

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)	Invert Level (m)
101	0.157	5.00	26.933	1500	341096.767	398506.491	1.762	25.171
102	0.256	5.00	26.188	1500	341044.805	398590.651	1.500	24.688
103	0.224	5.00	25.288	1500	341118.711	398564.639	1.725	23.563
104	0.050	5.00	25.424	1500	341155.375	398550.802	1.959	23.465
105	0.006	5.00	25.431	1500	341165.703	398549.708	1.992	23.439
106	0.086	5.00	25.343	1500	341173.673	398548.316	1.924	23.419
107	0.051	5.00	25.057	1500	341177.467	398559.058	1.966	23.091
108	0.096	5.00	23.994	1500	341176.001	398604.458	2.025	21.969
109	0.000	5.00	23.740	2400	341162.972	398610.133	3.145	20.595
110	0.000	5.00	24.100	2400	341104.017	398633.854	3.664	20.436
111	0.000	5.00	24.100	2400	341045.154	398657.569	3.822	20.278
112a	0.205	5.00	23.699	2400	341166.879	398614.729	3.106	20.593
112	0.073	5.00	24.017	2400	341106.066	398639.184	3.588	20.429
113	0.014	5.00	24.239	3000	341043.083	398664.953	3.980	20.259
114	0.146	5.00	24.382	2400	341032.209	398666.215	4.150	20.232
115	0.078	5.00	24.503	2400	341021.503	398665.503	4.298	20.205
116	0.084	5.00	25.388	1500	340998.387	398638.519	2.025	23.363
117	0.023	5.00	25.060	1500	341005.130	398656.446	2.176	22.884
118	0.022	5.00	24.647	2400	341010.763	398669.262	4.470	20.177
119	0.000	5.00	24.247	2400	341003.264	398684.732	4.113	20.134
120	0.212	5.00	26.754	1500	341041.378	398528.728	1.425	25.329
121	0.080	5.00	26.600	1500	340987.546	398549.048	2.859	23.741
122	0.000	5.00	26.812	2400	340977.836	398553.284	4.935	21.877
123	0.097	5.00	26.020	1500	341002.399	398606.491	3.124	22.896
124	0.103	5.00	25.943	2400	340988.207	398611.557	3.960	21.983
125	0.048	5.00	26.866	2400	340969.594	398561.118	5.017	21.849
126	0.144	5.00	25.924	1500	340928.710	398510.191	1.725	24.199
127	0.000	5.00	25.668	1500	340898.340	398521.739	1.804	23.864
128	0.144	5.00	25.679	1500	340894.270	398528.658	2.351	23.328
129	0.165	5.00	25.744	2400	340895.422	398536.045	3.921	21.823
130	0.171	5.00	26.379	2400	340913.139	398582.873	4.681	21.698
131	0.112	5.00	24.839	1500	340803.679	398608.941	1.853	22.986
132	0.083	5.00	25.018	1500	340818.589	398607.931	2.120	22.898
133	0.088	5.00	25.625	1500	340869.443	398588.720	1.725	23.900
134	0.116	5.00	25.424	2400	340848.629	398596.495	3.540	21.884
135	0.160	5.00	25.402	2400	340818.314	398677.788	3.536	21.866
136	0.146	5.00	25.450	2400	340872.081	398657.493	3.728	21.722
137	0.078	5.00	25.628	2400	340877.352	398671.387	3.943	21.685
138	0.091	5.00	26.175	2400	340923.964	398653.608	4.615	21.560
139	0.070	5.00	26.107	2400	340937.917	398648.293	4.584	21.523
140	0.135	5.00	25.937	2400	340941.790	398658.589	5.823	20.114
141	0.196	5.00	23.897	2700	340957.947	398701.490	3.897	20.000
142	0.000		23.200	2100	340965.213	398719.999	3.267	19.933
143	0.041	5.00	25.639	2400	340884.823	398692.427	2.574	23.065
144	0.056	5.00	25.138	2100	340882.303	398716.307	2.100	23.038
145	0.088	5.00	25.378	2400	340892.367	398712.530	2.367	23.011
146	0.037	5.00	25.150	2400	340899.667	398731.983	2.191	22.959
147	0.000	5.00	22.250	1500	340904.699	398745.371	1.526	20.724
148	0.000		21.300	1500	340900.176	398759.995	1.603	19.697
149	0.000		20.744	1500	340854.694	398758.881	1.575	19.169
150			20.767	1500	340835.934	398743.696	1.678	19.089
151			21.010	1500	340821.629	398752.190	1.976	19.034

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)	Invert Level (m)
152			21.183	1500	340796.681	398716.314	3.883	17.300
153			18.000		340772.064	398701.558	2.000	16.000

Links

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	101	103	62.151	0.600	25.171	23.788	1.383	44.9	225	5.53	50.0
2.000	102	103	78.350	0.600	24.688	23.713	0.975	80.4	300	5.74	50.0
1.001	103	104	39.188	0.600	23.563	23.465	0.098	399.9	450	6.39	50.0
1.002	104	105	10.386	0.600	23.465	23.439	0.026	399.5	450	6.56	50.0
1.003	105	106	8.091	0.600	23.439	23.419	0.020	404.6	450	6.70	50.0
1.004	106	107	11.392	0.600	23.419	23.091	0.328	34.7	450	6.75	50.0
1.005	107	108	45.424	0.600	23.091	21.969	1.122	40.5	450	6.99	50.0
1.006	108	109	14.211	0.600	21.969	21.645	0.324	43.9	450	7.06	50.0
1.007	109	110	63.548	0.600	20.595	20.436	0.159	400.0	1500	7.56	43.3
1.008	110	111	63.461	0.600	20.436	20.278	0.158	401.6	1500	8.06	41.8
1.009	111	113	7.669	0.600	20.278	20.260	0.018	426.1	1500	8.12	50.0
3.000	112a	112	65.546	0.600	20.593	20.429	0.164	400.0	1500	5.51	50.0
3.001	112	113	68.051	0.600	20.429	20.259	0.170	400.3	1500	6.04	50.0
1.010	113	114	10.947	0.600	20.259	20.232	0.027	405.4	1500	8.20	50.0
1.011	114	115	10.730	0.600	20.232	20.205	0.027	397.4	1500	8.29	50.0
1.012	115	118	11.379	0.600	20.205	20.177	0.028	406.4	1500	8.38	50.0
4.000	116	117	19.153	0.600	23.363	22.884	0.479	40.0	225	5.15	50.0
4.001	117	118	13.999	0.600	22.884	22.801	0.083	168.7	225	5.39	50.0
1.013	118	119	17.192	0.600	20.177	20.134	0.043	399.8	1500	8.51	50.0
1.014	119	141	48.316	0.600	20.134	20.000	0.134	360.6	1500	8.87	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	1.956	77.8	21.3	1.537	1.275	0.157	0.0	80	1.676
2.000	1.755	124.1	34.7	1.200	1.275	0.256	0.0	108	1.511
1.001	1.010	160.7	86.3	1.275	1.509	0.637	0.0	235	1.028
1.002	1.011	160.8	93.1	1.509	1.542	0.687	0.0	246	1.046
1.003	1.004	159.7	93.9	1.542	1.474	0.693	0.0	248	1.043
1.004	3.458	550.0	105.6	1.474	1.516	0.779	0.0	132	2.691
1.005	3.202	509.3	112.5	1.516	1.575	0.830	0.0	143	2.593
1.006	3.076	489.2	125.5	1.575	1.645	0.926	0.0	154	2.590
1.007	2.138	3778.4	108.6	1.645	2.164	0.926	0.0	170	0.981
1.008	2.134	3770.5	104.9	2.164	2.322	0.926	0.0	167	0.969
1.009	2.071	3660.3	125.5	2.322	2.479	0.926	0.0	186	1.000
3.000	2.138	3778.4	27.8	1.606	2.088	0.205	0.0	89	0.658
3.001	2.137	3776.9	37.7	2.088	2.480	0.278	0.0	102	0.717
1.010	2.124	3752.8	165.1	2.480	2.650	1.218	0.0	210	1.103
1.011	2.145	3790.7	184.9	2.650	2.798	1.364	0.0	220	1.145
1.012	2.121	3748.3	195.4	2.798	2.970	1.442	0.0	227	1.154
4.000	2.075	82.5	11.4	1.800	1.951	0.084	0.0	56	1.461
4.001	1.004	39.9	14.5	1.951	1.621	0.107	0.0	94	0.925
1.013	2.139	3779.2	212.9	2.970	2.613	1.571	0.0	237	1.192
1.014	2.253	3980.8	212.9	2.613	2.397	1.571	0.0	230	1.235

