STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Storm

Pipe Sizes STANDARD Manhole Sizes STANDARD

FEH Rainfall Model

Return Period (years)	100
FEH Rainfall Version	1999
Site Location	GB 386850 145550 ST 86850 45550
C (1km)	-0.027
D1 (1km)	0.363
D2 (1km)	0.417
D3 (1km)	0.273
E (1km)	0.289
F (1km)	2.484
Maximum Rainfall (mm/hr)	50
Maximum Time of Concentration (mins)	30
Foul Sewage (l/s/ha)	0.000
Volumetric Runoff Coeff.	0.750
PIMP (%)	100
Add Flow / Climate Change (%)	0
Minimum Backdrop Height (m)	0.200
Maximum Backdrop Height (m)	1.500
Min Design Depth for Optimisation (m)	1.200
Min Vel for Auto Design only (m/s)	1.00
Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Time Area Diagram for Storm

Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.341	4-8	1.261	8-12	0.072

Total Area Contributing (ha) = 1.673

Total Pipe Volume (m³) = 94.140

Network Design Table for Storm

« - Indicates pipe capacity < flow

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
1.000	1.000	0.020	50.0	0.010	4.00	0.0	0.600	o	100	Pipe/Conduit	
1.001	14.185	1.045	13.6	0.010	0.00	0.0	0.600	o	100	Pipe/Conduit	
1.002	17.662	0.220	80.3	0.038	0.00	0.0	0.600	o	225	Pipe/Conduit	
2.000	1.000	0.020	50.0	0.010	4.00	0.0	0.600	o	100	Pipe/Conduit	
2.001	6.793	1.255	5.4	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.000	50.00	4.02	138.270	0.010	0.0	0.0	0.0	1.09	8.6	1.4
1.001	50.00	4.13	138.250	0.020	0.0	0.0	0.0	2.11	16.6	2.7
1.002	50.00	4.33	137.080	0.058	0.0	0.0	0.0	1.46	58.1	7.9
2.000	50.00	4.02	138.260	0.010	0.0	0.0	0.0	1.09	8.6	1.4
2.001	50.00	4.05	138.240	0.010	0.0	0.0	0.0	3.35	26.3	1.4

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Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
1.003	2.967	0.037	80.3	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
1.004	3.349	0.033	101.5	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
3.000	1.000	0.020	50.0	0.014	4.00	0.0	0.600	o	100	Pipe/Conduit	
3.001	7.899	1.385	5.7	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
1.005	10.872	0.109	99.7	0.015	0.00	0.0	0.600	o	300	Pipe/Conduit	
4.000	1.000	0.020	50.0	0.014	4.00	0.0	0.600	o	100	Pipe/Conduit	
4.001	7.533	1.639	4.6	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
1.006	10.269	0.103	99.7	0.017	0.00	0.0	0.600	o	300	Pipe/Conduit	
5.000	1.000	0.020	50.0	0.009	4.00	0.0	0.600	o	100	Pipe/Conduit	
5.001	7.162	1.827	3.9	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
1.007	11.677	0.117	99.8	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
1.008	7.447	0.074	100.6	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
6.000	1.000	0.020	50.0	0.026	4.00	0.0	0.600	o	100	Pipe/Conduit	
6.001	8.779	0.790	11.1	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
6.002	11.630	0.490	23.7	0.014	0.00	0.0	0.600	o	150	Pipe/Conduit	
7.000	1.000	0.020	50.0	0.013	4.00	0.0	0.600	o	100	Pipe/Conduit	
7.001	5.711	0.515	11.1	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
6.003	10.709	0.450	23.8	0.014	0.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.003	50.00	4.36	136.860	0.068	0.0	0.0	0.0	1.46	58.1	9.2
1.004	50.00	4.40	136.748	0.068	0.0	0.0	0.0	1.56	110.3	9.2
3.000	50.00	4.02	138.320	0.014	0.0	0.0	0.0	1.09	8.6	1.9
3.001	50.00	4.06	138.300	0.014	0.0	0.0	0.0	3.26	25.6	1.9
1.005	50.00	4.51	136.715	0.097	0.0	0.0	0.0	1.57	111.3	13.1
4.000	50.00	4.02	138.465	0.014	0.0	0.0	0.0	1.09	8.6	1.9
4.001	50.00	4.05	138.445	0.014	0.0	0.0	0.0	3.63	28.5	1.9
1.006	50.00	4.62	136.606	0.128	0.0	0.0	0.0	1.57	111.3	17.3
5.000	50.00	4.02	138.550	0.009	0.0	0.0	0.0	1.09	8.6	1.2
5.001	50.00	4.05	138.530	0.009	0.0	0.0	0.0	3.93	30.9	1.2
1.007	50.00	4.75	136.503	0.137	0.0	0.0	0.0	1.57	111.2	18.6
1.008	50.00	4.83	136.386	0.137	0.0	0.0	0.0	1.57	110.8	18.6
6.000	50.00	4.02	141.160	0.026	0.0	0.0	0.0	1.09	8.6	3.5
6.001	50.00	4.08	141.140	0.026	0.0	0.0	0.0	2.33	18.3	3.5
6.002	50.00	4.17	140.300	0.040	0.0	0.0	0.0	2.08	36.7	5.4
7.000	50.00	4.02	140.395	0.013	0.0	0.0	0.0	1.09	8.6	1.8
7.001	50.00	4.06	140.375	0.013	0.0	0.0	0.0	2.33	18.3	1.8
6.003	50.00	4.26	139.810	0.067	0.0	0.0	0.0	2.07	36.6	9.1

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Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
8.000	1.000	0.020	50.0	0.013	4.00	0.0	0.600	o	100	Pipe/Conduit	
8.001	5.359	0.445	12.0	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
6.004	14.513	0.610	23.8	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
9.000	1.000	0.020	50.0	0.013	4.00	0.0	0.600	o	100	Pipe/Conduit	
9.001	6.287	0.530	11.9	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
6.005	16.038	0.450	35.6	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
10.000	1.775	0.040	44.4	0.013	4.00	0.0	0.600	o	100	Pipe/Conduit	
10.001	5.975	0.500	12.0	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
6.006	5.575	0.160	34.8	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
11.000	1.000	0.020	50.0	0.013	4.00	0.0	0.600	o	100	Pipe/Conduit	
11.001	9.935	0.780	12.7	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
6.007	7.954	0.229	34.7	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
6.008	9.917	1.449	6.8	0.015	0.00	0.0	0.600	o	150	Pipe/Conduit	
1.009	48.885	0.235	208.0	0.056	0.00	0.0	0.600	o	375	Pipe/Conduit	
12.000	1.550	0.030	51.7	0.010	4.00	0.0	0.600	o	100	Pipe/Conduit	
12.001	4.297	0.455	9.4	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
12.002	15.280	0.191	80.0	0.006	0.00	0.0	0.600	o	150	Pipe/Conduit	
13.000	1.000	0.020	50.0	0.019	4.00	0.0	0.600	o	100	Pipe/Conduit	
13.001	6.156	0.711	8.7	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
8.000	50.00	4.02	139.875	0.013	0.0	0.0	0.0	1.09	8.6	1.8
8.001	50.00	4.06	139.855	0.013	0.0	0.0	0.0	2.24	17.6	1.8
6.004	50.00	4.37	139.360	0.080	0.0	0.0	0.0	2.07	36.6	10.8
9.000	50.00	4.02	139.350	0.013	0.0	0.0	0.0	1.09	8.6	1.8
9.001	50.00	4.06	139.330	0.013	0.0	0.0	0.0	2.26	17.7	1.8
6.005	50.00	4.53	138.750	0.093	0.0	0.0	0.0	1.69	29.9	12.6
10.000	50.00	4.03	138.890	0.013	0.0	0.0	0.0	1.16	9.1	1.8
10.001	50.00	4.07	138.850	0.013	0.0	0.0	0.0	2.25	17.7	1.8
6.006	50.00	4.59	138.300	0.106	0.0	0.0	0.0	1.71	30.2	14.4
11.000	50.00	4.02	138.990	0.013	0.0	0.0	0.0	1.09	8.6	1.8
11.001	50.00	4.09	138.970	0.013	0.0	0.0	0.0	2.18	17.1	1.8
6.007	50.00	4.66	138.140	0.119	0.0	0.0	0.0	1.71	30.3	16.1
6.008	50.00	4.71	137.911	0.134	0.0	0.0	0.0	3.88	68.5	18.1
1.009	50.00	5.48	136.237	0.327	0.0	0.0	0.0	1.25	138.3	44.3
12.000	50.00	4.02	138.425	0.010	0.0	0.0	0.0	1.07	8.4	1.4
12.001	50.00	4.05	138.395	0.010	0.0	0.0	0.0	2.53	19.9	1.4
12.002	50.00	4.28	137.890	0.016	0.0	0.0	0.0	1.12	19.9	2.2
13.000	50.00	4.02	138.480	0.019	0.0	0.0	0.0	1.09	8.6	2.6
13.001	50.00	4.05	138.460	0.019	0.0	0.0	0.0	2.64	20.8	2.6

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Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
12.003	15.299	0.191	80.0	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
14.000	1.000	0.020	50.0	0.019	4.00	0.0	0.600	o	100	Pipe/Conduit	
14.001	5.138	1.122	4.6	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
12.004	15.953	0.199	80.0	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
12.005	11.218	0.178	62.9	0.019	0.00	0.0	0.600	o	225	Pipe/Conduit	
15.000	1.000	0.020	50.0	0.012	4.00	0.0	0.600	o	100	Pipe/Conduit	
15.001	6.716	1.619	4.1	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
12.006	15.689	0.249	63.0	0.006	0.00	0.0	0.600	o	225	Pipe/Conduit	
16.000	1.000	0.020	50.0	0.018	4.00	0.0	0.600	o	100	Pipe/Conduit	
16.001	5.829	1.658	3.5	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
12.007	17.988	0.286	62.9	0.060	0.00	0.0	0.600	o	225	Pipe/Conduit	
17.000	1.000	0.020	50.0	0.018	4.00	0.0	0.600	o	100	Pipe/Conduit	
17.001	5.516	1.709	3.2	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
12.008	23.129	0.369	62.7	0.016	0.00	0.0	0.600	o	225	Pipe/Conduit	
18.000	1.000	0.020	50.0	0.011	4.00	0.0	0.600	o	100	Pipe/Conduit	
18.001	6.574	1.963	3.3	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
1.010	10.672	0.024	450.0	0.050	0.00	0.0	0.600	o	600	Pipe/Conduit	
1.011	27.837	0.062	450.0	0.069	0.00	0.0	0.600	o	600	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
12.003	50.00	4.51	137.699	0.035	0.0	0.0	0.0	1.12	19.9	4.7
14.000	50.00	4.02	138.700	0.019	0.0	0.0	0.0	1.09	8.6	2.6
14.001	50.00	4.04	138.680	0.019	0.0	0.0	0.0	3.64	28.6	2.6
12.004	50.00	4.74	137.508	0.054	0.0	0.0	0.0	1.12	19.9	7.3
12.005	50.00	4.85	137.234	0.073	0.0	0.0	0.0	1.65	65.7	9.9
15.000	50.00	4.02	138.820	0.012	0.0	0.0	0.0	1.09	8.6	1.6
15.001	50.00	4.04	138.800	0.012	0.0	0.0	0.0	3.82	30.0	1.6
12.006	50.00	5.01	137.056	0.091	0.0	0.0	0.0	1.65	65.6	12.3
16.000	50.00	4.02	138.610	0.018	0.0	0.0	0.0	1.09	8.6	2.4
16.001	50.00	4.04	138.590	0.018	0.0	0.0	0.0	4.16	32.6	2.4
12.007	50.00	5.19	136.807	0.169	0.0	0.0	0.0	1.65	65.7	22.9
17.000	50.00	4.02	138.375	0.018	0.0	0.0	0.0	1.09	8.6	2.4
17.001	50.00	4.04	138.355	0.018	0.0	0.0	0.0	4.34	34.1	2.4
12.008	50.00	5.43	136.521	0.203	0.0	0.0	0.0	1.65	65.8	27.5
18.000	50.00	4.02	138.260	0.011	0.0	0.0	0.0	1.09	8.6	1.5
18.001	50.00	4.04	138.240	0.011	0.0	0.0	0.0	4.26	33.4	1.5
1.010	50.00	5.63	135.777	0.591	0.0	0.0	0.0	1.14	322.7	80.0
1.011	50.00	6.04	135.753	0.660	0.0	0.0	0.0	1.14	322.7	89.4

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Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
19.000	1.000	0.020	50.0	0.011	4.00	0.0	0.600	o	100	Pipe/Conduit	
19.001	5.505	0.505	10.9	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
19.002	8.366	0.085	98.4	0.017	0.00	0.0	0.600	o	150	Pipe/Conduit	
20.000	1.000	0.020	50.0	0.010	4.00	0.0	0.600	o	100	Pipe/Conduit	
20.001	5.123	0.690	7.4	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
19.003	10.641	0.108	98.5	0.013	0.00	0.0	0.600	o	150	Pipe/Conduit	
21.000	1.000	0.020	50.0	0.011	4.00	0.0	0.600	o	100	Pipe/Conduit	
21.001	4.539	1.063	4.3	0.003	0.00	0.0	0.600	o	100	Pipe/Conduit	
19.004	8.742	0.090	97.1	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
22.000	1.000	0.020	50.0	0.012	4.00	0.0	0.600	o	100	Pipe/Conduit	
22.001	5.941	1.503	4.0	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
19.005	11.645	0.120	97.0	0.003	0.00	0.0	0.600	o	150	Pipe/Conduit	
23.000	1.000	0.020	50.0	0.010	4.00	0.0	0.600	o	100	Pipe/Conduit	
23.001	5.573	1.863	3.0	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
19.006	17.809	0.183	97.3	0.018	0.00	0.0	0.600	o	150	Pipe/Conduit	
19.007	10.569	0.109	97.1	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
24.000	2.000	0.040	50.0	0.012	4.00	0.0	0.600	o	100	Pipe/Conduit	
24.001	3.210	0.060	53.5	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
24.002	7.966	0.080	99.6	0.010	0.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
19.000	50.00	4.02	139.920	0.011	0.0	0.0	0.0	1.09	8.6	1.5
19.001	50.00	4.05	139.900	0.011	0.0	0.0	0.0	2.35	18.5	1.5
19.002	50.00	4.19	139.345	0.028	0.0	0.0	0.0	1.01	17.9	3.8
20.000	50.00	4.02	140.020	0.010	0.0	0.0	0.0	1.09	8.6	1.4
20.001	50.00	4.05	140.000	0.010	0.0	0.0	0.0	2.86	22.4	1.4
19.003	50.00	4.37	139.260	0.051	0.0	0.0	0.0	1.01	17.9	6.9
21.000	50.00	4.02	140.285	0.011	0.0	0.0	0.0	1.09	8.6	1.5
21.001	50.00	4.04	140.265	0.014	0.0	0.0	0.0	3.77	29.6	1.9
19.004	50.00	4.51	139.152	0.065	0.0	0.0	0.0	1.02	18.0	8.8
22.000	50.00	4.02	140.635	0.012	0.0	0.0	0.0	1.09	8.6	1.6
22.001	50.00	4.04	140.615	0.012	0.0	0.0	0.0	3.92	30.8	1.6
19.005	50.00	4.70	139.062	0.080	0.0	0.0	0.0	1.02	18.0	10.8
23.000	50.00	4.02	140.875	0.010	0.0	0.0	0.0	1.09	8.6	1.4
23.001	50.00	4.04	140.855	0.010	0.0	0.0	0.0	4.51	35.4	1.4
19.006	50.00	4.99	138.942	0.108	0.0	0.0	0.0	1.02	18.0	14.6
19.007	50.00	5.16	138.759	0.108	0.0	0.0	0.0	1.02	18.0	14.6
24.000	50.00	4.03	141.275	0.012	0.0	0.0	0.0	1.09	8.6	1.6
24.001	50.00	4.08	141.235	0.012	0.0	0.0	0.0	1.06	8.3	1.6
24.002	50.00	4.21	141.125	0.022	0.0	0.0	0.0	1.01	17.8	3.0

