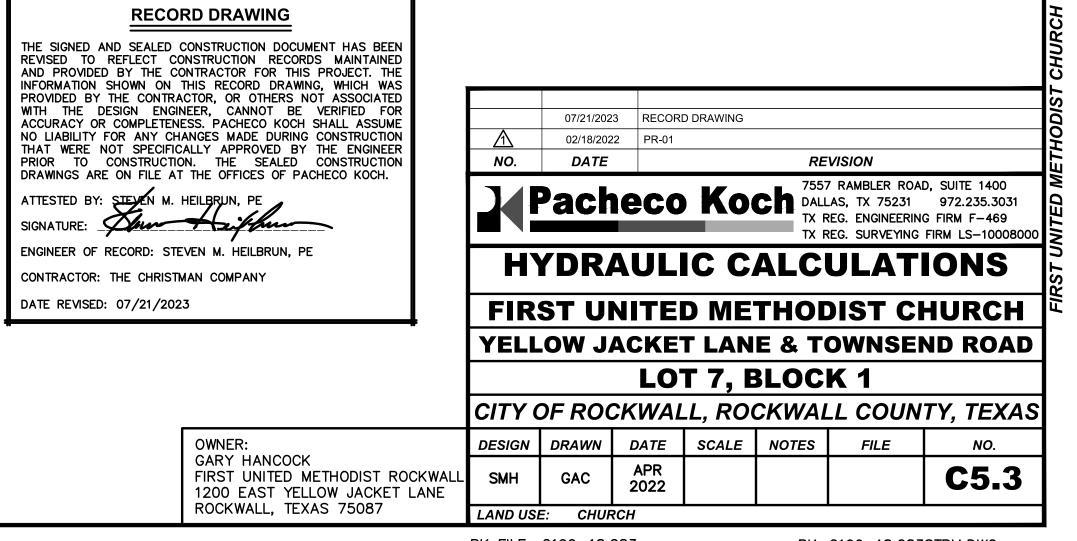
HYDRAULIC CALCULATIONS TABLE

Conduit Properties														<u> </u>										1				HGL Headloss Calculations											
	Callection Daint				Dev		Cond	Juit Proper	25	<u> </u>		Floudin			Ir	ncremental	Drainage A	rea		Desi										HO	JL		He	adloss Calculation	s			Top of	
SYSTEM ID	Collection Point		# of	_	BOX	x	-		Wetted	Hvdrau	lic Manning'	Flowiir	ne Elevation		_		Runoff	Incremental A	cumulated C*/	A Up-	Storm	Intensity I	Runoff Q	Conduit		Velocity		Friction	Friction							Head-loss	Design HGL	Curb	HGL Depth Remarks
	D/S U/S	ength	Barrells	Pipe Size	Span	Rise	Туре	Area	Perimeter	-	Ŭ	Down-strea	m Up-stream	Slope	Inlet ID	Area	Coeff. C	C*A		stream Tc	Freq.	······,		Capacity Q	C Flow	· · · · · · · · · · · · · · · · · · ·	Conduit	Slope Sf	Head-loss	D/S	U/S v1	2/2g v	v22/2g	Jct Type	Coeff. Kj	HI		Elev.	Below T/C
													-																										
		(ft)		(inches)	(ft)	(ft)		(ft2)	(ft)	(ft)				(ft/ft)		(acres)				(min)	(yr)	(in/hr)	(cfS)	(cfS)	(Yes/No)	(fps)	(min)	(ft/ft)	(ft)		(ft)	(ft)			(ft)			(ft)
			1	24					. ,		0.012	570.47			NI / A			0.00	4.07		400									570.00		-			0.05		500.07		
		5.35	1	21	NA NA		RCP	2.41	5.50	0.44		578.17	578.18	0.0024	N/A	0	0.8	0.00	1.27	10	100	9.8	13.21	7.76	No	5.49		0.0069		579.92 580.07).4684).4684	Bend - 30°	-	0.1171	580.07	NA	NA NA
		60.00 32.37	1	21	NA		RCP RCP	2.41	5.50 5.50	0.44	0.013	578.18 578.33	578.33 578.40	0.0024	N/A	0.14	0.8	0.11	1.27 1.16	10 10	100 100	9.8 9.8	13.21 12.10	7.76	No No	5.49 5.03	0.18	0.0069		580.07				Wye 45° ⁄Janhole - Through	-	0.2719 0.0196	580.76 580.97	NA NA	NA
	0+97.72 1+71.51	73 70	1	21	NA	NA		2.41	5.50	0.44		578.40	578.58	0.0024	5E	0.07	0.8	0.00	1.16	10	100	9.8	12.10	7.76	No	5.03	0.11	0.0038		580.97				Manhole - w/ 90*		0.3035	581.64	NA	NA
		17.63	1	21	NA	NA	RCP	2.41	5.50	0.44		578.58	578.62	0.0024	9,10	0.34	0.8	0.00	1.10	10	100	9.8	11.55	7.76	No	4.80	0.06	0.0053		581.64			0.3581	Wye 22.5°		0.1990	581.93	NA	NA
		12.57	1	21	NA	NA	RCP	2.41	5.50	0.44		578.62	578.65	0.0024	5,10 5D/5E	0.16	0.8	0.13	0.83	10	100	9.8	8.89	7.76	No	3.70	0.06	0.0031		581.93			0.2121	Wye 45°	-	0.1352	582.10	NA	NA