Links

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)
5.000	120	121	57.539	0.600	25.329	23.816	1.513	38.0	225	5.45	50.0
5.001	121	122	10.594	0.600	23.741	23.678	0.063	168.2	300	5.60	50.0
5.002	122	125	11.371	0.600	21.877	21.849	0.028	406.1	1050	5.71	50.0
6.000	123	124	15.069	0.600	22.896	22.808	0.088	171.2	225	5.25	50.0
6.001	124	125	53.764	0.600	21.983	21.849	0.134	401.2	1050	5.77	50.0
5.003	125	130	60.502	0.600	21.849	21.698	0.151	400.7	1050	6.36	50.0
7.000	126	127	32.491	0.600	24.199	23.864	0.335	97.0	225	5.41	50.0
7.001	127	128	8.027	0.600	23.864	23.328	0.536	15.0	225	5.45	50.0
7.002	128	129	7.476	0.600	23.328	22.648	0.680	11.0	225	5.48	50.0
7.003	129	130	50.067	0.600	21.823	21.698	0.125	400.5	1050	5.97	50.0
5.004	130	139	69.955	0.600	21.698	21.523	0.175	399.7	1050	7.04	50.0
8.000	131	132	14.944	0.600	22.986	22.898	0.088	169.8	225	5.25	50.0
8.001	132	134	32.143	0.600	22.898	22.709	0.189	170.1	225	5.79	50.0
9.000	133	134	22.219	0.600	23.900	22.710	1.190	18.7	225	5.12	50.0
8.002	134	136	65.351	0.600	21.884	21.722	0.162	403.4	1050	6.42	50.0
10.000	135	136	57.470	0.600	21.866	21.722	0.144	399.1	1050	5.56	50.0
8.003	136	137	14.860	0.600	21.722	21.685	0.037	401.6	1050	6.57	50.0
8.004	137	138	49.888	0.600	21.685	21.560	0.125	399.1	1050	7.05	50.0
8.005	138	139	14.931	0.600	21.560	21.523	0.037	403.5	1050	7.20	50.0
5.005	139	140	11.000	0.600	21.523	21.389	0.134	82.1	225	7.32	50.0
5.006	140	141	45.843	0.600	20.114	20.000	0.114	402.1	1500	7.68	50.0
1.015	141	142	19.884	0.600	20.000	19.933	0.067	296.8	375	9.18	49.9
1.016	142	148	76.352	0.600	19.933	19.697	0.236	323.5	375	10.45	36.3
11.000	143	145	21.472	0.600	23.065	23.011	0.054	397.6	900	5.23	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
5.000	2.128	84.6	28.7	1.200	2.559	0.212	0.0	90	1.927
5.001	1.209	85.5	39.6	2.559	2.834	0.292	0.0	143	1.186
5.002	1.703	1475.0	39.6	3.885	3.967	0.292	0.0	116	0.761
6.000	0.996	39.6	13.1	2.899	2.910	0.097	0.0	89	0.897
6.001	1.714	1484.0	27.1	2.910	3.967	0.200	0.0	96	0.684
5.003	1.715	1485.1	73.2	3.967	3.631	0.540	0.0	156	0.915
7.000	1.327	52.8	19.5	1.500	1.579	0.144	0.0	94	1.229
7.001	3.398	135.1	19.5	1.579	2.126	0.144	0.0	58	2.438
7.002	3.968	157.8	39.0	2.126	2.871	0.288	0.0	76	3.306
7.003	1.715	1485.3	61.4	2.871	3.631	0.453	0.0	143	0.870
5.004	1.717	1486.8	157.8	3.631	3.534	1.164	0.0	228	1.140
8.000	1.000	39.8	15.2	1.628	1.895	0.112	0.0	96	0.934
8.001	0.999	39.7	26.4	1.895	2.490	0.195	0.0	134	1.067
9.000	3.042	121.0	11.9	1.500	2.489	0.088	0.0	47	1.944
8.002	1.709	1480.0	54.1	2.490	2.678	0.399	0.0	135	0.837
10.000	1.718	1488.0	21.7	2.486	2.678	0.160	0.0	86	0.642
8.003	1.713	1483.3	95.5	2.678	2.893	0.705	0.0	178	0.987
8.004	1.718	1488.0	106.1	2.893	3.565	0.783	0.0	187	1.020
8.005	1.709	1479.7	118.4	3.565	3.534	0.874	0.0	198	1.047
5.005	1.444	57.4	285.7	4.359	4.323	2.108	0.0	225	1.471
5.006	2.132	3768.3	304.0	4.323	2.397	2.243	0.0	283	1.315
1.015	1.046	115.6	542.4	3.522	2.892	4.010	0.0	375	1.060
1.016	1.002	110.6	394.2	2.892	1.228	4.010	0.0	375	1.014
11.000	1.565	995.5	5.6	1.674	1.467	0.041	0.0	47	0.435

Links

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)
12.000	144	145	10.749	0.600	23.038	23.011	0.027	398.1	900	5.11	50.0
11.001	145	146	20.778	0.600	23.011	22.959	0.052	399.6	900	5.45	50.0
11.002	146	147	14.302	0.600	22.959	20.825	2.134	6.7	150	5.51	50.0
11.003	147	148	15.307	0.600	20.724	19.922	0.802	19.1	150	5.62	50.0
1.017	148	149	45.495	0.600	19.697	19.169	0.528	86.2	375	10.84	34.8
1.018	149	150	24.136	0.600	19.169	19.089	0.080	301.7	375	11.23	34.2
1.019	150	151	16.637	0.600	19.089	19.034	0.055	302.5	375	11.50	33.7
1.020	151	152	43.698	0.600	19.034	17.300	1.734	25.2	375	11.70	34.0
1.021	152	153	28.701	0.600	17.300	16.000	1.300	22.1	375	11.82	33.8

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
12.000	1.564	994.9	7.6	1.200	1.467	0.056	0.0	55	0.480
11.001	1.561	993.0	25.1	1.467	1.291	0.185	0.0	96	0.682
11.002	3.917	69.2	30.1	2.041	1.275	0.222	0.0	69	3.776
11.003	2.316	40.9	30.1	1.376	1.228	0.222	0.0	96	2.527
1.017	1.953	215.7	399.7	1.228	1.200	4.232	0.0	375	1.978
1.018	1.038	114.6	391.7	1.200	1.303	4.232	0.0	375	1.051
1.019	1.036	114.5	386.3	1.303	1.601	4.232	0.0	375	1.050
1.020	3.622	400.0	390.0	1.601	3.508	4.232	0.0	301	4.098
1.021	3.870	427.4	387.6	3.508	1.625	4.232	0.0	282	4.357

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	62.151	44.9	225	Circular_Default Sewer Type	26.933	25.171	1.537	25.288	23.788	1.275
2.000	78.350	80.4	300	Circular_Default Sewer Type	26.188	24.688	1.200	25.288	23.713	1.275
1.001	39.188	399.9	450	Circular_Default Sewer Type	25.288	23.563	1.275	25.424	23.465	1.509
1.002	10.386	399.5	450	Circular_Default Sewer Type	25.424	23.465	1.509	25.431	23.439	1.542
1.003	8.091	404.6	450	Circular_Default Sewer Type	25.431	23.439	1.542	25.343	23.419	1.474
1.004	11.392	34.7	450	Circular_Default Sewer Type	25.343	23.419	1.474	25.057	23.091	1.516
1.005	45.424	40.5	450	Circular_Default Sewer Type	25.057	23.091	1.516	23.994	21.969	1.575
1.006	14.211	43.9	450	Circular_Default Sewer Type	23.994	21.969	1.575	23.740	21.645	1.645
1.007	63.548	400.0	1500	Circular_Default Sewer Type	23.740	20.595	1.645	24.100	20.436	2.164
1.008	63.461	401.6	1500	Circular_Default Sewer Type	24.100	20.436	2.164	24.100	20.278	2.322
1.009	7.669	426.1	1500	Circular_Default Sewer Type	24.100	20.278	2.322	24.239	20.260	2.479

