

ON-SITE RUNOFF CALCULATIONS PHASE 7 OVERALL
FOR INFORMATION ONLY NOT FOR REVIEW

Drainage Area #	Area (Acres)	Runoff Coeff. "A"	Intensity (in./hr.) "C"	Time (minutes) "I"	Discharge (c.f.s.) "Q"	Construction Phase	Comment
STORM LINE 9							
9A	1.70	0.5	9.80	10.0	8.33	6A	Drains to Existing Inlet in Bay Line Drive
9B	1.20	0.5	9.80	10.0	5.88	6A	Drains to Existing Inlet in Bay Line Drive
9C	1.69	0.5	9.80	10.0	8.28	6A	Drains to Existing Inlet in Bay Line Drive
9D	2.02	0.5	9.80	10.0	9.90	7A	Developed - Single Family
9E	1.34	0.5	9.80	10.0	6.57	7A	Developed - Single Family
TOTAL RUNOFF STORM LINE 9					38.96		
STORM LINE 10							
10A	0.96	0.5	9.80	10.0	4.70	7C	Developed - Single Family
10B	1.73	0.5	9.80	10.0	8.48	7B	Developed - Single Family
10C	0.55	0.5	9.80	10.0	2.70	7B	Developed - Single Family
TOTAL RUNOFF STORM LINE 10					15.88		
STORM LINE 11							
11A	0.44	0.5	9.80	10.0	2.16	7A	Developed - Single Family
STORM LINE 12							
12	0.67	0.5	9.80	10.0	3.28	7B	Developed - Single Family
STORM LINE 14							
14A	0.40	0.5	9.80	10.0	1.96	7C	Developed - Single Family
14B	0.63	0.5	9.80	10.0	3.09	7C	Developed - Single Family
14C	1.44	0.5	9.80	10.0	7.06	7C	Developed - Single Family
14D	0.34	0.5	9.80	10.0	1.67	7C	Developed - Single Family
14E	0.58	0.5	9.80	10.0	2.84	7C	Developed - Single Family
14F	0.98	0.5	9.80	10.0	4.70	7C	Developed - Single Family
TOTAL RUNOFF STORM LINE 14					21.32		
STORM LINE 15							
15A	1.13	0.5	9.80	10.0	5.54	7C	Developed - Single Family
15B	0.29	0.5	9.80	10.0	1.42	7C	Developed - Single Family
TOTAL RUNOFF STORM LINE 15					6.96		
STORM LINE 16							
16A	1.00	0.5	9.80	10.0	4.90	7D	Developed - Single Family
16B	0.37	0.5	9.80	10.0	1.81	7D	Developed - Single Family
16C	2.03	0.5	9.80	10.0	9.95	7D	Developed - Single Family
16D	2.02	0.5	9.80	10.0	9.90	7D	Developed - Single Family
16E	0.74	0.5	9.80	10.0	3.63	7D	Developed - Single Family
16F	1.22	0.5	9.80	10.0	5.98	7B	Developed - Single Family
16G	0.67	0.5	9.80	10.0	3.28	7B	Developed - Single Family
16H	0.90	0.5	9.80	10.0	4.41	7B	Developed - Single Family
16I	0.77	0.5	9.80	10.0	3.77	7B	Developed - Single Family
16J	1.49	0.5	9.80	10.0	7.30	7B	Developed - Single Family
16K	1.48	0.5	9.80	10.0	7.25	7B	Developed - Single Family
TOTAL RUNOFF STORM LINE 16					54.93		
STORM LINE 17							
17A	0.52	0.5	9.80	10.0	2.55	7D	Developed - Single Family
17B	0.54	0.5	9.80	10.0	2.65	7D	Developed - Single Family
TOTAL RUNOFF STORM LINE 17					5.19		
STORM LINE 18							
18A	0.51	0.5	9.80	10.0	2.50	7D	Developed - Single Family
18B	0.90	0.5	9.80	10.0	4.41	7D	Developed - Single Family
TOTAL RUNOFF STORM LINE 18					6.91		
STORM LINE 19							
19A	1.10	0.5	9.80	10.0	5.39	7B	Developed - Single Family
19B	1.45	0.5	9.80	10.0	7.11	7B	Developed - Single Family

ON-SITE RUNOFF CALCULATIONS PHASE 7A

Drainage Area #	Area (Acres)	Runoff Coeff. "C"	Intensity (in./hr.) "I"	Time (minutes) "Tc"	Discharge (c.f.s.) "Q"	Comment
STORM LINE 9						
9A	1.70	0.5	9.80	10.0	8.33	Drains to Existing Inlet in Bay Line Drive
9B	1.20	0.5	9.80	10.0	5.88	Drains to Existing Inlet in Bay Line Drive
9C	1.69	0.5	9.80	10.0	8.28	Drains to Existing Inlet in Bay Line Drive
9D	2.02	0.5	9.80	10.0	9.90	Developed - Single Family
9E	1.68	0.5	9.80	10.0	8.23	Developed - Single Family
X	11.19	0.5	9.80	10.0	54.83	Undeveloped Area Diverted from Alley to Existing Pond
STORM LINE 11						
11A	0.44	0.5	9.80	10.0	2.16	Developed - Single Family

