

Drainage Area Characteristics																	Pipe Design															
Pipe #	Structures		DA Designation	Time (min)		Type	n	C	i (in/hr)	Area				Flow (cfs)		Pipe Size Diam.			Pipe Length (ft)	Pipe Slope (ft/ft)	Q Full (cfs)	V Full (fps)	Q Actual (cfs)	V Actual (fps)	Invert Elevations (ft)		Rim Elevations (ft)		Pipe Coverage (ft)			
	From	To		Tc	Sum Tc					Imp. (sf)	Lawn (sf)	Area (sf)	Change in Area (acres)	Sum Area (sf)	Sum Area (acres)	Q=CiA (cfs)	Sum of Q (cfs)	Req'd D (in)							Size Chosen (in)	Outside D (in)	Inlet	Outlet	Start	End	Start	End
1	CB 1	DMH 1	DA 1	5.00	5.00	HDPE	0.012	0.61	5.30	54,450	32,670	87,120	2.00	87,120	2.00	6.43	6.43	15.99	10	11.36	42.0	0.006	2.19	4.02	7.54	5.41	8.25	8.00	10.60	10.00	1.52	1.17
2	CB 2	DMH 1	DA 1	5.00	5.00	HDPE	0.012	0.65	5.30	27,225	11,835	39,060	0.90	39,060	0.90	3.10	3.10	11.78	10	11.36	21.0	0.007	2.41	4.42	3.71	4.90	7.80	7.65	10.15	10.00	1.52	1.52
3	CB 3	DMH 1	DA 1	5.00	5.00	HDPE	0.012	0.65	5.30	27,225	11,835	39,060	0.90	39,060	0.90	3.10	3.10	11.28	10	11.36	5.5	0.009	2.73	5.01	3.75	5.40	7.70	7.65	10.05	10.00	1.52	1.52
4	DMH 1	DMH 2	DA 1	5.00	5.00	RCP	0.013	0.59	5.30	99,359	65,340	164,699	3.78	164,699	3.78	11.87	11.87	21.36	12	14.45	195.0	0.005	3.26	4.15	14.84	5.96	7.50	6.50	10.00	9.40	1.50	1.90
5	CB 4	DMH 2	DA 1	5.00	5.00	HDPE	0.012	0.85	5.30	4,022	0	4,022	0.09	4,022	0.09	0.42	0.42	5.39	10	11.36	18.0	0.008	2.62	4.81	0.51	3.25	6.85	6.70	9.20	9.40	1.52	1.87
6	CB 5	DMH 2	DA 1	5.00	5.00	HDPE	0.012	0.85	5.30	5,519	0	5,519	0.90	5,519	0.13	4.04	0.57	6.58	10	11.36	37.0	0.005	2.07	3.80	0.69	2.92	6.85	6.65	9.20	9.40	1.52	1.92
7	DMH 2	DMH 3	DA 1	5.00	5.00	RCP	0.013	0.61	5.30	108,900	65,340	174,240	4.00	174,240	4.00	12.85	12.85	17.35	12	14.45	63.0	0.018	6.46	8.23	17.04	10.38	6.45	5.30	9.40	8.10	1.95	1.80
8	DMH 3	DSD	DA 1	5.00	5.00	PVC	0.012	0.61	5.30	108,900	65,340	174,240	4.00	174,240	4.00	1.10	1.10	8.54	8	9.11	11.0	0.005	1.11	3.17	1.31	3.30	4.80	4.75	8.10	8.10	2.63	2.68
9	DMH 3	DMH 4	DA 1	5.00	5.00	RCP	0.013	0.61	5.30	108,900	65,340	174,240	4.00	174,240	4.00	11.75	11.75	21.42	12	14.45	182.0	0.005	3.20	4.07	14.67	5.86	4.00	3.10	8.10	5.50	3.10	1.40
10	B 1	DMH 4	DA 1	5.00	5.00	HDPE	0.012	0.61	5.30	108,900	65,340	174,240	4.00	174,240	4.00	1.10	1.10	8.48	6	7.36	29.0	0.005	0.53	2.69	1.31	3.35	3.30	3.15	6.00	5.50	2.20	1.85
11	DMH 4	OUTLET	DA 1	5.00	5.00	RCP	0.013	0.61	5.30	108,900	65,340	174,240	4.00	174,240	4.00	12.85	12.85	22.55	12	14.45	77.0	0.005	3.04	3.86	15.95	5.75	2.85	2.50	5.50	--	1.65	--
