

HYDRAULIC CALCULATIONS

COLLECTION POINT INLETS OR MANHOLES		DISTANCE BETWEEN COLLECTION POINTS	INCREMENTAL DRAINAGE AREA				TIME @ UPSTREAM STATION (MIN.)	INTENSITY "I-100" (IN./HR)	100 YR. STORM RUNOFF "Q"	SLOPE OF HYDRAULIC GRADIENT (FT./FT.)	STORM SEWER SIZE	VELOCITY "V" (F.P.S.)	FLOW TIME IN SEWER (MIN.)	TIME @ DOWNSTREAM STATION (MIN.)	VELOCITY HEAD (FEET)	HYDRAULIC GRADE AT UPSTREAM STATION	HYDRAULIC GRADE AT DOWNSTREAM STATION	HYDRAULIC GRADE AT INLETS	COMMENTS
UPSTREAM STATION	DOWNSTREAM STATION		INCREM. AREA NO.	AREA "A" (AC.)	RUNOFF COEFF. "C"	INCREM. ACCUM. "CA"													
LAT. 'M-8'																			
15.01	0.00	15.01	M-8	0.32	0.90	0.29	0.29	10.00	8.74	2.5	0.0006	18	1.42	0.18	10.18	0.03	611.57	611.56	611.62
LINE 'N'																			
445.00	410.00	35.00	N-7	0.69	0.50	0.35	0.35	10.00	8.74	3.0	0.0004	21	1.25	0.47	10.47	0.02	612.75	612.74	
410.00	350.00	60.00	N-6	0.15	0.90	0.14	0.48	10.47	8.62	4.1	0.0007	21	1.72	0.58	11.05	0.05	612.72	612.68	
350.00	170.00	180.00	N-5 & O-8	1.51	0.90	1.36	1.84	11.05	8.48	15.6	0.0097	21	6.48	0.46	11.51	0.65	612.07	610.33	
170.00	165.00	5.00	N-4	0.17	0.90	0.15	1.99	11.51	8.37	16.7	0.0054	24	5.31	0.02	11.52	0.44	610.44	610.41	
165.00	150.00	15.00	N-3	0.55	0.90	0.50	2.49	11.52	8.36	20.8	0.0085	24	6.62	0.04	11.56	0.68	610.16	610.04	
150.00	145.00	5.00	N-2 & O-2	0.88	0.90	0.79	3.28	11.56	8.36	27.4	0.0045	30	5.58	0.01	11.58	0.48	610.14	610.11	
145.00	100.00	45.00	N-1	1.21	0.90	1.09	4.37	11.58	8.35	36.5	0.0079	30	7.43	0.10	11.68	0.86	609.74	609.38	FUTURE LINE
LAT. 'N-1'																			
31.47	0.00	31.47	N-1	0.11	0.90	0.10	0.10	10.00	8.74	0.9	0.0001	18	0.49	1.07	11.07	0.00	610.60	610.59	610.60
LAT. 'N-2'																			
14.87	0.00	14.87	N-2 & O-2	0.31	0.90	0.28	0.28	10.00	8.74	2.4	0.0005	18	1.38	0.18	10.18	0.03	610.60	610.59	610.64
LAT. 'N-3'																			
26.89	0.00	26.89	N-3	0.64	0.90	0.58	0.58	10.00	8.74	5.0	0.0010	21	2.09	0.21	10.21	0.07	610.80	610.78	
LAT. 'N-4'																			
44.14	0.00	44.14	N-4	1.15	0.90	1.04	1.04	10.00	8.74	9.0	0.0033	21	3.76	0.20	10.20	0.22	610.80	610.65	
LAT. 'N-5'																			
26.89	0.00	26.89	N-5 & O-8	0.63	0.90	0.57	0.57	10.00	8.74	5.0	0.0022	18	2.81	0.16	10.16	0.12	612.66	612.60	
LAT. 'N-6'																			
31.78	0.00	31.78	N-6	0.51	0.90	0.46	0.46	10.00	8.74	4.0	0.0015	18	2.27	0.23	10.23	0.08	612.75	612.70	612.85
LAT. 'N-7'																			
43.71	0.00	43.71	N-7	2.54	0.79	2.01	2.01	10.00	8.74	17.5	0.0060	24	5.58	0.13	10.13	0.48	612.78	612.52	
