

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	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	x
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)
SW1	0.176	5.00	385.500	600	407128.573	369823.921	1.000
SW2	0.100	5.00	384.500	600	407151.407	369839.587	1.000
SW3	0.176	5.00	384.500	600	407187.495	369873.438	1.500
SOAK-1			384.000	600	407165.150	369857.121	2.000
SOAK-2			384.000	600	407162.714	369860.256	2.000

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	SW1	SW2	27.691	0.600	384.500	383.500	1.000	27.7	225	5.18	47.4
1.001	SW2	SOAK-1	22.278	0.600	383.500	382.500	1.000	22.3	225	5.32	46.9
2.000	SW3	SOAK-1	27.668	0.600	383.000	382.000	1.000	27.7	225	5.18	47.4
1.002	SOAK-1	SOAK-2	3.970	0.600	382.000	382.000	0.000	0.0	225	5.38	46.7

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	2.496	99.2	22.6	0.775	0.775	0.176	0.0	73	2.028
1.001	2.784	110.7	35.1	0.775	1.275	0.276	0.0	87	2.474
2.000	2.497	99.3	22.6	1.275	1.775	0.176	0.0	73	2.029
1.002	1.000	39.8	57.2	1.775	1.775	0.452	0.0	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	27.691	27.7	225	Circular	385.500	384.500	0.775	384.500	383.500	0.775
1.001	22.278	22.3	225	Circular	384.500	383.500	0.775	384.000	382.500	1.275
2.000	27.668	27.7	225	Circular	384.500	383.000	1.275	384.000	382.000	1.775
1.002	3.970	0.0	225	Circular	384.000	382.000	1.775	384.000	382.000	1.775

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	SW1	600	Manhole	Adoptable	SW2	600	Manhole	Adoptable
1.001	SW2	600	Manhole	Adoptable	SOAK-1	600	Manhole	Adoptable
2.000	SW3	600	Manhole	Adoptable	SOAK-1	600	Manhole	Adoptable
1.002	SOAK-1	600	Manhole	Adoptable	SOAK-2	600	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
SW1	407128.573	369823.921	385.500	1.000	600		0	1.000	384.500	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
SW2	407151.407	369839.587	384.500	1.000	600		1 1.000	383.500	225
							0 1.001	383.500	225
SW3	407187.495	369873.438	384.500	1.500	600		0 2.000	383.000	225
SOAK-1	407165.150	369857.121	384.000	2.000	600		1 2.000	382.000	225
							2 1.001	382.500	225
							0 1.002	382.000	225
SOAK-2	407162.714	369860.256	384.000	2.000	600		1 1.002	382.000	225

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Normal	Additional Storage (m³/ha)	20.0
Summer CV	0.750	Skip Steady State	x	Check Discharge Rate(s)	x
Winter CV	0.840	Drain Down Time (mins)	240	Check Discharge Volume	x

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

Node SOAK-1 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.05490	Invert Level (m)	382.000	Depth (m)	
Side Inf Coefficient (m/hr)	0.05490	Time to half empty (mins)	2	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	2.500	Number Required	1
Porosity	1.00	Pit Length (m)	25.000		



Results for 2 year Critical Storm Duration. Lowest mass balance: 99.36%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SW1	10	384.573	0.073	23.1	0.2781	0.0000	OK
15 minute winter	SW2	10	383.592	0.092	35.9	0.2093	0.0000	OK
15 minute winter	SW3	10	383.073	0.073	23.1	0.1924	0.0000	OK
30 minute winter	SOAK-1	21	382.216	0.216	47.5	13.5488	0.0000	OK
30 minute winter	SOAK-2	21	382.157	0.157	35.2	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)
15 minute winter	SW1	1.000	SW2	22.8	1.736	0.230	0.3649	
15 minute winter	SW2	1.001	SOAK-1	35.4	2.412	0.319	0.3267	
15 minute winter	SW3	2.000	SOAK-1	22.9	1.842	0.231	0.6593	
30 minute winter	SOAK-1	1.002	SOAK-2	35.2	1.001	0.886	0.1367	34.3
30 minute winter	SOAK-1	Infiltration		0.6				

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.36%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SW1	10	384.622	0.122	57.2	0.4625	0.0000	OK
15 minute winter	SW2	10	383.667	0.167	89.2	0.3814	0.0000	OK
15 minute winter	SW3	10	383.121	0.121	57.2	0.3187	0.0000	OK
15 minute winter	SOAK-1	13	382.476	0.476	144.6	29.8607	0.0000	SURCHARGED
15 minute summer	SOAK-2	12	382.213	0.213	84.7	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)
15 minute winter	SW1	1.000	SW2	56.7	2.107	0.571	0.7408	
15 minute winter	SW2	1.001	SOAK-1	87.8	2.940	0.794	0.6657	
15 minute winter	SW3	2.000	SOAK-1	56.8	2.141	0.572	0.8518	
15 minute winter	SOAK-1	1.002	SOAK-2	90.5	2.275	2.275	0.1563	64.9
15 minute winter	SOAK-1	Infiltration		0.7				

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.36%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SW1	12	385.362	0.862	100.2	3.2786	0.0000	FLOOD RISK
15 minute winter	SW2	12	384.476	0.976	137.0	2.2271	0.0000	FLOOD RISK
15 minute winter	SW3	11	383.680	0.680	100.2	1.7881	0.0000	SURCHARGED
30 minute winter	SOAK-1	22	382.869	0.869	196.3	54.5624	0.0000	SURCHARGED
15 minute summer	SOAK-2	10	382.213	0.213	133.9	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)
15 minute winter	SW1	1.000	SW2	84.9	2.150	0.856	1.1013	
15 minute winter	SW2	1.001	SOAK-1	133.2	3.348	1.203	0.8860	
15 minute winter	SW3	2.000	SOAK-1	91.2	2.356	0.919	1.1004	
30 minute winter	SOAK-1	1.002	SOAK-2	143.0	3.597	3.597	0.1563	162.8
30 minute winter	SOAK-1	Infiltration		0.8				