

Network Details

Manhole Schedule

Manhole	Catchment Area (ha)	Diameter (m)	Type	CL (m)	IL (m)	Depth To Soffit (m)	Easting (m)	Northing (m)
S38-1	0.072	1.800	Unknown	5.784	4.050	0.984	488911.710	98114.115
S38-2	0.000	1.350	Unknown	5.414	3.975	1.289	488950.966	98097.806
S278 Headwall	0.000	0.000	Unknown	5.100	3.450	1.050	488958.590	98106.546
S38-3	0.000	2.100	Unknown	5.387	3.420	1.367	488954.432	98096.428
S278 Headwall	0.000	0.000	Unknown	5.059	3.400	1.059	488951.237	98088.661

Pipe Schedule

Pipe Number	US Manhole	US IL (m)	DS Manhole	DS IL (m)	Shape	Dimension (m)	Length (m)	Gradient (1:x)	Roughness (mm)	US Depth To Soffit (m)	DS Depth To Soffit (m)
1.000	S38-1	4.050	S38-2	3.975	Circ	0.75mØ	42.508	566.8	0.600	0.984	0.689
1.001	S38-2	3.975	S38-3	3.870	Circ	0.15mØ	3.730	35.5	0.600	1.289	1.367
2.000	S278	3.450	S38-3	3.420	Circ	0.6mØ	10.939	364.6	0.600	1.050	1.367
1.002	S38-3	3.420	S278	3.400	Circ	0.6mØ	8.399	419.9	0.600	1.367	1.059

Outfall Details

Surcharged Constant

Water Elevation (m)	Water Depth (m)
5.000	1.580

Outfall Manhole S278 Headwall B : Surcharged (Constant Level)

Surcharged Constant

Water Elevation (m)	Water Depth (m)
4.500	1.100

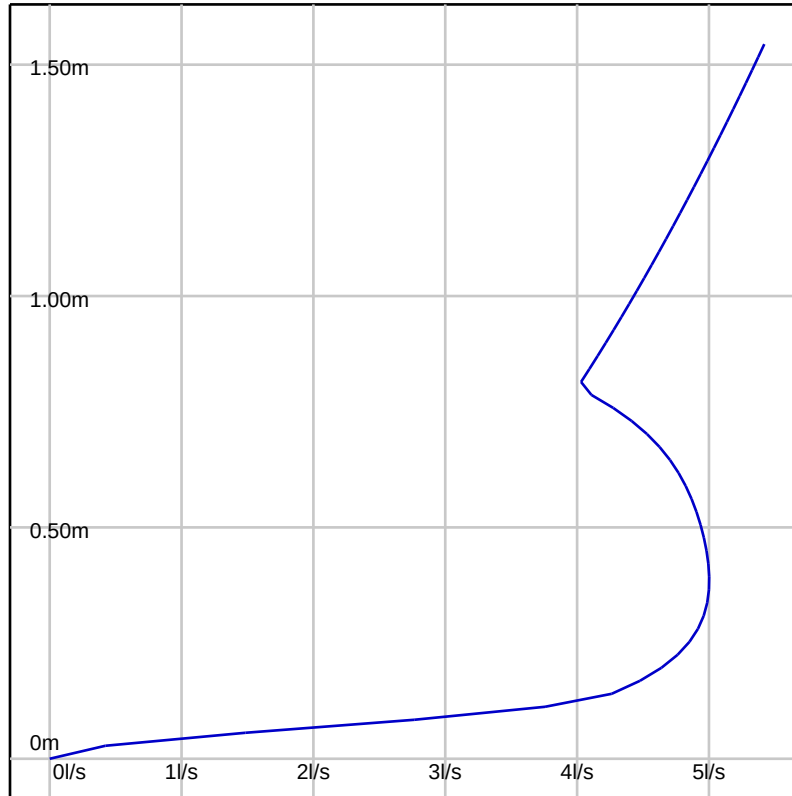
Flow Control Details

Controls within Manhole S38-2

Hydro-Brake® Optimum Control at Manhole S38-2

Model Ref	Design Depth (m)	Design Flow (l/s)	Depth Above Invert (m)	FF Head (m)	FF Flow (l/s)	KF Head (m)	KF Flow (l/s)
SHE-0101-5000-1300-5000	1.300	5.000	0.000	0.385	5.002	0.801	4.000

Hydro-Brake® Optimum Control at S38-2



Simulation Settings

FEH2022 (point): Filename=FEH_Point_Descriptors_488693_97897_v5_0_1.xml

Summer (Cv: 1.00), Winter (Cv: 1.00)

Global Time of Entry: 5.0 mins

Durations (mins): 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440

Return Periods (yrs) + Climate Change: (2, +0%), (10, +40%), (30, +40%), (100, +45%)