ST-1 FROM	2+01.71 2+37.56	35.85	1	21	NA	NA	RCP	2.41	5.50	0.44	0.013	578.65	578.74	0.0024	5A/5B/5C	0.25	0.8	0.20	0.70	10	100	9.8	7.57	7.76	No	3.15	0.19	0.0023		582.10			0.1538	Wye 45°		0.1117	582.30	NA	NA
EXIST.		10.98	1	21	NA	NA	RCP	2.41	5.50	0.44		578.74	578.77	0.0024	7,8	0.46	0.8	0.37	0.50	10	100	9.8	5.60	7.76	No	2.33		0.0012		582.30).0842	, Wye 45°		0.0788	582.39	NA	NA
	2+48.54 2+53.54	5.00	1	21	NA	NA	RCP	2.41	5.50	0.44		578.77	578.78	0.0024	N/A	0	0.8	0.00	0.14	10	100	9.8	2.00	7.76	No	0.83	0.10	0.0002	0.0008	582.39	582.39 0.0	0199 0.	0.0108	, Size Change		0.0053	582.39	NA	NA
	2+53.54 2+73.98	20.44	1	18	NA	NA	RCP	1.77	4.71	0.38	0.013	579.03	579.08	0.0024	N/A	0	0.8	0.00	0.14	10	100	9.8	2.00	5.14	No	1.13	0.30	0.0004	0.0074	582.39	582.40 0.0	0199 0.).0199 N	/anhole - Through	0.05	0.0010	582.40	NA	NA
	2+73.98 3+00.20	26.22	1	18	NA	NA	DI	1.77	4.71	0.38	0.012	579.08	579.14	0.0024	6	0.17	0.8	0.14	0.14	10	100	9.8	2.00	5.14	No	1.13	0.39	0.0003	0.0081	582.40	582.41 0.0	0000 0.).0199 N	Manhole - Through	0.05	0.0010	582.41	NA	NA
ST-1A	0+00.00 0+67.46	67.46	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	578.70	580.81	0.0312	N/A	0	0.8	0.11	0.11	10	100	9.8	1.10	42.84	Yes	1.40	0.80	0.0009	0.0637	580.94	581.00 0.0	0303 0	0.0303	Bend 45°	0.37	0.0112	581.30	NA	NA
	0+67.46 0+69.51	2.05	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	580.81	580.87	0.0312	5G	0.14	0.8	0.11	0.11	10	100	9.8	1.10	8.14	No	1.40	0.02	0.0009	0.0019	581.30	581.30 0.0	0000 0	0.0303	None	0	0.0000	581.30	NA	NA
ST-1B	0+00.00 0+33.82	33.82	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	579.33	579.62	0.0085	5F	0.07	0.8	0.06	0.06	10	100	9.8	0.55	3.28	No	0.70	0.81	0.0002	0.0080	581.55	581.56 0.0	0000 0	0.0076	Inlet	1.25	0.0095	581.57	NA	
51-10																																							
	0+00.00 0+05.21	5.21	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	579.03	579.43	0.0779	NA	0	0.8	0.00	0.13	10	100	9.8	1.25	35.65	Yes	2.00	0.04	0.0011	0.0057	582.16	582.17 0.0	0396 0	0.0621	Wye - 45°	0.5	0.0423	582.21	NA	NA
ST-1C	0+05.64 0+08.16	2.52	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	579.43	579.45	0.0050	5D	0.1	0.8	0.08	0.13	10	100	9.8	1.25	30.85	No	1.60	0.03		0.0031	582.21	582.21 0.0	0056 0	0.0396	Bend - 45°	0.37	0.0147	582.23	NA	NA
