Current Basin - 1 year event

<General>			
ID	65	Notes	
Label	Current Basin - 1 year event	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>	
Scaled Area	26,345.626 ft²

Geometry

X (ft)	Y (ft)
977,305.72	1,291,967.83
977,317.67	1,291,727.37
977,455.08	1,291,754.26
977,387.87	1,291,979.78

Active Topology	
Is Active?	True

Infiltration/Inflow & Seepage	
Pond Seepage Method	None

Inflow (Wet) Collection

Physical	
Volume Type	Elevation-Area

Elevation-Area

Elevation (ft)	Area (ft²)	Percent Void Space (%)
724.40	0.000	100.0
725.00	629.020	100.0
726.00	3,371.780	100.0
726.30	4,158.200	100.0
727.00	6,660.000	100.0

Simulation Initial Condition	
Initial Elevation Type	Invert

Results (Engine Parsing)	
Branch	1

Current Basin - 1 year event

Results (Engine Parsing)			

Results (Extended Node)			
Volume	0.00 ac-ft	Freeboard Height	2.6 ft
Depth (Flooding)	-2.60 ft		

Results (Flow)			
Flow (Total In)	0.04 cfs	Local Inflow?	False
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs

Results			
Is Overflowing?	False	Time to Maximum Outflow	12.250 hours
Is Ever Overflowing?	False	Time to Maximum Inflow	12.100 hours
Depth (Node)	0.00 ft	Flow (Out to Links Maximum)	5.06 cfs
Hydraulic Grade	724.40 ft	Flow (Total In Maximum)	5.87 cfs
Time to Maximum Hydraulic Grade	12.200 hours	Flow (Overflow)	0.00 cfs
Hydraulic Grade (Maximum)	725.81 ft	Time to Maximum Storage	12.200 hours
Time to Maximum Overflow	0.000 hours	Storage (Maximum)	0.04 ac-ft
Flow (Overflow Maximum)	0.00 cfs	Flow (Seepage loss)	0.00 cfs

Calculation Messages

Time (hours)	Message

Current Outlet Pipe - 1 Year

<General>			
ID	160	Hyperlinks	<Collection: 0 items>
Label	Current Outlet Pipe - 1 Year	Start Node	POS-5
Notes		Stop Node	CS-5

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,422.54	1,291,756.13
977,392.32	1,291,578.65

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Conduit Description	Circle - 12.0 in
Size (Display)	(N/A)	Set Invert to Start?	False
Section Type	Circle	Invert (Start)	724.40 ft
Material	PVC	Set Invert to Stop?	True
Diameter	15.0 in	Invert (Stop)	722.62 ft
Wall Thickness	0.0 in	Has User Defined Length?	True
Number of Barrels	1	Length (User Defined)	94.0 ft
Roughness Type	Single Roughness	Length (Unified)	94.0 ft
Manning's n	0.010	Slope (Calculated)	0.019 ft/ft
Use Local Conduit Description?	False		

Current Outlet Pipe - 1 Year

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Physical (Culvert)	
Is Culvert?	False

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	2

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	11.56 cfs	Area (Full Flow)	1.2 ft²

Results (Maximum Values)			
Flow (Maximum)	5.07 cfs	Velocity (Maximum Calculated)	9.06 ft/s
Time (Maximum Flow)	12.250 hours	Depth (Maximum) / Rise	46.5 %
Time (Maximum Calculated Velocity)	12.250 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	723.51 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	723.40 ft
Depth (Out)	0.78 ft	Headloss	1.00 ft
Energy Grade Line (In)	724.40 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	723.51 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	723.40 ft	Cover (Average)	-1.25 ft
Hydraulic Grade Line (In)	724.40 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	True	Froude (Stop)	0.000

Current Outlet Pipe - 1 Year

Results			
Time to Maximum Hydraulic Grade	12.250 hours	Flow-Area (Start)	0.0 ft²
Hydraulic Grade (Maximum)	724.98 ft	Flow-Area (Middle)	0.0 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.8 ft²
Rise (Unified)	1.25 ft	Flow-Width (Start)	0.2 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	0.2 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	1.2 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message
12.050	Conduit is operating under pressure.