Simulated Rainfall Events

Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %	Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %
2Yr 15Min Winter	32.920	0.00	2.71	30Yr+40% 15Min Summer	112.863	0.00	2.64
2Yr 15Min Summer	32.920	0.00	2.71	30Yr+40% 15Min Winter	112.863	0.00	2.66
2Yr 30Min Winter	21.400	0.00	2.70	30Yr+40% 30Min Summer	74.071	0.00	2.24
2Yr 30Min Summer	21.400	0.00	2.70	30Yr+40% 30Min Winter	74.071	0.00	2.24
2Yr 60Min Winter	13.300	0.00	2.98	30Yr+40% 60Min Summer	46.547	0.00	1.89
2Yr 60Min Summer	13.300	0.00	2.97	30Yr+40% 60Min Winter	46.547	0.00	1.90
2Yr 120Min Summer	8.917	0.00	2.57	30Yr+40% 120Min Summer	27.731	0.00	1.64
2Yr 120Min Winter	8.917	0.00	2.59	30Yr+40% 120Min Winter	27.731	0.00	1.65
2Yr 180Min Summer	6.969	0.00	2.40	30Yr+40% 180Min Summer	20.307	0.00	1.54
2Yr 180Min Winter	6.969	0.00	2.41	30Yr+40% 180Min Winter	20.307	0.00	1.54
2Yr 240Min Summer	5.692	0.00	2.32	30Yr+40% 240Min Summer	16.265	0.00	1.47
2Yr 240Min Winter	5.692	0.00	2.32	30Yr+40% 240Min Winter	16.265	0.00	1.46
2Yr 360Min Summer	4.267	0.00	2.23	30Yr+40% 360Min Summer	11.803	0.00	1.38
2Yr 360Min Winter	4.267	0.00	2.22	30Yr+40% 360Min Winter	11.803	0.00	1.38
2Yr 480Min Summer	3.462	0.00	2.19	30Yr+40% 480Min Summer	9.367	0.00	1.34
2Yr 480Min Winter	3.462	0.00	2.17	30Yr+40% 480Min Winter	9.367	0.00	1.33
2Yr 600Min Summer	2.922	0.00	2.17	30Yr+40% 600Min Summer	7.810	0.00	1.30
2Yr 600Min Winter	2.922	0.00	2.14	30Yr+40% 600Min Winter	7.810	0.00	1.30
2Yr 720Min Winter	2.536	0.00	2.14	30Yr+40% 720Min Summer	6.721	0.00	1.28
2Yr 720Min Summer	2.536	0.00	2.18	30Yr+40% 720Min Winter	6.721	0.00	1.27
2Yr 960Min Summer	2.031	0.00	2.24	30Yr+40% 960Min Summer	5.302	0.00	1.29
2Yr 960Min Winter	2.031	0.00	2.19	30Yr+40% 960Min Winter	5.302	0.00	1.26
2Yr 1440Min Summer	1.486	0.00	2.51	30Yr+40% 1440Min Summer	3.817	0.00	1.33
2Yr 1440Min Winter	1.486	0.00	2.41	30Yr+40% 1440Min Winter	3.817	0.00	1.28
10Yr+40% 15Min Summer	87.036	0.00	2.94	100Yr+45% 15Min Summer	146.276	0.00	2.36
10Yr+40% 15Min Winter	87.036	0.00	2.95	100Yr+45% 15Min Winter	146.276	0.00	2.35
10Yr+40% 30Min Summer	56.678	0.00	2.54	100Yr+45% 30Min Summer	96.982	0.00	1.89
10Yr+40% 30Min Winter	56.678	0.00	2.54	100Yr+45% 30Min Winter	96.982	0.00	1.92
10Yr+40% 60Min Summer	35.401	0.00	2.17	100Yr+45% 60Min Summer	61.530	0.00	1.59
10Yr+40% 60Min Winter	35.401	0.00	2.17	100Yr+45% 60Min Winter	61.530	0.00	1.60
10Yr+40% 120Min Winter	21.745	0.00	1.87	100Yr+45% 120Min Summer	35.946	0.00	1.39
10Yr+40% 120Min Summer	21.745	0.00	1.87	100Yr+45% 120Min Winter	35.946	0.00	1.39
10Yr+40% 180Min Summer	16.178	0.00	1.74	100Yr+45% 180Min Summer	26.053	0.00	1.28
10Yr+40% 180Min Winter	16.178	0.00	1.73	100Yr+45% 180Min Winter	26.053	0.00	1.32
10Yr+40% 240Min Summer	13.001	0.00	1.66	100Yr+45% 240Min Summer	20.923	0.00	1.26
10Yr+40% 240Min Winter	13.001	0.00	1.65	100Yr+45% 240Min Winter	20.923	0.00	1.24
10Yr+40% 360Min Summer	9.488	0.00	1.57	100Yr+45% 360Min Summer	15.176	0.00	1.18
10Yr+40% 360Min Winter	9.488	0.00	1.56	100Yr+45% 360Min Winter	15.176	0.00	1.18
10Yr+40% 480Min Summer	7.563	0.00	1.52	100Yr+45% 480Min Summer	12.028	0.00	1.14
10Yr+40% 480Min Winter	7.563	0.00	1.51	100Yr+45% 480Min Winter	12.028	0.00	1.13
10Yr+40% 600Min Winter	6.323	0.00	1.47	100Yr+45% 600Min Summer	10.033	0.00	1.10
10Yr+40% 600Min Summer	6.323	0.00	1.49	100Yr+45% 600Min Winter	10.033	0.00	1.10
10Yr+40% 720Min Summer	5.451	0.00	1.48	100Yr+45% 720Min Summer	8.641	0.00	1.08
10Yr+40% 720Min Winter	5.451	0.00	1.46	100Yr+45% 720Min Winter	8.641	0.00	1.07
10Yr+40% 960Min Summer	4.313	0.00	1.49	100Yr+45% 960Min Summer	6.827	0.00	1.05
10Yr+40% 960Min Winter	4.313	0.00	1.45	100Yr+45% 960Min Winter	6.827	0.00	1.05
10Yr+40% 1440Min Summer	3.111	0.00	1.51	100Yr+45% 1440Min Winter	4.922	0.00	1.06
10Yr+40% 1440Min Winter	3.111	0.00	1.47	100Yr+45% 1440Min Summer	4.922	0.00	1.10

