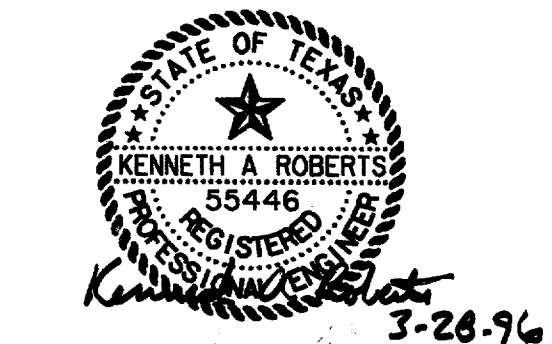


HYDRAULIC CALCULATIONS

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" (MGAL)	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.	"A" (AC.)	Coeff. "C"	INCREM. "CA"	ACCUM. "CA"													
LINE 'C'																				
103.00	85.00	18.00	C-3	4.71	0.90	4.24	4.24	10.00	8.74	37.1	0.0082	30	7.55	0.04	10.04	0.89	618.76	618.62		
85.00	7.63	77.37	C-1	0.59	0.90	0.53	4.77	10.04	8.73	41.7	0.0103	30	8.49	0.15	10.19	1.12	618.38	617.59		
7.63	0.00	7.63	NA	0.00	0.90	0.00	4.77	10.19	8.69	41.5	0.0102	30	8.45	0.02	10.21	1.11	617.23	617.15		
LAT. 'C-1'																				
47.28	0.00	47.28	C-1	0.59	0.90	0.53	0.53	10.00	8.74	4.6	0.0020	18	2.63	0.30	10.30	0.11	619.49	619.40	619.65	
LAT. 'C-3'																				
16.89	0.00	16.89	C-3	4.71	0.90	4.24	4.24	10.00	8.74	37.1	0.0082	30	7.55	0.04	10.04	0.89	618.90	618.76		
LINE 'D'																				
845.00	450.00	395.00	D-3	0.54	0.90	0.49	0.49	10.00	8.74	4.2	0.0002	27	1.07	6.16	16.16	0.02	617.71	617.64		
450.00	85.44	364.56	D-2	0.49	0.90	0.44	0.93	16.16	7.46	6.9	0.0001	36	0.98	6.21	22.37	0.01	617.64	617.60		
85.44	36.49	46.95	BEND	0.00	0.90	0.00	0.93	22.37	6.59	6.1	0.0001	36	0.86	0.90	23.27	0.01	613.07	613.06	PARTIAL FLOW	
36.49	0.00	36.49	D-1	0.61	0.90	0.55	1.48	23.27	6.49	9.6	0.0002	36	1.35	0.47	23.75	0.03	613.05	613.04		
LAT. 'D-1'																				
42.65	0.00	42.65	D-1	0.61	0.90	0.55	0.55	10.00	8.74	4.8	0.0021	18	2.72	0.26	10.26	0.11			PARTIAL FLOW	
LAT. 'D-2'																				
42.76	0.00	42.76	D-2	0.49	0.90	0.44	0.44	10.00	8.74	3.9	0.0006	21	1.60	0.44	10.44	0.04			PARTIAL FLOW	
LAT. 'D-3'																				
23.08	0.00	23.08	D-3	0.54	0.90	0.49	0.49	10.00	8.74	4.2	0.0007	21	1.77	0.22	10.22	0.05			PARTIAL FLOW	
LINE 'E'																				
639.24	639.88	18.36	LINE H	6.72	0.90	6.05	6.05	10.74	8.55	51.7	0.0060	36	7.32	0.04	10.78	0.83	626.28	626.17		
639.88	567.12	72.76	E-8	3.24	0.90	2.92	8.96	10.78	8.54	76.6	0.0086	39	9.23	0.13	10.91	1.32	625.68	625.06		
567.12	406.54	160.58	E-7, E-9, E-1	1.45	0.90	1.31	10.27	10.91	8.51	87.4	0.0112	39	10.53	0.25	11.17	1.72	624.66	622.86		
406.54	365.35	41.19	E-6 & F-8	1.18	0.90	1.06	11.33	11.17	8.45	95.7	0.0091	42	9.95	0.07	11.24	1.54	622.95	622.58		
365.35	311.78	53.57	E-5	0.26	0.90	0.23	11.57	11.24	8.43	97.5	0.0094	42	10.14	0.09	11.32	1.60	622.52	622.02		
311.78	258.78	53.00	E-3 & E-10	1.40	0.90	1.26	12.83	11.32	8.41	107.9	0.0080	45	9.77	0.09	11.41	1.48	622.07	621.65		
258.78	53.60	205.18	E-4	0.49	0.90	0.44	13.27	11.41	8.39	111.3	0.0085	45	10.08	0.34	11.75	1.58	621.56	619.82		
53.60	44.73	8.87	E-2	0.53	0.90	0.48	13.74	11.75	8.31	114.2	0.0089	45	10.34	0.01	11.77	1.66	619.73	619.65		