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	724.40
47.00	0.00	0.00	723.51
94.00	0.00	0.00	723.40

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	0.2	0.0	False
0.00	0.2	0.0	False
0.78	1.2	0.8	False

Section Froude Number
0.000
0.000
0.000

Current Overflow - 1 Year Event

<General>			
ID	96	Hyperlinks	<Collection: 0 items>
Label	Current Overflow - 1 Year Event	Start Node	POS-3
Notes		Stop Node	O-7

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,385.25	1,291,955.74
977,438.07	1,291,957.14

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Conduit Description	Circle - 48.0 in
Size (Display)	(N/A)	Set Invert to Start?	False
Section Type	Circle	Invert (Start)	726.30 ft
Material	PVC	Set Invert to Stop?	True
Diameter	48.0 in	Invert (Stop)	726.20 ft
Wall Thickness	0.3 in	Has User Defined Length?	True
Number of Barrels	1	Length (User Defined)	10.0 ft
Roughness Type	Single Roughness	Length (Unified)	10.0 ft
Manning's n	0.010	Slope (Calculated)	0.010 ft/ft
Use Local Conduit Description?	False		

Current Overflow - 1 Year Event

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Physical (Culvert)	
Is Culvert?	False

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	4

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	186.73 cfs	Area (Full Flow)	12.6 ft²

Results (Maximum Values)			
Flow (Maximum)	0.00 cfs	Velocity (Maximum Calculated)	0.00 ft/s
Time (Maximum Flow)	0.000 hours	Depth (Maximum) / Rise	0.0 %
Time (Maximum Calculated Velocity)	0.000 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	726.25 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	726.20 ft
Depth (Out)	0.00 ft	Headloss	0.10 ft
Energy Grade Line (In)	726.30 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	726.25 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	726.20 ft	Cover (Average)	-4.00 ft
Hydraulic Grade Line (In)	726.30 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	False	Froude (Stop)	0.000

Current Overflow - 1 Year Event

Results			
Time to Maximum Hydraulic Grade	0.000 hours	Flow-Area (Start)	0.0 ft²
Hydraulic Grade (Maximum)	726.30 ft	Flow-Area (Middle)	0.0 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.0 ft²
Rise (Unified)	4.00 ft	Flow-Width (Start)	0.0 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	0.0 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	0.0 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	726.30
5.00	0.00	0.00	726.25
10.00	0.00	0.00	726.20

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	0.0	0.0	False
0.00	0.0	0.0	False
0.00	0.0	0.0	False

Section Froude Number
0.000
0.000
0.000

Current Basin - 2 year event

<General>			
ID	65	Notes	
Label	Current Basin - 2 year event	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>	
Scaled Area	26,345.626 ft²

Geometry

X (ft)	Y (ft)
977,305.72	1,291,967.83
977,317.67	1,291,727.37
977,455.08	1,291,754.26
977,387.87	1,291,979.78

Active Topology	
Is Active?	True

Infiltration/Inflow & Seepage	
Pond Seepage Method	None

Inflow (Wet) Collection

Physical	
Volume Type	Elevation-Area

Elevation-Area

Elevation (ft)	Area (ft²)	Percent Void Space (%)
724.40	0.000	100.0
725.00	629.020	100.0
726.00	3,371.780	100.0
726.30	4,158.200	100.0
727.00	6,660.000	100.0

Simulation Initial Condition	
Initial Elevation Type	Invert

Results (Engine Parsing)	
Branch	1

Current Basin - 2 year event

Results (Engine Parsing)			

Results (Extended Node)			
Volume	0.00 ac-ft	Freeboard Height	2.6 ft
Depth (Flooding)	-2.60 ft		

Results (Flow)			
Flow (Total In)	0.04 cfs	Local Inflow?	False
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs

Results			
Is Overflowing?	False	Time to Maximum Outflow	12.250 hours
Is Ever Overflowing?	False	Time to Maximum Inflow	12.100 hours
Depth (Node)	0.00 ft	Flow (Out to Links Maximum)	6.41 cfs
Hydraulic Grade	724.40 ft	Flow (Total In Maximum)	8.34 cfs
Time to Maximum Hydraulic Grade	12.250 hours	Flow (Overflow)	0.00 cfs
Hydraulic Grade (Maximum)	726.22 ft	Time to Maximum Storage	12.250 hours
Time to Maximum Overflow	0.000 hours	Storage (Maximum)	0.07 ac-ft
Flow (Overflow Maximum)	0.00 cfs	Flow (Seepage loss)	0.00 cfs

Calculation Messages

Time (hours)	Message

Current Outlet Pipe - 2 Year

<General>			
ID	160	Hyperlinks	<Collection: 0 items>
Label	Current Outlet Pipe - 2 Year	Start Node	POS-5
Notes		Stop Node	CS-5

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,422.54	1,291,756.13
977,392.32	1,291,578.65

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Conduit Description	Circle - 12.0 in
Size (Display)	(N/A)	Set Invert to Start?	False
Section Type	Circle	Invert (Start)	724.40 ft
Material	PVC	Set Invert to Stop?	True
Diameter	15.0 in	Invert (Stop)	722.62 ft
Wall Thickness	0.0 in	Has User Defined Length?	True
Number of Barrels	1	Length (User Defined)	94.0 ft
Roughness Type	Single Roughness	Length (Unified)	94.0 ft
Manning's n	0.010	Slope (Calculated)	0.019 ft/ft
Use Local Conduit Description?	False		

Current Outlet Pipe - 2 Year

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Physical (Culvert)	
Is Culvert?	False

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	2

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	11.56 cfs	Area (Full Flow)	1.2 ft²

Results (Maximum Values)			
Flow (Maximum)	6.40 cfs	Velocity (Maximum Calculated)	9.62 ft/s
Time (Maximum Flow)	12.250 hours	Depth (Maximum) / Rise	53.3 %
Time (Maximum Calculated Velocity)	12.250 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	723.51 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	723.40 ft
Depth (Out)	0.78 ft	Headloss	1.00 ft
Energy Grade Line (In)	724.40 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	723.51 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	723.40 ft	Cover (Average)	-1.25 ft
Hydraulic Grade Line (In)	724.40 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	True	Froude (Stop)	0.000

Current Outlet Pipe - 2 Year

Results			
Time to Maximum Hydraulic Grade	12.250 hours	Flow-Area (Start)	0.0 ft²
Hydraulic Grade (Maximum)	725.07 ft	Flow-Area (Middle)	0.0 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.8 ft²
Rise (Unified)	1.25 ft	Flow-Width (Start)	0.2 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	0.2 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	1.2 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message
12.000	Conduit is operating under pressure.

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	724.40
47.00	0.00	0.00	723.51
94.00	0.00	0.00	723.40

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	0.2	0.0	False
0.00	0.2	0.0	False
0.78	1.2	0.8	False

Section Froude Number
0.000
0.000
0.000

Current Overflow - 2 Year Event

<General>			
ID	96	Hyperlinks	<Collection: 0 items>
Label	Current Overflow - 2 Year Event	Start Node	POS-3
Notes		Stop Node	O-7

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,385.25	1,291,955.74
977,438.07	1,291,957.14

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Conduit Description	Circle - 48.0 in
Size (Display)	(N/A)	Set Invert to Start?	False
Section Type	Circle	Invert (Start)	726.30 ft
Material	PVC	Set Invert to Stop?	True
Diameter	48.0 in	Invert (Stop)	726.20 ft
Wall Thickness	0.3 in	Has User Defined Length?	True
Number of Barrels	1	Length (User Defined)	10.0 ft
Roughness Type	Single Roughness	Length (Unified)	10.0 ft
Manning's n	0.010	Slope (Calculated)	0.010 ft/ft
Use Local Conduit Description?	False		

