

STORM SEWER CALCULATIONS

Upstream Station	Downstream Station	Distance (ft)	AREA NO.	Total Area (Acres)	Picked Up (Acres)	C	CA	Accumulated CA	Tc (Mn)	Design Storm (Years)	I (in/hr)	Q (CFS)	S (ft)	Pipe Size (in)	Partial Flow?	Velocity (ft/s)	Flow Time (Mn)	Velocity Head (ft)	Junction Type	K	Time at D/S (Mn)	Minor Losses (ft)	Hydraulic Grade Upstream	Hydraulic Grade Downstream		
Line D1																										
1+16.05	0+89.01	27.04		5	1.06	0.50	0.53	10.00	100	9.80	5.2	0.0024	18	No	2.9	0.15	0.13		Inlet	1.25	10.15	0.17	532.36	532.19		
0+89.01	0+36.65	52.36	D1A	1.06	1.06	0.50	0.53	10.00	100	9.78	10.3	0.0021	24	No	3.3	0.27	0.17		60" Vye	0.35	10.42	0.12	532.13	532.01		
0+36.65	0+00.00	36.65		0.00	0.00	0.50	0.00	1.06	10.42	100	9.74	10.3	0.0006	30	No	2.1	0.29	0.07		60" Vye	0.35	10.71	0.01	531.90	531.89	
0+00.00																5.8	0.00	0.52		60" Vye	0.35	0.00	0.46	531.86	531.40	
Lat D1A																										
0+26.63	0+00.00	26.63		6	1.06	1.06	0.50	0.53	10.00	100	9.80	5.2	0.0024	18	No	2.9	0.15	0.13		Inlet	1.25	10.15	0.17	532.36	532.19	
0+00.00																3.3	0.00	0.17		60" Vye	0.35	0.00	0.12	532.13	532.01	
Line D2																										
4+77.10	1+00.50	376.60		14	2.45	2.24	0.50	1.12	10.00	100	9.80	11.0	0.0110	18	Yes	8.4	0.75	1.10		Inlet	1.25	10.75	1.37	528.70	527.33	
1+00.50	0+36.65	63.98	D2A, D2B	3.44	3.24	0.50	1.62	2.74	10.75	100	9.69	26.6	0.0138	24	No	8.5	0.13	1.11		60" Vye	0.35	10.87	0.73	523.20	522.47	
0+36.65	0+00.00	36.65		0.00	0.00	0.50	0.00	2.74	10.87	100	9.67	26.5	0.0042	30	No	5.4	0.11	0.45		60" Vye	0.35	10.99	0.06	521.58	521.52	
0+00.00																7.2	0.00	0.80		60" Vye	0.35	0.00	0.65	521.37	520.72	
Lat D2A																										
0+17.93	0+00.00	17.93		16	2.24	2.24	0.50	1.12	10.00	100	9.80	11.0	0.0110	18	No	6.2	0.05	0.60		Inlet	1.25	10.05	0.75	524.32	523.57	
0+00.00																8.5	0.00	1.11		60" Vye	0.35	0.00	0.90	523.37	522.47	
Lat D2B																										
0+17.97	0+00.00	17.97		15	0.79	1.00	0.50	0.50	10.00	100	9.80	4.9	0.0022	18	No	2.8	0.11	0.12		Inlet	1.25	10.11	0.15	523.73	523.58	
0+00.00																8.5	0.00	1.11		60" Vye	0.35	0.00	1.07	523.54	522.47	
Line D3																										
18+48.33	18+08.98	39.35		9	1.58	1.33	0.50	0.66	10.00	100	9.80	6.5	0.0038	18	Yes	10.5	0.06	1.71		Inlet	1.25	10.06	2.14	534.87	532.73	
18+08.98	18+05.98	3.00	PVI	0.00	0.00	0.50	0.00	0.66	10.06	100	9.79	6.5	0.0038	18	Yes	6.3	0.01	0.62		PVI	1.00	10.07	0.00	532.59	532.59	
18+05.98	17+75.68	30.30	D3I	0.22	0.22	0.50	0.11	0.77	10.87	100	9.79	7.6	0.0052	18	Yes	6.5	0.08	0.68		60" Vye	0.35	10.15	0.44	532.58	532.14	
17+75.68	17+62.63	13.05	D3H	0.25	0.50	0.50	0.25	1.02	10.15	100	9.78	10.0	0.0091	18	Yes	6.8	0.03	0.72		60" Vye	0.35	10.18	0.49	531.98	531.50	
17+62.63	14+00.00	362.63	MH	0.00	0.00	0.50	0.00	1.02	10.18	100	9.77	10.0	0.0091	18	Yes	6.8	0.89	0.72		MH	0.55	11.07	0.39	531.38	530.98	
