

Causeway Flow Calculations

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	0.75
Return Period (years)	30	Connection Type	Level Soffits
Additional Flow (%)	40	Minimum Backdrop Height (m)	5.000
CV	0.750	Preferred Cover Depth (m)	0.500
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
1	0.020	5.00	147.000	450	302711.122	516816.690	1.000
2	0.023	5.00	146.135	450	302718.986	516833.113	0.863
3			144.537	450	302742.391	516840.716	0.682
4	0.033	5.00	144.350	450	302744.422	516835.044	0.696
5	0.012	5.00	143.050	450	302765.162	516840.455	0.657
6			142.874	450	302776.415	516844.531	0.681
15	0.035	5.00	146.965	1200	302702.002	516816.821	1.300
16	0.023	5.00	146.723	1200	302697.839	516829.347	1.350
17	0.028	5.00	146.038	1200	302715.422	516841.746	1.350
18			142.580	1200	302764.113	516858.208	1.350
19			141.888	1200	302780.221	516870.920	1.350
20			141.538	1200	302778.107	516878.375	1.350
7	0.022	5.00	141.577	450	302765.920	516875.517	0.877
21	0.089	5.00	143.560	450	302668.202	516897.353	0.725
22	0.068	5.00	143.287	450	302714.229	516887.001	0.725
23			141.610	450	302758.067	516879.677	0.725
8			141.390	1200	302762.807	516881.421	1.116
24	0.020	5.00	146.412	450	302682.051	516835.565	1.300
25	0.044	5.00	146.018	450	302662.422	516830.810	1.350
26			144.572	450	302629.113	516803.173	1.350
27			145.047	1200	302624.191	516809.147	1.864
28			144.647	450	302614.257	516804.163	1.001
38	0.041	5.00	147.000	450	302694.276	516816.455	0.700
39	0.022	5.00	146.391	450	302670.174	516827.838	0.700
40	0.026	5.00	145.761	450	302643.839	516805.190	0.700
41	0.031	5.00	145.030	450	302619.998	516794.102	0.700
29	0.037	5.00	143.925	450	302598.614	516795.797	1.050
30			142.525	450	302573.732	516786.689	1.125
31			142.127	450	302570.406	516797.993	1.133
32	0.044	5.00	142.068	1200	302573.737	516814.798	1.784
33	0.021	5.00	142.100	1200	302580.173	516831.846	1.907
34			142.538	1200	302596.868	516848.309	2.462
42	0.023	5.00	145.820	450	302664.012	516853.709	0.600
43	0.026	5.00	145.787	450	302655.938	516836.851	0.749
44	0.088	5.00	143.807	450	302626.462	516850.883	0.650
45			143.045	450	302623.109	516866.433	0.650
35			142.618	1200	302611.538	516864.692	2.652
36			141.344	1200	302605.982	516884.602	1.809
37			141.345	1200	302675.011	516918.194	2.193
9			139.094	1200	302744.417	516932.463	1.807
10			138.342	1200	302740.393	516966.535	1.801
11			135.319	1200	302669.446	517000.030	0.997

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
12			132.585	450	302605.418	517011.858	0.997
13			130.610	450	302545.156	517057.825	1.001
14			130.384		302552.508	517071.039	0.851

Links (Input)

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	1	2	18.208	0.600	146.000	145.272	0.728	25.0	100	5.20	50.0
1.001	2	3	24.609	0.600	145.272	143.905	1.367	18.0	100	5.42	50.0
1.002	3	4	6.024	0.600	143.855	143.654	0.201	30.0	150	5.47	50.0
1.003	4	5	21.434	0.600	143.654	142.393	1.261	17.0	150	5.62	50.0
1.004	5	6	11.969	0.600	142.393	142.193	0.200	59.8	150	5.77	50.0
1.005	6	7	32.715	0.600	142.193	140.766	1.427	22.9	150	6.03	50.0
2.000	15	16	13.199	0.600	145.665	145.423	0.242	54.5	100	5.21	50.0
2.001	16	17	21.515	0.600	145.373	144.688	0.685	31.4	150	5.41	50.0
2.002	17	18	51.398	0.600	144.688	141.230	3.458	14.9	150	5.74	50.0
2.003	18	19	20.520	0.600	141.230	140.538	0.692	29.7	150	5.92	50.0
2.004	19	20	7.749	0.600	140.538	140.188	0.350	22.1	150	5.98	50.0
2.005	20	7	12.517	0.600	140.813	140.750	0.063	198.7	100	6.37	50.0
1.006	7	8	6.675	0.600	140.700	140.349	0.351	19.0	150	6.41	50.0
3.000	21	22	47.177	0.600	142.835	142.562	0.273	172.8	225	5.79	50.0
3.001	22	23	44.446	0.600	142.562	140.885	1.677	26.5	225	6.08	50.0
3.002	23	8	5.051	0.600	140.885	140.683	0.202	25.0	225	6.12	50.0
1.007	8	9	54.254	0.600	140.274	137.363	2.911	18.6	225	6.71	50.0
4.000	24	25	20.197	0.600	145.112	144.718	0.394	51.3	100	5.31	50.0
4.001	25	26	43.282	0.600	144.668	143.222	1.446	29.9	150	5.70	50.0
4.002	26	27	7.741	0.600	143.222	143.183	0.039	198.5	150	5.88	50.0
4.003	27	28	11.114	0.600	143.878	143.646	0.232	47.9	100	6.05	50.0
4.004	28	29	17.740	0.600	143.646	142.925	0.721	24.6	100	6.24	50.0
5.000	38	39	26.655	0.600	146.300	145.691	0.609	43.8	150	5.29	50.0
5.001	39	40	34.734	0.600	145.691	145.061	0.630	55.1	150	5.72	50.0
5.002	40	41	26.293	0.600	145.061	144.330	0.731	36.0	225	5.92	50.0
5.003	41	29	21.452	0.600	144.330	142.875	1.455	14.7	225	6.02	50.0
4.005	29	30	26.497	0.600	142.875	141.475	1.400	18.9	225	6.39	50.0
4.006	30	31	11.783	0.600	141.400	140.994	0.406	29.0	225	6.47	50.0
4.007	31	32	17.133	0.600	140.994	140.359	0.635	27.0	225	6.58	50.0
4.008	32	33	18.222	0.600	140.284	140.193	0.091	200.2	300	6.85	50.0
4.009	33	34	23.447	0.600	140.193	140.076	0.117	200.4	300	7.21	50.0
4.010	34	35	21.992	0.600	140.076	139.966	0.110	199.9	300	7.54	50.0
6.000	42	43	18.691	0.600	145.220	145.038	0.182	102.7	150	5.31	50.0
6.001	43	44	32.646	0.600	145.039	143.207	1.832	17.8	150	5.54	50.0
6.002	44	45	15.907	0.600	143.157	142.395	0.762	20.9	225	5.63	50.0
6.003	45	35	11.700	0.600	142.395	141.664	0.731	16.0	225	5.69	50.0
4.011	35	36	20.670	0.600	139.966	139.535	0.431	48.0	300	7.69	50.0
4.012	36	37	76.769	0.600	139.536	139.152	0.384	199.9	300	8.84	50.0
4.013	37	9	70.858	0.600	139.152	137.287	1.865	38.0	300	9.31	50.0
1.008	9	10	34.309	0.600	137.287	136.541	0.746	46.0	300	9.55	50.0
1.009	10	11	78.456	0.600	137.144	134.322	2.822	27.8	100	10.44	50.0
1.010	11	12	65.111	0.600	134.322	131.588	2.734	23.8	100	11.12	50.0
1.011	12	13	75.792	0.600	131.588	129.609	1.979	38.3	100	12.14	50.0
1.012	13	14	15.121	0.600	129.609	129.533	0.076	199.0	100	12.60	50.0