Current Overflow - 2 Year Event

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Physical (Culvert)	
Is Culvert?	False

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	4

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	186.73 cfs	Area (Full Flow)	12.6 ft²

Results (Maximum Values)			
Flow (Maximum)	0.00 cfs	Velocity (Maximum Calculated)	0.00 ft/s
Time (Maximum Flow)	0.000 hours	Depth (Maximum) / Rise	0.0 %
Time (Maximum Calculated Velocity)	0.000 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	726.25 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	726.20 ft
Depth (Out)	0.00 ft	Headloss	0.10 ft
Energy Grade Line (In)	726.30 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	726.25 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	726.20 ft	Cover (Average)	-4.00 ft
Hydraulic Grade Line (In)	726.30 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	False	Froude (Stop)	0.000

Current Overflow - 2 Year Event

Results			
Time to Maximum Hydraulic Grade	0.000 hours	Flow-Area (Start)	0.0 ft²
Hydraulic Grade (Maximum)	726.30 ft	Flow-Area (Middle)	0.0 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.0 ft²
Rise (Unified)	4.00 ft	Flow-Width (Start)	0.0 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	0.0 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	0.0 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	726.30
5.00	0.00	0.00	726.25
10.00	0.00	0.00	726.20

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	0.0	0.0	False
0.00	0.0	0.0	False
0.00	0.0	0.0	False

Section Froude Number
0.000
0.000
0.000

Current Basin - 5 year event

<General>			
ID	65	Notes	
Label	Current Basin - 5 year event	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>	
Scaled Area	26,345.626 ft²

Geometry

X (ft)	Y (ft)
977,305.72	1,291,967.83
977,317.67	1,291,727.37
977,455.08	1,291,754.26
977,387.87	1,291,979.78

Active Topology	
Is Active?	True

Infiltration/Inflow & Seepage	
Pond Seepage Method	None

Inflow (Wet) Collection

Physical	
Volume Type	Elevation-Area

Elevation-Area

Elevation (ft)	Area (ft²)	Percent Void Space (%)
724.40	0.000	100.0
725.00	629.020	100.0
726.00	3,371.780	100.0
726.30	4,158.200	100.0
727.00	6,660.000	100.0

Simulation Initial Condition	
Initial Elevation Type	Invert

Results (Engine Parsing)	
Branch	1

Current Basin - 5 year event

Results (Engine Parsing)			

Results (Extended Node)			
Volume	0.00 ac-ft	Freeboard Height	2.6 ft
Depth (Flooding)	-2.60 ft		

Results (Flow)			
Flow (Total In)	0.04 cfs	Local Inflow?	False
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs

Results			
Is Overflowing?	False	Time to Maximum Outflow	12.200 hours
Is Ever Overflowing?	False	Time to Maximum Inflow	12.100 hours
Depth (Node)	0.00 ft	Flow (Out to Links Maximum)	11.21 cfs
Hydraulic Grade	724.40 ft	Flow (Total In Maximum)	11.76 cfs
Time to Maximum Hydraulic Grade	12.150 hours	Flow (Overflow)	0.00 cfs
Hydraulic Grade (Maximum)	726.40 ft	Time to Maximum Storage	12.150 hours
Time to Maximum Overflow	0.000 hours	Storage (Maximum)	0.09 ac-ft
Flow (Overflow Maximum)	0.00 cfs	Flow (Seepage loss)	0.00 cfs

Calculation Messages

Time (hours)	Message

Current Outlet Pipe - 5 Year

<General>			
ID	160	Hyperlinks	<Collection: 0 items>
Label	Current Outlet Pipe - 5 Year	Start Node	POS-5
Notes		Stop Node	CS-5

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,422.54	1,291,756.13
977,392.32	1,291,578.65

