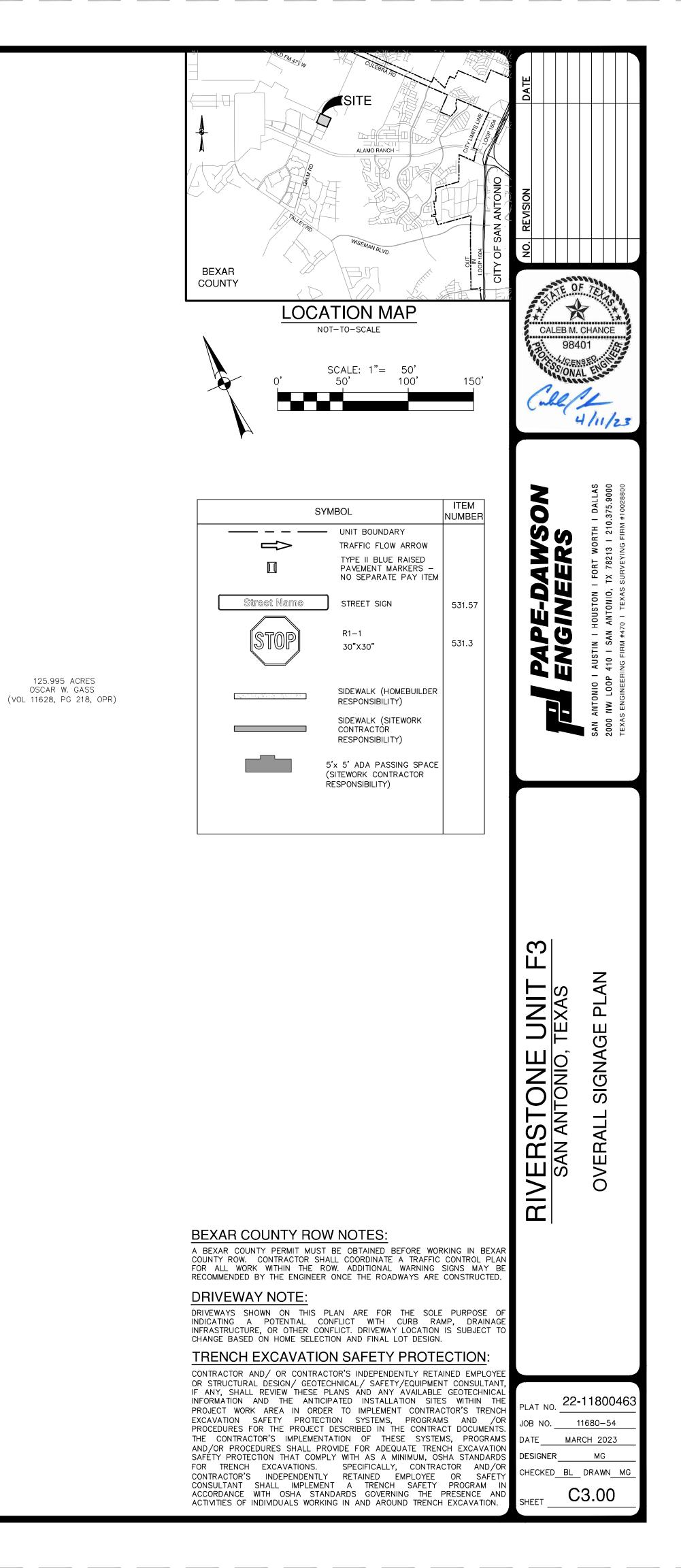


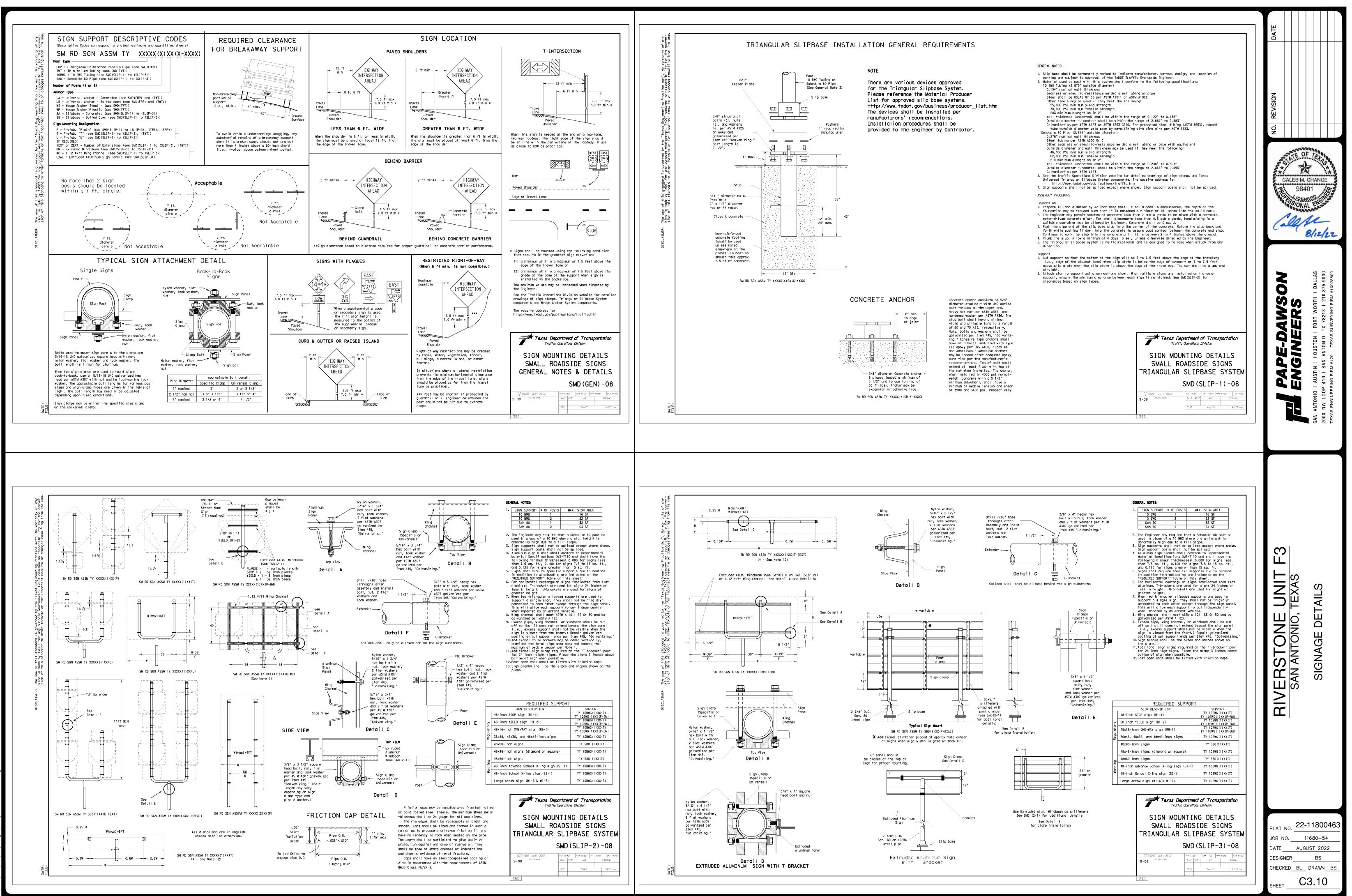




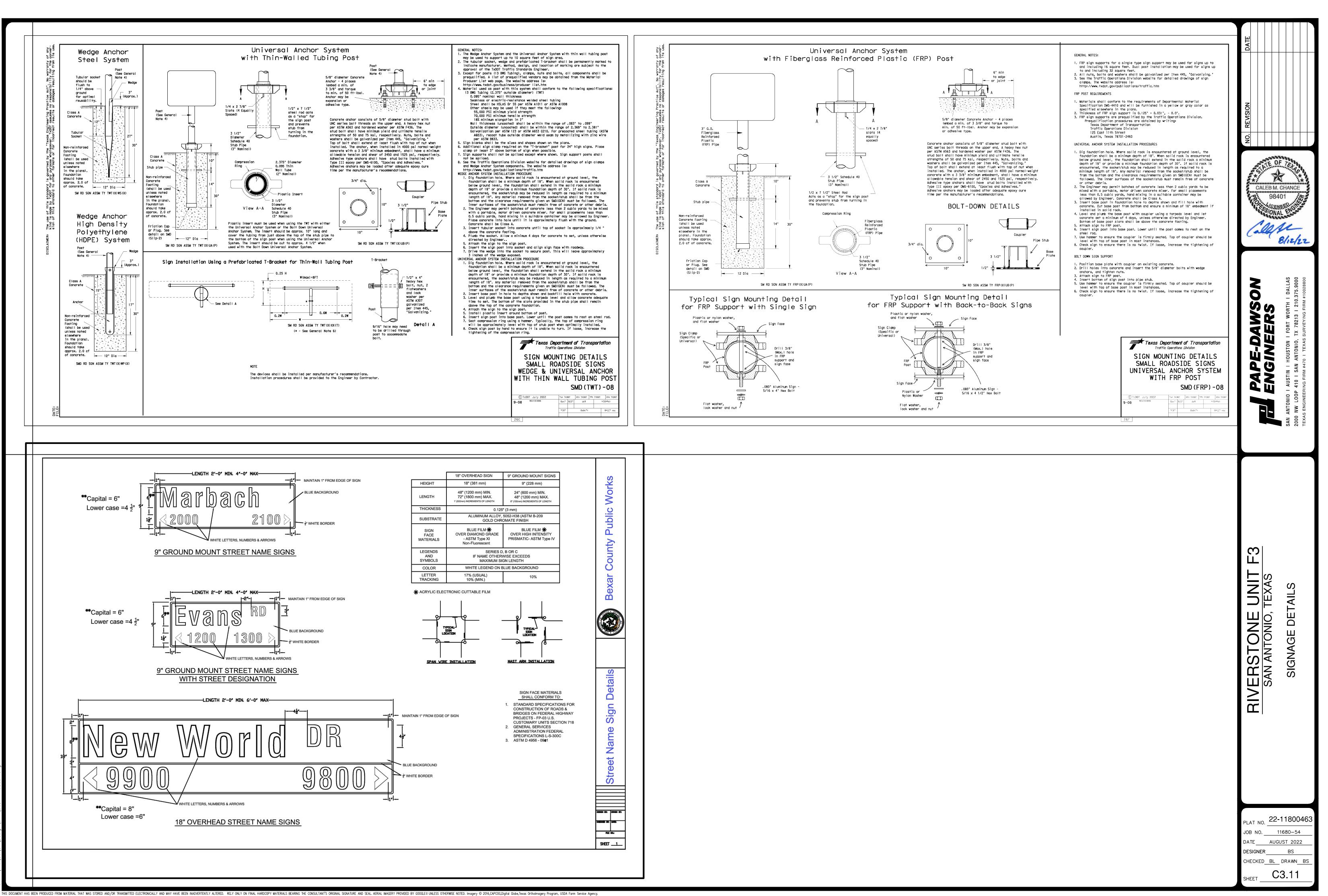


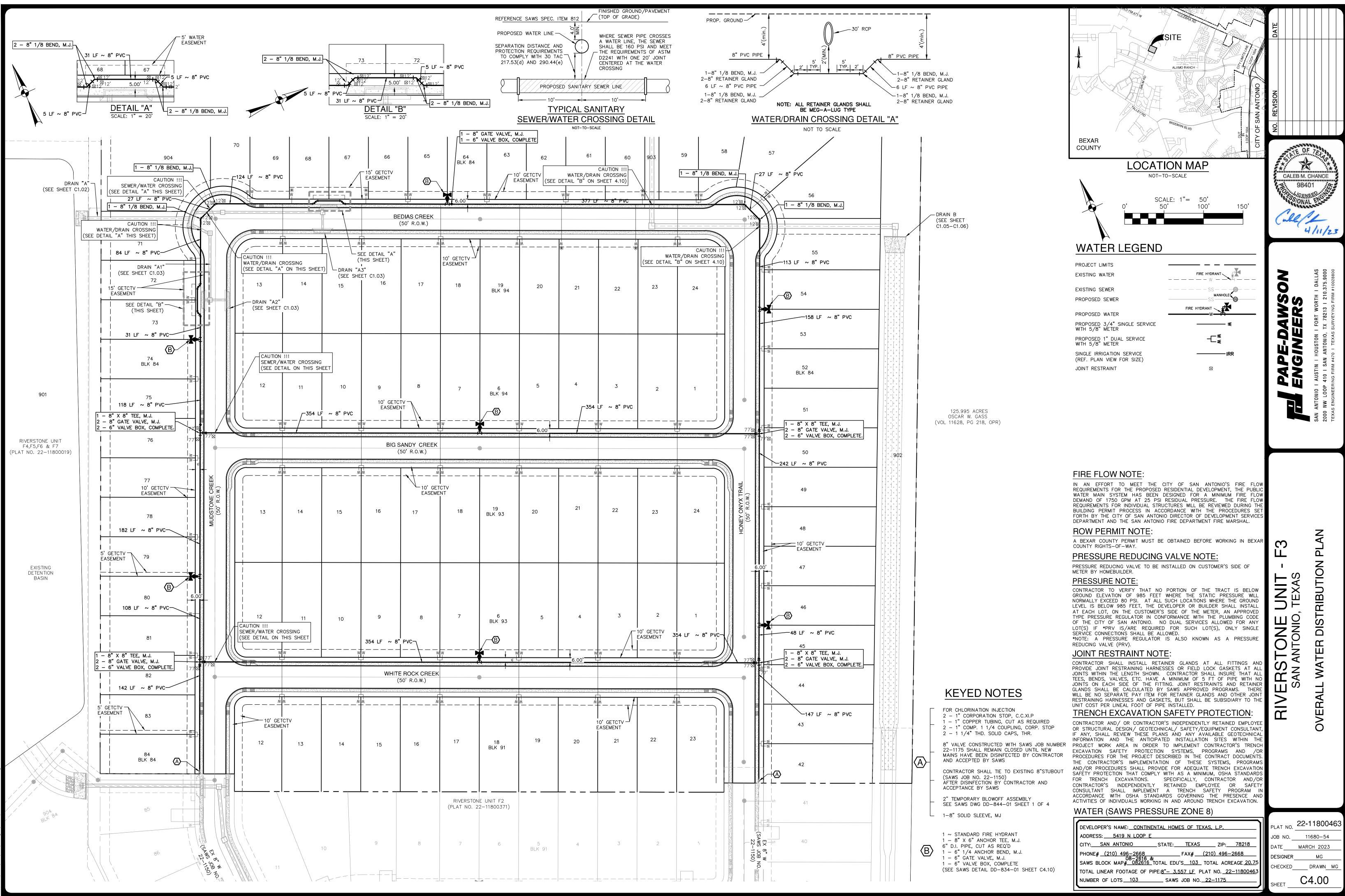
te: Apr 11, 2023, 5:57pm User ID: bspielman :: P:\116\80\54\Design\Civil\SG0A-1168054.dwg