44.73	0.00	44.73	E-1	0.21	0.90	0.19	13.93	11.77	8.31	115.8	0.0092	45	10.48	0.07	11.84	1.71	619.61	619.20		
LAT. 'E-1'																				
31.47	0.00	31.47	E-1	0.21	0.90	0.19	0.19	10.00	8.74	1.7	0.0002	18	0.94	0.56	10.56	0.01	621.31	621.30	PARTIAL FLOW	
LAT. 'E-2'																				
14.88	0.00	14.88	E-2	0.53	0.90	0.48	0.48	10.00	8.74	4.2	0.0016	18	2.36	0.11	10.11	0.09	621.33	621.31	621.46	
LAT. 'E-3'																				
26.89	0.00	26.89	E-3 & E-10	1.40	0.90	1.26	1.26	10.00	8.74	11.0	0.0048	21	4.58	0.10	10.10	0.33	623.36	623.23		
LAT. 'E-4'																				
31.18	0.00	31.18	E-4	0.49	0.90	0.44	0.44	10.00	8.74	3.9	0.0013	18	2.18	0.24	10.24	0.07	623.10	623.06	PARTIAL FLOW	
LAT. 'E-5'																				
14.88	0.00	14.88	E-5	0.26	0.90	0.23	0.23	10.00	8.74	2.0	0.0004	18	1.16	0.21	10.21	0.02	624.10	624.09	PARTIAL FLOW	
LAT. 'E-6'																				
55.71	0.00	55.71	E-6 & F-8	1.18	0.90	1.06	1.06	10.00	8.74	9.3	0.0034	21	3.86	0.24	10.24	0.23	624.45	624.26	624.79	
LAT. 'E-7'																				
293.21	236.71	56.50	E-7 & E-9	1.10	0.90	0.99	0.99	10.00	8.74	8.7	0.0068	18	4.90	0.19	10.19	0.37	628.20	627.81	628.76	
236.71	215.66	21.05	BEND	NA	NA	0.00	0.99	10.19	8.69	8.6	0.0067	18	4.87	0.07	10.26	0.37	627.69	627.55		
215.66	51.98	163.68	BEND	NA	NA	0.00	0.99	10.26	8.67	8.6	0.0067	18	4.86	0.56	10.83	0.37	627.43	626.34		
51.98	10.33	41.65	E-11	0.35	0.90	0.32	1.31	10.83	8.53	11.1	0.0007	30	2.27	0.31	11.13	0.08	626.36	626.33		
10.33	0.00	10.33	BEND	NA	NA	0.00	1.31	11.13	8.46	11.0	0.0007	30	2.25	0.08	11.21	0.08	626.31	626.30		
LAT. 'E-8'																				
140.41	125.45	14.96	E-8	3.44	0.90	3.10	3.10	10.00	8.74	27.1	0.0143	24	8.62	0.03	10.03	1.15				
125.45	67.22	58.23	BEND	NA	0.90	0.00	3.10	10.03	8.74	27.0	0.0143	24	8.61	0.11	10.14	1.15			PARTIAL FLOW	
67.22	0.00	67.22	BEND	NA	0.90	0.00	3.10	10.14	8.71	27.0	0.0142	24	8.58	0.13	10.27	1.14	626.82	625.86		
LAT. 'E-9'																				
11.54	0.00	11.54	E-9	0.57	0.90	0.51	0.51	10.00	8.74	4.5	0.0008	21	1.86	0.10	10.10	0.05	628.77	628.76		

RECORD DRAWING 5/1/98

ISSUED FOR CONSTRUCTION
MARCH 28, 1996
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY KENNETH A. ROBERTS, P.E. 55446 ON MARCH 28, 1996.



STORM WATER CALCULATIONS
HYDRAULIC CALCULATIONS
ADDISON CIRCLE
PHASE I PUBLIC INFRASTRUCTURE
TOWN OF ADDISON, TEXAS
Huttl-Zollars, Inc./Engineering/Architecture
Dallas, Fort Worth, Houston, El Paso, Phoenix, Tuslin, Ontario, San Clemente

DESIGN	DRAWN	APPR.	SCALE	DATE	PROJECT NO.	NO.
HZI	HZI	KAR	N.T.S.	JAN 96	1822-04	63

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