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Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
25.000	2.000	0.040	50.0	0.012	4.00	0.0	0.600	o	100	Pipe/Conduit	
25.001	3.340	0.305	11.0	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
24.003	19.055	0.191	99.8	0.012	0.00	0.0	0.600	o	150	Pipe/Conduit	
24.004	21.260	0.555	38.3	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
19.008	14.694	0.150	98.0	0.010	0.00	0.0	0.600	o	225	Pipe/Conduit	
26.000	1.000	0.020	50.0	0.014	4.00	0.0	0.600	o	100	Pipe/Conduit	
26.001	7.163	3.520	2.0	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
19.009	4.331	0.044	98.4	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
27.000	1.000	0.020	50.0	0.012	4.00	0.0	0.600	o	100	Pipe/Conduit	
27.001	5.718	1.756	3.3	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
19.010	7.021	0.070	100.3	0.004	0.00	0.0	0.600	o	225	Pipe/Conduit	
28.000	1.000	0.020	50.0	0.022	4.00	0.0	0.600	o	100	Pipe/Conduit	
28.001	9.295	2.829	3.3	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
19.011	14.785	0.146	101.3	0.042	0.00	0.0	0.600	o	225	Pipe/Conduit	
29.000	1.000	0.020	50.0	0.009	4.00	0.0	0.600	o	100	Pipe/Conduit	
29.001	4.575	0.960	4.8	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
30.000	1.000	0.020	50.0	0.022	4.00	0.0	0.600	o	100	Pipe/Conduit	
30.001	5.994	0.120	50.0	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
25.000	50.00	4.03	141.440	0.012	0.0	0.0	0.0	1.09	8.6	1.6
25.001	50.00	4.05	141.400	0.012	0.0	0.0	0.0	2.35	18.4	1.6
24.003	50.00	4.53	141.045	0.046	0.0	0.0	0.0	1.01	17.8	6.2
24.004	50.00	4.75	140.854	0.046	0.0	0.0	0.0	1.63	28.8	6.2
19.008	50.00	5.35	138.575	0.164	0.0	0.0	0.0	1.32	52.5	22.2
26.000	50.00	4.02	142.090	0.014	0.0	0.0	0.0	1.09	8.6	1.9
26.001	50.00	4.04	142.070	0.014	0.0	0.0	0.0	5.47	42.9	1.9
19.009	50.00	5.40	138.425	0.178	0.0	0.0	0.0	1.32	52.4	24.1
27.000	50.00	4.02	142.007	0.012	0.0	0.0	0.0	1.09	8.6	1.6
27.001	50.00	4.04	141.987	0.012	0.0	0.0	0.0	4.32	33.9	1.6
19.010	50.00	5.49	138.381	0.194	0.0	0.0	0.0	1.31	51.9	26.3
28.000	50.00	4.02	141.285	0.022	0.0	0.0	0.0	1.09	8.6	3.0
28.001	50.00	4.05	141.265	0.022	0.0	0.0	0.0	4.30	33.8	3.0
19.011	50.00	5.68	138.311	0.258	0.0	0.0	0.0	1.30	51.7	34.9
29.000	50.00	4.02	140.849	0.009	0.0	0.0	0.0	1.09	8.6	1.2
29.001	50.00	4.04	140.829	0.009	0.0	0.0	0.0	3.57	28.0	1.2
30.000	50.00	4.02	141.815	0.022	0.0	0.0	0.0	1.09	8.6	3.0
30.001	50.00	4.11	141.795	0.022	0.0	0.0	0.0	1.09	8.6	3.0

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Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
30.002	14.939	0.185	80.8	0.004	0.00	0.0	0.600	o	150	Pipe/Conduit	
31.000	1.000	0.020	50.0	0.011	4.00	0.0	0.600	o	100	Pipe/Conduit	
31.001	5.504	0.510	10.8	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
30.003	8.415	0.105	80.0	0.004	0.00	0.0	0.600	o	150	Pipe/Conduit	
30.004	2.616	0.083	31.5	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
32.000	1.000	0.020	50.0	0.013	4.00	0.0	0.600	o	100	Pipe/Conduit	
32.001	6.676	0.333	20.0	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
30.005	17.093	0.542	31.5	0.016	0.00	0.0	0.600	o	150	Pipe/Conduit	
33.000	10.000	0.100	100.0	0.027	4.00	0.0	0.600	o	150	Pipe/Conduit	
30.006	22.892	0.870	26.3	0.017	0.00	0.0	0.600	o	225	Pipe/Conduit	
34.000	1.000	0.020	50.0	0.009	4.00	0.0	0.600	o	100	Pipe/Conduit	
34.001	6.997	1.175	6.0	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
30.007	1.020	0.039	26.2	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
35.000	1.000	0.020	50.0	0.009	4.00	0.0	0.600	o	100	Pipe/Conduit	
35.001	5.500	1.299	4.2	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
30.008	11.314	0.430	26.3	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
36.000	1.000	0.020	50.0	0.009	4.00	0.0	0.600	o	100	Pipe/Conduit	
36.001	6.997	1.604	4.4	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
30.002	50.00	4.33	141.625	0.026	0.0	0.0	0.0	1.12	19.8	3.5
31.000	50.00	4.02	142.020	0.011	0.0	0.0	0.0	1.09	8.6	1.5
31.001	50.00	4.05	142.000	0.011	0.0	0.0	0.0	2.37	18.6	1.5
30.003	50.00	4.45	141.440	0.041	0.0	0.0	0.0	1.12	19.9	5.6
30.004	50.00	4.48	141.335	0.041	0.0	0.0	0.0	1.80	31.8	5.6
32.000	50.00	4.02	141.655	0.013	0.0	0.0	0.0	1.09	8.6	1.8
32.001	50.00	4.08	141.635	0.013	0.0	0.0	0.0	1.73	13.6	1.8
30.005	50.00	4.64	141.252	0.070	0.0	0.0	0.0	1.80	31.8	9.5
33.000	50.00	4.17	140.810	0.027	0.0	0.0	0.0	1.00	17.8	3.7
30.006	50.00	4.79	140.635	0.114	0.0	0.0	0.0	2.56	101.8	15.4
34.000	50.00	4.02	141.085	0.009	0.0	0.0	0.0	1.09	8.6	1.2
34.001	50.00	4.05	141.065	0.009	0.0	0.0	0.0	3.19	25.1	1.2
30.007	50.00	4.79	139.765	0.123	0.0	0.0	0.0	2.57	102.1	16.7
35.000	50.00	4.02	141.170	0.009	0.0	0.0	0.0	1.09	8.6	1.2
35.001	50.00	4.04	141.150	0.009	0.0	0.0	0.0	3.79	29.7	1.2
30.008	50.00	4.87	139.726	0.132	0.0	0.0	0.0	2.56	101.8	17.9
36.000	50.00	4.02	141.045	0.009	0.0	0.0	0.0	1.09	8.6	1.2
36.001	50.00	4.05	141.025	0.009	0.0	0.0	0.0	3.73	29.3	1.2

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Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
30.009	2.476	0.094	26.3	0.017	0.00	0.0	0.600	o	225	Pipe/Conduit	
37.000	1.000	0.020	50.0	0.009	4.00	0.0	0.600	o	100	Pipe/Conduit	
37.001	6.100	1.773	3.4	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
30.010	27.427	1.037	26.4	0.023	0.00	0.0	0.600	o	225	Pipe/Conduit	
19.012	15.382	0.154	99.9	0.005	0.00	0.0	0.600	o	300	Pipe/Conduit	
38.000	1.000	0.020	50.0	0.014	4.00	0.0	0.600	o	100	Pipe/Conduit	
38.001	5.000	1.684	3.0	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
19.013	25.832	0.258	100.1	0.069	0.00	0.0	0.600	o	300	Pipe/Conduit	
1.012	23.589	0.052	453.6	0.031	0.00	0.0	0.600	o	600	Pipe/Conduit	
1.013	31.370	0.069	454.6	0.058	0.00	0.0	0.600	o	600	Pipe/Conduit	
1.014	6.875	0.015	458.3	0.011	0.00	0.0	0.600	o	600	Pipe/Conduit	
39.000	1.000	0.020	50.0	0.026	4.00	0.0	0.600	o	100	Pipe/Conduit	
39.001	6.100	1.635	3.7	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
1.015	9.789	0.022	445.0	0.023	0.00	0.0	0.600	o	600	Pipe/Conduit	
40.000	1.000	0.020	50.0	0.016	4.00	0.0	0.600	o	100	Pipe/Conduit	
40.001	5.568	0.825	6.7	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
41.000	1.000	0.020	50.0	0.012	4.00	0.0	0.600	o	100	Pipe/Conduit	
41.001	4.084	0.635	6.4	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
30.009	50.00	4.88	139.296	0.158	0.0	0.0	0.0	2.56	101.8	21.4
37.000	50.00	4.02	141.120	0.009	0.0	0.0	0.0	1.09	8.6	1.2
37.001	50.00	4.04	141.100	0.009	0.0	0.0	0.0	4.20	33.0	1.2
30.010	50.00	5.06	139.202	0.190	0.0	0.0	0.0	2.55	101.6	25.7
19.012	50.00	5.85	138.090	0.462	0.0	0.0	0.0	1.57	111.2	62.6
38.000	50.00	4.02	139.840	0.014	0.0	0.0	0.0	1.09	8.6	1.9
38.001	50.00	4.03	139.820	0.014	0.0	0.0	0.0	4.52	35.5	1.9
19.013	50.00	6.12	137.936	0.545	0.0	0.0	0.0	1.57	111.1	73.8
1.012	50.00	6.47	135.691	1.236	0.0	0.0	0.0	1.14	321.4	167.4
1.013	50.00	6.93	135.639	1.294	0.0	0.0	0.0	1.14	321.1	175.2
1.014	50.00	7.03	135.570	1.305	0.0	0.0	0.0	1.13	319.7	176.7
39.000	50.00	4.02	137.710	0.026	0.0	0.0	0.0	1.09	8.6	3.5
39.001	50.00	4.04	137.690	0.026	0.0	0.0	0.0	4.03	31.7	3.5
1.015	50.00	7.17	135.555	1.354	0.0	0.0	0.0	1.15	324.6	183.3
40.000	50.00	4.02	139.370	0.016	0.0	0.0	0.0	1.09	8.6	2.2
40.001	50.00	4.05	139.350	0.016	0.0	0.0	0.0	3.00	23.5	2.2
41.000	50.00	4.02	139.180	0.012	0.0	0.0	0.0	1.09	8.6	1.6
41.001	50.00	4.04	139.160	0.012	0.0	0.0	0.0	3.07	24.1	1.6

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Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
40.002	10.715	0.348	30.8	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
42.000	1.000	0.020	50.0	0.012	4.00	0.0	0.600	o	100	Pipe/Conduit	
42.001	4.084	0.628	6.5	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
40.003	14.419	0.468	30.8	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
43.000	1.000	0.020	50.0	0.012	4.00	0.0	0.600	o	100	Pipe/Conduit	
43.001	4.084	0.606	6.7	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
40.004	7.268	0.236	30.8	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
40.005	20.658	1.440	14.3	0.033	0.00	0.0	0.600	o	150	Pipe/Conduit	
1.016	6.192	0.014	455.0	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
44.000	1.000	0.020	50.0	0.017	4.00	0.0	0.600	o	100	Pipe/Conduit	
44.001	7.685	1.351	5.7	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
1.017	12.689	0.028	453.2	0.031	0.00	0.0	0.600	o	600	Pipe/Conduit	
1.018	3.967	0.009	455.0	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
45.000	1.000	0.020	50.0	0.017	4.00	0.0	0.600	o	100	Pipe/Conduit	
45.001	6.583	1.388	4.7	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
1.019	12.038	0.026	463.0	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
1.020	4.751	0.010	455.0	0.010	0.00	0.0	0.600	o	600	Pipe/Conduit	
46.000	1.000	0.020	50.0	0.017	4.00	0.0	0.600	o	100	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
40.002	50.00	4.14	138.475	0.028	0.0	0.0	0.0	1.82	32.2	3.8
42.000	50.00	4.02	138.825	0.012	0.0	0.0	0.0	1.09	8.6	1.6
42.001	50.00	4.04	138.805	0.012	0.0	0.0	0.0	3.05	24.0	1.6
40.003	50.00	4.28	138.127	0.040	0.0	0.0	0.0	1.82	32.2	5.4
43.000	50.00	4.02	138.335	0.012	0.0	0.0	0.0	1.09	8.6	1.6
43.001	50.00	4.04	138.315	0.012	0.0	0.0	0.0	3.00	23.5	1.6
40.004	50.00	4.34	137.659	0.052	0.0	0.0	0.0	1.82	32.2	7.0
40.005	50.00	4.47	137.423	0.085	0.0	0.0	0.0	2.67	47.2	11.5
1.016	50.00	7.26	135.533	1.439	0.0	0.0	0.0	1.14	320.9	194.9
44.000	50.00	4.02	137.390	0.017	0.0	0.0	0.0	1.09	8.6	2.3
44.001	50.00	4.05	137.370	0.017	0.0	0.0	0.0	3.26	25.6	2.3
1.017	50.00	7.45	135.519	1.487	0.0	0.0	0.0	1.14	321.6	201.4
1.018	50.00	7.51	135.491	1.487	0.0	0.0	0.0	1.14	320.9	201.4
45.000	50.00	4.02	137.390	0.017	0.0	0.0	0.0	1.09	8.6	2.3
45.001	50.00	4.05	137.370	0.017	0.0	0.0	0.0	3.58	28.1	2.3
1.019	50.00	7.68	135.482	1.504	0.0	0.0	0.0	1.13	318.1	203.7
1.020	50.00	7.75	135.456	1.514	0.0	0.0	0.0	1.14	320.9	205.0
46.000	50.00	4.02	137.210	0.017	0.0	0.0	0.0	1.09	8.6	2.3