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	101	1500	Manhole	Adoptable	103	1500	Manhole	Adoptable
2.000	102	1500	Manhole	Adoptable	103	1500	Manhole	Adoptable
1.001	103	1500	Manhole	Adoptable	104	1500	Manhole	Adoptable
1.002	104	1500	Manhole	Adoptable	105	1500	Manhole	Adoptable
1.003	105	1500	Manhole	Adoptable	106	1500	Manhole	Adoptable
1.004	106	1500	Manhole	Adoptable	107	1500	Manhole	Adoptable
1.005	107	1500	Manhole	Adoptable	108	1500	Manhole	Adoptable
1.006	108	1500	Manhole	Adoptable	109	2400	Manhole	Adoptable
1.007	109	2400	Manhole	Adoptable	110	2400	Manhole	Adoptable
1.008	110	2400	Manhole	Adoptable	111	2400	Manhole	Adoptable
1.009	111	2400	Manhole	Adoptable	113	3000	Manhole	Adoptable

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)
3.000	65.546	400.0	1500	Circular_Default Sewer Type	23.699	20.593	1.606	24.017	20.429	2.088
3.001	68.051	400.3	1500	Circular_Default Sewer Type	24.017	20.429	2.088	24.239	20.259	2.480
1.010	10.947	405.4	1500	Circular_Default Sewer Type	24.239	20.259	2.480	24.382	20.232	2.650
1.011	10.730	397.4	1500	Circular_Default Sewer Type	24.382	20.232	2.650	24.503	20.205	2.798
1.012	11.379	406.4	1500	Circular_Default Sewer Type	24.503	20.205	2.798	24.647	20.177	2.970
4.000	19.153	40.0	225	Circular_Default Sewer Type	25.388	23.363	1.800	25.060	22.884	1.951
4.001	13.999	168.7	225	Circular_Default Sewer Type	25.060	22.884	1.951	24.647	22.801	1.621
1.013	17.192	399.8	1500	Circular_Default Sewer Type	24.647	20.177	2.970	24.247	20.134	2.613
1.014	48.316	360.6	1500	Circular_Default Sewer Type	24.247	20.134	2.613	23.897	20.000	2.397
5.000	57.539	38.0	225	Circular_Default Sewer Type	26.754	25.329	1.200	26.600	23.816	2.559
5.001	10.594	168.2	300	Circular_Default Sewer Type	26.600	23.741	2.559	26.812	23.678	2.834
5.002	11.371	406.1	1050	Circular_Default Sewer Type	26.812	21.877	3.885	26.866	21.849	3.967
6.000	15.069	171.2	225	Circular_Default Sewer Type	26.020	22.896	2.899	25.943	22.808	2.910
6.001	53.764	401.2	1050	Circular_Default Sewer Type	25.943	21.983	2.910	26.866	21.849	3.967
5.003	60.502	400.7	1050	Circular_Default Sewer Type	26.866	21.849	3.967	26.379	21.698	3.631
7.000	32.491	97.0	225	Circular_Default Sewer Type	25.924	24.199	1.500	25.668	23.864	1.579
7.001	8.027	15.0	225	Circular_Default Sewer Type	25.668	23.864	1.579	25.679	23.328	2.126
7.002	7.476	11.0	225	Circular_Default Sewer Type	25.679	23.328	2.126	25.744	22.648	2.871
7.003	50.067	400.5	1050	Circular_Default Sewer Type	25.744	21.823	2.871	26.379	21.698	3.631
5.004	69.955	399.7	1050	Circular_Default Sewer Type	26.379	21.698	3.631	26.107	21.523	3.534
8.000	14.944	169.8	225	Circular_Default Sewer Type	24.839	22.986	1.628	25.018	22.898	1.895
8.001	32.143	170.1	225	Circular_Default Sewer Type	25.018	22.898	1.895	25.424	22.709	2.490
9.000	22.219	18.7	225	Circular_Default Sewer Type	25.625	23.900	1.500	25.424	22.710	2.489
8.002	65.351	403.4	1050	Circular_Default Sewer Type	25.424	21.884	2.490	25.450	21.722	2.678
10.000	57.470	399.1	1050	Circular_Default Sewer Type	25.402	21.866	2.486	25.450	21.722	2.678

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
3.000	112a	2400	Manhole	Adoptable	112	2400	Manhole	Adoptable
3.001	112	2400	Manhole	Adoptable	113	3000	Manhole	Adoptable
1.010	113	3000	Manhole	Adoptable	114	2400	Manhole	Adoptable
1.011	114	2400	Manhole	Adoptable	115	2400	Manhole	Adoptable
1.012	115	2400	Manhole	Adoptable	118	2400	Manhole	Adoptable
4.000	116	1500	Manhole	Adoptable	117	1500	Manhole	Adoptable
4.001	117	1500	Manhole	Adoptable	118	2400	Manhole	Adoptable
1.013	118	2400	Manhole	Adoptable	119	2400	Manhole	Adoptable
1.014	119	2400	Manhole	Adoptable	141	2700	Manhole	Adoptable
5.000	120	1500	Manhole	Adoptable	121	1500	Manhole	Adoptable
5.001	121	1500	Manhole	Adoptable	122	2400	Manhole	Adoptable
5.002	122	2400	Manhole	Adoptable	125	2400	Manhole	Adoptable
6.000	123	1500	Manhole	Adoptable	124	2400	Manhole	Adoptable
6.001	124	2400	Manhole	Adoptable	125	2400	Manhole	Adoptable
5.003	125	2400	Manhole	Adoptable	130	2400	Manhole	Adoptable
7.000	126	1500	Manhole	Adoptable	127	1500	Manhole	Adoptable
7.001	127	1500	Manhole	Adoptable	128	1500	Manhole	Adoptable
7.002	128	1500	Manhole	Adoptable	129	2400	Manhole	Adoptable
7.003	129	2400	Manhole	Adoptable	130	2400	Manhole	Adoptable
5.004	130	2400	Manhole	Adoptable	139	2400	Manhole	Adoptable
8.000	131	1500	Manhole	Adoptable	132	1500	Manhole	Adoptable
8.001	132	1500	Manhole	Adoptable	134	2400	Manhole	Adoptable
9.000	133	1500	Manhole	Adoptable	134	2400	Manhole	Adoptable
8.002	134	2400	Manhole	Adoptable	136	2400	Manhole	Adoptable
10.000	135	2400	Manhole	Adoptable	136	2400	Manhole	Adoptable

