

SCALE: 1" = 100'

Upstream Station	Downstream Station	Distance (ft)	AREA NO.	Total Area (Acres)	Picked Up (Acres)	C	CA	Accumulated CA	Tc (Min)	Design Storm (Years)	I (in/hr)	Q (CFS)	S (ft/m)	Pipe Size (in)	Velocity (fps)	Head Loss (ft)	Flow Time (Min)	Time at D/S (Min)	Δ Velocity Head (ft)	Hydraulic Grade Upstream	Hydraulic Grade Downstream	Proposed Grade
<b>Line D1</b>																						
1+59.50	0+91.05	68.45	0	0.00	10.95	0.50	5.48	5.48	11.75	100	9.52	52.2	0.0061	36	7.4	0.85	0.15	11.90	0.85	540.11	539.26	542.49
0+91.05	0+00.00	91.05	0	0.00	1.94	0.50	0.97	6.45	11.90	100	9.50	61.3	0.0084	36	8.7	1.18	0.17	12.07	0.33	538.84	538.51	541.69
0+00.00	0+00.00	0.00	0	0.00	0.00	0.50	0.00	6.45	12.07	100	9.47	61.1	0.0084	36	8.6	1.15	0.00	12.07	-0.02	537.75	537.76	541.69
<b>Line D2</b>																						
1+61.06	0+98.25	62.81	0	2.32	1.98	0.50	0.99	0.99	10.00	100	9.00	9.7	0.0085	18	5.5	0.47	0.19	10.19	0.47	542.41	541.94	544.85
0+98.25	0+00.00	98.25	0	0.00	2.01	0.50	1.01	2.00	10.19	100	9.77	19.5	0.0152	21	8.1	1.02	0.20	10.39	0.55	541.41	540.86	542.80
0+00.00	0+00.00	0.00	0	0.00	0.00	0.50	0.00	2.00	10.39	100	9.74	19.5	0.0151	21	7.4	0.95	0.00	10.39	0.10	539.36	539.26	0.00
<b>Line D3</b>																						
5+58.58	4+67.85	90.73	0	0.00	1.19	0.50	0.59	0.59	10.00	100	9.00	5.8	0.0030	18	3.3	0.17	0.46	10.46	0.17	546.08	545.91	553.00
4+67.85	3+33.78	134.07	0	0.00	0.25	0.50	0.13	0.72	10.46	100	9.73	7.0	0.0045	18	4.0	0.25	0.56	11.02	0.08	545.63	545.55	552.00
3+33.78	3+13.00	20.78	0	0.00	1.58	0.50	0.79	1.51	11.02	100	9.64	14.6	0.0041	24	4.8	0.33	0.98	11.00	0.08	544.96	544.88	548.50
3+13.00	1+23.78	189.22	0	0.00	1.56	0.50	0.83	2.34	11.10	100	9.62	22.5	0.0039	24	7.2	0.30	0.44	11.54	0.47	544.79	544.32	547.70
1+23.78	1+03.00	20.78	0	0.00	0.96	0.50	0.48	2.82	11.54	100	9.55	26.9	0.0142	24	8.6	1.15	0.04	11.58	0.35	542.45	542.10	543.81
1+03.00	0+00.00	103.00	0	0.00	0.98	0.50	0.49	3.31	11.58	100	9.55	31.6	0.0195	24	10.1	1.58	0.17	11.75	0.43	541.80	541.37	544.09
0+00.00	0+00.00	0.00	0	0.00	0.00	0.50	0.00	3.31	11.75	100	9.52	31.5	0.0194	24	7.4	0.85	0.00	11.75	0.10	539.36	539.26	0.00

**RUNOFF COMPUTATIONS**

Area #	Area (sf)	Area (acres)	Runoff Coefficient	CA	Tc (min)	I(100) (in/hr)	Q(100) (cfs)
1	10938	0.25	0.50	0.13	10	9.80	1.2
2	91780	1.19	0.50	0.59	10	9.80	8.8
3	72463	1.64	0.50	0.83	10	9.80	8.2
4	68680	1.58	0.50	0.79	10	9.80	7.7
5	42516	0.98	0.50	0.49	10	9.80	4.8
6	41702	0.96	0.50	0.48	10	9.80	4.7
7	41184	0.95	0.50	0.47	10	9.80	4.6
8	43160	0.99	0.50	0.50	10	9.80	4.9
9	100599	2.32	0.50	1.16	10	9.80	11.4
10	87682	2.01	0.50	1.01	10	9.80	9.9
11	87864	2.02	0.50	1.01	10	9.80	9.9
12	18478	0.42	0.50	0.21	10	9.80	2.1
13	18875	0.43	0.50	0.22	10	9.80	2.1