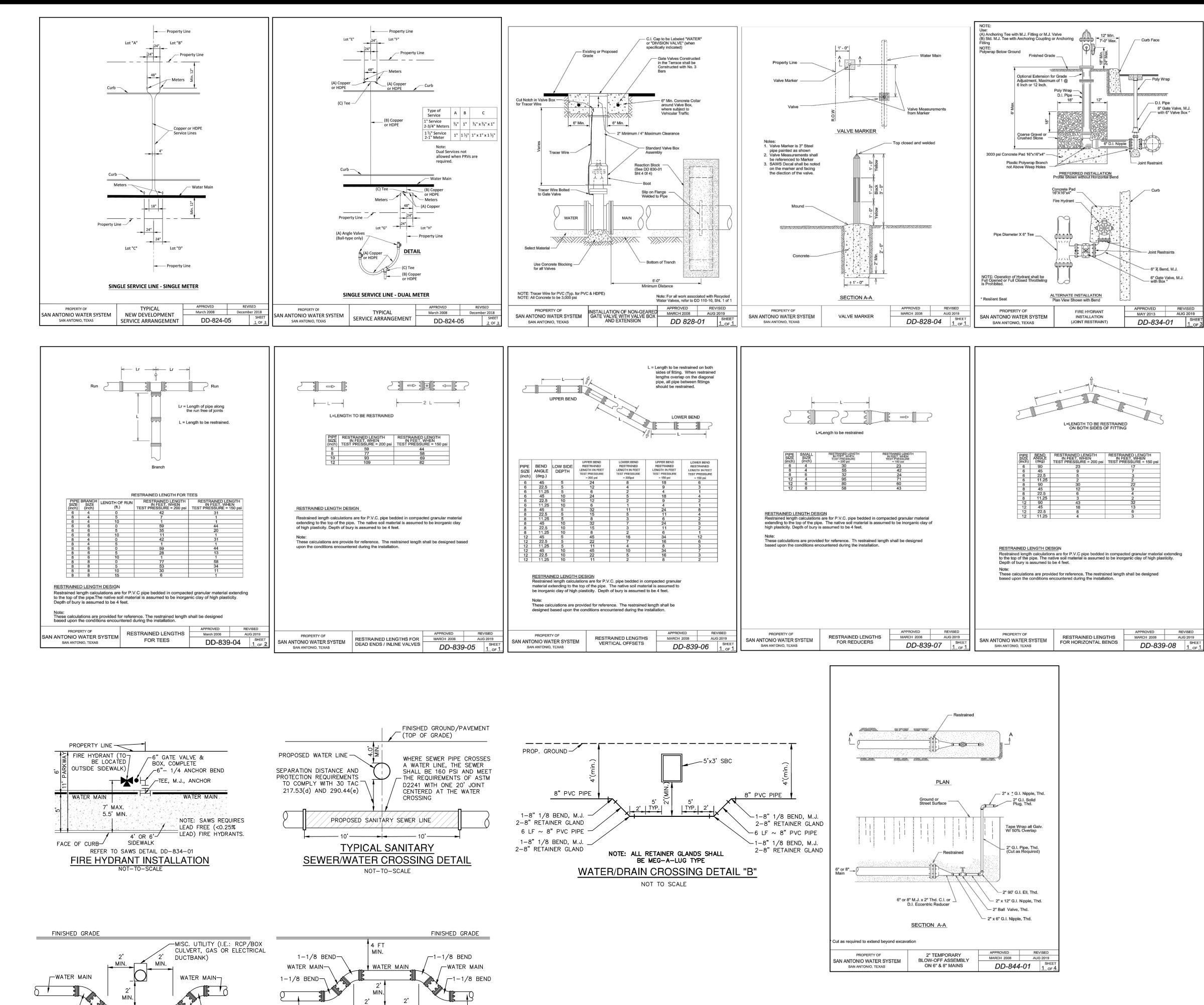


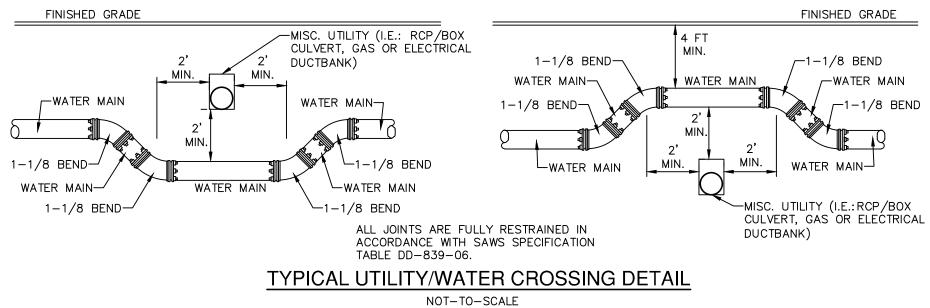
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TRAINED LENGTH IN FEET, WHEN T PRESSURE = 200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 150 psi
T PRESSURE = 200 psi	TEST PRESSURE = 150 psi
23	17
9	7
5	3
2	2
30	22
12	9
6	4
3	2 32
43	
18	13
8	6
4	3

	APPROVED	RE\	/ISED
RESTRAINED LENGTHS	MARCH 2008	AUG	G 2019
FOR HORIZONTAL BENDS	DD-839	9-08	SHEET

WATER (SAWS PRESSURE ZONE 8)

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP E
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78218
PHONE# <u>(210) 496-2668</u> FAX# <u>(210) 496-2668</u> 08-2616 & SAWS BLOCK MAP <u># 082616</u> TOTAL EDU'S <u>103</u> TOTAL ACREAGE <u>20.</u>
TOTAL LINEAR FOOTAGE OF PIPE: <u>8" - 3,557 LF</u> PLAT NO. <u>22-118004</u>
NUMBER OF LOTS 103 SAWS JOB NO. 22-1175
NOMBER OF E013 3AW3 00B NO

RIVERSTONE UNIT F3	I PAPE-DAWSON	The second secon	NO. REVISION	SION DATE	
SAN ANTONIO, TEXAS	ENGINEERS	653			
ATER DISTRIBUTION PLAN DETAILS	SAN ANTONIO I AUSTIN I HOUSTON I FORT WORTH I DALLAS 2000 NW LOOP 410 I SAN ANTONIO, TX 78213 I 210.375.9000 texas engineering firm #470 i texas surveying firm #10028800	VOOD 64 HEERGINA 23			

CHECKED_BL_DRAWN BS

SHEET

C4.10

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SAWS CONSTRUCTION NOTES (LAST REVISED JULY 2017)	
SAWS GENERAL SECTION	SAWS WATER NOTES
 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 'STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION''. CURRENT CITY OF SAN ANTONIO 'UTILITY EXCAVATION CRITERIA MANUAL'' (UECM). THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE APPROVED COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP) FROM THE CONSULTANT AND HAS BEEN NOTIFIED BY SAWS CONSTRUCTION INSPECTION DIVISION TO PROCEED WITH THE WORK AND HAS ARRANGED A MEETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK REQUIREMENTS. WORK COMPLETED BY THE CONTRACTOR WITHOUT AN APPROVED COUNTER PERMIT AND/OR A GCP WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE EXPENSE OF THE CONTRACTORS AND/OR THE DEVELOPER. 	 PRIOR TO TIE-INS, ANY SHUTI BE COORDINATED WITH THE LEAST ONE WEEK IN ADVANCE ALSO PROVIDE A SEQUENCE O AT NO ADDITIONAL COST TO RESPONSIBILITY OF THE ACCORDINGLY. FOR WATER MAINS 12" OR CENTER (210) 233-2014 ASBESTOS CEMENT (AC) PIPE KNOWN TO CONTAIN ASBEST LOCATED WITHIN THE PRO. PROCEDURES AND HEALTH AN WHEN REMOVAL AND/OR DISTI IS TO BE MADE UNDER SPEC SPECIFICATION FOR HANDLING VALVE REMOVAL: WHERE THE THE CONTROL VALVE LOCAT REMOVED AND REPLACED WITH SUITABLE ANCHORAGE/THRUS
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.	PROVIDED AT ALL OF THE FOL CAPS, TEES, CROSSES, VALV STANDARD DRAWINGS DD-839 STANDARD SPECIFICATIONS FOI
4. THE CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT (210) 233-2973, ON NOTIFICATION PROCEDURES THAT WILL BE USED TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO	 ALL VALVES SHALL READ "OPE PRVS REQUIRED: CONTRACTOR IS BELOW GROUND ELEVATION STATIC PRESSURE WILL NO

LOCATION AND DEPTH OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO SAWS.

- . THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES AT LEAST 1-2 WEEKS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON SAWS FACILITIES. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:
- SAWS UTILITY LOCATES: HTTP://WWW.SAWS.ORG/SERVICE/LOCATES
- COSA DRAINAGE (210) 207-0724 OR (210) 207-6026 COSA TRAFFIC SIGNAL OPERATIONS (210) 206-8480

BEGINNING ANY WORK.

- COSA TRAFFIC SIGNAL DAMAGES (210) 207–3951 TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005 OR 811
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION IF DAMAGES ARE MADE AS A RESULT OF THE PROJECT'S CONSTRUCTION.
- ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AND/OR BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT REQUIREMENTS.
- THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES. 10. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR
- FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT. HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO
- CONSTWORKREQ@SAWS.ORG. WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK
- REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG. . 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 HAS RELEASED THE MAIN FOR TIE-IN AND USE.

REDUCING VALVE (PRV).

8. BACKFLOW PREVENTION DEVICES:

10. DIVISION VALVES SHOWN ON PLANS OR NOT SHOWN ON PLANS BUT FOUND IN THE FIELD SHALL ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF AND ONLY WITH PRIOR WRITTEN APPROVAL OF THE SAWS DIRECTOR OF PRODUCTION AND OPERATIONS AND PROPER COORDINATION WITH ALL SAWS DEPARTMENTS. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE INSPECTOR A MINIMUM OF TWO WEEKS IN ADVANCE TO START THE COORDINATION PROCESS AND WILL BE INFORMED BY 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 TH INSPECTOR OR THE CONTRACTOR. OPERATION OF A DIVISION VALVE WITHOUT THE EXPRESS PRIOR WRITTEN APPROVAL OF THE SAWS DISTRIBUTION AND COLLECTION STAFE 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, 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.

DOWNS OF EXISTING MAINS OF ANY SIZE MUST 1. MACHINE CHLORINATION BY THE S.A.W.S. SAWS CONSTRUCTION INSPECTION DIVISION AT OF THE SHUTDOWN. THE CONTRACTOR MUST OF WORK AS RELATED TO THE TIE-INS; THIS IS O SAWS OR THE PROJECT AND IT IS THE

HIGHER: SAWS EMERGENCY OPERATIONS

, ALSO KNOWN AS TRANSITE PIPE WHICH IS TOS- CONTAINING MATERIAL (ACM), MAY BE JECT LIMITS. SPECIAL WASTE MANAGEMENT ID SAFETY REQUIREMENTS WILL BE APPLICABLE URBANCE OF THIS PIPE OCCURS. SUCH WORK CIAL SPECIFICATION ITEM NO. 3000, "SPECIAL ASBESTOS CEMENT PIPE".

CONTRACTOR IS TO ABANDON A WATER MAIN, TED ON THE ABANDONING BRANCH WILL BE I A CAP/PLUG. (NSPI)

ST BLOCKING OR JOINT RESTRAINT SHALL BE LOWING MAIN LOCATIONS: DEAD ENDS, PLUGS, /ES, AND BENDS, IN ACCORDANCE WITH THE 39 SERIES AND ITEM NO. 839, IN THE SAWS DR CONSTRUCTION.

EN RIGHT".

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 8. WATER METER BOXES IF APPLICABLE SHALL BE INSTALLED NINE FEET FRO 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

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.

 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.

UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED, AND

PROJECT WATER NOTES

- ALL 8", 12" AND 16" PIPE SHALL BE P.V.C. C-900 CLASS 235 DR 18.
- CONTRACTOR TO SEQUENCE THE WORK 3. ALL MAINS SHALL BE HYDROSTATICALLY TESTED BY THE CONTRACTOR, PROVIDED FOR IN THE SPECIAL CONDITIONS.
 - . THE WATER LINES WILL BE SET FROM THE STREET HUBS BEFORE CONTRACT BEGINS. STREET CUT SHEETS WILL BE SUPPLIED TO CONTRACTOR. THERE SHOULD BE NO ADDITIONAL STAKES REQUIRED, AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE SITE VERIFY THAT ALL STAKES REQUIRED FOR HIS WORK ARE IN PLACE AT TIME THE CONSTRUCTION BEGINS. IF ANY STAKES ARE MISSING ENGINEER SHOULD BE NOTIFIED IMMEDIATELY. AFTER CONSTRUCTION BEGIN ALL CONSTRUCTION STAKES, MARKS, ETC., SHALL BE CAREFULLY PRESERV BY THE CONTRACTOR, AND IN CASE OF DESTRUCTION OR REMOVAL BY CONTRACTOR, HIS EMPLOYEE OR ANY OTHER MEANS, SUCH STAKES, MARI ETC., SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH ALL THE FIN. MEASUREMENTS, TAPS AND LENGTH OF SERVICE CONNECTIONS.
 - 6. THE LOT CORNERS WILL BE SET BY THE ENGINEER FOR INSTALLATION OF WATER SERVICES. THESE LOT CORNERS SHALL BE CAREFULLY PRESERVED THE CONTRACTOR SO THE METER BOXES CAN BE SET IN PHASE II. ANY CORNER DESTROYED OR REMOVED BY THE CONTRACTOR, HIS EMPLOYEES, BY ANY OTHER MEANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENS
 - STREETS WILL HAVE BEEN EXCAVATED DOWN TO SUBGRADE AND PARKWAY WILL BE CUT DOWN TO TOP OF CURB BY THE STREET CONTRACT PRIOR TO CONSTRUCTION OF THE WATER MAINS. IT WILL BE THE UTILI CONTRACTOR'S RESPONSIBILITY TO PROVIDE A PAD FOR HIS EQUIPMENT.
 - FACE OF CURB TO CENTER OF THE METER BOX.
 - 9. ALL GARBAGE OR SPOIL MATERIAL FROM THIS WORK SHALL BE REMOVE FROM THE SITE BY THE CONTRACTOR, AT HIS EXPENSE.
 - 10. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UN WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED AND THE S.A.W RELEASES THE MAIN FOR TIE-IN AND USE.
 - . UNIT PRICE BID FOR "STANDARD FIRE HYDRANT ASSEMBLY" SHALL INCLU FIRE HYDRANT, 6-INCH GATE VALVE AND 6-INCH VALVE BOX COMPLE ANCHOR BEND, AND ALL 6-INCH DI PIPE REQUIRED (DI PIPE REQUIRED SHA INCLUDE ALL PIPE FROM THE TEE ON THE MAIN LINE TO THE FIRE HYDRANT
 - 2. WHEN SEWER LINES ARE INSTALLED IN THE VICINITY OF WATER MAINS, SU INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE TEXAS NATUR RESOURCE CONSERVATION COMMISSION "RULES AND REGULATIONS FOR PUBL WATER SYSTEMS" (1988 OR ANY REVISIONS THERETO).
 - 13. A CLEAR SPACE SHALL BE PROVIDED AROUND ALL FIRE HYDRANTS. AREA SHOULD HAVE A MINIMUM DIAMETER OF 3.0' AND BE CLEAN VERTICAL OBSTRUCTIONS, VALVES, AND METER BOXES.
- 9. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE 14. SAWS REQUIRES LEAD FREE (< 0.25%) FIRE HYDRANTS.
 - 15. UNLESS OTHERWISE NOTED ALL SERVICES SHALL BE 3/4" WITH 5/8" METER