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Conduit Description	Circle - 12.0 in
Size (Display)	(N/A)	Set Invert to Start?	False
Section Type	Circle	Invert (Start)	724.40 ft
Material	PVC	Set Invert to Stop?	True
Diameter	15.0 in	Invert (Stop)	722.62 ft
Wall Thickness	0.0 in	Has User Defined Length?	True
Number of Barrels	1	Length (User Defined)	94.0 ft
Roughness Type	Single Roughness	Length (Unified)	94.0 ft
Manning's n	0.010	Slope (Calculated)	0.019 ft/ft
Use Local Conduit Description?	False		

Current Outlet Pipe - 5 Year

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Physical (Culvert)	
Is Culvert?	False

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	2

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	11.56 cfs	Area (Full Flow)	1.2 ft²

Results (Maximum Values)			
Flow (Maximum)	6.90 cfs	Velocity (Maximum Calculated)	9.79 ft/s
Time (Maximum Flow)	12.200 hours	Depth (Maximum) / Rise	55.8 %
Time (Maximum Calculated Velocity)	12.200 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	723.51 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	723.40 ft
Depth (Out)	0.78 ft	Headloss	1.00 ft
Energy Grade Line (In)	724.40 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	723.51 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	723.40 ft	Cover (Average)	-1.25 ft
Hydraulic Grade Line (In)	724.40 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	True	Froude (Stop)	0.000

Current Outlet Pipe - 5 Year

Results			
Time to Maximum Hydraulic Grade	12.200 hours	Flow-Area (Start)	0.0 ft²
Hydraulic Grade (Maximum)	725.10 ft	Flow-Area (Middle)	0.0 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.8 ft²
Rise (Unified)	1.25 ft	Flow-Width (Start)	0.2 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	0.2 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	1.2 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message
11.950	Conduit is operating under pressure.

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	724.40
47.00	0.00	0.00	723.51
94.00	0.00	0.00	723.40

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	0.2	0.0	False
0.00	0.2	0.0	False
0.78	1.2	0.8	False

Section Froude Number
0.000
0.000
0.000

Current Overflow - 5 Year Event

<General>			
ID	96	Hyperlinks	<Collection: 0 items>
Label	Current Overflow - 5 Year Event	Start Node	POS-3
Notes		Stop Node	O-7

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,385.25	1,291,955.74
977,438.07	1,291,957.14

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Conduit Description	Circle - 48.0 in
Size (Display)	(N/A)	Set Invert to Start?	False
Section Type	Circle	Invert (Start)	726.30 ft
Material	PVC	Set Invert to Stop?	True
Diameter	48.0 in	Invert (Stop)	726.20 ft
Wall Thickness	0.3 in	Has User Defined Length?	True
Number of Barrels	1	Length (User Defined)	10.0 ft
Roughness Type	Single Roughness	Length (Unified)	10.0 ft
Manning's n	0.010	Slope (Calculated)	0.010 ft/ft
Use Local Conduit Description?	False		

Current Overflow - 5 Year Event

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Physical (Culvert)	
Is Culvert?	False

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	4

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	186.73 cfs	Area (Full Flow)	12.6 ft²

Results (Maximum Values)			
Flow (Maximum)	4.31 cfs	Velocity (Maximum Calculated)	5.73 ft/s
Time (Maximum Flow)	12.200 hours	Depth (Maximum) / Rise	11.0 %
Time (Maximum Calculated Velocity)	12.200 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	726.25 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	726.20 ft
Depth (Out)	0.00 ft	Headloss	0.10 ft
Energy Grade Line (In)	726.30 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	726.25 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	726.20 ft	Cover (Average)	-4.00 ft
Hydraulic Grade Line (In)	726.30 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	False	Froude (Stop)	0.000

Current Overflow - 5 Year Event

Results			
Time to Maximum Hydraulic Grade	12.400 hours	Flow-Area (Start)	0.0 ft²
Hydraulic Grade (Maximum)	726.42 ft	Flow-Area (Middle)	0.0 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.0 ft²
Rise (Unified)	4.00 ft	Flow-Width (Start)	0.0 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	0.0 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	0.0 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	726.30
5.00	0.00	0.00	726.25
10.00	0.00	0.00	726.20

