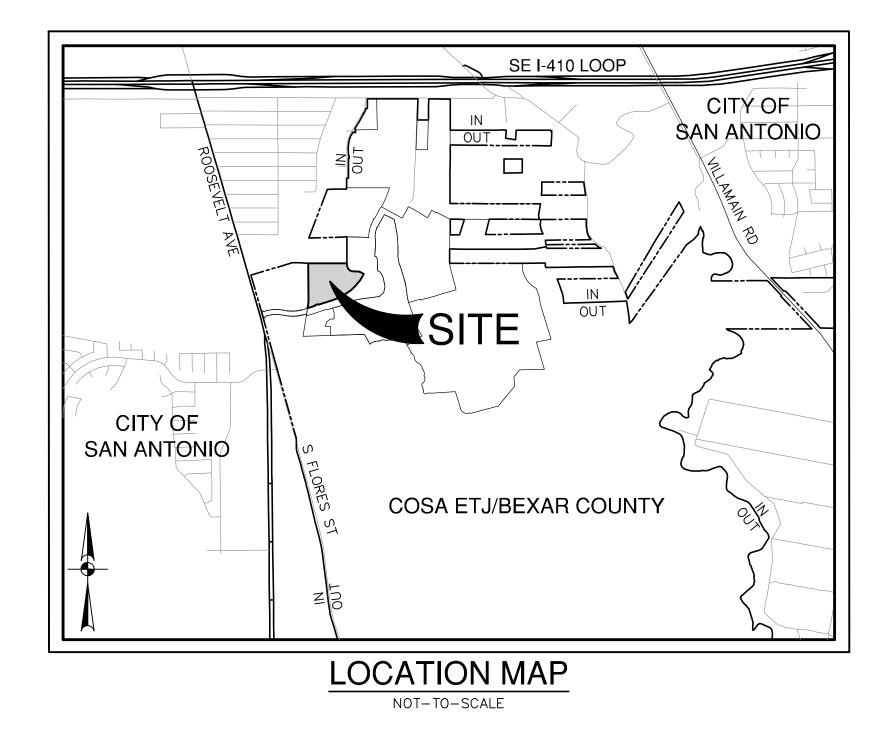
ESPADA TRACT UNIT 1

SAN ANTONIO, TEXAS

CIVIL CONSTRUCTION PLANS

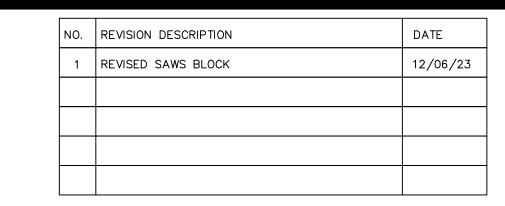


PREPARED FOR:

LENNAR HOMES OF TEXAS 100 NE LOOP 410, STE. 1155 SAN ANTONIO TX, 78216

JULY 2023



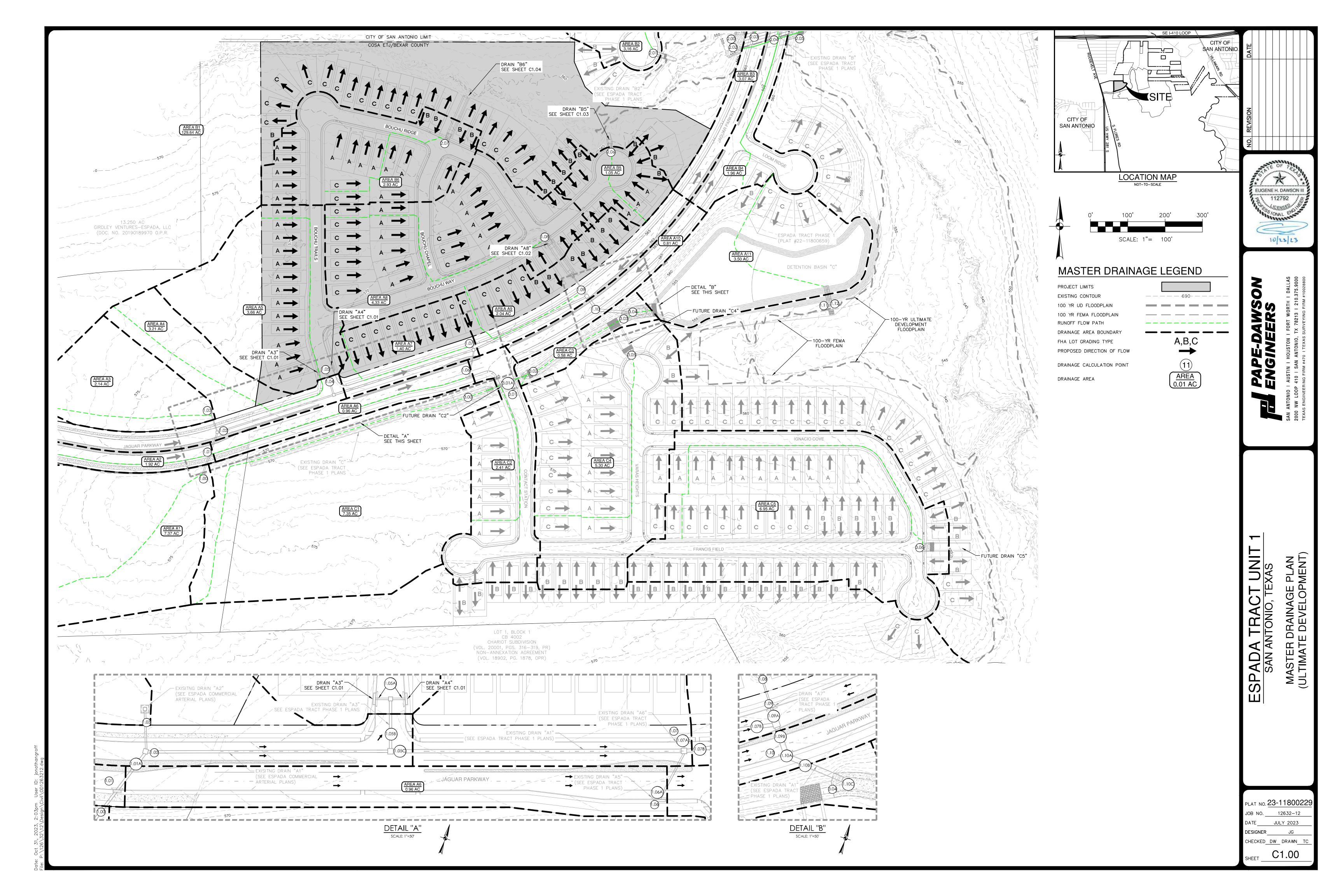


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C1.00A	MASTER DRAINAGE PLAN (ULTIMATE DEVELOPMENT)
C1.01	DRAIN A3 PLAN & PROFILE (STA. 1+00.00 TO END)
	DRAIN A4 PLAN & PROFILE (STA. 1+00.00 TO END)
C1.02	DRAIN A8 PLAN & PROFILE (STA. 1+00.00 TO END)
C1.03	DRAIN B5 PLAN & PROFILE (STA. 1+32.00 TO END)
C1.04	DRAIN B6 PLAN & PROFILE (STA. 1+54.50 TO 2+84.50)
C1.05	DRAINAGE DETAILS
C1.06	DRAINAGE DETAILS
C2.00	BOUCHU TRAILS PLAN & PROFILE (STA. 1+70.00 TO END)
C2.01	BOUCHU WAY PLAN & PROFILE (STA. 1+31.47 TO END)
C2.02	BOUCHU RIDGE PLAN & PROFILE (STA. 1+62.89 TO END)
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C2.04	TYPICAL STREET DETAILS
C2.05	TYPICAL STREET DETAILS
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C3.00	OVERALL SIGNAGE PLAN
C3.01	TxDOT SIGN MOUNTING DETAILS
C3.02	TxDOT SIGN MOUNTING DETAILS
C3.03	TxDOT SIGN MOUNTING DETAILS
C4.00	OVERALL WATER DISTRIBUTION PLAN
C4.01	OVERALL WATER DISTRIBUTION DETAILS
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C5.00	OVERALL SANITARY SEWER PLAN
C5.01	SS LINE C PLAN & PROFILE (STA 23+00.00 TO END)
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C5.03	SS LINE AA PLAN & PROFILE (STA 1+00.00 TO END)
C5.04	SS LINE BB PLAN & PROFILE (STA 1+00.00 TO END)
C5.05	SS LINE CC PLAN & PROFILE (STA 1+00.00 TO END)
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C5.07	OVERALL SANITARY SEWER DETAILS
C5.08	OVERALL SANITARY SEWER NOTES
C6.00	OVERALL UTILITY PLAN
C7.00	OVERALL GRADING PLAN
C8.00	STORM WATER POLLUTION PREVENTION PLAN
C8.01	STORM WATER POLLUTION PREVENTION DETAILS



WATER (SAWS PRESSURE ZONE 750)	SALADO CREEK - CENTRAL WATERSHED - DOS RIOS W.R.C.
DEVELOPER'S NAME: LENNAR HOMES OF TEXAS ADDRESS: 100 NE LOOP 410, STE. 1155 CITY: SAN ANTONIO STATE: TEXAS ZIP: 78216 PHONE# (210) 403-6200 FAX# N/A SAWS BLOCK MAP# 170536 TOTAL EDU'S 108 TOTAL ACREAGE 18.5 TOTAL LINEAR FOOTAGE OF PIPE: 3265.71 L.F.~8"PVC PLAT NO.23-118002 NUMBER OF LOTS 104 SAWS JOB NO. 23-1133	PHONE# (210) 403-6200 FAX# N/A SAWS BLOCK MAP# 168536 TOTAL EDU'S 104 TOTAL ACREAGE 18.52

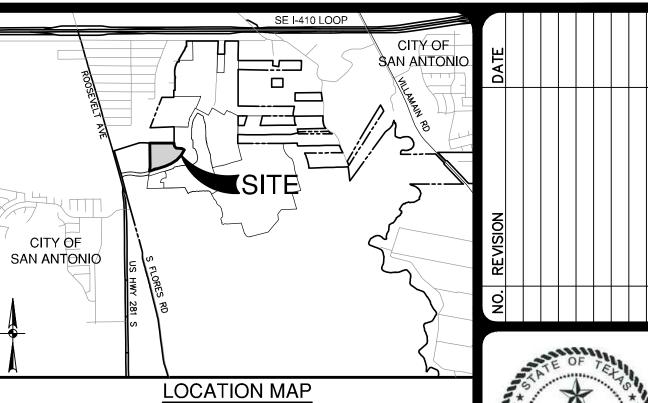


					<u>M</u> a	aster		_	Plan C		ılation	<u>ıs</u>								
		Drainage A	reas		th (ft)		rland/S w (See	heet			oncentr 1**	ated F	low -	Channe	elized l	Flow**		Ration IDF Curv	al Metho	d Q=CIA A14_PA4
Ref. Point	Structure / Description	#	Area (Ac)	С	Total Flowpath (ft)	L _o (FT)	S _o (ft/ft)	T _o *	L _{sc} (FT)	Condition***	Slope (ft/ft)	V _{sc} (FPS)	T _{sc} **	L _{c H} (FT)	V _{CH} (FPS)	T _{CH} ** (MIN)	Т _{с-тот}		Intensit y	Q (cfs)
1.00	Existing Drain A1	A1	7.37	0.97	870	100	0.01	15		8	<u>w</u>	-	-	770	6.0	2.1	17 17	5 25	(in/hr) 4.91 6.76	35.1 48.3
1.01	Existing Drain A2	A2	1.92	0.97	815							-	-	815	6.0	2.3	17 5 5	100 5 25	8.42 7.85 10.92	60.2 14.6 20.3
1.01A	Exisitng Drain	A1+A2	9.29	0.97		(Reference Accumulated Flow Rate Table)								5 0 0	100 5 25	13.65 - -	25.4 43.3 58.1			
1.02	Existing Drain	A1+A2+A3	11.43	0.97			(Reference Accumulated Flow Rate Table)								0 0 0	100 5 25	-	71.2 53.8 72.6		
1.03	Existing Drain A2	A3	2.14	0.97	530	100									0 16 16	100 5 25	5.06 6.99	89.3 10.5 14.5		
1.04	Street Capacity	A4	3.21	0.97	680	100	0.01	15				-	-	580	6.0	1.6	16 16 16	100 5 25	8.71 5.06 6.99	18.1 15.8 21.8
1.05	Check Calculation Point	A5	3.66	0.85	545	100	0.01	15	20	U	0.01	1.6	0.2	425	6.0	1.2	16 16 16	100 5 25	8.71 5.06 6.99	27.1 15.7 21.7
1.05A	Drain A3 &	A4+A5	6.87	0.91				(Re	eferenc	e Acc	umulate	ed Flov	v Rate	Table)			16 0 0	100 5 25	8.71 - -	27.1 15.8 21.8
1.05B	Existing Drain	A4+A5	6.87	0.91				(Re	eferenc	e Acc	umulate	ed Flov	v Rate	Table)			0 0 0	100 5 25	-	27.1 31.5 43.5
1.05C	Existing Drain	A1+A2+A3+A4+A5	18.30	0.95				(Re	eferenc	e Acc	umulate	ed Flov	v Rate	Table)			0 0 0	100 5 25	-	54.2 85.3 116.1
1.06	Calculation Point	A6	0.96	0.97	1,515	-	-	-	-	-	-	-	-	1,515	6.0	4.2	0 5 5	100 5 25	7.85 10.92	143.5 7.3 10.2
1.06A	Existing Drain A5	A6	0.96	0.97				(Re	eferenc	e Acc	umulate	ed Flov	v Rate	Table)			5 0 0	100 5 25	13.65 - -	12.7 10.8 13.8
1.07	Calculation Point	A7	1.40	0.83	470	100	0.02	13	50	U	0.02	2.3	0.4	320	6.0	0.9	0 14 14	100 5 25	5.42 7.53	16.1 6.3 8.7
1.07A	Existing Drain A6	A7	1.40	0.83				(Re	eferenc	e Acc	umulate	ed Flov	v Rate	Table)			14 0 0	100 5 25	9.39 - -	10.9 6.2 8.0
1.07B	Calculation Point	A1+A2+A3+A4+A5+A6 +A7	20.66	0.94				(Re	eferenc	e Acc	umulate	ed Flov	v Rate	Table)			0 0	100 5 25	-	9.3 102.3 137.9
1.08	Calculation Point	A8	4.33	0.77	755	100	0.02	13	145	U	0.02	2.3	1.1	510	6.0	1.4	15 15	100 5 25	5.24 7.24	168.9 17.5 24.1
1.09	Calculation Point	A9	2.04	0.86	440	100	0.01	15	50	U	0.01	1.6	0.5	290	6.0	0.8	15 16 16 16	100 5 25	9.03 5.06 6.99	30.1 8.9 12.3
1.09A	Calculation Point	A8+A9	6.37	0.80		(Reference Accumulated Flow Rate Table)								0 0	100 5 25	8.71 - -	15.3 26.5 37.1 47.0			
1.09B	Calculation Point	A1+A2+A3+A4+A5+A6 +A7+A8+A9	27.03	0.91		(Reference Accumulated Flow Rate Table)								0 0	100 5 25 100	-	128.8 175.0 215.9			
1.10	Calculation Point	A10	0.81	0.97	390	-	-	-	-	-	-	-	-	390	6.0	1.1	5 5 5	5 25 100	7.85 10.92 13.65	6.2 8.6 10.7
1.10A	Calculation Point	A10	0.81	0.97			<u>i</u>	(Re	eferenc	e Acc	umulate	ed Flov	v Rate	Table)		ı	0 0	5 25 100	-	9.1 15.5 21.7
1.10B	Calculation Point	A1+A2+A3+A4+A5+A6 +A7+A8+A9+A10	27.84	0.91				(Re	eferenc	e Acc	umulate	ed Flov	v Rate	Table)			0 0	5 25 100	-	137.9 190.5 237.6
1.10C	Calculation	A1+A2+A3+A4+A5+A6 +A7+A8+A9+A10+C1+ C2+C3+C4	43.48	0.89				(Re	eferenc	e Acc	umulate	ed Flov	v Rate	Table)			0 0 0	5 25 100	-	198.6 274.0 341.3
1.11	Calculation Point	A11	3.50	0.77	465	100	0.02	13	95	U	0.01	1.6	1.0	270	6.0	0.8	14 14 14	5 25 100	5.42 7.53 9.39	14.6 20.3 25.3
1.12	⊢vistina	A1+A2+A3+A4+A5+A6 +A7+A8+A9+A10+A11 +C1+C2+C3+C4	46.98	0.88	2,735	100	0.01	15	-	-	-	-	1=	2,635	6.0	7.3	22 22 22	SE SE	E HEC-H E HEC-H E HEC-H	IMS IMS
2.00	Calculation Point	B1	129.64	0.90	4,510	100	0.01	15	600	U	0.01	1.6	6.2	3,810	6.0	10.6	31 31 31	5 25 100	3.62 4.96 6.14	422.4 578.7 716.4
2.01	Existing Drain B2	B2	3.16	0.80	690	100	0.01	15	115	U	0.03	2.8	0.7	475	6.0	1.3	17 17 17	5 25 100	4.91 6.76 8.42	12.4 17.1 21.3
2.02	Existing Drain B	B1+B2+B5+B6	136.78	0.89	4,510	100	0.01	15	600	U	0.01	1.6	6.2	3,810	6.0	10.6	31 31 31	5 25 100	3.62 4.96 6.14	440.7 603.8 747.4
2.03	Calculation Point	B3	3.07	0.88	1,165	100	0.01	15	305	U	0.02	2.3	2.2	760	6.0	2.1	19 19 19	5 25 100	4.63 6.37 7.93	12.5 17.2 21.4
2.04	Calculation Point	B4	1.96	0.92	438	75	0.10	11	-	-	-	-	1-	363	6.0	1.0	12 12 12	5 25 100	5.81 8.12 10.14	10.5 14.6 18.3
2.05	Existing Drain B	B1+B2+B3+B4+B5+B6	141.81	0.89	4,560	100	0.01	15	600	U	0.01	1.6	6.2	3,860	6.0	10.7	31 31 31	5 25 100	3.62 4.96 6.14	456.9 626.0 774.9
2.06	Drain B5	B5	1.05	0.77	235	100	0.01	15	20	U	0.02	2.3	0.1	115	6.0	0.3	15 15 15	5 25 100	5.24 7.24 9.03	4.2 5.9 7.3
2.07	Drain B6	B6	2.93	0.77	475	100	0.02	13	205	U	0.02	2.3	1.5	170	6.0	0.5	14 14 14	5 25 100	5.42 7.53 9.39	12.2 17.0 21.2
3.00	Existing Drain C	C1	7.35	0.97	1,115	100	0.01	15	295	U	0.02	2.3	2.2	720	6.0	2.0	19 19 19	5 25 100	4.63 6.37 7.93	33.0 45.4 56.5
3.01	Calculation Point	C2	2.41	0.77	490	100	0.01	15	20	U	0.01	1.6	0.2	370	6.0	1.0	16 16 16	5 25 100	5.06 6.99 8.71	9.4 13.0 16.2
3.01A	Drain C1	C2	2.41	0.77	490						umulate					040 =	0 0	5 25 100	- - -	37.7 51.9 64.6
	e Chart or TR-5 alculated using	55 Eqn. 3-3 Mannings or TR-55 Figu	re 3-1 or	6 ft/s	$T_o =$	(0.00)	$7(n*L)^{0.8}$	<u>³)</u> ∗60	$v = \frac{k}{n}$ $k = 1$	$\frac{1}{1}R^{2/3}$	$S_o^{1/2}$ $ft^{1/3}/s$		P: Fo	r Paved: r Unpave	n = 0.0 d: n =	025, R 0.05, F	= 0.2	(Adapted	from Mar	inings)
						(P2	·-*5 ^{r*})						D: Fo	r Default	: v = 6	tps				

		Drainage Areas			(ft)	Ove	Overland/Sheet			nent) ow Co	ncentr	ated F	low -	Channe	lized l	Elow**		Ration	al Metho	d Q=CIA						
D (Diamage A	i cas	,	ath	Flo	Flow (Seelye)				1**			Chamine	iiZeu i	IOW		IDF Curv	CoSA	A14_PA4						
Ref. Structure / Point Description	Description	#	Area (Ac)	С	Total Flowpath (ft)	L _o (FT)	S _o (ft/ft)	T _o * (MIN)	L _{sc} (FT)	Condition***	Slope (ft/ft)	V _{sc} (FPS)	T _{SC} ** (MIN)	L _{CH} (FT)	V _{CH} (FPS)	T _{CH} ** (MIN)	T _{C-TOT}	Return Year	Intensit y (in/hr)	Q (cfs)						
	Existing Drain																19	5	4.63	41.6						
3.02	C	C1+C2	9.76	0.92	1,225	100	0.01	15	295	U	0.02	2.3	2.2	830	6.0	2.3	19	25	6.37	57.2						
																	19	100	7.93	71.2						
3.03	Calculation	alculation C3 0.58 0.	C3	C3	C3	C3	C3	C3	0.50	0.77	415	30	0.10	6					ne.	385	6.0	1.1	7	5 25	7.05 9.89	3.1
3.03	Point		0.77	415	30	0.10	0	_	-	-	-	-	363	0.0	1, 1	7	100	12.37	4.4 5.5							
	Fire one or one																20	5	4.51	60.7						
3.04	Calculation	C1+C2+C3+C4	15.64	0.86	1,610	100	0.01	15	295	U	0.02	2.3	2.2	1,215	6.0	3.4	20	25	6.21	83.5						
NAME OF TAXABLE PARTY.	Point				.,												20	100	7.71	103.7						
																	17	5	4.91	20.0						
3.05	Drain C4	C4	5.30	0.77	690	100	0.01	15	155	U	0.01	1.6	1.6	435	6.0	1.2	17	25	6.76	27.6						
																	17	100	8.42	34.4						
																	16	5	5.06	27.1						
3.06	Drain C5	C5	6.95	0.77	1,065	100	0.02	13	160	U	0.02	2.3	1.2	805	6.0	2.2	16	25	6.99	37.4						
	e Chart or TR-5																16	100 (Adapted	8.71	46.6						

U: For Unpaved: n = 0.05, R = 0.4 **U:** For Unpaved: n = 0.05, R = 0.4

					<u>Accui</u>	mlated Flow	/ Rates					
					Contrib	outing Flow				Reference	Sub-point	
Ref.	Desc.		Upstrean	n Watershed	Upstream S	urface Bypass	Upstream I	Pipe Flow	Т	С	В	P
Point		Return Year	#	Q _{WATERSHED} (cfs)	Surf Byp. Upstream Ref. Point	Q _{SURF-UP} (cfs)	Pipe Upstream Ref. Point	Q _{PIPE-UP} (cfs)	Q _{INLET-TOTAL} (cfs)	Q _{CAPTURE D} (cfs)	Q _{BYPASS} (cfs)	Q _{PIPE} (cfs)
	EXISTING	5		14.6		0.0		35.1	14.6	8.2	6.4	43.
1.01A	DRAIN A1 - 36"	25	1.01	20.3	N/A	0.0	1.00	48.3	20.3	9.8	10.5	58.
	RCP	100		25.4		0.0		60.2	25.4	11.0	14.4	71.
	EXISTING	5		10.5		0.0		43.3	10.5	10.5		53.
1.02	DRAIN A1 - 36"	25	1.03	14.5	N/A	0.0	1.01A	58.1	14.5	14.5	-	72.
	RCP	100		18.1		0.0		71.2	18.1	18.1	-1	89.
		5		15.7		15.8		0.0	31.5	15.8	15.8	15.
1.05A	DRAIN A3 & A4	25	1.05	21.7	1.04	21.8	N/A	0.0	43.5	21.8	21.8	21.
		100		27.1		27.1		0.0	54.2	27.1	27.1	27.
	EXISTING	5		15.7		15.8		0.0	31.5	31.5	-1	31.
1.05B	DRAIN A3 - 36"	25	1.05	21.7	1.04	21.8	N/A	0.0	43.5	43.5		43.
	RCP	100		27.1		27.1		0.0	54.2	54.2	-	54.
	EXISTING	5		0.0		0.0		85.3	0.0	7.		85.
1.05C	DRAIN A1 -	25	N/A	0.0	N/A	0.0	1.02, 1.05B	116.1	0.0	-	-	116.
	4'X4' SBC	100		0.0		0.0		143.5	0.0	-	-	143.
	EXISTING	5		7.3		6.4		0.0	13.7	10.8	2.9	10.
1.06A	DRAIN A5 - 24"	25	1.06	10.2	1.01A	10.5	N/A	0.0	20.7	13.8	6.9	13.
	RCP	100		12.7		14.4		0.0	27.1	16.1	11.0	16.
	EXISTING	5		6.3	N/A	0.0	N/A	0.0	6.3	6.2	0.1	6.:
1.07A	DRIAN A6 - 24"	25	1.07	8.7		0.0		0.0	8.7	8.0	0.7	8.
	RCP	100		10.9		0.0		0.0	10.9	9.3	1.6	9.
	EXISTING	5		0.0	N/A	0.0	1.05C, 1.06A, 1.07A	102.3	0.0	0.0	Η.	102.
1.07B	DRAIN A1 -	25	N/A	0.0		0.0		137.9	0.0	0.0	-	137.
	4'X4' SBC	100		0.0		0.0		168.9	0.0	0.0	-	168.
	EXISTING	5		8.9		0.1		17.5	9.0	9.0	-	26.
1.09A	DRIAN A7 - 36"	25	1.09	12.3	1.07A	0.7	1.08	24.1	13.0	13.0	-	37.
	RCP	100		15.3		1.6		30.1	16.9	16.9	-	47.
	EXISTING	5		0.0	120000	0.0	1.07B,	128.8	0.0	0.0	-	128.
1.09B	DRAIN A1 -	25	N/A	0.0	N/A	0.0	1.07B, 1.09A	175.0	0.0	0.0	-	175.
	4'X6' SBC	100		0.0		0.0		215.9	0.0	0.0	-	215.
	CALCULATION	5		6.2	_	2.9		0.0	9.1	9.1	-	9.
1.10A	POINT	25	1.10	8.6	1.06A	6.9	N/A	0.0	15.5	15.5	-	15.
	10111	100		10.7		11.0		0.0	21.7	21.7	-	21.
30 1 2 2 2	EXISTING	5		0.0		0.0	1.09B,	137.9	0.0	0.0	-	137.
1.10B	DRAIN A1 -	25	N/A	0.0	N/A	0.0	1.10A	190.5	0.0	0.0	-	190.
	4'X6' SBC	100		0.0		0.0		237.6	0.0	0.0	-	237.
	EXISTING	5		60.7		0.0		137.9	60.7	60.7	₩	198.
1.10C	DRAIN A1	25	3.04	83.5	N/A	0.0	1.10B	190.5	83.5	83.5		274
	CHANNEL	100		103.7		0.0		237.6	103.7	103.7	н:	341.
	DRAIN C1 - 36"	5		9.4		0.0		33.0	9.4	4.7	4.7	37.
3.01A		25	3.01	13.0	N/A	0.0	3.00	45.4	13.0	6.5	6.5	51.
	RCP	100		16.2		0.0		56.5	16.2	8.1	8.1	64



MASTER DRAINAGE LEGEND

PROJECT LIMITS EXISTING CONTOUR 100 YR UD FLOODPLAIN 100 YR FEMA FLOODPLAIN RUNOFF FLOW PATH DRAINAGE AREA BOUNDARY FHA LOT GRADING TYPE

PROPOSED DIRECTION OF FLOW DRAINAGE CALCULATION POINT

DRAINAGE AREA

A,B,C

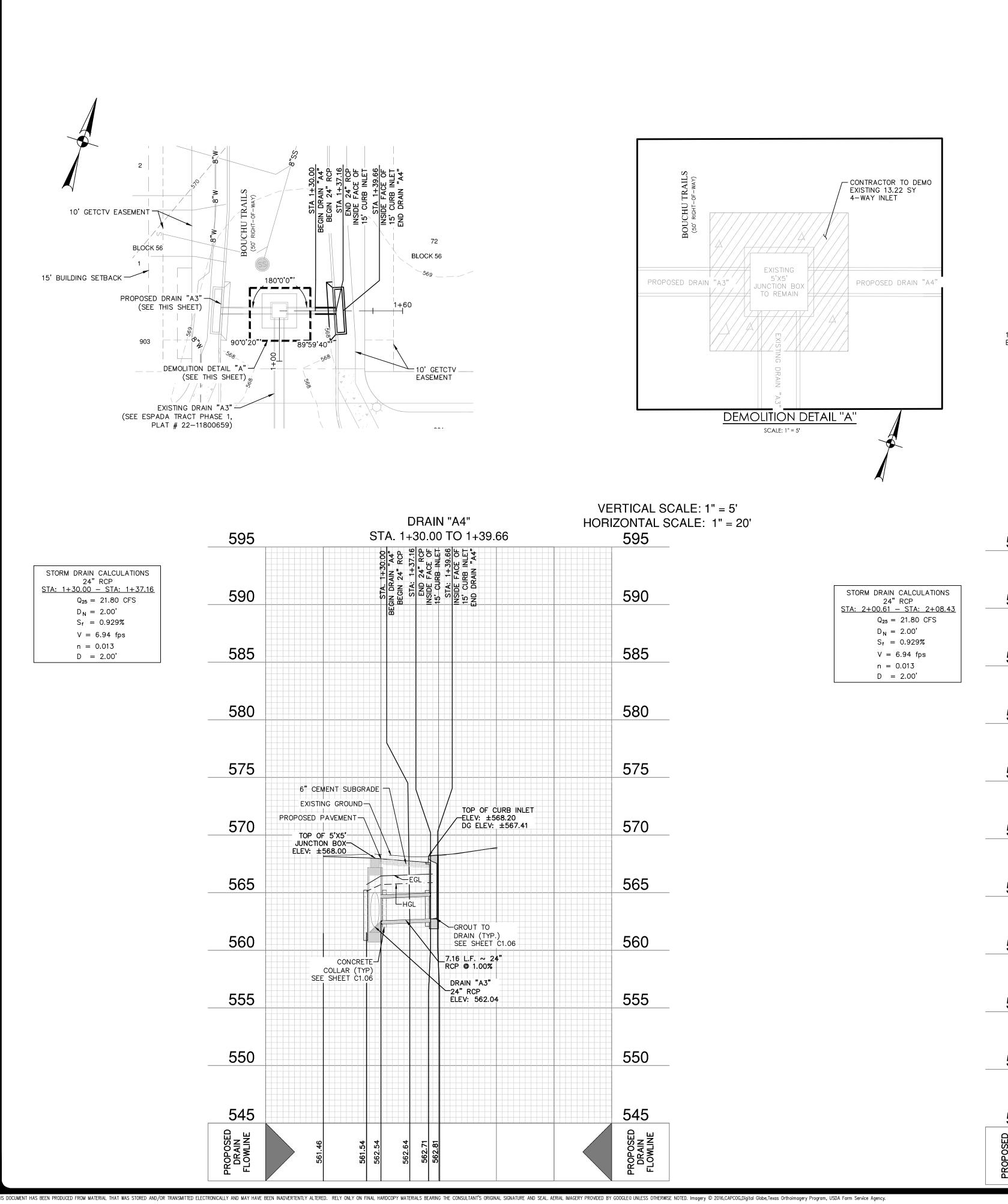
11 <u>AREA</u> 0.01 AC

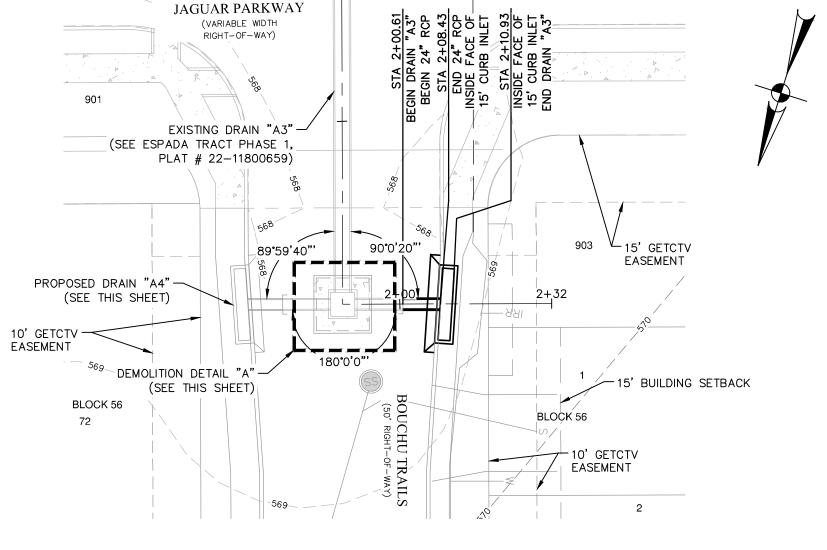
EUGENE H. DAWSON III

ESPADA TRACT UNIT SAN ANTONIO, TEXAS MASTER DRAINAGE PLAN (ULTIMATE DEVELOPMENT)

PLAT NO. 23-11800229 JOB NO. 12632-12 DESIGNER______JG

CHECKED DW DRAWN TC





VERTICAL SCALE: 1" = 5' DRAIN "A3" HORIZONTAL SCALE: 1" = 20' STA. 2+00.61 TO 2+10.93 590 585 585 580 580 575 575 6" CEMENT SUBGRADE -EXISTING GROUND PROPOSED PAVEMENT TOP OF CURB INLET 570 ←ELEV: ±568.20 TOP OF 5'X5'_ -DG ELEV: \pm 567.41 JUNCTION BOX ELEV: ±568.00 565 565 GROUT TO 560 560 DRAIN (TYP.) - SEE SHÈET Ć1.06 RCP @ 1.00% DRAIN "A3" CONCRETE-COLLAR (TYP) 24" RCP 555 555 SEE SHEET Č1.06 ELEV: 562.04 550 550 545 545

SCALE: 1"= 20'

DRAINAGE LEGEND

PROJECT LIMITS 100 YR FLOODPLAIN EXISTING CONTOUR PROPOSED CONTOUR PROPOSED WATER PROPOSED SEWER PROPOSED STORM DRAIN

EXISTING STORM DRAIN

FLOW ARROW

EUGENE H. DAWSON III 10/23/23

HYDRAULIC CALCULATIONS-DRAIN "A3" CURB INLETS TOTAL Q25 FOR THE CURB INLETS IS EQUAL TO 43.60 CFS. TWO INLETS WILL CAPTURE THE TOTAL FLOW. AS A RESULT, TOTAL FLOW HAS BEEN DIVIDED IN HALF TO SIZE

EACH INLET. ANALYSIS BELOW SHOWS CALCULATIONS FOR SIZING ONE OF THE TWO $Q_{25} = 43.60 \text{ CFS } (21.80 \text{ CFS EACH INLET})$ $Q_{25} = CA\sqrt{2gh}$ (ORIFICE FLOW EQN.)