PRIVERSTONE UNIT F3 PRE-DAWSON PRE-DAWSON RIVERSTONE UNIT F3 PRE-DAWSON SAN ANTONIO, TEXAS PRE-DAWSON WATER DISTRIBUTION PLAN NOTES PRE-INFORMATION I FORT WORTH I DALLAS WATER DISTRIBUTION PLAN NOTES PRE-INFORMATION I FORT WORTH I DALLAS PRE-DAWSON PRE-INFORMATION I FORT WORTH I DALLAS PRE-INFORMATION PLAN NOTES PRE-INFORMATION I FORT WORTH I DALLAS PRE-INFORMATION PLAN NOTES PRE-INFORMATION I FORT WORTH I DALLAS PRE-INFORMATION PLAN NOTES PRE-INFORMATION I FORT WORTH I DALLAS PRE-INFORMATION PLAN NOTES PRE-INFORMATION I FORT WORTH I DALLAS PRE-INFORMATION PLAN NOTES PRE-INFORMATION I FORT WORTH I DALLAS PRE-INFORMATION PLAN NOTES PRE-INFORMATION I FORT WORTH I DALLAS PRE-INFORMATION PLAN NOTES PRE-INFORMATION I FORT WORTH I DALLAS PRE-INFORMATION PLAN NOTES PRE-INFORMATION I FORT WORTH I DALLAS
RIVERSTONE UNIT F3 SAN ANTONIO, TEXAS ATER DISTRIBUTION PLAN NOTES

SIGNER

SHEET

ECKED BL DRAWN B

C4.11

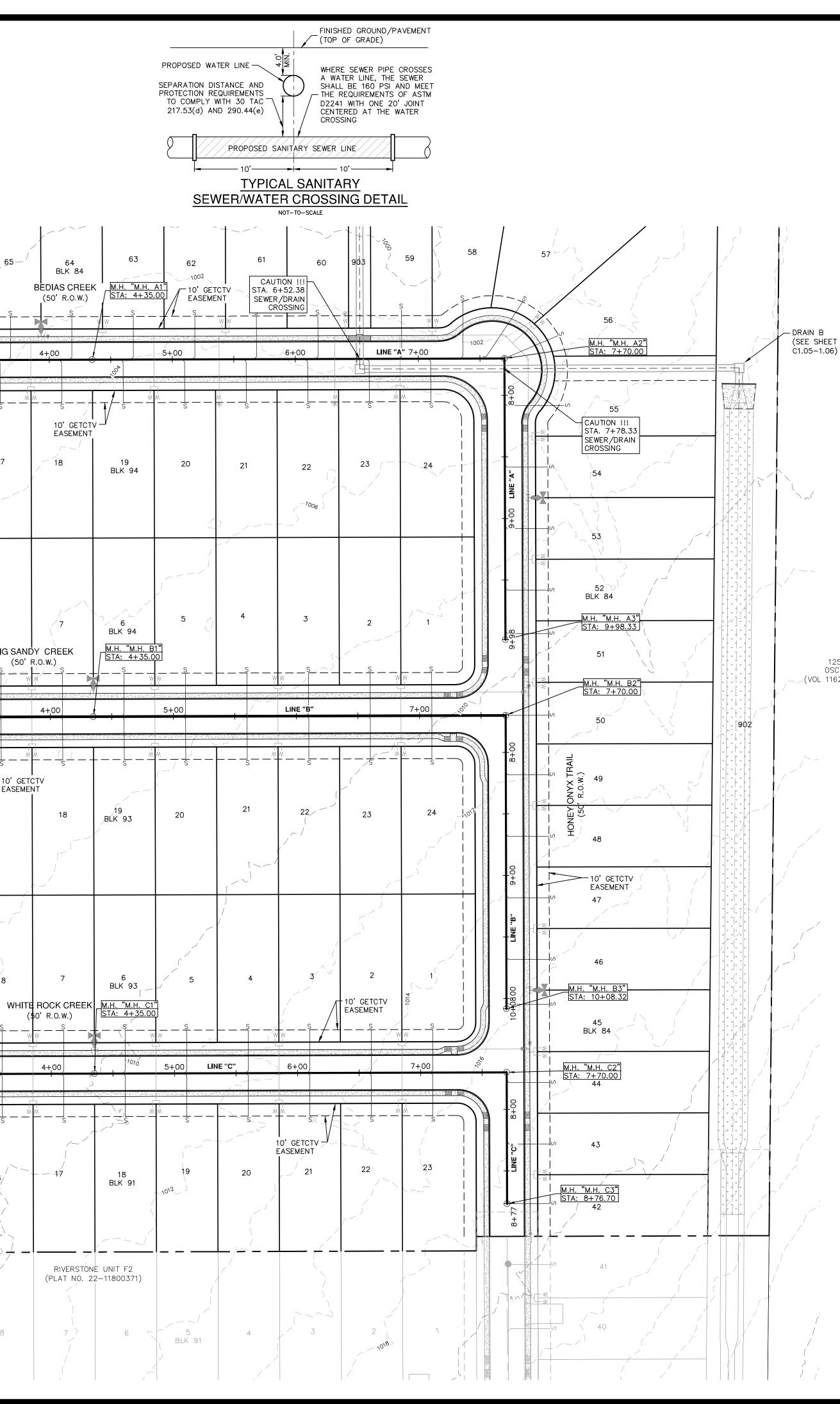
WATER (SAWS PRESSURE ZONE 8)

I	DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
I	ADDRESS: 5419 N LOOP E
I	CITY: SAN ANTONIO STATE: TEXAS ZIP: 78218
I	
I	SAWS BLOCK MAP# 082616 & SAWS BLOCK MAP# 082616 TOTAL EDU'S 103 TOTAL ACREAGE 20.
I	TOTAL LINEAR FOOTAGE OF PIPE: <u>8" - 3,557 LF</u> PLAT NO. <u>22-118004</u>
I	NUMBER OF LOTS 103 SAWS JOB NO. 22-1175
	NOMBER OF EU13_100_SAWS 00B NO22-11/3

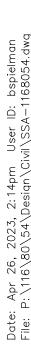
CAUTION !!! STA. 1+80.39 ______ SEWER/WATER 70 CROSSING 65-66 67 904 69 68 M.H. "EX D1 STA: 1+00. 16' DRAINAGE DRAIN "A" -CAUTION !!! EASEMENT (SEE SHEET STA. 1+86.02 SEWER/DRAIN C1.03) CROSSING DRAIN "A"-(SEE SHEET C1.02) 3+,00 2+00 LINE "A" _ _ _ _ · -/ -/_ - -_____ DRAIN "A" -----(SEE SHEET 72 /^{C1.03)} 16 14 17 1⁄3 15 DRAIN "A2" (SEE SHEET C1.03) STA. 2+97.88 100 SEWER/DRAIN CROSSING 73 BEK 84 10 11 9 901 75 <u>M.H. "EX D2"</u> STA: 4+84.78 10' GETCTV BIG SANDY CREEK EASEMENT (50' R.O.W.) CAUTION! STA. 4+65.78 WATER/SEWER CROSSING 76 RIVERSTONE UNIT LINE "B" 3+00 2+00 F4,F5,F6 & F7 (PLAT NO. 22-11800019) 10' GETCTV -EASEMENT 77 -10'GETCTV EASEMENT 16 15 17 13 14 78 5' GETCTV EASEMENT CAUTION! STA. 7+55.78 **12** 9 11 /10 WATER/SEWER CROSSING 998 3+00 2+00 82 ___ __ L 5' GETCTV -EASEMENT 83 - 10' GETCTV EX. 16' SANITARY SEWER EASEMENT 🕂 EASEMENT _ _ _ _ _ _ _ _ _ (PLAT NO. 22-11800019) 13 14 15 BLK 84 M.H."EX D4 <u>></u>-----STA: 9+05.6 24' DRAINAGE -EASEMENT

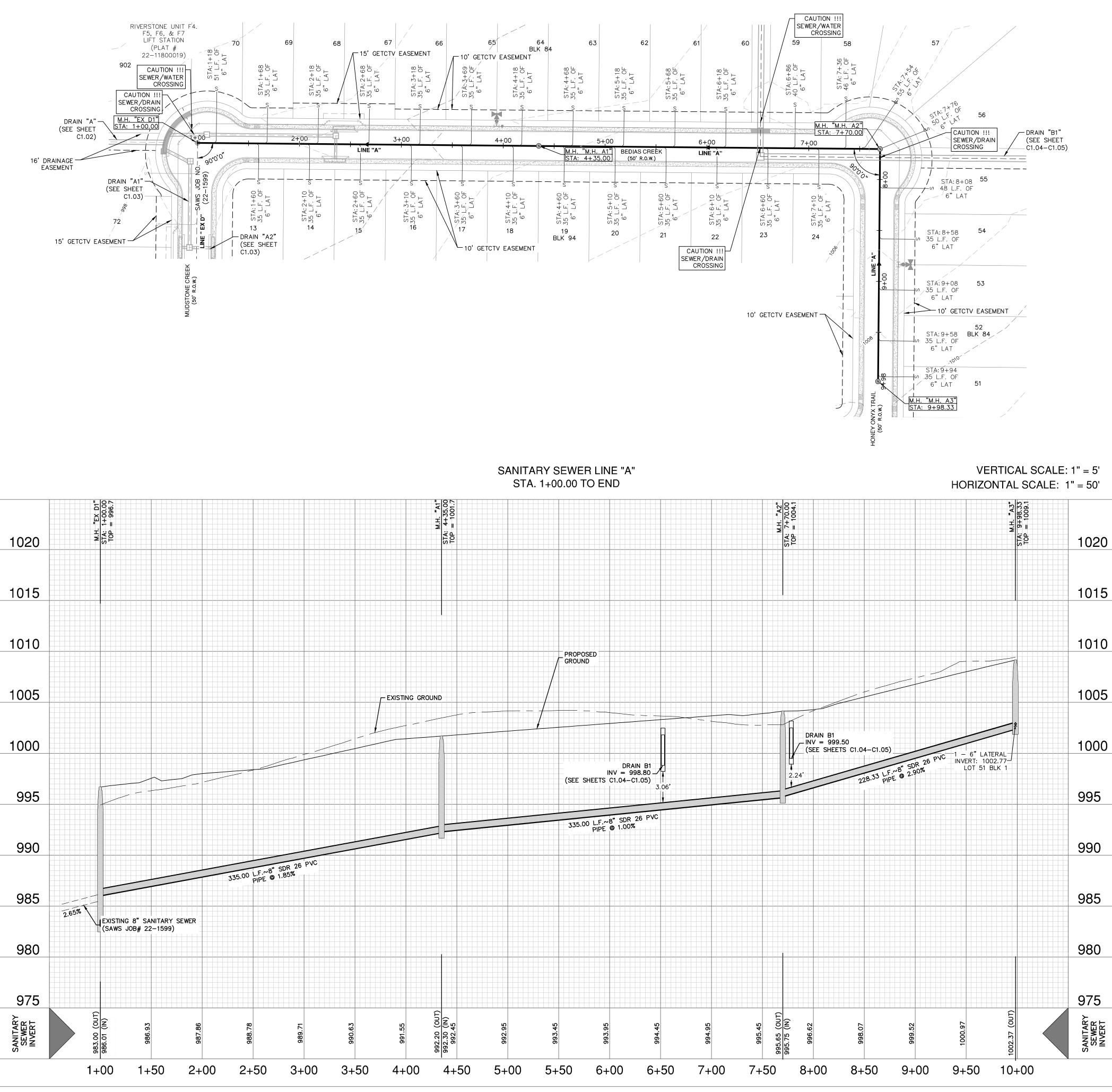
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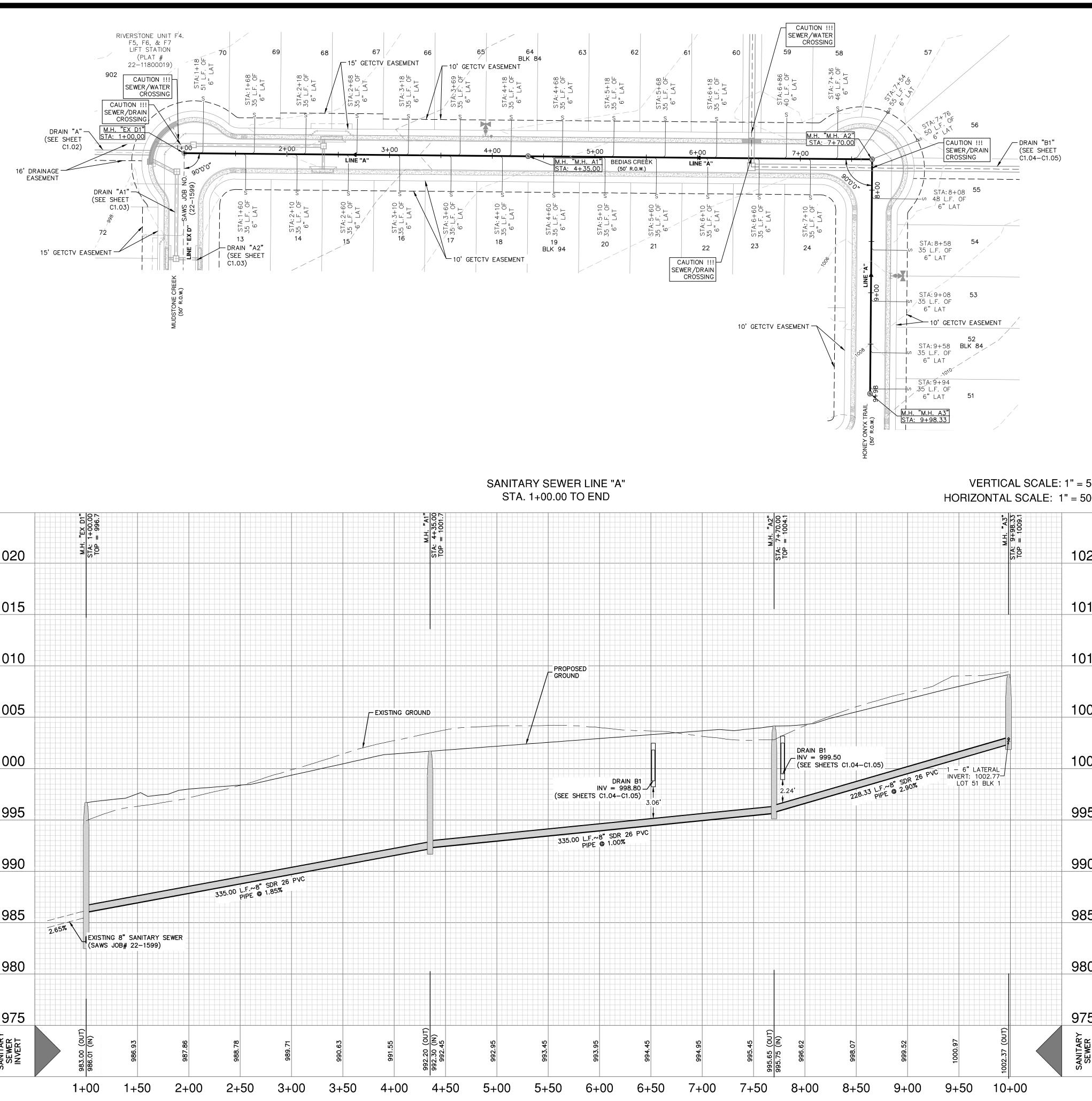
te: Apr 26, 2023, 2:13pm User ID: bspielman 2: P:\116\80\54\Desian\Civil\SSOA-1168054.dwa