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	18.208	25.0	100	1 SW COMBINED02	147.000	146.000	0.900	146.135	145.272	0.763
1.001	24.609	18.0	100	1 SW COMBINED02	146.135	145.272	0.763	144.537	143.905	0.532
1.002	6.024	30.0	150	1 SW COMBINED02	144.537	143.855	0.532	144.350	143.654	0.546
1.003	21.434	17.0	150	1 SW COMBINED02	144.350	143.654	0.546	143.050	142.393	0.507
1.004	11.969	59.8	150	1 SW COMBINED02	143.050	142.393	0.507	142.874	142.193	0.531
1.005	32.715	22.9	150	1 SW COMBINED02	142.874	142.193	0.531	141.577	140.766	0.661
2.000	13.199	54.5	100	1 SW COMBINED02	146.965	145.665	1.200	146.723	145.423	1.200
2.001	21.515	31.4	150	1 SW COMBINED02	146.723	145.373	1.200	146.038	144.688	1.200
2.002	51.398	14.9	150	1 SW COMBINED02	146.038	144.688	1.200	142.580	141.230	1.200
2.003	20.520	29.7	150	1 SW COMBINED02	142.580	141.230	1.200	141.888	140.538	1.200
2.004	7.749	22.1	150	1 SW COMBINED02	141.888	140.538	1.200	141.538	140.188	1.200
2.005	12.517	198.7	100	1 SW COMBINED02	141.538	140.813	0.625	141.577	140.750	0.727
1.006	6.675	19.0	150	1 SW COMBINED02	141.577	140.700	0.727	141.390	140.349	0.891
3.000	47.177	172.8	225	1 SW COMBINED02	143.560	142.835	0.500	143.287	142.562	0.500
3.001	44.446	26.5	225	1 SW COMBINED02	143.287	142.562	0.500	141.610	140.885	0.500
3.002	5.051	25.0	225	1 SW COMBINED02	141.610	140.885	0.500	141.390	140.683	0.482
1.007	54.254	18.6	225	1 SW COMBINED02	141.390	140.274	0.891	139.094	137.363	1.506
4.000	20.197	51.3	100	1 SW COMBINED02	146.412	145.112	1.200	146.018	144.718	1.200
4.001	43.282	29.9	150	1 SW COMBINED02	146.018	144.668	1.200	144.572	143.222	1.200
4.002	7.741	198.5	150	1 SW COMBINED02	144.572	143.222	1.200	145.047	143.183	1.714
4.003	11.114	47.9	100	1 SW COMBINED02	145.047	143.878	1.069	144.647	143.646	0.901
4.004	17.740	24.6	100	1 SW COMBINED02	144.647	143.646	0.901	143.925	142.925	0.900
5.000	26.655	43.8	150	1 SW COMBINED02	147.000	146.300	0.550	146.391	145.691	0.550
5.001	34.734	55.1	150	1 SW COMBINED02	146.391	145.691	0.550	145.761	145.061	0.550
5.002	26.293	36.0	225	1 SW COMBINED02	145.761	145.061	0.475	145.030	144.330	0.475

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	1	450	Manhole	1 SW COMBINED02	2	450	Manhole	1 SW COMBINED02
1.001	2	450	Manhole	1 SW COMBINED02	3	450	Manhole	1 SW COMBINED02
1.002	3	450	Manhole	1 SW COMBINED02	4	450	Manhole	1 SW COMBINED02
1.003	4	450	Manhole	1 SW COMBINED02	5	450	Manhole	1 SW COMBINED02
1.004	5	450	Manhole	1 SW COMBINED02	6	450	Manhole	1 SW COMBINED02
1.005	6	450	Manhole	1 SW COMBINED02	7	450	Manhole	1 SW COMBINED02
2.000	15	1200	Manhole	1 SW COMBINED02	16	1200	Manhole	1 SW COMBINED02
2.001	16	1200	Manhole	1 SW COMBINED02	17	1200	Manhole	1 SW COMBINED02
2.002	17	1200	Manhole	1 SW COMBINED02	18	1200	Manhole	1 SW COMBINED02
2.003	18	1200	Manhole	1 SW COMBINED02	19	1200	Manhole	1 SW COMBINED02
2.004	19	1200	Manhole	1 SW COMBINED02	20	1200	Manhole	1 SW COMBINED02
2.005	20	1200	Manhole	1 SW COMBINED02	7	450	Manhole	1 SW COMBINED02
1.006	7	450	Manhole	1 SW COMBINED02	8	1200	Manhole	1 SW COMBINED02
3.000	21	450	Manhole	1 SW COMBINED02	22	450	Manhole	1 SW COMBINED02
3.001	22	450	Manhole	1 SW COMBINED02	23	450	Manhole	1 SW COMBINED02
3.002	23	450	Manhole	1 SW COMBINED02	8	1200	Manhole	1 SW COMBINED02
1.007	8	1200	Manhole	1 SW COMBINED02	9	1200	Manhole	1 SW COMBINED02
4.000	24	450	Manhole	1 SW COMBINED02	25	450	Manhole	1 SW COMBINED02
4.001	25	450	Manhole	1 SW COMBINED02	26	450	Manhole	1 SW COMBINED02
4.002	26	450	Manhole	1 SW COMBINED02	27	1200	Manhole	1 SW COMBINED02
4.003	27	1200	Manhole	1 SW COMBINED02	28	450	Manhole	1 SW COMBINED02
4.004	28	450	Manhole	1 SW COMBINED02	29	450	Manhole	1 SW COMBINED02
5.000	38	450	Manhole	1 SW COMBINED02	39	450	Manhole	1 SW COMBINED02
5.001	39	450	Manhole	1 SW COMBINED02	40	450	Manhole	1 SW COMBINED02
5.002	40	450	Manhole	1 SW COMBINED02	41	450	Manhole	1 SW COMBINED02

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
5.003	21.452	14.7	225	1 SW COMBINED02	145.030	144.330	0.475	143.925	142.875	0.825
4.005	26.497	18.9	225	1 SW COMBINED02	143.925	142.875	0.825	142.525	141.475	0.825
4.006	11.783	29.0	225	1 SW COMBINED02	142.525	141.400	0.900	142.127	140.994	0.908
4.007	17.133	27.0	225	1 SW COMBINED02	142.127	140.994	0.908	142.068	140.359	1.484
4.008	18.222	200.2	300	1 SW COMBINED02	142.068	140.284	1.484	142.100	140.193	1.607
4.009	23.447	200.4	300	1 SW COMBINED02	142.100	140.193	1.607	142.538	140.076	2.162
4.010	21.992	199.9	300	1 SW COMBINED02	142.538	140.076	2.162	142.618	139.966	2.352
6.000	18.691	102.7	150	1 SW COMBINED02	145.820	145.220	0.450	145.787	145.038	0.599
6.001	32.646	17.8	150	1 SW COMBINED02	145.787	145.039	0.598	143.807	143.207	0.450
6.002	15.907	20.9	225	1 SW COMBINED02	143.807	143.157	0.425	143.045	142.395	0.425
6.003	11.700	16.0	225	1 SW COMBINED02	143.045	142.395	0.425	142.618	141.664	0.729
4.011	20.670	48.0	300	1 SW COMBINED02	142.618	139.966	2.352	141.344	139.535	1.509
4.012	76.769	199.9	300	1 SW COMBINED02	141.344	139.536	1.508	141.345	139.152	1.893
4.013	70.858	38.0	300	1 SW COMBINED02	141.345	139.152	1.893	139.094	137.287	1.507
1.008	34.309	46.0	300	1 SW COMBINED02	139.094	137.287	1.507	138.342	136.541	1.501
1.009	78.456	27.8	100	1 SW COMBINED02	138.342	137.144	1.098	135.319	134.322	0.897
1.010	65.111	23.8	100	1 SW COMBINED02	135.319	134.322	0.897	132.585	131.588	0.897
1.011	75.792	38.3	100	1 SW COMBINED02	132.585	131.588	0.897	130.610	129.609	0.901
1.012	15.121	199.0	100	1 SW COMBINED02	130.610	129.609	0.901	130.384	129.533	0.751