14+00.00	11+85.01	214.99	PVI	0.00	0.00	0.50	0.00	1.02	11.07	100	9.64	9.9	0.0088	18	Yes	10.3	0.35	1.65		PVI	1.00	11.42	0.93	529.98	529.05	
11+85.01	11+22.57	62.44	D3F, D3G	2.11	2.11	0.50	1.06	2.08	13.42	100	9.59	20.0	0.0078	24	No	6.4	0.16	0.63		60" Vye	0.35	11.58	0.05	527.69	527.64	
11+22.57																4.1		0.26			1.00			527.15	527.15	
Lat D3F																										
0+17.94	0+00.00	17.94		11	1.06	1.06	0.50	0.53	10.00	100	9.80	5.2	0.0024	18	No	2.9	0.10	0.13		Inlet	1.25	10.10	0.17	528.43	528.26	
0+00.00																6.4	0.00	0.63		60" Vye	0.35	0.00	0.58	528.22	527.64	
Lat D3G																										
0+17.86	0+00.00	17.86		12	1.06	1.06	0.50	0.53	10.00	100	9.80	5.2	0.0024	18	No	2.9	0.10	0.13		Inlet	1.25	10.10	0.17	528.43	528.26	
0+00.00																6.4	0.00	0.63		60" Vye	0.35	0.00	0.58	528.22	527.64	
Lat D3H																										
0+17.90	0+00.00	17.90		10	0.25	0.50	0.50	0.25	10.00	100	9.80	2.5	0.0005	18	No	1.4	0.21	0.03		Inlet	1.25	10.21	0.04	532.25	532.21	
0+00.00																6.8	0.00	0.72		60" Vye	0.35	0.00	0.71	532.20	531.50	
Lat D3I																										
0+18.61	0+00.00	18.61		8	0.22	0.22	0.50	0.11	10.00	100	9.80	1.1	0.0001	18	No	0.6	0.51	0.01		Inlet	1.25	10.51	0.01	532.81	532.80	
0+00.00																6.5	0.00	0.66		60" Vye	0.35	0.00	0.65	532.80	532.14	
Line D4																										
12+54.72	11+33.74	120.98		1	2.08	2.08	0.50	1.04	10.00	100	9.80	10.2	0.0094	18	Yes	8.0	0.25	0.99		Inlet	1.25	10.25	1.24	534.38	533.14	
11+33.74	10+37.85	95.89	D4F	2.13	2.13	0.50	1.07	2.10	10.25	100	9.76	20.5	0.0044	27	No	5.2	0.31	0.41		60" Vye	0.35	10.56	0.07	532.00	531.93	
10+37.85	9+75.00	62.85	D4E	0.66	0.66	0.50	0.33	2.43	10.56	100	9.72	23.6	0.0058	27	Yes	7.4	0.14	0.85		60" Vye	0.35	10.70	0.71	531.51	530.81	
9+75.00																									530.44	
5+25.00	4+95.00	30.00	D4, D9	7.79	7.79	0.50	3.89	3.89	10.56	100	9.72	37.8	0.0280	24	Yes	12.4	0.04	2.39			1.25	10.60	2.98	517.79	514.81	
4+95.00																										513.97
Lat D4E																										
0+17.96	0+00.00	17.96		2	0.66	0.66	0.50	0.33	10.00	100	9.80	3.2	0.0009	18	No	1.8	0.16	0.05		Inlet	1.25	10.16	0.06	531.72	531.66	
0+00.00																7.4	0.00	0.85		60" Vye	0.35	0.00	0.83	531.64	530.81	
Lat D4F																										
0+17.84	0+00.00	17.84		3	2.13	2.13	0.50	1.07	10.00	100	9.80	10.4	0.0099	18	No	5.9	0.05	0.54		Inlet	1.25	10.05	0.68	533.01	532.33	
0+00.00																5.2	0.00	0.41		60" Vye	0.35	0.00	0.22	532.16	531.93	
Line D7																										
20+19.32	17+59.00	260.32	D6, D26A	0.43	0.43	0.70	0.30	0.30	10.00	100	9.80	2.9	0.0008	18	Yes	4.7	0.92	0.34		Inlet	1.25	10.92	0.43	523.92	523.49	
17+59.00	17+00.00	59.00	D7N	0.55	0.55	0.68	0.37	0.67	10.92	100	9.66	6.5	0.0038	18	Yes	5.7	0.17	0.50		60" Vye	0.35	11.10	0.38	523.29	522.91	
17+00.00	16+09.00	91.00	PVI	0.00	0.00	0.50	0.00	0.67	11.10	100	9.64	6.5														