LINE 'O'																			
380.00	360.00	20.00	O-8	0.75	0.90	0.68	0.68	10.00	8.74	5.9	0.0014	21	2.45	0.14	10.14	0.09	615.75	615.73	
360.00	340.00	20.00	O-7	1.02	0.90	0.92	1.59	10.14	8.71	13.9	0.0077	21	5.77	0.06	10.19	0.52	615.30	615.15	
340.00	335.00	5.00	O-6	0.19	0.90	0.17	1.76	10.19	8.69	15.3	0.0094	21	6.37	0.01	10.21	0.63	615.03	614.99	
335.00	175.00	160.00	O-5	0.20	0.90	0.18	1.94	10.21	8.69	16.9	0.0114	21	7.02	0.38	10.59	0.77	614.85	613.03	
175.00	170.00	5.00	O-4	0.12	0.90	0.11	2.05	10.59	8.59	17.6	0.0061	24	5.61	0.01	10.60	0.49	613.17	613.14	
170.00	150.00	20.00	O-3	0.12	0.90	0.11	2.16	10.60	8.59	18.5	0.0067	24	5.90	0.06	10.66	0.54	613.09	612.96	
150.00	130.00	20.00	O-2	0.44	0.90	0.40	2.56	10.66	8.57	21.9	0.0094	24	6.98	0.05	10.71	0.76	612.74	612.55	
130.00	100.00	30.00	O-1	0.76	0.90	0.68	3.24	10.71	8.56	27.7	0.0080	27	6.98	0.07	10.78	0.76	612.55	612.31	FUTURE LINE
LAT. 'O-1'																			
31.47	0.00	31.47	O-1	0.11	0.90	0.10	0.10	10.00	8.74	0.9	0.0001	18	0.49	1.07	11.07	0.00	613.31	613.31	
LAT. 'O-2'																			
14.87	0.00	14.87	O-2	0.31	0.90	0.28	0.28	10.00	8.74	2.4	0.0005	18	1.38	0.18	10.18	0.03	613.48	613.47	
LAT. 'O-3'																			
26.89	0.00	26.89	O-3	0.64	0.90	0.58	0.58	10.00	8.74	5.0	0.0010	21	2.09	0.21	10.21	0.07	613.59	613.56	613.68
LAT. 'O-4'																			
44.14	0.00	44.14	O-4	1.15	0.90	1.04	1.04	10.00	8.74	9.0	0.0033	21	3.76	0.20	10.20	0.22	613.59	613.44	613.86
LAT. 'O-5'																			
26.89	0.00	26.89	O-5	0.63	0.90	0.57	0.57	10.00	8.74	5.0	0.0022	18	2.81	0.16	10.16	0.12	615.56	615.50	615.71
LAT. 'O-6'																			
31.78	0.00	31.78	O-6	0.51	0.90	0.46	0.46	10.00	8.74	4.0	0.0015	18	2.27	0.23	10.23	0.08	615.63	615.59	615.73
LAT. 'O-7'																			
43.71	0.00	43.71	O-7	2.54	0.79	2.01	2.01	10.00	8.74	17.5	0.0060	24	5.58	0.13	10.13	0.48	615.60	615.33	
LAT. 'O-8'																			
31.47	0.00	31.47	O-8	0.42	0.90	0.38	0.38	10.00	8.74	3.3	0.0010	18	1.87	0.28	10.28	0.05	615.82	615.79	

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY DAVID E. MEYERS, P.E. 81512



RECORD DRAWING

DATE	DESCRIPTION	REF. NO.
10/3/97	ISSUED FOR CONSTRUCTION	N/A
7/14/97	ISSUED FOR BID	N/A

STORM WATER CALCULATIONS
HYDRAULIC CALCULATIONS
ADDISON CIRCLE
PHASE II PUBLIC INFRASTRUCTURE
TOWN OF ADDISON, TEXAS

Hull-Zollars, Inc./Engineering/Architecture
Dallas, Fort Worth, Houston, El Paso, Phoenix, Tustin, Ontario

DESIGN	DRAWN	APPR.	SCALE	DATE	PROJECT NO.	NO.
HZI	HZI	DEM	N.T.S.	OCT. 97	01-1822-21	SW7