Pipeline Schedule

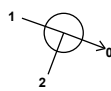
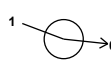
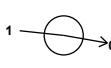
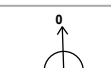
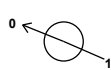
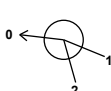
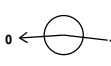
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
8.003	14.860	401.6	1050	Circular_Default Sewer Type	25.450	21.722	2.678	25.628	21.685	2.893
8.004	49.888	399.1	1050	Circular_Default Sewer Type	25.628	21.685	2.893	26.175	21.560	3.565
8.005	14.931	403.5	1050	Circular_Default Sewer Type	26.175	21.560	3.565	26.107	21.523	3.534
5.005	11.000	82.1	225	Circular_Default Sewer Type	26.107	21.523	4.359	25.937	21.389	4.323
5.006	45.843	402.1	1500	Circular_Default Sewer Type	25.937	20.114	4.323	23.897	20.000	2.397
1.015	19.884	296.8	375	Circular_Default Sewer Type	23.897	20.000	3.522	23.200	19.933	2.892
1.016	76.352	323.5	375	Circular_Default Sewer Type	23.200	19.933	2.892	21.300	19.697	1.228
11.000	21.472	397.6	900	Circular_Default Sewer Type	25.639	23.065	1.674	25.378	23.011	1.467
12.000	10.749	398.1	900	Circular_Default Sewer Type	25.138	23.038	1.200	25.378	23.011	1.467
11.001	20.778	399.6	900	Circular_Default Sewer Type	25.378	23.011	1.467	25.150	22.959	1.291
11.002	14.302	6.7	150	Circular_Default Sewer Type	25.150	22.959	2.041	22.250	20.825	1.275
11.003	15.307	19.1	150	Circular_Default Sewer Type	22.250	20.724	1.376	21.300	19.922	1.228
1.017	45.495	86.2	375	Circular_Default Sewer Type	21.300	19.697	1.228	20.744	19.169	1.200
1.018	24.136	301.7	375	Circular_Default Sewer Type	20.744	19.169	1.200	20.767	19.089	1.303
1.019	16.637	302.5	375	Circular_Default Sewer Type	20.767	19.089	1.303	21.010	19.034	1.601
1.020	43.698	25.2	375	Circular_Default Sewer Type	21.010	19.034	1.601	21.183	17.300	3.508
1.021	28.701	22.1	375	Circular_Default Sewer Type	21.183	17.300	3.508	18.000	16.000	1.625

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
8.003	136	2400	Manhole	Adoptable	137	2400	Manhole	Adoptable
8.004	137	2400	Manhole	Adoptable	138	2400	Manhole	Adoptable
8.005	138	2400	Manhole	Adoptable	139	2400	Manhole	Adoptable
5.005	139	2400	Manhole	Adoptable	140	2400	Manhole	Adoptable
5.006	140	2400	Manhole	Adoptable	141	2700	Manhole	Adoptable
1.015	141	2700	Manhole	Adoptable	142	2100	Manhole	Adoptable
1.016	142	2100	Manhole	Adoptable	148	1500	Manhole	Adoptable
11.000	143	2400	Manhole	Adoptable	145	2400	Manhole	Adoptable
12.000	144	2100	Manhole	Adoptable	145	2400	Manhole	Adoptable
11.001	145	2400	Manhole	Adoptable	146	2400	Manhole	Adoptable
11.002	146	2400	Manhole	Adoptable	147	1500	Manhole	Adoptable
11.003	147	1500	Manhole	Adoptable	148	1500	Manhole	Adoptable
1.017	148	1500	Manhole	Adoptable	149	1500	Manhole	Adoptable
1.018	149	1500	Manhole	Adoptable	150	1500	Manhole	Adoptable
1.019	150	1500	Manhole	Adoptable	151	1500	Manhole	Adoptable
1.020	151	1500	Manhole	Adoptable	152	1500	Manhole	Adoptable
1.021	152	1500	Manhole	Adoptable	153		Junction	

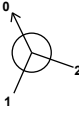
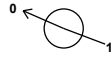
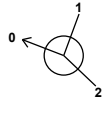
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
101	341096.767	398506.491	26.933	1.762	1500				
						0	1.000	25.171	225
102	341044.805	398590.651	26.188	1.500	1500				
						0	2.000	24.688	300

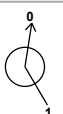
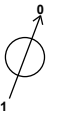
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
103	341118.711	398564.639	25.288	1.725	1500		1	2.000	23.713	300
							2	1.000	23.788	225
							0	1.001	23.563	450
104	341155.375	398550.802	25.424	1.959	1500		1	1.001	23.465	450
							0	1.002	23.465	450
105	341165.703	398549.708	25.431	1.992	1500		1	1.002	23.439	450
							0	1.003	23.439	450
106	341173.673	398548.316	25.343	1.924	1500		1	1.003	23.419	450
							0	1.004	23.419	450
107	341177.467	398559.058	25.057	1.966	1500		1	1.004	23.091	450
							0	1.005	23.091	450
108	341176.001	398604.458	23.994	2.025	1500		1	1.005	21.969	450
							0	1.006	21.969	450
109	341162.972	398610.133	23.740	3.145	2400		1	1.006	21.645	450
							0	1.007	20.595	1500
110	341104.017	398633.854	24.100	3.664	2400		1	1.007	20.436	1500
							0	1.008	20.436	1500
111	341045.154	398657.569	24.100	3.822	2400		1	1.008	20.278	1500
							0	1.009	20.278	1500
112a	341166.879	398614.729	23.699	3.106	2400					
							0	3.000	20.593	1500
112	341106.066	398639.184	24.017	3.588	2400		1	3.000	20.429	1500
							0	3.001	20.429	1500
113	341043.083	398664.953	24.239	3.980	3000		1	3.001	20.259	1500
							2	1.009	20.260	1500
							0	1.010	20.259	1500
114	341032.209	398666.215	24.382	4.150	2400		1	1.010	20.232	1500
							0	1.011	20.232	1500

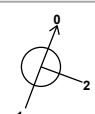
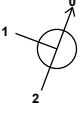
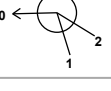
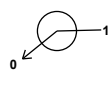
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
115	341021.503	398665.503	24.503	4.298	2400		1	1.011	20.205	1500
							0	1.012	20.205	1500
116	340998.387	398638.519	25.388	2.025	1500		0	4.000	23.363	225
117	341005.130	398656.446	25.060	2.176	1500		1	4.000	22.884	225
							0	4.001	22.884	225
118	341010.763	398669.262	24.647	4.470	2400		1	4.001	22.801	225
							2	1.012	20.177	1500
							0	1.013	20.177	1500
119	341003.264	398684.732	24.247	4.113	2400		1	1.013	20.134	1500
							0	1.014	20.134	1500
120	341041.378	398528.728	26.754	1.425	1500		0	5.000	25.329	225
121	340987.546	398549.048	26.600	2.859	1500		1	5.000	23.816	225
							0	5.001	23.741	300
122	340977.836	398553.284	26.812	4.935	2400		1	5.001	23.678	300
							0	5.002	21.877	1050
123	341002.399	398606.491	26.020	3.124	1500		0	6.000	22.896	225
124	340988.207	398611.557	25.943	3.960	2400		1	6.000	22.808	225
							0	6.001	21.983	1050
125	340969.594	398561.118	26.866	5.017	2400		1	6.001	21.849	1050
							2	5.002	21.849	1050
							0	5.003	21.849	1050
126	340928.710	398510.191	25.924	1.725	1500		0	7.000	24.199	225
127	340898.340	398521.739	25.668	1.804	1500		1	7.000	23.864	225
							0	7.001	23.864	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
128	340894.270	398528.658	25.679	2.351	1500	 1	7.001	23.328	225
						0	7.002	23.328	225
129	340895.422	398536.045	25.744	3.921	2400	 1	7.002	22.648	225
						0	7.003	21.823	1050
130	340913.139	398582.873	26.379	4.681	2400	 1	7.003	21.698	1050
						2	5.003	21.698	1050
						0	5.004	21.698	1050
131	340803.679	398608.941	24.839	1.853	1500	 0	8.000	22.986	225
132	340818.589	398607.931	25.018	2.120	1500	 1	8.000	22.898	225
						0	8.001	22.898	225
133	340869.443	398588.720	25.625	1.725	1500	 0	9.000	23.900	225
134	340848.629	398596.495	25.424	3.540	2400	 1	9.000	22.710	225
						2	8.001	22.709	225
						0	8.002	21.884	1050
135	340818.314	398677.788	25.402	3.536	2400	 0	10.000	21.866	1050
136	340872.081	398657.493	25.450	3.728	2400	 1	10.000	21.722	1050
						2	8.002	21.722	1050
						0	8.003	21.722	1050
137	340877.352	398671.387	25.628	3.943	2400	 1	8.003	21.685	1050
						0	8.004	21.685	1050
138	340923.964	398653.608	26.175	4.615	2400	 1	8.004	21.560	1050
						0	8.005	21.560	1050
139	340937.917	398648.293	26.107	4.584	2400	 1	8.005	21.523	1050
						2	5.004	21.523	1050
						0	5.005	21.523	225
140	340941.790	398658.589	25.937	5.823	2400	 1	5.005	21.389	225
						0	5.006	20.114	1500

