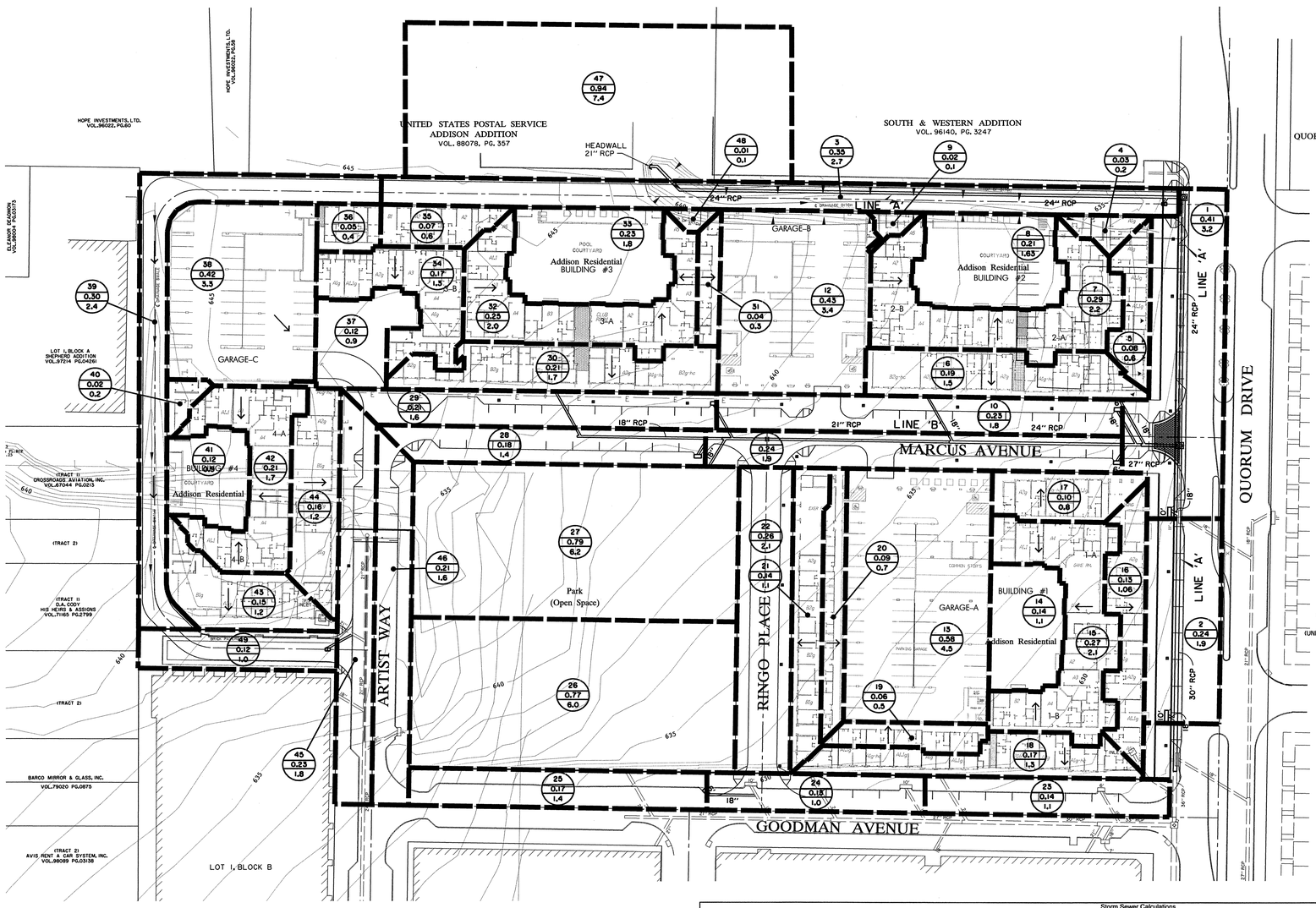

N

0 25 50 75 100
SCALE IN FEET
SCALE: 1" = 50'

LEGEND

EXISTING CONTOUR	
DRAINAGE DIVIDE LINE	— — —
SURFACE FLOW DIRECTION	⟶
DRAINAGE AREA NUMBER	7 / 0.18 / 1.4 — DRAINAGE AREA IDENTIFIER; AREA (ACRES); 100 Y STORM RUNOFF