A = L(0.52), h = 0.52, g = 32.2, c = 0.7021.80 CFS

 $L = \frac{2.032}{(0.7) (0.52)\sqrt{2 (32.2) (0.52)}}$

L = 10.35 FT USE 1 \sim 15 FT CURB INLET EACH SIDE CHECK WITH WEIR FORMULA

h = $\left(\frac{Q}{(CL)}\right)^{2/3} = \left(\frac{21.80}{(3.087)(15)}\right)^{2/3} = 0.61 \text{ FT.}$

h = 0.61 < 0.79 OK

HYDRAULIC CALCULATIONS-DRAIN "A4" CURB INLET TOTAL Q25 FOR THE CURB INLETS IS EQUAL TO 43.60 CFS. TWO INLETS WILL CAPTURE THE TOTAL FLOW. AS A RESULT, TOTAL FLOW HAS BEEN DIVIDED IN HALF TO SIZE EACH INLET. ANALYSIS BELOW SHOWS CALCULATIONS FOR SIZING ONE OF THE TWO

 $Q_{25} = 43.60 \text{ CFS } (21.80 \text{ CFS EACH INLET})$ $Q_{25} = CA\sqrt{2gh}$ (ORIFICE FLOW EQN.)

A = L(0.52), h = 0.52, g = 32.2, c = 0.70

21.80 CFS $L = \frac{2.132}{(0.7) (0.52)\sqrt{2 (32.2) (0.52)}}$

L = 10.35 FT USE 1 ~ 15 FT CURB INLET EACH SIDE CHECK WITH WEIR FORMULA

h = $\left(\frac{Q}{(CL)}\right)^{2/3}$ = $\left(\frac{21.80}{(3.087)(15)}\right)^{2/3}$ = 0.61 FT.

h = 0.61 < 0.79 OK

DRAINAGE & GRADING NOTES:

1. A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING I BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.

2. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.

3. ALL CONCRETE FOR TXDOT DRAINAGE STRUCTURES SHALL MEET TXDOT SPECIFICATIONS. ALL OTHER CONCRETE SHALL BE CLASS "A" 3000 PS CYLINDER STRENGTH IN 28 DAYS.

4. REFERENCE DRAINAGE DETAILS FOR PIPE TRENCH DETAILS, BO 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.

6. EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. 85% OF THE CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.

7. CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH OF "D" AS SHOWN IN TH

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYER 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 DOCUMENT THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFÉTY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OF CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE 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 TI ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO TH START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL B THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL E AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

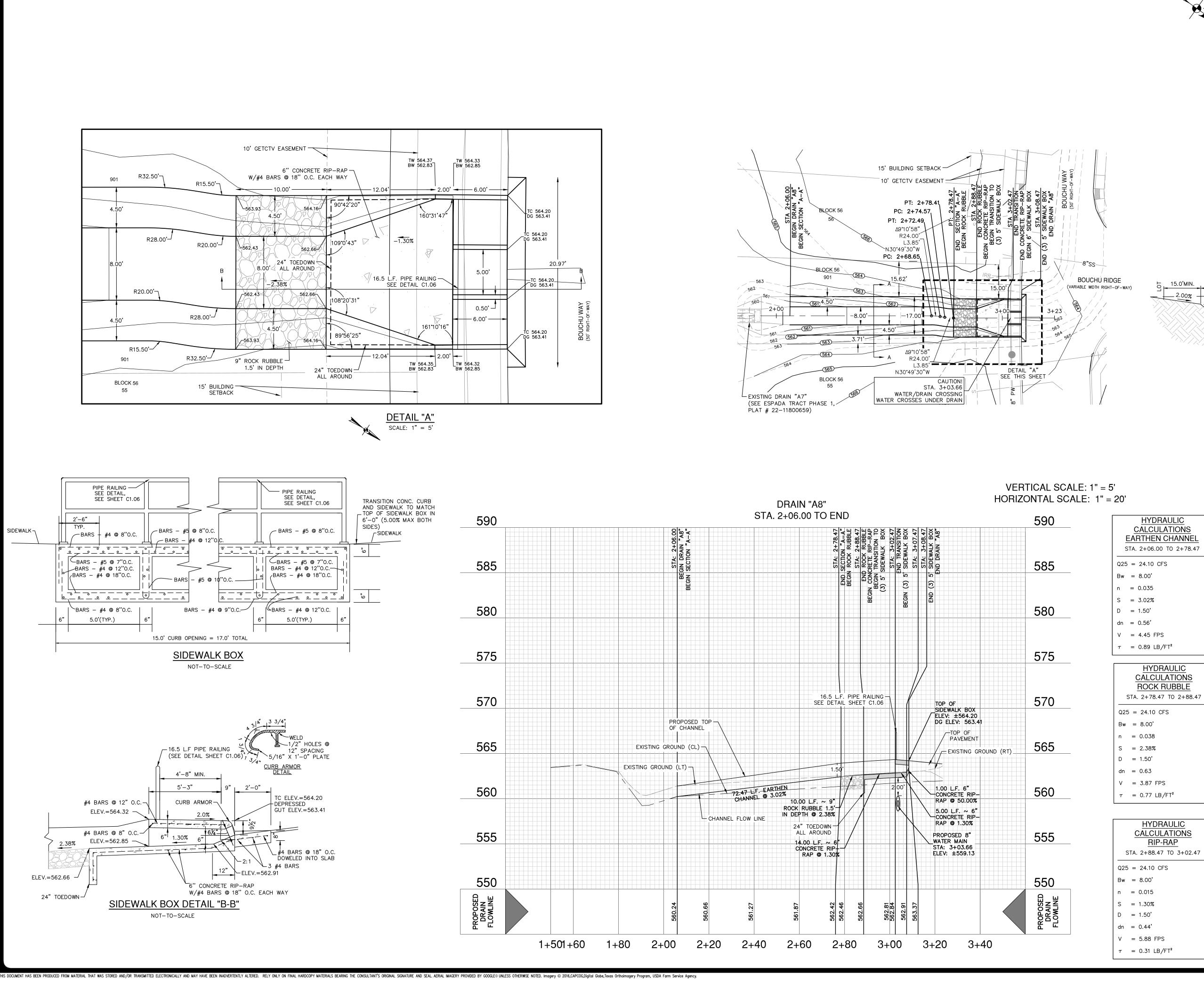
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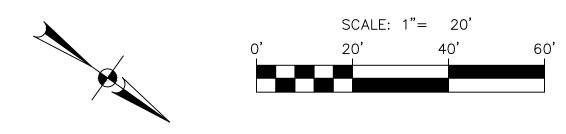
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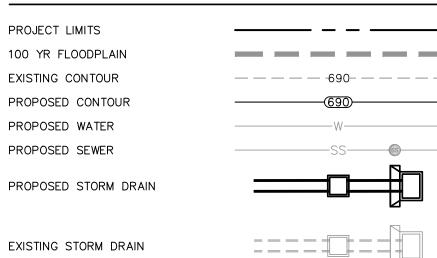
PLAT NO. 23-11800229 JOB NO. 12632-12

DESIGNER HECKED DW DRAWN TO C1.01

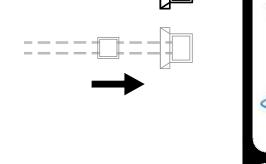




DRAINAGE LEGEND

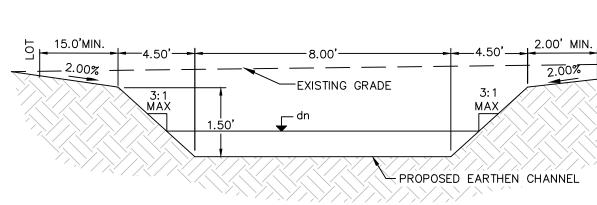


FLOW ARROW



EUGENE H. DAWSON III

12/2/23



SECTION "A-A" NOT-TO-SCALE STA. 2+06.00 - 2+78.47

HYDRAULIC CALCULATIONS-DRAIN "A8" SIDEWALK BOX $Q_{25} = 24.1 \text{ CFS}$

 $Q_{25} = CA\sqrt{2gh}$ (ORIFICE FLOW EQN.) A = L(0.52), h = 0.52, g = 32.2, c = 0.70

 $L = \frac{24.1 \text{ CFS}}{(0.70) (0.52)\sqrt{2 (32.2) (0.52)}}$

L = 11.44 FT USE 3 \sim 5 FT SIDEWALK BOX

CHECK WITH WEIR FORMULA

h = $\left(\frac{Q}{(CL)}\right)^{2/3} = \left(\frac{24.1}{(3.087)(15)}\right)^{2/3} = 0.65 \text{ FT.}$

h = 0.65 < 0.79 OK

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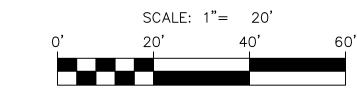
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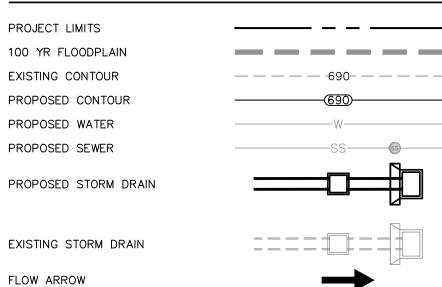
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PLAT NO. 23-11800229 JOB NO. 12632-12 DESIGNER

HECKED DW DRAWN TO C1.02



DRAINAGE LEGEND



EUGENE H. DAWSON III 12/2/23

80

PROPOSED ROCK RUBBLE CHANNEL

SECTION "A-A"

NOT-TO-SCALE
STA. 1+50.00 - 1+60.00

HYDRAULIC CALCULATIONS-DRAIN "B5" SIDEWALK BOX $Q_{25} = 5.90 \text{ CFS}$

 $Q_{25} = CA\sqrt{2gh}$ (ORIFICE FLOW EQN.) A = L(0.52), h = 0.52, g = 32.2, c = 0.70 $L = \frac{3.35 \text{ G/S}}{(0.70) (0.52)\sqrt{2 (32.2) (0.52)}}$ L = 2.80 FT USE 1 ~ 5 FT SIDEWALK BOX

CHECK WITH WEIR FORMULA h = $\left(\frac{Q}{(CL)}\right)^{2/3} = \left(\frac{5.90}{(3.087)(5)}\right)^{2/3} = 0.53 \text{ FT.}$

h = 0.53 < 0.79 OK

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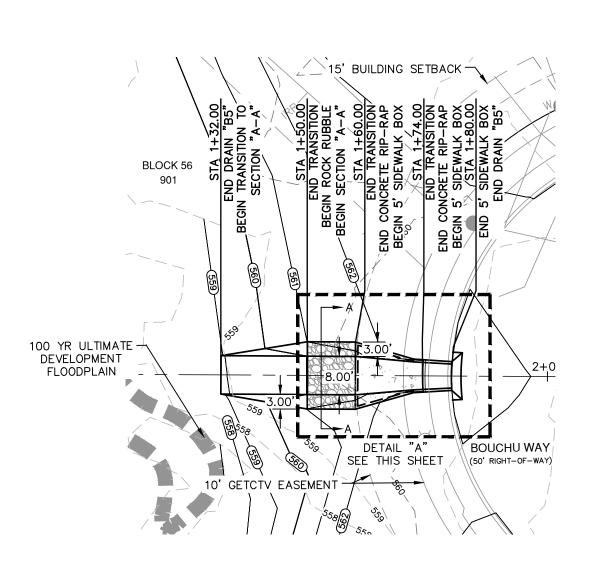
7. CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH OF "D" AS SHOWN IN TH

TRENCH EXCAVATION SAFETY PROTECTION:

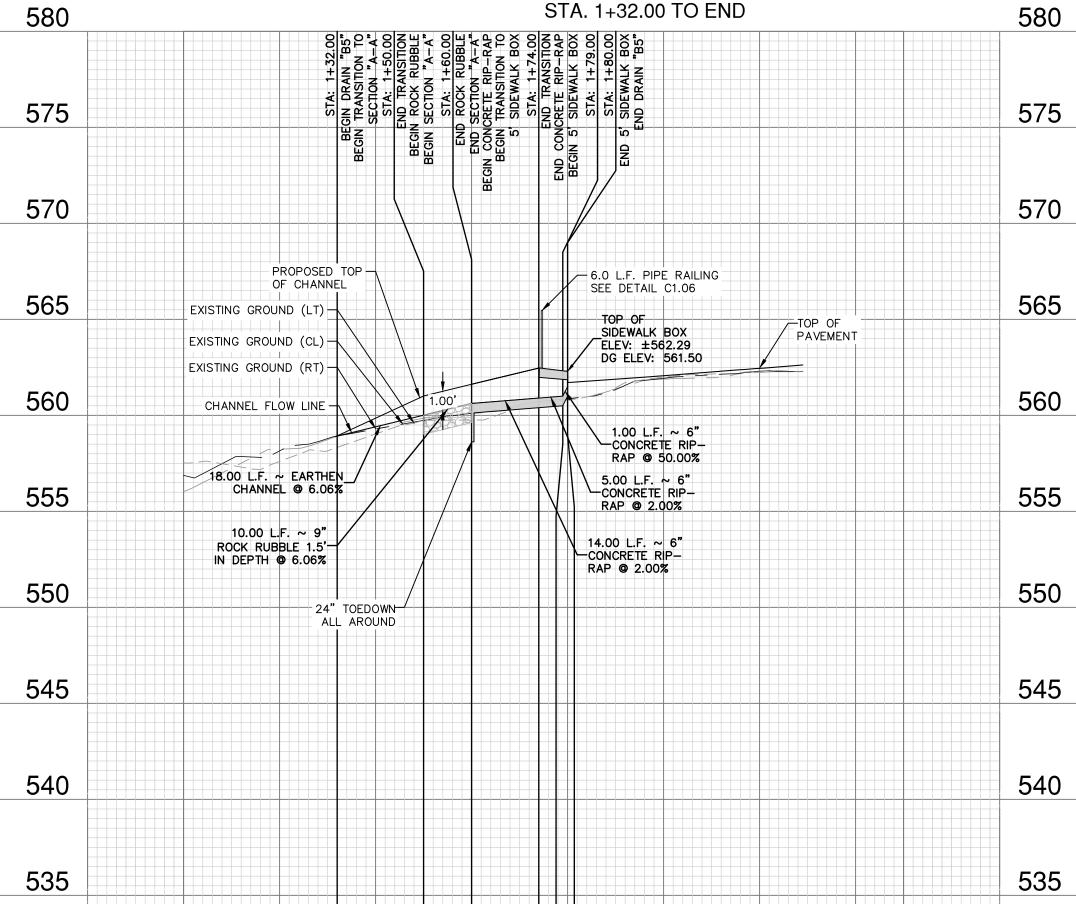
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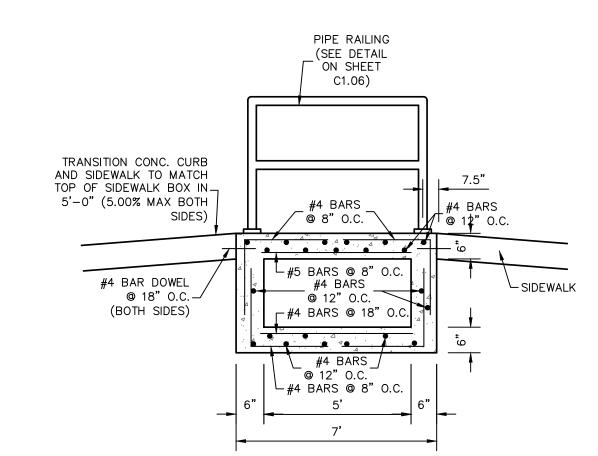
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DRAIN "B5"





BLOCK 56

10' GETCTV EASEMENT -

6.0 L.F. PIPE RAILING

24" TOEDOWN

DETAIL "A"

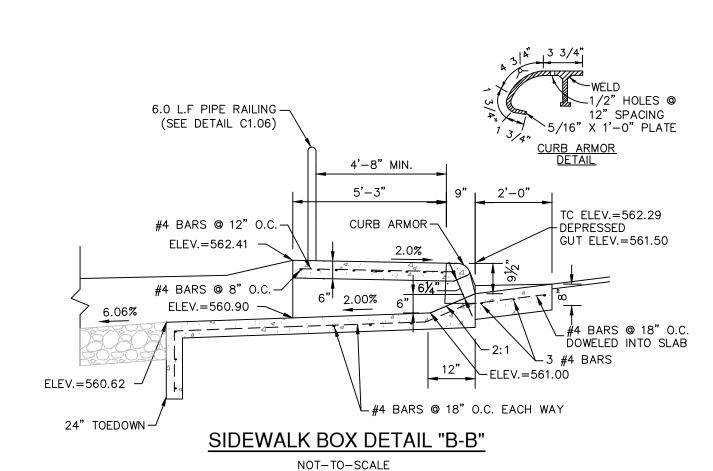
SCALE 1"=5'

SEE DETAIL C1.06 -

B 9" ROCK RUBBLE

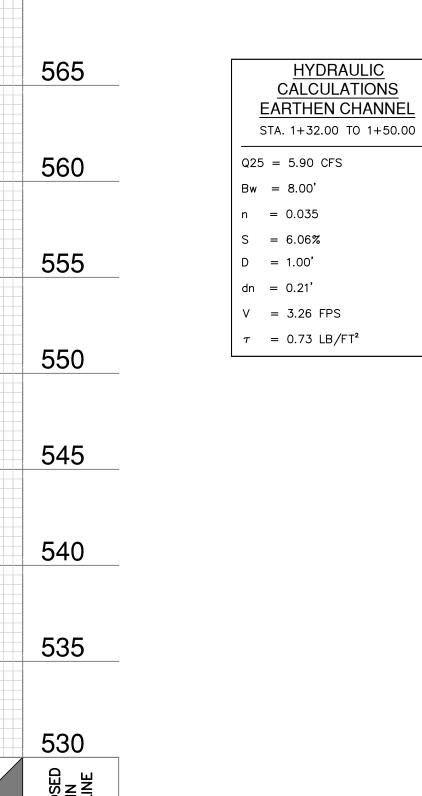
– 1.5' IN DEPTH

6" CONCRETE RIP-RAP W/#4 BARS @ 18" O.C.E.W.



SIDEWALK SINGLE BOX DETAIL

NOT-TO-SCALE



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

$\tau = 0.77 \text{ LB/FT}^2$ **HYDRAULIC CALCULATIONS** RIP-RAP

HYDRAULIC

CALCULATIONS

ROCK RUBBLE

Q25 = 5.90 CFS

Bw = 8.00'

n = 0.038

S = 6.06%

D = 1.00'

dn = 0.22

V = 3.10 FPS

STA. 1+50.00 TO 1+60.00

Q25 = 5.90 CFSBw = 8.00'n = 0.015

S = 2.00%

 $\tau = 0.77 \text{ LB/FT}^2$

STA. 1+60.00 TO 1+74.00

D = 1.00'dn = 0.17'

V = 4.08 FPS

PLAT NO. 23-11800229 JOB NO. 12632-12

DESIGNER

HECKED DW DRAWN TO

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

530

1 + 40

1+60

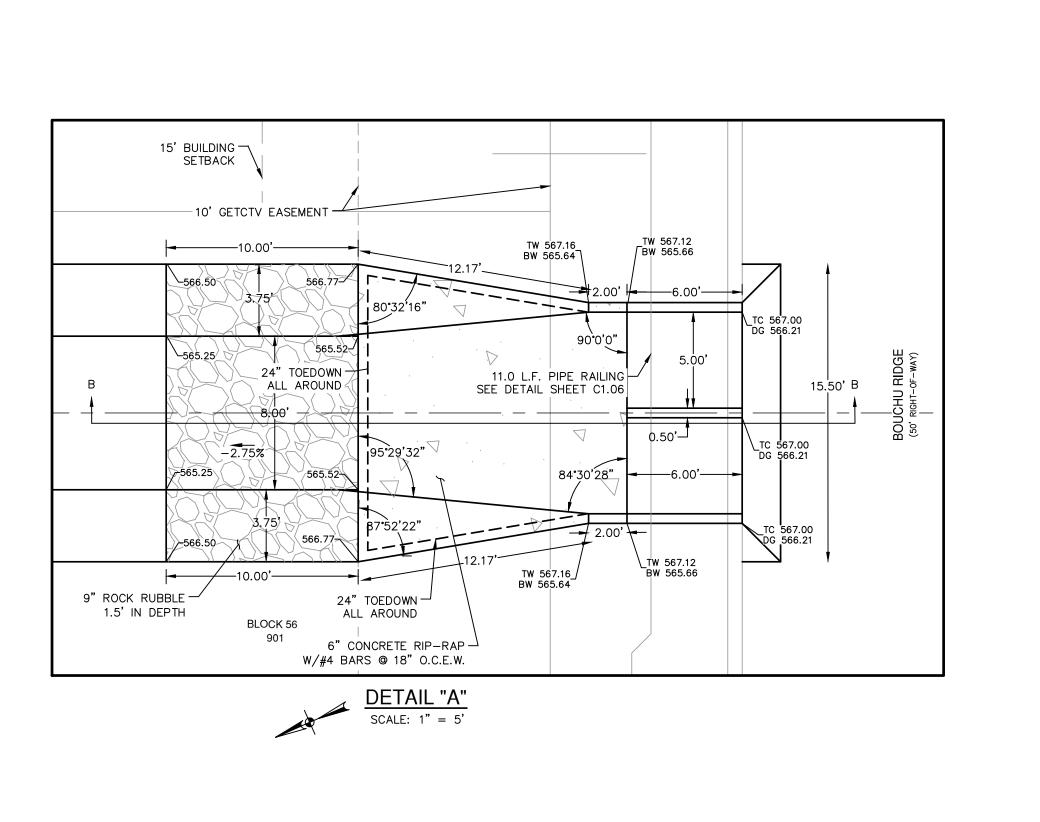
1+80

2+00

2+20

2+402+50

1+20



9 12" O.C.

−#5 BARS @ 10" O.C

@ 12" O.C.

- SIDEWALK

___1/2" HOLES @

5/16" X 1'-0" PLATE

TC ELEV.=567.00

GUT ELEV.=566.21

_#4 BARS @ 18" O.C.

DOWELED INTO SLAB

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-DEPRESSED

√_3 #4 BARS

-ELEV.=565.71

12" SPACING

PIPE RAILING

@ 8" O.C.

└#5 BARS @ 8" O.C.

_#4 BARS @ 18" O.C.

-#4 BARS @ 8" O.C.

SIDEWALK DOUBLE

BOX DETAIL

— 11.0 L.F PIPE RAILING

4'-8" MIN.

CURB ARMOR-

2.0%

6" 1.00% 6"

6" CONCRETE RIP-RAP

W/#4 BARS @ 18" O.C. EACH WAY

5'-3**"**

SIDEWALK BOX DETAIL "B-B"

NOT-TO-SCALE

NOT-TO-SCALE

(SEE DETAIL SHEET C1.06) 3/4"

@ 12" O.C.

__ #4 BARS

TRANSITION CONC. CURB AND SIDEWALK TO MATCH TOP OF SIDEWALK BOX IN-

5'-0" (5.00% MAX BOTH

#4 BAR DOWEL

@ 18" O.C.—

#4 BARS @ 12" O.C.-

ELEV.=567.12 -

#4 BARS @ 8" O.C.-

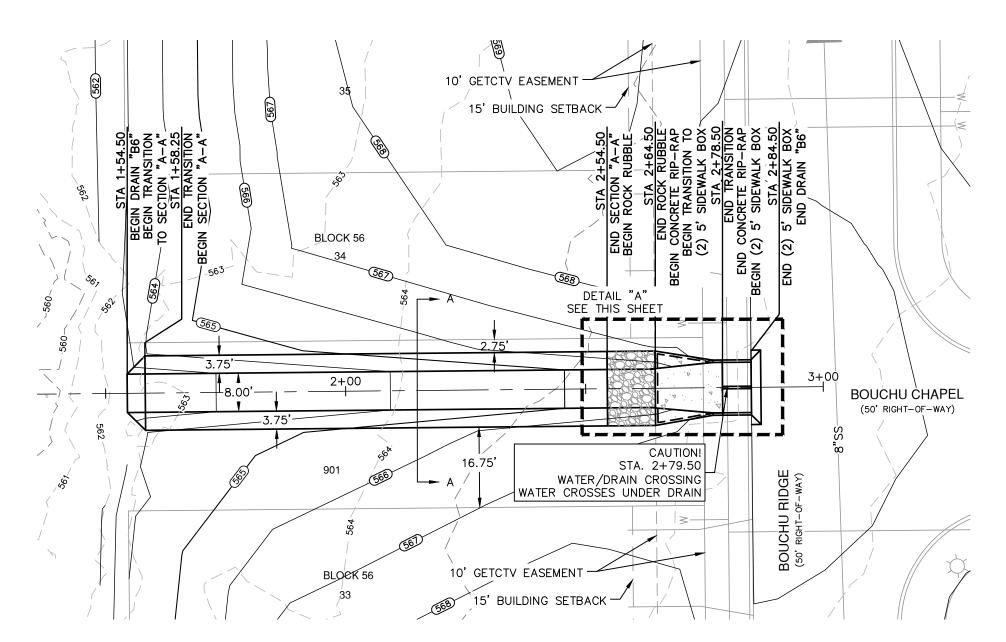
ELEV.=565.66 —

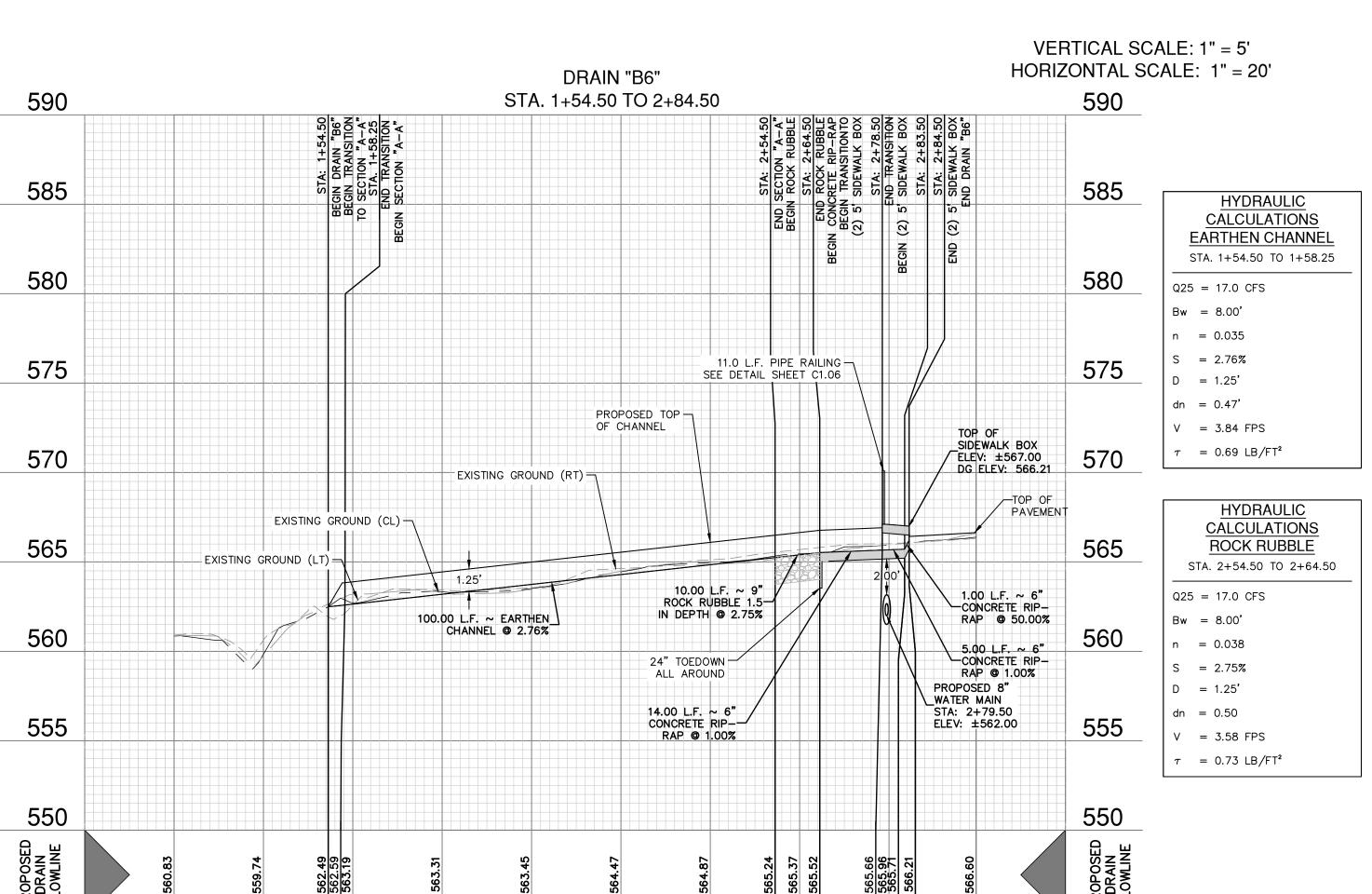
ELEV.=565.52

24" TOEDOWN-

(BOTH SIDES)

— (SEE DETAIL —— ON SHEET C1.06)





2+20

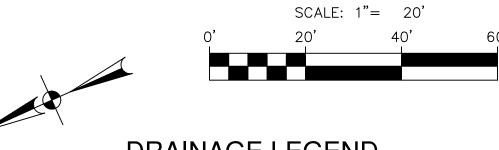
2+40

2+60

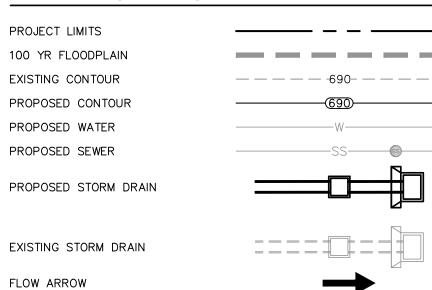
1+80

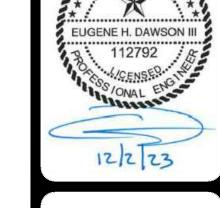
2+00

2+80



DRAINAGE LEGEND





0

PROPOSED EARTHEN CHANNEL SECTION "A-A"

NOT-TO-SCALE STA. 1+58.25 - 2+54.50

$\frac{\text{HYDRAULIC CALCULATIONS-DRAIN "B6" SIDEWALK BOX}}{Q_{25} = 17.0 \text{ CFS}}$

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

A = L(0.52), h = 0.52, g = 32.2, c = 0.70

17.0 CFS $L = \frac{17.0 \text{ s. s}}{(0.70) (0.52)\sqrt{2 (32.2) (0.52)}}$

L = 8.07 FT USE 2 \sim 5 FT SIDEWALK BOX

CHECK WITH WEIR FORMULA

HYDRAULIC

CALCULATIONS

EARTHEN CHANNEL

STA. 1+58.25 TO 2+54.50

Q25 = 17.0 CFS

Bw = 8.00'

n = 0.035

S = 2.76%

D = 1.25'

dn = 0.47'

V = 3.84 FPS

Q25 = 17.0 CFS

Bw = 8.00'

n = 0.015

S = 1.00%

D = 1.25'

dn = 0.39'

V = 4.75 FPS

 $\tau = 0.21 \text{ LB/FT}^2$

 $\tau = 0.69 \text{ LB/FT}^2$

HYDRAULIC

CALCULATIONS

RIP-RAP

STA. 2+64.50 TO 2+78.50

h = $\left(\frac{Q}{(CL)}\right)^{2/3} = \left(\frac{17.0}{(3.087)(10)}\right)^{2/3} = 0.67 \text{ FT.}$

h = 0.67 < 0.79 OK

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7. CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH OF "D" AS SHOWN IN TH

TRENCH EXCAVATION SAFETY PROTECTION:

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

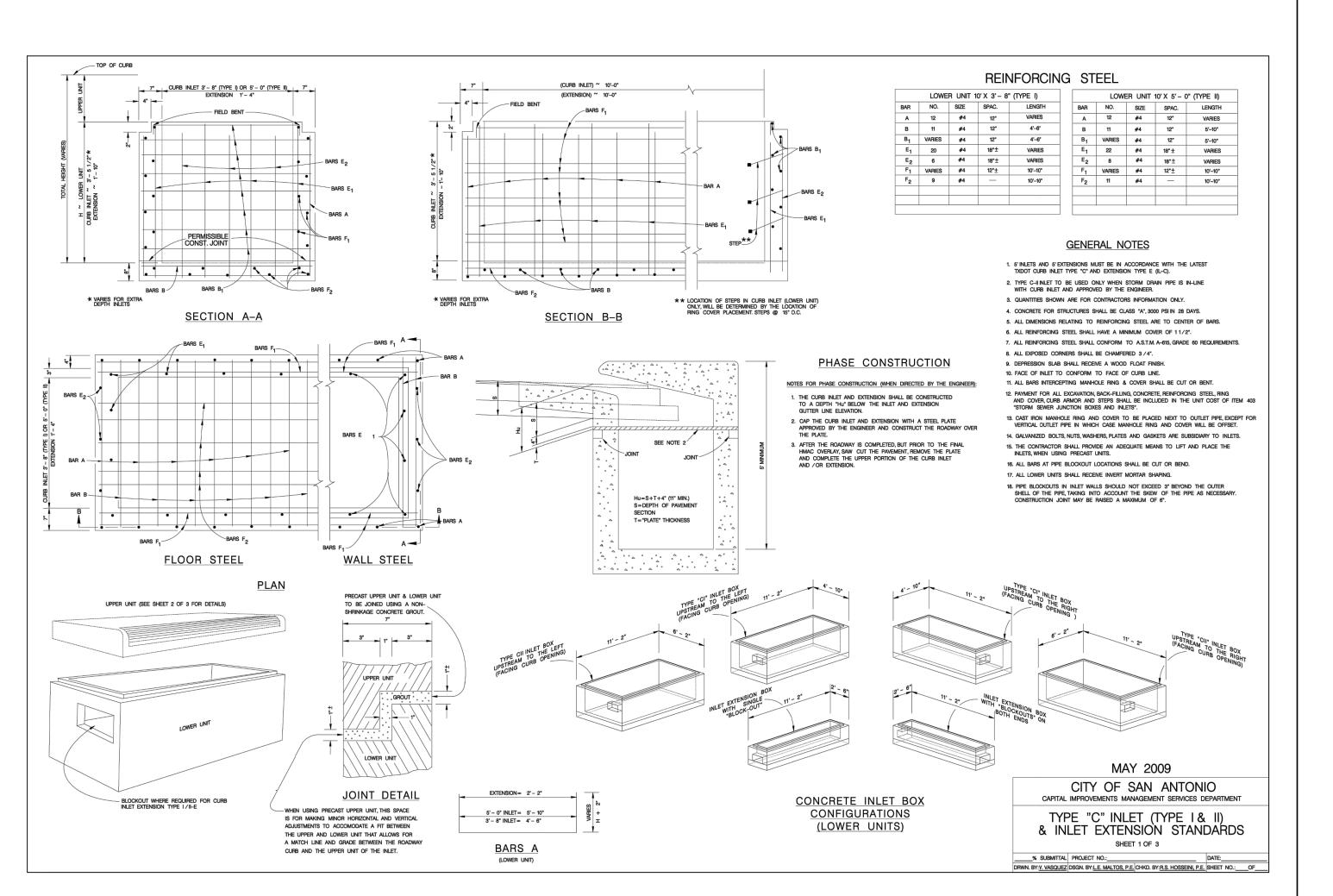
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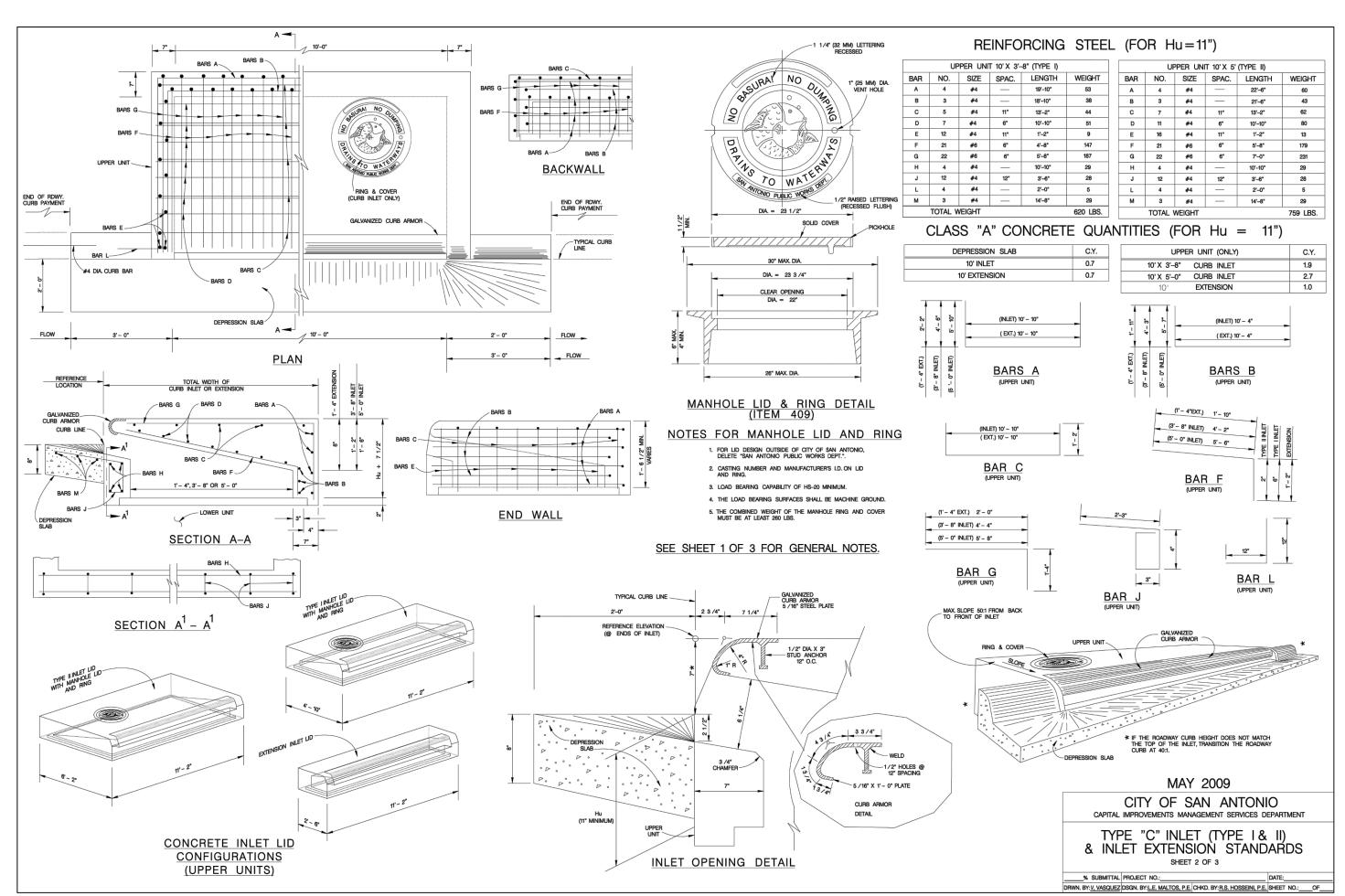
CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO TH 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 B THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL B AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

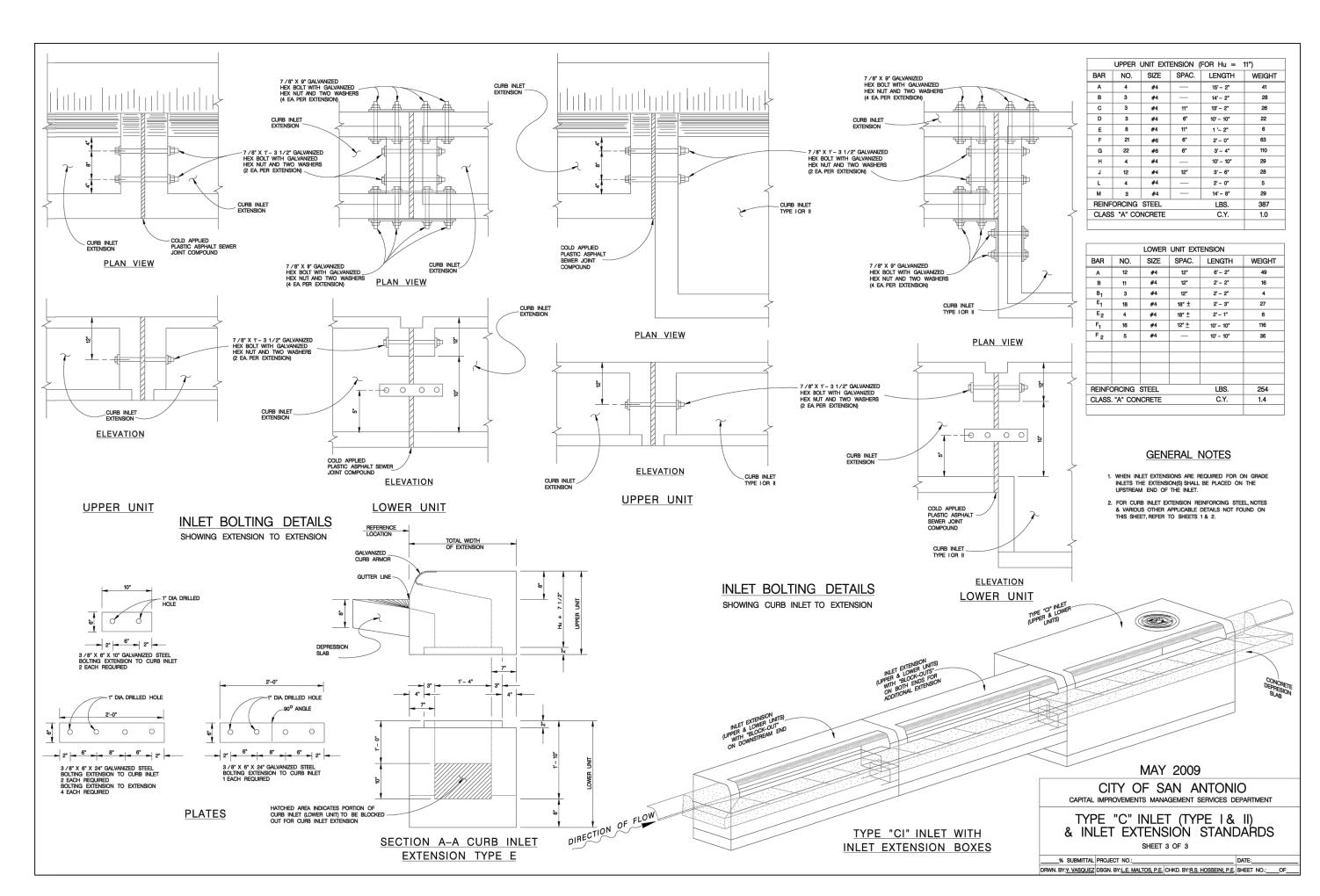
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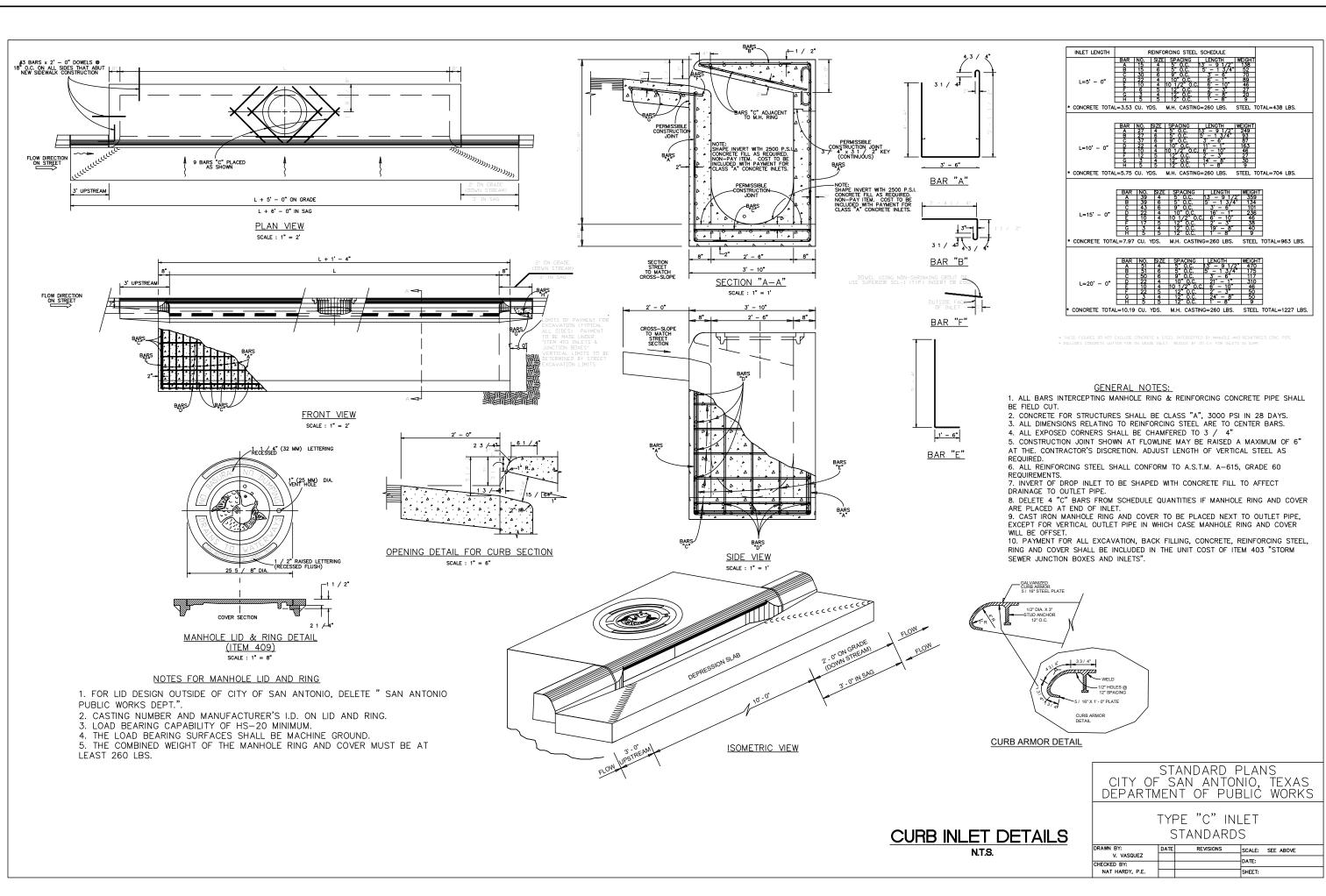
PLAT NO. 23-11800229 JOB NO. 12632-12

HECKED DW DRAWN TO









EUGENE H. DAWSON II

112792

6/23/23

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PLAT NO. 23-11800229 12632-12 ESIGNER CHECKED <u>DW</u> DRAWN T C1.05

PLAT NO. 23-11800229

JOB NO. 12632-12 JULY 2023 DESIGNER CHECKED DW DRAWN TC

 CONCRETE FOR STRUCTURE SHALL BE CLASS "A," 3,000 P.S.I. AT 28 DAYS. CONCRETE COLLAR DETAIL EXTERIOR WALL OF CONCRETE STRUCTURE (NOT TO SCALE) 2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4". 3. REINFORCING STEEL SHALL BE NEW BILLET STEEL, INTERMEDIATE GRADE, ASTM. A—15. THE DEFORMATION SHALL CONFORM TO ASTM. A—305. 4. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS. R.C.P., C.M.P., S.R.C.M.P., OR H.D.C.P ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD—CUT. 6. WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 33 DIAMETERS SHALL BE USED. PROTRUDING PIPE 7. INVERT OF JUNCTION BOX TO BE SHAPED WITH CONCRETE FILL (3,000 P.S.I. MIN.) TO EFFECT DRAINAGE TO OUTLET PIPE. COST SUBSIDIARY TO CLASS "A" CONCRETE (JUNCTION BOXES). IS FOR DROP STRUCTURE ONLY EXTERIOR WALL OF CONCRETE STRUCTURE 8 ~ #4 BARS SHAPE INVERT SLOPE WITH CONCRETE FILL R.C.P., C.M.P., S.R.C.M.P., OR H.D.C.P FLOW_ JANUARY 2006 SHAPE INVERT SLOPE WITH CONCRETE FILL STANDARD PLANS CITY OF SAN ANTONIO, TEXAS DEVELOPMENT SERVICES CONCRETE COLLAR DETAIL PIPE FLUSH WITH INVERT

8'-0" MAX.

- 90° WELDING ELBOWS

– 2 1/2" DIA. – STANDARD BLACK PIPE

1. FOR CONSTRUCTION WITHIN THE CITY OF SAN ANTONIO ETJ AND/OR BEXAR COUNTY, PIPE SHALL BE STANDARD BLACK PIPE PAINTED WITH 1 COAT OF READ PRIMER AND 2 COATS OF ALUMINUM PAINT

PIPE RAILING DETAIL

NOT-TO-SCALE

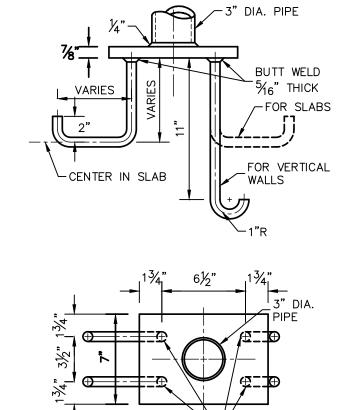
SEE PIPE ANCHORAGE DETAIL

8'-0" MAX.

> ALL JOINTS WELDED & GROUNDED SMOOTH

- 2 1/2" DIA. STANDARD BLACK PIPE

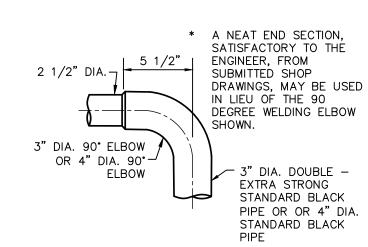
SIDEWALK OR HEADWALL -



PIPE ANCHORAGE DETAIL

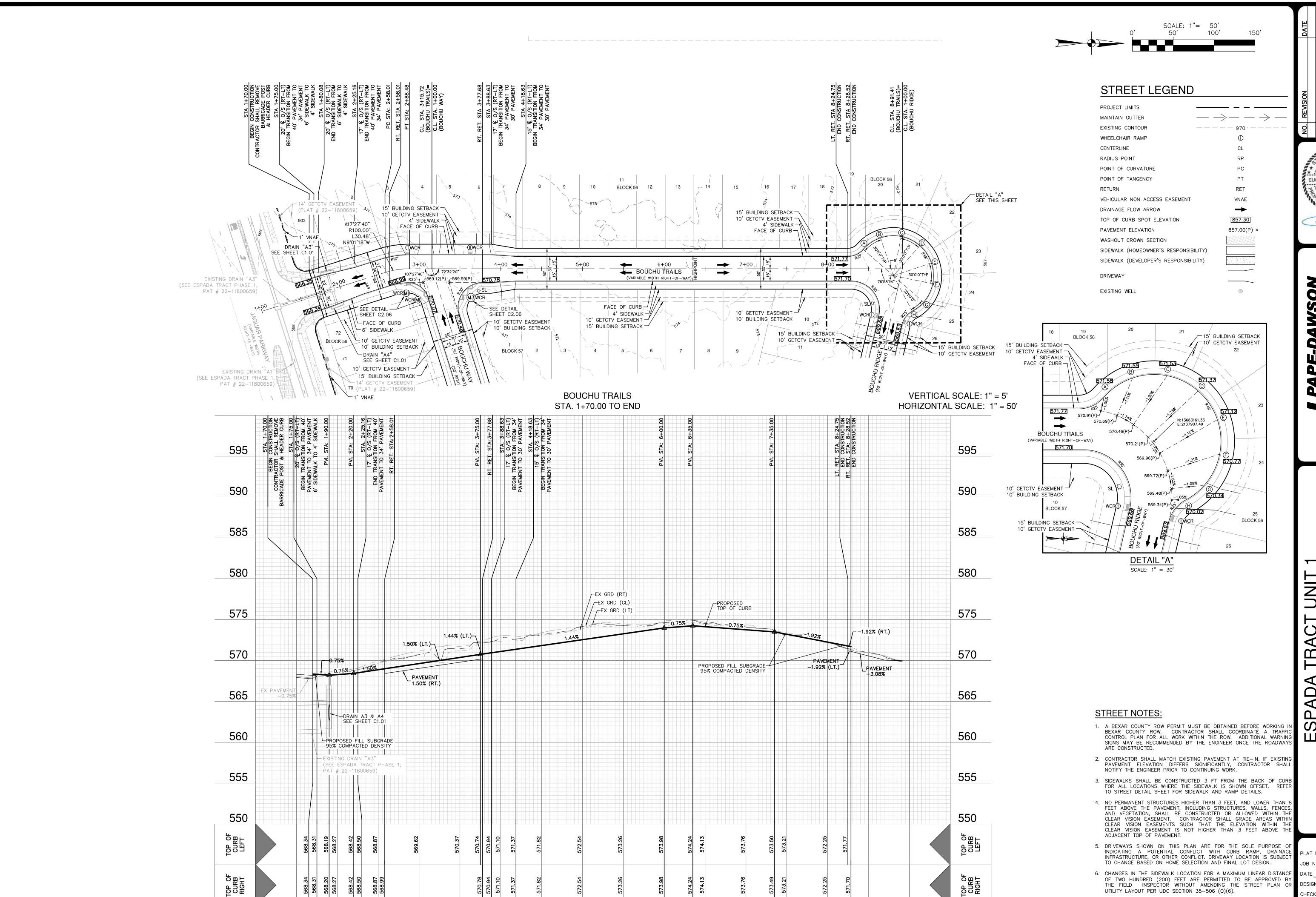
NOT-TO-SCALE

BARS BUTT WELDED TO BOTTOM OF PLATE



90° WELDING ELBOWS

DETAIL NOT-TO-SCALE



2+00

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3+50

4+00

4+50

5+00

5+50

6+00

6+50

7+00

7+50

8+00

EUGENE H. DAWSON III

& PR(END) ⁻RAILS

PLAT NO. 23-11800229

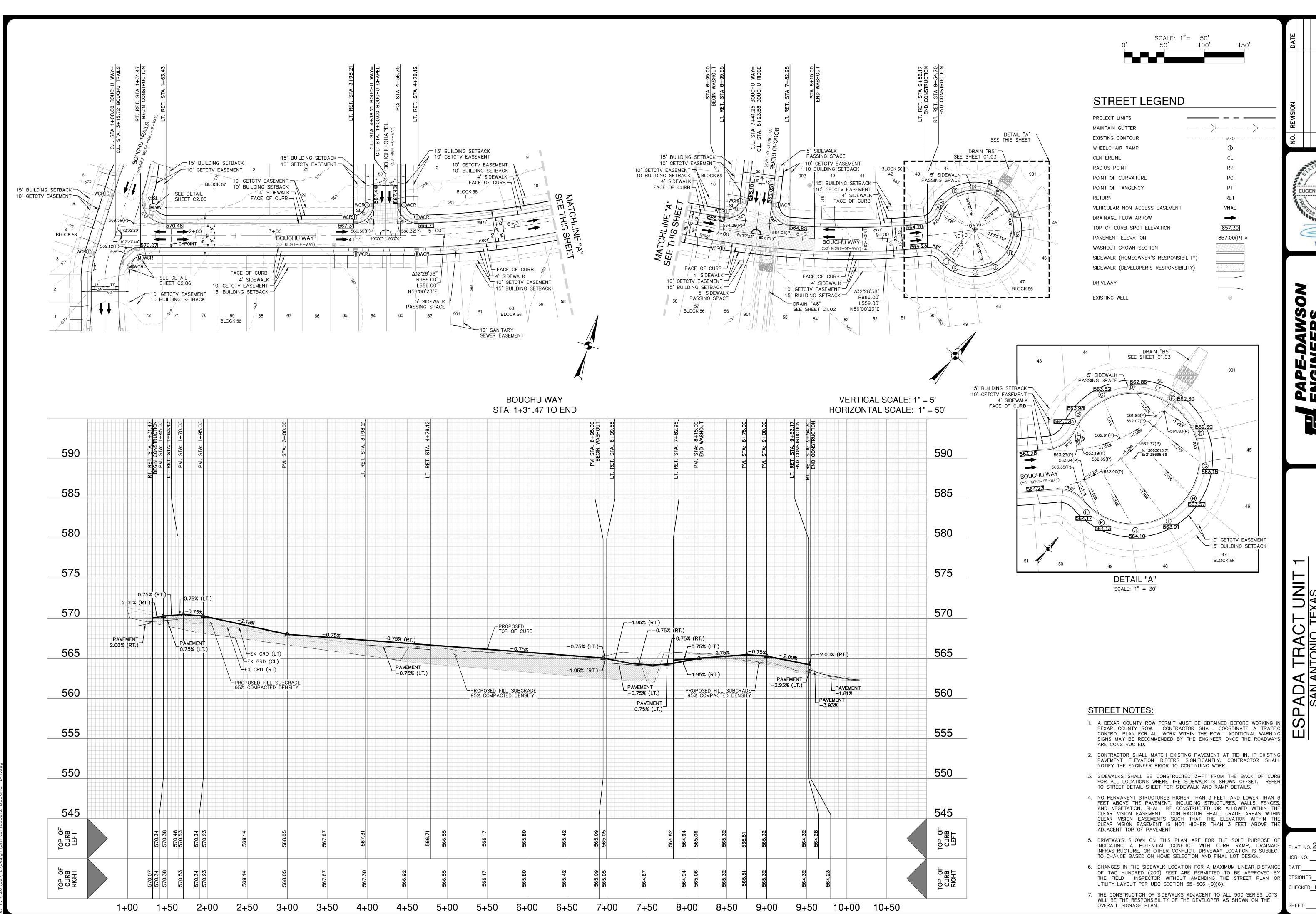
OB NO. 12632-12 JULY 2023 DESIGNER

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7. THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS

WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE

OVERALL SIGNAGE PLAN.



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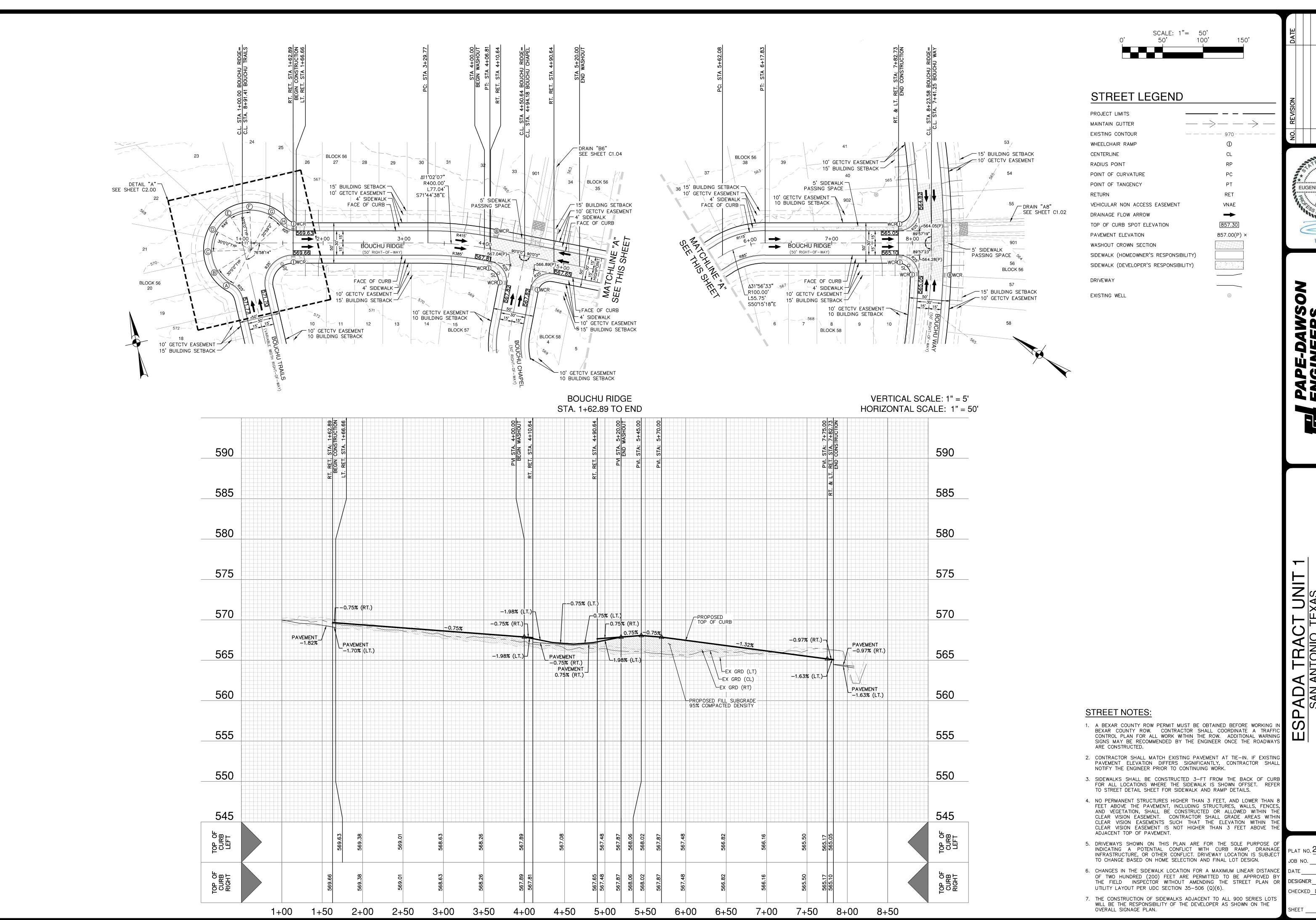
EUGENE H. DAWSON III

10/23/23

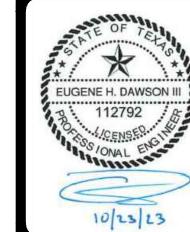
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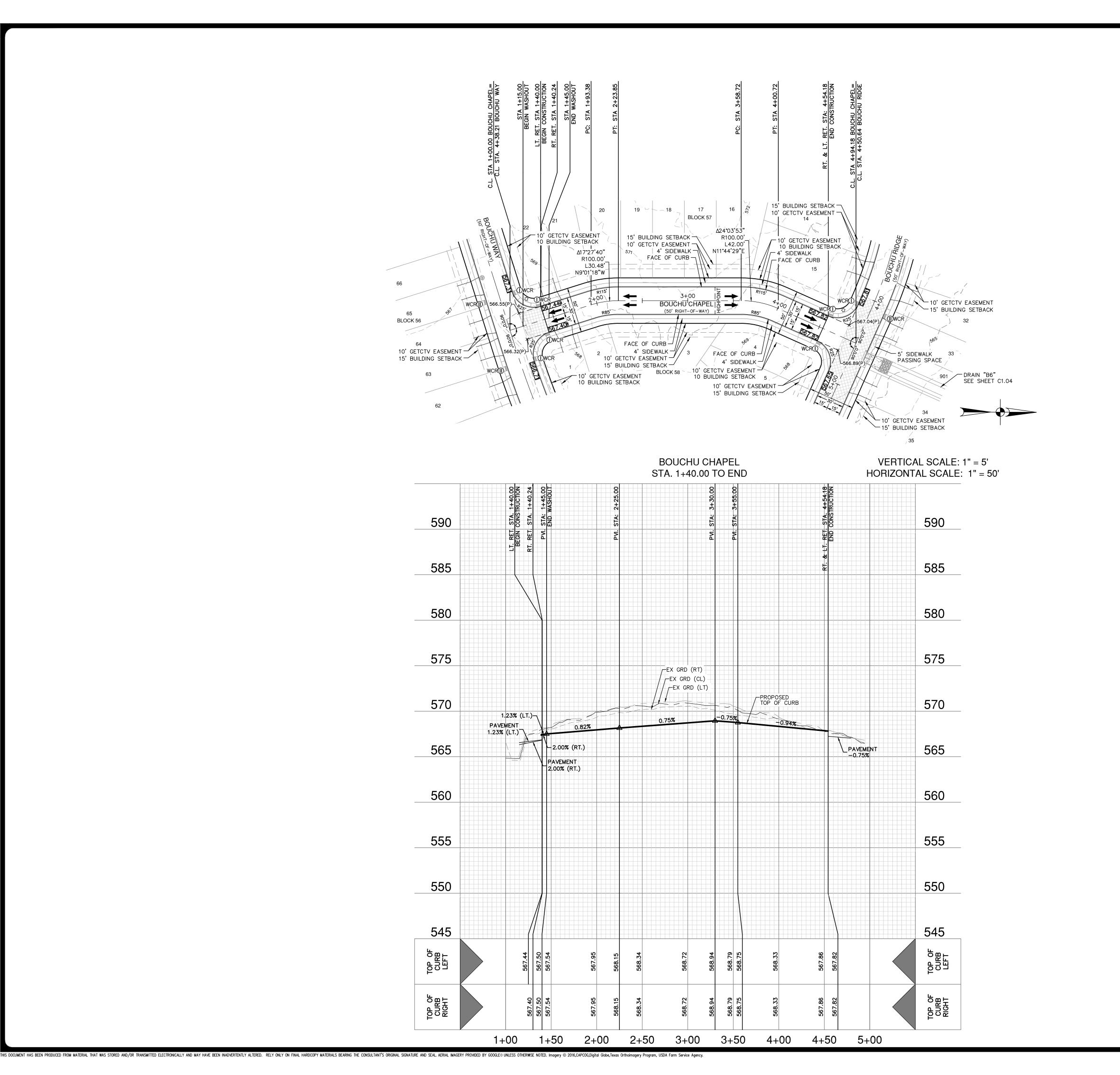
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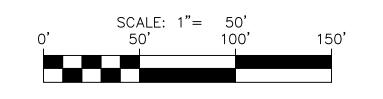
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PLAT NO. 23-11800229

12632-12

HECKED DW DRAWN TO C2.02





STREET LEGEND

EXISTING WELL

PROJECT LIMITS ———	
MAINTAIN GUTTER	\rightarrow $$ \rightarrow
EXISTING CONTOUR — — —	970
WHEELCHAIR RAMP	①
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
VEHICULAR NON ACCESS EASEMENT	VNAE
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	

EUGENE H. DAWSON III

PAPE-DAWSON ENGINEERS

CHU CHAPEL PLAN & PR (STA. 1+40.00 TO END)

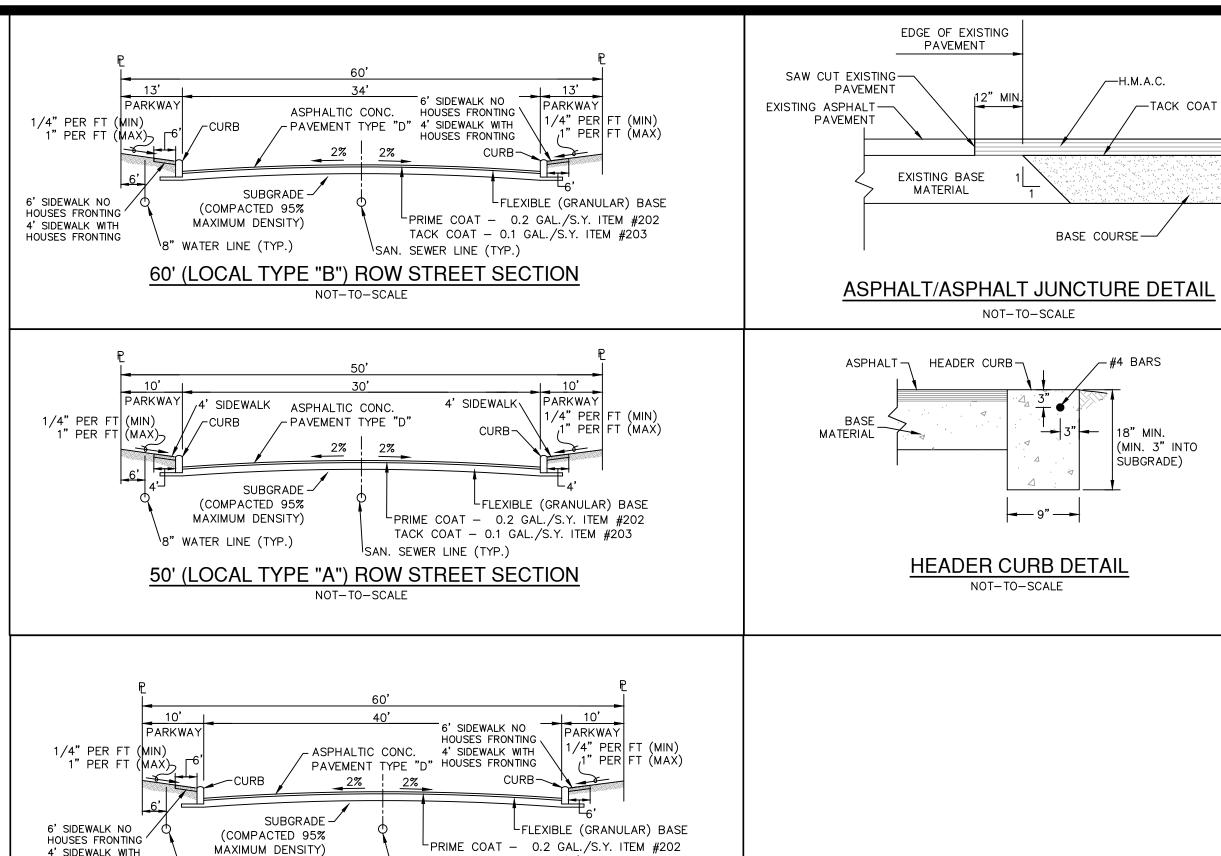
STREET NOTES:

- 1. A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
- 2. CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT TIE—IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
- 3. SIDEWALKS SHALL BE CONSTRUCTED 3-FT FROM THE BACK OF CURE FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
- 4. NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN TH CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
- 5. DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.
- 6. CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (Q)(6).
- 7. THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN.