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
141	340957.947	398701.490	23.897	3.897	2700		1 5.006 20.000 1500 2 1.014 20.000 1500		
142	340965.213	398719.999	23.200	3.267	2100		1 1.015 19.933 375 0 1.016 19.933 375		
143	340884.823	398692.427	25.639	2.574	2400		0 11.000 23.065 900		
144	340882.303	398716.307	25.138	2.100	2100		0 12.000 23.038 900		
145	340892.367	398712.530	25.378	2.367	2400		1 12.000 23.011 900 2 11.000 23.011 900 0 11.001 23.011 900		
146	340899.667	398731.983	25.150	2.191	2400		1 11.001 22.959 900 0 11.002 22.959 150		
147	340904.699	398745.371	22.250	1.526	1500		1 11.002 20.825 150 0 11.003 20.724 150		
148	340900.176	398759.995	21.300	1.603	1500		1 11.003 19.922 150 2 1.016 19.697 375 0 1.017 19.697 375		
149	340854.694	398758.881	20.744	1.575	1500		1 1.017 19.169 375 0 1.018 19.169 375		
150	340835.934	398743.696	20.767	1.678	1500		1 1.018 19.089 375 0 1.019 19.089 375		
151	340821.629	398752.190	21.010	1.976	1500		1 1.019 19.034 375 0 1.020 19.034 375		
152	340796.681	398716.314	21.183	3.883	1500		1 1.020 17.300 375 0 1.021 17.300 375		
153	340772.064	398701.558	18.000	2.000			1 1.021 16.000 375		

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Detailed	Starting Level (m)	
Rainfall Events	Singular	Skip Steady State	x	Check Discharge Rate(s)	✓
Summer CV	0.750	Drain Down Time (mins)	240	Check Discharge Volume	✓
Winter CV	0.840	Additional Storage (m ³ /ha)	20.0	100 year 360 minute (m ³)	

Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440 | 2160

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
30	0	0	0
100	40	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	Growth Factor 30 year	1.95
Greenfield Method	IH124	Growth Factor 100 year	2.48
Positively Drained Area (ha)		Betterment (%)	0
SAAR (mm)		QBar	
Soil Index	1	Q 1 year (l/s)	
SPR	0.10	Q 30 year (l/s)	
Region	1	Q 100 year (l/s)	
Growth Factor 1 year	0.85		

Pre-development Discharge Volume

Site Makeup	Greenfield	Return Period (years)	100
Greenfield Method	FSR/FEH	Climate Change (%)	0
Positively Drained Area (ha)		Storm Duration (mins)	360
Soil Index	1	Betterment (%)	0
SPR	0.10	PR	
CWI		Runoff Volume (m ³)	

Node 139 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	21.523	Product Number	CTL-SHE-0185-2500-3300-2500
Design Depth (m)	3.300	Min Outlet Diameter (m)	0.225
Design Flow (l/s)	25.0	Min Node Diameter (mm)	2100

Node 141 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	20.000	Product Number	CTL-SHE-0214-3500-3700-3500
Design Depth (m)	3.700	Min Outlet Diameter (m)	0.300
Design Flow (l/s)	35.0	Min Node Diameter (mm)	2700

Node 146 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	22.959	Product Number	CTL-SHE-0100-5000-1400-5000
Design Depth (m)	1.400	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	5.0	Min Node Diameter (mm)	1200

Node 122 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	23.000
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	176

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	0.800	260.0	305.7	0.801	0.0	305.7

Node 125 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	23.000
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	176

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	0.800	260.0	305.7	0.801	0.0	305.7

Node 146 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	23.650
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	60

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	50.0	50.0	0.400	50.0	60.0	0.401	0.0	60.0

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.95%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	101	11	25.237	0.066	14.9	0.2339	0.0000	OK
15 minute winter	102	11	24.776	0.088	24.2	0.4570	0.0000	OK
15 minute winter	103	11	23.758	0.195	57.5	0.8500	0.0000	OK
15 minute winter	104	11	23.667	0.202	62.4	0.4607	0.0000	OK
15 minute winter	105	11	23.614	0.175	62.2	0.3194	0.0000	OK
15 minute winter	106	11	23.538	0.119	69.6	0.3160	0.0000	OK
15 minute winter	107	11	23.205	0.114	73.8	0.2609	0.0000	OK
15 minute winter	108	12	22.105	0.136	81.7	0.3698	0.0000	OK
15 minute winter	109	12	20.747	0.152	81.3	0.6897	0.0000	OK
240 minute winter	110	188	20.668	0.232	21.9	1.0482	0.0000	OK
240 minute winter	111	192	20.667	0.389	21.5	1.7613	0.0000	OK
360 minute winter	112a	264	20.668	0.075	3.8	0.4367	0.0000	OK
240 minute winter	112	196	20.668	0.239	7.6	1.1763	0.0000	OK
240 minute winter	113	192	20.667	0.408	21.9	2.9150	0.0000	OK
240 minute winter	114	192	20.667	0.435	19.8	2.2760	0.0000	OK
240 minute winter	115	192	20.667	0.462	19.7	2.2597	0.0000	OK
15 minute winter	116	10	23.410	0.047	7.9	0.1210	0.0000	OK
15 minute winter	117	11	22.963	0.079	10.0	0.1567	0.0000	OK
240 minute winter	118	192	20.667	0.490	20.6	2.2667	0.0000	OK
240 minute winter	119	192	20.667	0.533	18.1	2.4133	0.0000	OK
15 minute winter	120	11	25.403	0.074	20.1	0.3509	0.0000	OK
15 minute winter	121	11	23.865	0.124	26.8	0.2892	0.0000	OK
120 minute winter	122	90	22.045	0.168	10.1	0.7583	0.0000	OK
15 minute winter	123	10	22.972	0.076	9.2	0.1809	0.0000	OK
15 minute winter	124	11	22.062	0.079	18.6	0.4004	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 winter	101	1.000	103	14.3	1.496	0.184	0.5961	
15 minute winter	102	2.000	103	23.1	1.353	0.186	1.3392	
15 minute winter	103	1.001	104	57.9	0.859	0.360	2.6402	
15 minute winter	104	1.002	105	61.7	0.981	0.384	0.6540	
15 minute winter	105	1.003	106	61.9	1.390	0.387	0.3651	
15 minute winter	106	1.004	107	69.3	2.134	0.126	0.3699	
15 minute winter	107	1.005	108	73.1	2.038	0.143	1.6317	
15 minute winter	108	1.006	109	81.3	2.164	0.166	0.5345	
15 minute winter	109	1.007	110	82.1	0.907	0.022	5.7666	
240 minute winter	110	1.008	111	21.5	0.485	0.006	16.9405	
240 minute winter	111	1.009	113	17.5	0.407	0.005	2.8696	
360 minute winter	112a	3.000	112	3.8	0.318	0.001	6.9222	
240 minute winter	112	3.001	113	6.0	0.246	0.002	19.2848	
240 minute winter	113	1.010	114	16.5	0.451	0.004	4.4398	
240 minute winter	114	1.011	115	17.9	0.454	0.005	4.7447	
240 minute winter	115	1.012	118	17.7	0.440	0.005	5.4649	
15 minute winter	116	4.000	117	7.8	0.871	0.095	0.1751	
15 minute winter	117	4.001	118	9.8	0.814	0.246	0.1687	
240 minute winter	118	1.013	119	18.1	0.431	0.005	9.1191	
240 minute winter	119	1.014	141	21.3	0.156	0.005	31.8457	
15 minute winter	120	5.000	121	19.4	1.726	0.229	0.6466	
15 minute winter	121	5.001	122	26.8	1.028	0.313	0.2759	
120 minute winter	122	5.002	125	10.0	0.393	0.007	1.1320	
15 minute winter	123	6.000	124	8.9	0.790	0.225	0.1707	
15 minute winter	124	6.001	125	18.1	0.454	0.012	2.2738	

