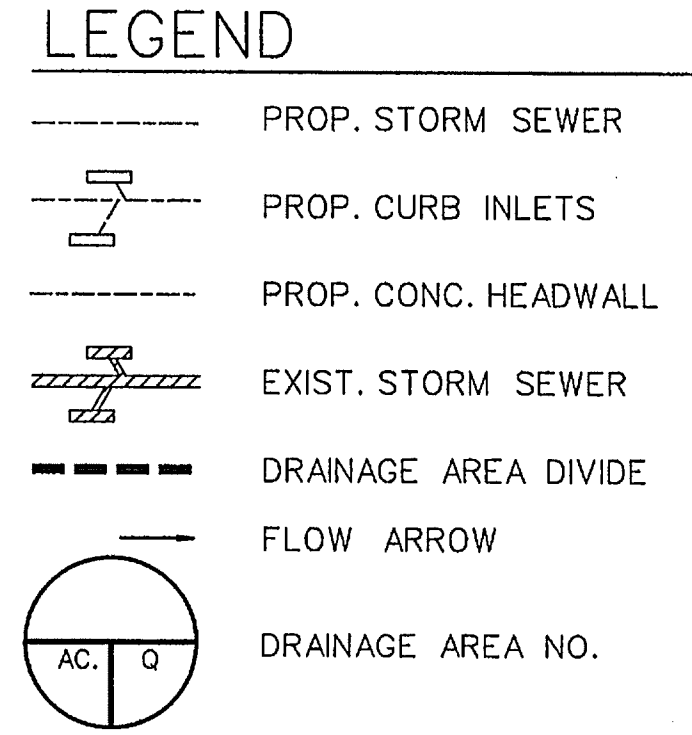


INLET CALCULATIONS

Inlet #	Location	Design Storm Frequency	Time of Conc. (min.)	Intensity (in/hr)	Runoff Coeff.	Area (acres)	Q (cfs)	Carry-Over from Upstream (cfs)	Gutter Flow (cfs)	Gutter Capacity (cfs)	Gutter Slope (ft/ft)	Crown Length (ft)	Type	Selected Inlet Type	Carry-Over to Downstream (cfs)	Inlet Capacity (cfs)	
1	Woods/Knox	100	10	9.8	0.50	1.49	7.3	0.0	7.3	10.6	Low Pt	6" pbl	10	STD.	0.0	21.0	
2	Waits	2+44.50	100	10	9.8	0.50	1.29	6.3	0.0	6.3	12.3	6" pbl	10	STD.	0.0	21.0	
3	Mountcastle	6+24.10	100	10	9.8	0.50	1.67	8.2	0.0	8.2	17.7	Low Pt	6" pbl	10	STD.	0.0	21.0
4	Mountcastle	6+24.10	100	10	9.8	0.50	2.59	12.7	0.0	12.7	17.7	Low Pt	6" pbl	10	STD.	0.0	21.0
5	Mountcastle	18+21.45	100	10	9.8	0.50	1.45	7.1	0.0	7.1	16.5	1.65%	6" pbl	15	STD.	0.0	11.5
6	Mountcastle	19+36.00	100	10	9.8	0.57	1.33	7.5	0.0	7.5	21.7	2.36%	6" pbl	15	STD.	0.0	10.5
7	Mountcastle	9+91.44	100	10	9.8	0.50	1.41	6.9	0.0	6.9	19.3	1.20%	6" pbl	10	STD.	0.1	6.8
8	Mountcastle	9+69.02	100	10	9.8	0.70	1.37	9.4	0.0	9.4	21.7	2.07%	6" pbl	10	STD.	2.9	6.5
9	Greenway	16+75.00	100	10	9.8	0.50	1.08	5.3	3.0	8.3	21.1	1.96%	6" pbl	15	STD.	0.0	10.0
10	Greenway	16+47.73	100	10	9.8	0.70	2.14	14.7	0.0	14.7	N/A	Low Pt	-	4	WYE	0.0	20.5
11	Greenway	21+00.00	100	10	9.8	0.50	1.19	5.8	0.0	5.8	10.6	1.63%	6" pbl	10	STD.	0.0	6.3
12	Greenway	20+97.50	100	10	9.8	0.60	0.32	1.6	0.0	1.6	10.6	0.88%	6" pbl	10	STD.	0.0	6.3
12A	Greenway	21+10.00	100	10	9.8	0.50	2.18	10.7	0.0	10.7	N/A	Low Pt	-	4	WYE	0.0	20.5
13	Stone Creek	4+82.55	100	10	9.8	0.90	0.53	4.6	0.0	4.6	27.0	1.69%	1/4" ft	10	STD.	0.0	5.6
14	Featherstone	36+47.97	100	10	9.8	0.90	0.65	5.7	0.0	5.7	21.9	2.10%	6" pbl	10	STD.	0.0	6.2
15	Stone Creek	4+82.55	100	10	9.8	0.90	0.47	4.2	0.0	4.2	27.0	1.69%	1/4" ft	10	STD.	0.0	5.6