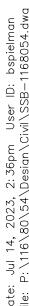




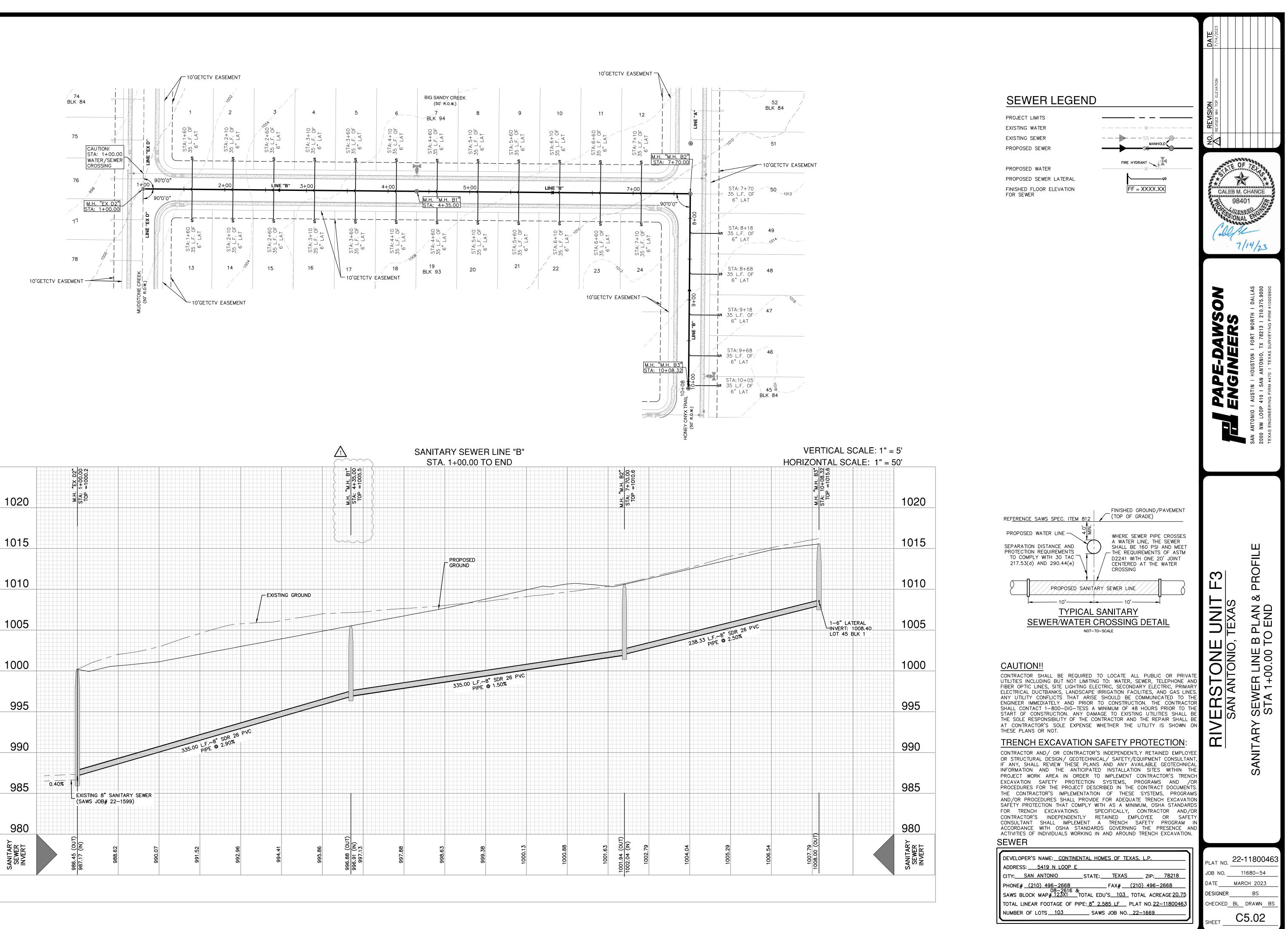


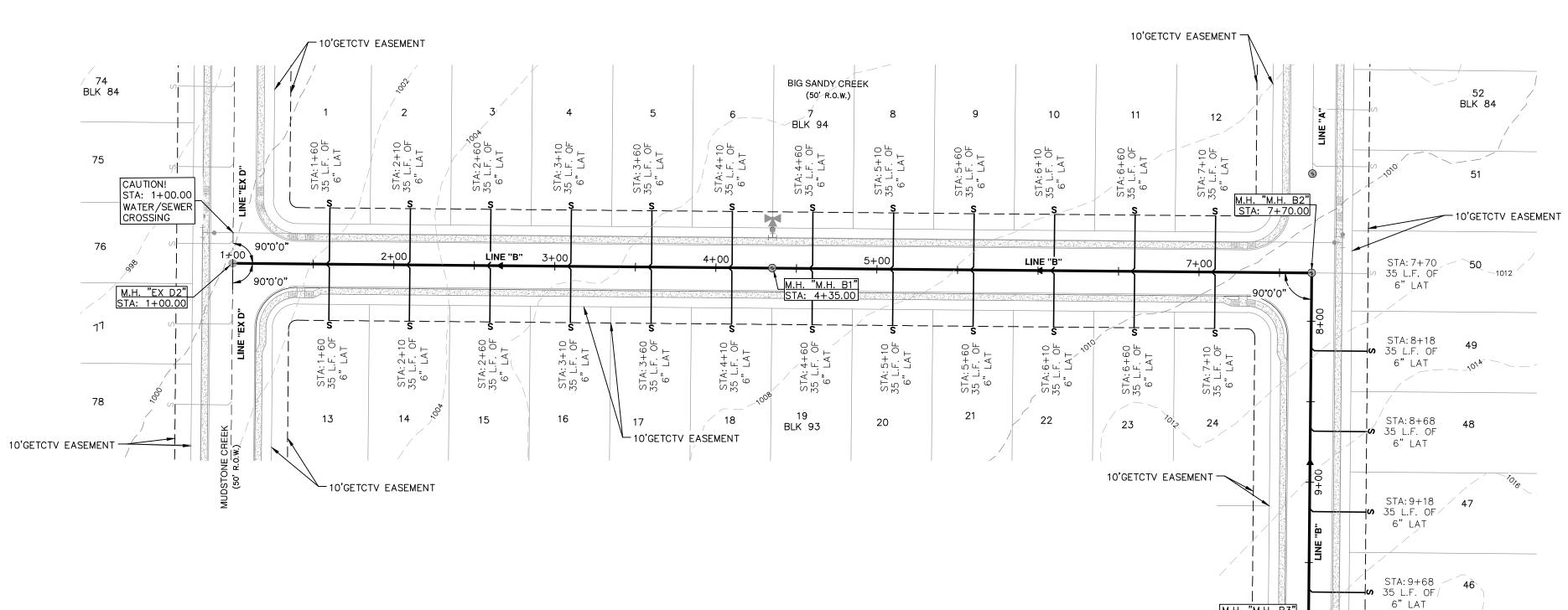


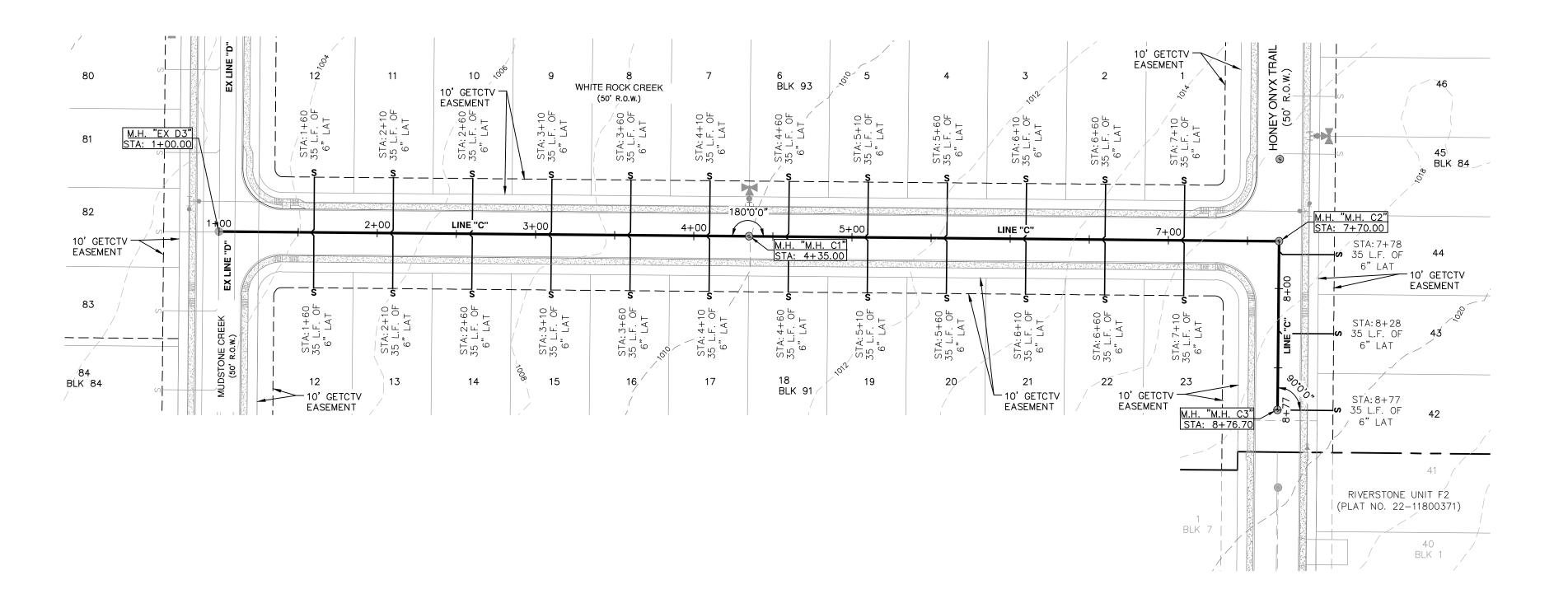
150' SCALE: 1"= 50' SEWER LEGEND PROJECT LIMITS EXISTING WATER EXISTING SEWER MANHOLE PROPOSED SEWER FIRE HYDRANT X PROPOSED SEWER LATERAL FINISHED FLOOR ELEVATION FOR SEWER FF = XXXX.XXCALEB M. CHANCE 98401 4/26/23 LLAS 9000 PAPE-DAWSON ENGINEERS DAI 75. SAN ΝŇ FINISHED GROUND/PAVEMENT (TOP OF GRADE) REFERENCE SAWS SPEC. ITEM 812 PROPOSED WATER LINE -WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET Ш SEPARATION DISTANCE AND PROTECTION REQUIREMENTS - THE REQUIREMENTS OF ASTM PROFIL TO COMPLY WITH 30 TAC D2241 WITH ONE 20' JOINT 217.53(d) AND 290.44(e) CENTERED AT THE WATER CROSSING \mathcal{O} LL PROPOSED SANITARY SEWER LINE Š VER LINE A PLAN { \ 1+00.00 TO END – 10'— UNI. TYPICAL SANITARY SEWER/WATER CROSSING DETAIL NOT-TO-SCALE ERSTONE 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. ШA ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO T ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO TI S S Ш START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL B THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE \succ AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN C >AR THESE PLANS OR NOT. С TRENCH EXCAVATION SAFETY PROTECTION: ANIT CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN TH S PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /C 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 I ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION. SEWER . _{NO.} 22-11800463 DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P. ADDRESS: 5419 N LOOP E 11680-54 DB NO. CITY: SAN ANTONIO STATE: TEXAS ZIP: 78218 MARCH 2023 PHONE# (210) 496-2668 ______ FAX**# <u>(210) 496–2668</u>** SAWS BLOCK MAP # 123X1 TOTAL EDU'S 103 TOTAL ACREAGE 20.75 DESIGNER BS TOTAL LINEAR FOOTAGE OF PIPE: 8" 2.585 LF PLAT NO. 22-11800463 CHECKED_BL_DRAWN_BS NUMBER OF LOTS 103 _____ SAWS JOB NO. 22-1669 C5.01 SHEET

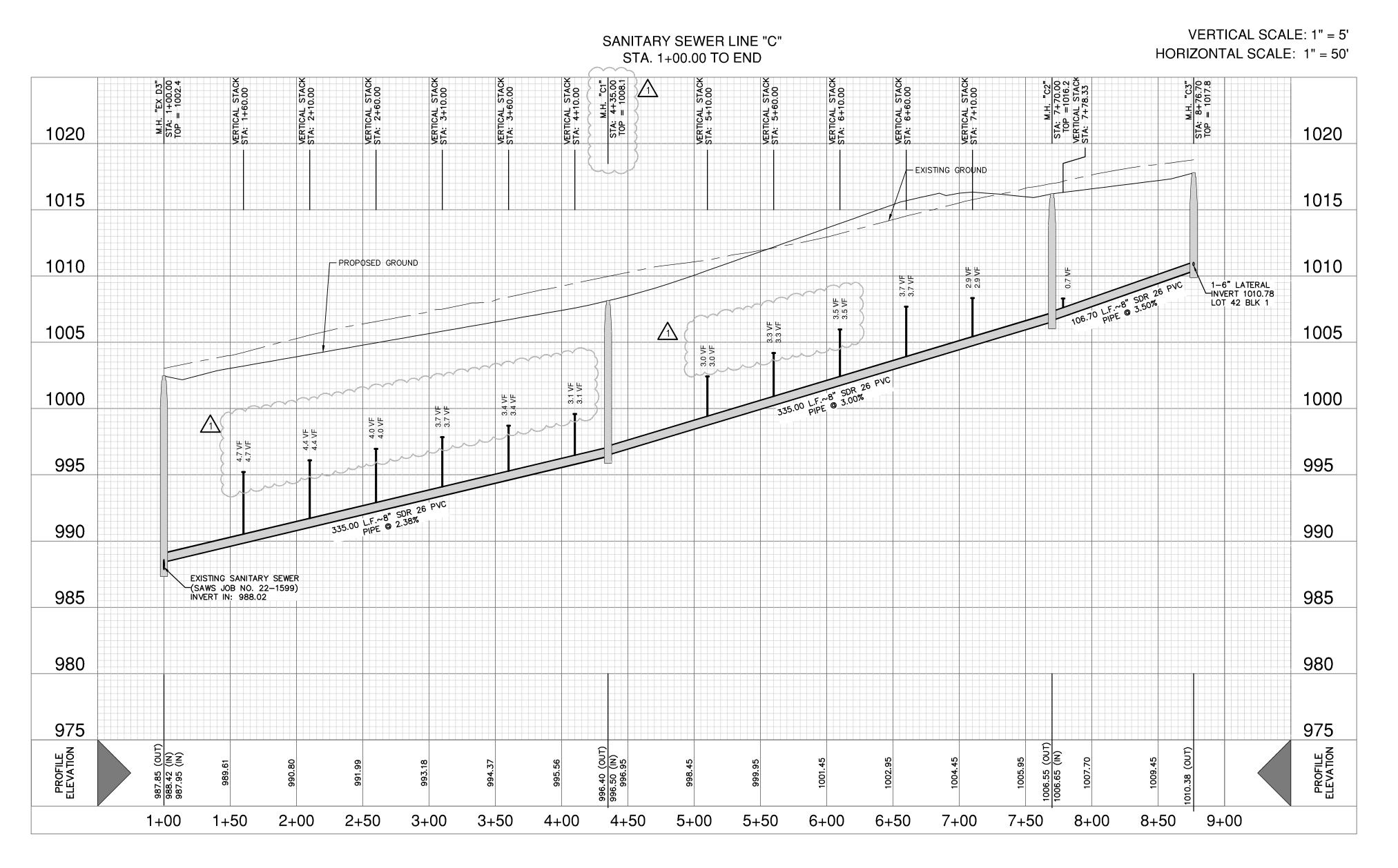


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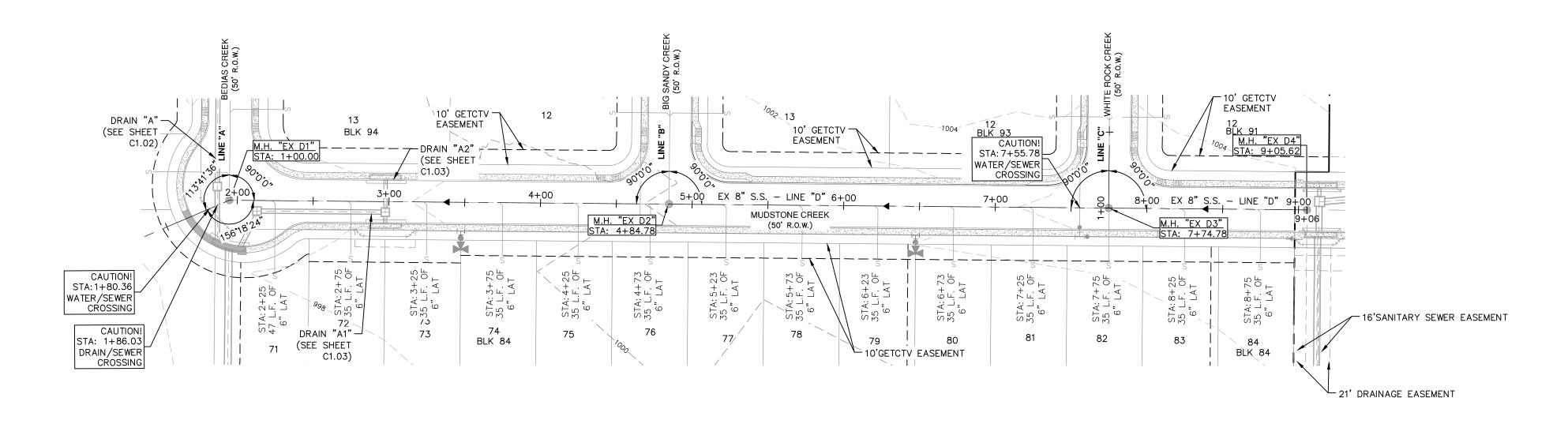




