

Storm Sewer Design

10 yr. Storm
Project: Holiday Inn Express
Job No.: 15M040-000

Formulas Used:
Q_r = ACI
V_p = 1.486 R^(2/3) S^(1/2)/n
Q_p = A_p V_p

Bayer Becker Engineers

Designed By: MJL Date: 09/13/16
Reviewed By: Date:
Revisions: MJL Date: 09/23/16
Revisions: Date:

LOCATION			TOPOGRAPHY					TIME			Min. Tc= 10		DESIGN										Constant n value: 0.015		
Street	From Structure	To Structure	Area No.	Area (acres)	"C"	Contributing Area	Composite C	T-inlet (min.)	T-upstr (min.)	T_c-conc. (min.)	Intensity (in./hr.)	Q_r (c.f.s.)	Pipe Size (inches)	"n"	Distance (ft.)	Slope (%)	Velocity (ft./sec)	Q_p (c.f.s.)	Flow Time (min.)	T/Grate	Inlet Invert	Outlet Invert	Inlet Clearance		
	1	2		0.00	0.40	0.00	0.40	10.00	10.00	10.00	5.15	0.00	12	0.015	115	1.79	5.27	4.14	0.36	898.47	894.92	892.85	2.55		
	2	3		0.31	0.90	0.31	0.90	10.00	10.36	10.36	5.10	1.42	12	0.015	100	0.50	2.78	2.18	0.60	896.33	892.85	892.35	2.48		
	3	5		0.09	0.90	0.40	0.90	10.00	10.96	10.96	5.01	1.80	12	0.015	43	0.50	2.78	2.18	0.26	896.72	892.35	892.14	3.37		
	5	4		0.33	0.90	0.73	0.90	10.00	11.22	11.22	4.97	3.26	15	0.015	115	0.50	3.23	3.96	0.59	897.74	891.90	891.32	4.59		
	4	13		0.16	0.90	0.89	0.90	10.00	11.82	11.82	4.88	3.91	15	0.015	84	0.50	3.23	3.96	0.43	896.47	891.32	890.90	3.90		
	13	14		0.29	0.90	1.48	0.90	10.00	12.25	12.25	4.82	6.42	72	0.015	12	0.50	9.18	259.54	0.02	896.21	888.17	888.11	2.04		
	10	11		0.19	0.90	0.19	0.90	10.00	10.00	10.00	5.15	0.88	12	0.015	148	0.50	2.78	2.18	0.89	896.66	893.18	892.44	2.48		
	11	12		0.16	0.90	0.35	0.90	10.00	10.89	10.89	5.02	1.58	12	0.015	124	0.50	2.78	2.18	0.74	896.90	892.44	891.82	3.46		
	12	13		0.30	0.90	0.65	0.90	10.00	11.63	11.63	4.91	2.87	72	0.015	108	0.30	7.11	201.04	0.25	896.18	888.49	888.17	1.69		
	30	31		7.00	0.40	7.00	0.40	11.00	11.00	11.00	5.00	14.00	24	0.015	56	0.75	5.40	16.98	0.17	889.67	885.40	884.98	2.27		
	31	32		0.00	0.40	7.00	0.40	10.00	11.17	11.17	4.97	13.93	24	0.015	189	0.75	5.40	16.98	0.58	890.03	884.98	883.56	3.05		