PLAT NO. 23-11800229 OB NO. 12632-12 DESIGNER

> HECKED<u>DW</u> DRAWN<u>TC</u> C2.03

		F	PAVEME	NT SECT	ΓΙΟΝ DETA	١L				
STREET NAME	STATION	TYPE "D" HMAC	TYPE "C" HMAC	TYPE "B" HMAC	GRANULAR BASE COURSE	CEMENT TREATED SUBGRADE	GEOGRID (TENSAR TRIAX TX5)	CBR	STRUCTURAL N	IUMBER
BOUCHU TRAILS	1+70.00 TO 4+18.63	2"	2"	2.5"	17.5"	6"	NO	1.8	2(.44) = .88 2(.44) = .88 2.5(.38) = .95 17.5(.14) = 2.45	5.16
BOUCHU TRAILS	4+18.63 TO END	3"	_	_	12"	6"	NO	1.8	3(.44) = 1.32 12(.14) = 1.68	3.0
BOUCHU WAY	1+17.82 TO END	3"	_	-	12"	6"	NO	1.8	3(.44) = 1.32 12(.14) = 1.68	3.0
BOUCHU RIDGE	1+00.00 TO END	3"	_	_	12"	6"	NO	1.8	3(.44) = 1.32 12(.14) = 1.68	3.0
BOUCHU CHAPEL	1+15.00 TO END	3"	_	_	12"	6"	NO	1.8	3(.44) = 1.32 12(.14) = 1.68	3.0



TACK COAT - 0.1 GAL./S.Y. ITEM #203

SAN. SEWER LINE (TYP.)

60' (LOCAL TYPE "B") ROW STREET WITH 40' PAVEMENT SECTION

NOT-TO-SCALE

GENERAL NOTES:

HOUSES FRONTING

1. CONTRACTOR SHALL REFERENCE THE PROJECT PAVEMENT DESIGN REPORT PREPARED BY **TTL** DATED **NOVEMBER 2, 2023.**

[\]8" WATER LINE (TYP.)

- 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 CEMENT 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. EACH LIFT OF SOIL SHALL BE MOISTURE CONDITIONED BETWEEN MINUS TWO (-2) AND PLUS THREE (+3) PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT AND COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY.
- 6. IN THE EVENT THAT THE CLAY FILL USED IS DIFFERENT THAN THE EXISTING SUBGRADE, THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT COULD BE INVALIDATED AND THE DESIGN ENGINEER MUST BE CONSULTED TO DETERMINE IF ADDITIONAL CBR TESTING AND THICKER PAVEMENT SECTIONS ARE
- 7. UNDERCUT SOFT, WEAK, AND UNSTABLE SOILS BY EXCAVATING BELOW SUBGRADE LEVEL TO EXPOSE STABLE SOILS. THE EXCAVATED SOIL CAN BE USED TO RESTORE THE EXCAVATION SUBGRADE, PROVIDED THAT THE SOILS ARE RELATIVELY FREE AND CLEAN OF DELETERIOUS MATERIAL OR MATERIALS EXCEEDING 3 INCHES IN MAXIMUM DIMENSION. THE EXCAVATED SOIL, OR IMPORTED FILL SOIL, SHALL BE PLACED IN MAXIMUM 6-INCH COMPACTED LIFTS. EACH LIFT OF SOIL SHALL BE MOISTURE CONDITIONED BETWEEN PLUS OR MINUS TWO (±2) PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT AND COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH THE STANDARD COMPACTION EFFORT (ASTM D 698). IF UNDERCUTTING DEEPER THAN ABOUT 3 FEET IS NEEDED, CONTACT TTL.
- 8. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL MATERIAL TESTING WITH THE PROJECT GEOTECHNICAL ENGINEER. TESTING SHALL BE PAID FOR BY THE OWNER.
- 9. SOIL SUBGRADE AREAS REQUIRING FILL PLACEMENT SHOULD BE SCARIFIED TO A DEPTH OF ABOUT EIGHT (8) INCHES AND MOISTURE CONDITIONED BETWEEN PLUS OF MINUS TWO (±2) POINTS OF THE OPTIMUM MOISTURE CONTENT. THE MOISTURE—CONDITIONED SUBGRADE SHOULD THEN BE COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH ASTM D 698. THE SUBGRADE SHOULD BE MOISTURE CONDITIONED JUST PRIOR TO FILL PLACEMENT SO THE SUBGRADE MAINTAINS IT'S COMPACTION MOISTURE LEVELS AND DOES NOT DRY OUT.
- 10. A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN THE BEXAR COUNTY ROW.

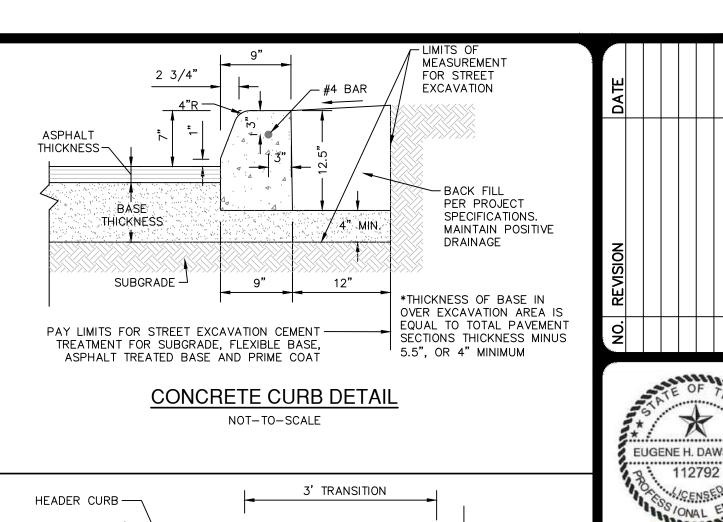
 CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.

STREET SUBGRADE NOTES:

- 1. IF THE STREET SUBGRADE PLASTICITY INDEX VALUE IS GREATER THAN 20, SUBGRADE TREATMENT IS NEEDED AS PER CITY OF SAN ANTONIO AND BEXAR COUNTY REQUIREMENTS.
- 2. IF THE SUBGRADE PLASTICITY INDEX VALUE IS 20 OR LESS. SUBGRADE TREATEMENT IS NOT NEEDED. THE SUBGRADE SHOULD BE MOISTURE CONDITIONED (COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AT A MINIMUM MOISTURE CONTENT OF OPTIMUM PLUS 2 PERCENT (TEX114E)).
- 3. THE SUBGRADE SHOULD BE TREATED USING A MINIMUM OF 5% PORTLAND CEMENT, BY DRY WEIGHT TO A DEPTH OF 6 INCHES.
- 4. THE SUBGRADE SOILS SHOULD BE TESTED FOR SOIL SULFATE CONTENT PRIOR TO TREATMENT. IF THE SOIL SULFATE CONTENT IS HIGH, AN ALTERNATE PROCEDURE / RECOMMENDATION WILL BE NEEDED.
- 5. CEMENT APPLICATION RATE OF 28 LBS PER SQ YARD OF SOIL IS RECOMMENDED.
- 6. APPROVED FILL MATERIAL SHOULD BE USED TO RAISE THE GRADE. THE FILL SHOULD BE FREE OF DELETERIOUS MATERIAL WITH THE MINIMUM CBR VALUE OF 1.8 AND PI NOT MORE THAN 35. CEMENT APPLICATION RATES SHOULD BE RE-EVALUATED AND TESTED FOR SULFATE CONTENT PRIOR TO USE OF

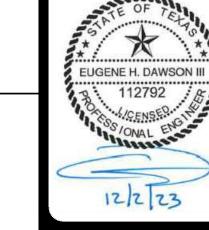
THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.

7. THE SUBGRADE SHOULD BE PROOF ROLLED TO IDENTIFY SOFT AREAS BEFORE TREATMENT.



-SUBGRADE PER

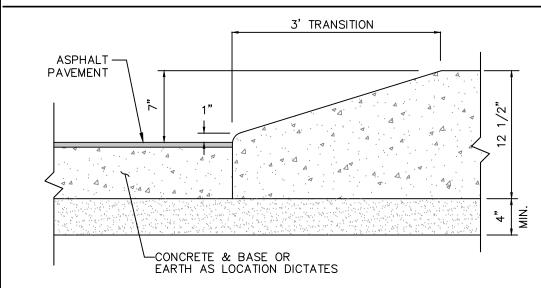
PAVEMENT SECTION



SONSTH 1 DALLAS
210.375.9000

CURB TRANSITION DETAIL
(FROM HEADER CURB TO STANDARD CURB

NOT-TO-SCALE



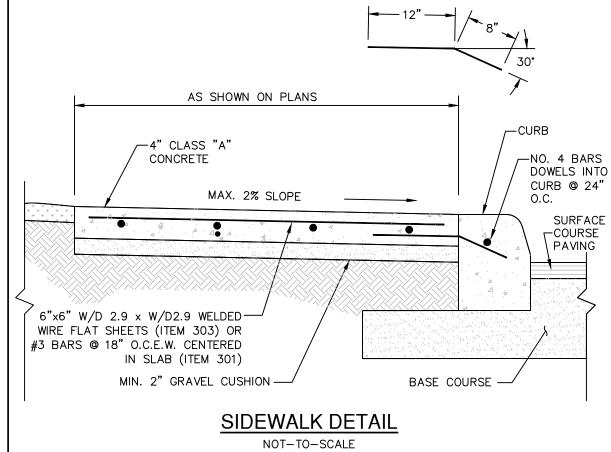
PROPOSED PAVEMENT -

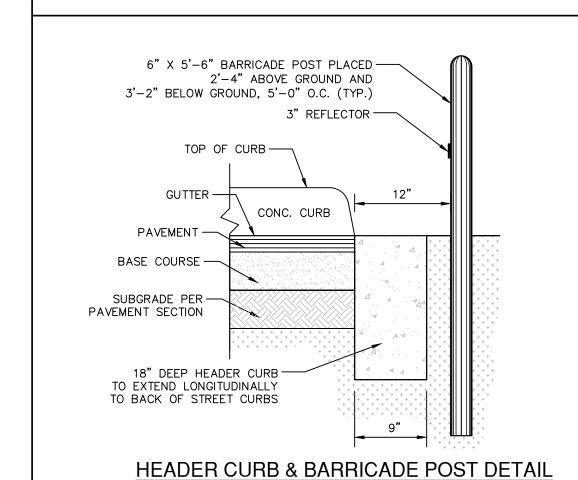
OR NATURAL GROUND

AS LOCATION DICTATES (REFER OR PLANS)

CURB TRANSITION DETAIL
(FROM PAVEMENT TO STANDARD CURB)

NOT-TO-SCALE





ESPADA TRACT UNI
SAN ANTONIO, TEXAS

PLAT NO. 23-11800229

JOB NO. 12632-12

DATE JULY 2023

DESIGNER JG

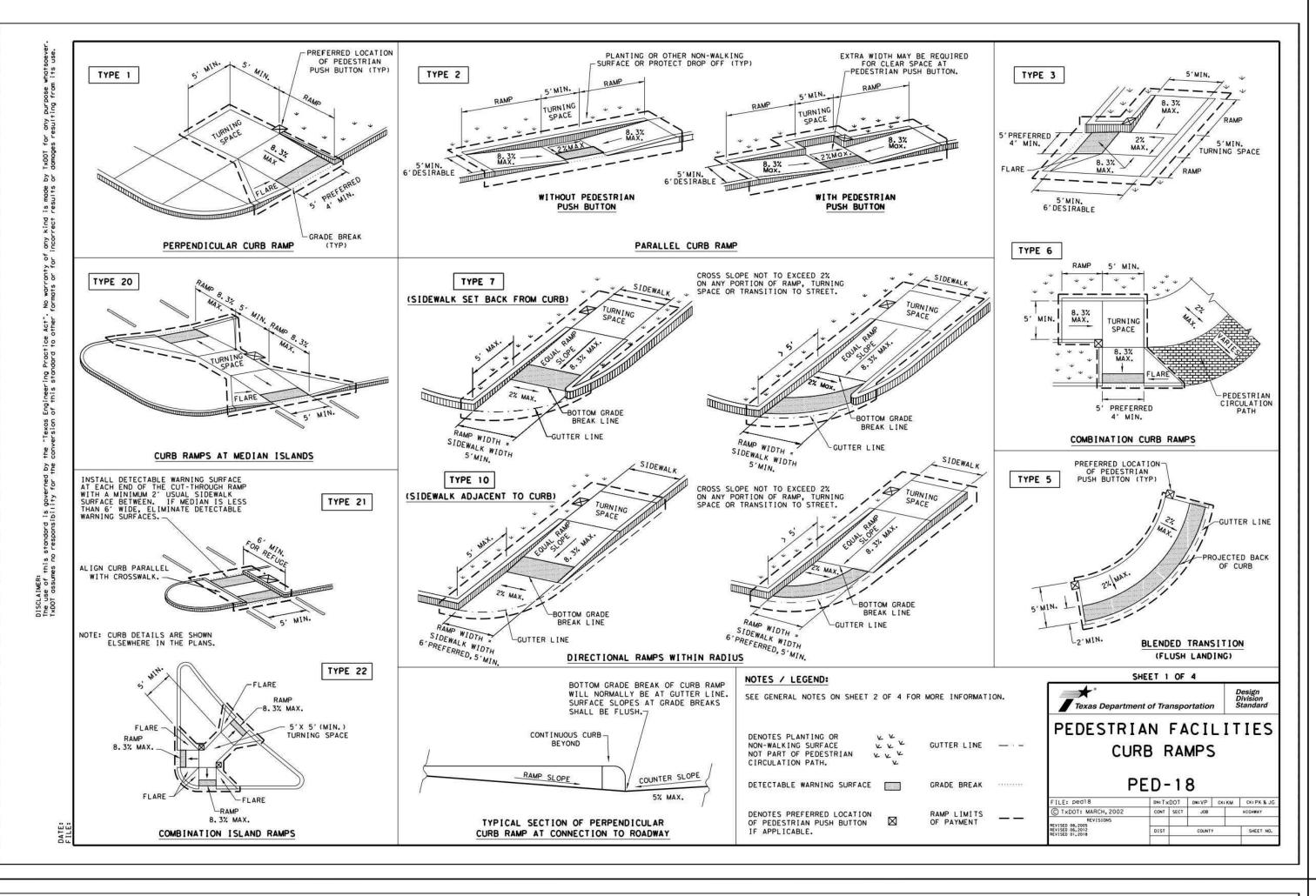
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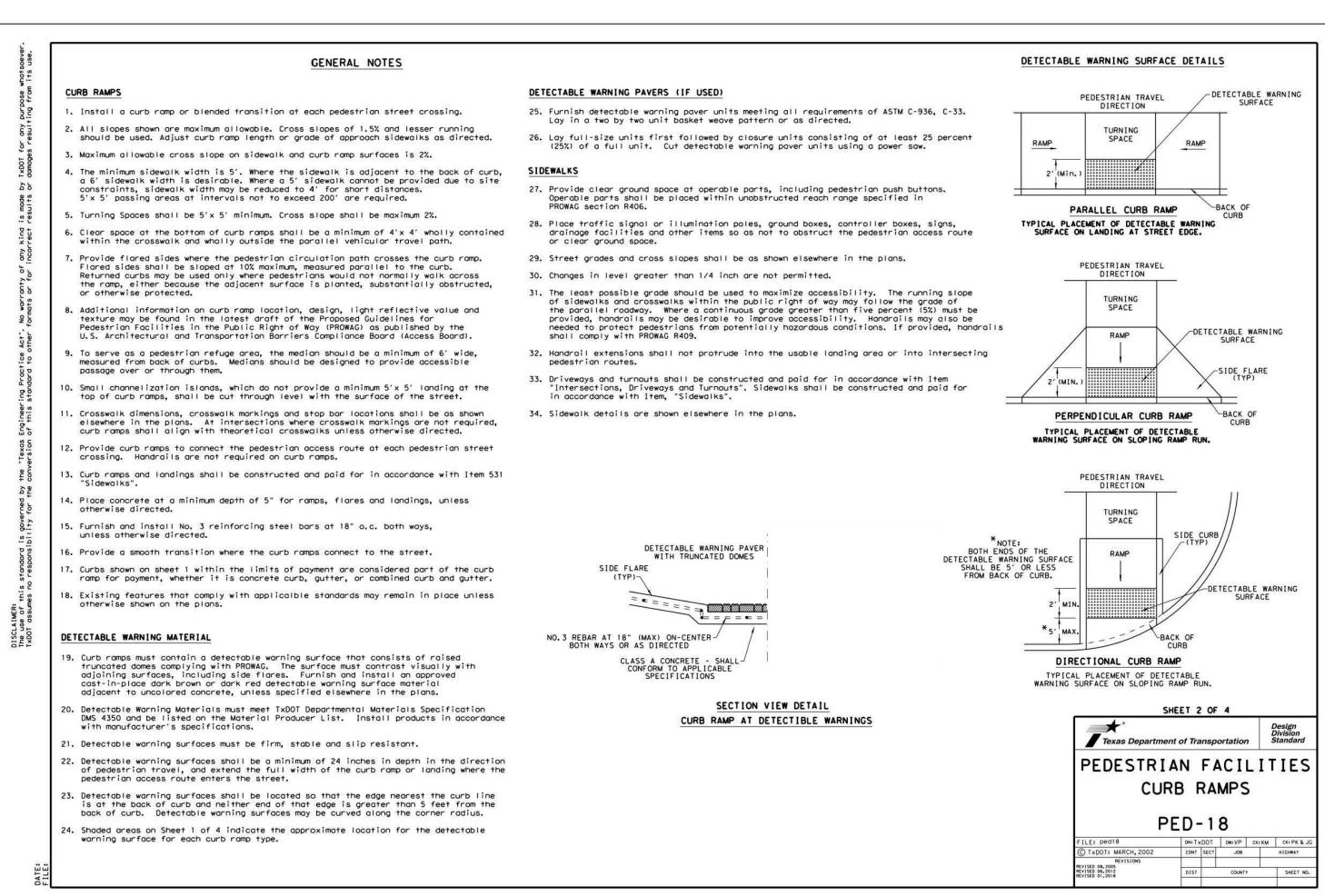
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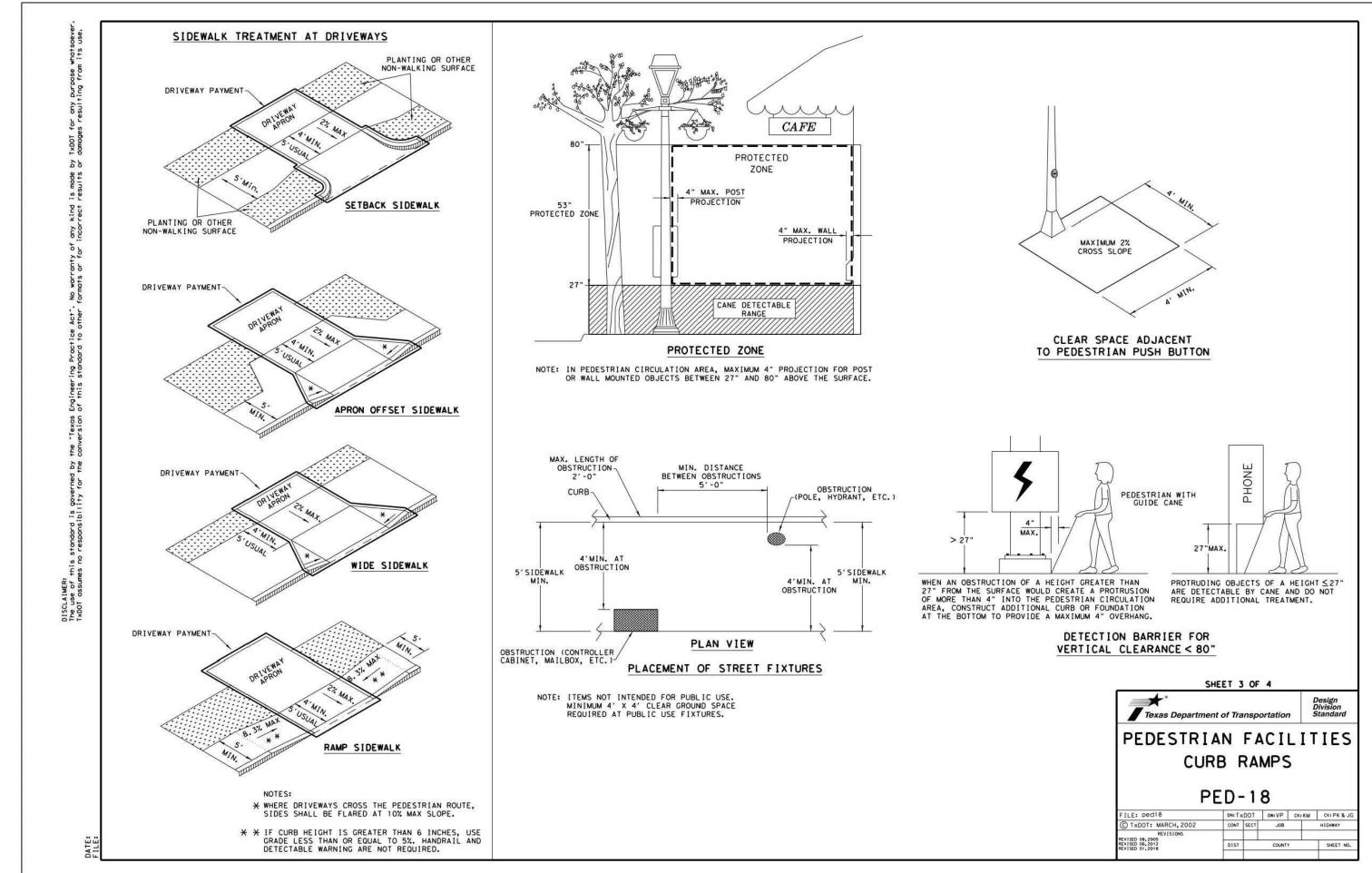
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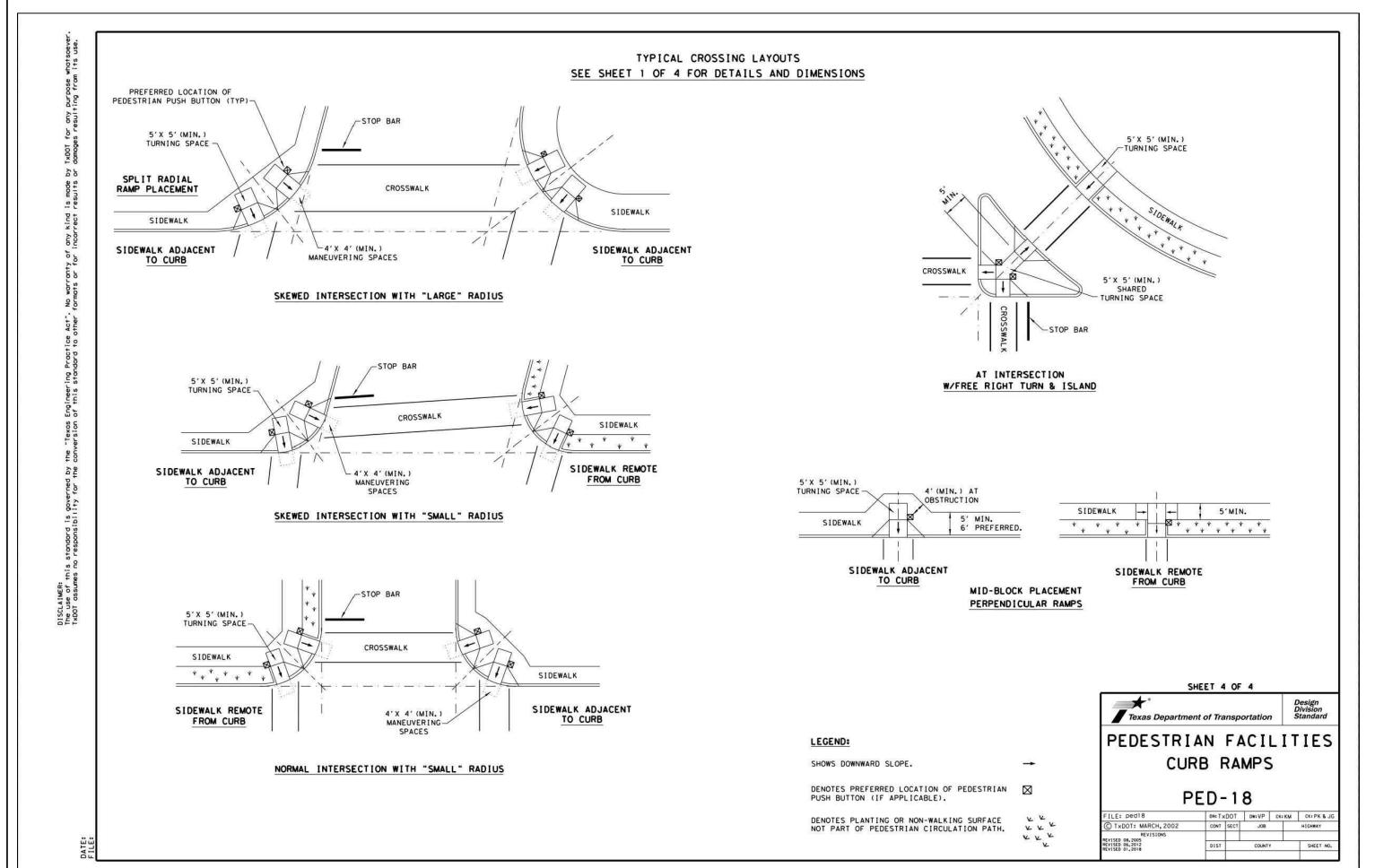
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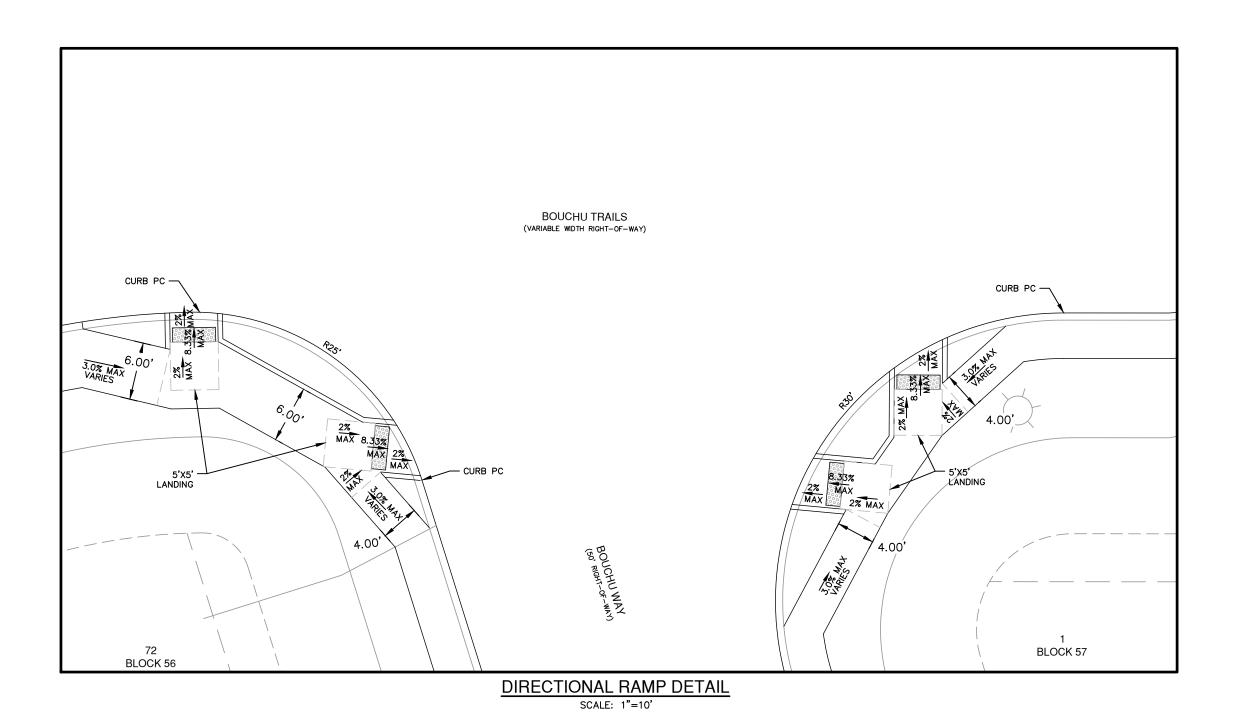
EUGENE H. DAWSON II