RUNOFF COMPUTATIONS

#	Area (sq ft)	Area (acres)	Runoff Coefficient	Tc (min)	I (in/hr)	Q (100)	Q (cfs)
1	64913	1.49	0.50	10	9.8	7.3	7.3
2	56144	1.29	0.50	10	9.8	6.3	6.3
3	72810	1.67	0.50	10	9.8	8.2	8.2
4	112693	2.59	0.50	10	9.8	12.7	12.7
5	62985	1.45	0.50	10	9.8	7.1	7.1
6	97307	0.65	0.50	10	9.8	5.8	5.8
6A	20770	0.48	0.70	10	9.8	3.3	3.3
7	61389	1.41	0.50	10	9.8	6.9	6.9
8	55550	1.37	0.70	10	9.8	9.4	9.4
9	47155	1.08	0.50	10	9.8	5.3	5.3
10	35188	2.14	0.70	10	9.8	14.7	14.7
11	51869	1.19	0.50	10	9.8	5.8	5.8
12	13919	0.32	0.50	10	9.8	1.6	1.6
12A	94904	2.18	0.50	10	9.8	10.7	10.7
13	22937	0.53	0.50	10	9.8	4.6	4.6
14	28155	0.65	0.50	10	9.8	5.7	5.7
15	20563	0.47	0.90	10	9.8	4.2	4.2
16	91340	2.10	0.50	10	9.8	10.3	10.3
17	23239	0.53	0.50	10	9.8	2.6	2.6
18	207622	4.75	0.35	15	6.3	13.8	13.8
19	76230	1.75	0.50	10	9.8	8.6	8.6
20	198802	4.56	0.50	10	9.8	22.4	22.4
21	277890	6.38	0.50	10	9.8	31.3	31.3
22	86207	1.88	0.50	10	9.8	9.7	9.7
23	39213	0.90	0.50	10	9.8	4.4	4.4
24	541551	21.82	0.90	10	9.8	100.3	100.3
25	165086	3.79	0.35	10	6.3	11.0	11.0
26	202645	4.65	0.50	10	9.8	22.8	22.8
27	143285	3.29	0.50	10	9.8	16.1	16.1
28	65428	2.03	0.50	10	9.8	10.0	10.0