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Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
46.001	6.200	1.244	5.0	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
1.021	16.787	0.037	453.7	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
47.000	1.000	0.020	50.0	0.016	4.00	0.0	0.600	o	100	Pipe/Conduit	
47.001	6.955	0.931	7.5	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
1.022	18.318	0.040	458.0	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
48.000	38.846	0.960	40.5	0.031	4.00	0.0	0.600	o	150	Pipe/Conduit	
48.001	22.929	0.515	44.5	0.030	0.00	0.0	0.600	o	225	Pipe/Conduit	
49.000	1.000	0.020	50.0	0.012	4.00	0.0	0.600	o	100	Pipe/Conduit	
49.001	4.470	0.430	10.4	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
48.002	5.083	0.181	28.1	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
1.023	8.042	0.018	455.0	0.020	0.00	0.0	0.600	o	600	Pipe/Conduit	
50.000	1.000	0.020	50.0	0.013	4.00	0.0	0.600	o	100	Pipe/Conduit	
50.001	8.248	0.511	16.1	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
1.024	19.192	0.042	457.0	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
1.025	13.188	0.031	425.4	0.020	0.00	0.0	0.600	o	600	Pipe/Conduit	
1.026	7.176	0.078	92.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
1.027	8.622	1.081	8.0	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
46.001	50.00	4.04	137.190	0.017	0.0	0.0	0.0	3.49	27.4	2.3
1.021	50.00	8.00	135.446	1.531	0.0	0.0	0.0	1.14	321.4	207.3
47.000	50.00	4.02	136.860	0.016	0.0	0.0	0.0	1.09	8.6	2.2
47.001	50.00	4.06	136.840	0.016	0.0	0.0	0.0	2.85	22.4	2.2
1.022	50.00	8.27	135.409	1.547	0.0	0.0	0.0	1.13	319.9	209.5
48.000	50.00	4.41	137.475	0.031	0.0	0.0	0.0	1.59	28.0	4.2
48.001	50.00	4.60	136.440	0.061	0.0	0.0	0.0	1.97	78.2	8.3
49.000	50.00	4.02	136.500	0.012	0.0	0.0	0.0	1.09	8.6	1.6
49.001	50.00	4.05	136.480	0.012	0.0	0.0	0.0	2.41	18.9	1.6
48.002	50.00	4.64	135.925	0.073	0.0	0.0	0.0	2.48	98.5	9.9
1.023	50.00	8.39	135.369	1.640	0.0	0.0	0.0	1.14	320.9	222.1
50.000	50.00	4.02	136.370	0.013	0.0	0.0	0.0	1.09	8.6	1.8
50.001	50.00	4.09	136.350	0.013	0.0	0.0	0.0	1.93	15.2	1.8
1.024	50.00	8.67	135.351	1.653	0.0	0.0	0.0	1.13	320.2	223.8
1.025	50.00	8.86	135.309	1.673	0.0	0.0	0.0	1.17	332.0	226.5
1.026	50.00	8.93	135.278	1.673	0.0	0.0	0.0	1.64	115.9«	226.5
1.027	50.00	8.97	135.200	1.673	0.0	0.0	0.0	3.59	63.4«	226.5

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Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	PN	Pipe Out Invert Level (m)	Diameter (mm)	PN	Pipes In Invert Level (m)	Diameter (mm)	Backdrop (mm)
DIST TANK	138.865	0.595	Open Manhole	450	1.000	138.270	100				
SIC 206-1	138.865	0.615	Open Manhole	1200	1.001	138.250	100	1.000	138.250	100	
SMH 14	138.805	1.725	Junction		1.002	137.080	225	1.001	137.205	100	
DIST TANK 1	138.865	0.605	Open Manhole	450	2.000	138.260	100				
SIC 207-1	138.940	0.700	Open Manhole	450	2.001	138.240	100	2.000	138.240	100	
JUNCTION	138.705	1.845	Junction		1.003	136.860	225	1.002	136.860	225	
								2.001	136.985	100	
SMH 13	138.735	1.987	Open Manhole	1200	1.004	136.748	300	1.003	136.823	225	
DIST TK 1	139.020	0.700	Open Manhole	450	3.000	138.320	100				
SIC 208-1	139.020	0.720	Open Manhole	450	3.001	138.300	100	3.000	138.300	100	
JUNCTION	138.770	2.055	Junction		1.005	136.715	300	1.004	136.715	300	
								3.001	136.915	100	
DIST TANK 1	139.065	0.600	Open Manhole	450	4.000	138.465	100				
SIC 209-1	139.080	0.635	Open Manhole	450	4.001	138.445	100	4.000	138.445	100	
JUNCTION	138.913	2.307	Junction		1.006	136.606	300	1.005	136.606	300	
								4.001	136.806	100	
DIST TANK 1	139.150	0.600	Open Manhole	450	5.000	138.550	100				
SIC 210-1	139.175	0.645	Open Manhole	450	5.001	138.530	100	5.000	138.530	100	
JUNCTION	139.040	2.537	Junction		1.007	136.503	300	1.006	136.503	300	
								5.001	136.703	100	
SMH 12	139.230	2.844	Open Manhole	1200	1.008	136.386	300	1.007	136.386	300	
DIST TANK	141.980	0.820	Open Manhole	450	6.000	141.160	100				
SIC 188-1	142.115	0.975	Open Manhole	450	6.001	141.140	100	6.000	141.140	100	
SMH 22	141.650	1.350	Open Manhole	1200	6.002	140.300	150	6.001	140.350	100	
DIST TANK	141.220	0.825	Open Manhole	450	7.000	140.395	100				
SIC 187-1	141.300	0.925	Open Manhole	450	7.001	140.375	100	7.000	140.375	100	
JUNCTION	141.105	1.295	Junction		6.003	139.810	150	6.002	139.810	150	
								7.001	139.860	100	
DIST TANK	140.755	0.880	Open Manhole	450	8.000	139.875	100				
SIC 186-1	140.865	1.010	Open Manhole	450	8.001	139.855	100	8.000	139.855	100	
JUNCTION	140.690	1.330	Junction		6.004	139.360	150	6.003	139.360	150	
								8.001	139.410	100	
DIST TANK	140.255	0.905	Open Manhole	450	9.000	139.350	100				
SIC 185-1	140.300	0.970	Open Manhole	450	9.001	139.330	100	9.000	139.330	100	
SMH 21	140.100	1.350	Open Manhole	1200	6.005	138.750	150	6.004	138.750	150	
								9.001	138.800	100	
DIST TANK	139.825	0.935	Open Manhole	450	10.000	138.890	100				
SIC 205-1	139.860	1.010	Open Manhole	450	10.001	138.850	100	10.000	138.850	100	
SMH 20	139.650	1.350	Open Manhole	1200	6.006	138.300	150	6.005	138.300	150	
								10.001	138.350	100	
DIST TANK	139.570	0.580	Open Manhole	450	11.000	138.990	100				
SIC 204-1	139.650	0.680	Open Manhole	450	11.001	138.970	100	11.000	138.970	100	
JUNCTION	139.520	1.380	Junction		6.007	138.140	150	6.006	138.140	150	
								11.001	138.190	100	
SMH 19	139.480	1.569	Open Manhole	1200	6.008	137.911	150	6.007	137.911	150	
SMH 11	139.230	2.993	Open Manhole	1350	1.009	136.237	375	1.008	136.312	300	
								6.008	136.462	150	

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Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	PN	Pipe Out Invert Level (m)	Diameter (mm)	PN	Pipes In Invert Level (m)	Diameter (mm)	Backdrop (mm)
DIST TANK	139.155	0.730	Open Manhole	450	12.000	138.425	100				
SIC 222-1	139.180	0.785	Open Manhole	450	12.001	138.395	100	12.000	138.395	100	
SMH 18	139.240	1.350	Open Manhole	1200	12.002	137.890	150	12.001	137.940	100	
DIS TANK	139.210	0.730	Open Manhole	450	13.000	138.480	100				
SIC 220-1	139.320	0.860	Open Manhole	450	13.001	138.460	100	13.000	138.460	100	
JUNCTION	139.435	1.736	Junction		12.003	137.699	150	12.002	137.699	150	
								13.001	137.749	100	
DIST TANK	139.430	0.730	Open Manhole	450	14.000	138.700	100				
SIC 219-1	139.505	0.825	Open Manhole	450	14.001	138.680	100	14.000	138.680	100	
JUNCTION	139.635	2.127	Junction		12.004	137.508	150	12.003	137.508	150	
								14.001	137.558	100	
SMH 17	139.600	2.366	Open Manhole	1200	12.005	137.234	225	12.004	137.309	150	
DIST TANK	139.460	0.640	Open Manhole	450	15.000	138.820	100				
SIC 136-1	139.515	0.715	Open Manhole	450	15.001	138.800	100	15.000	138.800	100	
JUNCTION	139.510	2.454	Junction		12.006	137.056	225	12.005	137.056	225	
								15.001	137.181	100	
DIST TANK	139.250	0.640	Open Manhole	450	16.000	138.610	100				
SIC 138-1	139.355	0.765	Open Manhole	450	16.001	138.590	100	16.000	138.590	100	
JUNCTION	139.370	2.563	Junction		12.007	136.807	225	12.006	136.807	225	
								16.001	136.932	100	
DIST TANK	139.015	0.640	Open Manhole	450	17.000	138.375	100				
SIC 140-1	139.130	0.775	Open Manhole	450	17.001	138.355	100	17.000	138.355	100	
JUNCTION	139.085	2.564	Junction		12.008	136.521	225	12.007	136.521	225	
								17.001	136.646	100	75
DIST TANK	138.900	0.640	Open Manhole	450	18.000	138.260	100				
SIC 141-1	138.900	0.660	Open Manhole	450	18.001	138.240	100	18.000	138.240	100	
SMH 10	138.885	3.108	Open Manhole	1500	1.010	135.777	600	1.009	136.002	375	
								12.008	136.152	225	
								18.001	136.277	100	
SMH 9	139.135	3.382	Open Manhole	1500	1.011	135.753	600	1.010	135.753	600	
DIST TANK	140.580	0.660	Open Manhole	450	19.000	139.920	100				
SIC 173-1	140.580	0.680	Open Manhole	450	19.001	139.900	100	19.000	139.900	100	
SMH 32	140.715	1.370	Open Manhole	1200	19.002	139.345	150	19.001	139.395	100	
DIST TANK	140.660	0.640	Open Manhole	450	20.000	140.020	100				
SIC 172-1	140.660	0.660	Open Manhole	450	20.001	140.000	100	20.000	140.000	100	
JUNCTION	140.925	1.665	Junction		19.003	139.260	150	19.002	139.260	150	
								20.001	139.310	100	
DIST TANK	140.925	0.640	Open Manhole	450	21.000	140.285	100				
SIC 171-1	140.925	0.660	Open Manhole	450	21.001	140.265	100	21.000	140.265	100	
SMH 31	141.190	2.038	Open Manhole	1200	19.004	139.152	150	19.003	139.152	150	
								21.001	139.202	100	
DIST TANK	141.275	0.640	Open Manhole	450	22.000	140.635	100				
SIC 170-1	141.275	0.660	Open Manhole	450	22.001	140.615	100	22.000	140.615	100	
JUNCTION	141.410	2.348	Junction		19.005	139.062	150	19.004	139.062	150	
								22.001	139.112	100	
DIST TANK	141.515	0.640	Open Manhole	450	23.000	140.875	100				
SIC 167-1	141.515	0.660	Open Manhole	450	23.001	140.855	100	23.000	140.855	100	

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Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	PN	Pipe Out Invert Level (m)	Diameter (mm)	PN	Pipes In Invert Level (m)	Diameter (mm)	Backdrop (mm)
JUNCTION	141.830	2.888	Junction		19.006	138.942	150	19.005	138.942	150	
								23.001	138.992	100	
SMH 30	142.825	4.066	Open Manhole	1200	19.007	138.759	150	19.006	138.759	150	
DIST TANK	142.425	1.150	Open Manhole	450	24.000	141.275	100				
SIC 174-1	142.500	1.265	Open Manhole	450	24.001	141.235	100	24.000	141.235	100	
SMH 34	142.610	1.485	Open Manhole	1200	24.002	141.125	150	24.001	141.175	100	
DIST TANK	142.590	1.150	Open Manhole	450	25.000	141.440	100				
SIC 175-1	142.630	1.230	Open Manhole	450	25.001	141.400	100	25.000	141.400	100	
JUNCTION	142.710	1.665	Junction		24.003	141.045	150	24.002	141.045	150	
								25.001	141.095	100	
SMH 33	142.960	2.106	Open Manhole	1200	24.004	140.854	150	24.003	140.854	150	
SMH 29	143.175	4.600	Open Manhole	1200	19.008	138.575	225	19.007	138.650	150	
								24.004	140.299	150	1649
DIST TANK	142.730	0.640	Open Manhole	450	26.000	142.090	100				
SIC 176-1	142.730	0.660	Open Manhole	450	26.001	142.070	100	26.000	142.070	100	
JUNCTION	142.750	4.325	Junction		19.009	138.425	225	19.008	138.425	225	
								26.001	138.550	100	
DIST TANK	142.647	0.640	Open Manhole	450	27.000	142.007	100				
SIC 169-1	142.647	0.660	Open Manhole	450	27.001	141.987	100	27.000	141.987	100	
SMH 28	142.600	4.219	Open Manhole	450	19.010	138.381	225	19.009	138.381	225	
								27.001	140.231	100	1725
DIST TANK	141.925	0.640	Open Manhole	450	28.000	141.285	100				
SIC 178-1	141.925	0.660	Open Manhole	450	28.001	141.265	100	28.000	141.265	100	
JUNCTION	142.250	3.939	Junction		19.011	138.311	225	19.010	138.311	225	
								28.001	138.436	100	
DIST TANK	141.489	0.640	Open Manhole	450	29.000	140.849	100				
SIC 166-1	141.489	0.660	Open Manhole	450	29.001	140.829	100	29.000	140.829	100	
DIST TANK	142.815	1.000	Open Manhole	450	30.000	141.815	100				
SIC 184-1	142.910	1.115	Open Manhole	450	30.001	141.795	100	30.000	141.795	100	
SMH 27	142.975	1.350	Open Manhole	1200	30.002	141.625	150	30.001	141.675	100	
DIST TANK	142.700	0.680	Open Manhole	450	31.000	142.020	100				
SIC 182-1	142.850	0.850	Open Manhole	450	31.001	142.000	100	31.000	142.000	100	
SMH 26	142.790	1.350	Open Manhole	1200	30.003	141.440	150	30.002	141.440	150	
								31.001	141.490	100	
SMH 25	142.700	1.365	Open Manhole	1200	30.004	141.335	150	30.003	141.335	150	
DIST TANK	142.635	0.980	Open Manhole	450	32.000	141.655	100				
SIC 181-1	142.750	1.115	Open Manhole	450	32.001	141.635	100	32.000	141.635	100	
JUNCTION	142.660	1.408	Junction		30.005	141.252	150	30.004	141.252	150	
								32.001	141.302	100	
HD CP1	142.160	1.350	Open Manhole	1200	33.000	140.810	150				
SMH 24	142.350	1.715	Open Manhole	1200	30.006	140.635	225	30.005	140.710	150	
								33.000	140.710	150	
DIST TANK	141.725	0.640	Open Manhole	450	34.000	141.085	100				
SIC 190-1	141.750	0.685	Open Manhole	450	34.001	141.065	100	34.000	141.065	100	
JUNCTION	141.810	2.045	Junction		30.007	139.765	225	30.006	139.765	225	
								34.001	139.890	100	
DIST TANK	141.810	0.640	Open Manhole	450	35.000	141.170	100				