RECORD DRAWING

THIS DRAWING HAS BEEN MODIFIED FROM THE ORIGINAL TO SHOW ONLY THE FIELD CHANGES AND ADJUSTMENTS MADE DURING CONSTRUCTION BY THE CONTRACTOR WHICH WERE DOCUMENTED AND FURNISHED TO THE ENGINEER FOR THE PURPOSE OF PREPARING THESE RECORD DRAWINGS. FIELD INSPECTION OF CONSTRUCTION WAS PERFORMED BY OTHERS. TO THE BEST OF OUR KNOWLEDGE AND UNDERSTANDING THESE RECORD DRAWINGS REPRESENT THE "AS-BUILT" CONDITIONS.

STATE OF TEXAS
KEVIN N. CARLSON
89232
REGISTERED
PROFESSIONAL ENGINEER
1-9-09

Grate Inlet Calculations

Inlet No.	Runoff Q_{100} (cfs)	Head on Grate 'y' (ft)	Area Required (ft^2)	Area Provided (ft^2)	Inlet Type
A3	2.7	0.22	1.19	3.42	2-grate
H8	3.4	0.15	1.82	3.42	2-grate

$A_{Required} = Q/(4.82y^{1/2})$

$A_{Provided}$ = 246 sq. in per grate

AREA NO.	AREA "A" (ACRES)	Tc (MIN)	INTENSITY $"I_{100}"$ (IN/HR)	RUNOFF COEFF. "C"	STORM RUNOFF $"Q_{100}"$	REMARKS	AREA NO.	AREA "A" (ACRES)	Tc (MIN)	INTENSITY $"I_{100}"$ (IN/HR)	RUNOFF COEFF. "C"	STORM RUNOFF $"Q_{100}"$	REMARKS
1	0.41	10	8.74	0.9	3.2	LINE 'A'	26	0.77	10	8.74	0.9	6.1	EX. RCP
2	0.24	10	8.74	0.9	1.9	LINE 'A'	27	0.79	10	8.74	0.9	6.2	LINE 'B'
3	0.35	10	8.74	0.9	2.7	LINE 'A'	28	0.18	10	8.74	0.9	1.4	LINE 'B'
4	0.03	10	8.74	0.9	0.2	LINE 'A'	29	0.21	10	8.74	0.9	1.6	LINE 'B'
5	0.08	10	8.74	0.9	0.6	LINE 'B'	30	0.21	10	8.74	0.9	1.7	LINE 'B'
6	0.19	10	8.74	0.9	1.5	LINE 'B'	31	0.04	10	8.74	0.9	0.3	LINE 'B'
7	0.29	10	8.74	0.9	2.2	LINE 'A'	32	0.25	10	8.74	0.9	2.0	LINE 'A'
8	0.21	10	8.74	0.9	1.6	LINE 'A'	33	0.23	10	8.74	0.9	1.8	LINE 'A'
9	0.02	10	8.74	0.9	0.1	LINE 'A'	34	0.17	10	8.74	0.9	1.3	LINE 'B'
10	0.23	10	8.74	0.9	1.8	LINE 'B'	35	0.07	10	8.74	0.9	0.6	LINE 'A'
11	0.24	10	8.74	0.9	1.9	LINE 'B'	36	0.05	10	8.74	0.9	0.4	LINE 'A'
12	0.43	10	8.74	0.9	3.4	LINE 'B'	37	0.12	10	8.74	0.9	0.9	LINE 'B'
13	0.58	10	8.74	0.9	4.5	EX. RCP	38	0.42	10	8.74	0.9	3.3	LINE 'B'
14	0.14	10	8.74	0.9	1.1	EX. RCP	39	0.30	10	8.74	0.9	2.4	LAT 'H8'
15	0.27	10	8.74	0.9	2.1	EX. RCP	40	0.02	10	8.74	0.9	0.2	EX. RCP
16	0.12	10	8.74	0.9	1.0	EX. RCP	41	0.12	10	8.74	0.9	0.9	EX. RCP
17	0.10	10	8.74	0.9	0.8	EX. RCP	42	0.21	10	8.74	0.9	1.7	EX. RCP
18	0.17	10	8.74	0.9	1.3	EX. RCP	43	0.15	10	8.74	0.9	1.2	EX. RCP
19	0.06	10	8.74	0.9	0.5	EX. RCP	44	0.16	10	8.74	0.9	1.2	EX. RCP
20	0.09	10	8.74	0.9	0.7	EX. RCP	45	0.23	10	8.74	0.9	1.8	EX. RCP
21	0.14	10	8.74	0.9	1.1	EX. RCP	46	0.21	10	8.74	0.9	1.6	EX. RCP
22	0.26	10	8.74	0.9	2.1	EX. RCP	47	0.94	10	8.74	0.9	7.4	LINE 'A'
23	0.14	10	8.74	0.9	1.1	EX. RCP	48	0.01	10	8.74	0.9	0.1	LINE 'A'
24	0.13	10	8.74	0.9	1.0	EX. RCP	49	0.12	10	8.74	0.9	1.0	LAT 'H8'
25	0.17	10	8.74	0.9	1.4	EX. RCP							