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
5.003	41	450	Manhole	1 SW COMBINED02	29	450	Manhole	1 SW COMBINED02
4.005	29	450	Manhole	1 SW COMBINED02	30	450	Manhole	1 SW COMBINED02
4.006	30	450	Manhole	1 SW COMBINED02	31	450	Manhole	1 SW COMBINED02
4.007	31	450	Manhole	1 SW COMBINED02	32	1200	Manhole	1 SW COMBINED02
4.008	32	1200	Manhole	1 SW COMBINED02	33	1200	Manhole	1 SW COMBINED02
4.009	33	1200	Manhole	1 SW COMBINED02	34	1200	Manhole	1 SW COMBINED02
4.010	34	1200	Manhole	1 SW COMBINED02	35	1200	Manhole	1 SW COMBINED02
6.000	42	450	Manhole	1 SW COMBINED02	43	450	Manhole	1 SW COMBINED02
6.001	43	450	Manhole	1 SW COMBINED02	44	450	Manhole	1 SW COMBINED02
6.002	44	450	Manhole	1 SW COMBINED02	45	450	Manhole	1 SW COMBINED02
6.003	45	450	Manhole	1 SW COMBINED02	35	1200	Manhole	1 SW COMBINED02
4.011	35	1200	Manhole	1 SW COMBINED02	36	1200	Manhole	1 SW COMBINED02
4.012	36	1200	Manhole	1 SW COMBINED02	37	1200	Manhole	1 SW COMBINED02
4.013	37	1200	Manhole	1 SW COMBINED02	9	1200	Manhole	1 SW COMBINED02
1.008	9	1200	Manhole	1 SW COMBINED02	10	1200	Manhole	1 SW COMBINED02
1.009	10	1200	Manhole	1 SW COMBINED02	11	1200	Manhole	1 SW COMBINED02
1.010	11	1200	Manhole	1 SW COMBINED02	12	450	Manhole	1 SW COMBINED02
1.011	12	450	Manhole	1 SW COMBINED02	13	450	Manhole	1 SW COMBINED02
1.012	13	450	Manhole	1 SW COMBINED02	14		Manhole	1 SW COMBINED02

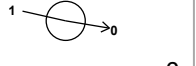
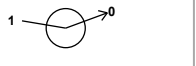
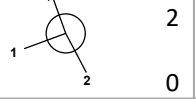
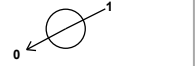
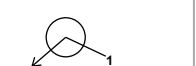
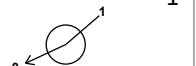
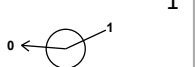
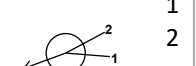
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
1	302711.122	516816.690	147.000	1.000	450				
						0	1.000	146.000	100

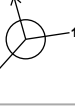
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
2	302718.986	516833.113	146.135	0.863	450		1	1.000	145.272	100
							0	1.001	145.272	100
3	302742.391	516840.716	144.537	0.682	450		1	1.001	143.905	100
							0	1.002	143.855	150
4	302744.422	516835.044	144.350	0.696	450		1	1.002	143.654	150
							0	1.003	143.654	150
5	302765.162	516840.455	143.050	0.657	450		1	1.003	142.393	150
							0	1.004	142.393	150
6	302776.415	516844.531	142.874	0.681	450		1	1.004	142.193	150
							0	1.005	142.193	150
15	302702.002	516816.821	146.965	1.300	1200					
							0	2.000	145.665	100
16	302697.839	516829.347	146.723	1.350	1200		1	2.000	145.423	100
							0	2.001	145.373	150
17	302715.422	516841.746	146.038	1.350	1200		1	2.001	144.688	150
							0	2.002	144.688	150
18	302764.113	516858.208	142.580	1.350	1200		1	2.002	141.230	150
							0	2.003	141.230	150
19	302780.221	516870.920	141.888	1.350	1200		1	2.003	140.538	150
							0	2.004	140.538	150
20	302778.107	516878.375	141.538	1.350	1200		1	2.004	140.188	150
							0	2.005	140.813	100
7	302765.920	516875.517	141.577	0.877	450		1	2.005	140.750	100
							2	1.005	140.766	150
							0	1.006	140.700	150
21	302668.202	516897.353	143.560	0.725	450					
							0	3.000	142.835	225

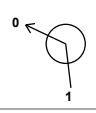
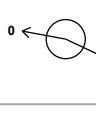
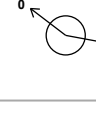
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
22	302714.229	516887.001	143.287	0.725	450		1	3.000	142.562	225
							0	3.001	142.562	225
23	302758.067	516879.677	141.610	0.725	450		1	3.001	140.885	225
							0	3.002	140.885	225
8	302762.807	516881.421	141.390	1.116	1200		1	3.002	140.683	225
							2	1.006	140.349	150
							0	1.007	140.274	225
24	302682.051	516835.565	146.412	1.300	450					
							0	4.000	145.112	100
25	302662.422	516830.810	146.018	1.350	450		1	4.000	144.718	100
							0	4.001	144.668	150
26	302629.113	516803.173	144.572	1.350	450		1	4.001	143.222	150
							0	4.002	143.222	150
27	302624.191	516809.147	145.047	1.864	1200		1	4.002	143.183	150
							0	4.003	143.878	100
28	302614.257	516804.163	144.647	1.001	450		1	4.003	143.646	100
							0	4.004	143.646	100
38	302694.276	516816.455	147.000	0.700	450					
							0	5.000	146.300	150
39	302670.174	516827.838	146.391	0.700	450		1	5.000	145.691	150
							0	5.001	145.691	150
40	302643.839	516805.190	145.761	0.700	450		1	5.001	145.061	150
							0	5.002	145.061	225
41	302619.998	516794.102	145.030	0.700	450		1	5.002	144.330	225
							0	5.003	144.330	225
29	302598.614	516795.797	143.925	1.050	450		1	5.003	142.875	225
							2	4.004	142.925	100
							0	4.005	142.875	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
30	302573.732	516786.689	142.525	1.125	450	 1	4.005	141.475	225
						0	4.006	141.400	225
31	302570.406	516797.993	142.127	1.133	450	 1	4.006	140.994	225
						0	4.007	140.994	225
32	302573.737	516814.798	142.068	1.784	1200	 1	4.007	140.359	225
						0	4.008	140.284	300
33	302580.173	516831.846	142.100	1.907	1200	 1	4.008	140.193	300
						0	4.009	140.193	300
34	302596.868	516848.309	142.538	2.462	1200	 1	4.009	140.076	300
						0	4.010	140.076	300
42	302664.012	516853.709	145.820	0.600	450	 0	6.000	145.220	150
43	302655.938	516836.851	145.787	0.749	450	 1	6.000	145.038	150
						0	6.001	145.039	150
44	302626.462	516850.883	143.807	0.650	450	 1	6.001	143.207	150
						0	6.002	143.157	225
45	302623.109	516866.433	143.045	0.650	450	 1	6.002	142.395	225
						0	6.003	142.395	225
35	302611.538	516864.692	142.618	2.652	1200	 1	6.003	141.664	225
						2	4.010	139.966	300
						0	4.011	139.966	300
36	302605.982	516884.602	141.344	1.809	1200	 1	4.011	139.535	300
						0	4.012	139.536	300
37	302675.011	516918.194	141.345	2.193	1200	 1	4.012	139.152	300
						0	4.013	139.152	300
9	302744.417	516932.463	139.094	1.807	1200	 1	4.013	137.287	300
						2	1.007	137.363	225
						0	1.008	137.287	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
10	302740.393	516966.535	138.342	1.801	1200		1	1.008	136.541	300
11	302669.446	517000.030	135.319	0.997	1200		0	1.009	137.144	100
							1	1.009	134.322	100
12	302605.418	517011.858	132.585	0.997	450		0	1.010	134.322	100
							1	1.010	131.588	100
13	302545.156	517057.825	130.610	1.001	450		0	1.011	131.588	100
							1	1.011	129.609	100
14	302552.508	517071.039	130.384	0.851			0	1.012	129.609	100
							1	1.012	129.533	100