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Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	PN	Pipe Out Invert Level (m)	Diameter (mm)	PN	Pipes In Invert Level (m)	Diameter (mm)	Backdrop (mm)
SIC 180-1	141.900	0.750	Open Manhole	450	35.001	141.150	100	35.000	141.150	100	
JUNCTION	141.795	2.069	Junction		30.008	139.726	225	30.007	139.726	225	
								35.001	139.851	100	
DIST TANK	141.685	0.640	Open Manhole	450	36.000	141.045	100				
SIC 191-1	141.700	0.675	Open Manhole	450	36.001	141.025	100	36.000	141.025	100	
JUNCTION	141.630	2.334	Junction		30.009	139.296	225	30.008	139.296	225	
								36.001	139.421	100	
DIST TANK	141.760	0.640	Open Manhole	450	37.000	141.120	100				
SIC 179-1	141.785	0.685	Open Manhole	450	37.001	141.100	100	37.000	141.100	100	
JUNCTION	141.600	2.398	Junction		30.010	139.202	225	30.009	139.202	225	
								37.001	139.327	100	
SMH 23	141.400	3.310	Open Manhole	1200	19.012	138.090	300	19.011	138.165	225	
								29.001	139.869	100	1579
								30.010	138.165	225	
DIST TANK	140.480	0.640	Open Manhole	450	38.000	139.840	100				
SIC 165-1	140.810	0.990	Open Manhole	450	38.001	139.820	100	38.000	139.820	100	
JUNCTION	140.925	2.989	Junction		19.013	137.936	300	19.012	137.936	300	
								38.001	138.136	100	
SMH 8	139.965	4.274	Open Manhole	1500	1.012	135.691	600	1.011	135.691	600	
								19.013	137.678	300	1687
SMH 7	139.400	3.761	Open Manhole	1500	1.013	135.639	600	1.012	135.639	600	
SMH 6	138.640	3.070	Open Manhole	1500	1.014	135.570	600	1.013	135.570	600	
DIST TANK	138.350	0.640	Open Manhole	450	39.000	137.710	100				
SIC 146-1	138.400	0.710	Open Manhole	450	39.001	137.690	100	39.000	137.690	100	
JUNCTION	138.450	2.895	Junction		1.015	135.555	600	1.014	135.555	600	
								39.001	136.055	100	
DIST TANK	140.010	0.640	Open Manhole	450	40.000	139.370	100				
SIC 152_1	140.080	0.730	Open Manhole	450	40.001	139.350	100	40.000	139.350	100	
DIST TANK	139.820	0.640	Open Manhole	450	41.000	139.180	100				
SIC 153-1	139.900	0.740	Open Manhole	450	41.001	139.160	100	41.000	139.160	100	
SMH 36	139.825	1.350	Open Manhole	1200	40.002	138.475	150	40.001	138.525	100	
								41.001	138.525	100	
DIST TANK	139.465	0.640	Open Manhole	450	42.000	138.825	100				
SIC 154-1	139.560	0.755	Open Manhole	450	42.001	138.805	100	42.000	138.805	100	
JUNCTION	139.475	1.348	Junction		40.003	138.127	150	40.002	138.127	150	
								42.001	138.177	100	
DIST TANK	138.975	0.640	Open Manhole	450	43.000	138.335	100				
SIC 155-1	139.090	0.775	Open Manhole	450	43.001	138.315	100	43.000	138.315	100	
JUNCTION	138.980	1.321	Junction		40.004	137.659	150	40.003	137.659	150	
								43.001	137.709	100	
SMH 35	138.775	1.352	Open Manhole	1200	40.005	137.423	150	40.004	137.423	150	
SMH 5	138.225	2.692	Open Manhole	1500	1.016	135.533	600	1.015	135.533	600	
								40.005	135.983	150	
DIST TANK	138.030	0.640	Open Manhole	450	44.000	137.390	100				
SIC 148-1	138.190	0.820	Open Manhole	450	44.001	137.370	100	44.000	137.370	100	
JUNCTION	138.075	2.556	Junction		1.017	135.519	600	1.016	135.519	600	
								44.001	136.019	100	

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Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	PN	Pipe Out Invert Level (m)	Diameter (mm)	PN	Pipes In Invert Level (m)	Diameter (mm)	Backdrop (mm)
SMH 4	138.060	2.569	Open Manhole	1500	1.018	135.491	600	1.017	135.491	600	
DIST TANK	138.030	0.640	Open Manhole	450	45.000	137.390	100				
SIC 150-1	138.030	0.660	Open Manhole	450	45.001	137.370	100	45.000	137.370	100	
JUNCTION	138.080	2.598	Junction		1.019	135.482	600	1.018	135.482	600	
								45.001	135.982	100	
SMH 3	138.010	2.554	Open Manhole	1500	1.020	135.456	600	1.019	135.456	600	
DIST TANK	137.850	0.640	Open Manhole	450	46.000	137.210	100				
SIC 111-1	137.850	0.660	Open Manhole	450	46.001	137.190	100	46.000	137.190	100	
JUNCTION	137.950	2.504	Junction		1.021	135.446	600	1.020	135.446	600	
								46.001	135.946	100	
DIST TANK	137.500	0.640	Open Manhole	450	47.000	136.860	100				
SIC 113-1	137.500	0.660	Open Manhole	450	47.001	136.840	100	47.000	136.840	100	
JUNCTION	137.700	2.291	Junction		1.022	135.409	600	1.021	135.409	600	
								47.001	135.909	100	
SWMH 114-3	138.825	1.350	Open Manhole	1200	48.000	137.475	150				
SWMH 114-2	137.865	1.425	Open Manhole	1200	48.001	136.440	225	48.000	136.515	150	
DIST TANK	137.140	0.640	Open Manhole	450	49.000	136.500	100				
SIC 115-1	137.140	0.660	Open Manhole	450	49.001	136.480	100	49.000	136.480	100	
SWMH 114-1	137.350	1.425	Open Manhole	1200	48.002	135.925	225	48.001	135.925	225	
								49.001	136.050	100	
SMH 2	137.190	1.821	Open Manhole	1500	1.023	135.369	600	1.022	135.369	600	
								48.002	135.744	225	
DIST TANK	137.010	0.640	Open Manhole	450	50.000	136.370	100				
SIC 116-1	137.010	0.660	Open Manhole	450	50.001	136.350	100	50.000	136.350	100	
JUNCTION	137.000	1.649	Junction		1.024	135.351	600	1.023	135.351	600	
								50.001	135.839	100	
SMH 1	136.780	1.471	Open Manhole	1500	1.025	135.309	600	1.024	135.309	600	
POND	136.578	1.300	Open Manhole	1500	1.026	135.278	300	1.025	135.278	600	
FC	136.350	1.150	Open Manhole	1200	1.027	135.200	150	1.026	135.200	300	
	135.770	1.651	Open Manhole	0		OUTFALL		1.027	134.119	150	

No coordinates have been specified, layout information cannot be produced.

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PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.000	o	100	DIST TANK	138.865	138.270	0.495	Open Manhole	450
1.001	o	100	SIC 206-1	138.865	138.250	0.515	Open Manhole	1200
1.002	o	225	SMH 14	138.805	137.080	1.500	Junction	
2.000	o	100	DIST TANK 1	138.865	138.260	0.505	Open Manhole	450
2.001	o	100	SIC 207-1	138.940	138.240	0.600	Open Manhole	450
1.003	o	225	JUNCTION	138.705	136.860	1.620	Junction	
1.004	o	300	SMH 13	138.735	136.748	1.687	Open Manhole	1200
3.000	o	100	DIST TK 1	139.020	138.320	0.600	Open Manhole	450
3.001	o	100	SIC 208-1	139.020	138.300	0.620	Open Manhole	450
1.005	o	300	JUNCTION	138.770	136.715	1.755	Junction	
4.000	o	100	DIST TANK 1	139.065	138.465	0.500	Open Manhole	450
4.001	o	100	SIC 209-1	139.080	138.445	0.535	Open Manhole	450
1.006	o	300	JUNCTION	138.913	136.606	2.007	Junction	
5.000	o	100	DIST TANK 1	139.150	138.550	0.500	Open Manhole	450
5.001	o	100	SIC 210-1	139.175	138.530	0.545	Open Manhole	450
1.007	o	300	JUNCTION	139.040	136.503	2.237	Junction	
1.008	o	300	SMH 12	139.230	136.386	2.544	Open Manhole	1200
6.000	o	100	DIST TANK	141.980	141.160	0.720	Open Manhole	450
6.001	o	100	SIC 188-1	142.115	141.140	0.875	Open Manhole	450

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.000	1.000	50.0	SIC 206-1	138.865	138.250	0.515	Open Manhole	1200
1.001	14.185	13.6	SMH 14	138.805	137.205	1.500	Junction	
1.002	17.662	80.3	JUNCTION	138.705	136.860	1.620	Junction	
2.000	1.000	50.0	SIC 207-1	138.940	138.240	0.600	Open Manhole	450
2.001	6.793	5.4	JUNCTION	138.705	136.985	1.620	Junction	
1.003	2.967	80.3	SMH 13	138.735	136.823	1.687	Open Manhole	1200
1.004	3.349	101.5	JUNCTION	138.770	136.715	1.755	Junction	
3.000	1.000	50.0	SIC 208-1	139.020	138.300	0.620	Open Manhole	450
3.001	7.899	5.7	JUNCTION	138.770	136.915	1.755	Junction	
1.005	10.872	99.7	JUNCTION	138.913	136.606	2.007	Junction	
4.000	1.000	50.0	SIC 209-1	139.080	138.445	0.535	Open Manhole	450
4.001	7.533	4.6	JUNCTION	138.913	136.806	2.007	Junction	
1.006	10.269	99.7	JUNCTION	139.040	136.503	2.237	Junction	
5.000	1.000	50.0	SIC 210-1	139.175	138.530	0.545	Open Manhole	450
5.001	7.162	3.9	JUNCTION	139.040	136.703	2.237	Junction	
1.007	11.677	99.8	SMH 12	139.230	136.386	2.544	Open Manhole	1200
1.008	7.447	100.6	SMH 11	139.230	136.312	2.618	Open Manhole	1350
6.000	1.000	50.0	SIC 188-1	142.115	141.140	0.875	Open Manhole	450
6.001	8.779	11.1	SMH 22	141.650	140.350	1.200	Open Manhole	1200

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PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
6.002	o	150	SMH 22	141.650	140.300	1.200	Open Manhole	1200
7.000	o	100	DIST TANK	141.220	140.395	0.725	Open Manhole	450
7.001	o	100	SIC 187-1	141.300	140.375	0.825	Open Manhole	450
6.003	o	150	JUNCTION	141.105	139.810	1.145	Junction	
8.000	o	100	DIST TANK	140.755	139.875	0.780	Open Manhole	450
8.001	o	100	SIC 186-1	140.865	139.855	0.910	Open Manhole	450
6.004	o	150	JUNCTION	140.690	139.360	1.180	Junction	
9.000	o	100	DIST TANK	140.255	139.350	0.805	Open Manhole	450
9.001	o	100	SIC 185-1	140.300	139.330	0.870	Open Manhole	450
6.005	o	150	SMH 21	140.100	138.750	1.200	Open Manhole	1200
10.000	o	100	DIST TANK	139.825	138.890	0.835	Open Manhole	450
10.001	o	100	SIC 205-1	139.860	138.850	0.910	Open Manhole	450
6.006	o	150	SMH 20	139.650	138.300	1.200	Open Manhole	1200
11.000	o	100	DIST TANK	139.570	138.990	0.480	Open Manhole	450
11.001	o	100	SIC 204-1	139.650	138.970	0.580	Open Manhole	450
6.007	o	150	JUNCTION	139.520	138.140	1.230	Junction	
6.008	o	150	SMH 19	139.480	137.911	1.419	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
6.002	11.630	23.7	JUNCTION	141.105	139.810	1.145	Junction	
7.000	1.000	50.0	SIC 187-1	141.300	140.375	0.825	Open Manhole	450
7.001	5.711	11.1	JUNCTION	141.105	139.860	1.145	Junction	
6.003	10.709	23.8	JUNCTION	140.690	139.360	1.180	Junction	
8.000	1.000	50.0	SIC 186-1	140.865	139.855	0.910	Open Manhole	450
8.001	5.359	12.0	JUNCTION	140.690	139.410	1.180	Junction	
6.004	14.513	23.8	SMH 21	140.100	138.750	1.200	Open Manhole	1200
9.000	1.000	50.0	SIC 185-1	140.300	139.330	0.870	Open Manhole	450
9.001	6.287	11.9	SMH 21	140.100	138.800	1.200	Open Manhole	1200
6.005	16.038	35.6	SMH 20	139.650	138.300	1.200	Open Manhole	1200
10.000	1.775	44.4	SIC 205-1	139.860	138.850	0.910	Open Manhole	450
10.001	5.975	12.0	SMH 20	139.650	138.350	1.200	Open Manhole	1200
6.006	5.575	34.8	JUNCTION	139.520	138.140	1.230	Junction	
11.000	1.000	50.0	SIC 204-1	139.650	138.970	0.580	Open Manhole	450
11.001	9.935	12.7	JUNCTION	139.520	138.190	1.230	Junction	
6.007	7.954	34.7	SMH 19	139.480	137.911	1.419	Open Manhole	1200
6.008	9.917	6.8	SMH 11	139.230	136.462	2.618	Open Manhole	1350

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PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.009	o	375	SMH 11	139.230	136.237	2.618	Open Manhole	1350
12.000	o	100	DIST TANK	139.155	138.425	0.630	Open Manhole	450
12.001	o	100	SIC 222-1	139.180	138.395	0.685	Open Manhole	450
12.002	o	150	SMH 18	139.240	137.890	1.200	Open Manhole	1200
13.000	o	100	DIS TANK	139.210	138.480	0.630	Open Manhole	450
13.001	o	100	SIC 220-1	139.320	138.460	0.760	Open Manhole	450
12.003	o	150	JUNCTION	139.435	137.699	1.586	Junction	
14.000	o	100	DIST TANK	139.430	138.700	0.630	Open Manhole	450
14.001	o	100	SIC 219-1	139.505	138.680	0.725	Open Manhole	450
12.004	o	150	JUNCTION	139.635	137.508	1.977	Junction	
12.005	o	225	SMH 17	139.600	137.234	2.141	Open Manhole	1200
15.000	o	100	DIST TANK	139.460	138.820	0.540	Open Manhole	450
15.001	o	100	SIC 136-1	139.515	138.800	0.615	Open Manhole	450
12.006	o	225	JUNCTION	139.510	137.056	2.229	Junction	
16.000	o	100	DIST TANK	139.250	138.610	0.540	Open Manhole	450
16.001	o	100	SIC 138-1	139.355	138.590	0.665	Open Manhole	450
12.007	o	225	JUNCTION	139.370	136.807	2.338	Junction	
17.000	o	100	DIST TANK	139.015	138.375	0.540	Open Manhole	450

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.009	48.885	208.0	SMH 10	138.885	136.002	2.508	Open Manhole	1500
12.000	1.550	51.7	SIC 222-1	139.180	138.395	0.685	Open Manhole	450
12.001	4.297	9.4	SMH 18	139.240	137.940	1.200	Open Manhole	1200
12.002	15.280	80.0	JUNCTION	139.435	137.699	1.586	Junction	
13.000	1.000	50.0	SIC 220-1	139.320	138.460	0.760	Open Manhole	450
13.001	6.156	8.7	JUNCTION	139.435	137.749	1.586	Junction	
12.003	15.299	80.0	JUNCTION	139.635	137.508	1.977	Junction	
14.000	1.000	50.0	SIC 219-1	139.505	138.680	0.725	Open Manhole	450
14.001	5.138	4.6	JUNCTION	139.635	137.558	1.977	Junction	
12.004	15.953	80.0	SMH 17	139.600	137.309	2.141	Open Manhole	1200
12.005	11.218	62.9	JUNCTION	139.510	137.056	2.229	Junction	
15.000	1.000	50.0	SIC 136-1	139.515	138.800	0.615	Open Manhole	450
15.001	6.716	4.1	JUNCTION	139.510	137.181	2.229	Junction	
12.006	15.689	63.0	JUNCTION	139.370	136.807	2.338	Junction	
16.000	1.000	50.0	SIC 138-1	139.355	138.590	0.665	Open Manhole	450
16.001	5.829	3.5	JUNCTION	139.370	136.932	2.338	Junction	
12.007	17.988	62.9	JUNCTION	139.085	136.521	2.339	Junction	
17.000	1.000	50.0	SIC 140-1	139.130	138.355	0.675	Open Manhole	450