112792

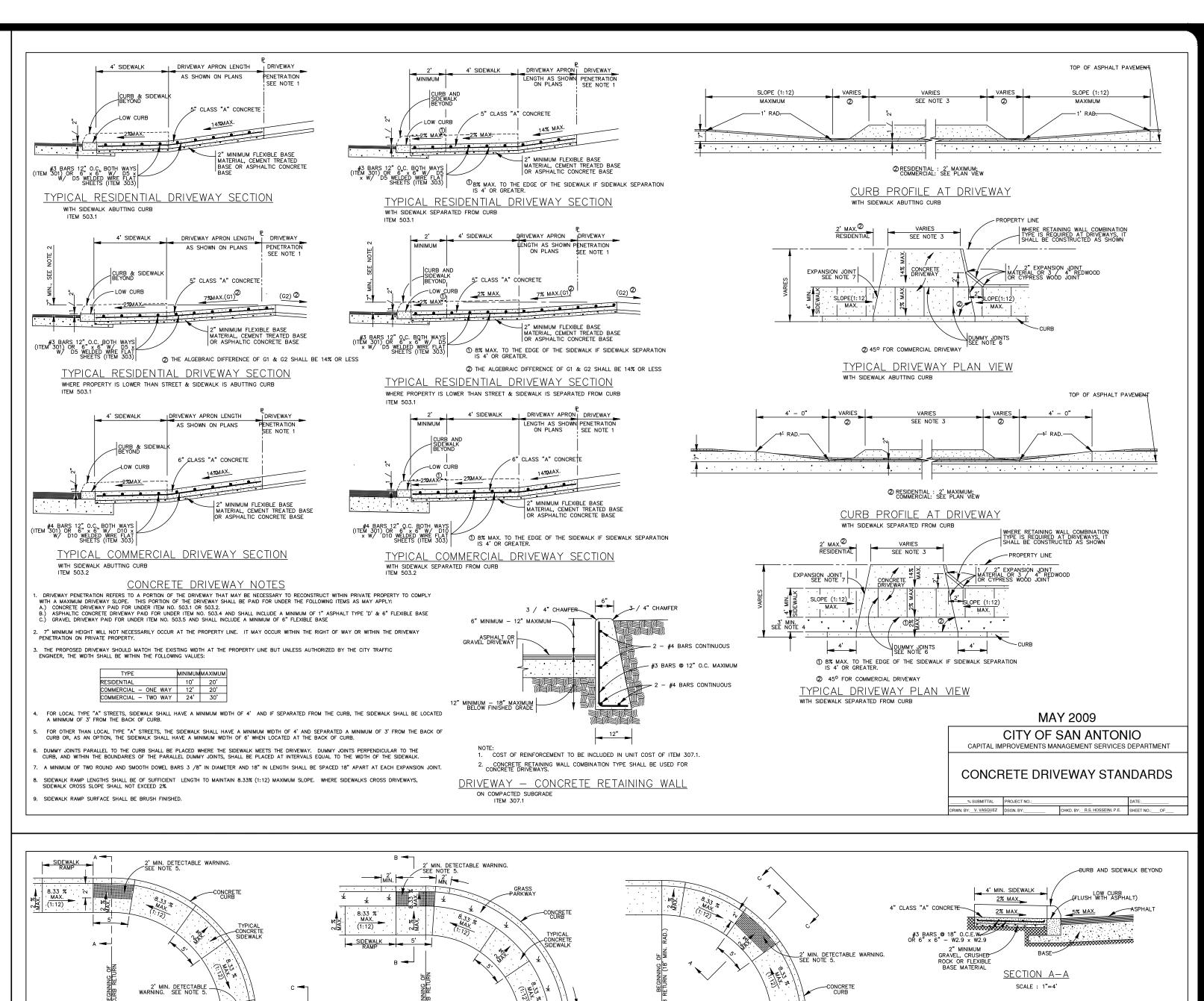
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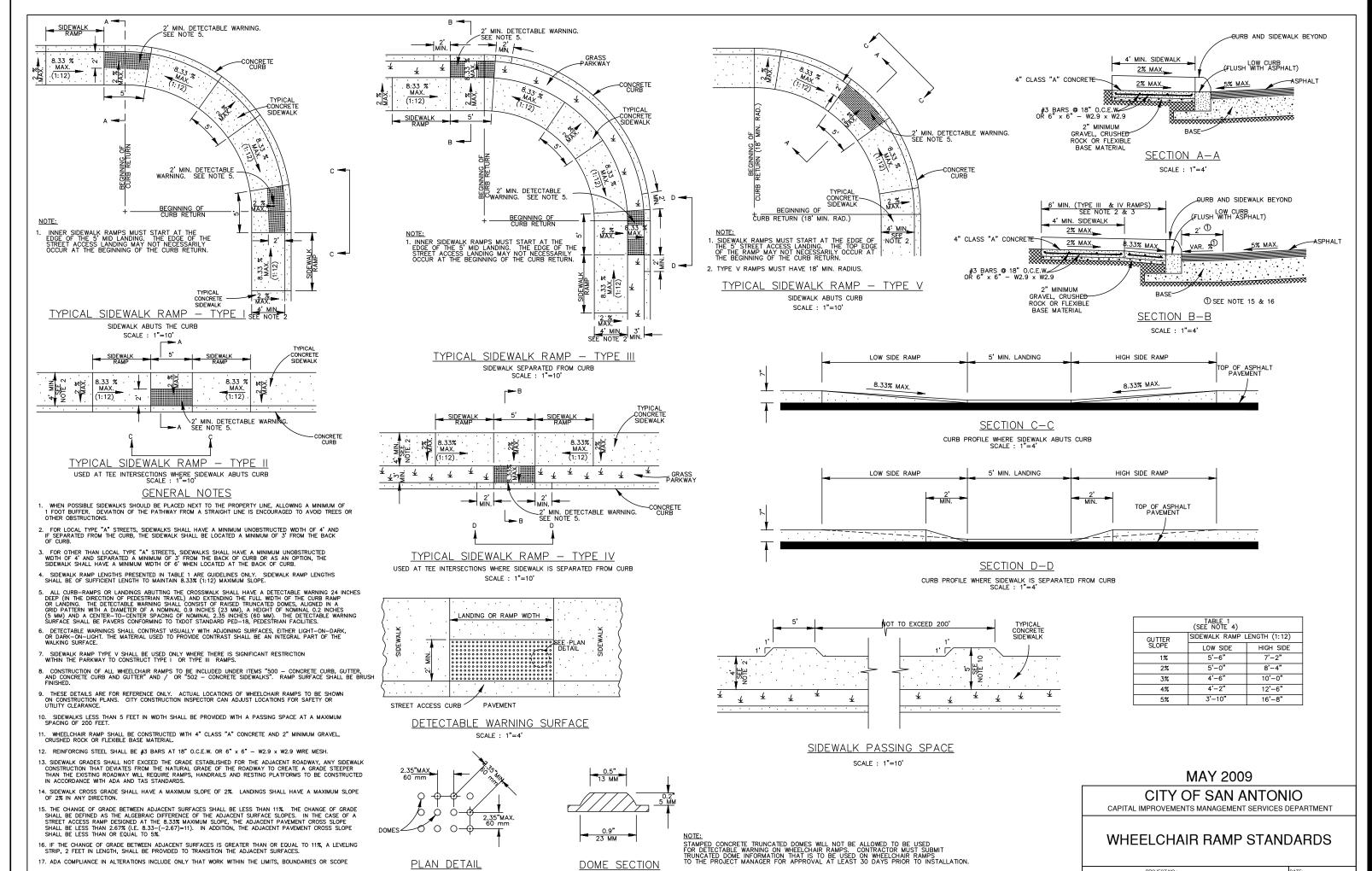
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PLAT NO. **23-1180022**9 12632-12 JULY 2023 ESIGNER

EUGENE H. DAWSON III

112792

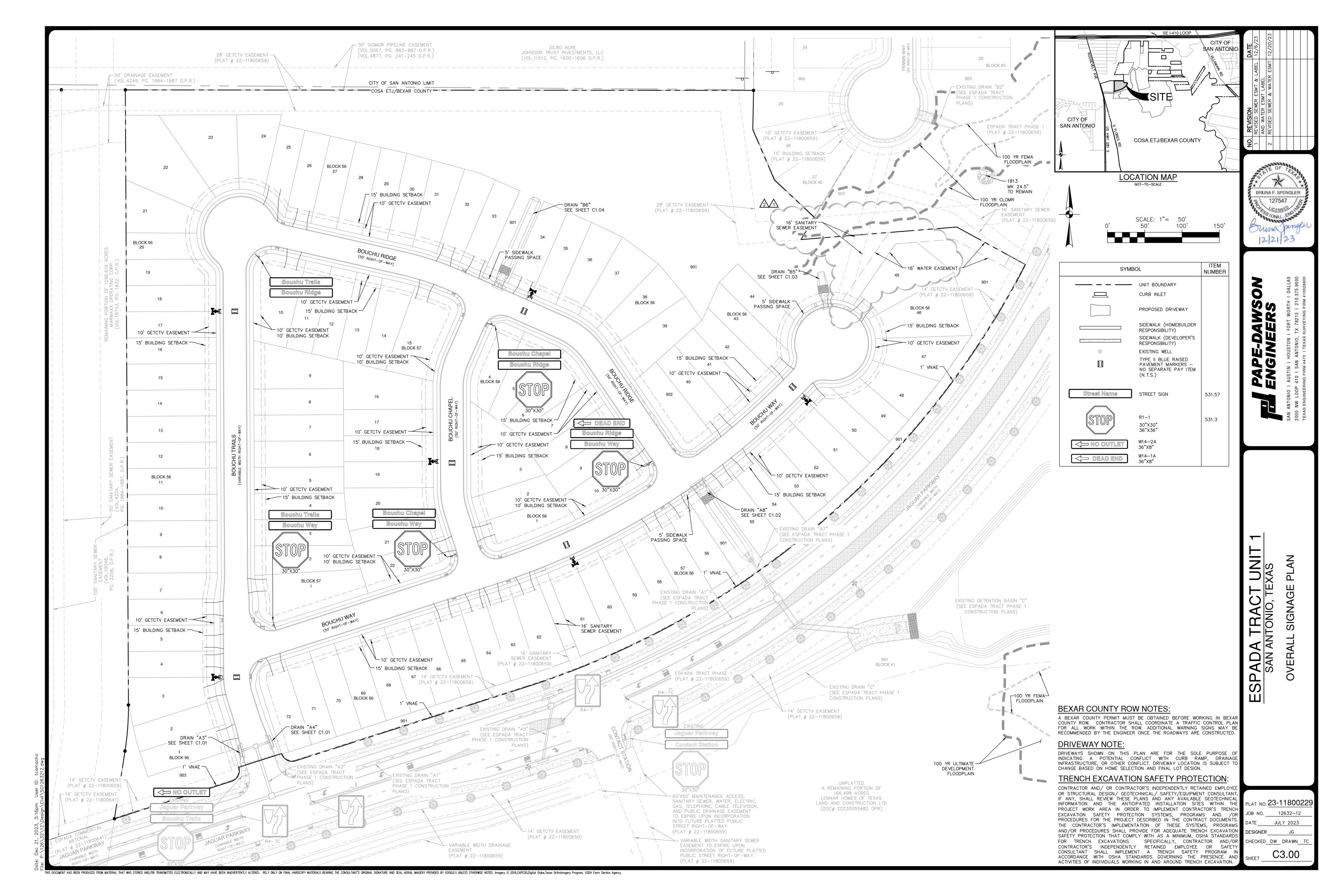
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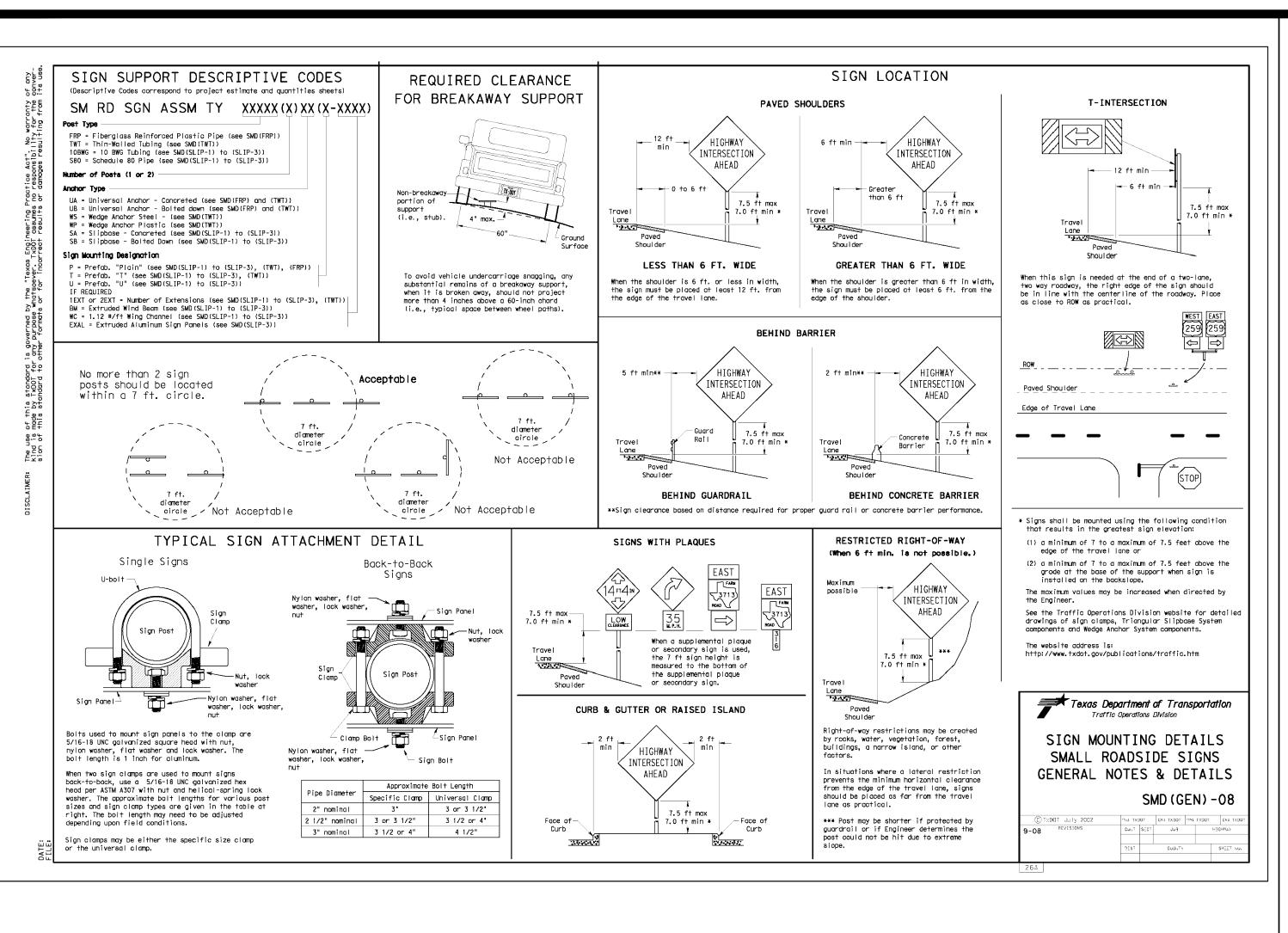
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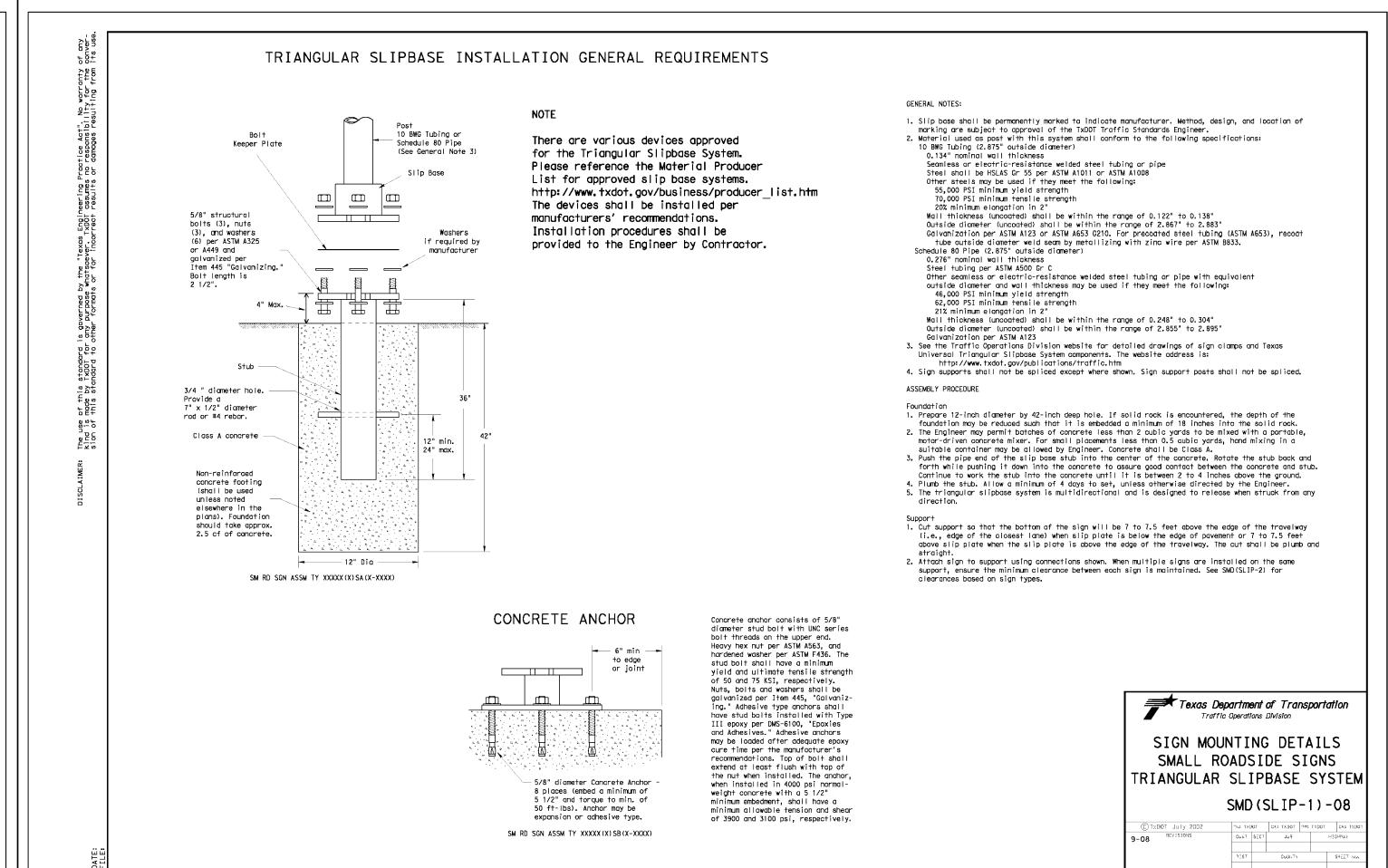
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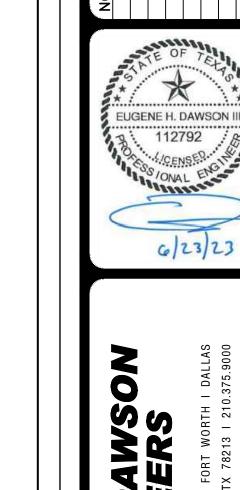
CHKD. BY: R.S. HOSSEINI, P.E. SHEET NO.:

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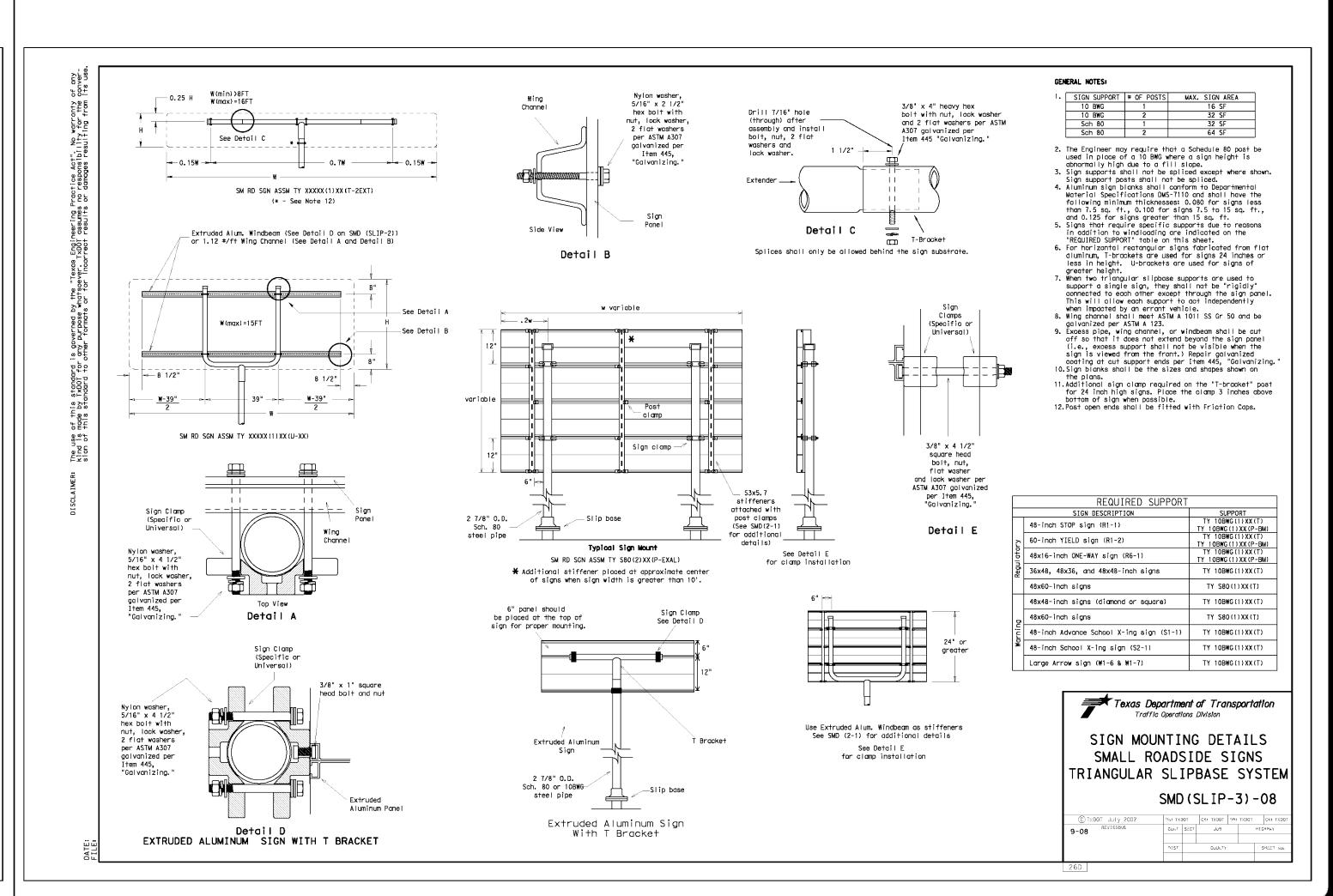
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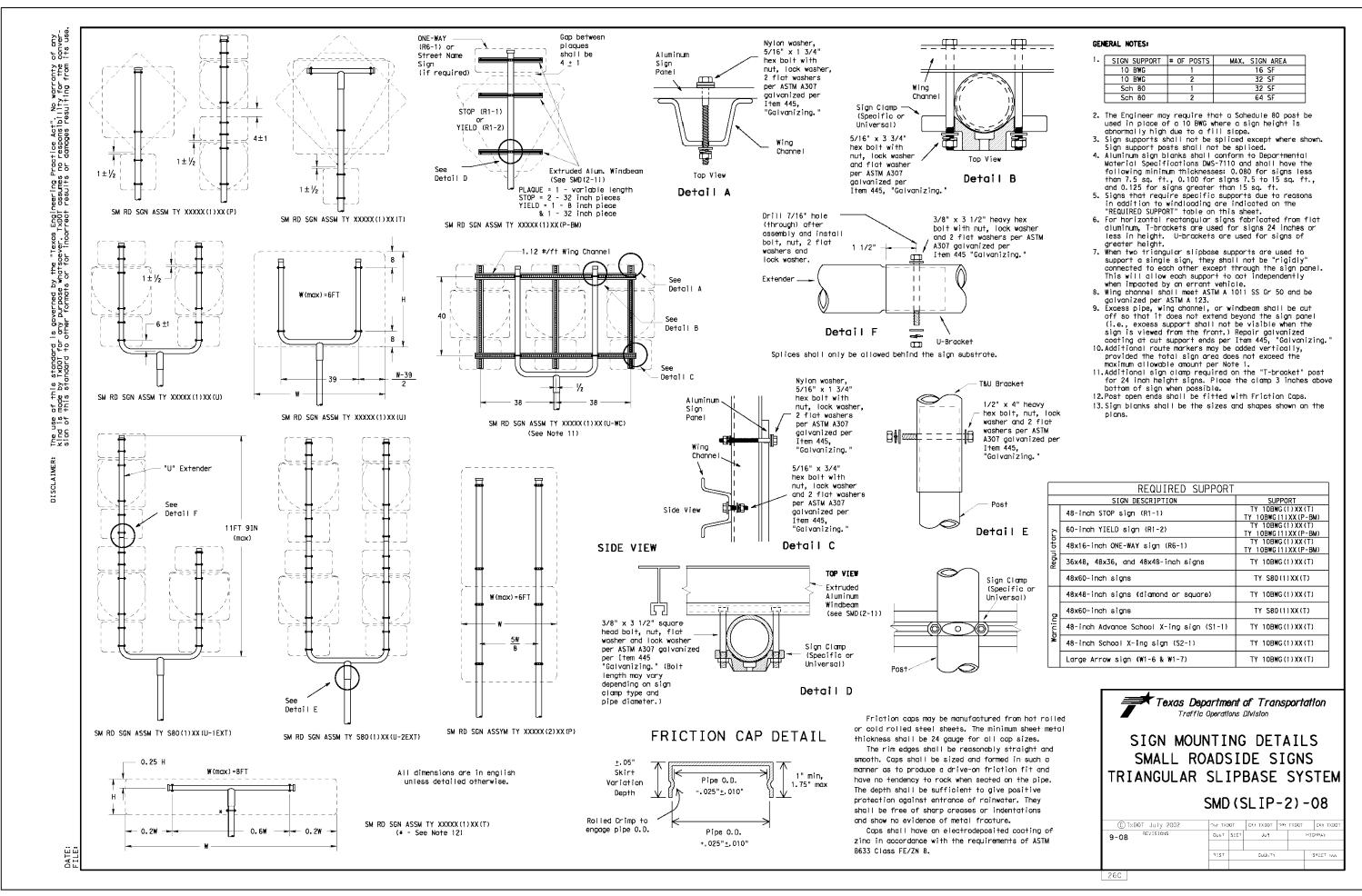
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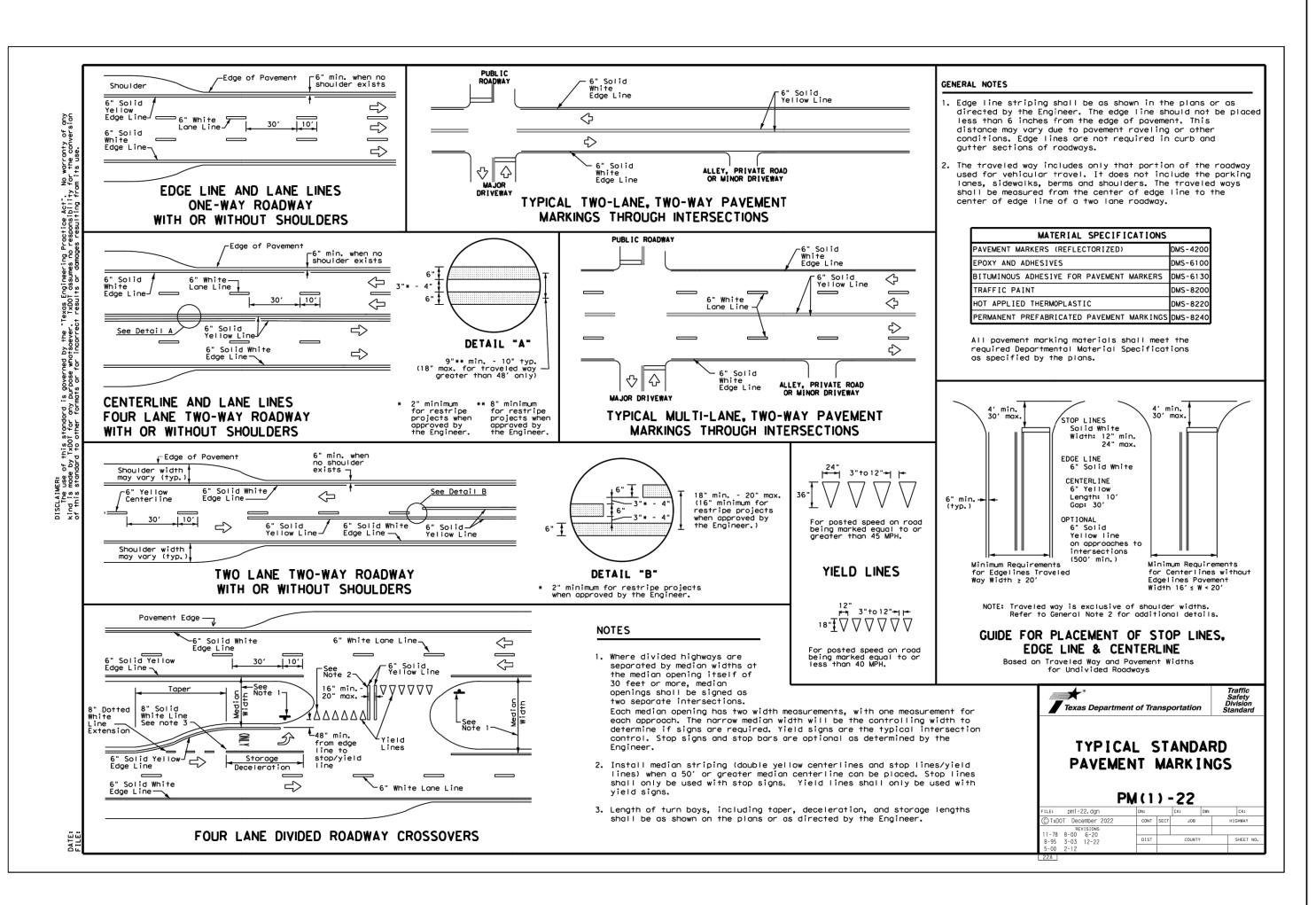
DESIGNER JG

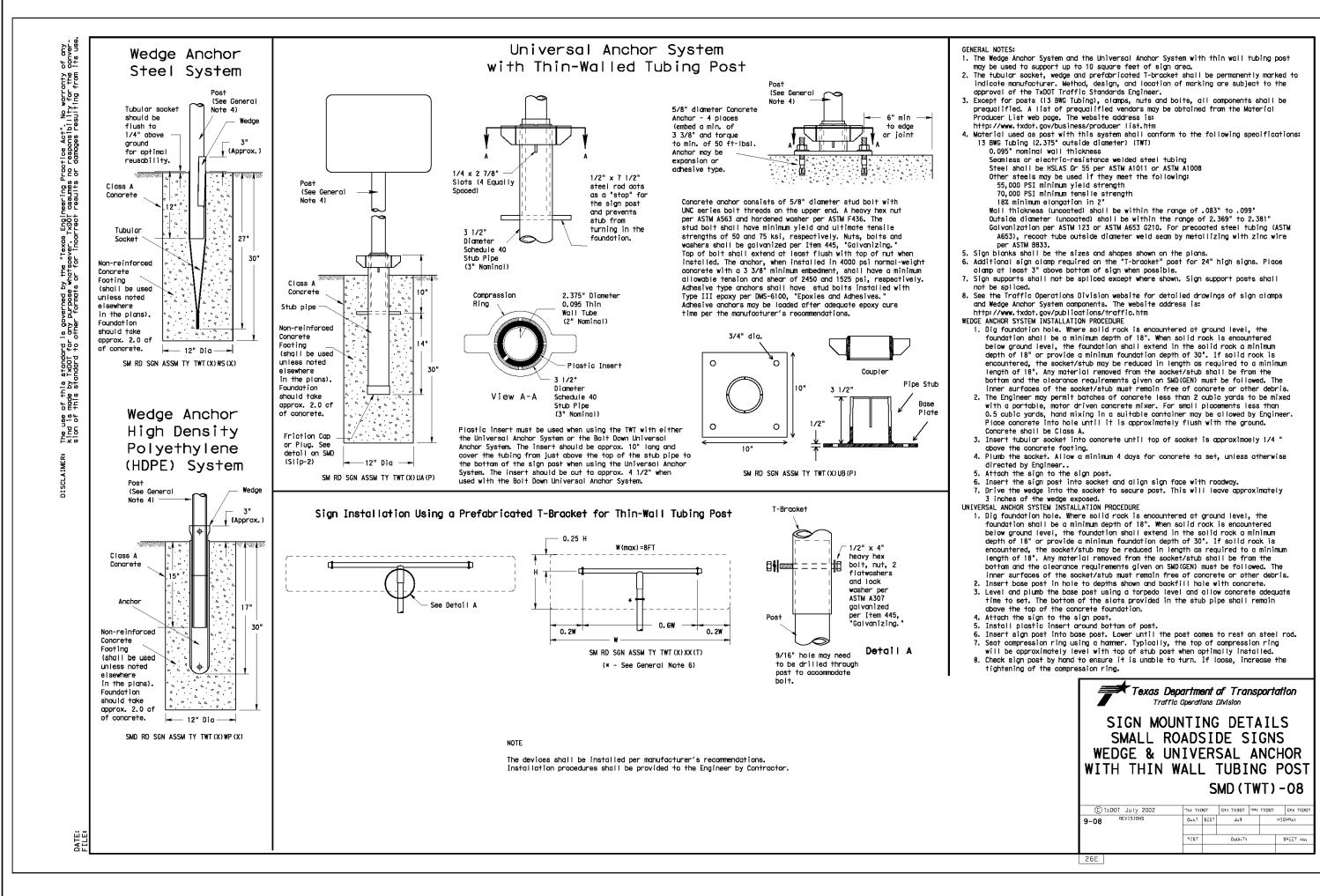
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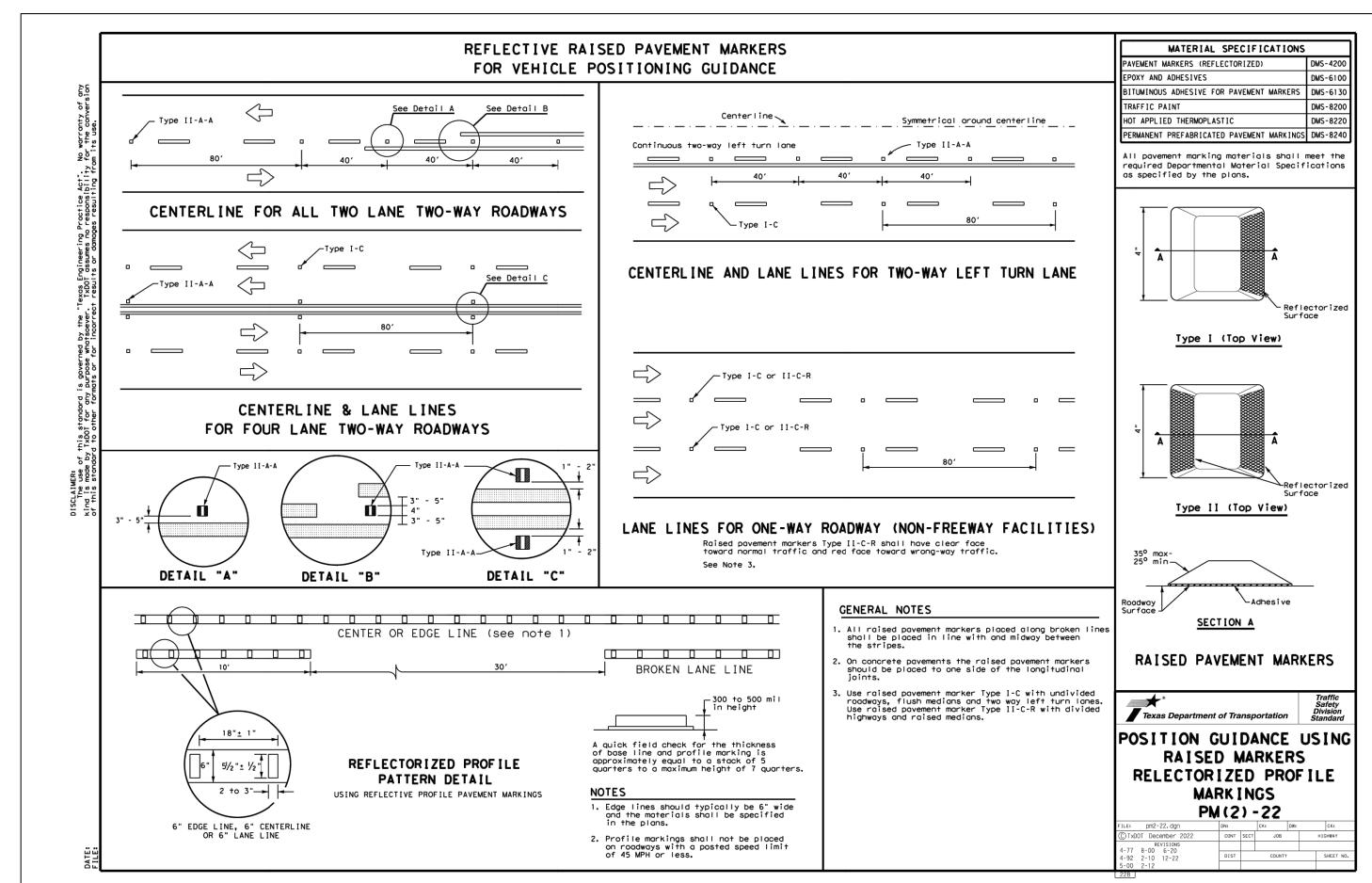
C3.01