Storm Sewer Calculations

Line or Lateral Name	Runoff Collection Point (Inlet or Manhole) Upstream Station	Downstream Station	Distance Between Collection Points	Incremental Drainage Area: Area No.	Drainage Area "A" (acres)	Runoff Coeff. "C"	Incremental "CA"	Accumulated "CA"	Time at Upstream Station (minutes)	Design Storm Frequency (years)	Intensity "I" (in/hr)	Storm Runoff "Q" (cfs)	Slope of Hydraulic Gradient "S" (ft/ft)	Selected Storm Water Size	Velocity in Sewer Between Connection Points "V" (fps)	Velocity Head Loss at Upstream Station	Inlet, Manhole, Bends, Lateral, or Junction Box Losses	Head Loss Coeff Kj	Flow Time in Sewer (minutes)	Time at Downstream Station (minutes)	Hydraulic Grade Line Elevation Upstream (elev)	Hydraulic Grade Line Elevation Downstream (elev)	Remarks
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
A																							
Offsite, Roof drains	1994.57	1557.91	436.66	32,33,35,36,47,48,4,8,9	1.62	0.9	1.458	1.458	10	100	8.74	12.743	0.0032	24	4.06	0.255	Lateral	0.6	1.79	11.79	629.67	628.28	
A3	1557.91	1544.57	13.34	3	0.35	0.9	0.315	1.773	10	100	8.74	15.496	0.0047	24	4.93	0.378	Lateral	0.6	0.05	11.84	628.06	628.00	
Ex. Pipe	1554.57	1339.57	215	50	1.4	0.9	1.26	3.033	10	100	11.6	35.183	0.0074	30	7.17	0.798	Lateral	0.6	0.50	12.34	627.36	625.78	
B	1339.57	1282.13	57.44	4,5,6,7,8,9,10,11,12,27,2 8,29,30,31,34,37	3.31	0.9	2.979	6.012	10	100	8.74	52.545	0.0062	36	7.43	0.858	Manhole	0.6	0.13	12.47	625.30	624.94	
A2	1282.13	1112.73	169.4	1	0.41	0.9	0.369	6.381	10	100	8.74	55.770	0.0070	36	7.89	0.967	Lateral	0.6	0.36	12.83	624.49	623.30	
A1	1112.73	1070.00	42.73	2	0.24	0.9	0.216	6.597	10	100	8.74	57.658	0.0075	36	8.16	1.033	Lateral	0.6	0.09	12.91	622.85	622.53	
A1																							
	5.56	0.00	5.56	2	0.24	0.9	0.216	0.216	10	100	8.74	1.888	0.0003	18	1.07	0.018	Inlet	1.25	0.09	10.09	622.85	622.84	
A2																							
	5.56	0.00	5.56	1	0.41	0.9	0.369	0.369	10	100	8.74	3.225	0.0009	18	1.83	0.052	Inlet	1.25	0.05	10.05	624.48	624.47	
A3																							
	5.14	0.00	5.14	3	0.35	0.9	0.315	0.315	10	100	8.74	2.753	0.0007	18	1.56	0.038	Inlet	1.25	0.05	10.05	628.05	628.05	
B																							
B8	496.00	391.00	105	34,37,30	0.92	0.9	0.828	0.828	10	100	8.74	7.237	0.0047	18	4.10	0.260	Lateral	0.6	0.43	10.43	632.14	631.64	