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PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
17.001	o	100	SIC 140-1	139.130	138.355	0.675	Open Manhole	450
12.008	o	225	JUNCTION	139.085	136.521	2.414	Junction	
18.000	o	100	DIST TANK	138.900	138.260	0.540	Open Manhole	450
18.001	o	100	SIC 141-1	138.900	138.240	0.560	Open Manhole	450
1.010	o	600	SMH 10	138.885	135.777	2.508	Open Manhole	1500
1.011	o	600	SMH 9	139.135	135.753	2.782	Open Manhole	1500
19.000	o	100	DIST TANK	140.580	139.920	0.560	Open Manhole	450
19.001	o	100	SIC 173-1	140.580	139.900	0.580	Open Manhole	450
19.002	o	150	SMH 32	140.715	139.345	1.220	Open Manhole	1200
20.000	o	100	DIST TANK	140.660	140.020	0.540	Open Manhole	450
20.001	o	100	SIC 172-1	140.660	140.000	0.560	Open Manhole	450
19.003	o	150	JUNCTION	140.925	139.260	1.515	Junction	
21.000	o	100	DIST TANK	140.925	140.285	0.540	Open Manhole	450
21.001	o	100	SIC 171-1	140.925	140.265	0.560	Open Manhole	450
19.004	o	150	SMH 31	141.190	139.152	1.888	Open Manhole	1200
22.000	o	100	DIST TANK	141.275	140.635	0.540	Open Manhole	450
22.001	o	100	SIC 170-1	141.275	140.615	0.560	Open Manhole	450
19.005	o	150	JUNCTION	141.410	139.062	2.198	Junction	

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
17.001	5.516	3.2	JUNCTION	139.085	136.646	2.339	Junction	
12.008	23.129	62.7	SMH 10	138.885	136.152	2.583	Open Manhole	1500
18.000	1.000	50.0	SIC 141-1	138.900	138.240	0.560	Open Manhole	450
18.001	6.574	3.3	SMH 10	138.885	136.277	2.508	Open Manhole	1500
1.010	10.672	450.0	SMH 9	139.135	135.753	2.782	Open Manhole	1500
1.011	27.837	450.0	SMH 8	139.965	135.691	3.674	Open Manhole	1500
19.000	1.000	50.0	SIC 173-1	140.580	139.900	0.580	Open Manhole	450
19.001	5.505	10.9	SMH 32	140.715	139.395	1.220	Open Manhole	1200
19.002	8.366	98.4	JUNCTION	140.925	139.260	1.515	Junction	
20.000	1.000	50.0	SIC 172-1	140.660	140.000	0.560	Open Manhole	450
20.001	5.123	7.4	JUNCTION	140.925	139.310	1.515	Junction	
19.003	10.641	98.5	SMH 31	141.190	139.152	1.888	Open Manhole	1200
21.000	1.000	50.0	SIC 171-1	140.925	140.265	0.560	Open Manhole	450
21.001	4.539	4.3	SMH 31	141.190	139.202	1.888	Open Manhole	1200
19.004	8.742	97.1	JUNCTION	141.410	139.062	2.198	Junction	
22.000	1.000	50.0	SIC 170-1	141.275	140.615	0.560	Open Manhole	450
22.001	5.941	4.0	JUNCTION	141.410	139.112	2.198	Junction	
19.005	11.645	97.0	JUNCTION	141.830	138.942	2.738	Junction	

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PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
23.000	o	100	DIST TANK	141.515	140.875	0.540	Open Manhole	450
23.001	o	100	SIC 167-1	141.515	140.855	0.560	Open Manhole	450
19.006	o	150	JUNCTION	141.830	138.942	2.738	Junction	
19.007	o	150	SMH 30	142.825	138.759	3.916	Open Manhole	1200
24.000	o	100	DIST TANK	142.425	141.275	1.050	Open Manhole	450
24.001	o	100	SIC 174-1	142.500	141.235	1.165	Open Manhole	450
24.002	o	150	SMH 34	142.610	141.125	1.335	Open Manhole	1200
25.000	o	100	DIST TANK	142.590	141.440	1.050	Open Manhole	450
25.001	o	100	SIC 175-1	142.630	141.400	1.130	Open Manhole	450
24.003	o	150	JUNCTION	142.710	141.045	1.515	Junction	
24.004	o	150	SMH 33	142.960	140.854	1.956	Open Manhole	1200
19.008	o	225	SMH 29	143.175	138.575	4.375	Open Manhole	1200
26.000	o	100	DIST TANK	142.730	142.090	0.540	Open Manhole	450
26.001	o	100	SIC 176-1	142.730	142.070	0.560	Open Manhole	450
19.009	o	225	JUNCTION	142.750	138.425	4.100	Junction	
27.000	o	100	DIST TANK	142.647	142.007	0.540	Open Manhole	450
27.001	o	100	SIC 169-1	142.647	141.987	0.560	Open Manhole	450
19.010	o	225	SMH 28	142.600	138.381	3.994	Open Manhole	450

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
23.000	1.000	50.0	SIC 167-1	141.515	140.855	0.560	Open Manhole	450
23.001	5.573	3.0	JUNCTION	141.830	138.992	2.738	Junction	
19.006	17.809	97.3	SMH 30	142.825	138.759	3.916	Open Manhole	1200
19.007	10.569	97.1	SMH 29	143.175	138.650	4.375	Open Manhole	1200
24.000	2.000	50.0	SIC 174-1	142.500	141.235	1.165	Open Manhole	450
24.001	3.210	53.5	SMH 34	142.610	141.175	1.335	Open Manhole	1200
24.002	7.966	99.6	JUNCTION	142.710	141.045	1.515	Junction	
25.000	2.000	50.0	SIC 175-1	142.630	141.400	1.130	Open Manhole	450
25.001	3.340	11.0	JUNCTION	142.710	141.095	1.515	Junction	
24.003	19.055	99.8	SMH 33	142.960	140.854	1.956	Open Manhole	1200
24.004	21.260	38.3	SMH 29	143.175	140.299	2.726	Open Manhole	1200
19.008	14.694	98.0	JUNCTION	142.750	138.425	4.100	Junction	
26.000	1.000	50.0	SIC 176-1	142.730	142.070	0.560	Open Manhole	450
26.001	7.163	2.0	JUNCTION	142.750	138.550	4.100	Junction	
19.009	4.331	98.4	SMH 28	142.600	138.381	3.994	Open Manhole	450
27.000	1.000	50.0	SIC 169-1	142.647	141.987	0.560	Open Manhole	450
27.001	5.718	3.3	SMH 28	142.600	140.231	2.269	Open Manhole	450
19.010	7.021	100.3	JUNCTION	142.250	138.311	3.714	Junction	

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PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
28.000	o	100	DIST TANK	141.925	141.285	0.540	Open Manhole	450
28.001	o	100	SIC 178-1	141.925	141.265	0.560	Open Manhole	450
19.011	o	225	JUNCTION	142.250	138.311	3.714	Junction	
29.000	o	100	DIST TANK	141.489	140.849	0.540	Open Manhole	450
29.001	o	100	SIC 166-1	141.489	140.829	0.560	Open Manhole	450
30.000	o	100	DIST TANK	142.815	141.815	0.900	Open Manhole	450
30.001	o	100	SIC 184-1	142.910	141.795	1.015	Open Manhole	450
30.002	o	150	SMH 27	142.975	141.625	1.200	Open Manhole	1200
31.000	o	100	DIST TANK	142.700	142.020	0.580	Open Manhole	450
31.001	o	100	SIC 182-1	142.850	142.000	0.750	Open Manhole	450
30.003	o	150	SMH 26	142.790	141.440	1.200	Open Manhole	1200
30.004	o	150	SMH 25	142.700	141.335	1.215	Open Manhole	1200
32.000	o	100	DIST TANK	142.635	141.655	0.880	Open Manhole	450
32.001	o	100	SIC 181-1	142.750	141.635	1.015	Open Manhole	450
30.005	o	150	JUNCTION	142.660	141.252	1.258	Junction	
33.000	o	150	HD CP1	142.160	140.810	1.200	Open Manhole	1200
30.006	o	225	SMH 24	142.350	140.635	1.490	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
28.000	1.000	50.0	SIC 178-1	141.925	141.265	0.560	Open Manhole	450
28.001	9.295	3.3	JUNCTION	142.250	138.436	3.714	Junction	
19.011	14.785	101.3	SMH 23	141.400	138.165	3.010	Open Manhole	1200
29.000	1.000	50.0	SIC 166-1	141.489	140.829	0.560	Open Manhole	450
29.001	4.575	4.8	SMH 23	141.400	139.869	1.431	Open Manhole	1200
30.000	1.000	50.0	SIC 184-1	142.910	141.795	1.015	Open Manhole	450
30.001	5.994	50.0	SMH 27	142.975	141.675	1.200	Open Manhole	1200
30.002	14.939	80.8	SMH 26	142.790	141.440	1.200	Open Manhole	1200
31.000	1.000	50.0	SIC 182-1	142.850	142.000	0.750	Open Manhole	450
31.001	5.504	10.8	SMH 26	142.790	141.490	1.200	Open Manhole	1200
30.003	8.415	80.0	SMH 25	142.700	141.335	1.215	Open Manhole	1200
30.004	2.616	31.5	JUNCTION	142.660	141.252	1.258	Junction	
32.000	1.000	50.0	SIC 181-1	142.750	141.635	1.015	Open Manhole	450
32.001	6.676	20.0	JUNCTION	142.660	141.302	1.258	Junction	
30.005	17.093	31.5	SMH 24	142.350	140.710	1.490	Open Manhole	1200
33.000	10.000	100.0	SMH 24	142.350	140.710	1.490	Open Manhole	1200
30.006	22.892	26.3	JUNCTION	141.810	139.765	1.820	Junction	

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PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
34.000	o	100	DIST TANK	141.725	141.085	0.540	Open Manhole	450
34.001	o	100	SIC 190-1	141.750	141.065	0.585	Open Manhole	450
30.007	o	225	JUNCTION	141.810	139.765	1.820	Junction	
35.000	o	100	DIST TANK	141.810	141.170	0.540	Open Manhole	450
35.001	o	100	SIC 180-1	141.900	141.150	0.650	Open Manhole	450
30.008	o	225	JUNCTION	141.795	139.726	1.844	Junction	
36.000	o	100	DIST TANK	141.685	141.045	0.540	Open Manhole	450
36.001	o	100	SIC 191-1	141.700	141.025	0.575	Open Manhole	450
30.009	o	225	JUNCTION	141.630	139.296	2.109	Junction	
37.000	o	100	DIST TANK	141.760	141.120	0.540	Open Manhole	450
37.001	o	100	SIC 179-1	141.785	141.100	0.585	Open Manhole	450
30.010	o	225	JUNCTION	141.600	139.202	2.173	Junction	
19.012	o	300	SMH 23	141.400	138.090	3.010	Open Manhole	1200
38.000	o	100	DIST TANK	140.480	139.840	0.540	Open Manhole	450
38.001	o	100	SIC 165-1	140.810	139.820	0.890	Open Manhole	450
19.013	o	300	JUNCTION	140.925	137.936	2.689	Junction	
1.012	o	600	SMH 8	139.965	135.691	3.674	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
34.000	1.000	50.0	SIC 190-1	141.750	141.065	0.585	Open Manhole	450
34.001	6.997	6.0	JUNCTION	141.810	139.890	1.820	Junction	
30.007	1.020	26.2	JUNCTION	141.795	139.726	1.844	Junction	
35.000	1.000	50.0	SIC 180-1	141.900	141.150	0.650	Open Manhole	450
35.001	5.500	4.2	JUNCTION	141.795	139.851	1.844	Junction	
30.008	11.314	26.3	JUNCTION	141.630	139.296	2.109	Junction	
36.000	1.000	50.0	SIC 191-1	141.700	141.025	0.575	Open Manhole	450
36.001	6.997	4.4	JUNCTION	141.630	139.421	2.109	Junction	
30.009	2.476	26.3	JUNCTION	141.600	139.202	2.173	Junction	
37.000	1.000	50.0	SIC 179-1	141.785	141.100	0.585	Open Manhole	450
37.001	6.100	3.4	JUNCTION	141.600	139.327	2.173	Junction	
30.010	27.427	26.4	SMH 23	141.400	138.165	3.010	Open Manhole	1200
19.012	15.382	99.9	JUNCTION	140.925	137.936	2.689	Junction	
38.000	1.000	50.0	SIC 165-1	140.810	139.820	0.890	Open Manhole	450
38.001	5.000	3.0	JUNCTION	140.925	138.136	2.689	Junction	
19.013	25.832	100.1	SMH 8	139.965	137.678	1.987	Open Manhole	1500
1.012	23.589	453.6	SMH 7	139.400	135.639	3.161	Open Manhole	1500

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PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.013	o	600	SMH 7	139.400	135.639	3.161	Open Manhole	1500
1.014	o	600	SMH 6	138.640	135.570	2.470	Open Manhole	1500
39.000	o	100	DIST TANK	138.350	137.710	0.540	Open Manhole	450
39.001	o	100	SIC 146-1	138.400	137.690	0.610	Open Manhole	450
1.015	o	600	JUNCTION	138.450	135.555	2.295	Junction	
40.000	o	100	DIST TANK	140.010	139.370	0.540	Open Manhole	450
40.001	o	100	SIC 152_1	140.080	139.350	0.630	Open Manhole	450
41.000	o	100	DIST TANK	139.820	139.180	0.540	Open Manhole	450
41.001	o	100	SIC 153-1	139.900	139.160	0.640	Open Manhole	450
40.002	o	150	SMH 36	139.825	138.475	1.200	Open Manhole	1200
42.000	o	100	DIST TANK	139.465	138.825	0.540	Open Manhole	450
42.001	o	100	SIC 154-1	139.560	138.805	0.655	Open Manhole	450
40.003	o	150	JUNCTION	139.475	138.127	1.198	Junction	
43.000	o	100	DIST TANK	138.975	138.335	0.540	Open Manhole	450
43.001	o	100	SIC 155-1	139.090	138.315	0.675	Open Manhole	450
40.004	o	150	JUNCTION	138.980	137.659	1.171	Junction	
40.005	o	150	SMH 35	138.775	137.423	1.202	Open Manhole	1200
1.016	o	600	SMH 5	138.225	135.533	2.092	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.013	31.370	454.6	SMH 6	138.640	135.570	2.470	Open Manhole	1500
1.014	6.875	458.3	JUNCTION	138.450	135.555	2.295	Junction	
39.000	1.000	50.0	SIC 146-1	138.400	137.690	0.610	Open Manhole	450
39.001	6.100	3.7	JUNCTION	138.450	136.055	2.295	Junction	
1.015	9.789	445.0	SMH 5	138.225	135.533	2.092	Open Manhole	1500
40.000	1.000	50.0	SIC 152_1	140.080	139.350	0.630	Open Manhole	450
40.001	5.568	6.7	SMH 36	139.825	138.525	1.200	Open Manhole	1200
41.000	1.000	50.0	SIC 153-1	139.900	139.160	0.640	Open Manhole	450
41.001	4.084	6.4	SMH 36	139.825	138.525	1.200	Open Manhole	1200
40.002	10.715	30.8	JUNCTION	139.475	138.127	1.198	Junction	
42.000	1.000	50.0	SIC 154-1	139.560	138.805	0.655	Open Manhole	450
42.001	4.084	6.5	JUNCTION	139.475	138.177	1.198	Junction	
40.003	14.419	30.8	JUNCTION	138.980	137.659	1.171	Junction	
43.000	1.000	50.0	SIC 155-1	139.090	138.315	0.675	Open Manhole	450
43.001	4.084	6.7	JUNCTION	138.980	137.709	1.171	Junction	
40.004	7.268	30.8	SMH 35	138.775	137.423	1.202	Open Manhole	1200
40.005	20.658	14.3	SMH 5	138.225	135.983	2.092	Open Manhole	1500
1.016	6.192	455.0	JUNCTION	138.075	135.519	1.956	Junction	