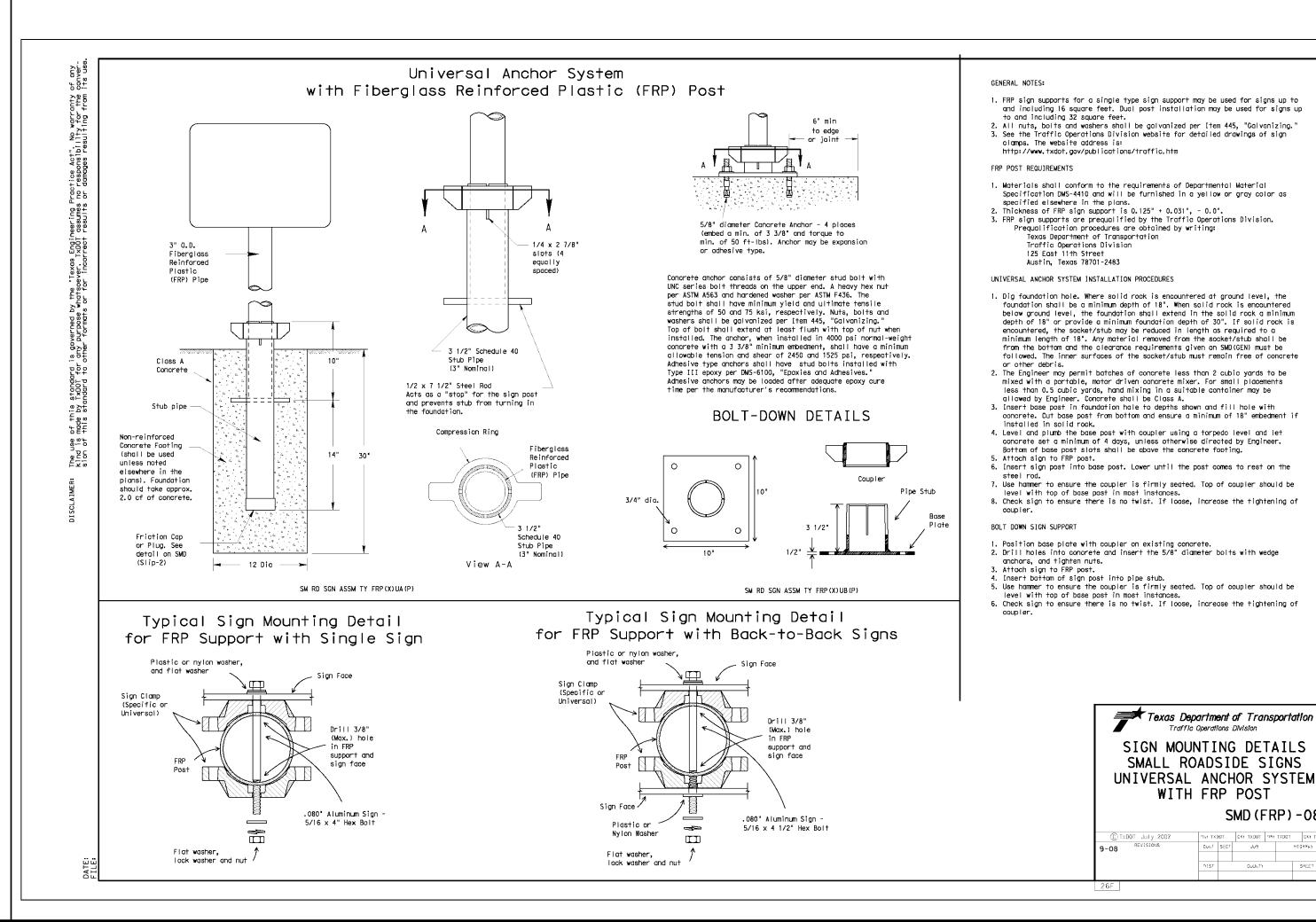


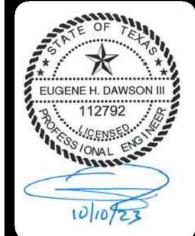










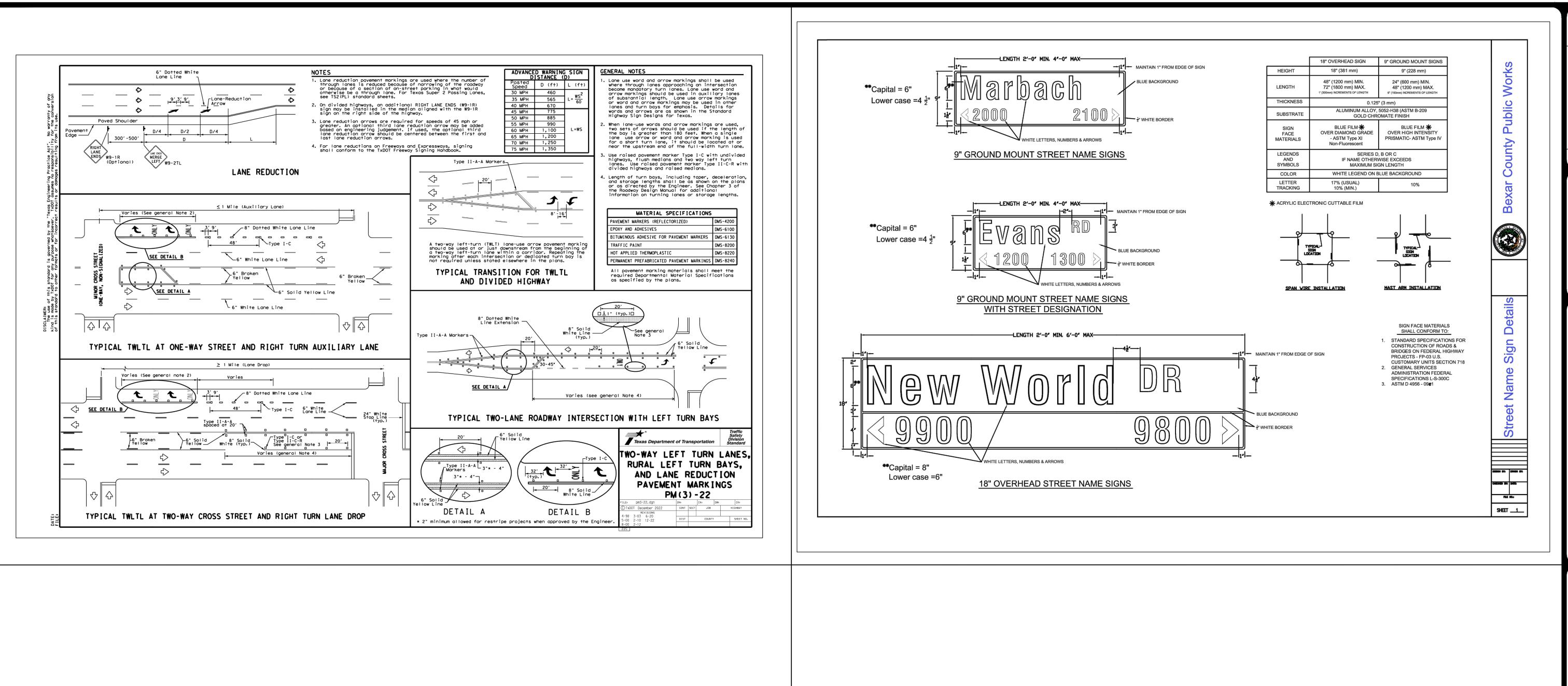


LAT NO. 23-1180022 12632-12

C3.02

SMALL ROADSIDE SIGNS UNIVERSAL ANCHOR SYSTEM

DESIGNER HECKED DW DRAWN 1



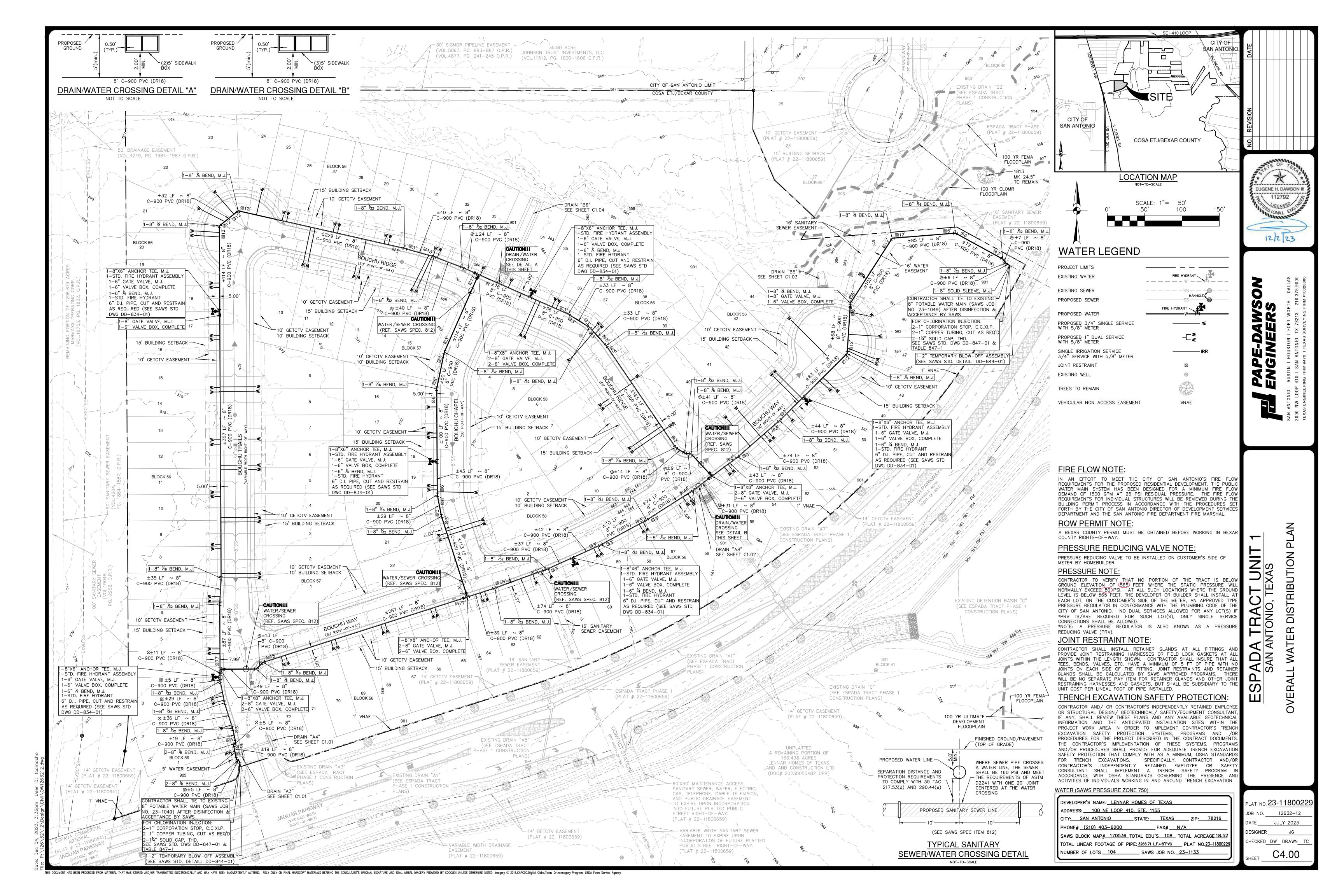
ESPADA TRACT UNIT SAN ANTONIO, TEXAS

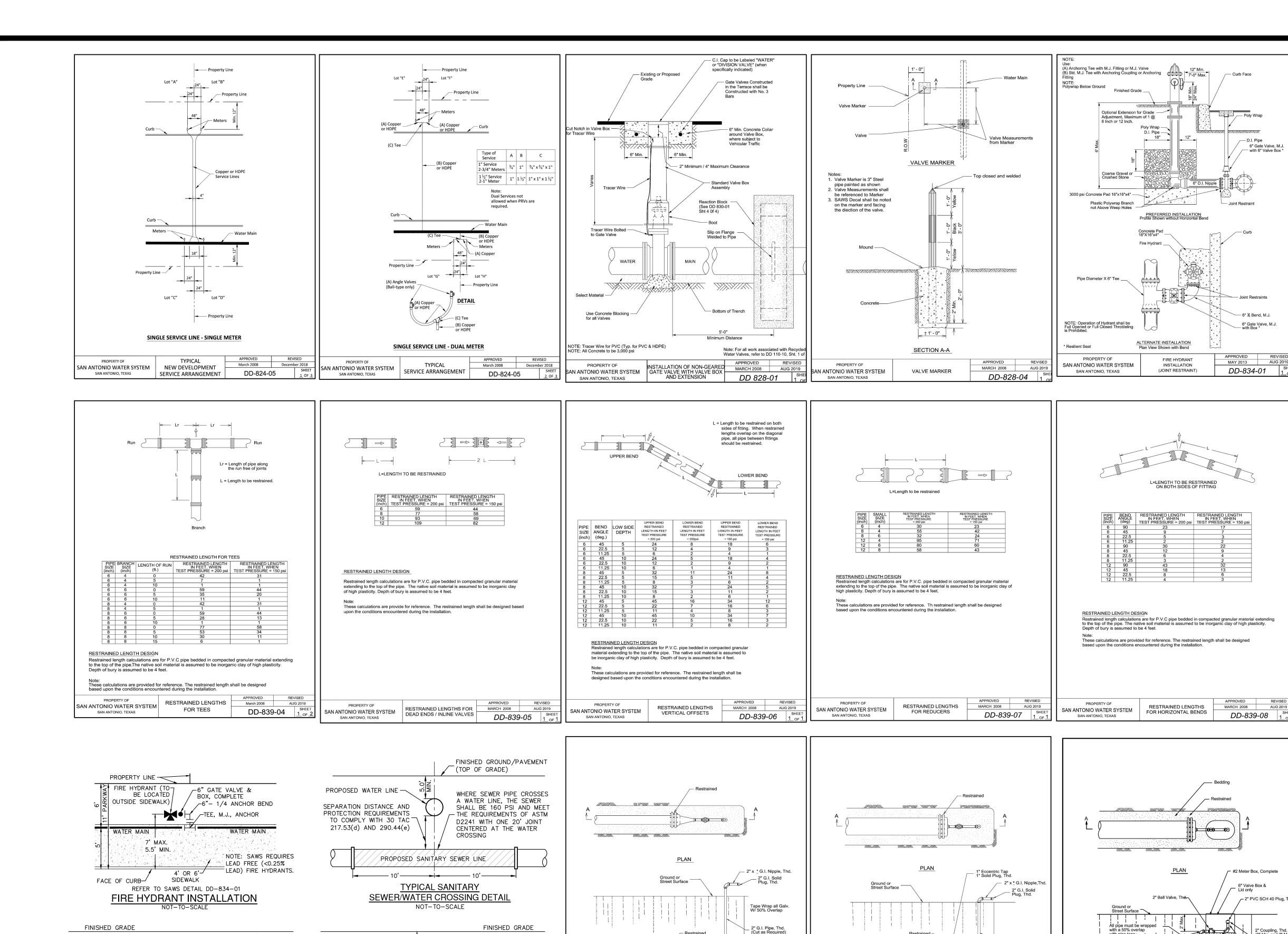
EUGENE H. DAWSON III

112792

PLAT NO. 23-11800229 CHECKED<u>DW</u> DRAWN<u>TC</u>

C3.03





⊆ 2" 90° G.I. EII, Thd.

— 2" x 12" G.I. Nipple, Thd.

AUG 2019

_ 2" Ball Valve, Thd.

2" x 6" G.I. Nipple, Thd.

MARCH 2008

DD-844-01

6" or 8" M.J. x 2" Thd. C.I. or _ D.I. Eccentric Reducer

SECTION A-A

2" TEMPORARY

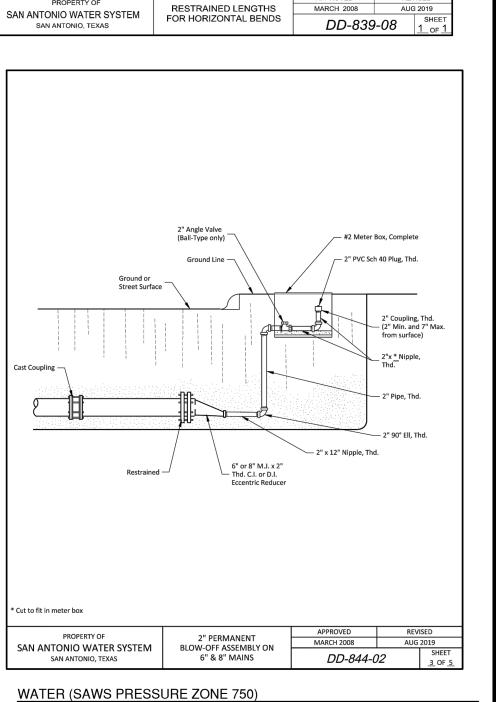
BLOW-OFF ASSEMBLY

ON 6" & 8" MAINS

ut as required to extend beyond excavation

SAN ANTONIO WATER SYSTEM

SAN ANTONIO, TEXAS



DEVELOPER'S NAME: <u>LENNAR HOMES OF TEXAS</u>

PHONE# (210) 403-6200 FAX# N/A

NUMBER OF LOTS 104 SAWS JOB NO. 23-1133

CITY: SAN ANTONIO STATE: TEXAS ZIP: 78216

SAWS BLOCK MAP# 170536 TOTAL EDU'S 108 TOTAL ACREAGE 18.52 TOTAL LINEAR FOOTAGE OF PIPE: 3265.71 LF.~8"PVC PLAT NO.23-11800229

ADDRESS: 100 NE LOOP 410, STE. 1155

L=LENGTH TO BE RESTRAINED ON BOTH SIDES OF FITTING

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

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

based upon the conditions encountered during the installation.

RESTRAINED LENGTH DESIGN

1" Eccentric Tap & 1" Solid Plug-

Cut to fit in meter box.

AN ANTONIO WATER SYSTE

SAN ANTONIO, TEXAS

SECTION A-A

2" PERMANENT

BLOW-OFF ASSEMBLY

ON 12" & 16" MAINS

— 2" 90° Ell, Thd.

- 12" or 16" M.J. Retainer Gland

_ 12" or 16" x 2" Eccentrically Tapped Cap, M.J.

DD-844-02

2" G.I. Pipe, Thd. (Cut as Required)

- 2" 90° G.I. Ell, Thd.

- 2" x 12" G.I. Nipple, Thd

2" Ball Valve, Thd.

— 2" x 6" G.I. Nipple, Thd.

 APPROVED
 REVISED

 March 2008
 AUG 2019

DD-844-01

12" or 16" x 2" Eccentrically

SECTION A-A

2" TEMPORARY

Tapped Cap, M.J.

ON 12" & 16" MAINS

Cut as required to extend beyond excavation

SAN ANTONIO, TEXAS

SAN ANTONIO WATER SYSTEM BLOW-OFF ASSEMBLY

PROPERTY OF

Depth of bury is assumed to be 4 feet.



EUGENE H. DAWSON III

112792

12/2/23

0

AT NO. 23-1180022 3 NO. 12632-12

PLAT NO. 23-11800229

JOB NO. 12632-12

DATE JULY 2023

DESIGNER JG

CHECKED DW DRAWN TC

SHEET

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

1-1/8 BEND-

WATER MAIN-

ALL JOINTS ARE FULLY RESTRAINED IN

TABLE DD-839-06.

TYPICAL UTILITY/WATER CROSSING DETAIL

NOT-TO-SCALE

ACCORDANCE WITH SAWS SPECIFICATION

-1-1/8 BEND

WATER MAIN-

-MISC. UTILITY (I.E.: RCP/BOX

DUCTBANK)

CULVERT, GAS OR ELECTRICAL

-WATER MAIN

WATER MAIN

-MISC. UTILITY (I.E.: RCP/BOX

DUCTBANK)

-WATER MAIN

1-1/8 BEND-

1-1/8 BEND-

WATER MAIN-

CULVERT, GAS OR ELECTRICAL

─WATER MAIN

1-1/8 BEND

	SAWS
	1. ALL MA CONTRA COMPLY FOLLOW
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	9. THE CO
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	AND FIN PROVIDI 13. A COPY INSPECT
	INSPECT

SAWS CONSTRUCTION NOTES

(LAST REVISED JANUARY 2022)

S GENERAL SECTION

- MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS TRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND PLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE OWING AS APPLICABLE:
 - 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.
 - CURRENT TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE? CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION".
 - CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION". CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).
- CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL OBTAIN A COPY OF THE APPROVED COUNTER PERMIT OR GENERAL STRUCTION PERMIT (GCP) FROM THE CONSULTANT AND HAS BEEN NOTIFIED BY S CONSTRUCTION INSPECTION DIVISION TO PROCEED WITH THE WORK AND HAS ANGED A MEETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK JIREMENTS. WORK COMPLETED BY THE CONTRACTOR WITHOUT AN APPROVED NTER PERMIT AND/OR A GCP WILL BE SUBJECT TO REMOVAL AND LACEMENT AT THE EXPENSE OF THE CONTRACTORS AND/OR THE DEVELOPER.
- CONTRACTOR SHALL OBTAIN THE SAWS STANDARD DETAILS FROM THE SAWS SITE, HTTP://WWW.SAWS.ORG/BUSINESS_CENTER/SPECS. UNLESS OTHERWISE ED WITHIN THE DESIGN PLANS.
- CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION 0) 233-2973, ON NOTIFICATION PROCEDURES THAT WILL BE USED TO NOTIFY ECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO INNING ANY WORK.
- ATION AND DEPTH OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND IHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO STRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE TY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM NG CONSTRUCTION AT NO COST TO SAWS.
- CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES DRAINAGE STRUCTURES AT LEAST 1-2 WEEKS PRIOR TO CONSTRUCTION THER SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR ATES REQUESTING PIPE LOCATION MARKERS ON SAWS FACILITIES. THE OWING 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
- CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, BS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS INAL OR BETTER CONDITION IF DAMAGES ARE MADE AS A RESULT OF THE JECT'S CONSTRUCTION.
- WORK IN TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AND/OR BEXAR NTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE STRUCTION SPECIFICATIONS AND PERMIT REQUIREMENTS.
- CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER ERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.
- CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR DD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.
- DAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON S RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO STWORKREQ@SAWS.ORG.

KEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION TRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK JEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.

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

- PACTION NOTE (ITEM 804): THE CONTRACTOR SHALL BE RESPONSIBLE FOR TING THE COMPACTION REQUIREMENTS ON ALL TRENCH BACKFILL AND FOR NG FOR THE TESTS PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL OONE AT ONE LOCATION POINT RANDOMLY SELECTED. OR AS INDICATED BY THE INSPECTOR AND/OR THE TEST ADMINISTRATOR, PER EACH 12-INCH LOOSE PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY VIDING ALL NECESSARY DOCUMENTED TEST RESULTS.
- DPY OF ALL TESTING REPORTS SHALL BE FORWARDED TO SAWS CONSTRUCTION

SAWS WATER NOTES

ACCORDINGLY.

- PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING MAINS OF ANY SIZE MUST | 1. MACHINE CHLORINATION BY THE S.A.W.S. 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 THI RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK
 - FOR WATER MAINS 12" OR HIGHER: SAWS EMERGENCY OPERATIONS CENTER (210) 233-2014
- ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS- CONTAINING MATERIAL (ACM), MAY BE LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCURS. SUCH WORK IS TO BE MADE UNDER SPECIAL SPECIFICATION ITEM NO. 3000, "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE".
- VALVE REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN. THE CONTROL VALVE LOCATED ON THE ABANDONING BRANCH WILL BE REMOVED AND REPLACED WITH A CAP/PLUG. (NSPI)
- 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.
- ALL VALVES SHALL READ "OPEN RIGHT".
- 6. PRVS REQUIRED: CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 565 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 565 FEET, THE DEVELOPER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AI APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CODE OF THE CITY OF SAN ANTONIO. NO DUAL SERVICES ALLOWED FOR ANY LOT(S) IF *PRV IS/ARE REQUIRED FOR SUCH LOT(S) ONLY SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED. *NOTE: PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE
- PIPE DISINFECTION WITH DRY HTH FOR PROJECTS LESS THAN 800 LINEAR FEET. (ITEM NO. 847.3): MAINS SHALL BE DISINFECTED WITH DRY HTH WHERE SHOWN IN THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE INSPECTOR, AND SHALL NOT EXCEED A TOTAL LENGTH OF 800 FEET. THIS METHOD OF DISINFECTION WILL ALSO BE FOLLOWED FOR MAIN REPAIRS. TH 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.
- FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE │ 14. SAWS REQUIRES LEAD FREE (< 0.25%) FIRE HYDRANTS. UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED, AND SAWS HAS RELEASED THE MAIN FOR TIE-IN AND USE.
- 10. DIVISION VALVES: DIVISION VALVES SHOWN ON PLANS OR NOT SHOWN ON PLANS BUT FOUND IN THE FIELD SHALL ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF AND ONLY WITH PRIOR WRITTEN APPROVAL OF THE SAWS DIRECTOR OF PRODUCTION AND OPERATIONS AND PROPER COORDINATION WITH ALL SAWS DEPARTMENTS. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE INSPECTOR A MINIMUM OF TWO WEEKS IN ADVANCE TO START THE COORDINATION PROCESS AND WILL 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 MATERIA 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. THI LOCK AND KEY MECHANISM WILL BE PAID FOR BY THE CONTRACTOR BUT WILL BE INSTALLED BY SAWS DISTRIBUTION AND COLLECTION STAFF.

PROJECT WATER NOTES

- ALL 8", 12" AND 16" PIPE SHALL BE P.V.C. C-900 CLASS 235 DR 18.
- . ALL MAINS SHALL BE HYDROSTATICALLY TESTED BY THE CONTRACTOR, AS PROVIDED FOR IN THE SPECIAL CONDITIONS.
- THE WATER LINES WILL BE SET FROM THE STREET HUBS BEFORE THIS CONTRACT BEGINS. STREET CUT SHEETS WILL BE SUPPLIED TO TH 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 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 THI CONTRACTOR, HIS EMPLOYEE OR ANY OTHER MEANS, SUCH STAKES, MARKS, ETC., SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH ALL THE FINAL MEASUREMENTS, TAPS AND LENGTH OF SERVICE CONNECTIONS.
- 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.
- STREETS WILL HAVE BEEN EXCAVATED DOWN TO SUBGRADE AND THI PARKWAY WILL BE CUT DOWN TO TOP OF CURB BY THE STREET CONTRACTOR, PRIOR TO CONSTRUCTION OF THE WATER MAINS. IT WILL BE THE UTILITY CONTRACTOR'S RESPONSIBILITY TO PROVIDE A PAD FOR HIS EQUIPMENT.
- WATER METER BOXES IF APPLICABLE SHALL BE INSTALLED NINE FEET FROM FACE OF CURB TO CENTER OF THE METER BOX.
- ALL GARBAGE OR SPOIL MATERIAL FROM THIS WORK SHALL BE REMOVED
- FROM THE SITE BY THE CONTRACTOR, AT HIS EXPENSE. 10. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED AND THE S.A.W.S.
- RELEASES THE MAIN FOR TIE-IN AND USE. . UNIT PRICE BID FOR "STANDARD FIRE HYDRANT ASSEMBLY" SHALL INCLUDE FIRE HYDRANT, 6-INCH GATE VALVE AND 6-INCH VALVE BOX COMPLETE,
- ANCHOR BEND, AND ALL 6-INCH DI PIPE REQUIRED (DI PIPE REQUIRED SHALL INCLUDE ALL PIPE FROM THE TEE ON THE MAIN LINE TO THE FIRE HYDRANT). 2. WHEN SEWER LINES ARE INSTALLED IN THE VICINITY OF WATER MAINS, SUCH INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE TEXAS NATURAL

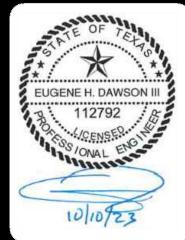
RESOURCE CONSERVATION COMMISSION "RULES AND REGULATIONS FOR PUBLIC

- 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

WATER SYSTEMS" (1988 OR ANY REVISIONS THERETO).

VERTICAL OBSTRUCTIONS, VALVES, AND METER BOXES.

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



WATER (SAWS PRESSURE ZONE 750)

NUMBER OF LOTS <u>104</u> SAWS JOB NO. <u>23-1133</u>

CHECKED DW DRAWN TO

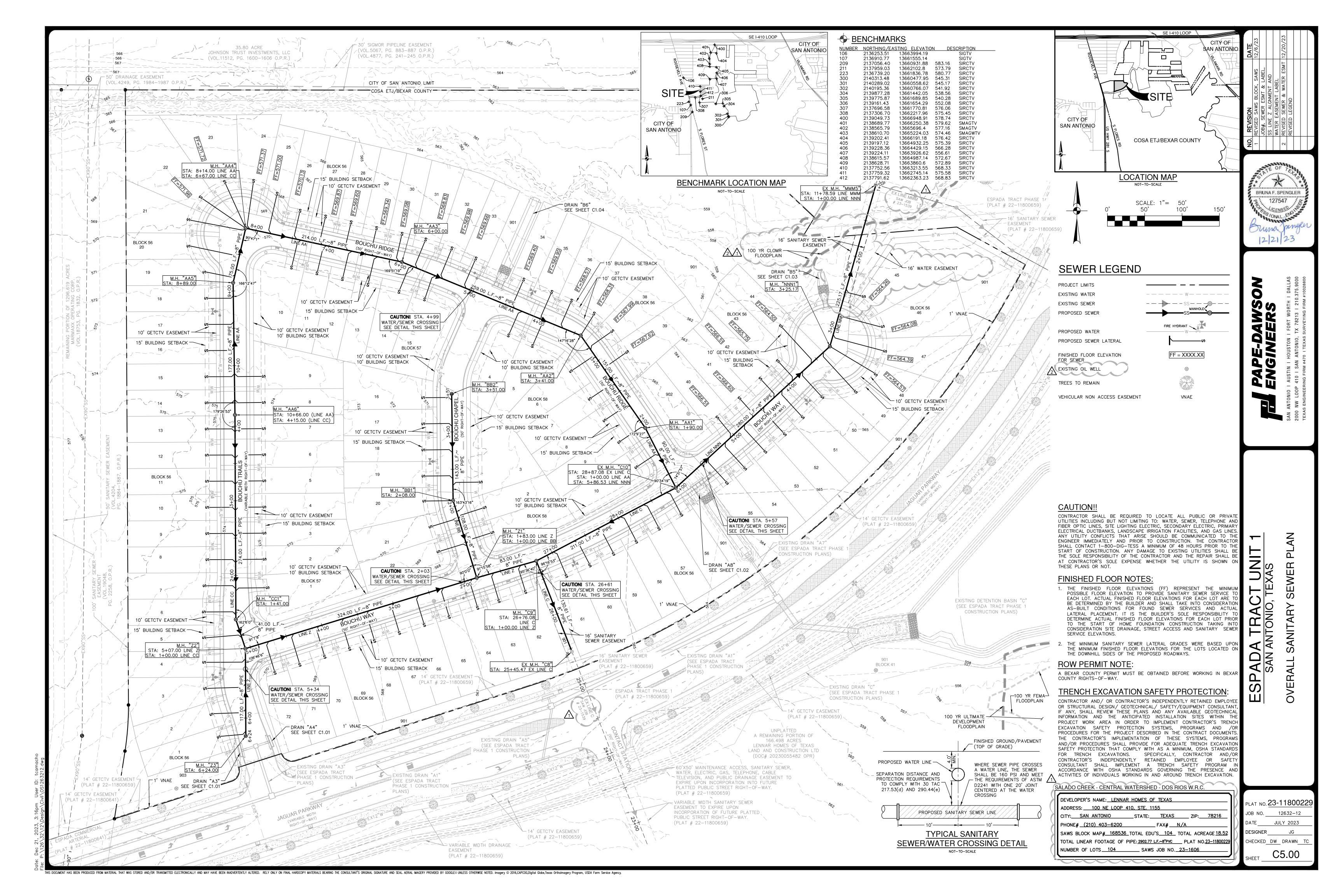
DESIGNER

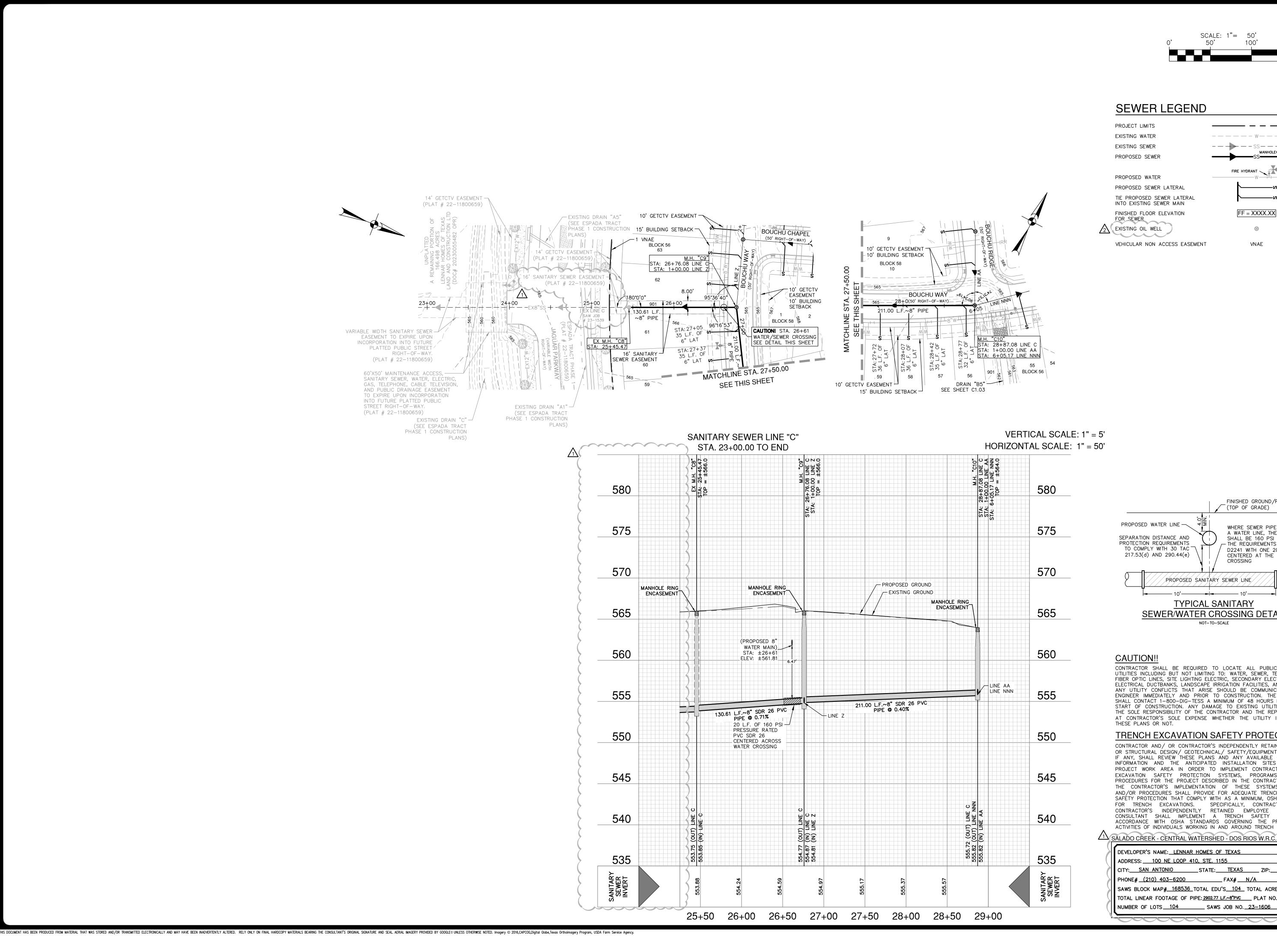
LAT NO. 23-1180022

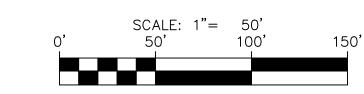
12632-12

DEVELOPER'S NAME: <u>LENNAR HOMES OF TEXAS</u> ADDRESS: 100 NE LOOP 410, STE. 1155

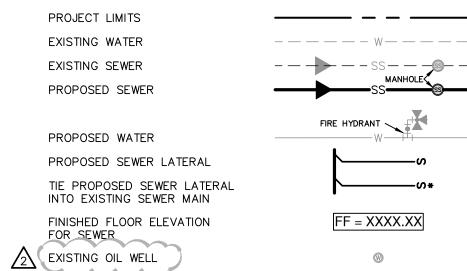
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78216 SAWS BLOCK MAP# 170536 TOTAL EDU'S 108 TOTAL ACREAGE 18.52 TOTAL LINEAR FOOTAGE OF PIPE: 3265.71 LF.~8"PVC PLAT NO.23-11800229







SEWER LEGEND



VEHICULAR NON ACCESS EASEMENT VNAE BRUNA F. SPENGLER

SO

END)

FINISHED GROUND/PAVEMENT (TOP OF GRADE) 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 PROPOSED SANITARY SEWER LINE

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

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 T START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL B 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.