B7	391.00	376.00	15	28	0.18	0.9	0.162	0.99		100	8.74	8.653	0.0068	18	4.90	0.372	Lateral	0.6	0.05	10.48	631.43	631.32	
B6	376.00	370.00	6	27	0.79	0.9	0.711	1.701		100	8.74	14.867	0.0088	21	6.18	0.593	Lateral	0.6	0.02	10.49	630.95	630.90	
B5	370.00	188.00	182	29	0.21	0.9	0.189	1.89		100	8.74	16.519	0.0109	21	6.87	0.732	Lateral	0.6	0.44	10.94	630.53	628.55	
B4	188.00	44.00	144	12,6,31	0.66	0.9	0.594	2.484		100	8.74	21.710	0.0092	24	6.91	0.742	Lateral	0.6	0.35	11.28	628.25	626.92	
B3	44.00	36.00	8	11	0.24	0.9	0.216	2.7		100	8.74	23.598	0.0109	24	7.51	0.876	Lateral	0.6	0.02	11.30	626.49	626.40	
B2	36.00	29.00	7	10	0.23	0.9	0.207	2.907		100	8.74	25.407	0.0126	24	8.09	1.016	Lateral	0.6	0.01	11.32	625.91	625.82	
B1	29.00	0.00	29	5	0.08	0.9	0.072	2.979		100	8.74	26.036	0.0071	27	6.55	0.666	Lateral	0.6	0.07	11.39	625.77	625.56	
B8	42.87	0	42.87	34,37,30	0.92	0.9	0.828	0.828	10	100	8.74	7.23672	0.0047	18	4.10	0.260	Lateral	0.6	0.17	10.17	632.45	632.25	
B7	13.28	0	13.28	28	0.18	0.9	0.162	0.162	10	100	8.74	1.41588	0.0002	18	0.80	0.010	Inlet	1.25	0.28	10.28	631.79	631.79	
B6	27.00	0	27	27	0.79	0.9	0.711	0.711	10	100	8.74	6.21414	0.0035	18	3.52	0.192	Lateral	0.6	0.13	10.13	631.53	631.43	
B5	29.44	0	29.44	29	0.21	0.9	0.189	0.189	10	100	8.74	1.65186	0.0002	18	0.93	0.014	Inlet	1.25	0.52	10.52	631.25	631.24	
B4	44.00	0	44	12,6,31	0.66	0.9	0.594	0.594	10	100	8.74	5.19156	0.0024	18	2.94	0.134	Lateral	0.6	0.25	10.25	629.01	628.91	
B3	16.00	0	16	11	0.24	0.9	0.216	0.216	10	100	8.74	1.88784	0.0003	18	1.07	0.018	Inlet	1.25	0.25	10.25	627.35	627.34	
B2	32.00	0	32	10	0.23	0.9	0.207	0.207	10	100	8.74	1.80918	0.0003	18	1.02	0.016	Inlet	1.25	0.52	10.52	626.92	626.91	
B1	43.00	0	43	5	0.08	0.9	0.072	0.072	10	100	8.74	0.62928	0.0000	18	0.36	0.002	Lateral	0.6	2.01	12.01	626.43	626.43	
H8	22.80	0	22.8	39,49	0.42	0.9	0.378	0.378	10	100	8.74	3.30372	0.0010	18	1.87	0.054	Lateral	0.6	0.20	10.20	631.02	631.00	

DRAINAGE AREA MAP

ADDISON RESIDENTIAL

TOWN OF ADDISON, TEXAS

Hurit - Zollars, Inc.
3131 Mckinney Ave., Suite 600, Dallas, TX 75204
Phone (214) 871-3311/Fax (214) 871-0757

DESIGN	CHECKED	APPR.	SCALE	DATE	PROJECT NO.	NO.
HZI	HZI	DEM	1"=50'	11/20/08		C20

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