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.95%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	125	90	22.044	0.195	18.6	0.9216	0.0000	OK
15 minute winter	126	10	24.283	0.084	13.6	0.2888	0.0000	OK
15 minute winter	127	11	23.911	0.047	13.3	0.0837	0.0000	OK
15 minute winter	128	10	23.396	0.068	26.7	0.2047	0.0000	OK
120 minute winter	129	92	22.047	0.224	15.7	1.2041	0.0000	OK
180 minute winter	130	128	22.044	0.346	28.1	1.8163	0.0000	OK
15 minute winter	131	10	23.066	0.080	10.6	0.2391	0.0000	OK
15 minute winter	132	11	23.007	0.109	18.3	0.2779	0.0000	OK
15 minute winter	133	10	23.940	0.040	8.3	0.1124	0.0000	OK
120 minute winter	134	88	22.046	0.162	13.8	0.8411	0.0000	OK
120 minute winter	135	88	22.046	0.180	5.7	0.9748	0.0000	OK
180 minute winter	136	132	22.044	0.322	18.4	1.7073	0.0000	OK
120 minute winter	137	90	22.044	0.359	16.7	1.7660	0.0000	OK
120 minute winter	138	90	22.045	0.485	17.4	2.3859	0.0000	OK
120 minute winter	139	90	22.045	0.522	32.0	2.5205	0.0000	SURCHARGED
240 minute winter	140	192	20.668	0.554	24.6	2.7611	0.0000	OK
240 minute winter	141	192	20.668	0.668	38.3	4.4930	0.0000	SURCHARGED
240 minute winter	142	204	20.073	0.140	31.5	0.4852	0.0000	OK
30 minute winter	143	26	23.184	0.119	4.1	0.5748	0.0000	OK
30 minute winter	144	25	23.181	0.143	4.1	0.5711	0.0000	OK
30 minute winter	145	25	23.181	0.170	10.9	0.8977	0.0000	OK
30 minute winter	146	25	23.183	0.224	8.0	1.0877	0.0000	SURCHARGED
30 minute winter	147	25	20.759	0.035	4.7	0.0621	0.0000	OK
180 minute winter	148	128	19.799	0.102	35.6	0.1798	0.0000	OK
180 minute winter	149	128	19.319	0.150	35.6	0.2650	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 winter	125	5.003	130	18.0	0.392	0.012	10.8125	
15 minute winter	126	7.000	127	13.3	1.381	0.251	0.3174	
15 minute winter	127	7.001	128	13.2	1.650	0.098	0.0651	
15 minute winter	128	7.002	129	26.5	2.775	0.168	0.0713	
120 minute winter	129	7.003	130	14.4	0.372	0.010	9.5546	
180 minute winter	130	5.004	139	20.0	0.273	0.013	23.5683	
15 minute winter	131	8.000	132	10.4	0.668	0.262	0.2343	
15 minute winter	132	8.001	134	18.0	0.966	0.452	0.5980	
15 minute winter	133	9.000	134	8.2	1.721	0.067	0.1053	
120 minute winter	134	8.002	136	13.7	0.381	0.009	10.0413	
120 minute winter	135	10.000	136	6.6	0.199	0.004	9.2159	
180 minute winter	136	8.003	137	12.7	0.470	0.009	3.5955	
120 minute winter	137	8.004	138	14.3	0.363	0.010	16.2165	
120 minute winter	138	8.005	139	13.0	0.182	0.009	6.1055	
120 minute winter	139	Hydro-Brake®	140	22.2				
240 minute winter	140	5.006	141	23.6	0.222	0.006	30.8786	
240 minute winter	141	Hydro-Brake®	142	31.5				
240 minute winter	142	1.016	148	31.5	1.060	0.285	2.3393	
30 minute winter	143	11.000	145	2.2	0.152	0.002	1.4130	
30 minute winter	144	12.000	145	2.8	0.205	0.003	0.7942	
30 minute winter	145	11.001	146	5.3	0.275	0.005	2.1399	
30 minute winter	146	Hydro-Brake®	147	4.7				
30 minute winter	147	11.003	148	4.7	1.520	0.114	0.0472	
180 minute winter	148	1.017	149	35.6	1.098	0.165	1.4837	
180 minute winter	149	1.018	150	35.6	0.905	0.310	0.9488	

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.95%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	150	128	19.229	0.140	35.6	0.2476	0.0000	OK
180 minute winter	151	128	19.111	0.077	35.6	0.1356	0.0000	OK
120 minute winter	152	92	17.374	0.074	35.6	0.1300	0.0000	OK
120 minute winter	153	92	16.072	0.072	35.6	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)
180 minute winter	150	1.019	151	35.6	1.350	0.311	0.4466	
180 minute winter	151	1.020	152	35.6	2.268	0.089	0.6857	
120 minute winter	152	1.021	153	35.6	2.365	0.083	0.4318	422.4