**INLET CALCULATIONS**

No.	Inlet Location	Design Storm Freq. (years)	Area Runoff: Q=CIA				Carry-Over from Upstream (cfs)	Total Gutter Flow (cfs)	Gutter Capacity (cfs)	Gutter Slope (ft/100 ft)	Selected Inlet			Carry-Over to Downstream Inlet (cfs)		
			Tc (min)	Intensity (in/hr)	Runoff "C" Coeff.	Area "A" (acres)					Q (cfs)	Type	Length (ft)		Inlet Capacity (cfs)	
1	EXIST. INLET GREENWAY	100	10	9.8	0.5	0.43	2.1	0.0	2.1	14.0	0.50%	6" pbl	10	STD.	6.3	0.0
2	EXIST. INLET GREENWAY	100	10	9.8	0.5	0.42	2.1	0.2	2.3	14.0	0.50%	6" pbl	10	STD.	6.3	0.0
3	8+68.42 BORDEAUX	100	10	9.8	0.5	2.32	11.4	0.0	11.4	28.0	0.90%	1/4" Cross	15	STD.	9.7	1.7
4	8+56.92 BORDEAUX	100	10	9.8	0.5	2.01	9.9	0.0	9.9	16.0	0.50%	1/4" Cross	15	STD.	10.7	0.0
5	5+56.42 BORDEAUX	100	10	9.8	0.5	0.98	4.8	0.0	4.8	32.0	1.21%	1/4" Cross	10	STD.	5.7	0.0
6	5+56.42 BORDEAUX	100	10	9.8	0.5	0.96	4.7	0.0	4.7	28.5	1.87%	1/4" Cross	10	STD.	5.6	0.0
7	3+83.42 BORDEAUX	100	10	9.8	0.5	1.58	8.2	0.0	8.2	33.0	2.10%	1/4" Cross	15	STD.	8.7	0.0
8	3+83.42 BORDEAUX	100	10	9.8	0.5	1.58	7.7	0.0	7.7	28.5	1.87%	1/4" Cross	15	STD.	9.1	0.0
9	WVE INLET NORTH	100	10	9.8	0.5	0.25	1.2	0.0	1.2	-	-	Low Pt	2	Wye	8.0	0.0
10	WVE INLET SOUTH	100	10	9.8	0.5	1.19	5.8	0.0	5.8	-	-	Low Pt	2	Wye	8.0	0.0
11	2+70.00 GREENWAY	100	10	9.8	0.5	0.99	4.9	1.7	6.5	14.0	0.50%	6" pbl	10	STD.	6.3	0.2
12	2+70.00 GREENWAY	100	10	9.8	0.5	0.95	4.6	0.0	4.6	14.0	0.50%	6" pbl	10	STD.	6.3	0.0

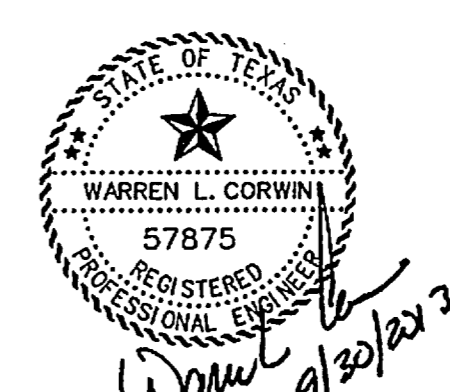
0.3 cfs BYPASS TO INLET #23 STONE CREEK PH I  
INLET FLOW 5.1cfs, INLET CAPACITY 6.2 cfs

**LEGEND**

- PROP. STORM SEWER
- PROP. CURB INLETS
- EXIST. STORM SEWER
- DRAINAGE AREA DIVIDE
- FLOW ARROW
- DRAINAGE AREA NO.

RELEASED FOR CONSTRUCTION  
ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.

CITY \_\_\_\_\_ DATE \_\_\_\_\_



The seal appearing on this document was authorized by Warren L. Corwin, P.E. 57875, on September 30, 2013

**AS-BUILT JUNE 2014**  
INFORMATION PROVIDED BY CONTRACTORS  
(NOT FIELD VERIFIED)

<b>CORWIN ENGINEERING, INC.</b> 200 W. BELMONT, SUITE E ALLEN, TEXAS 75013 (972)396-1200 TBPE FIRM #5951			
DEVELOPMENT PLANS FOR <b>STONE CREEK</b> PHASE V ROCKWALL, TEXAS			
DRAINAGE AREA MAP			
DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER 13045	DATE JULY 2013	SCALE: 1"=100'	3 of 12