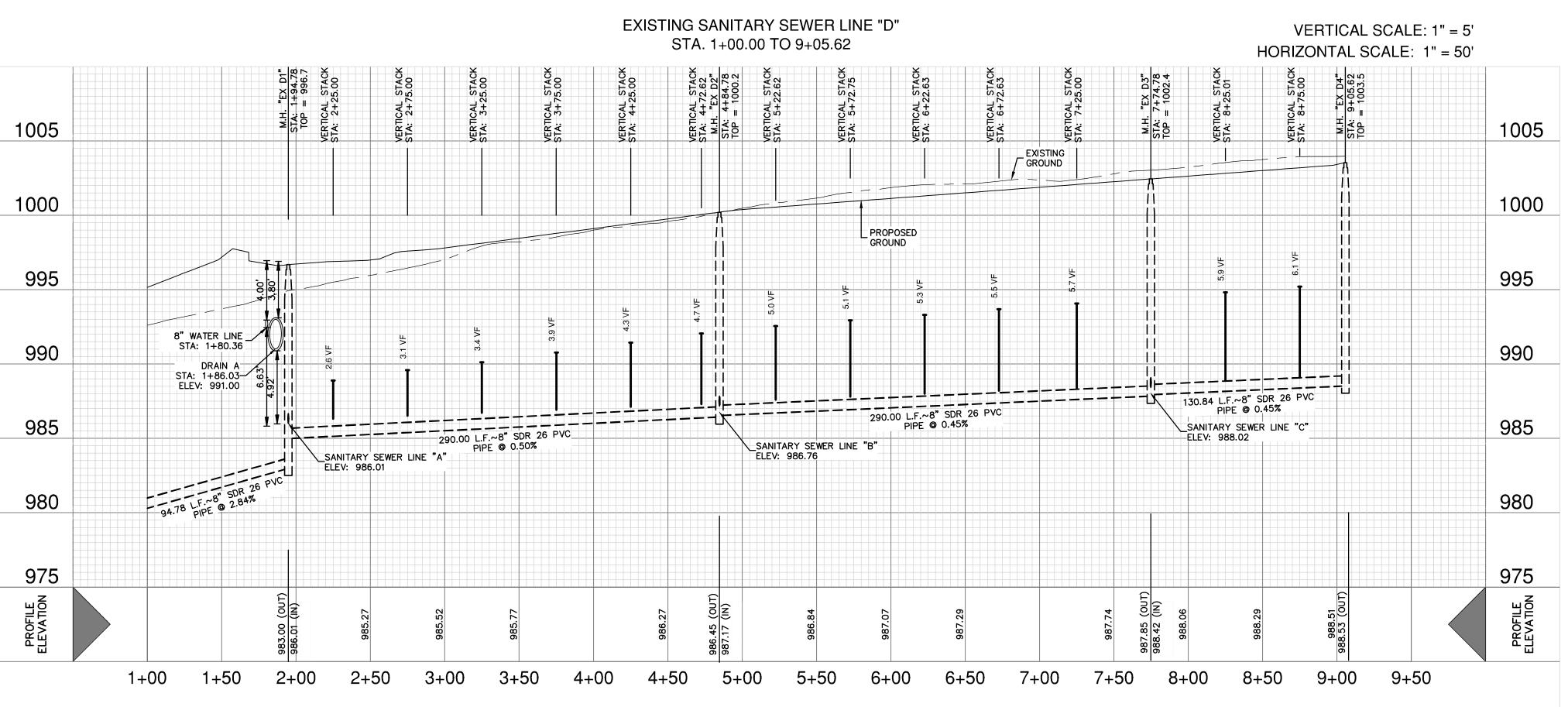
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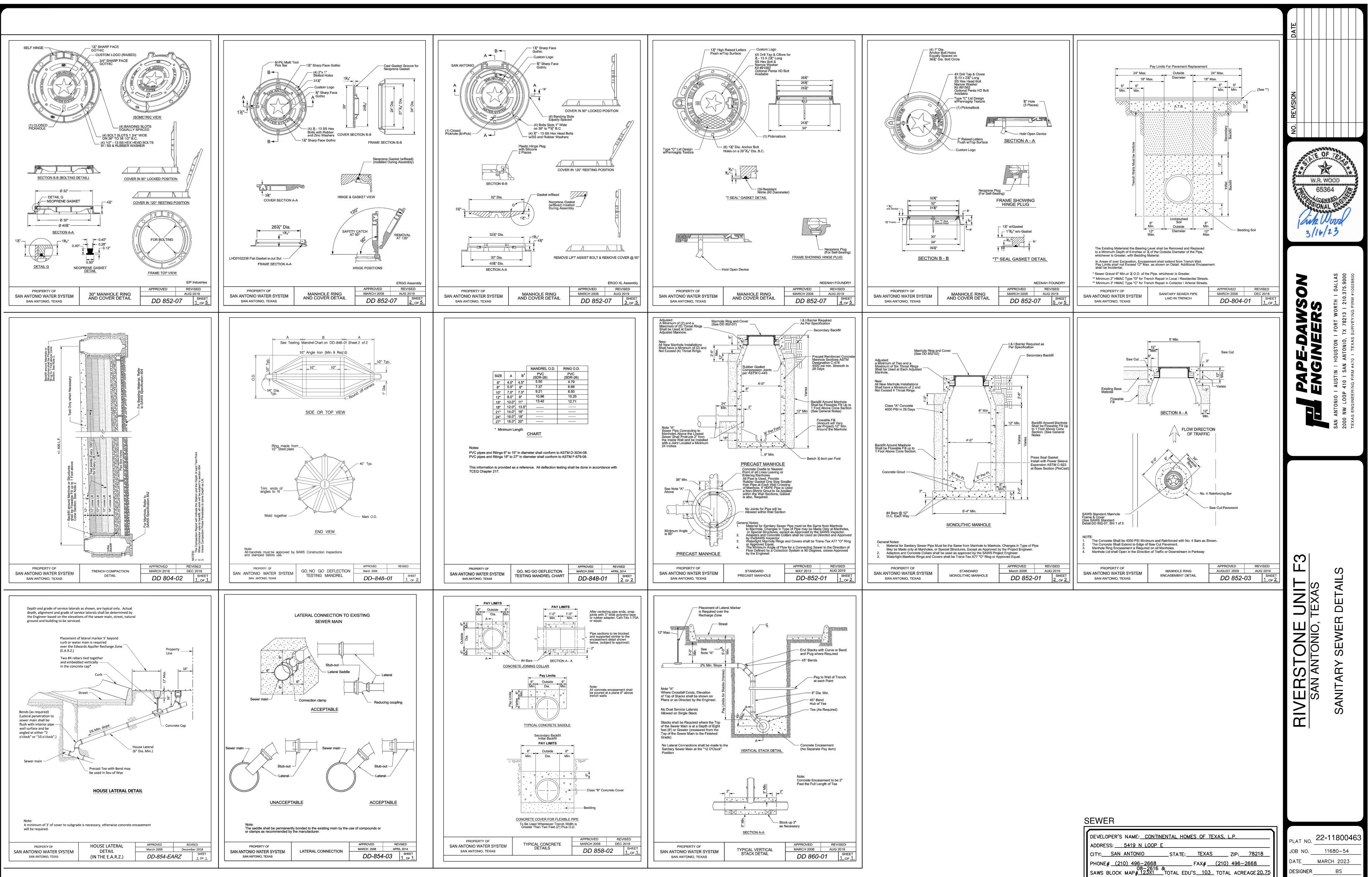
50' 100' SCALE: 50' 150' SEWER LEGEND PROJECT LIMITS EXISTING WATER EXISTING SEWER z€ MANHOLE PROPOSED SEWER PROPOSED WATER × PROPOSED SEWER LATERAL FINISHED FLOOR ELEVATION FOR SEWER FF = XXXX.XX CALEB M. CHANCE 98401 7/14/23 LLAS 9000 PAPE-DAWSON ENGINEERS DAI 75. ლ N - SAN 410 ΝN FINISHED GROUND/PAVEMENT (TOP OF GRADE) REFERENCE SAWS SPEC. ITEM 812 PROPOSED WATER LINE -WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET Ш SEPARATION DISTANCE AND PROTECTION REQUIREMENTS THE REQUIREMENTS OF ASTM PROFIL TO COMPLY WITH 30 TAC D2241 WITH ONE 20' JOINT 217.53(d) AND 290.44(e) CENTERED AT THE WATER CROSSING \mathcal{O} PROPOSED SANITARY SEWER LINE Š – 10'— END **TYPICAL SANITARY** SEWER/WATER CROSSING DETAIL C P TO P NOT-TO-SCALE R LINE 00.00 CAUTION! |O|AN ANTO CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE ш т UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND Ψ÷ FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. SEWI STA ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO T Ш START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL E THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL B 'ARY AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN (THESE PLANS OR NOT. С TRENCH EXCAVATION SAFETY PROTECTION: ANIT, CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN TH S PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /C 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 I ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AN ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION. SEWER DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P. 22-11800463 ADDRESS: 5419 N LOOP E 11680-54 DB NO. CITY: SAN ANTONIO STATE: TEXAS ZIP: 78218 MARCH 2023 PHONE# (210) 496-2668 ______FAX**# <u>(210) 496–2668</u>** SAWS BLOCK MAP # 123X1 TOTAL EDU'S 103 TOTAL ACREAGE 20.75 DESIGNER BS TOTAL LINEAR FOOTAGE OF PIPE: 8" 2.585 LF PLAT NO. 22-11800463 CHECKED_BL_DRAWN_BS NUMBER OF LOTS 103 ____ SAWS JOB NO.__22-1669__ C5.03 SHEET



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SCALE: 1"= 50' 50' 100' 150' SEWER LEGEND PROJECT LIMITS EXISTING WATER EXISTING SEWER MANHOL PROPOSED SEWER FIRE HYDRANT PROPOSED WATER PROPOSED SEWER LATERAL X FINISHED FLOOR ELEVATION FOR SEWER FF = XXXX.XX W.R. WOOD 65364 3/16/23 LLAS 9000 PAPE-DAWSON ENGINEERS 75. NΝ FINISHED GROUND/PAVEMENT REFERENCE SAWS SPEC. ITEM 812 (TOP OF GRADE) Ш PROFIL PROPOSED WATER LINE -WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET SEPARATION DISTANCE AND PROTECTION REQUIREMENTS - THE REQUIREMENTS OF ASTM TO COMPLY WITH 30 TAC D2241 WITH ONE 20' JOINT 217.53(d) AND 290.44(e) CENTERED AT THE WATER CROSSING 8 \mathcal{O} Z⊿ Ш PROPOSED SANITARY SEWER LINE / SEWER LINE PLA +00.00 TO 9+05.62 UNIT — 10**'**— TYPICAL SANITARY SEWER/WATER CROSSING DETAIL NOT-TO-SCALE ERSTONE 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 ANITARY STA 1+(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 TI Ш START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL E THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL B >AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN (THESE PLANS OR NOT. S \mathbf{T} TRENCH EXCAVATION SAFETY PROTECTION: EXISTING CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN TH PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /C PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFÉTY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFET CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION. SEWER 22-11800463 DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P. ADDRESS: 5419 N LOOP E 11680-54 OB NO. CITY: SAN ANTONIO STATE: TEXAS ZIP: 78218 MARCH 2023 PHONE# (210) 496-2668 _____ FAX**# <u>(210) 496–2668</u>** SAWS BLOCK MAP # 123X1 TOTAL EDU'S 103 TOTAL ACREAGE 20.75 DESIGNER BS TOTAL LINEAR FOOTAGE OF PIPE: 8" 2.585 LF PLAT NO. 22-11800463 CHECKED_BL_DRAWN_BS NUMBER OF LOTS 103 ____ SAWS JOB NO.__22-1669__ C5.04 SHEET



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TOTAL LINEAR FOOTAGE OF PIPE:<u>8" 2,585 LF</u> PLAT NO.<u>22–11800463</u>