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.62%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	101	10	25.297	0.126	48.4	0.4477	0.0000	OK
15 minute winter	102	10	24.857	0.169	78.8	0.8755	0.0000	OK
15 minute winter	103	11	24.041	0.478	193.4	2.0853	0.0000	SURCHARGED
15 minute winter	104	11	23.887	0.422	199.4	0.9604	0.0000	OK
15 minute winter	105	11	23.780	0.341	200.9	0.6228	0.0000	OK
15 minute winter	106	11	23.662	0.243	225.7	0.6479	0.0000	OK
15 minute winter	107	11	23.312	0.221	240.3	0.5055	0.0000	OK
15 minute winter	108	11	22.253	0.284	267.4	0.7715	0.0000	OK
360 minute winter	109	344	21.211	0.616	39.1	2.7869	0.0000	OK
360 minute winter	110	352	21.211	0.775	34.6	3.5060	0.0000	OK
360 minute winter	111	352	21.211	0.933	25.0	4.2226	0.0000	OK
360 minute winter	112a	352	21.212	0.619	8.7	3.6154	0.0000	OK
360 minute winter	112	352	21.212	0.783	11.7	3.8589	0.0000	OK
360 minute winter	113	352	21.211	0.952	20.5	6.7993	0.0000	OK
360 minute winter	114	352	21.211	0.979	18.4	5.1207	0.0000	OK
360 minute winter	115	352	21.212	1.007	19.2	4.9188	0.0000	OK
15 minute winter	116	10	23.449	0.086	25.9	0.2226	0.0000	OK
15 minute winter	117	10	23.050	0.166	32.8	0.3285	0.0000	OK
360 minute winter	118	352	21.212	1.035	22.2	4.7817	0.0000	OK
360 minute winter	119	352	21.212	1.078	19.2	4.8751	0.0000	OK
15 minute winter	120	10	25.474	0.145	65.2	0.6895	0.0000	OK
15 minute winter	121	11	24.026	0.285	88.8	0.6638	0.0000	OK
120 minute winter	122	120	22.846	0.969	27.8	4.3855	0.0000	OK
15 minute winter	123	10	23.052	0.156	29.9	0.3721	0.0000	OK
120 minute winter	124	118	22.846	0.863	19.1	4.3511	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 winter	101	1.000	103	47.5	1.837	0.611	1.9327	
15 minute winter	102	2.000	103	76.9	1.546	0.620	4.3408	
15 minute winter	103	1.001	104	184.9	1.168	1.151	6.1282	
15 minute winter	104	1.002	105	199.2	1.391	1.239	1.4704	
15 minute winter	105	1.003	106	200.7	1.853	1.257	0.8752	
15 minute winter	106	1.004	107	225.5	2.738	0.410	0.9399	
15 minute winter	107	1.005	108	239.5	2.616	0.470	4.1555	
15 minute winter	108	1.006	109	264.7	2.824	0.541	1.3330	
360 minute winter	109	1.007	110	34.6	0.587	0.009	50.7868	
360 minute winter	110	1.008	111	25.0	0.414	0.007	65.6703	
360 minute winter	111	1.009	113	20.0	0.367	0.005	8.9338	
360 minute winter	112a	3.000	112	6.6	0.331	0.002	52.8957	
360 minute winter	112	3.001	113	-6.6	0.264	-0.002	71.7428	
360 minute winter	113	1.010	114	14.2	0.423	0.004	13.1229	
360 minute winter	114	1.011	115	16.5	0.445	0.004	13.2761	
360 minute winter	115	1.012	118	16.9	0.448	0.004	14.5203	
15 minute winter	116	4.000	117	25.7	1.138	0.311	0.4336	
15 minute winter	117	4.001	118	32.1	1.077	0.803	0.4164	
360 minute winter	118	1.013	119	19.2	0.477	0.005	22.7804	
360 minute winter	119	1.014	141	12.7	0.173	0.003	69.5489	
15 minute winter	120	5.000	121	64.2	2.066	0.758	1.8868	
15 minute winter	121	5.001	122	87.4	1.357	1.023	0.6740	
120 minute winter	122	5.002	125	24.3	0.416	0.016	9.5482	
15 minute winter	123	6.000	124	29.2	1.051	0.737	0.4198	
120 minute winter	124	6.001	125	12.6	0.340	0.009	43.1309	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.62%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	125	120	22.846	0.997	39.7	4.7015	0.0000	OK
15 minute winter	126	10	24.371	0.172	44.4	0.5926	0.0000	OK
15 minute winter	127	10	23.956	0.091	43.5	0.1617	0.0000	OK
15 minute winter	128	10	23.473	0.145	87.5	0.4343	0.0000	OK
120 minute winter	129	120	22.853	1.030	43.2	5.5263	0.0000	OK
120 minute winter	130	120	22.847	1.149	67.2	6.0395	0.0000	SURCHARGED
15 minute winter	131	11	23.349	0.363	34.5	1.0793	0.0000	SURCHARGED
15 minute winter	132	11	23.276	0.378	55.4	0.9631	0.0000	SURCHARGED
15 minute winter	133	10	23.975	0.075	27.1	0.2082	0.0000	OK
120 minute winter	134	118	22.854	0.970	38.1	5.0211	0.0000	OK
120 minute winter	135	118	22.848	0.982	15.3	5.3339	0.0000	OK
120 minute winter	136	118	22.851	1.129	48.3	5.9936	0.0000	SURCHARGED
120 minute winter	137	118	22.850	1.165	29.3	5.7317	0.0000	SURCHARGED
120 minute winter	138	120	22.849	1.289	24.8	6.3370	0.0000	SURCHARGED
120 minute winter	139	120	22.848	1.325	44.1	6.3986	0.0000	SURCHARGED
360 minute winter	140	352	21.212	1.098	28.6	5.4759	0.0000	OK
360 minute winter	141	352	21.212	1.212	43.4	8.1563	0.0000	SURCHARGED
180 minute winter	142	396	20.076	0.143	32.6	0.4948	0.0000	OK
60 minute winter	143	57	23.642	0.577	7.9	2.7940	0.0000	OK
60 minute winter	144	59	23.642	0.604	8.9	2.4149	0.0000	OK
60 minute winter	145	59	23.642	0.631	20.4	3.3239	0.0000	OK
60 minute winter	146	59	23.643	0.684	13.1	3.3272	0.0000	SURCHARGED
30 minute winter	147	80	20.760	0.036	5.0	0.0642	0.0000	OK
360 minute summer	148	224	19.802	0.105	37.6	0.1849	0.0000	OK
360 minute summer	149	224	19.324	0.155	37.6	0.2734	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 winter	125	5.003	130	20.7	0.381	0.014	51.7097	
15 minute winter	126	7.000	127	43.5	1.802	0.823	0.7765	
15 minute winter	127	7.001	128	43.1	2.064	0.319	0.1695	
15 minute winter	128	7.002	129	86.8	3.596	0.550	0.1803	
120 minute winter	129	7.003	130	34.9	0.431	0.024	43.0907	
120 minute winter	130	5.004	139	36.9	0.369	0.025	60.3457	
15 minute winter	131	8.000	132	31.3	0.787	0.787	0.5943	
15 minute winter	132	8.001	134	54.1	1.368	1.360	1.2199	
15 minute winter	133	9.000	134	26.8	2.395	0.221	0.2484	
120 minute winter	134	8.002	136	28.0	0.373	0.019	55.3977	
120 minute winter	135	10.000	136	10.1	0.230	0.007	48.9113	
120 minute winter	136	8.003	137	22.0	0.505	0.015	12.8188	
120 minute winter	137	8.004	138	19.6	0.439	0.013	43.0352	
120 minute winter	138	8.005	139	18.7	0.217	0.013	12.8800	
120 minute winter	139	Hydro-Brake®	140	22.9				
360 minute winter	140	5.006	141	25.2	0.234	0.007	66.6073	
360 minute winter	141	Hydro-Brake®	142	32.6				
180 minute winter	142	1.016	148	32.6	1.074	0.295	2.4178	
60 minute winter	143	11.000	145	3.8	0.149	0.004	9.7010	
60 minute winter	144	12.000	145	5.1	0.203	0.005	4.9852	
60 minute winter	145	11.001	146	7.3	0.297	0.007	10.3094	
60 minute winter	146	Hydro-Brake®	147	5.0				
30 minute winter	147	11.003	148	5.0	1.548	0.122	0.0495	
360 minute summer	148	1.017	149	37.6	1.114	0.174	1.5457	
360 minute summer	149	1.018	150	37.6	0.920	0.328	0.9876	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.62%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	150	224	19.233	0.144	37.6	0.2546	0.0000	OK
360 minute summer	151	224	19.113	0.079	37.6	0.1395	0.0000	OK
360 minute summer	152	224	17.376	0.076	37.6	0.1337	0.0000	OK
360 minute summer	153	224	16.074	0.074	37.6	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)
360 minute summer	150	1.019	151	37.6	1.372	0.329	0.4642	
360 minute summer	151	1.020	152	37.6	2.303	0.094	0.7139	
360 minute summer	152	1.021	153	37.6	2.404	0.088	0.4492	1111.0