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PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
44.000	o	100	DIST TANK	138.030	137.390	0.540	Open Manhole	450
44.001	o	100	SIC 148-1	138.190	137.370	0.720	Open Manhole	450
1.017	o	600	JUNCTION	138.075	135.519	1.956	Junction	
1.018	o	600	SMH 4	138.060	135.491	1.969	Open Manhole	1500
45.000	o	100	DIST TANK	138.030	137.390	0.540	Open Manhole	450
45.001	o	100	SIC 150-1	138.030	137.370	0.560	Open Manhole	450
1.019	o	600	JUNCTION	138.080	135.482	1.998	Junction	
1.020	o	600	SMH 3	138.010	135.456	1.954	Open Manhole	1500
46.000	o	100	DIST TANK	137.850	137.210	0.540	Open Manhole	450
46.001	o	100	SIC 111-1	137.850	137.190	0.560	Open Manhole	450
1.021	o	600	JUNCTION	137.950	135.446	1.904	Junction	
47.000	o	100	DIST TANK	137.500	136.860	0.540	Open Manhole	450
47.001	o	100	SIC 113-1	137.500	136.840	0.560	Open Manhole	450
1.022	o	600	JUNCTION	137.700	135.409	1.691	Junction	
48.000	o	150	SWMH 114-3	138.825	137.475	1.200	Open Manhole	1200
48.001	o	225	SWMH 114-2	137.865	136.440	1.200	Open Manhole	1200
49.000	o	100	DIST TANK	137.140	136.500	0.540	Open Manhole	450
49.001	o	100	SIC 115-1	137.140	136.480	0.560	Open Manhole	450

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
44.000	1.000	50.0	SIC 148-1	138.190	137.370	0.720	Open Manhole	450
44.001	7.685	5.7	JUNCTION	138.075	136.019	1.956	Junction	
1.017	12.689	453.2	SMH 4	138.060	135.491	1.969	Open Manhole	1500
1.018	3.967	455.0	JUNCTION	138.080	135.482	1.998	Junction	
45.000	1.000	50.0	SIC 150-1	138.030	137.370	0.560	Open Manhole	450
45.001	6.583	4.7	JUNCTION	138.080	135.982	1.998	Junction	
1.019	12.038	463.0	SMH 3	138.010	135.456	1.954	Open Manhole	1500
1.020	4.751	455.0	JUNCTION	137.950	135.446	1.904	Junction	
46.000	1.000	50.0	SIC 111-1	137.850	137.190	0.560	Open Manhole	450
46.001	6.200	5.0	JUNCTION	137.950	135.946	1.904	Junction	
1.021	16.787	453.7	JUNCTION	137.700	135.409	1.691	Junction	
47.000	1.000	50.0	SIC 113-1	137.500	136.840	0.560	Open Manhole	450
47.001	6.955	7.5	JUNCTION	137.700	135.909	1.691	Junction	
1.022	18.318	458.0	SMH 2	137.190	135.369	1.221	Open Manhole	1500
48.000	38.846	40.5	SWMH 114-2	137.865	136.515	1.200	Open Manhole	1200
48.001	22.929	44.5	SWMH 114-1	137.350	135.925	1.200	Open Manhole	1200
49.000	1.000	50.0	SIC 115-1	137.140	136.480	0.560	Open Manhole	450
49.001	4.470	10.4	SWMH 114-1	137.350	136.050	1.200	Open Manhole	1200

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PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
48.002	o	225	SWMH 114-1	137.350	135.925	1.200	Open Manhole	1200
1.023	o	600	SMH 2	137.190	135.369	1.221	Open Manhole	1500
50.000	o	100	DIST TANK	137.010	136.370	0.540	Open Manhole	450
50.001	o	100	SIC 116-1	137.010	136.350	0.560	Open Manhole	450
1.024	o	600	JUNCTION	137.000	135.351	1.049	Junction	
1.025	o	600	SMH 1	136.780	135.309	0.871	Open Manhole	1500
1.026	o	300	POND	136.578	135.278	1.000	Open Manhole	1500
1.027	o	150	FC	136.350	135.200	1.000	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
48.002	5.083	28.1	SMH 2	137.190	135.744	1.221	Open Manhole	1500
1.023	8.042	455.0	JUNCTION	137.000	135.351	1.049	Junction	
50.000	1.000	50.0	SIC 116-1	137.010	136.350	0.560	Open Manhole	450
50.001	8.248	16.1	JUNCTION	137.000	135.839	1.061	Junction	
1.024	19.192	457.0	SMH 1	136.780	135.309	0.871	Open Manhole	1500
1.025	13.188	425.4	POND	136.578	135.278	0.700	Open Manhole	1500
1.026	7.176	92.0	FC	136.350	135.200	0.850	Open Manhole	1200
1.027	8.622	8.0		135.770	134.119	1.501	Open Manhole	0

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
1.027		135.770	134.119	0.000	0	0

Simulation Criteria for Storm

Volumetric Runoff Coeff	0.840	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	0.000
Hot Start (mins)	0	Inlet Coeffiecient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

Number of Input Hydrographs	0	Number of Offline Controls	0	Number of Time/Area Diagrams	0
Number of Online Controls	48	Number of Storage Structures	48	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH	D2 (1km)	0.417
Return Period (years)	1	D3 (1km)	0.273
FEH Rainfall Version	1999	E (1km)	0.289
Site Location	GB 386850 145550 ST 86850 45550	F (1km)	2.484
C (1km)	-0.027	Summer Storms	No
D1 (1km)	0.363	Winter Storms	Yes

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Synthetic Rainfall Details

Cv (Summer) 0.750 Storm Duration (mins) 15
Cv (Winter) 0.840

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Online Controls for Storm

Orifice Manhole: SIC 206-1, DS/PN: 1.001, Volume (m³): 0.7

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 138.250

Orifice Manhole: SIC 207-1, DS/PN: 2.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 138.240

Orifice Manhole: SIC 208-1, DS/PN: 3.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 138.300

Orifice Manhole: SIC 209-1, DS/PN: 4.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 138.445

Orifice Manhole: SIC 210-1, DS/PN: 5.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 138.530

Orifice Manhole: SIC 188-1, DS/PN: 6.001, Volume (m³): 0.2

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 141.140

Orifice Manhole: SIC 187-1, DS/PN: 7.001, Volume (m³): 0.2

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 140.375

Orifice Manhole: SIC 186-1, DS/PN: 8.001, Volume (m³): 0.2

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 139.855

Orifice Manhole: SIC 185-1, DS/PN: 9.001, Volume (m³): 0.2

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 139.330

Orifice Manhole: SIC 205-1, DS/PN: 10.001, Volume (m³): 0.2

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 138.850

Orifice Manhole: SIC 204-1, DS/PN: 11.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 138.970

Orifice Manhole: SIC 222-1, DS/PN: 12.001, Volume (m³): 0.1

Diameter (m) 0.050 Discharge Coefficient 0.600 Invert Level (m) 138.395

Orifice Manhole: SIC 220-1, DS/PN: 13.001, Volume (m³): 0.1

Diameter (m) 0.050 Discharge Coefficient 0.600 Invert Level (m) 138.460

Orifice Manhole: SIC 219-1, DS/PN: 14.001, Volume (m³): 0.1

Diameter (m) 0.050 Discharge Coefficient 0.600 Invert Level (m) 138.680

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Orifice Manhole: SIC 136-1, DS/PN: 15.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 138.800

Orifice Manhole: SIC 138-1, DS/PN: 16.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 138.590

Orifice Manhole: SIC 140-1, DS/PN: 17.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 138.355

Orifice Manhole: SIC 141-1, DS/PN: 18.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 138.240

Orifice Manhole: SIC 173-1, DS/PN: 19.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 139.900

Orifice Manhole: SIC 172-1, DS/PN: 20.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 140.000

Orifice Manhole: SIC 171-1, DS/PN: 21.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 140.265

Orifice Manhole: SIC 170-1, DS/PN: 22.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 140.615

Orifice Manhole: SIC 167-1, DS/PN: 23.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 140.855

Orifice Manhole: SIC 174-1, DS/PN: 24.001, Volume (m³): 0.2

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 141.235

Orifice Manhole: SIC 175-1, DS/PN: 25.001, Volume (m³): 0.2

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 141.400

Orifice Manhole: SIC 176-1, DS/PN: 26.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 142.070

Orifice Manhole: SIC 169-1, DS/PN: 27.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 141.987

Orifice Manhole: SIC 178-1, DS/PN: 28.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 141.265

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Orifice Manhole: SIC 166-1, DS/PN: 29.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 140.829

Orifice Manhole: SIC 184-1, DS/PN: 30.001, Volume (m³): 0.2

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 141.795

Orifice Manhole: SIC 182-1, DS/PN: 31.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 142.000

Orifice Manhole: SIC 181-1, DS/PN: 32.001, Volume (m³): 0.2

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 141.635

Orifice Manhole: SIC 190-1, DS/PN: 34.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 141.065

Orifice Manhole: SIC 180-1, DS/PN: 35.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 141.150

Orifice Manhole: SIC 191-1, DS/PN: 36.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 141.025

Orifice Manhole: SIC 179-1, DS/PN: 37.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 141.100

Orifice Manhole: SIC 165-1, DS/PN: 38.001, Volume (m³): 0.2

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 139.820

Orifice Manhole: SIC 146-1, DS/PN: 39.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 137.690

Orifice Manhole: SIC 152_1, DS/PN: 40.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 139.350

Orifice Manhole: SIC 153-1, DS/PN: 41.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 139.160

Orifice Manhole: SIC 154-1, DS/PN: 42.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 138.805

Orifice Manhole: SIC 155-1, DS/PN: 43.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 138.315

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Orifice Manhole: SIC 148-1, DS/PN: 44.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 137.370

Orifice Manhole: SIC 150-1, DS/PN: 45.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 137.370

Orifice Manhole: SIC 111-1, DS/PN: 46.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 137.190

Orifice Manhole: SIC 113-1, DS/PN: 47.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 136.840

Orifice Manhole: SIC 115-1, DS/PN: 49.001, Volume (m³): 0.1

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 136.480

Hydro-Brake® Optimum Manhole: POND, DS/PN: 1.026, Volume (m³): 5.6

Unit Reference	MD-SHE-0089-3500-1000-3500
Design Head (m)	1.000
Design Flow (l/s)	3.5
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	89
Invert Level (m)	135.278
Minimum Outlet Pipe Diameter (mm)	150
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.000	3.5	Kick-Flo®	0.632	2.8
Flush-Flo™	0.300	3.5	Mean Flow over Head Range	-	3.1

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	2.7	0.800	3.1	2.000	4.8	4.000	6.7	7.000	8.7
0.200	3.4	1.000	3.5	2.200	5.0	4.500	7.0	7.500	9.0
0.300	3.5	1.200	3.8	2.400	5.2	5.000	7.4	8.000	9.2
0.400	3.4	1.400	4.1	2.600	5.4	5.500	7.7	8.500	9.5
0.500	3.3	1.600	4.3	3.000	5.8	6.000	8.1	9.000	9.8
0.600	3.0	1.800	4.6	3.500	6.2	6.500	8.4	9.500	10.0

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Storage Structures for Storm

Porous Car Park Manhole: DIST TANK, DS/PN: 1.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	6.0
Membrane Percolation (mm/hr)	1000	Length (m)	9.6
Max Percolation (l/s)	16.0	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	138.270	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK 1, DS/PN: 2.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.0
Membrane Percolation (mm/hr)	1000	Length (m)	9.6
Max Percolation (l/s)	8.0	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	138.260	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TK 1, DS/PN: 3.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.4
Membrane Percolation (mm/hr)	1000	Length (m)	11.9
Max Percolation (l/s)	11.2	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	138.320	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK 1, DS/PN: 4.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.4
Membrane Percolation (mm/hr)	1000	Length (m)	11.9
Max Percolation (l/s)	11.2	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	138.465	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK 1, DS/PN: 5.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.4
Membrane Percolation (mm/hr)	1000	Length (m)	11.6
Max Percolation (l/s)	11.0	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	138.550	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 6.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	6.4
Membrane Percolation (mm/hr)	1000	Length (m)	10.8
Max Percolation (l/s)	19.2	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	141.160	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 7.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	5.5
Membrane Percolation (mm/hr)	1000	Length (m)	5.7
Max Percolation (l/s)	8.7	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	140.395	Membrane Depth (mm)	0

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Porous Car Park Manhole: DIST TANK, DS/PN: 8.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	5.5
Membrane Percolation (mm/hr)	1000	Length (m)	5.7
Max Percolation (l/s)	8.7	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	139.875	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 9.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	5.5
Membrane Percolation (mm/hr)	1000	Length (m)	5.7
Max Percolation (l/s)	8.7	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	139.350	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 10.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	5.5
Membrane Percolation (mm/hr)	1000	Length (m)	6.0
Max Percolation (l/s)	9.2	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	138.890	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 11.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.4
Membrane Percolation (mm/hr)	1000	Length (m)	10.8
Max Percolation (l/s)	10.2	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	138.990	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 12.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.0
Membrane Percolation (mm/hr)	1000	Length (m)	10.2
Max Percolation (l/s)	8.5	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	138.425	Membrane Depth (mm)	0

Porous Car Park Manhole: DIS TANK, DS/PN: 13.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	6.0
Membrane Percolation (mm/hr)	1000	Length (m)	9.6
Max Percolation (l/s)	16.0	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	138.480	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 14.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.0
Membrane Percolation (mm/hr)	1000	Length (m)	9.6
Max Percolation (l/s)	8.0	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	138.700	Membrane Depth (mm)	0

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Porous Car Park Manhole: DIST TANK, DS/PN: 15.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.0
Membrane Percolation (mm/hr)	1000	Length (m)	11.7
Max Percolation (l/s)	9.8	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	138.820	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 16.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	6.0
Membrane Percolation (mm/hr)	1000	Length (m)	11.2
Max Percolation (l/s)	18.7	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	138.610	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 17.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	6.0
Membrane Percolation (mm/hr)	1000	Length (m)	11.0
Max Percolation (l/s)	18.3	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	138.375	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 18.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	6.0
Membrane Percolation (mm/hr)	1000	Length (m)	9.6
Max Percolation (l/s)	16.0	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	138.260	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 19.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.3
Membrane Percolation (mm/hr)	1000	Length (m)	10.8
Max Percolation (l/s)	9.9	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	139.920	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 20.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.3
Membrane Percolation (mm/hr)	1000	Length (m)	10.8
Max Percolation (l/s)	9.9	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	140.020	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 21.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.3
Membrane Percolation (mm/hr)	1000	Length (m)	10.8
Max Percolation (l/s)	9.9	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	140.285	Membrane Depth (mm)	0