TRENCH EXCAVATION SAFETY PROTECTION:

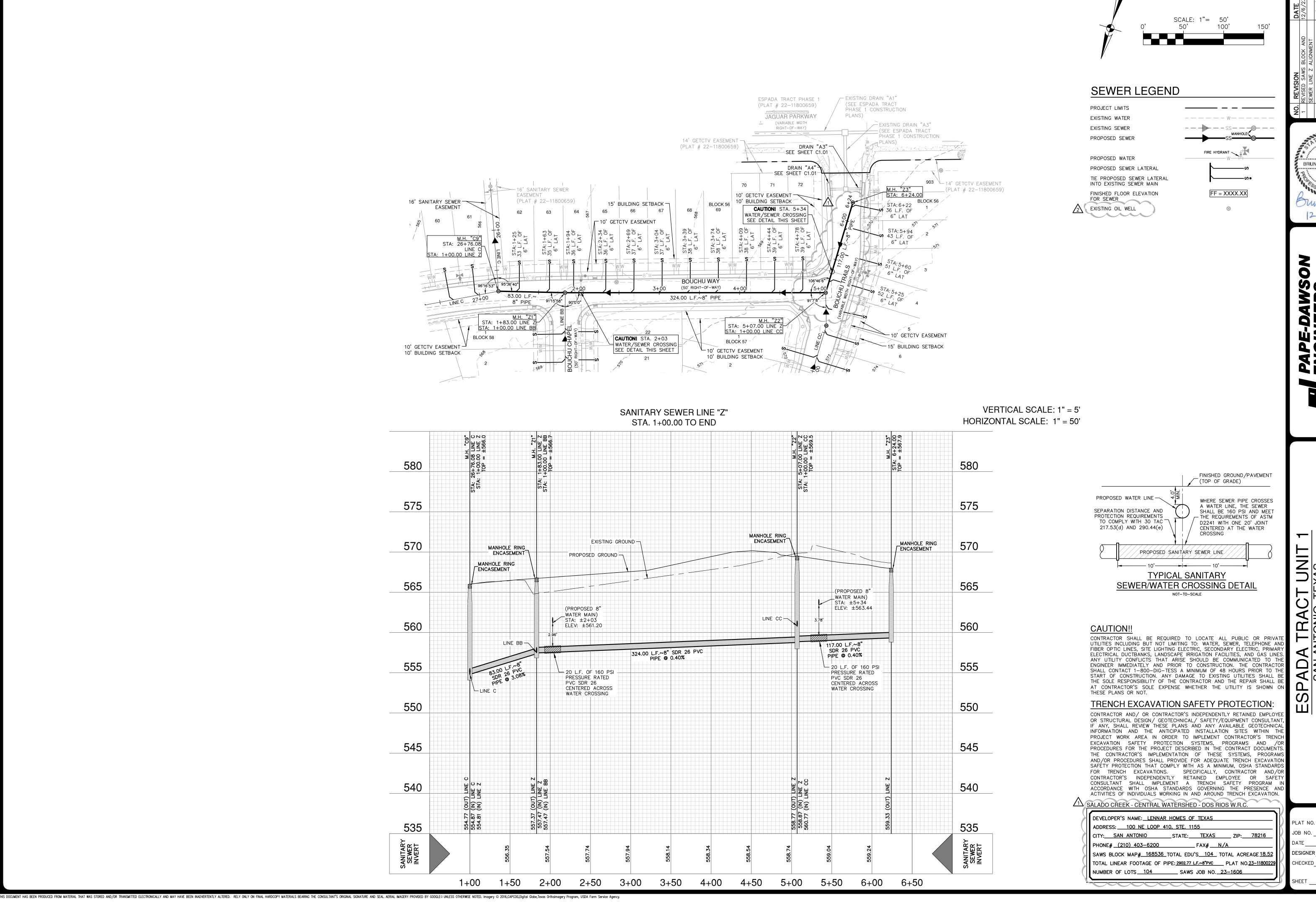
CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN TH PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENC EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /C PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT 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 SAFETY

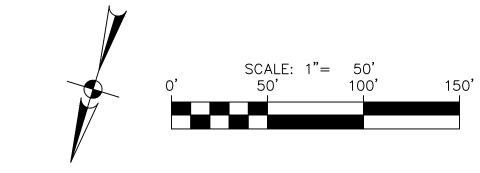
CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AN ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

DEVELOPER'S NAME: LENNAR HOMES OF TEXAS ADDRESS: 100 NE LOOP 410, STE. 1155 CITY: SAN ANTONIO STATE: TEXAS ZIP: 78216 PHONE# (210) 403-6200 FAX# N/A SAWS BLOCK MAP# 168536 TOTAL EDU'S 104 TOTAL ACREAGE 18.52 TOTAL LINEAR FOOTAGE OF PIPE: 2902.77 LF.~8"PVC PLAT NO.23-11800229 CHECKED DW DRAWN TC NUMBER OF LOTS 104 SAWS JOB NO. 23-1606

	PLAT NO.	<u>23-11800229</u>
	JOB NO	12632-12
ı	DATE	JULY 2023
	DESIGNER	JG

C5.01





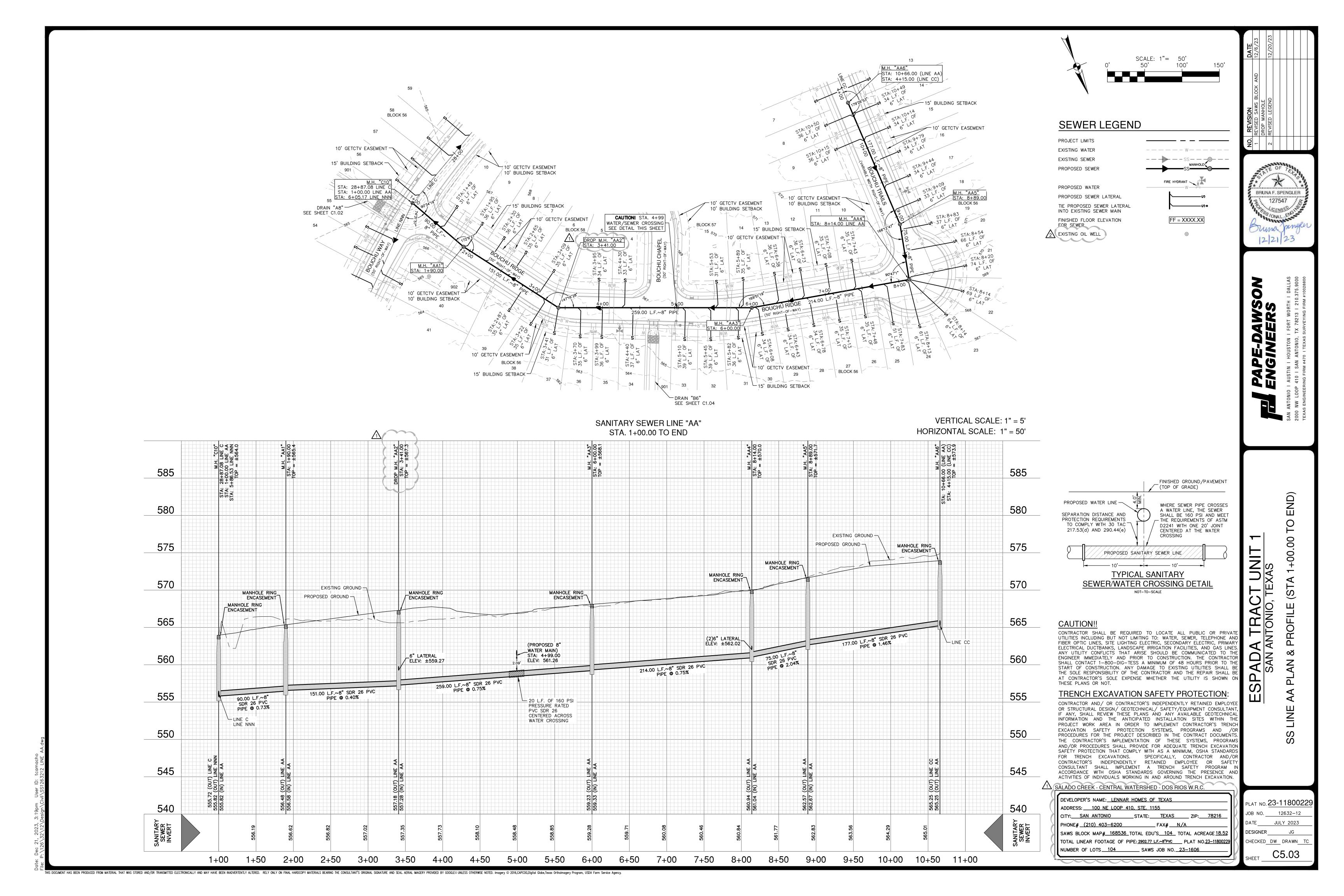
BRUNA F. SPENGLER

END) Ŏ

PLAT NO. 23-11800229 12632-12 DESIGNER

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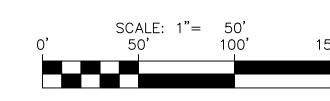
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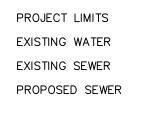


VERTICAL SCALE: 1" = 5'

HORIZONTAL SCALE: 1" = 50'

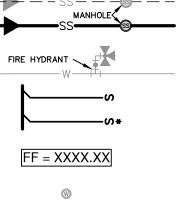


SEWER LEGEND



PROPOSED WATER PROPOSED SEWER LATERAL

TIE PROPOSED SEWER LATERAL INTO EXISTING SEWER MAIN FINISHED FLOOR ELEVATION FOR SEWER 2 EXISTING OIL WELL



BRUNA F. SPENGLER

PLAT NO. 23-11800229

CHECKED<u>DW</u> DRAWN<u>TC</u>

JULY 2023

JOB NO. 12632-12

DESIGNER

FINISHED GROUND/PAVEMENT (TOP OF GRADE) 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 CENTERED AT THE WATER CROSSING

> TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

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.
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TRENCH EXCAVATION SAFETY PROTECTION:

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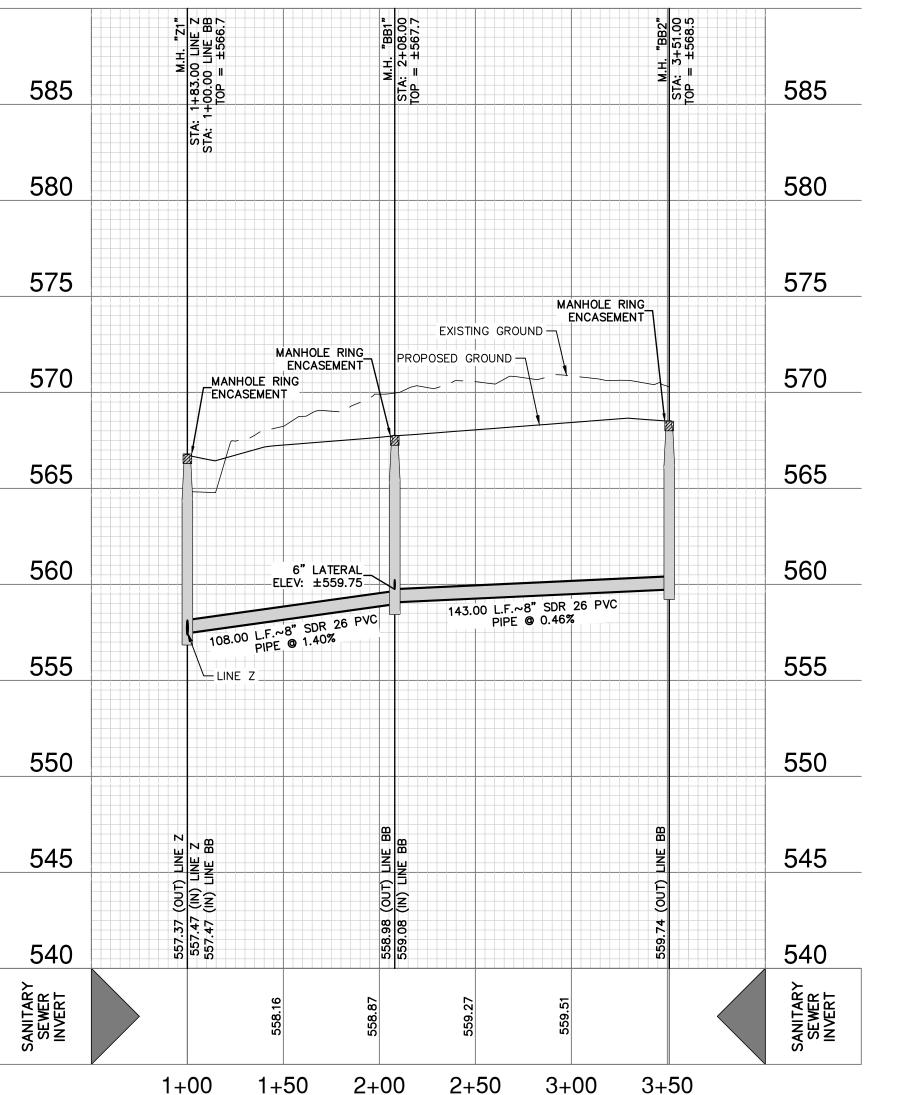
ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

10' GETCTV EASEMENT 10' BUILDING SETBACK 10' GETCTV EASEMENT 15' BUILDING SETBACK -143.00 L.F.~ BOUCHU CHAPEL 163.43'16" 8" PIPE (50' RIGHT-OF-WAY) 15' BUILDING SETBACK 10' GETCTV EASEMENT 10' BUILDING SETBACK SANITARY SEWER LINE "BB"

10' GETCTV EASEMENT 10' BUILDING SETBACK

10' GETCTV EASEMENT

STA. 1+00.00 TO END



217.53(d) AND 290.44(e) PROPOSED SANITARY SEWER LINE NOT-TO-SCALE

CAUTION!!

THESE PLANS OR NOT.

CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM

SALADO CREEK - CENTRAL WATERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME: LENNAR HOMES OF TEXAS
ADDRESS: 100 NE LOOP 410, STE. 1155
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78216
PHONE# (210) 403-6200 FAX# N/A
SAWS BLOCK MAP# 168536 TOTAL EDU'S 104 TOTAL ACREAGE 18.52
TOTAL LINEAR FOOTAGE OF PIPE: 2902.77 L.F.~8"PVC PLAT NO.23-11800229
NUMBER OF LOTS 104 SAWS IOR NO 23-1606

1+50

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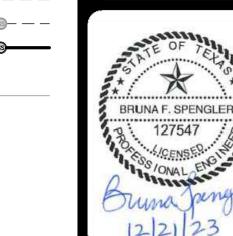
SEWER LEGEND

PROJECT LIMITS EXISTING WATER EXISTING SEWER PROPOSED SEWER

PROPOSED WATER PROPOSED SEWER LATERAL TIE PROPOSED SEWER LATERAL INTO EXISTING SEWER MAIN

FINISHED FLOOR ELEVATION FOR SEWER

EXISTING OIL WELL



FF = XXXX.XX

BRUNA F. SPENGLER

PAPE-DAWSON ENGINEERS

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PLAT NO. 23-11800229

CHECKED DW DRAWN TO

JULY 2023

C5.05

JOB NO. 12632-12

DESIGNER

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

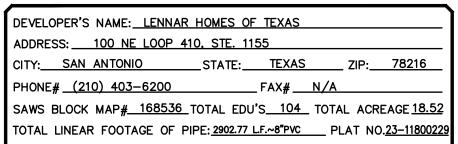
TYPICAL SANITARY NOT-TO-SCALE

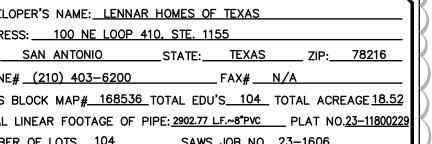
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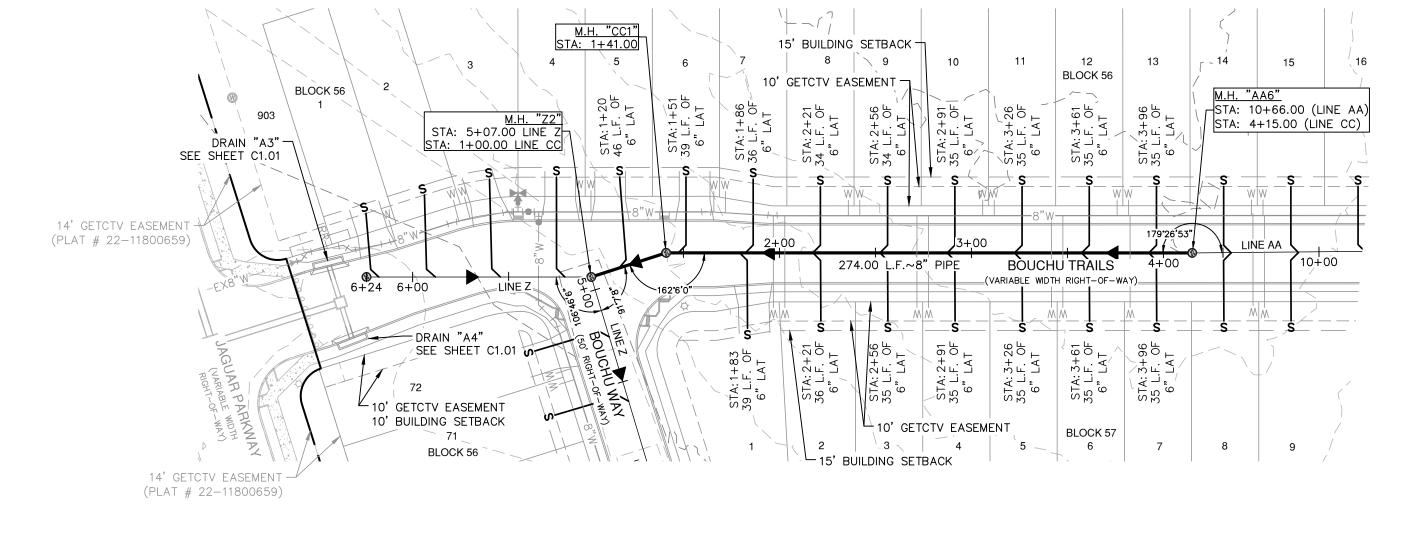
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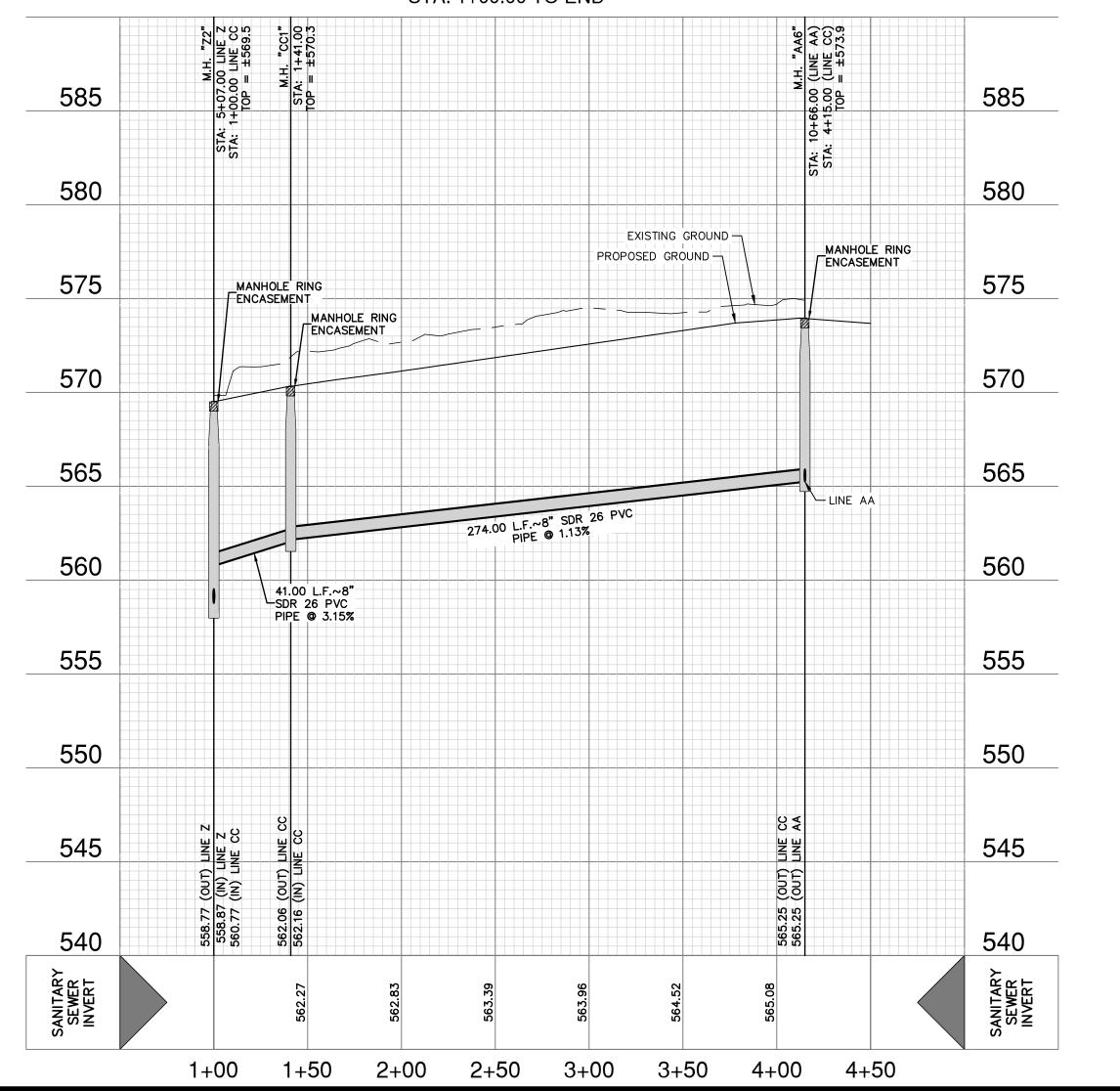
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SANITARY SEWER LINE "CC" STA. 1+00.00 TO END



PROPOSED WATER LINE — SEPARATION DISTANCE AND PROTECTION REQUIREMENTS TO COMPLY WITH 30 TAC -217.53(d) AND 290.44(e) SEWER/WATER CROSSING DETAIL

CAUTION!

VERTICAL SCALE: 1" = 5'

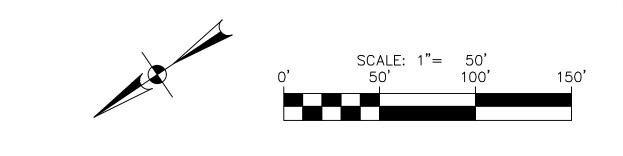
HORIZONTAL SCALE: 1" = 50'

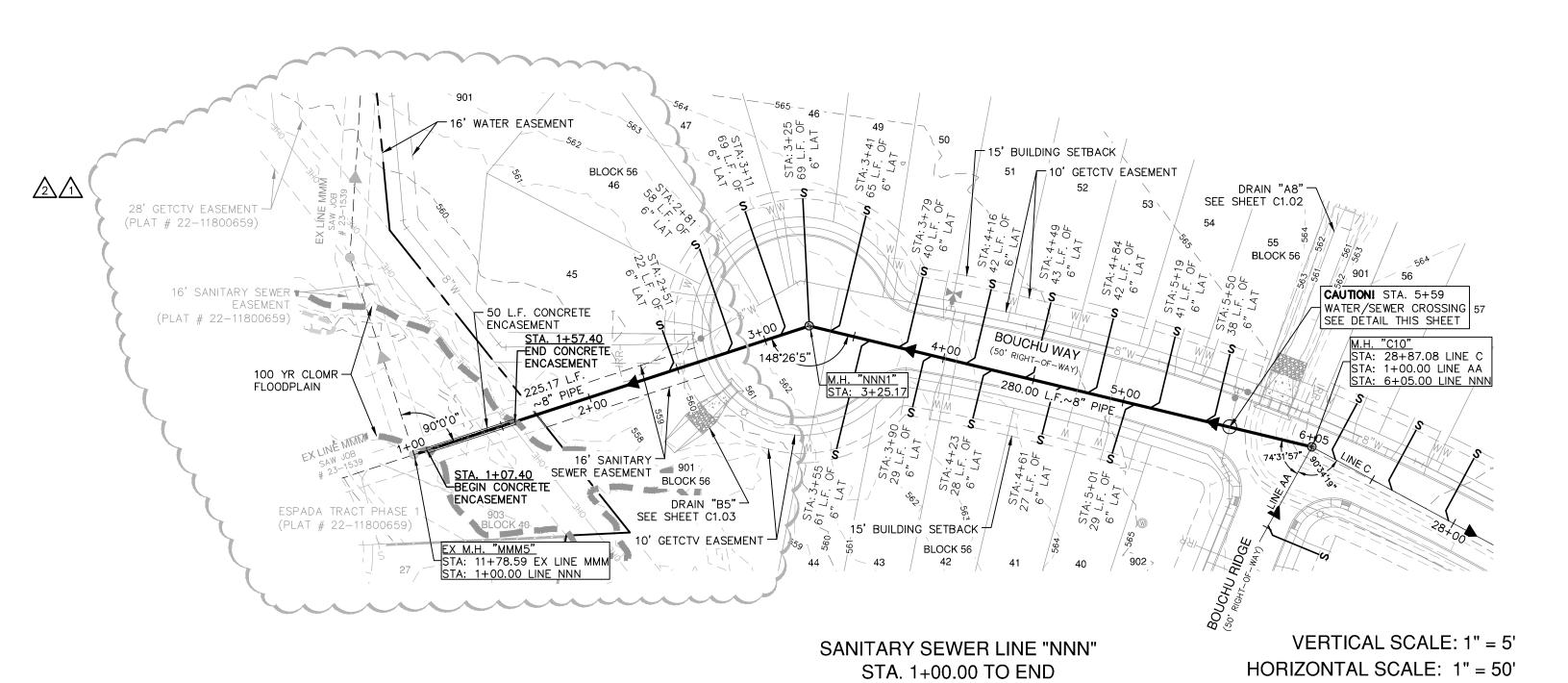
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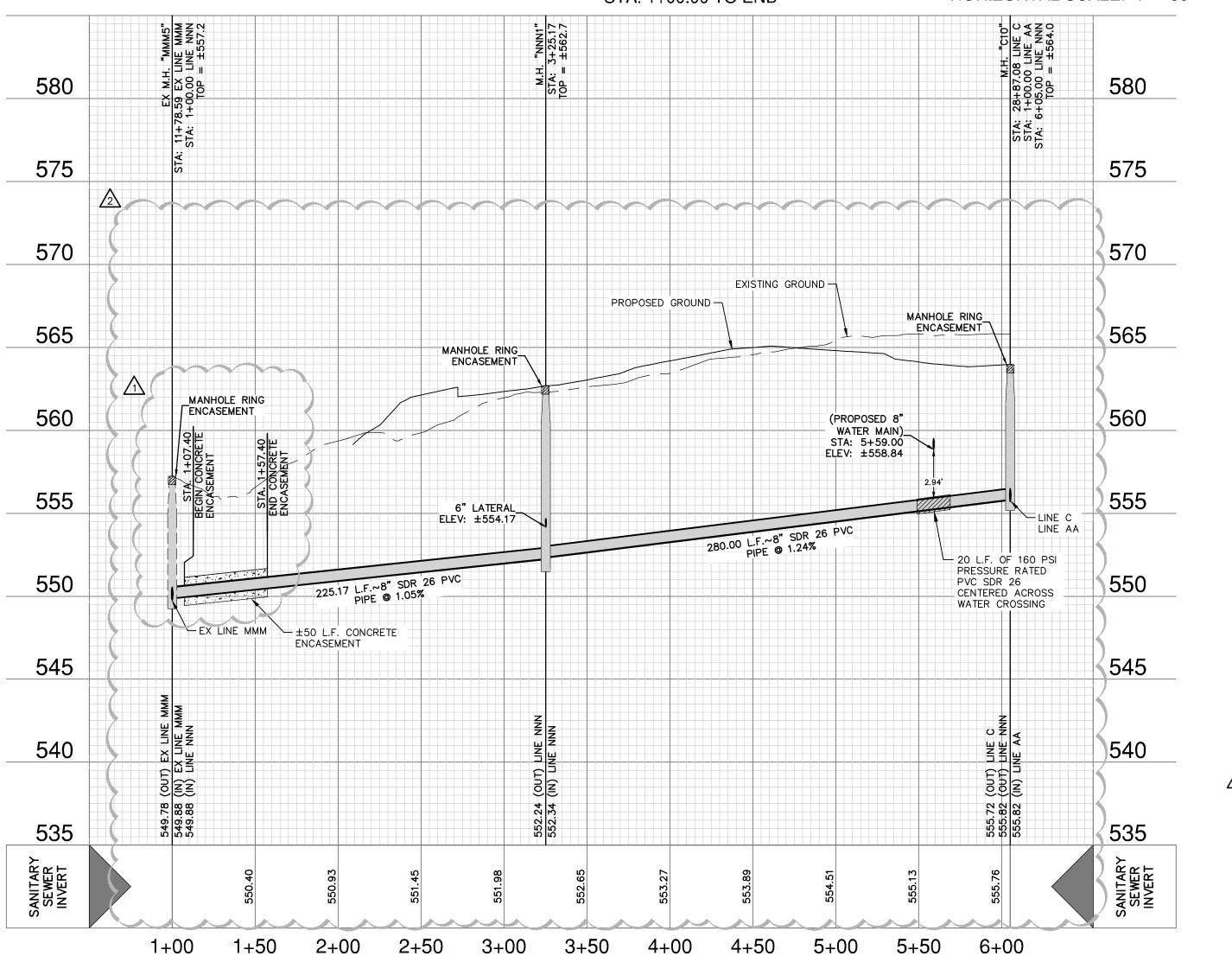
SALADO CREEK - CENTRAL WATERSHED - DOS RIOS W.R.C.