STORM SEWER CALCULATIONS

Upstream Station	Downstream Station	Distance (ft)	AREA NO.	Total Area (Acres)	Picked Up (Acres)	C	CA	Accounted CA	Tc (Min)	Design Storm (Years)	I (in/hr)	Q (CFS)	S (ft/ft)	Pipe Size (in)	Velocity (ft/s)	Head Loss (ft)	Flow Time (Min)	Time at DS (Min)	Δ Velocity Head (ft)	Hydraulic Grade Upstream	Hydraulic Grade Downstream	Proposed Grade	
Line D1																							
2+36.27	2+13.67	22.60	12A	2.18	2.18	0.50	1.09	1.09	10.00	100	9.80	10.7	0.0022	24	3.4	0.18	0.11	10.11	0.18	528.21	528.21	528.00	
2+13.67	1+73.67	40.00	12	0.32	0.32	0.50	0.16	1.25	10.00	100	9.80	12.2	0.0029	24	3.9	0.24	0.17	10.17	0.06	528.16	528.11	528.08	
1+73.67	1+56.50	17.17	11	1.19	1.19	0.50	0.60	1.84	10.00	100	9.80	18.1	0.0064	24	5.8	0.51	0.05	10.05	0.28	527.99	527.71	530.48	
Line D2																							
1+56.50	0+58.72	81.19	2	1.29	1.29	0.50	0.64	0.64	10.00	100	9.80	6.3	0.0008	24	2.0	0.06	0.67	10.67	0.06	533.43	533.37	541.63	
0+58.72	0+00.00	58.72	1	1.49	1.49	0.50	0.75	1.39	10.00	100	9.80	13.6	0.0036	24	4.3	0.29	0.23	10.23	0.23	533.30	533.07	540.53	
Line D3																							
2+10.43	1+76.19	34.24	13	0.53	0.53	0.90	0.47	0.47	10.00	100	9.80	4.6	0.0004	24	1.5	0.03	0.39	10.39	0.03	547.89	547.86	550.99	
1+76.19	1+66.52	9.67	Bread	0.00	0.00	0.90	0.00	0.47	10.00	100	9.80	4.6	0.0004	24	1.5	0.03	0.11	10.11	0.03	547.85	547.85	550.60	
1+66.52	0+00.00	166.52	15	0.47	0.47	0.90	0.43	0.90	10.00	100	9.80	8.8	0.0015	24	2.8	0.12	0.99	10.99	0.09	547.84	547.75	539.99	
Line D4																							
10+23.08	8+81.68	141.40	2627	7.94	7.94	0.50	3.97	3.97	10.00	100	9.80	38.9	0.0034	36	5.5	0.47	0.43	10.43	0.47	538.25	537.77	544.76	
8+81.68	2+23.12	658.56	D6	2.78	2.72	0.50	1.36	5.33	10.00	100	9.80	52.2	0.0061	36	7.4	0.85	1.49	11.49	0.38	537.29	536.92	542.33	
2+23.12	1+34.81	88.31	9,10	3.22	3.71	0.63	2.35	7.68	10.00	100	9.80	75.2	0.0056	42	7.8	0.95	1.19	10.19	0.10	532.88	532.77	536.61	
Line D5																							
1+34.81	1+57.64	41.92	4	2.59	2.59	0.50	1.29	1.29	10.00	100	9.80	12.7	0.0031	24	4.0	0.25	0.17	10.17	0.25	537.24	537.12	540.69	
1+57.64	0+04.00	153.64	3	1.67	1.67	0.50	0.83	2.13	10.00	100	9.80	20.8	0.0085	24	6.6	0.68	0.39	10.39	0.43	537.14	537.01	540.69	
Line D6																							
0+04.00	0+36.55	46.50	7	1.41	1.39	0.50	0.70	0.70	10.00	100	9.80	6.8	0.0042	18	3.9	0.23	0.20	10.20	0.23	538.09	537.86	544.06	
0+36.55	0+00.00	36.55	8	1.37	1.33	0.50	0.67	1.36	10.00	100	9.80	13.3	0.0035	24	4.2	0.28	0.14	10.14	0.14	537.66	537.61	543.52	
Line D7																							
87+79.17	7+97.99	81.18	28	2.03	2.03	0.50	1.02	1.02	10.00	100	9.80	10.0	0.0090	18	5.6	0.49	0.24	10.24	0.49	535.12	534.62	542.25	
7+97.99	4+12.32	385.67	5,6,6A	2.78	2.78	0.53	1.49	2.50	10.00	100	9.80	24.6	0.0118	24	7.8	0.95	0.82	10.82	0.46	533.89	533.43	541.15	
4+12.32	0+66.24	346.08	14,19	2.40	2.40	0.61	1.46	3.96	10.00	100	9.80	38.9	0.0099	30	7.9	0.97	0.73	10.73	0.62	538.86	538.84	533.54	
0+66.24	0+00.00	66.24	Future	4.56	4.56	0.50	2.28	6.24	10.00	100	9.80	61.3	0.0037	42	6.4	0.63	0.17	10.17	-0.17	525.73	525.25	528.16	
0+00.00																					525.00		

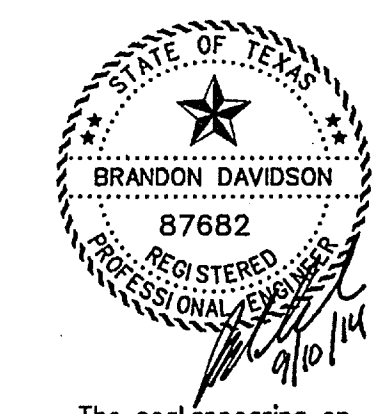
BENCHMARK:

CITY OF ROCKWALL SURVEY MONUMENT ON AN INLET AT THE NORTHWEST CORNER OF FEATHERSTONE DR. AND HARVARD DR. ELEV. = 525.31



0 50 100 200
SCALE: 1" = 100'

AS-BUILT SEPTEMBER 2015
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The seal appearing on this document was authorized by Brandon Davidson, P.E. 87682, on September 10, 2014

CORWIN ENGINEERING, INC.
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ALLEN, TEXAS 75013 (972)396-1200
TBP# FIRM #5951

DEVELOPMENT PLANS FOR
STONE CREEK
PHASE VI
ROCKWALL, TEXAS

DRAINAGE AREA MAP
SHEET 2 OF 2

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
13068	MAY 2014	1"=100'	5 of 26