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	0.0	0.0	False
0.00	0.0	0.0	False
0.00	0.0	0.0	False

Section Froude Number
0.000
0.000
0.000

Current Basin - 50 year event

<General>			
ID	65	Notes	
Label	Current Basin - 50 year event	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>	
Scaled Area	26,345.626 ft²

Geometry

X (ft)	Y (ft)
977,305.72	1,291,967.83
977,317.67	1,291,727.37
977,455.08	1,291,754.26
977,387.87	1,291,979.78

Active Topology	
Is Active?	True

Infiltration/Inflow & Seepage	
Pond Seepage Method	None

Inflow (Wet) Collection

Physical	
Volume Type	Elevation-Area

Elevation-Area

Elevation (ft)	Area (ft²)	Percent Void Space (%)
724.40	0.000	100.0
725.00	629.020	100.0
726.00	3,371.780	100.0
726.30	4,158.200	100.0
727.00	6,660.000	100.0

Simulation Initial Condition	
Initial Elevation Type	Invert

Results (Engine Parsing)	
Branch	1

Current Basin - 50 year event

Results (Engine Parsing)			

Results (Extended Node)			
Volume	0.00 ac-ft	Freeboard Height	2.6 ft
Depth (Flooding)	-2.60 ft		

Results (Flow)			
Flow (Total In)	0.04 cfs	Local Inflow?	False
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs

Results			
Is Overflowing?	False	Time to Maximum Outflow	12.150 hours
Is Ever Overflowing?	False	Time to Maximum Inflow	12.100 hours
Depth (Node)	0.00 ft	Flow (Out to Links Maximum)	21.64 cfs
Hydraulic Grade	724.40 ft	Flow (Total In Maximum)	21.99 cfs
Time to Maximum Hydraulic Grade	12.150 hours	Flow (Overflow)	0.00 cfs
Hydraulic Grade (Maximum)	726.52 ft	Time to Maximum Storage	12.150 hours
Time to Maximum Overflow	0.000 hours	Storage (Maximum)	0.10 ac-ft
Flow (Overflow Maximum)	0.00 cfs	Flow (Seepage loss)	0.00 cfs

Calculation Messages

Time (hours)	Message

Current Outlet Pipe - 50 Year

<General>			
ID	160	Hyperlinks	<Collection: 0 items>
Label	Current Outlet Pipe - 50 Year	Start Node	POS-5
Notes		Stop Node	CS-5

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,422.54	1,291,756.13
977,392.32	1,291,578.65

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Conduit Description	Circle - 12.0 in
Size (Display)	(N/A)	Set Invert to Start?	False
Section Type	Circle	Invert (Start)	724.40 ft
Material	PVC	Set Invert to Stop?	True
Diameter	15.0 in	Invert (Stop)	722.62 ft
Wall Thickness	0.0 in	Has User Defined Length?	True
Number of Barrels	1	Length (User Defined)	94.0 ft
Roughness Type	Single Roughness	Length (Unified)	94.0 ft
Manning's n	0.010	Slope (Calculated)	0.019 ft/ft
Use Local Conduit Description?	False		

Current Outlet Pipe - 50 Year

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Physical (Culvert)	
Is Culvert?	False

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	2

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	11.56 cfs	Area (Full Flow)	1.2 ft²

Results (Maximum Values)			
Flow (Maximum)	7.18 cfs	Velocity (Maximum Calculated)	9.88 ft/s
Time (Maximum Flow)	12.150 hours	Depth (Maximum) / Rise	57.2 %
Time (Maximum Calculated Velocity)	12.150 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	723.51 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	723.40 ft
Depth (Out)	0.78 ft	Headloss	1.00 ft
Energy Grade Line (In)	724.40 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	723.51 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	723.40 ft	Cover (Average)	-1.25 ft
Hydraulic Grade Line (In)	724.40 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	True	Froude (Stop)	0.000

Current Outlet Pipe - 50 Year

Results			
Time to Maximum Hydraulic Grade	12.150 hours	Flow-Area (Start)	0.0 ft²
Hydraulic Grade (Maximum)	725.12 ft	Flow-Area (Middle)	0.0 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.8 ft²
Rise (Unified)	1.25 ft	Flow-Width (Start)	0.2 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	0.2 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	1.2 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message
11.800	Conduit is operating under pressure.