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Porous Car Park Manhole: DIST TANK, DS/PN: 22.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.3
Membrane Percolation (mm/hr)	1000	Length (m)	10.8
Max Percolation (l/s)	9.9	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	140.635	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 23.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	6.0
Membrane Percolation (mm/hr)	1000	Length (m)	9.6
Max Percolation (l/s)	16.0	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	140.875	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 24.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	5.5
Membrane Percolation (mm/hr)	1000	Length (m)	6.2
Max Percolation (l/s)	9.5	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	141.275	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 25.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	5.5
Membrane Percolation (mm/hr)	1000	Length (m)	6.2
Max Percolation (l/s)	9.5	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	141.440	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 26.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.3
Membrane Percolation (mm/hr)	1000	Length (m)	11.7
Max Percolation (l/s)	10.7	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	142.090	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 27.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.3
Membrane Percolation (mm/hr)	1000	Length (m)	13.0
Max Percolation (l/s)	11.9	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	142.007	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 28.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	6.3
Membrane Percolation (mm/hr)	1000	Length (m)	11.2
Max Percolation (l/s)	19.6	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	141.285	Membrane Depth (mm)	0

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Porous Car Park Manhole: DIST TANK, DS/PN: 29.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.0
Membrane Percolation (mm/hr)	1000	Length (m)	11.3
Max Percolation (l/s)	9.4	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	140.849	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 30.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	6.4
Membrane Percolation (mm/hr)	1000	Length (m)	10.8
Max Percolation (l/s)	19.2	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	141.815	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 31.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.4
Membrane Percolation (mm/hr)	1000	Length (m)	10.8
Max Percolation (l/s)	10.2	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	142.020	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 32.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.4
Membrane Percolation (mm/hr)	1000	Length (m)	10.8
Max Percolation (l/s)	10.2	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	141.655	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 34.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.0
Membrane Percolation (mm/hr)	1000	Length (m)	9.6
Max Percolation (l/s)	8.0	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	141.085	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 35.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.0
Membrane Percolation (mm/hr)	1000	Length (m)	9.6
Max Percolation (l/s)	8.0	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	141.170	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 36.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.0
Membrane Percolation (mm/hr)	1000	Length (m)	10.5
Max Percolation (l/s)	8.8	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	141.045	Membrane Depth (mm)	0

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Porous Car Park Manhole: DIST TANK, DS/PN: 37.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.0
Membrane Percolation (mm/hr)	1000	Length (m)	10.3
Max Percolation (l/s)	8.6	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	141.120	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 38.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	9.0
Membrane Percolation (mm/hr)	1000	Length (m)	10.0
Max Percolation (l/s)	25.0	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	139.840	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 39.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	9.0
Membrane Percolation (mm/hr)	1000	Length (m)	10.6
Max Percolation (l/s)	26.5	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	137.710	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 40.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.3
Membrane Percolation (mm/hr)	1000	Length (m)	17.6
Max Percolation (l/s)	16.1	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	139.370	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 41.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	5.5
Membrane Percolation (mm/hr)	1000	Length (m)	5.7
Max Percolation (l/s)	8.7	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	139.180	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 42.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	5.5
Membrane Percolation (mm/hr)	1000	Length (m)	5.7
Max Percolation (l/s)	8.7	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	138.825	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 43.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	5.5
Membrane Percolation (mm/hr)	1000	Length (m)	5.7
Max Percolation (l/s)	8.7	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	138.335	Membrane Depth (mm)	0

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Porous Car Park Manhole: DIST TANK, DS/PN: 44.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	6.0
Membrane Percolation (mm/hr)	1000	Length (m)	10.0
Max Percolation (l/s)	16.7	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	137.390	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 45.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	6.0
Membrane Percolation (mm/hr)	1000	Length (m)	9.6
Max Percolation (l/s)	16.0	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	137.390	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 46.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	6.0
Membrane Percolation (mm/hr)	1000	Length (m)	9.6
Max Percolation (l/s)	16.0	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	137.210	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 47.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	6.0
Membrane Percolation (mm/hr)	1000	Length (m)	9.6
Max Percolation (l/s)	16.0	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	136.860	Membrane Depth (mm)	0

Porous Car Park Manhole: DIST TANK, DS/PN: 49.000

Infiltration Coefficient Base (m/hr)	0.01080	Width (m)	3.3
Membrane Percolation (mm/hr)	1000	Length (m)	10.7
Max Percolation (l/s)	9.8	Slope (1:X)	0.0
Safety Factor	5.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	136.500	Membrane Depth (mm)	0

Tank or Pond Manhole: POND, DS/PN: 1.026

Invert Level (m) 135.278

Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	1637.2	1.300	2298.1

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Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000
Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 0.000
Hot Start Level (mm) 0 Inlet Coeffiecient 0.800
Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (l/per/day) 0.000
Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
Number of Online Controls 48 Number of Storage Structures 48 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FEH D3 (1km) 0.273
FEH Rainfall Version 1999 E (1km) 0.289
Site Location GB 386850 145550 ST 86850 45550 F (1km) 2.484
C (1km) -0.027 Cv (Summer) 0.750
D1 (1km) 0.363 Cv (Winter) 0.840
D2 (1km) 0.417

Margin for Flood Risk Warning (mm) 300.0
Analysis Timestep 2.5 Second Increment (Extended)
DTS Status OFF
DVD Status ON
Inertia Status ON

Profile(s) Summer and Winter
Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years) 30
Climate Change (%) 0

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)
1.000	DIST TANK	120 Winter	30	+0%	30/15 Summer				138.459	0.089
1.001	SIC 206-1	120 Winter	30	+0%	30/15 Summer				138.458	0.108
1.002	SMH 14	15 Winter	30	+0%					137.161	-0.144
2.000	DIST TANK 1	30 Winter	30	+0%	30/15 Summer				138.426	0.066
2.001	SIC 207-1	60 Winter	30	+0%	30/15 Summer				138.443	0.103
1.003	JUNCTION	15 Winter	30	+0%					136.982	-0.103
1.004	SMH 13	15 Winter	30	+0%					136.855	-0.193
3.000	DIST TK 1	60 Winter	30	+0%	30/15 Summer				138.507	0.087
3.001	SIC 208-1	30 Winter	30	+0%	30/15 Summer				138.518	0.118
1.005	JUNCTION	15 Winter	30	+0%					136.824	-0.191
4.000	DIST TANK 1	60 Winter	30	+0%	30/15 Summer				138.652	0.087
4.001	SIC 209-1	30 Winter	30	+0%	30/15 Summer				138.663	0.118
1.006	JUNCTION	15 Winter	30	+0%					136.736	-0.170
5.000	DIST TANK 1	60 Winter	30	+0%	30/30 Winter				138.661	0.011
5.001	SIC 210-1	60 Winter	30	+0%	30/15 Summer				138.673	0.043
1.007	JUNCTION	15 Winter	30	+0%					136.629	-0.174
1.008	SMH 12	15 Winter	30	+0%					136.528	-0.158
6.000	DIST TANK	120 Winter	30	+0%	30/15 Summer				141.407	0.147
6.001	SIC 188-1	60 Summer	30	+0%	30/15 Summer				141.393	0.153
6.002	SMH 22	15 Winter	30	+0%					140.344	-0.106
7.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				140.609	0.114
7.001	SIC 187-1	60 Winter	30	+0%	30/15 Summer				140.621	0.146
6.003	JUNCTION	15 Winter	30	+0%					139.871	-0.089
8.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				140.088	0.113
8.001	SIC 186-1	60 Winter	30	+0%	30/15 Summer				140.107	0.152
6.004	JUNCTION	15 Winter	30	+0%					139.422	-0.088
9.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				139.564	0.114
9.001	SIC 185-1	60 Winter	30	+0%	30/15 Summer				139.576	0.146
6.005	SMH 21	15 Winter	30	+0%					138.824	-0.076
10.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				139.087	0.097
10.001	SIC 205-1	60 Winter	30	+0%	30/15 Summer				139.090	0.140
6.006	SMH 20	15 Winter	30	+0%					138.380	-0.070

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Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
1.000	DIST TANK	0.000	0.13		0.5	SURCHARGED	
1.001	SIC 206-1	0.000	0.04		0.6	SURCHARGED	
1.002	SMH 14	0.000	0.28		16.5	OK*	
2.000	DIST TANK 1	0.000	0.14		0.5	SURCHARGED	
2.001	SIC 207-1	0.000	0.02		0.5	SURCHARGED	
1.003	JUNCTION	0.000	0.56		16.9	OK*	
1.004	SMH 13	0.000	0.27		16.8	OK	
3.000	DIST TK 1	0.000	0.15		0.6	SURCHARGED	
3.001	SIC 208-1	0.000	0.02		0.6	SURCHARGED	
1.005	JUNCTION	0.000	0.28		23.3	OK*	
4.000	DIST TANK 1	0.000	0.15		0.6	SURCHARGED	
4.001	SIC 209-1	0.000	0.02		0.6	SURCHARGED	
1.006	JUNCTION	0.000	0.38		30.3	OK*	
5.000	DIST TANK 1	0.000	0.11		0.4	SURCHARGED	
5.001	SIC 210-1	0.000	0.02		0.4	SURCHARGED	
1.007	JUNCTION	0.000	0.36		31.0	OK*	
1.008	SMH 12	0.000	0.46		31.1	OK	
6.000	DIST TANK	0.000	0.17		0.7	SURCHARGED	
6.001	SIC 188-1	0.000	0.04		0.6	SURCHARGED	
6.002	SMH 22	0.000	0.19		6.3	OK	
7.000	DIST TANK	0.000	0.16		0.6	SURCHARGED	
7.001	SIC 187-1	0.000	0.04		0.6	SURCHARGED	
6.003	JUNCTION	0.000	0.34		12.6	OK*	
8.000	DIST TANK	0.000	0.16		0.6	SURCHARGED	
8.001	SIC 186-1	0.000	0.04		0.6	SURCHARGED	
6.004	JUNCTION	0.000	0.36		13.0	OK*	
9.000	DIST TANK	0.000	0.16		0.6	SURCHARGED	
9.001	SIC 185-1	0.000	0.04		0.6	SURCHARGED	
6.005	SMH 21	0.000	0.48		13.4	OK	
10.000	DIST TANK	0.000	0.11		0.6	SURCHARGED	
10.001	SIC 205-1	0.000	0.04		0.6	SURCHARGED	
6.006	SMH 20	0.000	0.56		13.9	OK	

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Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)
11.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				139.176	0.086
11.001	SIC 204-1	60 Winter	30	+0%	30/15 Summer				139.179	0.109
6.007	JUNCTION	15 Winter	30	+0%					138.213	-0.077
6.008	SMH 19	15 Winter	30	+0%					137.971	-0.090
1.009	SMH 11	15 Winter	30	+0%					136.508	-0.104
12.000	DIST TANK	15 Winter	30	+0%					138.525	0.000
12.001	SIC 222-1	15 Winter	30	+0%	30/15 Summer				138.524	0.029
12.002	SMH 18	15 Winter	30	+0%					137.937	-0.103
13.000	DIS TANK	30 Winter	30	+0%	30/15 Summer				138.613	0.033
13.001	SIC 220-1	30 Winter	30	+0%	30/15 Summer				138.619	0.059
12.003	JUNCTION	15 Winter	30	+0%					137.752	-0.097
14.000	DIST TANK	15 Winter	30	+0%	30/15 Summer				138.936	0.136
14.001	SIC 219-1	30 Summer	30	+0%	30/15 Summer				138.910	0.130
12.004	JUNCTION	15 Winter	30	+0%					137.572	-0.086
12.005	SMH 17	15 Winter	30	+0%					137.314	-0.145
15.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				138.996	0.076
15.001	SIC 136-1	30 Winter	30	+0%	30/15 Summer				139.004	0.104
12.006	JUNCTION	15 Winter	30	+0%					137.136	-0.145
16.000	DIST TANK	120 Winter	30	+0%	30/15 Summer				138.772	0.062
16.001	SIC 138-1	180 Winter	30	+0%	30/15 Summer				138.781	0.091
12.007	JUNCTION	15 Winter	30	+0%					136.941	-0.091
17.000	DIST TANK	120 Winter	30	+0%	30/15 Summer				138.539	0.064
17.001	SIC 140-1	120 Winter	30	+0%	30/15 Summer				138.555	0.100
12.008	JUNCTION	15 Winter	30	+0%					136.669	-0.077
18.000	DIST TANK	60 Winter	30	+0%	30/60 Winter				138.361	0.001
18.001	SIC 141-1	30 Winter	30	+0%	30/15 Winter				138.371	0.031
1.010	SMH 10	15 Winter	30	+0%	30/15 Winter				136.452	0.075
1.011	SMH 9	15 Winter	30	+0%	30/15 Winter				136.438	0.085
19.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				140.076	0.056
19.001	SIC 173-1	30 Winter	30	+0%	30/15 Summer				140.085	0.085
19.002	SMH 32	15 Winter	30	+0%					139.418	-0.077
20.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				140.158	0.038
20.001	SIC 172-1	60 Winter	30	+0%	30/15 Summer				140.162	0.062
19.003	JUNCTION	15 Winter	30	+0%					139.357	-0.053
21.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				140.491	0.106
21.001	SIC 171-1	30 Winter	30	+0%	30/15 Summer				140.495	0.130
19.004	SMH 31	15 Winter	30	+0%					139.301	-0.001
22.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				140.808	0.073
22.001	SIC 170-1	120 Winter	30	+0%	30/15 Summer				140.808	0.093
19.005	JUNCTION	15 Winter	30	+0%					139.212	0.000
23.000	DIST TANK	60 Winter	30	+0%					140.964	-0.011
23.001	SIC 167-1	60 Winter	30	+0%	30/15 Winter				140.974	0.019
19.006	JUNCTION	15 Winter	30	+0%					139.092	0.000
19.007	SMH 30	15 Winter	30	+0%	30/15 Summer				138.968	0.059
24.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				141.449	0.074
24.001	SIC 174-1	15 Winter	30	+0%	30/15 Summer				141.446	0.111
24.002	SMH 34	15 Winter	30	+0%					141.181	-0.094
25.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				141.614	0.074
25.001	SIC 175-1	15 Winter	30	+0%	30/15 Summer				141.613	0.113
24.003	JUNCTION	15 Winter	30	+0%					141.126	-0.069
24.004	SMH 33	15 Winter	30	+0%					140.917	-0.087
19.008	SMH 29	15 Winter	30	+0%	30/15 Winter				138.806	0.006
26.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				142.285	0.095
26.001	SIC 176-1	60 Winter	30	+0%	30/15 Summer				142.276	0.106
19.009	JUNCTION	15 Winter	30	+0%					138.650	0.000
27.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				142.155	0.048
27.001	SIC 169-1	30 Winter	30	+0%	30/15 Summer				142.162	0.075
19.010	SMH 28	15 Winter	30	+0%	30/15 Summer				138.639	0.033
28.000	DIST TANK	120 Winter	30	+0%	30/15 Summer				141.483	0.098
28.001	SIC 178-1	60 Winter	30	+0%	30/15 Summer				141.492	0.127
19.011	JUNCTION	15 Winter	30	+0%					138.536	0.000
29.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				140.976	0.027
29.001	SIC 166-1	15 Winter	30	+0%	30/15 Summer				140.982	0.053
30.000	DIST TANK	120 Winter	30	+0%	30/15 Summer				142.017	0.102