Simulation Results

Return Period Yrs: 2.0

Climate Change %: 0

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S38-1	180 min Summer	99	4.613	0.563	3.763		OK
S38-2	180 min Summer	99	4.613	0.638	3.744		Surcharged
S278 Headwall A	15 min Summer	0	4.558	1.108	0.000		Surcharged
S38-3	15 min Summer	0	4.544	1.124	24.157		Surcharged
S278 Headwall B	15 min Winter	0	4.500	1.100	99.124		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	180 min Summer	99	S38-1	S38-2	0.601	0.011	4.216	0.008	OK
1.001	180 min Summer	99	S38-2	S38-3	0.150	0.212	3.747	0.125	Surcharged
2.000	15 min Summer	0	S278	S38-3	0.600	0.085	24.157	0.067	Surcharged
1.002	15 min Summer	0	S38-3	S278	0.600	0.351	99.125	0.297	Surcharged

Return Period Yrs: 10.0

Climate Change %: 40

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S38-1	120 min Summer	77	5.101	1.051	4.752		Surcharged
S38-2	120 min Summer	77	5.101	1.126	4.820		Surcharged
S278 Headwall A	15 min Summer	0	4.558	1.108	0.000		Surcharged
S38-3	15 min Summer	0	4.544	1.124	24.157		Surcharged
S278 Headwall B	15 min Summer	0	4.500	1.100	99.127		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	60 min Winter	36	S38-1	S38-2	0.750	0.030	11.692	0.023	Surcharged
1.001	120 min Summer	102	S38-2	S38-3	0.150	0.284	5.014	0.168	Surcharged
2.000	15 min Winter	0	S278	S38-3	0.600	0.085	24.157	0.067	Surcharged
1.002	15 min Winter	0	S38-3	S278	0.600	0.351	99.126	0.297	Surcharged

Return Period Yrs: 30.0

Climate Change %: 40

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S38-1	120 min Summer	82	5.414	1.364	4.235		Surcharged
S38-2	120 min Summer	73	5.414	1.439	9.869	0.924	Flood
S278 Headwall A	15 min Summer	0	4.558	1.108	0.000		Surcharged
S38-3	15 min Summer	0	4.544	1.124	24.157		Surcharged
S278 Headwall B	15 min Summer	0	4.500	1.100	99.127		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	60 min Summer	31	S38-1	S38-2	0.750	0.050	21.059	0.041	Surcharged
1.001	30 min Summer	19	S38-2	S38-3	0.150	0.284	5.014	0.168	Surcharged
2.000	15 min Winter	0	S278	S38-3	0.600	0.085	24.157	0.067	Surcharged
1.002	15 min Winter	0	S38-3	S278	0.600	0.351	99.126	0.297	Surcharged

Return Period Yrs: 100.0

Climate Change %: 45

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S38-1	120 min Summer	73	5.420	1.370	11.194		Surcharged
S38-2	120 min Winter	66	5.414	1.439	20.225	11.981	Flood
S278 Headwall A	15 min Winter	0	4.558	1.108	0.000		Surcharged
S38-3	30 min Summer	0	4.544	1.124	24.157		Surcharged
S278 Headwall B	15 min Summer	0	4.500	1.100	99.127		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	60 min Summer	34	S38-1	S38-2	0.750	0.105	46.495	0.090	Surcharged
1.001	60 min Winter	90	S38-2	S38-3	0.150	0.284	5.014	0.168	Surcharged
2.000	15 min Winter	0	S278	S38-3	0.600	0.085	24.157	0.067	Surcharged
1.002	30 min Summer	0	S38-3	S278	0.600	0.351	99.127	0.297	Surcharged