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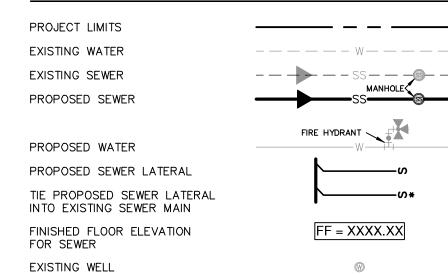
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SEWER LEGEND



BRUNA F. SPENGLEF

PAPE-DAWSON ENGINEERS

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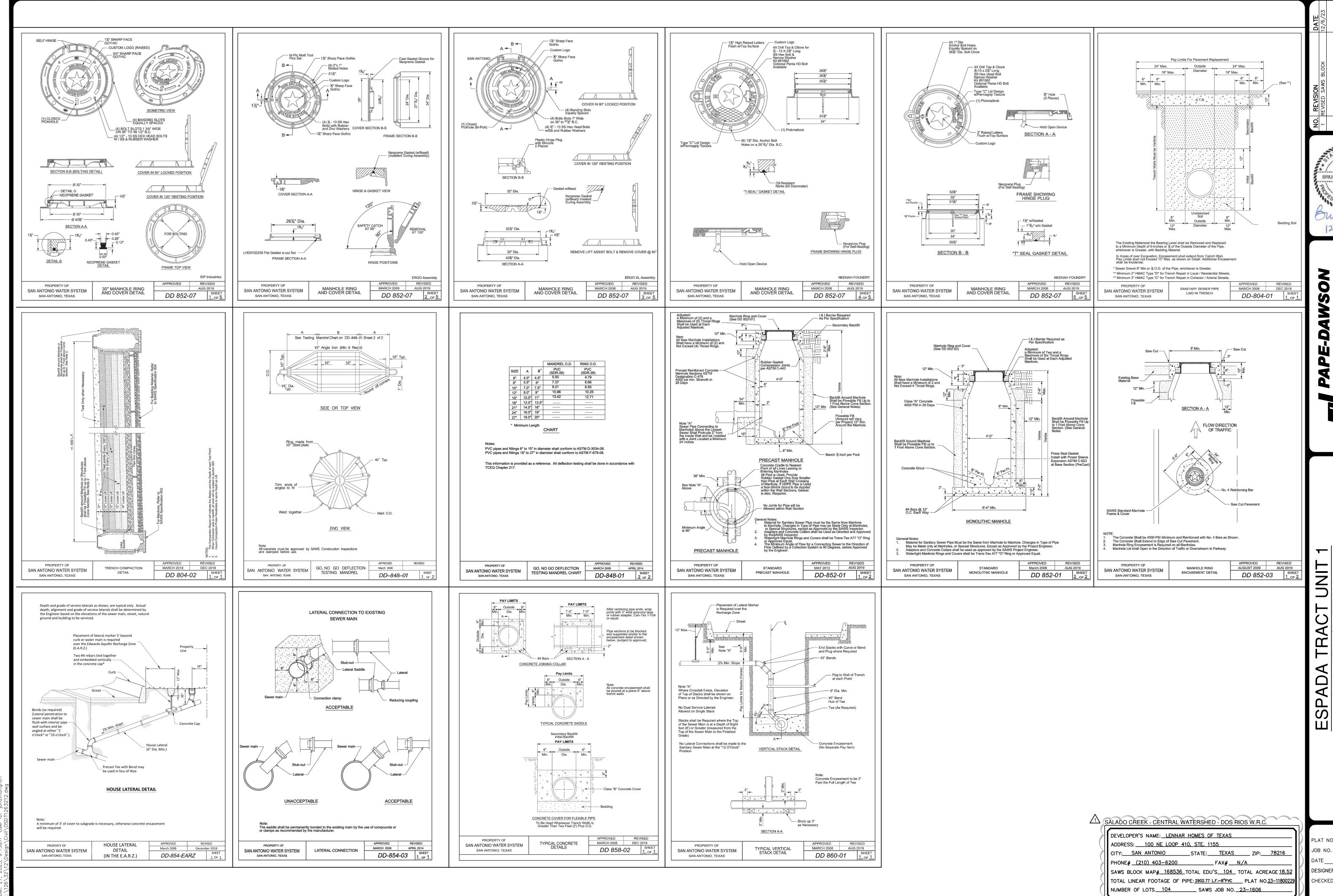
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PLAT NO. 23-1180022 JOB NO. 12632-12 JULY 2023 DESIGNER CHECKED DW DRAWN TO

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BRUNA F. SPENGLER

PLAT NO. 23-1180022 12632-12 CHECKED DW DRAWN 1 SHEET

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		WATER AND D. CURRENT CIT WORKS CONS E. CURRENT CIT
		(UECM).
		2. THE CONTRACTOR THEY OBTAIN A CONSTRUCTION PE SAWS CONSTRUCT ARRANGED A ME REQUIREMENTS. V
		REPLACEMENT AT
		3. THE CONTRACTOR WEBSITE, HTTP:/
		4. THE CONTRACTOF INSPECTION DIVISI (210) 233—2973, AFFECTED HOME BEGINNING ANY V
		BEGINNING ANY N 5. LOCATION AND D THE PLANS ARE DEPTHS MUST BE
		DEPTHS MUST BE CONSTRUCTION. I UTILITY SERVICE DURING CONSTRUC
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		LOCATES REQUE FOLLOWING CONTA SAWS UTILITY
		 COSA DRAINA COSA TRAFFI COSA TRAFFI TEXAS STATE
		7. THE CONTRACTOR CURBS, STREETS, ORIGINAL OR BE
		PROJECT'S CONST
		8. ALL WORK IN TE COUNTY RIGHT—(CONSTRUCTION SF 9. THE CONTRACTO GOVERNING MUNICIPAL SECTION
		GOVERNING MUNIC 10. THE CONTRACTOR FLOOD PLAIN WITH
		11. HOLIDAY WORK: (SAWS RECOGNIZEI CONSTWORKREQ@S
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		ANY AND ALL SA APPROVAL WILL B
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AWS CONSTRUCTION NOTES

(LAST REVISED JANUARY 2022)

ERAL SECTION

- AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE
- XAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) 'DESIGN OR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING TITLE 30 PART 1 CHAPTER 290.
- XDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF STREETS AND DRAINAGE".
- SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR SANITARY SEWER CONSTRUCTION".
- TY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC STRUCTION". ITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL"
- SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL COPY OF THE APPROVED COUNTER PERMIT OR GENERAL ERMIT (GCP) FROM THE CONSULTANT AND HAS BEEN NOTIFIED BY TION INSPECTION DIVISION TO PROCEED WITH THE WORK AND HAS ETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK ORK COMPLETED BY THE CONTRACTOR WITHOUT AN APPROVED AND/OR A GCP WILL BE SUBJECT TO REMOVAL AND THE EXPENSE OF THE CONTRACTORS AND/OR THE DEVELOPER.
- SHALL OBTAIN THE SAWS STANDARD DETAILS FROM THE SAWS /WWW.SAWS.ORG/BUSINESS_CENTER/SPECS. UNLESS OTHERWISE
- ON NOTIFICATION PROCEDURES THAT WILL BE USED TO NOTIFY RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO
- DEPTH OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM CTION AT NO COST TO SAWS.
- SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES STRUCTURES AT LEAST 1-2 WEEKS PRIOR TO CONSTRUCTION ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR STING PIPE LOCATION MARKERS ON SAWS FACILITIES. TH ACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:
 - LOCATES: HTTP://WWW.SAWS.ORG/SERVICE/LOCATES AGE (210) 207-0724 OR (210) 207-6026
 - FIC SIGNAL OPERATIONS (210) 206-8480
 - FIC SIGNAL DAMAGES (210) 207-3951
- WIDE ONE CALL LOCATOR 1-800-545-6005 OR 811
- OR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS TTER CONDITION IF DAMAGES ARE MADE AS A RESULT OF THE
- EXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AND/OR BEXAR -OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE SPECIFICATIONS AND PERMIT REQUIREMENTS.
- OR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER CIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.
- SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR THOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.
- ED HOLIDAYS. REQUEST SHOULD BE SENT TO

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

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

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

SAWS SEWER NOTES

- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SANITARY SEWER OVERFLOW (SSO) OCCURS AS A RESULT OF THEIR WORK. ALL CONTRACTOR PERSONNEL RESPONSIBLE FOR SSO PREVENTION AND CONTROL
- SHALL BE TRAINED ON PROPER RESPONSE. SHOULD AN SSO OCCUR, THE CONTRACTOR SHALL: A. IDENTIFY THE SOURCE OF THE SSO AND NOTIFY SAWS EMERGENCY
- OPERATIONS CENTER (EOC) IMMEDIATELY AT (210) 233-2014. PROVIDE THE ADDRESS OF THE SPILL AND AN ESTIMATED VOLUME OR FLOW. B.ATTEMPT TO ELIMINATE THE SOURCE OF THE SSO.
- C.CONTAIN SEWAGE FROM THE SSO TO THE EXTENT OF PREVENTING A POSSIBLE CONTAMINATION OF WATERWAYS.
- D.CLEAN UP SPILL SITE (RETURN CONTAINED SEWAGE TO THE COLLECTION SYSTEM IF POSSIBLE) AND PROPERLY DISPOSE OF CONTAMINATED SOIL/MATERIALS.
- E.CLEAN THE AFFECTED SEWER MAINS AND REMOVE ANY DEBRIS. F.MEET ALL POST-SSO REQUIREMENTS AS PER THE EPA CONSENT DECREE, INCLUDING LINE CLEANING AND TELEVISING THE AFFECTED SEWER MAINS (AT SAWS DIRECTION) WITHIN 24 HOURS.
- SHOULD THE CONTRACTOR FAIL TO ADDRESS AN SSO IMMEDIATELY AND TO SAWS SATISFACTION, THEY WILL BE RESPONSIBLE FOR ALL COSTS INCURRED BY SAWS, INCLUDING ANY FINES FROM EPA, TCEQ AND/OR ANY OTHER FEDERAL, STATE OR LOCAL AGENCIES.
- NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR THIS WORK. ALL WORK SHALL BE DONE ACCORDING TO GUIDELINES SET BY THE TCEQ
- IS TO MAKE ARRANGEMENTS 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 PRESSURÉ RATED PVC AT THE PROPOSED WATER CROSSING.
 - ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE FINISHED GRADE OF THE PROJECT'S IMPROVEMENTS. (NSPI)
 - . SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER: ALL SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER, RECYCLED WATER, PETROLEUM PRODUCTS, OR CHEMICALS MUST BE REPORTED IMMEDIATELY TO THE SAWS INSPECTOR ASSIGNED TO THE COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP). THIS REQUIREMENT APPLIES TO EVERY SPILL, OVERFLOW, OR DISCHARGE RÉGARDLESS OF SIZE.
 - MANHOLE AND ALL PIPE TESTING (INCLUDING THE TV INSPECTION) MUST BE PERFORMED AND PASSED PRIOR TO FINAL FIELD ACCEPTANCE BY SAWS CONSTRUCTION INSPECTION DIVISION, AS PER THE SAWS SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION.
 - ALL PVC PIPE OVER 14 FEET OF COVER SHALL BE EXTRA STRENGTH WITH MINIMUM PIPE STIFFNESS OF 115 PSI.

CONTRACTORS WILL NOT BE 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 SEPARATE PAY ITEM.
- CONTRACTOR TO INSTALL CLEANOUTS AT THE END OF ALL SEWER LATERALS, PER LATERAL DETAIL SHEET C5.07
- . NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- ALL 6" SEWER LATERALS WILL BE SET AT 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
- WHEN HORIZONTAL DISTANCE BETWEEN SEWER PIPES AND WATER MAIN IS LESS THAN 9 FOOT OF SEPARATION, SEWER MAIN SHALL BE INSTALLED WITH 150 PSI (MIN) PRESSURE PIPE AND FITTINGS IN ACCORDANCE WITH SAWS CONSTRUCTION CRITERIA FOR CONSTRUCTION OF SEWER MAINS IN THE VICINITY OF WATER MAINS.
- . CONTRACTOR SHALL ENSURE THAT MANHOLES OUTSIDE OF PAVED AREAS ARE SET WITH TOP ELEVATIONS 6" ABOVE FINISHED GRADE WITH CONCRETE
- 7. ALL SEWER PIPES SHALL BE 8" PVC (SDR 26), UNLESS OTHERWISE NOTED.
- 8. CONTRACTOR IS TO VERIFY EXISTING INVERT OF EXISTING SANITARY SEWER MAINS AND ALERT ENGINEER IMMEDIATELY OF ANY DIFFERENCE FROM INVERT SHOWN ON PLANS.
- 9. CONTRACTOR SHALL PROTECT ALL EXISTING FENCES. ANY FENCE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR
- 10. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
- 1. 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.

SALADO CREEK - CENTRAL WATERSHED - DOS RIOS W.R.C.

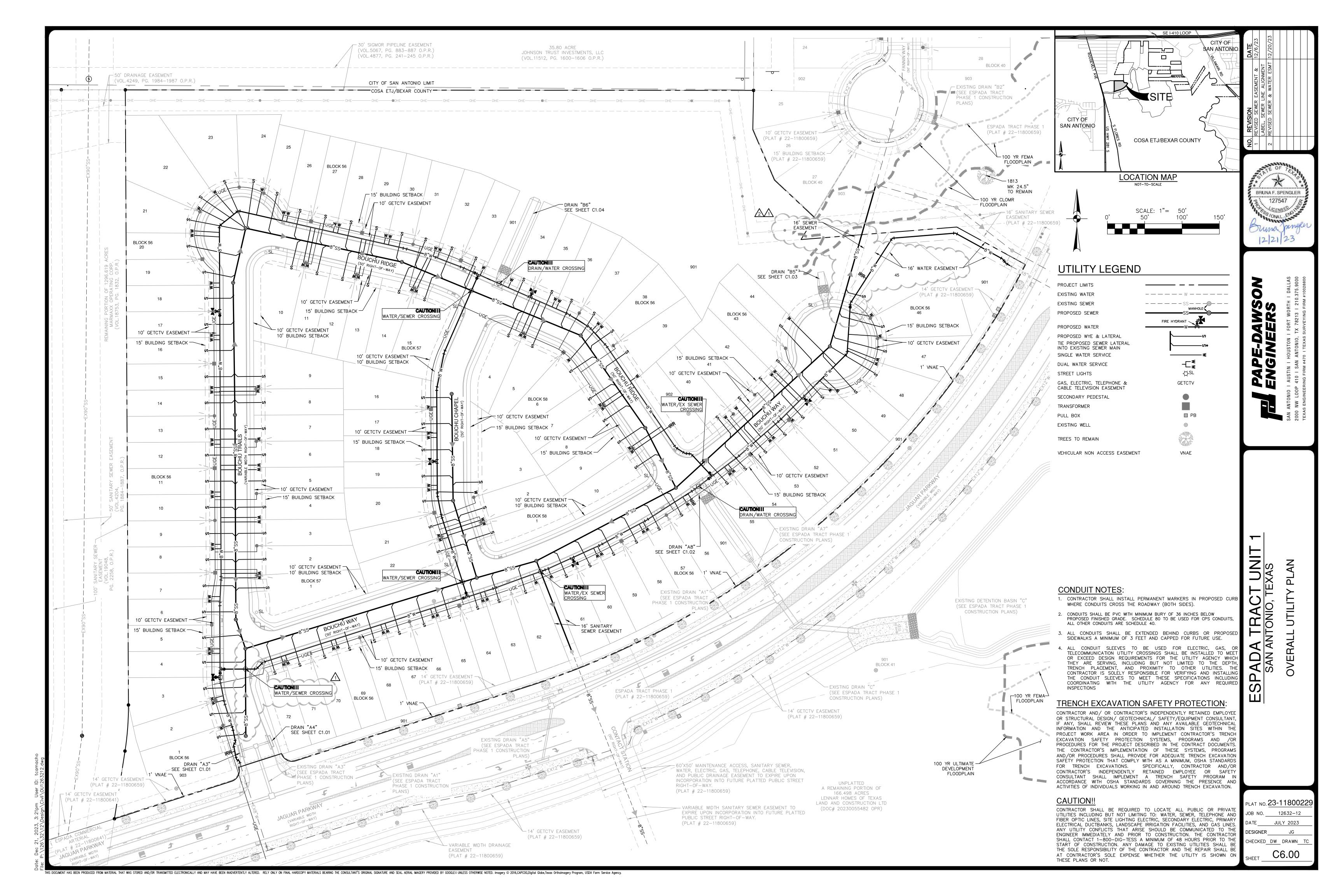
DEVELOPER'S NAME: LENNAR	HOMES OF	TEXAS		
ADDRESS: 100 NE LOOP 4	10, STE, 11	55		
CITY: SAN ANTONIO	_STATE:_	TEXAS	ZIP:	78216
PHONE# (210) 403-6200		_FAX# <u>1</u>	I/A	

SAWS BLOCK MAP# 168536 TOTAL EDU'S 104 TOTAL ACREAGE 18.52 TOTAL LINEAR FOOTAGE OF PIPE: 2902.77 L.F.~8"PVC PLAT NO.23-11800229 NUMBER OF LOTS 104 SAWS JOB NO. 23-1606

BRUNA F. SPENGLER

127547

PLAT NO. 23-11800225 12632-12 JULY 2023 DESIGNER







1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THIS SCOPE (WORK WHERE NOT SPECIFICALLY COVERED IN THE SPECIFICATIONS OF GEOTECHNICAL REPORT SHALL CONFORM TO ALL APPLICABLE CITY, COUNTY AND TXDOT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

PLAN REFLECT FINISHED GRADES. THE THICKNESS OF PAVING, BAS GRASS, TOPSOIL, AND MULCH MUST BE SUBTRACTED TO OBTAIN SUBGRADE

LIMITS OF DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE

AND TOPSOIL. CLEAN STRIPPINGS AND TOPSOIL MAY BE STOCKPILED ON

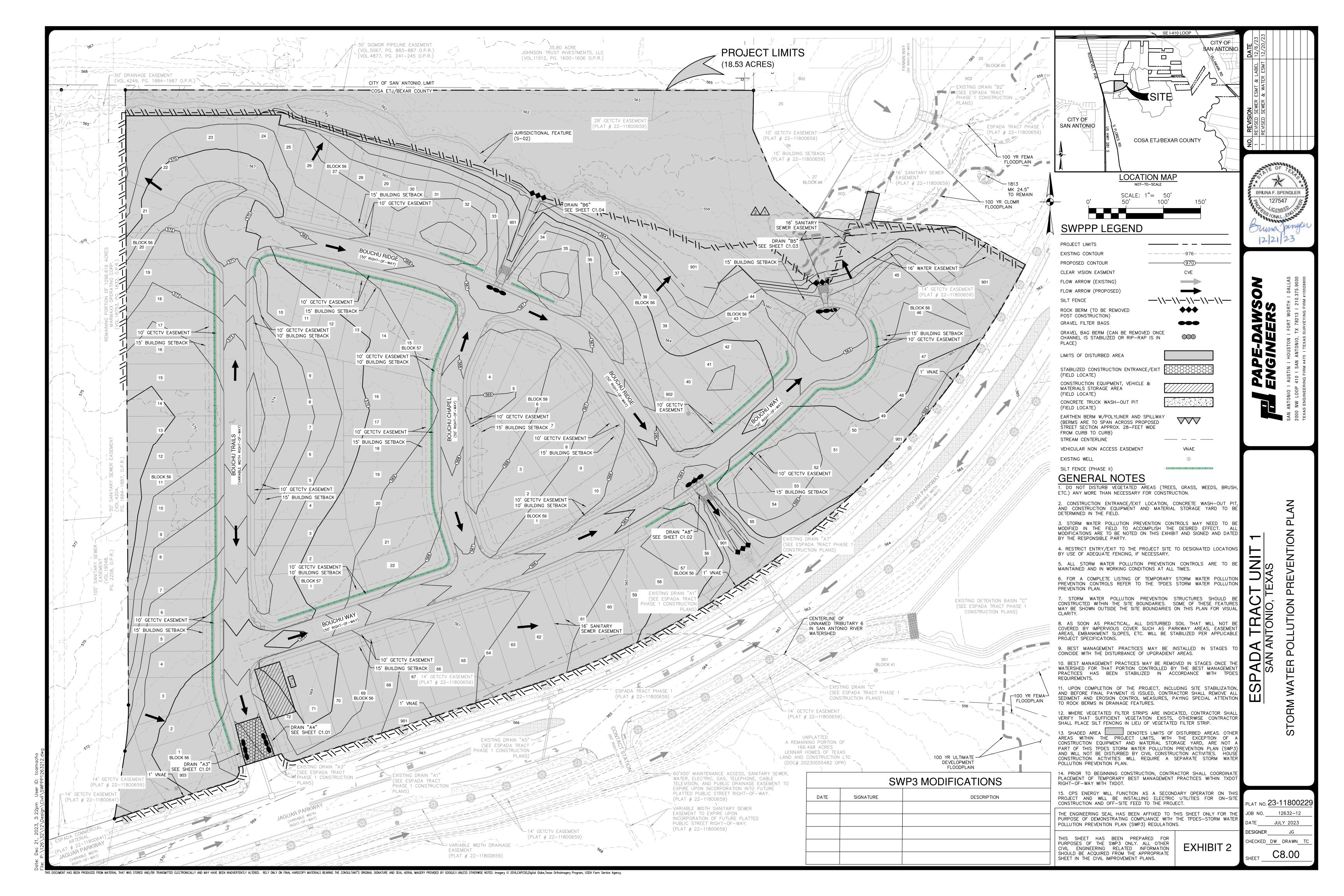
9. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE STABILIZATION ALL DISTURBED AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND TPDES/SWPPP REQUIREMENTS. REFERENCE

THE CONTRACTOR WILL BE RESPONSIBLE FOR

THE PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW

LAT NO. 23-11800229 12632-12 DESIGNER

CHECKED DW DRAWN TO



SCHEMATIC OF TEMPORARY CONSTRUCTION ENTRANCE/EXIT

MATERIALS

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 OF

INSTALLATION

. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.

. 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.

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

2. PIECES OF SOD SHOULD BE CUT TO THE SUPPLIER'S STANDARD WIDTH AND

. STANDARD SIZE SECTIONS OF SOD SHOULD BE STRONG ENOUGH TO

SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN

4. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD

PRIOR TO SOIL PREPARATION, AREAS TO BE SODDED SHOULD BE BROUGHT

THE SURFACE SHOULD BE CLEARED OF ALL TRASH, DEBRIS AND OF ALL

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. FERTILIZE

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

FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE CONTOUR.

SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. ON SLOPING LAND, THE

SOD STRIPS IN WATERWAYS SHOULD BE LAID PERPENDICULAR TO THE

. 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

DIRECTION OF FLOW. CARE SHOULD BE TAKEN TO BUTT ENDS OF STRIPS

LAY SOD IN A STAGGERED PATTERN. BUTT

THE STRIPS TIGHTLY AGAINST EACH OTHER.

DO NOT LEAVE SPACES AND DO NOT

OVERLAP. A SHARPENED MASON'S TROWEL

IS A HANDY TOOL FOR TUCKING DOWN THE

TING - ANGLED ENDS CAUSED BY THE

AUTOMATIC SOD CUTTER MUST BE MATCHED

ENDS AND TRIMMING PIECES.

LAY SOD ACROSS THE

DIRECTION OF FLOW

MATERIALS

OF 36 HOURS.

SHOOT GROWTH AND THATCH.

SITE PREPARATION

TIGHTLY (SEE FIGURE ABOVE).

TORN OR UNEVEN PADS SHOULD NOT BE ACCEPTABLE.

SUSPENDED FROM A FIRM GRASP ON ONE END OF THE SECTION.

TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLAN.

INSTALLATION IN CHANNELS

INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.

PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD

SOIL.

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

GEOTEXTILE FABRIC TO

STABILIZE FOUNDATION

COMMON TROUBLE POINTS

IMPROVE FOUNDATION DRAINAGE.

SEDIMENT BASIN.

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

HEALTHY: MOWED AT A 2"-3"

ROOT ZONE - SOIL AND ROOTS

CUTTING HEIGHT.

STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL

NOT-TO-SCALE

APPEARANCE OF GOOD SOD

SOON AS THE SOD IS LAID.

THE MOWER HIGH (2"-3").

ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE

3. MOW WHEN THE SOD IS ESTABLISHED - IN 2-3 WEEKS. SET

2. WATER TO A DEPTH OF 4" AS NEEDED. WATER WELL AS

1. INADEQUATE RUNOFF CONTROL-SEDIMENT WASHES ONTO PUBLIC ROAD.

STONE TOO SMALL OR GEOTEXTILE FABRIC ABSENT, RESULTS IN MUDDY CONDITION AS STONE IS PRESSED INTO SOIL. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC-EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY. 4. PAD NOT FLARED SUFFICIENTLY AT ROAD SURFACE, RESULTS IN MUD BEING TRACKED ON TO ROAD AND POSSIBLE DAMAGE TO ROAD.

INSPECTION AND MAINTENANCE GUIDELINES

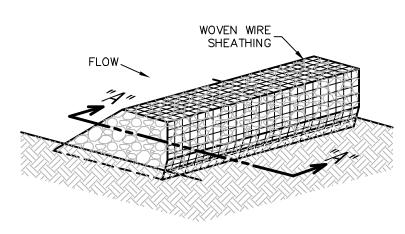
5. UNSTABLE FOUNDATION - USE GEOTEXTILE FABRIC UNDER PAD AND/OR

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

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

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

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



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.

NSPECTION AND MAINTENANCE GUIDELINES

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

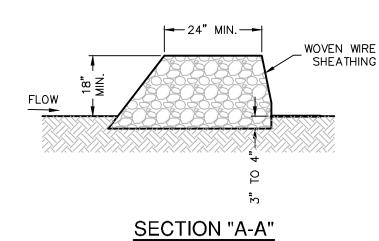
REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER THAT WILL NOT CAUSE ANY ADDITIONAL SILTATION.

3. REPAIR ANY LOOSE WIRE SHEATHING.

4. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION

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.



MATERIALS

BEING 2:1 (H: V) OR FLATTER.

OR AS NEAR AS POSSIBLE

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

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

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

2. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES

3. PLACE THE ROCK ALONG THE SHEATHING AS SHOWN IN THE DIAGRAM TO A HEIGHT NOT LESS THAN 18".

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

4. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE

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)

NOT-TO-SCALE

STEEL FENCE POST SILT FENCE -MAX. 8' SPACING(**` (MIN. HEIGHT 24' ABOVE EXISTING \M IN. EMBEDMENT = 1 GROUND) WIRE MESH BACKING 4X4~W1.4xW1.4 MIN. COMPACTED EARTH OR ROCK BACKFILL - ALLOWARLE TYPICAL CHAIN LINK FENCE FABRIC IS ACCEPTABLE

TRENCH-

ENDS OF FABRIC MEET

ISOMETRIC PLAN VIEW

CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET. (RG-348, SECTION 1.4.3)

**STEEL POSTS, WHICH SUPPORT THE SILT

ROCK BERM DETAIL

GRASS SHOULD BE GREEN AND -THATCH- GRASS CLIPPINGS AND DEAD LEAVES, UP TO 1/2" THICK SHOULD BE 1/2"-3/4" THICK, WITH DENSE ROOT MAT FOR STRENGTH. INCORRECT SOD INSTALLATION

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

GENERAL INSTALLATION (VA. DEPT. OF

SOD ALSO SHOULD NOT BE LAID ON SOIL SURFACES THAT ARE FROZEN.

THE FIRST ROW OF SOD SHOULD BE LAID IN A STRAIGHT LINE WITH

OTHER. LATERAL JOINTS SHOULD BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. CARE SHOULD BE EXERCISED TO ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS (SEE FIGURE ABOVE).

SOD SHOULD BE LAID WITH STAGGERED JOINTS AND SECURED BY STAPLING OR OTHER APPROVED METHODS. SOD SHOULD BE INSTALLED WITH THE LENGTH PERPENDICULAR TO THE SLOPE (ON CONTOUR).

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

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

LEAF SHOULD BE REMOVED AT ANY ONE CUTTING.

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

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

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

SOD INSTALLATION DETAIL

SOON AS PRACTICAL.

SILT FENCE

AT ANY TIME.

EXCEEDING 140.

INSTALLATION

SHOULD BE 6 FEET.

AREAS OF CONCENTRATED FLOW.

2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

USE PEGS OR STAPLES TO FASTEN SOD FIRMLY - AT THE ENDS OF STRIPS AND IN THE CENTER, OR EVERY 3-4 FEET IF THE STRIPS ARE LONG. WHEN READY TO MOW, DRIVE PEGS OR STAPLES FLUSH WITH THE GROUND.

CONSERVATION, 1992

SOD SHOULD NOT BE CUT OR LAID IN EXCESSIVELY WET OR DRY WEATHER.

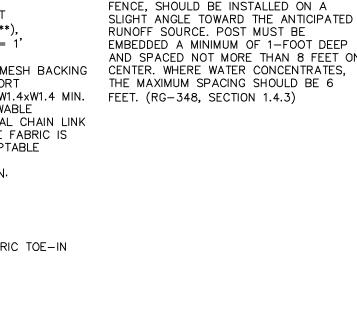
2. DURING PERIODS OF HIGH TEMPERATURE, THE SOIL SHOULD BE LIGHTLY LENGTH, WITH A MAXIMUM ALLOWABLE DEVIATION IN ANY DIMENSION OF 5%. IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD, TO COOL THE SOIL AND REDUCE ROOT BURNING AND DIEBACK.

SUBSEQUENT ROWS PLACED PARALLEL TO AND BUTTING TIGHTLY AGAINST EACH

4. ON SLOPES 3:1 OR GREATER, OR WHEREVER EROSION MAY BE A PROBLEM,

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

NOT-TO-SCALE



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

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

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

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

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

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

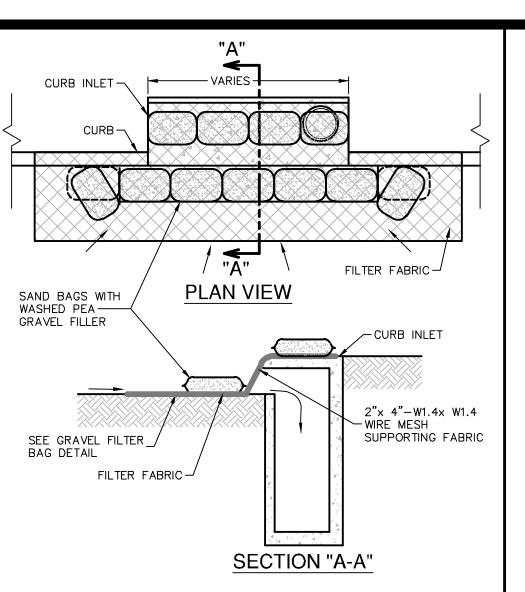
INSPECTION AND MAINTENANCE GUIDELINES

EXCEED 50% OF HEIGHT. 3. REPLACE TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL

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

> PIT DETAIL NOT-TO-SCALE



GENERAL NOTES

. 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 AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.

INSPECTION AND MAINTENANCE GUIDELINES 1. INSPECTION SHOULD BE MADE WEEKLY. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.

2. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

3. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND 4. INSPECT FILTER FABRIC AND PATCH OR REPLACE IF TORN OR MISSING.

5. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER

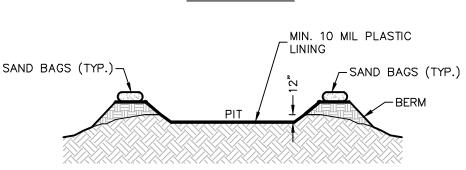
BAGGED GRAVEL CURB INLET PROTECTION DETAIL

NOT-TO-SCALE

THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

MIN. 10 MIL PLASTIC LINING LATH AND FLAGGING ON ALL SIDES -SAND BAGS (TYP.) PIT

PLAN VIEW



GENERAL NOTES

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.

SECTION "A-A'

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

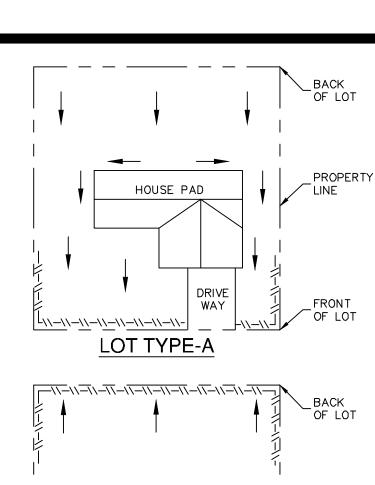
PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL IN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

MAINTENANCE

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

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

CONCRETE TRUCK WASHOUT



HOUSE PAD

LOT TYPE-B

HOUSE PAD

LOT TYPE-C

NOTE: SILT FENCE TO BE INSTALLED PER

DOWNGRADIENT SIDE OF EACH LOT LINE

THESE DETAILS AND LOCATED ON THE

WAY

EUGENE H. DAWSON 112792 6/23/23

PROPERT'

LINE

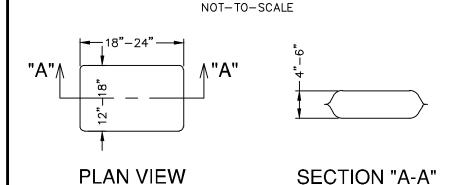
PROPERT

LEGEND -\\-\\- SILT FENCE → DRAINAGE FLOW

OR LIMITS OF CLEARING AS GENERALLY SHOWN ON THE OVERALL SITE PLAN. TYPICAL HOUSE LOT LAYOUTS

SECTION "A-A"

DRIVE WAY



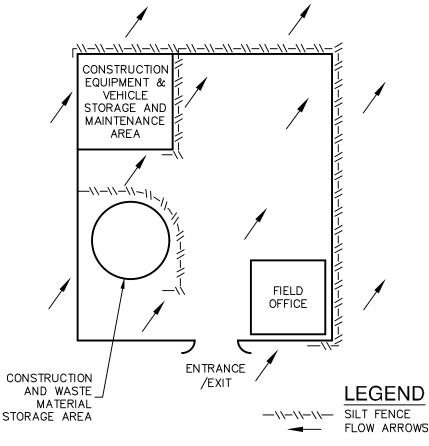
THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN FABRIC, MIN. UNIT WEIGHT OF 4 OUNCES/SY, HAVE A MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70%.

THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM WASHED PEA

GRAVEL TO COARSE GRAVEL (0.31 TO 0.75 INCH DIAMETER). 3. SAND SHALL <u>NOT</u> BE USED TO FILL THE FILTER BAGS.

GRAVEL FILTER BAG DETAIL

NOT-TO-SCALE



CONSTRUCTION STAGING AREA

NOT-TO-SCALE

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

THIS SHEET HAS BEEN PREPARED FOI PURPOSES OF THE SWP3 ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION 1 OF SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

12632-12 SIGNER C8.01

HECKED DW DRAWN

_{-AT NO.} 23-1180022

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

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

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

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

. 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%,

. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET

LONG WITH TEE OR Y-BAR CROSS SECTION, SURFACE PAINTED OR

GALVANIZED, MINIMUM WEIGHT 1.25 LB/FT, AND BRINDELL HARDNESS

3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED

. 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

AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NUMBER 30.

INSTALLED, SILT FENCES ARE NOT LIKELY TO BE EFFECTIVE.

1. INSPECT ALL FENCING WEEKLY. REMOVE SEDIMENT WHEN BUILDUP APPROACHES 6 INCHES, BUT NOT TO

TO THE TORN SECTION.

ITSELF SHOULD BE DISPOSED OF IN AN APPROVED LANDFILL.

SILT FENCE DETAIL