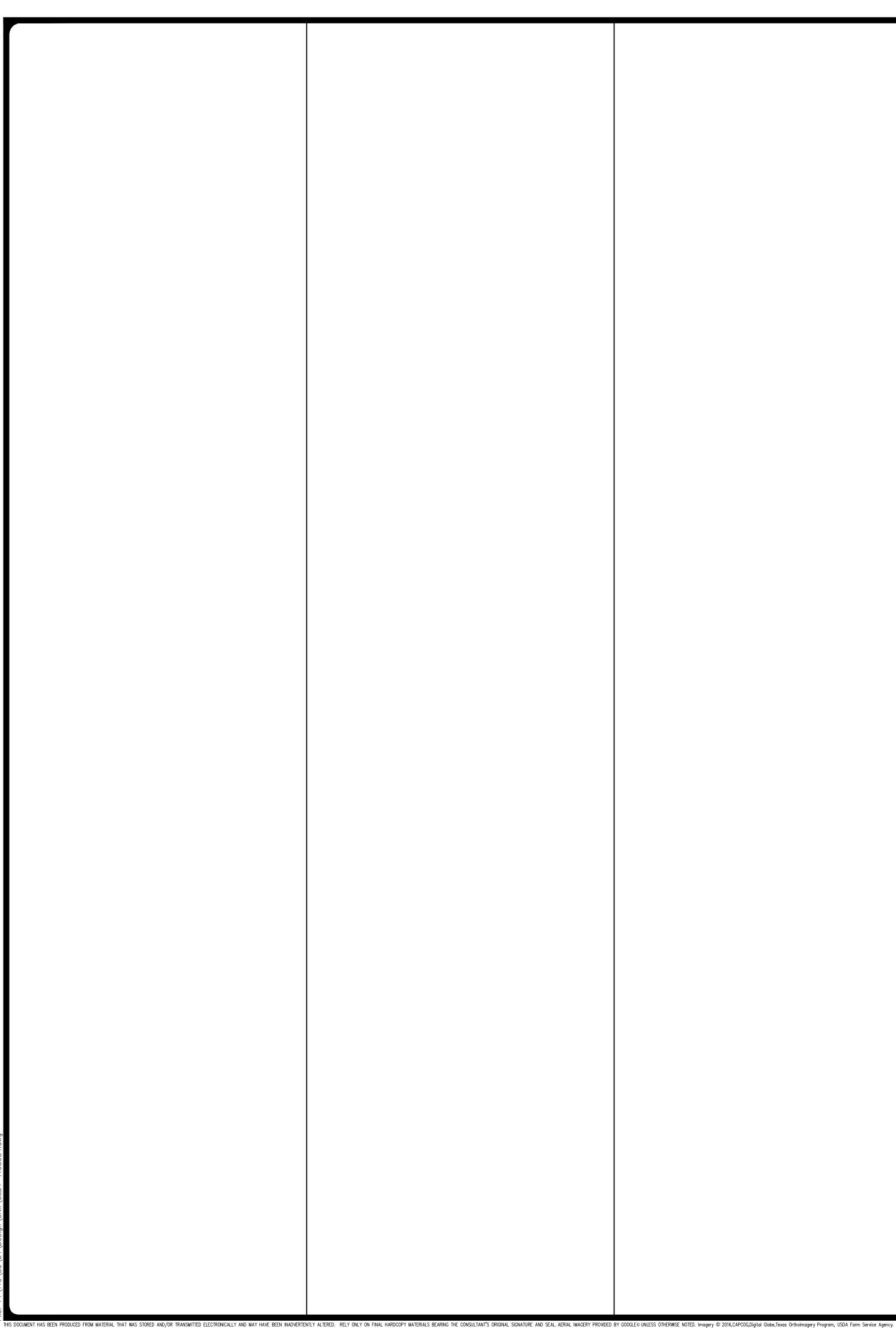
____ SAWS JOB NO. <u>22-1669</u>

NUMBER OF LOTS 103

CHECKED BL DRAWN B

SHEET

C5.10



SAWS CONSTRUC (LAST REVISED JUL)
SAWS GENERAL SECTION
1. ALL MATERIALS AND CONSTRUCTION PROCED CONTRACT SHALL BE APPROVED BY THE SAN COMPLY WITH THE PLANS, SPECIFICATIONS, FOLLOWING AS APPLICABLE:
 A. CURRENT TEXAS COMMISSION ON ENVIRON CRITERIA FOR DOMESTIC WASTEWATER CODE (TAC) TITLE 30 PART 1 CHAPTER WATER", TAC TITLE 30 PART 1 CHAPTER 3 B. CURRENT TXDOT "STANDARD SPECIFIC/ HIGHWAYS, STREETS AND DRAINAGE". C. CURRENT "SAN ANTONIO WATER SYSTEM WATER AND SANITARY SEWER CONSTRUCT D. CURRENT CITY OF SAN ANTONIO "STAND WORKS CONSTRUCTION". E. CURRENT CITY OF SAN ANTONIO "UTILITY (UECM).
2. THE CONTRACTOR SHALL NOT PROCEED WITH THEY OBTAIN A COPY OF THE APPROVE CONSTRUCTION PERMIT (GCP) FROM THE CONS SAWS CONSTRUCTION INSPECTION DIVISION TO ARRANGED A MEETING WITH THE INSPECTOR REQUIREMENTS. WORK COMPLETED BY THE C COUNTER PERMIT AND/OR A GCP WILL REPLACEMENT AT THE EXPENSE OF THE CONTER
 THE CONTRACTOR SHALL OBTAIN THE SAWS WEBSITE, HTTP://WWW.SAWS.ORG/BUSINESS_C NOTED WITHIN THE DESIGN PLANS.
 THE CONTRACTOR IS TO MAKE ARRANGEMENT INSPECTION DIVISION AT (210) 233-2973, ON NOTIFICATION PROCEDUR AFFECTED HOME RESIDENTS AND/OR PROPENT BEGINNING ANY WORK.
5. LOCATION AND DEPTH OF EXISTING UTILITIES THE PLANS ARE UNDERSTOOD TO BE APP DEPTHS MUST BE FIELD VERIFIED BY THE CON CONSTRUCTION. IT SHALL BE THE CONTRA UTILITY SERVICE LINES AS REQUIRED FOR CC DURING CONSTRUCTION AT NO COST TO SAWS.
6. THE CONTRACTOR SHALL VERIFY THE EXACT I AND DRAINAGE STRUCTURES AT LEAST 1– WHETHER SHOWN ON PLANS OR NOT. PLEASE LOCATES REQUESTING PIPE LOCATION MA FOLLOWING CONTACT INFORMATION ARE SUPPLI
 SAWS UTILITY LOCATES: HTTP://WWW.SAW COSA DRAINAGE (210) 207-0724 OR (210) COSA TRAFFIC SIGNAL OPERATIONS (210) COSA TRAFFIC SIGNAL DAMAGES (210) 20 TEXAS STATE WIDE ONE CALL LOCATOR 1-
 THE CONTRACTOR SHALL BE RESPONSIBLE CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LAI ORIGINAL OR BETTER CONDITION IF DAMAGES PROJECT'S CONSTRUCTION.
8. ALL WORK IN TEXAS DEPARTMENT OF TRANS COUNTY RIGHT-OF-WAY SHALL BE DONE CONSTRUCTION SPECIFICATIONS AND PERMIT RE
9. THE CONTRACTOR SHALL COMPLY WITH C GOVERNING MUNICIPALITY'S TREE ORDINANCES
 THE CONTRACTOR SHALL NOT PLACE ANY N FLOOD PLAIN WITHOUT FIRST OBTAINING AN AF HOLIDAY WORK: CONTRACTORS WILL NOT BE A
SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULI CONSTWORKREQ@SAWS.ORG.
WEEKEND WORK: CONTRACTORS ARE REQUIRE CONSTRUCTION DEPARTMENT 48 HOURS IN AE REQUEST SHOULD BE SENT TO CONSTWORKREG
ANY AND ALL SAWS UTILITY WORK INSTALLED APPROVAL WILL BE SUBJECT TO BE UNCOVERE
12. COMPACTION NOTE (ITEM 804): THE CONTR. MEETING THE COMPACTION REQUIREMENTS O PAYING FOR THE TESTS PERFORMED BY A TH BE DONE AT ONE LOCATION POINT RANDOMLY SAWS INSPECTOR AND/OR THE TEST ADMINIS LIFT PER 400 LINEAR FEET AT A MINIMUM. T AND FINALIZED BY SAWS WITHOUT THIS REQUI
PROVIDING ALL NECESSARY DOCUMENTED TEST 13. A COPY OF ALL TESTING REPORTS SHALL BE INSPECTION DIVISION.

CTION NOTES JLY 2017)

CEDURES WITHIN THE SCOPE OF THIS N ANTONIO WATER SYSTEM (SAWS) AND GENERAL CONDITIONS AND WITH THE

ONMENTAL QUALITY (TCEQ) 'DESIGN SYSTEM", TEXAS ADMINISTRATIVE PTER 217 AND "PUBLIC DRINKING ICATIONS FOR CONSTRUCTION OF EM STANDARD SPECIFICATIONS FOR NDARD SPECIFICATIONS FOR PUBLIC

LITY EXCAVATION CRITERIA MANUAL"

TH ANY PIPE INSTALLATION WORK UNTIL VED COUNTER PERMIT OR GENERAL NSULTANT AND HAS BEEN NOTIFIED BY O PROCEED WITH THE WORK AND HAS OR AND CONSULTANT FOR THE WORK CONTRACTOR WITHOUT AN APPROVED BE SUBJECT TO REMOVAL AND TRACTORS AND/OR THE DEVELOPER.

STANDARD DETAILS FROM THE SAWS _CENTER/SPECS. UNLESS OTHERWISE

URES THAT WILL BE USED TO NOTIFY PERTY OWNERS 48 HOURS PRIOR TO

ES AND SERVICE LATERALS SHOWN ON PPROXIMATE. ACTUAL LOCATIONS AND ONTRACTOR AT LEAST 1 WEEK PRIOR TO RACTOR'S RESPONSIBILITY TO LOCATE CONSTRUCTION AND TO PROTECT THEM

LOCATION OF UNDERGROUND UTILITIES -2 WEEKS PRIOR TO CONSTRUCTION ALLOW UP TO 7 BUSINESS DAYS FOR IARKERS ON SAWS FACILITIES. TH LIED FOR VERIFICATION PURPOSES:

AWS.ORG/SERVICE/LOCATES

210) 207-6026 0) 206-8480 207-3951

1-800-545-6005 OR 811

FOR RESTORING EXISTING FENCES, ANDSCAPING AND STRUCTURES TO ITS GES ARE MADE AS A RESULT OF THE

NSPORTATION (TXDOT) AND/OR BEXAR IN ACCORDANCE WITH RESPECTIVE REQUIREMENTS.

CITY OF SAN ANTONIO OR OTHER WHEN EXCAVATING NEAR TREES. WASTE MATERIALS IN THE 100-YEAR APPROVED FLOOD PLAIN PERMIT.

ULD BE SENT TO

IRED TO NOTIFY THE SAWS INSPECTION DVANCE TO REQUEST WEEKEND WORK. EQ@SAWS.ORG.

WITHOUT HOLIDAY/WEEKEND RED FOR PROPER INSPECTION.

RACTOR SHALL BE RESPONSIBLE FOR ON ALL TRENCH BACKFILL AND FOR THIRD PARTY. COMPACTION TESTS WILL LY SELECTED, OR AS INDICATED BY THE NISTRATOR, PER EACH 12-INCH LOOSE THIS PROJECT WILL NOT BE ACCEPTED UIREMENT BEING MET AND VERIFIED BY 5. ST RESULTS.

BE FORWARDED TO SAWS CONSTRUCTION

SAWS SEWER NOTES

THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SANITARY SEWER OVERFLOW (SSO) OCCURS AS A RESULT OF THEIR WORK. ALL CONTRACTOR PERSONNEL RESPONSIBLE FOR SSO PREVENTION AND CONTROL SHALL BE TRAINED ON PROPER RESPONSE. SHOULD AN SSO OCCUR, THE CONTRACTOR SHALL:

A. IDENTIFY THE SOURCE OF THE SSO AND NOTIFY SAWS EMERGENCY OPERATIONS CENTER (EOC) IMMEDIATELY AT (210) 233-2014. PROVIDE THE ADDRESS OF THE SPILL AND AN ESTIMATED VOLUME OR FLOW. B.ATTEMPT TO ELIMINATE THE SOURCE OF THE SSO.

- C.CONTAIN SEWAGE FROM THE SSO TO THE EXTENT OF PREVENTING A POSSIBLE CONTAMINATION OF WATERWAYS. D.CLEAN UP SPILL SITE (RETURN CONTAINED SEWAGE TO THE
- COLLECTION SYSTEM IF POSSIBLE) AND PROPERLY DISPOSE OF CONTAMINATED SOIL/MATERIALS.
- E.CLEAN THE AFFECTED SEWER MAINS AND REMOVE ANY DEBRIS. F.MEET ALL POST-SSO REQUIREMENTS AS PER THE EPA CONSENT DECREE, INCLUDING LINE CLEANING AND TELEVISING THE AFFECTED SEWER MAINS (AT SAWS DIRECTION) WITHIN 24 HOURS.

SHOULD THE CONTRACTOR FAIL TO ADDRESS AN SSO IMMEDIATELY AND TO SAWS SATISFACTION, THEY WILL BE RESPONSIBLE FOR ALL COSTS INCURRED BY SAWS, INCLUDING ANY FINES FROM EPA, TCEQ AND/OR ANY OTHER FEDERAL, STATE OR LOCAL AGENCIES.

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

- MENTS WITH THE SAWS CONSTRUCTION 2. IF BYPASS PUMPING IS REQUIRED, THE CONTRACTOR SHALL PERFORM SUCH WORK IN ACCORDANCE WITH SAWS STANDARD SPECIFICATION FOR WATER AND SANITARY SEWER CONSTRUCTION, ITEM NO. 864, "BYPASS PUMPING".
 - PRIOR TO TIE-INS. ANY SHUTDOWNS OF EXISTING FORCE MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT (210) 233-2973 AT LEAST ONE WEEK IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS; THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.
 - SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241, TAC 217.53 AND TCEQ 290.44(E)(4)(B). CONTRACTOR SHALL CENTER A 20' JOINT OF 160 PSI PRESSURE RATED PVC AT THE PROPOSED WATER CROSSING.
 - ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE FINISHED GRADE OF THE PROJECT'S IMPROVEMENTS. (NSPI)
 - 6. SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER: ALL SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER, RECYCLED WATER, PETROLEUM PRODUCTS, OR CHEMICALS MUST BE REPORTED IMMEDIATELY TO THE SAWS INSPECTOR ASSIGNED TO THE COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP). THIS REQUIREMENT APPLIES TO EVERY SPILL, OVERFLOW, OR DISCHARGE RÉGARDLESS OF SIZE.
 - MANHOLE AND ALL PIPE TESTING (INCLUDING THE TV INSPECTION) MUST BE PERFORMED AND PASSED PRIOR TO FINAL FIELD ACCEPTANCE BY SAWS CONSTRUCTION INSPECTION DIVISION, AS PER THE SAWS SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION.
 - 8. ALL PVC PIPE OVER 14 FEET OF COVER SHALL BE EXTRA STRENGTH WITH MINIMUM PIPE STIFFNESS OF 115 PSI.

ALLOWED TO PERFORM SAWS WORK ON PROJECT SEWER NOTES

- ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO 10' PAST THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2" X 4" STAKE, FOUR (4) FEET LONG, TWO (2) FEET DEEP INTO THE GROUND AT THE END OF EACH SERVICE. NO SÉPARATE PAY ITEM.
- CONTRACTOR TO INSTALL CLEANOUTS AT THE END OF ALL SEWER LATERALS, PER LATERAL DETAIL SHEET C5.10
- 3. NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- ALL 6" SEWER LATERALS WILL BE SET AT 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
- WHEN HORIZONTAL DISTANCE BETWEEN SEWER PIPES AND WATER MAIN IS LESS THAN 9 FOOT OF SEPARATION, SEWER MAIN SHALL BE INSTALLED WITH 150 PSI (MIN) PRESSURE PIPE AND FITTINGS IN ACCORDANCE WITH SAWS CONSTRUCTION CRITERIA FOR CONSTRUCTION OF SEWER MAINS IN THE VICINITY OF WATER MAINS.
- . CONTRACTOR SHALL ENSURE THAT MANHOLES OUTSIDE OF PAVED AREAS ARE SET WITH TOP ELEVATIONS 6" ABOVE FINISHED GRADE WITH CONCRETE RING ENCASEMENT.
- 7. ALL SEWER PIPES SHALL BE 8" PVC (SDR 26), UNLESS OTHERWISE NOTED. 8. CONTRACTOR IS TO VERIFY EXISTING INVERT OF EXISTING SANITARY SEWER MAINS AND ALERT ENGINEER IMMEDIATELY OF ANY DIFFERENCE FROM
- INVERT SHOWN ON PLANS. 9. CONTRACTOR SHALL PROTECT ALL EXISTING FENCES. ANY FENCE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR
- EXPENSE. 10. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
- I. CONCRETE RING ENCASEMENT TO BE INSTALLED ON ALL MANHOLES AND, WITHIN LIMITS OF PAVEMENT, BE INSTALLED TO THE TOP OF THE BASE LAYER WITH A MINIMUM OF 2" OF ASPHALT ON TOP OF THE RING ENCASEMENT.
- 12. MANHOLE OPENING INCREASED TO 30" AS PER TAC CHAPTER 217.55.
- 13. ALL SEWER PIPE LATERALS SHALL BE SDR 26 (CLASS 160) PVC PIPE.
- 14. IF THE GIVEN TOP OF MANHOLE ELEVATION DOES NOT AGREE ON ACTUAL GROUND SURFACE OR FINISH PAVEMENT, THE CONTRACTOR SHALL ADJUST ELEVATIONS SUCH THAT THE TOP OF MANHOLE SHALL BE 0.5' ABOVE EXISTING GROUND, OR FLUSH TO FINISH ASPHALT PAVEMENT.
- 15. ALL MANHOLES CONSTRUCTED OVER THE EDWARDS AQUIFER RECHARGE ZONE SHOULD BE WATERTIGHT.