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Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
11.000	DIST TANK	0.000	0.15		0.6	SURCHARGED	
11.001	SIC 204-1	0.000	0.04		0.6	SURCHARGED	
6.007	JUNCTION	0.000	0.48		14.4	OK*	
6.008	SMH 19	0.000	0.33		20.0	OK	
1.009	SMH 11	0.000	0.55		70.5	OK	
12.000	DIST TANK	0.000	0.34		1.6	OK	
12.001	SIC 222-1	0.000	0.10		1.6	SURCHARGED	
12.002	SMH 18	0.000	0.21		3.9	OK	
13.000	DIS TANK	0.000	0.47		1.8	SURCHARGED	
13.001	SIC 220-1	0.000	0.10		1.8	SURCHARGED	
12.003	JUNCTION	0.000	0.27		5.3	OK*	
14.000	DIST TANK	0.000	0.61		2.4	SURCHARGED	
14.001	SIC 219-1	0.000	0.09		2.3	SURCHARGED	
12.004	JUNCTION	0.000	0.38		7.5	OK*	
12.005	SMH 17	0.000	0.26		14.7	OK	
15.000	DIST TANK	0.000	0.14		0.6	SURCHARGED	
15.001	SIC 136-1	0.000	0.02		0.5	SURCHARGED	
12.006	JUNCTION	0.000	0.26		17.4	OK*	
16.000	DIST TANK	0.000	0.14		0.5	SURCHARGED	
16.001	SIC 138-1	0.000	0.02		0.5	SURCHARGED	
12.007	JUNCTION	0.000	0.65		42.7	OK*	
17.000	DIST TANK	0.000	0.14		0.5	SURCHARGED	
17.001	SIC 140-1	0.000	0.02		0.5	SURCHARGED	
12.008	JUNCTION	0.000	0.75		49.4	OK*	
18.000	DIST TANK	0.000	0.11		0.4	SURCHARGED	
18.001	SIC 141-1	0.000	0.01		0.4	SURCHARGED	
1.010	SMH 10	0.000	0.75		126.0	SURCHARGED	
1.011	SMH 9	0.000	0.52		136.2	SURCHARGED	
19.000	DIST TANK	0.000	0.13		0.5	SURCHARGED	
19.001	SIC 173-1	0.000	0.03		0.5	SURCHARGED	
19.002	SMH 32	0.000	0.48		7.5	OK	
20.000	DIST TANK	0.000	0.13		0.5	SURCHARGED	
20.001	SIC 172-1	0.000	0.03		0.5	SURCHARGED	
19.003	JUNCTION	0.000	0.75		13.3	OK*	
21.000	DIST TANK	0.000	0.14		0.6	SURCHARGED	
21.001	SIC 171-1	0.000	0.02		0.6	SURCHARGED	
19.004	SMH 31	0.000	0.82		13.0	OK	
22.000	DIST TANK	0.000	0.14		0.6	SURCHARGED	
22.001	SIC 170-1	0.000	0.02		0.5	SURCHARGED	
19.005	JUNCTION	0.000	0.77		13.9	SURCHARGED*	
23.000	DIST TANK	0.000	0.11		0.4	OK	
23.001	SIC 167-1	0.000	0.01		0.4	SURCHARGED	
19.006	JUNCTION	0.000	1.10		19.9	SURCHARGED*	
19.007	SMH 30	0.000	1.21		19.6	SURCHARGED	
24.000	DIST TANK	0.000	0.10		0.6	SURCHARGED	
24.001	SIC 174-1	0.000	0.08		0.6	SURCHARGED	
24.002	SMH 34	0.000	0.30		4.6	OK	
25.000	DIST TANK	0.000	0.10		0.6	SURCHARGED	
25.001	SIC 175-1	0.000	0.04		0.6	SURCHARGED	
24.003	JUNCTION	0.000	0.57		10.1	OK*	
24.004	SMH 33	0.000	0.37		10.0	OK	
19.008	SMH 29	0.000	0.68		31.2	SURCHARGED	
26.000	DIST TANK	0.000	0.15		0.6	SURCHARGED	
26.001	SIC 176-1	0.000	0.02		0.6	SURCHARGED	
19.009	JUNCTION	0.000	1.06		31.7	SURCHARGED*	
27.000	DIST TANK	0.000	0.13		0.5	SURCHARGED	
27.001	SIC 169-1	0.000	0.02		0.5	SURCHARGED	
19.010	SMH 28	0.000	0.89		33.0	SURCHARGED	
28.000	DIST TANK	0.000	0.15		0.6	SURCHARGED	
28.001	SIC 178-1	0.000	0.02		0.6	SURCHARGED	
19.011	JUNCTION	0.000	0.92		47.4	SURCHARGED*	
29.000	DIST TANK	0.000	0.12		0.5	SURCHARGED	
29.001	SIC 166-1	0.000	0.02		0.5	SURCHARGED	

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Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
30.000	DIST TANK	0.000	0.15		0.6	SURCHARGED	

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Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)
30.001	SIC 184-1	60 Winter	30	+0%	30/15 Summer				142.037	0.142
30.002	SMH 27	15 Winter	30	+0%					141.659	-0.116
31.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				142.172	0.052
31.001	SIC 182-1	120 Summer	30	+0%	30/15 Summer				142.161	0.061
30.003	SMH 26	15 Winter	30	+0%					141.489	-0.101
30.004	SMH 25	15 Winter	30	+0%					141.383	-0.102
32.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				141.842	0.087
32.001	SIC 181-1	60 Winter	30	+0%	30/15 Summer				141.844	0.109
30.005	JUNCTION	15 Winter	30	+0%					141.313	-0.088
33.000	HD CP1	15 Winter	30	+0%					140.904	-0.056
30.006	SMH 24	15 Winter	30	+0%					140.722	-0.138
34.000	DIST TANK	30 Winter	30	+0%	30/15 Summer				141.231	0.046
34.001	SIC 190-1	30 Winter	30	+0%	30/15 Summer				141.234	0.069
30.007	JUNCTION	15 Winter	30	+0%					139.950	-0.040
35.000	DIST TANK	30 Winter	30	+0%	30/15 Summer				141.316	0.046
35.001	SIC 180-1	30 Winter	30	+0%	30/15 Summer				141.319	0.069
30.008	JUNCTION	15 Winter	30	+0%					139.814	-0.137
36.000	DIST TANK	30 Winter	30	+0%	30/15 Summer				141.180	0.035
36.001	SIC 191-1	30 Winter	30	+0%	30/15 Summer				141.183	0.058
30.009	JUNCTION	15 Winter	30	+0%					139.459	-0.062
37.000	DIST TANK	30 Winter	30	+0%	30/15 Summer				141.257	0.037
37.001	SIC 179-1	60 Winter	30	+0%	30/15 Summer				141.270	0.070
30.010	JUNCTION	15 Winter	30	+0%					139.311	-0.116
19.012	SMH 23	15 Winter	30	+0%	30/15 Summer				138.420	0.030
38.000	DIST TANK	120 Winter	30	+0%					139.930	-0.010
38.001	SIC 165-1	120 Winter	30	+0%	30/30 Winter				139.943	0.023
19.013	JUNCTION	15 Winter	30	+0%					138.236	0.000
1.012	SMH 8	15 Winter	30	+0%	30/15 Summer				136.408	0.117
1.013	SMH 7	15 Winter	30	+0%	30/15 Summer				136.369	0.130
1.014	SMH 6	15 Winter	30	+0%	30/15 Summer				136.320	0.150
39.000	DIST TANK	120 Winter	30	+0%	30/15 Summer				137.895	0.085
39.001	SIC 146-1	120 Winter	30	+0%	30/15 Summer				137.906	0.116
1.015	JUNCTION	15 Winter	30	+0%					136.155	0.000
40.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				139.529	0.059
40.001	SIC 152_1	60 Winter	30	+0%	30/15 Summer				139.533	0.083
41.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				139.373	0.093
41.001	SIC 153-1	30 Winter	30	+0%	30/15 Summer				139.388	0.128
40.002	SMH 36	60 Winter	30	+0%					138.494	-0.131
42.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				139.018	0.093
42.001	SIC 154-1	30 Winter	30	+0%	30/15 Summer				139.033	0.128
40.003	JUNCTION	60 Winter	30	+0%					138.149	-0.128
43.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				138.528	0.093
43.001	SIC 155-1	30 Winter	30	+0%	30/15 Summer				138.543	0.128
40.004	JUNCTION	60 Winter	30	+0%					137.686	-0.123
40.005	SMH 35	15 Winter	30	+0%					137.484	-0.089
1.016	SMH 5	15 Winter	30	+0%	30/15 Summer				136.271	0.138
44.000	DIST TANK	120 Winter	30	+0%	30/15 Summer				137.556	0.066
44.001	SIC 148-1	120 Winter	30	+0%	30/15 Summer				137.560	0.090
1.017	JUNCTION	15 Winter	30	+0%					136.119	0.000
1.018	SMH 4	15 Winter	30	+0%	30/15 Summer				136.206	0.115
45.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				137.562	0.072
45.001	SIC 150-1	120 Winter	30	+0%	30/15 Summer				137.578	0.108
1.019	JUNCTION	15 Winter	30	+0%					136.082	0.000
1.020	SMH 3	15 Winter	30	+0%	30/15 Summer				136.144	0.088
46.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				137.382	0.072
46.001	SIC 111-1	120 Winter	30	+0%	30/15 Summer				137.398	0.108
1.021	JUNCTION	15 Winter	30	+0%					136.046	0.000
47.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				137.020	0.060
47.001	SIC 113-1	60 Winter	30	+0%	30/15 Summer				137.024	0.084
1.022	JUNCTION	15 Winter	30	+0%					136.009	0.000
48.000	SWMH 114-3	15 Winter	30	+0%					137.548	-0.077
48.001	SWMH 114-2	15 Summer	30	+0%					136.533	-0.132
49.000	DIST TANK	60 Winter	30	+0%	30/15 Summer				136.674	0.074
49.001	SIC 115-1	30 Winter	30	+0%	30/15 Summer				136.674	0.094

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Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
30.001	SIC 184-1	0.000	0.08		0.6	SURCHARGED	
30.002	SMH 27	0.000	0.11		2.1	OK	
31.000	DIST TANK	0.000	0.13		0.5	SURCHARGED	
31.001	SIC 182-1	0.000	0.03		0.5	SURCHARGED	
30.003	SMH 26	0.000	0.24		4.1	OK	
30.004	SMH 25	0.000	0.22		4.0	OK	
32.000	DIST TANK	0.000	0.15		0.6	SURCHARGED	
32.001	SIC 181-1	0.000	0.05		0.6	SURCHARGED	
30.005	JUNCTION	0.000	0.35		11.1	OK*	
33.000	HD CP1	0.000	0.72		11.4	OK	
30.006	SMH 24	0.000	0.32		29.6	OK	
34.000	DIST TANK	0.000	0.13		0.5	SURCHARGED	
34.001	SIC 190-1	0.000	0.02		0.5	SURCHARGED	
30.007	JUNCTION	0.000	0.99		29.7	OK*	
35.000	DIST TANK	0.000	0.13		0.5	SURCHARGED	
35.001	SIC 180-1	0.000	0.02		0.5	SURCHARGED	
30.008	JUNCTION	0.000	0.32		29.9	OK*	
36.000	DIST TANK	0.000	0.12		0.5	SURCHARGED	
36.001	SIC 191-1	0.000	0.02		0.5	SURCHARGED	
30.009	JUNCTION	0.000	0.85		36.9	OK*	
37.000	DIST TANK	0.000	0.13		0.5	SURCHARGED	
37.001	SIC 179-1	0.000	0.02		0.5	SURCHARGED	
30.010	JUNCTION	0.000	0.45		46.1	OK*	
19.012	SMH 23	0.000	1.00		93.2	SURCHARGED	
38.000	DIST TANK	0.000	0.11		0.4	OK	
38.001	SIC 165-1	0.000	0.01		0.4	SURCHARGED	
19.013	JUNCTION	0.000	1.07		118.4	SURCHARGED*	
1.012	SMH 8	0.000	0.98		245.9	SURCHARGED	
1.013	SMH 7	0.000	0.96		252.5	SURCHARGED	
1.014	SMH 6	0.000	1.29		247.7	SURCHARGED	
39.000	DIST TANK	0.000	0.14		0.6	SURCHARGED	
39.001	SIC 146-1	0.000	0.02		0.6	SURCHARGED	
1.015	JUNCTION	0.000	0.94		249.8	SURCHARGED*	
40.000	DIST TANK	0.000	0.13		0.5	SURCHARGED	
40.001	SIC 152_1	0.000	0.03		0.5	SURCHARGED	
41.000	DIST TANK	0.000	0.15		0.6	SURCHARGED	
41.001	SIC 153-1	0.000	0.03		0.6	SURCHARGED	
40.002	SMH 36	0.000	0.04		1.1	OK	
42.000	DIST TANK	0.000	0.15		0.6	SURCHARGED	
42.001	SIC 154-1	0.000	0.03		0.6	SURCHARGED	
40.003	JUNCTION	0.000	0.05		1.7	OK*	
43.000	DIST TANK	0.000	0.15		0.6	SURCHARGED	
43.001	SIC 155-1	0.000	0.03		0.6	SURCHARGED	
40.004	JUNCTION	0.000	0.07		2.3	OK*	
40.005	SMH 35	0.000	0.34		15.3	OK	
1.016	SMH 5	0.000	1.26		258.4	SURCHARGED	
44.000	DIST TANK	0.000	0.14		0.5	SURCHARGED	
44.001	SIC 148-1	0.000	0.02		0.5	SURCHARGED	
1.017	JUNCTION	0.000	1.02		265.9	SURCHARGED*	
1.018	SMH 4	0.000	1.21		268.4	SURCHARGED	
45.000	DIST TANK	0.000	0.14		0.5	SURCHARGED	
45.001	SIC 150-1	0.000	0.02		0.5	SURCHARGED	
1.019	JUNCTION	0.000	1.05		268.7	SURCHARGED*	
1.020	SMH 3	0.000	1.24		269.6	SURCHARGED	
46.000	DIST TANK	0.000	0.14		0.5	SURCHARGED	
46.001	SIC 111-1	0.000	0.02		0.5	SURCHARGED	
1.021	JUNCTION	0.000	0.97		267.5	SURCHARGED*	
47.000	DIST TANK	0.000	0.13		0.5	SURCHARGED	
47.001	SIC 113-1	0.000	0.03		0.5	SURCHARGED	
1.022	JUNCTION	0.000	0.94		270.3	SURCHARGED*	
48.000	SWMH 114-3	0.000	0.48		13.0	OK	
48.001	SWMH 114-2	0.000	0.36		25.7	OK	
49.000	DIST TANK	0.000	0.14		0.6	SURCHARGED	

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Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
49.001	SIC 115-1	0.000	0.03		0.5	SURCHARGED	

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Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
48.002	SWMH 114-1	15 Summer	30	+0%					136.029
1.023	SMH 2	15 Winter	30	+0%	30/15 Summer				135.999
50.000	DIST TANK	15 Winter	30	+0%	30/15 Summer				136.484
50.001	SIC 116-1	15 Winter	30	+0%					136.393
1.024	JUNCTION	15 Winter	30	+0%					135.951
1.025	SMH 1	30 Winter	30	+0%					135.909
1.026	POND	2880 Winter	30	+0%	30/180 Winter				135.787
1.027	FC	180 Winter	30	+0%					135.224

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
48.002	SWMH 114-1	-0.121	0.000	0.43		26.0	OK	
1.023	SMH 2	0.030	0.000	1.63		282.2	SURCHARGED	
50.000	DIST TANK	0.014	0.000	1.39		5.5	SURCHARGED	
50.001	SIC 116-1	-0.057	0.000	0.39		5.5	OK	
1.024	JUNCTION	0.000	0.000	0.95		278.6	SURCHARGED*	
1.025	SMH 1	0.000	0.000	1.14		216.4	OK	
1.026	POND	0.209	0.000	0.05		3.5	SURCHARGED	
1.027	FC	-0.126	0.000	0.06		3.5	OK	

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