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	724.40
47.00	0.00	0.00	723.51
94.00	0.00	0.00	723.40

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	0.2	0.0	False
0.00	0.2	0.0	False
0.78	1.2	0.8	False

Section Froude Number
0.000
0.000
0.000

Current Overflow - 50 Year Event

<General>			
ID	96	Hyperlinks	<Collection: 0 items>
Label	Current Overflow - 50 Year Event	Start Node	POS-3
Notes		Stop Node	O-7

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,385.25	1,291,955.74
977,438.07	1,291,957.14

Active Topology	
Is Active?	True

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output	
Output Options	Summary Results

Physical			
Conduit Type	User Defined Conduit	Conduit Description	Circle - 48.0 in
Size (Display)	(N/A)	Set Invert to Start?	False
Section Type	Circle	Invert (Start)	726.30 ft
Material	PVC	Set Invert to Stop?	True
Diameter	48.0 in	Invert (Stop)	726.20 ft
Wall Thickness	0.3 in	Has User Defined Length?	True
Number of Barrels	1	Length (User Defined)	10.0 ft
Roughness Type	Single Roughness	Length (Unified)	10.0 ft
Manning's n	0.010	Slope (Calculated)	0.010 ft/ft
Use Local Conduit Description?	False		

Current Overflow - 50 Year Event

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Physical (Culvert)	
Is Culvert?	False

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	4

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	186.73 cfs	Area (Full Flow)	12.6 ft²

Results (Maximum Values)			
Flow (Maximum)	14.47 cfs	Velocity (Maximum Calculated)	8.86 ft/s
Time (Maximum Flow)	12.150 hours	Depth (Maximum) / Rise	18.8 %
Time (Maximum Calculated Velocity)	12.150 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	726.25 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	726.20 ft
Depth (Out)	0.00 ft	Headloss	0.10 ft
Energy Grade Line (In)	726.30 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	726.25 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	726.20 ft	Cover (Average)	-4.00 ft
Hydraulic Grade Line (In)	726.30 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	False	Froude (Stop)	0.000

Current Overflow - 50 Year Event

Results			
Time to Maximum Hydraulic Grade	12.150 hours	Flow-Area (Start)	0.0 ft²
Hydraulic Grade (Maximum)	726.51 ft	Flow-Area (Middle)	0.0 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.0 ft²
Rise (Unified)	4.00 ft	Flow-Width (Start)	0.0 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	0.0 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	0.0 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	726.30
5.00	0.00	0.00	726.25
10.00	0.00	0.00	726.20

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	0.0	0.0	False
0.00	0.0	0.0	False
0.00	0.0	0.0	False

Section Froude Number
0.000
0.000
0.000

1993 As-Built Basin- 1 YEAR EVENT

<General>			
ID	65	Notes	
Label	1993 As-Built Basin- 1 YEAR EVENT	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>	
Scaled Area	26,345.626 ft²

Geometry

X (ft)	Y (ft)
977,305.72	1,291,967.83
977,317.67	1,291,727.37
977,455.08	1,291,754.26
977,387.87	1,291,979.78

Active Topology	
Is Active?	True

Infiltration/Inflow & Seepage	
Pond Seepage Method	None

Inflow (Wet) Collection

Physical	
Volume Type	Elevation-Area

Elevation-Area

Elevation (ft)	Area (ft²)	Percent Void Space (%)
723.21	0.000	100.0
724.00	80.000	100.0
725.00	2,153.690	100.0
726.00	8,496.800	100.0
727.00	12,446.940	100.0