SEWER

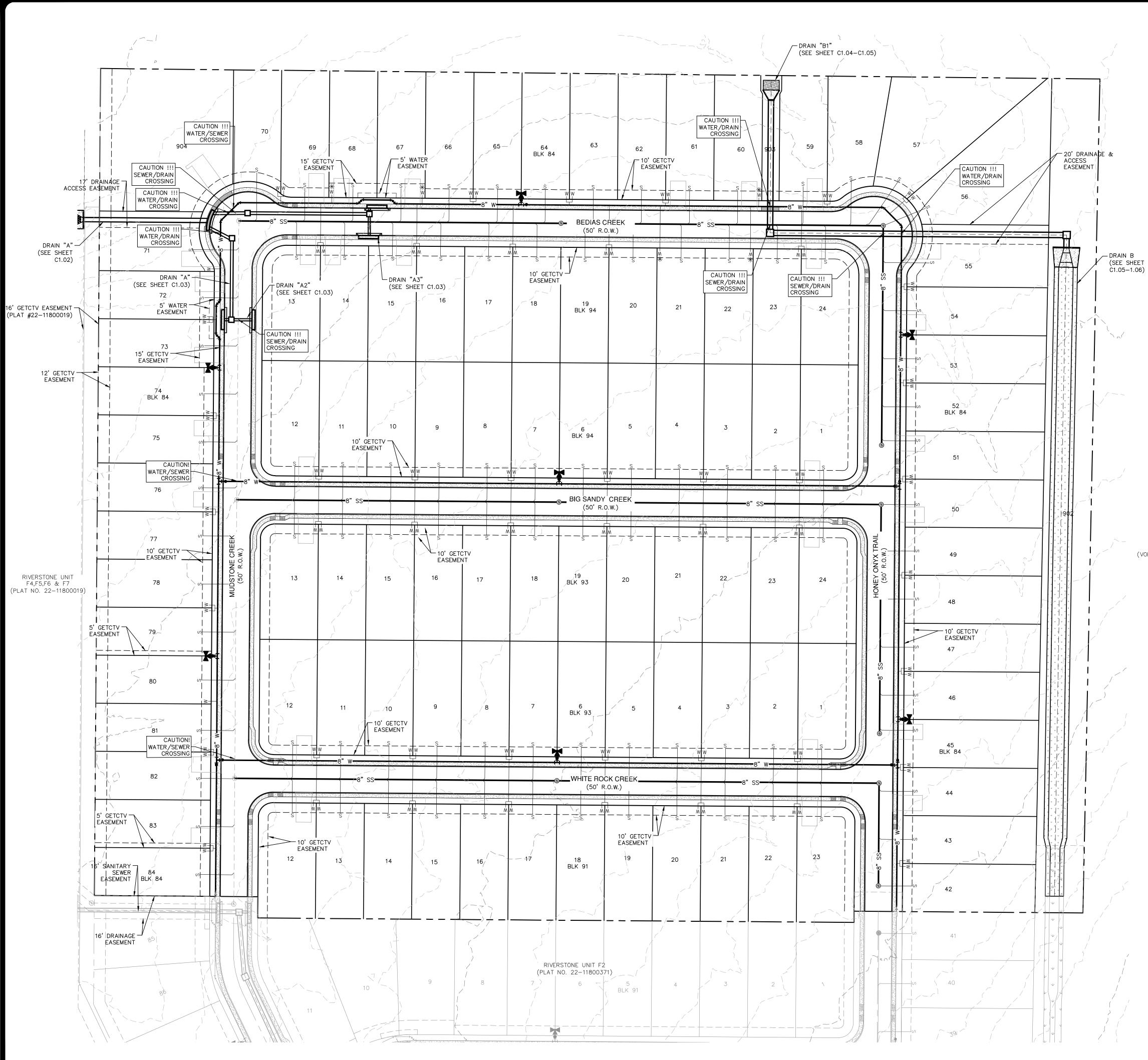
DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP E
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78218
PHONE# (210) 496-2668 FAX# (210) 496-2668
PHONE# (210) 496-2668 08-2616 & FAX# (210) 496-2668 SAWS BLOCK MAP# 123X1 TOTAL EDU'S 103 TOTAL ACREAGE 20.75
TOTAL LINEAR FOOTAGE OF PIPE: <u>8" 2,585 LF</u> PLAT NO.22-11800463
NUMBER OF LOTS 103 SAWS JOB NO. 22-1669

Riversion Pape-Dawson San antonio, texas San antonio, texas San antonio, texas San antonio, texas Santary sever notes Sour loop 410 i san antonio, tr 78213 i 210.375.900 Texas engine final 470 i texas surveving final #100.000 Fired Balawson	NO. REVISION DATE	W.R. W 653	64 SEP CITY
RIVERSTONE UNIT F3 SAN ANTONIO, TEXAS SANITARY SEWER NOTES	I PAPE-DAWSON	ENGINEERS	SAN ANTONIO I AUSTIN I HOUSTON I FORT WORTH I DALLAS 2000 NW LOOP 410 I SAN ANTONIO, TX 78213 I 210.375.9000 Texas engineering firm #470 i texas surveying firm #10028800
·	RIVERSTONE UNIT F3	SAN ANTONIO, TEXAS	SANITARY SEWER NOTES

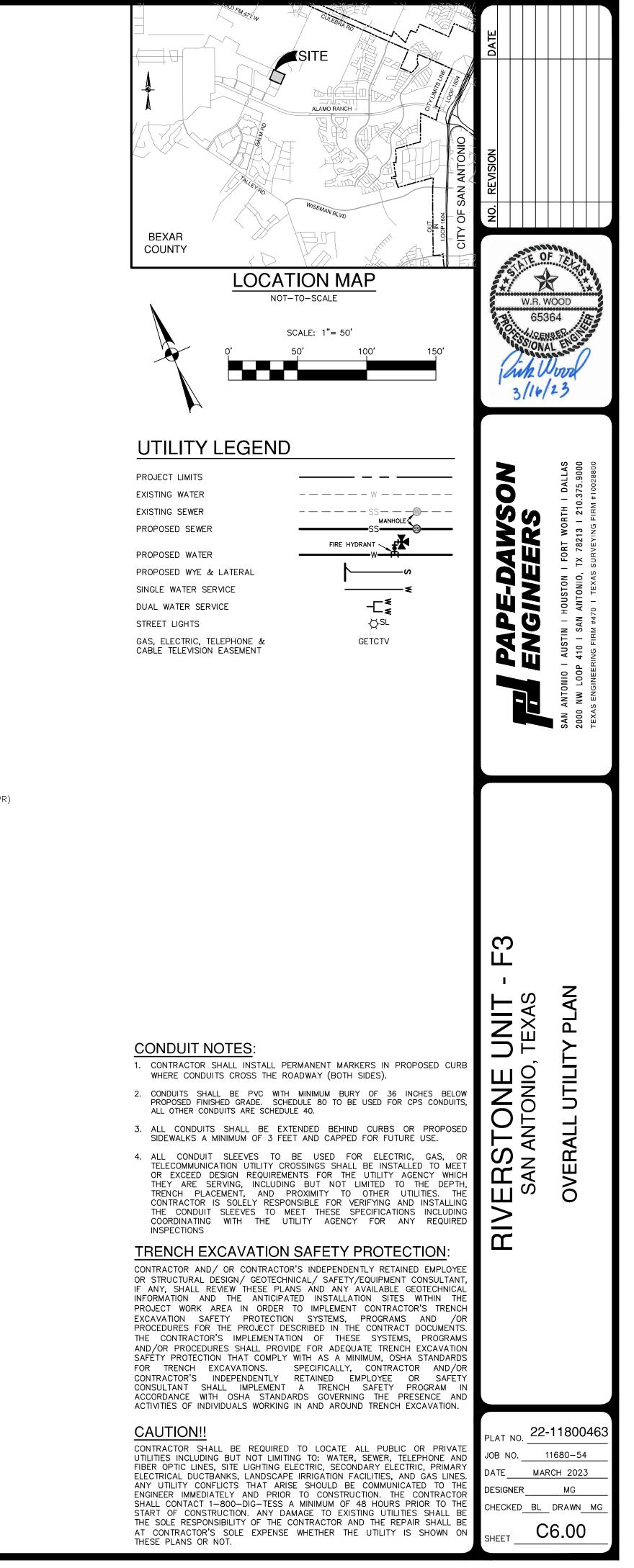
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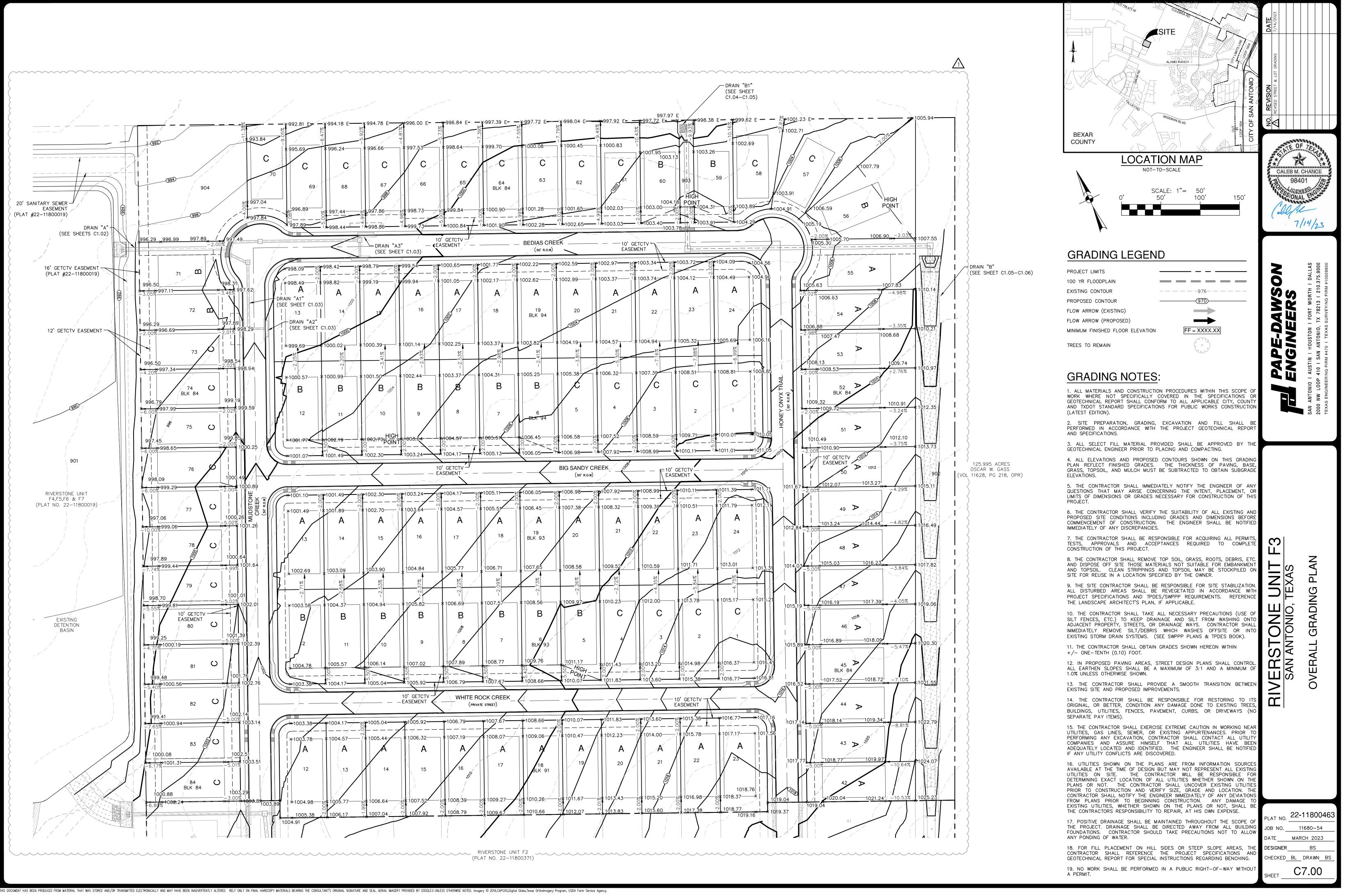
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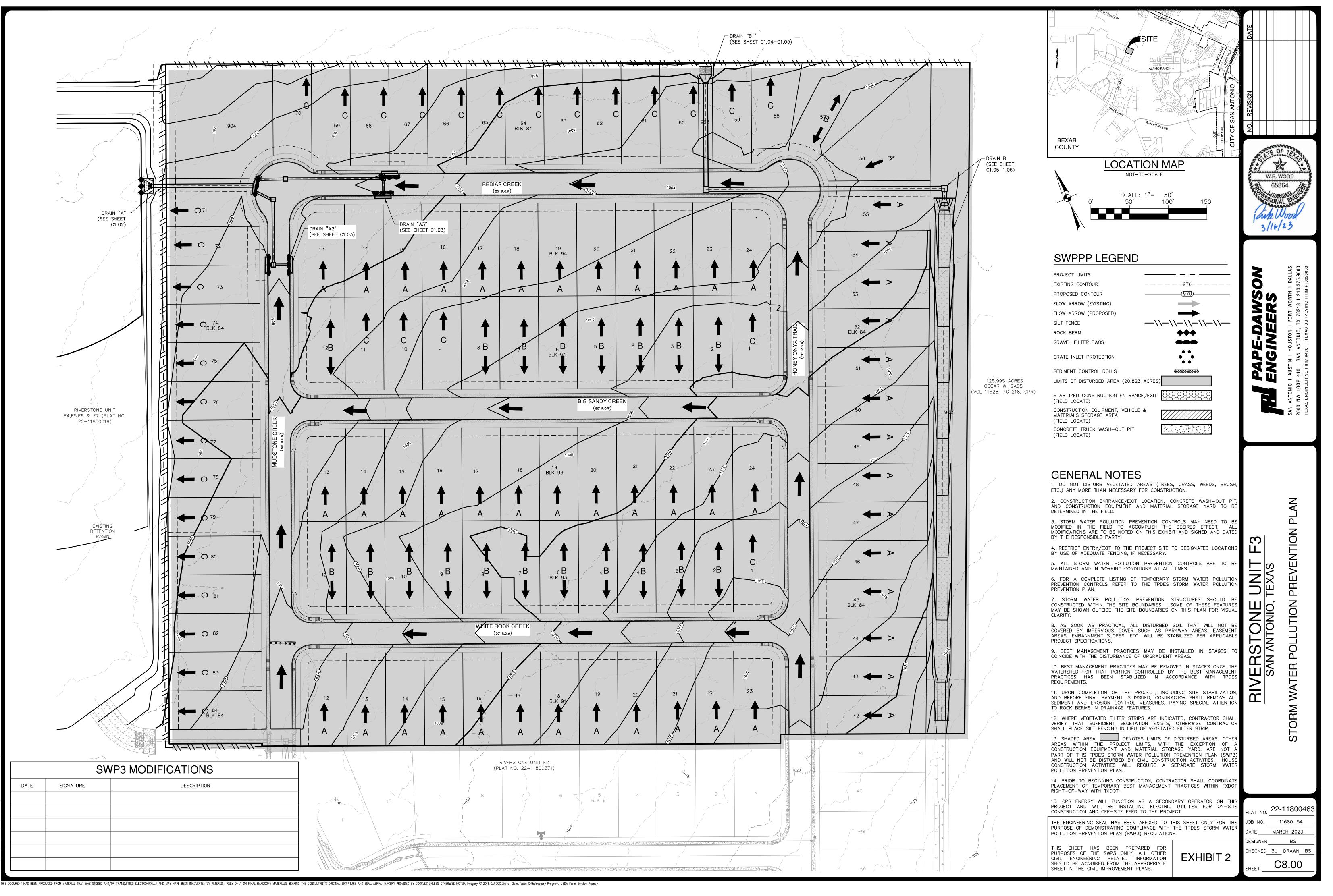


