

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	100	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	0.750	Preferred Cover Depth (m)	1.200
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		

Adoptable Manhole Type

Max Width (mm)	Diameter (mm)	Max Width (mm)	Diameter (mm)
374	1200	749	1500
499	1350	900	1800

>900 Link+900 mm

Max Depth (m)	Diameter (mm)	Max Depth (m)	Diameter (mm)
1.500	1050	99.999	1200

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
3	0.021	5.00	7.452	600	503114.248	103682.390	1.350
4	0.029	5.00	7.158	600	503164.709	103675.717	1.350
2	0.022	5.00	7.217	600	503135.390	103679.594	1.779
1	0.013	5.00	7.449	600	503136.740	103689.762	2.349

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	3	2	21.326	0.600	6.102	5.438	0.664	32.1	150	5.20	50.0
2.000	4	2	29.574	0.600	5.808	5.438	0.370	80.0	150	5.44	50.0
1.001	2	1	10.257	0.600	5.438	5.100	0.338	30.3	150	5.53	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)
1.000	1.782	31.5	2.8	1.200	1.629	0.021	0.0
2.000	1.125	19.9	3.9	1.200	1.629	0.029	0.0
1.001	1.834	32.4	9.8	1.629	2.199	0.072	0.0

Simulation Settings

Rainfall Methodology	FEH-22	Drain Down Time (mins)	240
Rainfall Events	Singular	Additional Storage (m³/ha)	20.0
Summer CV	0.740	Starting Level (m)	
Winter CV	0.840	Check Discharge Rate(s)	✓
Analysis Speed	Normal	Check Discharge Volume	✓
Skip Steady State	✓	100 year 360 minute (m³)	

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	0	0	0
100	30	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 (m³)	

Node 1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00360	Safety Factor	2.0	Invert Level (m)	5.000
Side Inf Coefficient (m/hr)	0.00360	Porosity	0.95	Time to half empty (mins)	14147
Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	75.0	75.0	1.200	75.0	115.8
			1.201	0.0	115.8

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
30 year 15 minute summer	296.222	83.821
30 year 15 minute winter	207.875	83.821
30 year 30 minute summer	196.026	55.469
30 year 30 minute winter	137.562	55.469
30 year 60 minute summer	133.324	35.234
30 year 60 minute winter	88.578	35.234
30 year 120 minute summer	81.115	21.436
30 year 120 minute winter	53.891	21.436
30 year 180 minute summer	61.425	15.807
30 year 180 minute winter	39.928	15.807
30 year 240 minute summer	47.897	12.658
30 year 240 minute winter	31.822	12.658
30 year 360 minute summer	35.653	9.175
30 year 360 minute winter	23.175	9.175
30 year 480 minute summer	27.477	7.261
30 year 480 minute winter	18.255	7.261
30 year 600 minute summer	22.094	6.043
30 year 600 minute winter	15.096	6.043
30 year 720 minute summer	19.384	5.195
30 year 720 minute winter	13.028	5.195

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
30 year 960 minute summer	15.515	4.085
30 year 960 minute winter	10.277	4.085
30 year 1440 minute summer	10.899	2.921
30 year 1440 minute winter	7.325	2.921
100 year +30% CC 15 minute summer	484.881	137.205
100 year +30% CC 15 minute winter	340.268	137.205
100 year +30% CC 30 minute summer	324.431	91.803
100 year +30% CC 30 minute winter	227.671	91.803
100 year +30% CC 60 minute summer	221.492	58.534
100 year +30% CC 60 minute winter	147.154	58.534
100 year +30% CC 120 minute summer	132.299	34.963
100 year +30% CC 120 minute winter	87.897	34.963
100 year +30% CC 180 minute summer	99.613	25.634
100 year +30% CC 180 minute winter	64.751	25.634
100 year +30% CC 240 minute summer	77.514	20.485
100 year +30% CC 240 minute winter	51.498	20.485
100 year +30% CC 360 minute summer	57.683	14.844
100 year +30% CC 360 minute winter	37.495	14.844
100 year +30% CC 480 minute summer	44.589	11.784
100 year +30% CC 480 minute winter	29.624	11.784
100 year +30% CC 600 minute summer	35.944	9.831
100 year +30% CC 600 minute winter	24.559	9.831
100 year +30% CC 720 minute summer	31.592	8.467
100 year +30% CC 720 minute winter	21.232	8.467
100 year +30% CC 960 minute summer	25.302	6.663
100 year +30% CC 960 minute winter	16.760	6.663
100 year +30% CC 1440 minute summer	17.753	4.758
100 year +30% CC 1440 minute winter	11.931	4.758

Results for 30 year Critical Storm Duration. Lowest mass balance: 98.59%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	3	10	6.153	0.051	8.0	0.0305	0.0000	OK
15 minute winter	4	10	5.887	0.079	11.1	0.0564	0.0000	OK
1440 minute winter	2	1410	5.654	0.216	1.3	0.1146	0.0000	SURCHARGED
1440 minute winter	1	1410	5.654	0.554	1.5	46.8326	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)
15 minute winter	3	1.000	2	7.9	0.788	0.252	0.2151
15 minute winter	4	2.000	2	10.9	0.892	0.551	0.3591
1440 minute winter	2	1.001	1	1.3	0.703	0.040	0.1806
1440 minute winter	1	Infiltration		0.0			

Results for 100 year +30% CC Critical Storm Duration. Lowest mass balance: 98.59%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	3	10	6.169	0.067	13.1	0.0399	0.0000	OK
15 minute winter	4	11	6.211	0.403	18.1	0.2867	0.0000	SURCHARGED
1440 minute winter	2	1440	6.059	0.621	2.0	0.3289	0.0000	SURCHARGED
1440 minute winter	1	1440	6.059	0.959	2.3	75.8050	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute winter	3	1.000	2	13.0	0.889	0.413	0.2693
15 minute winter	4	2.000	2	16.1	0.931	0.809	0.5206
1440 minute winter	2	1.001	1	2.0	0.661	0.062	0.1806
1440 minute winter	1	Infiltration		0.1			