12	B 4A	DMH 5	DA 2	5.00	5.00	HDPE	0.012	0.85	5.30	13,787	0	13,787	0.32	13,787	0.32	1.43	1.43	9.24	6	7.36	46.0	0.006	0.55	2.78	1.70	3.65	3.30	3.05	6.00	7.60	2.20	4.05
13	B 2A	DMH 5	DA 4	5.00	5.00	HDPE	0.012	0.85	5.30	1,860	0	1,860	0.04	1,860	0.04	0.19	0.19	4.44	6	7.36	61.0	0.005	0.52	2.64	0.23	2.19	3.30	3.00	6.25	7.60	2.45	4.10
14	B 2B	DMH 5	DA 2	5.00	5.00	HDPE	0.012	0.85	5.30	1,860	0	1,860	0.04	1,860	0.04	0.19	0.19	4.44	6	7.36	31.0	0.005	0.52	2.64	0.23	2.19	3.30	3.15	6.00	7.60	2.20	3.95
15	DMH 5	DMH 6	DA 2 & 4	5.00	5.00	RCP	0.013	0.85	5.30	17,507	0	17,507	0.40	17,507	0.40	1.81	1.81	10.59	12	14.45	139.0	0.005	3.23	4.11	2.32	3.80	2.90	2.20	7.60	5.75	3.70	2.55
16	B 4B	DMH 6	DA 2	5.00	5.00	HDPE	0.012	0.85	5.30	7,053	0	7,053	0.16	7,053	0.16	0.73	0.73	7.61	6	7.36	37.0	0.004	0.46	2.36	0.87	2.74	2.30	2.15	5.00	5.75	2.20	3.10
17	B 2C	DMH 6	DA 4	5.00	5.00	HDPE	0.012	0.85	5.30	1,860	0	1,860	0.04	1,860	0.04	0.19	0.19	4.52	6	7.36	44.0	0.005	0.49	2.51	0.23	2.10	2.30	2.10	5.00	5.75	2.20	3.15
18	DMH 6	DMH 7	DA 2 & 4	5.00	5.00	RCP	0.013	0.85	5.30	26,420	0	26,420	0.61	26,420	0.61	2.73	2.73	12.25	12	14.45	47.5	0.005	3.30	4.21	3.49	4.26	2.05	1.80	5.75	5.50	2.70	2.70
19	B 2D	DMH 7	DA 4	5.00	5.00	HDPE	0.012	0.85	5.30	1,860	0	1,860	0.04	1,860	0.04	0.19	0.19	4.32	6	7.36	43.5	0.006	0.56	2.85	0.24	2.32	2.30	2.05	5.00	5.50	2.20	2.95
20	DMH 7	DMH 8	DA 2 & 4	5.00	5.00	RCP	0.013	0.85	5.30	28,280	0	28,280	0.65	28,280	0.65	2.92	2.92	12.79	12	14.45	52.0	0.005	3.15	4.00	3.72	4.17	1.80	1.55	5.50	5.30	2.70	2.75
21	B 3A	DMH 8	DA 3	5.00	5.00	HDPE	0.012	0.85	5.30	4,707	0	4,707	0.11	4,707	0.11	0.49	0.49	4.48	6	7.36	11.5	0.030	1.38	7.01	0.64	5.83	2.30	1.95	5.00	5.30	2.20	2.85
22	DMH 8	DMH 9	DA 3	5.00	5.00	RCP	0.013	0.85	5.30	32,987	0	32,987	0.76	37,694	0.87	3.41	3.90	14.02	12	14.45	86.0	0.005	3.29	4.19	4.95	4.62	1.45	1.00	5.30	5.30	2.85	3.30
23	B 3B	DMH 9	DA 3	5.00	5.00	HDPE	0.012	0.85	5.30	3,839	0	3,839	0.09	3,839	0.09	0.40	0.40	5.02	6	7.36	9.0	0.011	0.80	4.07	0.50	3.63	2.30	2.20	5.00	5.30	2.20	2.60
24	DMH 9	OUTLET	DA 3	5.00	5.00	RCP	0.013	0.85	5.30	36,826	0	36,826	0.85	40,665	0.93	3.81	4.21	15.69	12	14.5	45.0	0.003	2.58	3.29	5.23	3.89	0.90	0.75	5.30	--	3.40	--

- Notes:
- 1 Sizes of Front St. system is constricted by outlet elevations (DMH 1 - 4). Overflow from Front St. assumed to outlet North of proposed site.
 - 2 Runoff Coefficients 0.85 pavement
 - 0.2 Lawns - Sandy soils (steep)
 - 3 DMH - Drainage Manhole
 - 4 B - Bioretention Basin
 - 5 DSD - Downstream Defender
 - 6 CB - Catch Basin
 - 7 PVC - Polyvinyl Chloride Pipe
 - 8 HDPE - High Density Polyethylene Pipe
 - 9 RCP - Reinforced Concrete Pipe