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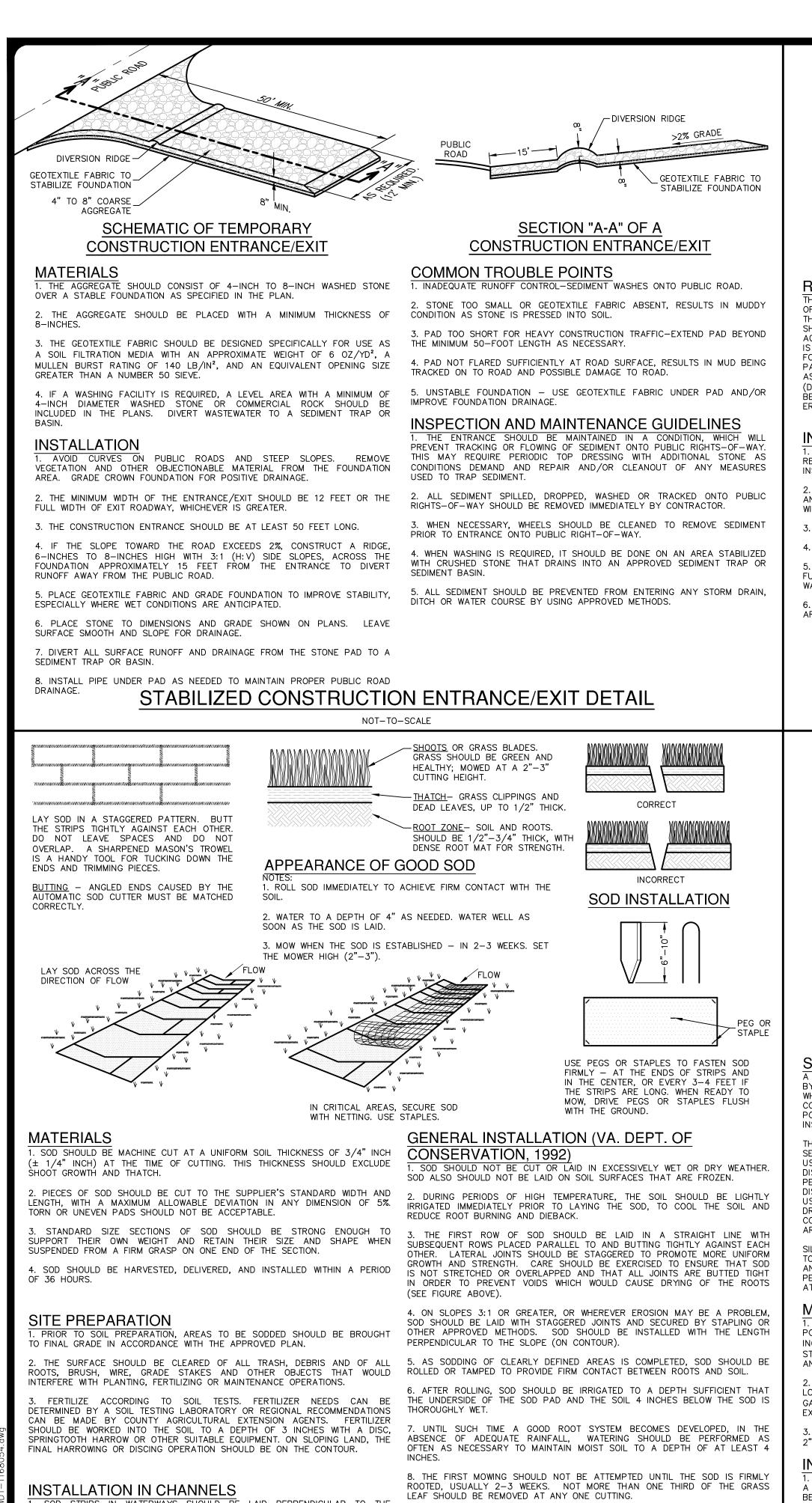


125.995 ACRES OSCAR W. GASS (VOL 11628, PG 218, OPR)





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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).

. 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.

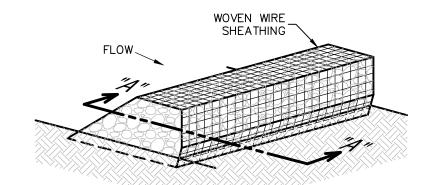
NSPECTION AND MAINTENANCE GUIDELINES SOD SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAIN EVENT TO LOCATE AND REPAIR ANY DAMAGE.

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

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SOD INSTALLATION DETAIL

NOT-TO-SCALE



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

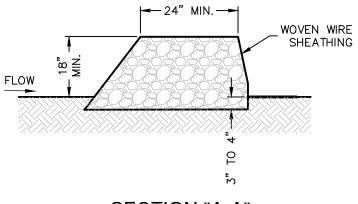
INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.

. 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.



SECTION "A-A'

MATERIALS

THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT 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.

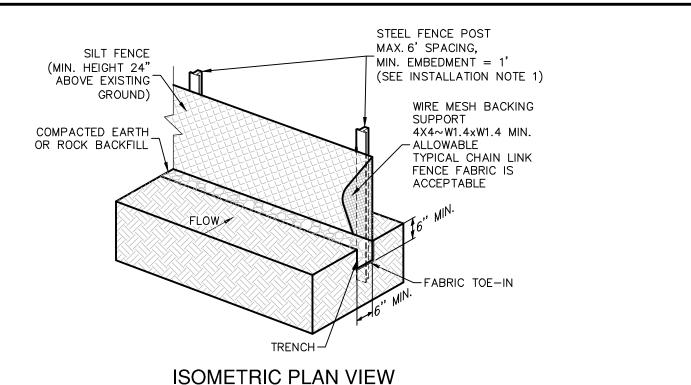
COMMON TROUBLE POINTS

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

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

ROCK BERM DETAIL

NOT-TO-SCALE



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 OF 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

. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN2, ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NUMBER 30.

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

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

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

4. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

5. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.

6. SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

COMMON TROUBLE POINTS

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

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

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

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

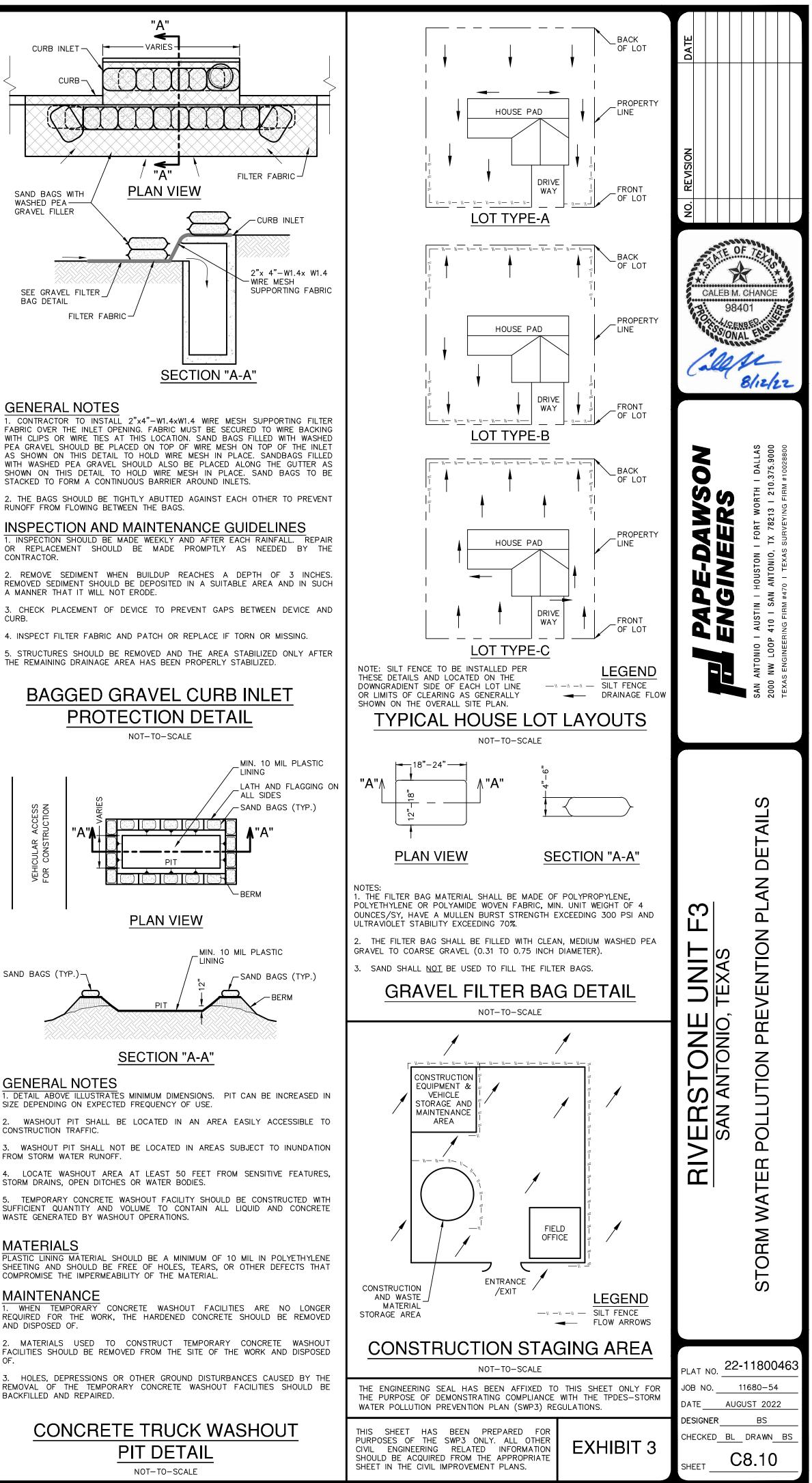
INSPECTION AND MAINTENANCE GUIDELINES

1. INSPECT ALL FENCING WEEKLY, AND AFTER RAINFALL 2. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.

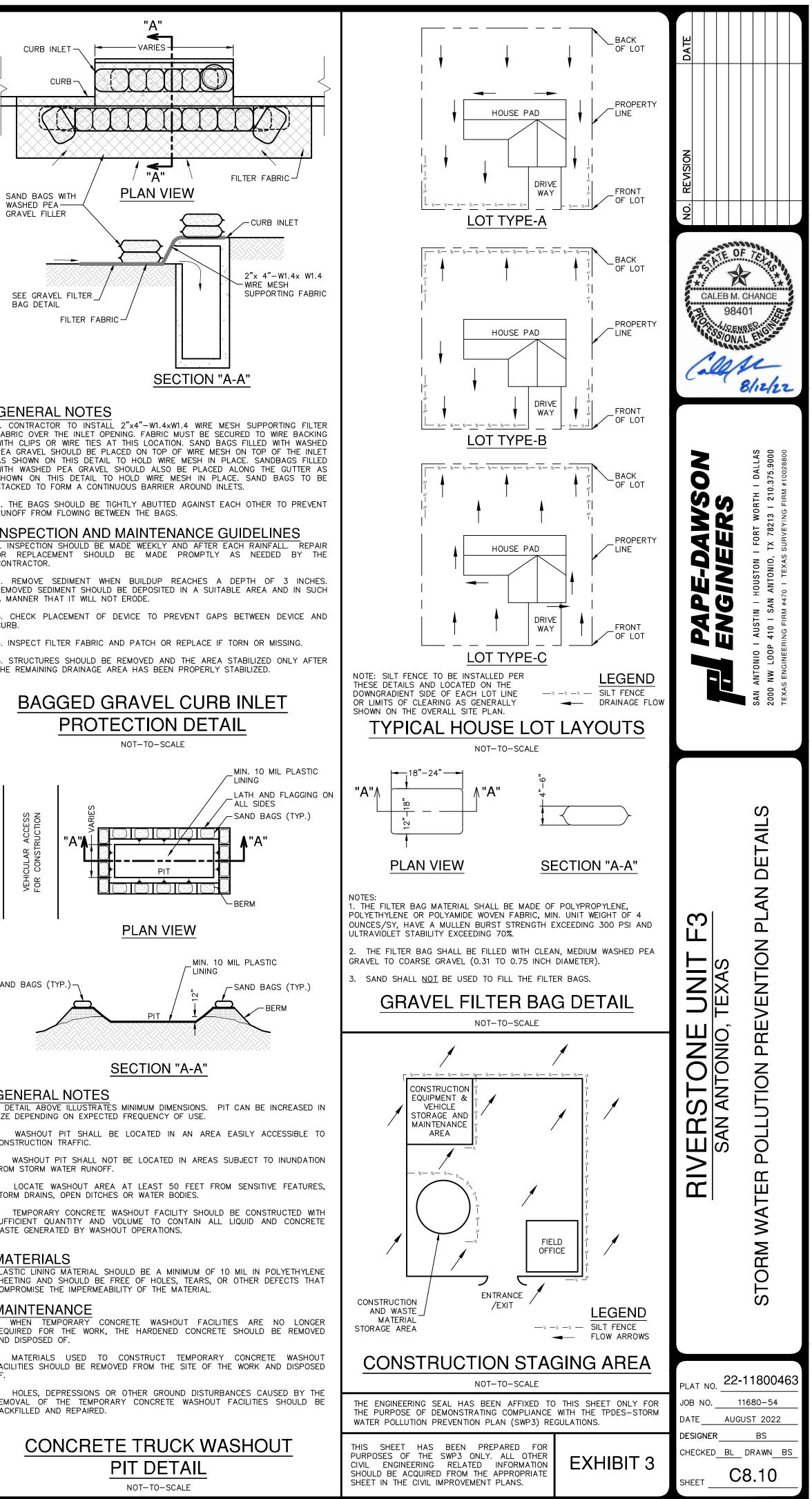
3. REPLACE TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.

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

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



CURB.



SAND BAGS (TYP.)

FROM STORM WATER RUNOFF.

MATERIALS

MAINTENANCE

AND DISPOSED OF.

BACKFILLED AND REPAIRED.

SILT FENCE DETAIL

NOT-TO-SCALE