Simulation Settings

Rainfall Methodology	FEH-22	Skip Steady State	x	Check Discharge Rate(s)	x
Summer CV	0.750	Drain Down Time (mins)	240	Check Discharge Volume	x
Analysis Speed	Normal	Additional Storage (m³/ha)	20.0		

Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0
30	40	0	0
100	40	0	0
100	50	0	0

Node 10 Online Orifice Control

Flap Valve	x	Design Depth (m)	1.200	Discharge Coefficient	0.600
Replaces Downstream Link	✓	Design Flow (l/s)	7.9		
Invert Level (m)	137.144	Diameter (m)	0.059		

Node 36 Online Orifice Control

Flap Valve	x	Invert Level (m)	139.536	Discharge Coefficient	0.600
Replaces Downstream Link	✓	Diameter (m)	0.100		

Node 19 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.37580	Safety Factor	2.0	Invert Level (m)	139.480
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Time to half empty (mins)	30

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	66.0	66.0	1.800	66.0	72.8	1.801	0.0	72.8

Node 10 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.25760	Safety Factor	2.0	Invert Level (m)	136.541
Side Inf Coefficient (m/hr)	0.25760	Porosity	0.30	Time to half empty (mins)	100

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	260.0	260.0	1.400	260.0	360.8	1.401	0.0	360.8

Node 27 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.72120	Safety Factor	2.0	Invert Level (m)	143.183
Side Inf Coefficient (m/hr)	0.72120	Porosity	0.30	Time to half empty (mins)	20

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	45.0	45.0	1.000	45.0	73.0	1.001	0.0	73.0

Node 31 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.14870	Safety Factor	2.0	Invert Level (m)	140.994
Side Inf Coefficient (m/hr)	0.14870	Porosity	0.30	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	20.6	20.6	1.000	20.6	57.2	1.001	0.0	57.2

Node 32 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.14870	Safety Factor	2.0	Invert Level (m)	140.284
Side Inf Coefficient (m/hr)	0.14870	Porosity	0.30	Time to half empty (mins)	13

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	21.9	21.9	1.000	21.9	60.7	1.001	0.0	60.7

Node 33 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.14870	Safety Factor	2.0	Invert Level (m)	140.193
Side Inf Coefficient (m/hr)	0.14870	Porosity	0.30	Time to half empty (mins)	16

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	28.1	28.1	1.000	28.1	77.4	1.001	0.0	77.4

Node 34 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.25760	Safety Factor	2.0	Invert Level (m)	140.076
Side Inf Coefficient (m/hr)	0.25760	Porosity	0.30	Time to half empty (mins)	22

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	26.4	26.4	1.000	26.4	72.8	1.001	0.0	72.8

Node 35 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.25760	Safety Factor	2.0	Invert Level (m)	139.966
Side Inf Coefficient (m/hr)	0.25760	Porosity	0.30	Time to half empty (mins)	27

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	24.8	24.8	1.000	24.8	68.5	1.001	0.0	68.5

Node 36 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.25760	Safety Factor	2.0	Invert Level (m)	139.535
Side Inf Coefficient (m/hr)	0.25760	Porosity	0.30	Time to half empty (mins)	48

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	92.1	92.1	1.000	92.1	248.1	1.001	0.0	248.1

Node 37 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.25760	Safety Factor	2.0	Invert Level (m)	139.152
Side Inf Coefficient (m/hr)	0.25760	Porosity	0.30	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	85.0	85.0	1.000	85.0	229.1	1.001	0.0	229.1

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.37%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	146.031	0.031	2.6	0.0175	0.0000	OK
15 minute summer	2	10	145.315	0.043	5.5	0.0299	0.0000	OK
15 minute summer	3	11	143.898	0.043	5.4	0.0068	0.0000	OK
15 minute summer	4	10	143.702	0.048	9.5	0.0527	0.0000	OK
15 minute summer	5	11	142.473	0.080	10.9	0.0418	0.0000	OK
15 minute summer	6	11	142.250	0.057	11.0	0.0091	0.0000	OK
15 minute summer	15	10	145.720	0.054	4.5	0.0909	0.0000	OK
15 minute summer	16	10	145.423	0.050	7.3	0.0735	0.0000	OK
15 minute summer	17	11	144.737	0.049	10.9	0.0759	0.0000	OK
15 minute summer	18	11	141.291	0.061	10.7	0.0691	0.0000	OK
30 minute summer	19	24	139.629	-0.909	10.2	2.9410	0.0000	OK
15 minute summer	20	1	140.188	0.000	0.0	0.0000	0.0000	OK
15 minute summer	7	11	140.766	0.066	13.7	0.0435	0.0000	OK
15 minute summer	21	10	142.920	0.085	11.4	0.2217	0.0000	OK
15 minute summer	22	11	142.629	0.067	19.8	0.1358	0.0000	OK
15 minute summer	23	11	140.960	0.075	19.6	0.0120	0.0000	OK
15 minute summer	8	11	140.356	0.082	33.3	0.0925	0.0000	OK
15 minute summer	24	10	145.150	0.038	2.6	0.0178	0.0000	OK
15 minute summer	25	10	144.719	0.051	8.1	0.0411	0.0000	OK
15 minute summer	26	11	143.309	0.087	8.0	0.0138	0.0000	OK
30 minute summer	27	22	143.267	0.084	7.5	1.2245	0.0000	OK
15 minute summer	28	1	143.646	0.000	0.0	0.0000	0.0000	OK
15 minute summer	38	10	146.345	0.044	5.2	0.0591	0.0000	OK
Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.000	2	2.6	0.964	0.210	0.0485	
15 minute summer	2	1.001	3	5.4	1.672	0.373	0.0787	
15 minute summer	3	1.002	4	5.4	1.198	0.164	0.0269	
15 minute summer	4	1.003	5	9.4	1.334	0.217	0.1532	
15 minute summer	5	1.004	6	11.0	1.407	0.477	0.0936	
15 minute summer	6	1.005	7	11.0	1.819	0.294	0.1977	
15 minute summer	15	2.000	16	4.4	1.039	0.537	0.0561	
15 minute summer	16	2.001	17	7.3	1.434	0.228	0.1088	
15 minute summer	17	2.002	18	10.7	1.861	0.231	0.3016	
15 minute summer	18	2.003	19	10.7	1.631	0.328	0.1352	
30 minute summer	19	2.004	20	0.0	0.000	0.000	0.0000	
30 minute summer	19	Infiltration		3.4				
15 minute summer	20	2.005	7	0.0	0.000	0.000	0.0049	
15 minute summer	7	1.006	8	13.7	1.962	0.334	0.0466	
15 minute summer	21	3.000	22	11.1	0.952	0.282	0.5528	
15 minute summer	22	3.001	23	19.6	1.837	0.193	0.4775	
15 minute summer	23	3.002	8	19.7	1.847	0.188	0.0538	
15 minute summer	8	1.007	9	33.2	2.584	0.274	0.6967	
15 minute summer	24	4.000	25	2.5	0.929	0.296	0.0546	
15 minute summer	25	4.001	26	8.0	1.037	0.245	0.3402	
15 minute summer	26	4.002	27	7.9	1.109	0.633	0.0717	
30 minute summer	27	4.003	28	0.0	0.000	0.000	0.0000	
30 minute summer	27	Infiltration		4.6				
15 minute summer	28	4.004	29	0.0	0.000	0.000	0.0052	
15 minute summer	38	5.000	39	5.2	0.938	0.191	0.1470	