EXISTING DRAINAGE AREAS FROM CARUTH LAKES PHASE 6

Drainage Area #	Area (Acres)	Runoff Coeff.	Intensity (in./hr.)	Time (minutes)	Discharge (c.f.s.)	Comment
STORM LINE 8						
8A	0.42	0.5	9.80	10.0	2.06	DA from Caruth Lakes Phase 6 DA Map Sheet 1 of 57
8B	1.31	0.5	9.80	10.0	6.42	DA from Caruth Lakes Phase 6 DA Map Sheet 1 of 57
8C	2.94	0.5	9.80	10.0	14.41	DA from Caruth Lakes Phase 6 DA Map Sheet 1 of 57
8D	0.38	0.5	9.80	10.0	1.86	DA from Caruth Lakes Phase 6 DA Map Sheet 1 of 57
8E	1.33	0.5	9.80	10.0	6.52	DA from Caruth Lakes Phase 6 DA Map Sheet 1 of 57
8F	2.31	0.5	9.80	10.0	11.32	DA from Caruth Lakes Phase 6 DA Map Sheet 1 of 57
STORM LINE 10						
10C	0.42	0.5	9.80	10.0	2.06	DA from Caruth Lakes Phase 6 DA Map Sheet 1 of 57
10D	1.45	0.5	9.80	10.0	7.11	DA from Caruth Lakes Phase 6 DA Map Sheet 1 of 57
10H	0.99	0.5	9.80	10.0	4.85	DA from Caruth Lakes Phase 6 DA Map Sheet 1 of 57
10J	0.64	0.5	9.80	10.0	3.14	DA from Caruth Lakes Phase 6 DA Map Sheet 1 of 57
10K	1.1	0.5	9.80	10.0	5.39	DA from Caruth Lakes Phase 6 DA Map Sheet 1 of 57
10L	0.83	0.5	9.80	10.0	4.07	DA from Caruth Lakes Phase 6 DA Map Sheet 1 of 57
10M	1.06	0.5	9.80	10.0	5.19	DA from Caruth Lakes Phase 6 DA Map Sheet 1 of 57
10N	1.36	0.5	9.80	10.0	6.66	DA from Caruth Lakes Phase 6 DA Map Sheet 1 of 57

INLET SUMMARY CHART

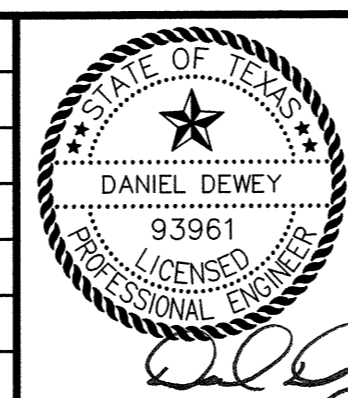
Development Phase	No.	Location	AREA RUNOFF Q=CIA							Upstream Inlet Bypass and Crossover (c.f.s.)	To/From	Total Gutter Flow (c.f.s.)	Gutter Capacity (c.f.s.)	Gutter Slope (%)	Crown Type	SELECTED INLET				
			Drainage Area No.	Design Storm Freq. (yrs.)	Time of Conc. (min.)	Intensity I (in./hr.)	Runoff Coeff. "C"	Area (Ac.)	Q (c.f.s.)							Length "Li" (Feet)	Type	Inlet Capacity (c.f.s.)	Carry-Over Downstream (c.f.s.)	Q100 Intercepted at Inlet (c.f.s.)
PROPOSED CURB INLETS																				
PHASE 7A	9D	18+65.75 ALLEY 8	9D	100	10	9.80	0.5	1.90	9.31	0.00	from 9E	9.31	12.57	1.80	5" INVERT	15	ON GRADE CURB	9.50	0.00	9.31
PHASE 7A	9E	12+70.18 ALLEY 8	9E	100	10	9.80	0.5	1.34	6.57	0.00		6.57	6.36	0.60	5" INVERT	10	ON GRADE CURB	7.00	0.00	6.57
			9E ULTIMATE	100	10	9.80	0.5	1.3	6.37	0.00		6.37	6.36	0.60	5" INVERT	10	ON GRADE CURB	7.00	0.00	6.37
PHASE 7A	11A	22+67.09 ALLEY 8	11A	100	10	9.80	0.5	1.22	5.98	0.00	from 9D	5.98	13.41	4.00	5" INVERT	15	ON GRADE CURB	8.50	0.00	5.98

Notes: Inlet 9E collects some offsite water from the undeveloped area in Phase 7B. Upon development of 7B the drainage area will be reduced and the inlet will have capacity to collect the entire drainage area. Inlet 9D calculations based on Q100 ultimate conditions. Total Gutter Flow for phase 7A is 9.90 cfs see sheet 13

BENCHMARKS


- X-chiseled in CL of Alley East of Morningstar Drive within the third lot north of Midnight Pass. Elevation = 513.26
- PK Nail in CL of Caruth Lane & Alley intersection 150 feet +/- east of Morningstar Drive. Elevation = 491.68

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE	NO.	SUBMITTALS	DATE



The seal appearing on this document was authorized by DANIEL DEWEY, P.E. 93961. Alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act.

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DRAINAGE CALCULATIONS		PROJECT NO.
Caruth Lakes Phase 7		HOE132
City of Rockwall, Texas		SHEET NO.
11		

AS-BUILT DRAWINGS: 7/20/12

TO THE BEST OF JBI PARTNERS, INC. KNOWLEDGE HEREBY STATES THE THIS PLAN IS AS-BUILT. THE INFORMATION PROVIDED IS BASED ON CONSTRUCTION STAKING AND PAD VERIFICATION AT THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.

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.