	0+08.16 0+36.37	28.21	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	579.45	579.59	0.0050	5E	0.06	0.8	0.05	0.05	10	100	9.8	0.47	30.77	No	0.60	0.79	0.0002	0.0049	582.23	582.23 0.0	0000 0	0.0056	Inlet	1.25	0.0070	582.24	NA	NA
	_																																						
	0+00.00 0+05.64		1	12	NA	NA	RCP	0.79	3.14	0.25		579.12	579.57	0.0810	5C	0.1	0.8	0.08	0.20	10	100	9.8	1.96	30.60	No	2.50		0.0030	0.0170	582.30	582.32 0.0	0348 0	0.0967	Wye - 45°	0.5	0.0793	582.40	NA	NA
ST-1D	0+05.64 0+08.38	2.74	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	579.57	579.59	0.0050	5A	0.1	0.8	0.08	0.12	10	100	9.8	1.18	30.85	No	1.50	0.03	0.0011	0.0030	582.40	582.40 0.0	0039 0	0.0348	Wye - 45°	0.5	0.0329	582.43	NA	NA
	0+08.38 0+36.29	27.91	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	579.59	579.73	0.0050	5B	0.05	0.8	0.04	0.04	10	100	9.8	0.39	30.77	No	0.50	0.93	0.0001	0.0034	582.43	582.44 0.0	0000 0	0.0039	None	0	0.0000	582.44	NA	NA
							1													-		1																	
	0+00.00 0+03.01	3.01	1	12	NA	NA	RCP	0.79	3.14	0.25		579.59	579.81	0.0728	N/A	0	0.8	0.00	0.08	10	100	9.8	0.75	8.14	No	3.29	0.02	0.0004			582.42 0.3			Bend - 45°	0.37	0.0622	582.48	NA	NA
ST-1E	0+03.01 0+17.45	14.44	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	579.81	580.86	0.0728	5A	0.1	0.8	0.08	0.08	10	100	9.8	0.75	8.14	No	3.29	0.07	0.0004	0.0064	582.48	582.49 0.0	0000 0	0.1681	None	0	0.0000	582.49	NA	NA
ST-2	0+00.00 0+51.75	51.75	1	24	NA	NA	RCP	3.14	6.28	0.50	0.013	575.92	576.36	0.0242	1A	0.97	0.8	0.78	0.78	10	100	9.8	7.60	35.21	No	2.42	0.36	0.0011	0.0582	579.44	579.50 0.0	0000 0	0.0910	Inlet	1.25	0.1137	579.61	NA	
															·																								
ST-3	0+00.00 0+24.87	24.87	1	36	NA	NA	RCP	7.07	9.42	0.75	0.013	575.25	575.37	0.0050	OS 3/OS 4	3.39	0.8	2.71	2.71	10	100	9.8	29.80	47.24	No	4.22	0.10	0.0020	0.0494	579.4	579.45 0.0	0000 0	0.2760	none	0	0.0000	579.45	NA	
	0+00.00 0+07.19		1		NA	NA	RCP		4.71	0.38		579.59	579.81	0.0728	N/A	0	0.8	0.00	0.17	10	100	9.8	1.65	8.14	No	3.29					578.40 0.3			Bend - 45°		0.0622	578.46	NA	NA