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.37%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	39	10	145.752	0.061	8.0	0.0478	0.0000	OK
15 minute summer	40	11	145.117	0.056	11.1	0.0506	0.0000	OK
15 minute summer	41	11	144.380	0.050	14.9	0.0524	0.0000	OK
15 minute summer	29	11	142.938	0.063	19.5	0.0543	0.0000	OK
15 minute summer	30	11	141.473	0.073	19.5	0.0116	0.0000	OK
15 minute summer	31	11	141.063	0.069	19.6	0.4385	0.0000	OK
15 minute summer	32	11	140.403	0.118	24.4	0.9709	0.0000	OK
15 minute summer	33	12	140.313	0.120	25.7	1.1745	0.0000	OK
15 minute summer	34	13	140.191	0.115	24.6	1.0378	0.0000	OK
15 minute summer	42	10	145.262	0.042	2.9	0.0390	0.0000	OK
15 minute summer	43	10	145.078	0.040	6.2	0.0341	0.0000	OK
15 minute summer	44	10	143.219	0.062	17.3	0.1765	0.0000	OK
15 minute summer	45	10	142.453	0.058	17.2	0.0092	0.0000	OK
15 minute summer	35	12	140.062	0.096	36.4	0.8220	0.0000	OK
30 minute summer	36	25	139.840	0.305	34.5	8.7614	0.0000	SURCHARGED
60 minute summer	37	42	139.194	0.042	10.5	1.1237	0.0000	OK
15 minute summer	9	11	137.392	0.105	33.4	0.1188	0.0000	OK
120 minute summer	10	86	136.754	0.213	24.1	16.8767	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	39	5.001	40	7.8	1.238	0.327	0.2201	
15 minute summer	40	5.002	41	11.1	1.554	0.128	0.1880	
15 minute summer	41	5.003	29	15.0	1.919	0.110	0.1676	
15 minute summer	29	4.005	30	19.5	2.201	0.163	0.2352	
15 minute summer	30	4.006	31	19.6	1.829	0.202	0.1264	
15 minute summer	31	4.007	32	19.0	1.898	0.189	0.1716	
15 minute summer	31	Infiltration		0.4				
15 minute summer	32	4.008	33	23.1	0.910	0.296	0.4740	
15 minute summer	32	Infiltration		0.5				
15 minute summer	33	4.009	34	24.6	1.074	0.314	0.5900	
15 minute summer	33	Infiltration		0.7				
15 minute summer	34	4.010	35	22.9	1.062	0.292	0.4771	
15 minute summer	34	Infiltration		1.1				
15 minute summer	42	6.000	43	2.9	0.737	0.164	0.0729	
15 minute summer	43	6.001	44	6.1	1.693	0.144	0.1174	
15 minute summer	44	6.002	45	17.2	2.041	0.150	0.1338	
15 minute summer	45	6.003	35	17.0	2.203	0.130	0.0905	
15 minute summer	35	4.011	36	35.2	1.753	0.219	0.7831	
15 minute summer	35	Infiltration		1.0				
30 minute summer	36	Orifice	37	10.5				
30 minute summer	36	Infiltration		4.8				
60 minute summer	37	4.013	9	7.8	0.982	0.043	0.7370	
60 minute summer	37	Infiltration		2.6				
15 minute summer	9	1.008	10	34.5	2.456	0.210	0.6136	
120 minute summer	10	Orifice	11	0.0				

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.37%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	11	1	134.322	0.000	0.0	0.0000	0.0000	OK
15 minute summer	12	1	131.588	0.000	0.0	0.0000	0.0000	OK
15 minute summer	13	1	129.609	0.000	0.0	0.0000	0.0000	OK
15 minute summer	14	1	129.533	0.000	0.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute summer	10	Infiltration		9.7				
15 minute summer	11	1.010	12	0.0	0.000	0.000	0.0000	
15 minute summer	12	1.011	13	0.0	0.000	0.000	0.0000	
15 minute summer	13	1.012	14	0.0	0.000	0.000	0.0000	0.0

Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 99.37%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	146.055	0.055	7.2	0.0309	0.0000	OK
15 minute summer	2	11	145.366	0.094	15.3	0.0649	0.0000	OK
15 minute summer	3	11	143.934	0.079	14.9	0.0126	0.0000	OK
15 minute summer	4	10	143.739	0.085	26.6	0.0938	0.0000	OK
15 minute summer	5	11	142.767	0.374	30.8	0.1959	0.0000	FLOOD RISK
15 minute summer	6	11	142.298	0.105	29.8	0.0168	0.0000	OK
15 minute summer	15	11	145.999	0.334	12.5	0.5578	0.0000	SURCHARGED
15 minute summer	16	11	145.459	0.086	18.6	0.1263	0.0000	OK
15 minute summer	17	11	144.772	0.084	28.2	0.1306	0.0000	OK
15 minute summer	18	11	141.345	0.115	28.2	0.1301	0.0000	OK
120 minute summer	19	86	140.234	-0.304	16.2	14.9245	0.0000	OK
15 minute summer	20	14	140.240	0.052	0.5	0.0587	0.0000	OK
15 minute summer	7	11	140.842	0.142	37.0	0.0939	0.0000	OK
15 minute summer	21	10	142.992	0.157	31.8	0.4112	0.0000	OK
15 minute summer	22	11	142.679	0.117	55.4	0.2380	0.0000	OK
15 minute summer	23	11	141.031	0.145	54.7	0.0231	0.0000	OK
15 minute summer	8	11	140.425	0.151	91.1	0.1705	0.0000	OK
15 minute summer	24	10	145.185	0.073	7.2	0.0340	0.0000	OK
15 minute summer	25	10	144.760	0.092	22.7	0.0743	0.0000	OK
60 minute summer	26	40	143.636	0.414	17.7	0.0658	0.0000	SURCHARGED
60 minute summer	27	42	143.624	0.441	16.0	6.4473	0.0000	OK
15 minute summer	28	1	143.646	0.000	0.0	0.0000	0.0000	OK
15 minute summer	38	10	146.379	0.079	14.7	0.1045	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.000	2	7.1	1.184	0.587	0.1086	
15 minute summer	2	1.001	3	14.9	2.033	1.035	0.1900	
15 minute summer	3	1.002	4	14.9	1.519	0.456	0.0591	
15 minute summer	4	1.003	5	26.5	1.691	0.611	0.2986	
15 minute summer	5	1.004	6	29.8	1.785	1.296	0.1845	
15 minute summer	6	1.005	7	29.5	2.295	0.792	0.4219	
15 minute summer	15	2.000	16	10.8	1.382	1.317	0.1022	
15 minute summer	16	2.001	17	18.6	1.800	0.583	0.2219	
15 minute summer	17	2.002	18	28.2	2.297	0.608	0.6350	
15 minute summer	18	2.003	19	28.0	2.008	0.855	0.2862	
120 minute summer	19	2.004	20	0.0	0.000	0.000	0.0000	
120 minute summer	19	Infiltration		3.4				
15 minute summer	20	2.005	7	-0.5	-0.117	-0.127	0.0556	
15 minute summer	7	1.006	8	36.0	2.319	0.879	0.1034	
15 minute summer	21	3.000	22	31.1	1.236	0.790	1.1904	
15 minute summer	22	3.001	23	54.7	2.295	0.539	1.0664	
15 minute summer	23	3.002	8	55.0	2.307	0.527	0.1203	
15 minute summer	8	1.007	9	90.9	3.293	0.750	1.4969	
15 minute summer	24	4.000	25	7.0	1.181	0.830	0.1204	
15 minute summer	25	4.001	26	22.5	1.405	0.691	0.6250	
60 minute summer	26	4.002	27	16.0	0.906	1.273	0.1363	
60 minute summer	27	4.003	28	0.0	0.000	0.000	0.0000	
60 minute summer	27	Infiltration		5.7				
15 minute summer	28	4.004	29	0.0	0.000	0.000	0.0451	
15 minute summer	38	5.000	39	14.6	1.185	0.541	0.3282	

Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 99.37%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	39	10	145.813	0.122	22.5	0.0958	0.0000	OK
15 minute summer	40	11	145.159	0.098	31.2	0.0884	0.0000	OK
15 minute summer	41	11	144.415	0.085	41.9	0.0890	0.0000	OK
15 minute summer	29	11	142.987	0.112	54.8	0.0967	0.0000	OK
15 minute summer	30	11	141.537	0.136	54.8	0.0217	0.0000	OK
15 minute summer	31	11	141.116	0.122	54.9	0.7723	0.0000	OK
60 minute summer	32	40	140.563	0.279	54.9	2.2867	0.0000	OK
60 minute summer	33	40	140.554	0.361	59.1	3.5323	0.0000	SURCHARGED
60 minute summer	34	41	140.543	0.467	55.3	4.2297	0.0000	SURCHARGED
15 minute summer	42	10	145.295	0.075	8.2	0.0693	0.0000	OK
15 minute summer	43	10	145.107	0.069	17.4	0.0591	0.0000	OK
15 minute summer	44	10	143.267	0.110	48.7	0.3157	0.0000	OK
15 minute summer	45	10	142.499	0.104	48.4	0.0166	0.0000	OK
60 minute summer	35	41	140.535	0.569	84.7	4.8733	0.0000	SURCHARGED
60 minute summer	36	42	140.516	0.981	64.3	28.2153	0.0000	SURCHARGED
60 minute summer	37	43	139.214	0.062	20.1	1.6430	0.0000	OK
240 minute summer	9	172	137.510	0.223	45.3	0.2521	0.0000	OK
240 minute summer	10	172	137.504	0.963	45.3	76.2121	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	39	5.001	40	22.0	1.594	0.918	0.4773	
15 minute summer	40	5.002	41	31.1	2.052	0.358	0.3990	
15 minute summer	41	5.003	29	41.9	2.506	0.307	0.3589	
15 minute summer	29	4.005	30	54.8	2.877	0.456	0.5045	
15 minute summer	30	4.006	31	54.9	2.328	0.566	0.2776	
15 minute summer	31	4.007	32	54.7	2.198	0.544	0.4659	
15 minute summer	31	Infiltration		0.5				
60 minute summer	32	4.008	33	53.6	1.046	0.685	1.2638	
60 minute summer	32	Infiltration		0.6				
60 minute summer	33	4.009	34	55.3	1.121	0.707	1.6511	
60 minute summer	33	Infiltration		0.9				
60 minute summer	34	4.010	35	46.8	1.106	0.598	1.5487	
60 minute summer	34	Infiltration		1.7				
15 minute summer	42	6.000	43	8.1	0.970	0.463	0.1564	
15 minute summer	43	6.001	44	17.2	2.240	0.406	0.2504	
15 minute summer	44	6.002	45	48.4	2.599	0.423	0.2964	
15 minute summer	45	6.003	35	48.1	2.859	0.368	0.1970	
60 minute summer	35	4.011	36	64.3	1.366	0.400	1.4556	
60 minute summer	35	Infiltration		1.7				
60 minute summer	36	Orifice	37	20.1				
60 minute summer	36	Infiltration		8.8				
60 minute summer	37	4.013	9	17.0	1.268	0.094	1.5722	
60 minute summer	37	Infiltration		3.1				
240 minute summer	9	1.008	10	45.3	1.462	0.276	2.1712	
240 minute summer	10	Orifice	11	4.2				

Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 99.37%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	11	172	134.362	0.040	4.2	0.0452	0.0000	OK
240 minute summer	12	172	131.634	0.046	4.2	0.0073	0.0000	OK
240 minute summer	13	176	129.694	0.085	4.2	0.0135	0.0000	OK
240 minute summer	14	176	129.599	0.066	4.2	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute summer	10	Infiltration		11.7				
240 minute summer	11	1.010	12	4.2	1.307	0.335	0.2083	
240 minute summer	12	1.011	13	4.2	0.995	0.426	0.4006	
240 minute summer	13	1.012	14	4.2	0.656	0.981	0.0953	19.8

