

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	2	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	1.000	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)	0.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Depth (m)
RE1	0.004	5.00	5.550	150	0.500
SIC2	0.010	5.00	5.550	450	0.600
SIC3	0.004	5.00	5.550	450	0.800
SIC4	0.004	5.00	5.550	450	0.900
SOAKAWAY	0.000		5.550	100	0.950

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	RE1	SIC2	10.000	0.600	5.050	4.950	0.100	100.0	150	5.17	0.0
1.001	SIC2	SIC3	24.000	0.600	4.950	4.750	0.200	120.0	150	5.60	0.0
1.002	SIC3	SIC4	12.000	0.600	4.750	4.650	0.100	120.0	150	5.82	0.0
1.003	SIC4	SOAKAWAY	3.000	0.600	4.650	4.600	0.050	60.0	150	5.86	0.0

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	1.005	17.8	0.0	0.350	0.450	0.004	0.0	0	0.000
1.001	0.916	16.2	0.0	0.450	0.650	0.014	0.0	0	0.000
1.002	0.916	16.2	0.0	0.650	0.750	0.018	0.0	0	0.000
1.003	1.301	23.0	0.0	0.750	0.800	0.022	0.0	0	0.000

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	10.000	100.0	150	Circular	5.550	5.050	0.350	5.550	4.950	0.450
1.001	24.000	120.0	150	Circular	5.550	4.950	0.450	5.550	4.750	0.650
1.002	12.000	120.0	150	Circular	5.550	4.750	0.650	5.550	4.650	0.750
1.003	3.000	60.0	150	Circular	5.550	4.650	0.750	5.550	4.600	0.800

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	RE1	150	Manhole	Adoptable	SIC2	450	Manhole	Adoptable
1.001	SIC2	450	Manhole	Adoptable	SIC3	450	Manhole	Adoptable
1.002	SIC3	450	Manhole	Adoptable	SIC4	450	Manhole	Adoptable
1.003	SIC4	450	Manhole	Adoptable	SOAKAWAY	100	Manhole	Adoptable

Manhole Schedule

Node	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
RE1	5.550	0.500	150		0	1.000	5.050	150
SIC2	5.550	0.600	450		1	1.000	4.950	150
					0	1.001	4.950	150
SIC3	5.550	0.800	450		1	1.001	4.750	150
					0	1.002	4.750	150
SIC4	5.550	0.900	450		1	1.002	4.650	150
					0	1.003	4.650	150
SOAKAWAY	5.550	0.950	100		1	1.003	4.600	150

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Normal	Additional Storage (m³/ha)	0.0
Summer CV	1.000	Skip Steady State	x	Check Discharge Rate(s)	x
Winter CV	1.000	Drain Down Time (mins)	10080	Check Discharge Volume	x

Storm Durations

15	60	180	360	600	960	2160	4320	7200	10080
30	120	240	480	720	1440	2880	5760	8640	

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
10	0	0	0

Node SOAKAWAY Online Head/Flow Control

Flap Valve x Replaces Downstream Link ✓ Invert Level (m) 4.600

Head (m) 0.001
Flow (l/s) 0.000

Node SOAKAWAY Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.01120	Invert Level (m)	3.500	Depth (m)	1.500
Side Inf Coefficient (m/hr)	0.01120	Time to half empty (mins)	0	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	3.000	Number Required	1
Porosity	0.95	Pit Length (m)	6.000		

Other (defaults)

Entry Loss (manhole)	0.250	Entry Loss (junction)	0.000	Apply Recommended Losses	x
Exit Loss (manhole)	0.250	Exit Loss (junction)	0.000	Flood Risk (m)	0.300

Approval Settings

Node Size	✓	Minimum Full Bore Velocity (m/s)	
Node Losses	✓	Maximum Full Bore Velocity (m/s)	3.000
Link Size	✓	Proportional Velocity	✓
Minimum Diameter (mm)	150	Return Period (years)	
Link Length	✓	Minimum Proportional Velocity (m/s)	0.750
Maximum Length (m)	100.000	Maximum Proportional Velocity (m/s)	3.000
Coordinates	✓	Surcharged Depth	✓
Accuracy (m)	1.000	Return Period (years)	
Crossings	✓	Maximum Surcharged Depth (m)	0.100
Cover Depth	✓	Flooding	✓
Minimum Cover Depth (m)		Return Period (years)	30
Maximum Cover Depth (m)	3.000	Time to Half Empty	x
Backdrops	✓	Discharge Rates	✓
Minimum Backdrop Height (m)		Discharge Volume	✓
Maximum Backdrop Height (m)	1.500	100 year 360 minute (m³)	
Full Bore Velocity	✓		

Results for 10 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	RE1	11	5.078	0.028	1.4	0.0005	0.0000	OK
15 minute summer	SIC2	10	5.007	0.057	5.0	0.0091	0.0000	OK
15 minute summer	SIC3	11	4.819	0.069	6.4	0.0109	0.0000	OK
15 minute summer	SIC4	11	4.719	0.069	7.8	0.0110	0.0000	OK
600 minute winter	SOAKAWAY	585	3.998	-0.602	0.6	8.5179	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	RE1	1.000	SIC2	1.4	0.340	0.079	0.0424	
15 minute summer	SIC2	1.001	SIC3	5.0	0.714	0.306	0.1673	
15 minute summer	SIC3	1.002	SIC4	6.4	0.806	0.393	0.0948	
15 minute summer	SIC4	1.003	SOAKAWAY	7.8	1.069	0.338	0.0218	
600 minute winter	SOAKAWAY	Head/Flow		0.0				0.0
600 minute winter	SOAKAWAY	Infiltration		0.0				