ST-4	0+07.19 0+34.21	27.02	1	18	NA	NA	RCP	1.77	4.71	0.38	0.013	579.81	580.86	0.0728	1B	0.21	0.8	0.17	0.17	10	100	9.8	1.65	8.14	Yes	3.29	0.14	0.0002	0.0066	578.46	578.47 0.0	0000 0	0.1681	None	0	0.0000	579.76	NA	NA HGL at tp
															-		-					_		-															
	0+00.00 1+49.16		1	12	NA	NA	RCP		3.14	0.25		568.2	573.82	0.0377	N/A	0	0.8	0.00	0.00	10	100	9.8	0.00	8.14	No	3.29	+				578.75 0.3		0.1681	Bend - 45°		0.0622	578.75	NA	NA
ST-5	1+49.16 1+50.84	1.68	1	12	NA	NA	RCP	0.79	3.14	0.25	0.013	573.82	573.89	0.0377	N/A	0	0.8	0.00	0.00	10	100	9.8	0.00	8.14	No	3.29	0.01	0.0000	0.0000	578.75	578.75 0.0	0000 0	0.1681	None	0	0.0000	578.75	NA	NA
								1																															

		Location	Area Runoff											Gutter Flow														Inlets Capacity Inlet By-Pass													
Inlet ID		Station Of	feet D		6	ArrestD	Time of				Bypass	Total Gutter Iow Qa Th	orughfare	On-	Manning's	Long	Crown	Cross	Depres	ssion	Ponding Width/Spread		Depth of Gutter Flow		Max Allowable Flow based on	Depresse Secti		Section Beyond Depression Conveya			ve yance	-	o of ssion Equivalent		Length	Inlet	Flow	C * 0	To Inlet	Remarks	
	Alignment	Station Or	tset D	Design Frequency	C	Area ID	tion Tc	intensity	Arae A	KUNOTT Q			Туре	Grade/Sag	; n	Slope S	Туре	Slope Sx	Depth a		(allow) Tallow	(actual) Tactual	· /	(actual) yactual	Max. Allowable Ponding Width Qallow gutter	Area	Wetted Perimeter	Area	Wetted Perimeter	Depression Kw	Section Beyond Depression K0	- flow to Total Flow E0	Cross- Slope, Se	Required		- Capacity Qc	Qbypass	C*A	ID		Z
																										Aw	Pw	A0	PO												
				(yr)			(min)	(in/hr)	(acres)	(cfs)	(cfs)	(cfs)				(ft/ft)		(ft/ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(ft2)	(ft)	(ft2)	(ft)	(cfs)	(cfs)		(ft/ft)	(ft)	(ft)	(cfs)	(cfs)				
1			NA	100	0.8	D1A	10	9.8	0.9	7.6	0	7.06 Pa	arking Lot	Sag	0.0175	0.01	NA	0.036	0.5	2	NA	10.72	NA	0.39	7.01	1.20	2.08	1.37	8.72	23.83	16.57	0.59	0.18	5.49	10	11.06	NA	NA		l0' Curb Inlet is sufficient	
2	ST-4	0+34.21 N	NA	100	0.8	D 1B	10	9.8	0.28	1.65	0	2.20 P	arking Lot	Sag	0.0175	0.016	NA	0.01	0.5	2	NA	14.10	NA	0.14	2.18	0.76	2.07	0.73	12.10	11.24	3.44	0.77	0.20	5.33	5	6.99	NA	NA	NA 5	5' Curb Inlet is sufficient	



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