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.37%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	11	146.079	0.079	8.9	0.0440	0.0000	OK
15 minute summer	2	12	145.802	0.530	18.7	0.3665	0.0000	SURCHARGED
15 minute summer	3	12	143.937	0.082	15.7	0.0130	0.0000	OK
15 minute summer	4	11	143.752	0.098	29.4	0.1081	0.0000	OK
30 minute summer	5	19	142.882	0.489	34.2	0.2563	0.0000	FLOOD RISK
30 minute summer	6	19	142.304	0.111	33.5	0.0176	0.0000	OK
30 minute summer	15	19	146.223	0.558	15.1	0.9316	0.0000	SURCHARGED
15 minute summer	16	11	145.471	0.098	22.5	0.1438	0.0000	OK
15 minute summer	17	11	144.784	0.096	34.3	0.1484	0.0000	OK
15 minute summer	18	12	141.439	0.209	34.3	0.2362	0.0000	SURCHARGED
120 minute summer	19	90	140.540	0.002	20.2	20.9821	0.0000	OK
15 minute summer	20	19	140.592	0.404	3.7	0.4572	0.0000	OK
30 minute summer	7	19	140.939	0.239	42.1	0.1581	0.0000	SURCHARGED
15 minute summer	21	10	143.022	0.187	39.5	0.4887	0.0000	OK
15 minute summer	22	11	142.696	0.134	68.7	0.2721	0.0000	OK
15 minute summer	23	11	141.057	0.172	67.9	0.0273	0.0000	OK
15 minute summer	8	11	140.445	0.171	106.3	0.1929	0.0000	OK
15 minute summer	24	11	145.203	0.091	8.9	0.0425	0.0000	OK
30 minute summer	25	18	144.782	0.113	27.5	0.0920	0.0000	OK
60 minute summer	26	41	143.829	0.607	22.3	0.0964	0.0000	SURCHARGED
60 minute summer	27	42	143.813	0.630	20.1	9.2184	0.0000	OK
15 minute summer	28	1	143.646	0.000	0.0	0.0000	0.0000	OK
15 minute summer	38	10	146.390	0.090	18.2	0.1194	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.000	2	8.5	1.220	0.697	0.1314	
15 minute summer	2	1.001	3	15.7	2.008	1.094	0.1925	
15 minute summer	3	1.002	4	15.7	1.643	0.482	0.0656	
15 minute summer	4	1.003	5	29.3	1.791	0.675	0.3187	
30 minute summer	5	1.004	6	33.5	1.974	1.454	0.1888	
30 minute summer	6	1.005	7	33.4	2.290	0.895	0.5161	
30 minute summer	15	2.000	16	13.1	1.671	1.592	0.1022	
15 minute summer	16	2.001	17	22.5	1.869	0.706	0.2588	
15 minute summer	17	2.002	18	34.3	2.376	0.739	0.7584	
15 minute summer	18	2.003	19	32.1	1.992	0.980	0.3501	
120 minute summer	19	2.004	20	0.0	0.000	0.000	0.0001	
120 minute summer	19	Infiltration		3.4				
15 minute summer	20	2.005	7	-3.7	-0.516	-0.869	0.0810	
30 minute summer	7	1.006	8	38.2	2.319	0.932	0.1070	
15 minute summer	21	3.000	22	38.6	1.282	0.978	1.4108	
15 minute summer	22	3.001	23	67.9	2.385	0.669	1.2695	
15 minute summer	23	3.002	8	68.2	2.395	0.653	0.1431	
15 minute summer	8	1.007	9	105.9	3.372	0.875	1.7044	
15 minute summer	24	4.000	25	8.7	1.200	1.022	0.1513	
30 minute summer	25	4.001	26	27.2	1.596	0.834	0.6904	
60 minute summer	26	4.002	27	20.1	1.143	1.605	0.1363	
60 minute summer	27	4.003	28	0.0	0.000	0.000	0.0000	
60 minute summer	27	Infiltration		6.2				
15 minute summer	28	4.004	29	0.0	0.000	0.000	0.0552	
15 minute summer	38	5.000	39	18.1	1.214	0.670	0.3812	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.37%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	39	19	145.988	0.297	27.2	0.2337	0.0000	SURCHARGED
15 minute summer	40	11	145.167	0.106	35.7	0.0957	0.0000	OK
15 minute summer	41	11	144.423	0.093	48.7	0.0967	0.0000	OK
15 minute summer	29	11	142.999	0.124	64.4	0.1072	0.0000	OK
15 minute summer	30	11	141.554	0.154	64.6	0.0245	0.0000	OK
30 minute summer	31	20	141.132	0.138	63.8	0.8742	0.0000	OK
60 minute summer	32	41	140.992	0.708	70.0	5.8037	0.0000	SURCHARGED
60 minute summer	33	42	140.983	0.790	70.4	7.7236	0.0000	SURCHARGED
60 minute summer	34	42	140.970	0.894	61.8	8.0935	0.0000	SURCHARGED
15 minute summer	42	10	145.306	0.086	10.2	0.0794	0.0000	OK
15 minute summer	43	10	145.117	0.079	21.6	0.0672	0.0000	OK
15 minute summer	44	10	143.283	0.126	60.4	0.3613	0.0000	OK
15 minute summer	45	10	142.514	0.119	59.9	0.0190	0.0000	OK
60 minute summer	35	42	140.960	0.994	91.9	8.5165	0.0000	SURCHARGED
60 minute summer	36	42	140.935	1.400	68.4	29.2273	0.0000	SURCHARGED
60 minute summer	37	43	139.221	0.069	24.3	1.8279	0.0000	OK
240 minute summer	9	176	137.815	0.528	55.0	0.5968	0.0000	SURCHARGED
240 minute summer	10	180	137.803	1.262	55.1	99.8699	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	39	5.001	40	24.7	1.600	1.030	0.5346	
15 minute summer	40	5.002	41	35.6	2.109	0.409	0.4441	
15 minute summer	41	5.003	29	48.7	2.578	0.358	0.4056	
15 minute summer	29	4.005	30	64.6	2.986	0.537	0.5728	
15 minute summer	30	4.006	31	64.6	2.398	0.667	0.3172	
30 minute summer	31	4.007	32	63.3	2.167	0.630	0.5592	
30 minute summer	31	Infiltration		0.5				
60 minute summer	32	4.008	33	63.0	1.077	0.805	1.2832	
60 minute summer	32	Infiltration		1.0				
60 minute summer	33	4.009	34	61.8	1.139	0.789	1.6511	
60 minute summer	33	Infiltration		1.4				
60 minute summer	34	4.010	35	48.1	1.090	0.614	1.5487	
60 minute summer	34	Infiltration		2.4				
15 minute summer	42	6.000	43	10.1	1.021	0.576	0.1848	
15 minute summer	43	6.001	44	21.4	2.359	0.506	0.2968	
15 minute summer	44	6.002	45	59.9	2.710	0.524	0.3519	
15 minute summer	45	6.003	35	59.6	2.998	0.456	0.2325	
60 minute summer	35	4.011	36	68.4	1.444	0.425	1.4556	
60 minute summer	35	Infiltration		2.4				
60 minute summer	36	Orifice	37	24.2				
60 minute summer	36	Infiltration		8.9				
60 minute summer	37	4.013	9	21.1	0.729	0.116	2.9065	
60 minute summer	37	Infiltration		3.1				
240 minute summer	9	1.008	10	55.1	1.566	0.336	2.4160	
240 minute summer	10	Orifice	11	5.8				

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.37%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	11	180	134.370	0.048	5.8	0.0542	0.0000	OK
240 minute summer	12	180	131.643	0.055	5.8	0.0088	0.0000	OK
240 minute summer	13	184	129.758	0.149	5.8	0.0237	0.0000	SURCHARGED
240 minute summer	14	184	129.611	0.078	5.8	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute summer	10	Infiltration		12.5				
240 minute summer	11	1.010	12	5.8	1.418	0.462	0.2648	
240 minute summer	12	1.011	13	5.8	1.025	0.588	0.4644	
240 minute summer	13	1.012	14	5.8	0.755	1.355	0.1086	38.9

