



**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	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	x
Maximum Rainfall (mm/hr)	150.0		

**Adoptable Manhole Type**

<b>Max Width (mm)</b>	<b>Diameter (mm)</b>	<b>Max Width (mm)</b>	<b>Diameter (mm)</b>
374	1200	749	1500
499	1350	900	1800

>900 Link+900 mm

<b>Max Depth (m)</b>	<b>Diameter (mm)</b>	<b>Max Depth (m)</b>	<b>Diameter (mm)</b>
1.500	1050	99.999	1200

**Circular Link Type**

Shape	Circular	Auto Increment (mm)	75
Barrels	1	Follow Ground	x

**Available Diameters (mm)**

100 | 150

**Nodes**

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
1	0.023	5.00	85.300	450	424990.611	433693.792	0.450
2	0.023	5.00	85.100		424983.701	433672.858	0.526
3			85.100	450	424978.646	433674.046	1.300

**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	1	2	22.045	0.600	84.850	84.574	0.276	80.0	150	5.33	144.4
1.001	2	3	5.193	0.600	84.574	83.800	0.774	6.7	150	5.35	144.2

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	1.125	19.9	12.0	0.300	0.376	0.023	0.0	84	1.176
1.001	3.915	69.2	24.0	0.376	1.150	0.046	0.0	61	3.559






**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	22.045	80.0	150	Circular	85.300	84.850	0.300	85.100	84.574	0.376
1.001	5.193	6.7	150	Circular	85.100	84.574	0.376	85.100	83.800	1.150

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	1	450	Manhole	Adoptable	2		Junction	
1.001	2		Junction		3	450	Manhole	Adoptable

**Manhole Schedule**

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
1	424990.611	433693.792	85.300	0.450	450				
2	424983.701	433672.858	85.100	0.526			1.000	84.850	150
3	424978.646	433674.046	85.100	1.300	450		1.001	84.574	150

**Simulation Settings**

Rainfall Methodology	FEH-22	Analysis Speed	Detailed	Additional Storage (m³/ha)	20.0
Summer CV	1.000	Skip Steady State	x	Check Discharge Rate(s)	x
Winter CV	1.000	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 %)
2	0	0	0
30	0	0	0
100	45	0	0

**Node 3 Online Orifice Control**

Flap Valve	x	Design Depth (m)	0.755	Discharge Coefficient	0.600
Replaces Downstream Link	✓	Design Flow (l/s)	1.0		
Invert Level (m)	83.800	Diameter (m)	0.023		

**Node 3 Depth/Area Storage Structure**

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	83.800
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	352



Depth (m)	Area (m <sup>2</sup> )	Inf Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Inf Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Inf Area (m <sup>2</sup> )
0.000	40.0	0.0	0.800	40.0	0.0	0.801	0.0	0.0

**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



**Results for 2 year Critical Storm Duration. Lowest mass balance: 99.85%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
15 minute summer	1	10	84.894	0.044	3.5	0.0523	0.0000	OK
15 minute summer	2	9	84.608	0.034	6.9	0.0298	0.0000	OK
600 minute summer	3	390	83.976	0.176	1.4	6.7062	0.0000	OK

Link Event (Velocity)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
15 minute summer	1	1.000	2	3.5	0.977	0.174	0.0792	
15 minute summer	2	1.001	3	7.0	2.816	0.102	0.0243	
600 minute summer	3	Orifice		0.4				13.3



**Results for 30 year Critical Storm Duration. Lowest mass balance: 99.85%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
15 minute summer	1	10	84.926	0.076	9.5	0.0903	0.0000	OK
15 minute summer	2	10	84.627	0.053	18.9	0.0468	0.0000	OK
360 minute summer	3	256	84.192	0.392	4.2	14.9733	0.0000	OK

Link Event (Velocity)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
15 minute summer	1	1.000	2	9.4	1.288	0.474	0.1615	
15 minute winter	2	1.001	3	17.6	2.994	0.255	0.0577	
360 minute summer	3	Orifice		0.7				16.9



**Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.85%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
15 minute summer	1	10	84.964	0.114	17.5	0.1351	0.0000	OK
15 minute summer	2	10	84.649	0.075	34.8	0.0657	0.0000	OK
480 minute winter	3	368	84.551	0.751	3.8	28.6650	0.0000	OK

Link Event (Velocity)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
15 minute summer	1	1.000	2	17.3	1.480	0.871	0.2561	
15 minute winter	2	1.001	3	32.4	3.163	0.469	0.0675	
480 minute winter	3	Orifice		0.9				29.1