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.73%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	101	12	25.953	0.782	84.9	2.7766	0.0000	SURCHARGED
15 minute winter	102	11	25.642	0.954	138.5	4.9404	0.0000	SURCHARGED
15 minute winter	103	11	24.646	1.083	301.6	4.7255	0.0000	SURCHARGED
15 minute winter	104	11	24.212	0.747	323.9	1.7025	0.0000	SURCHARGED
15 minute winter	105	11	24.000	0.561	326.1	1.0252	0.0000	SURCHARGED
15 minute winter	106	11	23.773	0.354	369.4	0.9418	0.0000	OK
360 minute winter	107	344	23.700	0.609	60.5	1.3929	0.0000	SURCHARGED
360 minute winter	108	344	23.700	1.731	67.5	4.7007	0.0000	FLOOD RISK
360 minute winter	109	344	23.699	3.104	67.4	14.0406	0.0000	FLOOD RISK
360 minute winter	110	344	23.698	3.262	57.9	14.7592	0.0000	SURCHARGED
360 minute winter	111	344	23.699	3.421	39.2	15.4760	0.0000	SURCHARGED
360 minute winter	112a	344	23.699	3.106	15.0	18.1515	1.3808	FLOOD
360 minute winter	112	344	23.699	3.270	21.0	16.1239	0.0000	SURCHARGED
360 minute winter	113	344	23.699	3.440	29.7	24.5577	0.0000	SURCHARGED
360 minute winter	114	344	23.699	3.467	18.8	18.1256	0.0000	SURCHARGED
360 minute winter	115	344	23.699	3.494	19.0	17.0755	0.0000	SURCHARGED
360 minute winter	116	344	23.699	0.336	6.2	0.8717	0.0000	SURCHARGED
360 minute winter	117	344	23.699	0.815	7.9	1.6122	0.0000	SURCHARGED
360 minute winter	118	344	23.699	3.522	22.6	16.2791	0.0000	SURCHARGED
360 minute winter	119	344	23.699	3.565	18.4	16.1283	0.0000	SURCHARGED
15 minute winter	120	12	26.367	1.038	114.6	4.9239	0.0000	SURCHARGED
15 minute winter	121	11	24.208	0.467	134.4	1.0878	0.0000	SURCHARGED
360 minute winter	122	352	23.955	2.078	55.0	207.2499	0.0000	SURCHARGED
360 minute winter	123	352	23.956	1.060	7.1	2.5304	0.0000	SURCHARGED
360 minute winter	124	344	23.955	1.972	26.6	9.9457	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 winter	101	1.000	103	72.3	1.819	0.930	2.4718	
15 minute winter	102	2.000	103	120.6	1.712	0.972	5.5174	
15 minute winter	103	1.001	104	298.4	1.883	1.857	6.2091	
15 minute winter	104	1.002	105	323.0	2.039	2.009	1.6456	
15 minute winter	105	1.003	106	325.5	2.101	2.038	1.1821	
15 minute winter	106	1.004	107	368.7	2.932	0.670	1.4409	
360 minute winter	107	1.005	108	60.5	1.942	0.119	7.1971	
360 minute winter	108	1.006	109	67.4	2.061	0.138	2.2516	
360 minute winter	109	1.007	110	57.9	0.545	0.015	111.8752	
360 minute winter	110	1.008	111	39.2	0.472	0.010	111.7220	
360 minute winter	111	1.009	113	28.7	0.409	0.008	13.5011	
360 minute winter	112a	3.000	112	6.3	0.304	0.002	115.3926	
360 minute winter	112	3.001	113	-16.9	0.254	-0.004	119.8026	
360 minute winter	113	1.010	114	16.9	0.471	0.004	19.2720	
360 minute winter	114	1.011	115	17.3	0.486	0.005	18.8900	
360 minute winter	115	1.012	118	16.3	0.496	0.004	20.0325	
360 minute winter	116	4.000	117	6.2	0.805	0.075	0.7617	
360 minute winter	117	4.001	118	7.9	0.767	0.197	0.5568	
360 minute winter	118	1.013	119	18.4	0.489	0.005	30.2662	
360 minute winter	119	1.014	141	19.6	0.156	0.005	85.0595	
15 minute winter	120	5.000	121	95.4	2.399	1.128	2.2884	
15 minute winter	121	5.001	122	134.1	1.905	1.568	0.7301	
360 minute winter	122	5.002	125	-35.2	0.332	-0.024	9.8090	
360 minute winter	123	6.000	124	8.8	0.737	0.221	0.5993	
360 minute winter	124	6.001	125	-13.8	0.261	-0.009	46.3788	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.73%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	125	352	23.955	2.106	89.7	207.7782	0.0000	SURCHARGED
15 minute winter	126	11	24.805	0.606	77.8	2.0832	0.0000	SURCHARGED
15 minute winter	127	11	24.030	0.166	71.9	0.2933	0.0000	OK
360 minute winter	128	352	23.956	0.628	21.2	1.8776	0.0000	SURCHARGED
360 minute winter	129	352	23.955	2.132	33.3	11.4402	0.0000	SURCHARGED
360 minute winter	130	352	23.955	2.257	83.9	11.8614	0.0000	SURCHARGED
15 minute winter	131	12	24.209	1.223	60.5	3.6388	0.0000	SURCHARGED
15 minute winter	132	12	24.011	1.113	93.6	2.8387	0.0000	SURCHARGED
15 minute winter	133	10	24.003	0.103	47.6	0.2869	0.0000	OK
360 minute winter	134	352	23.955	2.071	28.8	10.7247	0.0000	SURCHARGED
360 minute winter	135	352	23.955	2.089	11.9	11.3401	0.0000	SURCHARGED
360 minute winter	136	352	23.955	2.233	45.9	11.8522	0.0000	SURCHARGED
360 minute winter	137	352	23.955	2.270	50.4	11.1702	0.0000	SURCHARGED
360 minute winter	138	352	23.955	2.395	55.6	11.7782	0.0000	SURCHARGED
360 minute winter	139	352	23.955	2.432	59.0	11.7434	0.0000	SURCHARGED
360 minute winter	140	344	23.699	3.585	32.0	17.8798	0.0000	SURCHARGED
360 minute winter	141	344	23.699	3.699	44.9	24.8964	0.0000	FLOOD RISK
360 minute winter	142	344	20.080	0.147	34.6	0.5088	0.0000	OK
120 minute winter	143	116	24.301	1.236	8.0	5.9852	0.0000	SURCHARGED
120 minute winter	144	118	24.298	1.260	9.4	5.0365	0.0000	SURCHARGED
120 minute winter	145	118	24.298	1.287	28.9	6.7771	0.0000	SURCHARGED
120 minute winter	146	118	24.301	1.342	30.0	25.5700	0.0000	SURCHARGED
960 minute summer	147	690	20.760	0.036	5.0	0.0642	0.0000	OK
600 minute winter	148	570	19.803	0.106	38.8	0.1878	0.0000	OK
600 minute winter	149	570	19.326	0.157	38.8	0.2781	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)
360 minute winter	125	5.003	130	-86.1	0.338	-0.058	52.1912	
15 minute winter	126	7.000	127	71.9	1.881	1.363	1.1562	
15 minute winter	127	7.001	128	72.1	2.423	0.534	0.2857	
360 minute winter	128	7.002	129	21.2	2.604	0.134	0.2973	
360 minute winter	129	7.003	130	38.6	0.356	0.026	43.1896	
360 minute winter	130	5.004	139	-39.3	0.313	-0.026	60.3457	
15 minute winter	131	8.000	132	51.8	1.302	1.302	0.5943	
15 minute winter	132	8.001	134	90.1	2.265	2.267	1.2784	
15 minute winter	133	9.000	134	47.1	2.767	0.389	0.5169	
360 minute winter	134	8.002	136	26.1	0.331	0.018	56.3742	
360 minute winter	135	10.000	136	10.0	0.171	0.007	49.5757	
360 minute winter	136	8.003	137	45.1	0.453	0.030	12.8188	
360 minute winter	137	8.004	138	49.5	0.289	0.033	43.0352	
360 minute winter	138	8.005	139	54.3	0.175	0.037	12.8800	
360 minute winter	139	Hydro-Brake®	140	22.9				
360 minute winter	140	5.006	141	26.2	0.252	0.007	80.7058	
360 minute winter	141	Hydro-Brake®	142	34.6				
360 minute winter	142	1.016	148	34.6	1.061	0.313	2.5042	
120 minute winter	143	11.000	145	8.3	0.143	0.008	13.6084	
120 minute winter	144	12.000	145	7.4	0.193	0.007	6.8124	
120 minute winter	145	11.001	146	24.0	0.275	0.024	13.1686	
120 minute winter	146	Hydro-Brake®	147	5.0				
960 minute summer	147	11.003	148	5.0	1.548	0.122	0.0495	
600 minute winter	148	1.017	149	38.8	1.123	0.180	1.5805	
600 minute winter	149	1.018	150	38.8	0.928	0.338	1.0092	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.73%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	150	570	19.235	0.146	38.8	0.2586	0.0000	OK
600 minute winter	151	570	19.114	0.080	38.8	0.1416	0.0000	OK
600 minute winter	152	570	17.377	0.077	38.8	0.1358	0.0000	OK
600 minute winter	153	570	16.076	0.076	38.8	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)
600 minute winter	150	1.019	151	38.8	1.385	0.339	0.4740	
600 minute winter	151	1.020	152	38.8	2.323	0.097	0.7297	
600 minute winter	152	1.021	153	38.8	2.425	0.091	0.4591	1614.2