Results for 100 year +50% CC Critical Storm Duration. Lowest mass balance: 99.37%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	12	146.216	0.216	9.5	0.1208	0.0000	SURCHARGED
15 minute summer	2	12	145.899	0.627	19.8	0.4338	0.0000	FLOOD RISK
30 minute summer	3	20	143.938	0.083	16.1	0.0132	0.0000	OK
15 minute summer	4	11	143.760	0.106	30.9	0.1176	0.0000	OK
30 minute summer	5	19	142.944	0.551	36.2	0.2889	0.0000	FLOOD RISK
30 minute summer	6	19	142.310	0.117	35.3	0.0186	0.0000	OK
30 minute summer	15	19	146.307	0.642	16.2	1.0708	0.0000	SURCHARGED
15 minute summer	16	11	145.475	0.102	23.9	0.1503	0.0000	OK
15 minute summer	17	11	144.789	0.100	36.6	0.1553	0.0000	OK
15 minute summer	18	12	141.544	0.314	36.6	0.3550	0.0000	SURCHARGED
60 minute summer	19	59	140.616	0.078	30.5	22.5808	0.0000	OK
60 minute summer	20	57	140.618	0.430	3.0	0.4860	0.0000	OK
30 minute summer	7	19	140.973	0.273	44.5	0.1804	0.0000	SURCHARGED
15 minute summer	21	11	143.036	0.200	42.3	0.5241	0.0000	OK
15 minute summer	22	11	142.702	0.140	73.2	0.2843	0.0000	OK
15 minute summer	23	11	141.067	0.182	72.6	0.0289	0.0000	OK
15 minute summer	8	11	140.453	0.179	112.7	0.2029	0.0000	OK
15 minute summer	24	11	145.266	0.153	9.5	0.0717	0.0000	SURCHARGED
30 minute summer	25	19	144.793	0.125	29.1	0.1016	0.0000	OK
60 minute summer	26	41	143.897	0.675	23.9	0.1072	0.0000	SURCHARGED
60 minute summer	27	43	143.880	0.697	21.5	10.1982	0.0000	OK
60 minute summer	28	44	143.646	0.000	0.0	0.0000	0.0000	OK
15 minute summer	38	11	146.402	0.102	19.5	0.1356	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.000	2	8.9	1.228	0.729	0.1425	
15 minute summer	2	1.001	3	16.1	2.062	1.123	0.1925	
30 minute summer	3	1.002	4	16.1	1.668	0.494	0.0693	
15 minute summer	4	1.003	5	30.8	1.837	0.709	0.3316	
30 minute summer	5	1.004	6	35.3	2.056	1.535	0.1937	
30 minute summer	6	1.005	7	35.2	2.274	0.944	0.5294	
30 minute summer	15	2.000	16	13.8	1.766	1.684	0.1022	
15 minute summer	16	2.001	17	23.9	1.890	0.749	0.2722	
15 minute summer	17	2.002	18	36.6	2.398	0.788	0.7746	
15 minute summer	18	2.003	19	33.7	2.006	1.028	0.3612	
60 minute summer	19	2.004	20	3.0	0.251	0.080	0.1040	
60 minute summer	19	Infiltration		3.4				
60 minute summer	20	2.005	7	-2.2	-0.338	-0.526	0.0721	
30 minute summer	7	1.006	8	39.6	2.338	0.965	0.1175	
15 minute summer	21	3.000	22	41.4	1.292	1.049	1.4926	
15 minute summer	22	3.001	23	72.6	2.409	0.715	1.3398	
15 minute summer	23	3.002	8	72.8	2.417	0.697	0.1510	
15 minute summer	8	1.007	9	111.7	3.392	0.922	1.7875	
15 minute summer	24	4.000	25	8.7	1.178	1.031	0.1549	
30 minute summer	25	4.001	26	28.5	1.641	0.873	0.7210	
60 minute summer	26	4.002	27	21.5	1.221	1.714	0.1363	
60 minute summer	27	4.003	28	0.0	0.000	0.000	0.0002	
60 minute summer	27	Infiltration		6.4				
60 minute summer	28	4.004	29	0.0	0.001	0.000	0.0494	
15 minute summer	38	5.000	39	18.9	1.231	0.702	0.4046	

Results for 100 year +50% CC Critical Storm Duration. Lowest mass balance: 99.37%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	39	12	146.082	0.391	29.4	0.3079	0.0000	SURCHARGED
15 minute summer	40	11	145.171	0.110	37.8	0.0990	0.0000	OK
15 minute summer	41	11	144.426	0.096	51.8	0.1000	0.0000	OK
15 minute summer	29	11	143.004	0.129	68.6	0.1117	0.0000	OK
15 minute summer	30	11	141.561	0.161	68.7	0.0257	0.0000	OK
60 minute summer	31	41	141.188	0.194	58.7	1.2273	0.0000	OK
60 minute summer	32	42	141.164	0.880	73.7	7.2075	0.0000	SURCHARGED
60 minute summer	33	42	141.153	0.960	74.1	9.3892	0.0000	SURCHARGED
60 minute summer	34	41	141.139	1.063	60.5	9.1257	0.0000	SURCHARGED
15 minute summer	42	10	145.310	0.090	10.9	0.0829	0.0000	OK
15 minute summer	43	10	145.120	0.082	23.2	0.0697	0.0000	OK
15 minute summer	44	10	143.289	0.132	64.8	0.3787	0.0000	OK
15 minute summer	45	10	142.520	0.125	64.4	0.0199	0.0000	OK
60 minute summer	35	41	141.127	1.161	87.1	8.7563	0.0000	SURCHARGED
60 minute summer	36	41	141.099	1.564	68.9	29.4131	0.0000	FLOOD RISK
60 minute summer	37	43	139.223	0.071	25.7	1.8886	0.0000	OK
240 minute summer	9	180	137.934	0.647	58.6	0.7315	0.0000	SURCHARGED
240 minute summer	10	180	137.921	1.380	58.3	109.2147	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	39	5.001	40	26.2	1.572	1.092	0.5457	
15 minute summer	40	5.002	41	37.7	2.140	0.433	0.4642	
15 minute summer	41	5.003	29	51.8	2.611	0.380	0.4256	
15 minute summer	29	4.005	30	68.7	3.028	0.572	0.6015	
15 minute summer	30	4.006	31	68.8	2.404	0.710	0.3373	
60 minute summer	31	4.007	32	57.1	2.138	0.568	0.6522	
60 minute summer	31	Infiltration		0.5				
60 minute summer	32	4.008	33	66.2	1.082	0.845	1.2832	
60 minute summer	32	Infiltration		1.2				
60 minute summer	33	4.009	34	60.5	1.130	0.773	1.6511	
60 minute summer	33	Infiltration		1.6				
60 minute summer	34	4.010	35	44.8	1.062	0.572	1.5487	
60 minute summer	34	Infiltration		2.6				
15 minute summer	42	6.000	43	10.8	1.039	0.616	0.1942	
15 minute summer	43	6.001	44	23.0	2.371	0.544	0.3188	
15 minute summer	44	6.002	45	64.4	2.745	0.563	0.3729	
15 minute summer	45	6.003	35	64.0	3.043	0.490	0.2460	
60 minute summer	35	4.011	36	68.9	1.466	0.428	1.4556	
60 minute summer	35	Infiltration		2.5				
60 minute summer	36	Orifice	37	25.7				
60 minute summer	36	Infiltration		8.9				
60 minute summer	37	4.013	9	22.5	0.570	0.124	2.9447	
60 minute summer	37	Infiltration		3.2				
240 minute summer	9	1.008	10	58.3	1.594	0.355	2.4160	
240 minute summer	10	Orifice	11	6.3				

Results for 100 year +50% CC Critical Storm Duration. Lowest mass balance: 99.37%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	11	180	134.372	0.050	6.3	0.0570	0.0000	OK
240 minute summer	12	180	131.646	0.058	6.3	0.0093	0.0000	OK
240 minute summer	13	184	129.787	0.178	6.3	0.0283	0.0000	SURCHARGED
240 minute summer	14	184	129.614	0.081	6.3	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute summer	10	Infiltration		12.9				
240 minute summer	11	1.010	12	6.3	1.447	0.504	0.2826	
240 minute summer	12	1.011	13	6.3	0.944	0.640	0.4759	
240 minute summer	13	1.012	14	6.3	0.816	1.477	0.1105	46.2