Simulation Initial Condition	
Initial Elevation Type	Invert

Results (Engine Parsing)	
Branch	1

1993 As-Built Basin- 1 YEAR EVENT

Results (Engine Parsing)			

Results (Extended Node)			
Volume	0.00 ac-ft	Freeboard Height	3.8 ft
Depth (Flooding)	-3.79 ft		

Results (Flow)			
Flow (Total In)	0.04 cfs	Local Inflow?	False
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs

Results			
Is Overflowing?	False	Time to Maximum Outflow	12.200 hours
Is Ever Overflowing?	False	Time to Maximum Inflow	12.100 hours
Depth (Node)	0.00 ft	Flow (Out to Links Maximum)	5.53 cfs
Hydraulic Grade	723.21 ft	Flow (Total In Maximum)	5.87 cfs
Time to Maximum Hydraulic Grade	12.150 hours	Flow (Overflow)	0.00 cfs
Hydraulic Grade (Maximum)	724.92 ft	Time to Maximum Storage	12.150 hours
Time to Maximum Overflow	0.000 hours	Storage (Maximum)	0.02 ac-ft
Flow (Overflow Maximum)	0.00 cfs	Flow (Seepage loss)	0.00 cfs

Calculation Messages

Time (hours)	Message

1993 As-Built Outlet Pipe - 1 YEAR

<General>			
ID	151	Hyperlinks	<Collection: 0 items>
Label	1993 As-Built Outlet Pipe - 1 YEAR	Start Node	POS-5
Notes		Stop Node	CS-5

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,422.54	1,291,756.13
977,392.32	1,291,578.65

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output	
Output Options	Summary Results

Physical			
Conduit Type	User Defined Conduit	Conduit Description	Circle - 15.0 in
Size (Display)	(N/A)	Set Invert to Start?	False
Section Type	Circle	Invert (Start)	723.21 ft
Material	CMP	Set Invert to Stop?	True
Diameter	15.0 in	Invert (Stop)	722.82 ft
Wall Thickness	0.1 in	Has User Defined Length?	True
Number of Barrels	1	Length (User Defined)	20.0 ft
Roughness Type	Single Roughness	Length (Unified)	20.0 ft
Manning's n	0.024	Slope (Calculated)	0.019 ft/ft
Use Local Conduit Description?	False		

1993 As-Built Outlet Pipe - 1 YEAR

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Physical (Culvert)	
Is Culvert?	False

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	2

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	4.89 cfs	Area (Full Flow)	1.2 ft²

Results (Maximum Values)			
Flow (Maximum)	5.53 cfs	Velocity (Maximum Calculated)	5.40 ft/s
Time (Maximum Flow)	12.200 hours	Depth (Maximum) / Rise	77.8 %
Time (Maximum Calculated Velocity)	12.200 hours		

Results (Profile)			
Depth (In)	0.19 ft	Hydraulic Grade	723.40 ft
Depth (Middle)	0.39 ft	Hydraulic Grade Line (Out)	723.40 ft
Depth (Out)	0.58 ft	Headloss	0.00 ft
Energy Grade Line (In)	723.40 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	723.40 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	723.40 ft	Cover (Average)	-1.25 ft
Hydraulic Grade Line (In)	723.40 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	False	Froude (Stop)	0.000

1993 As-Built Outlet Pipe - 1 YEAR

Results			
Time to Maximum Hydraulic Grade	12.200 hours	Flow-Area (Start)	0.1 ft²
Hydraulic Grade (Maximum)	724.22 ft	Flow-Area (Middle)	0.3 ft²
Depth/Rise	30.8 %	Flow-Area (Stop)	0.6 ft²
Rise (Unified)	1.25 ft	Flow-Width (Start)	0.9 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	1.2 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	1.2 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	723.40
10.00	0.00	0.00	723.40
20.00	0.00	0.00	723.40

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.19	0.9	0.1	False
0.39	1.2	0.3	False
0.58	1.2	0.6	False

Section Froude Number
0.000
0.000
0.000

1993 As-Built Overflow - 1 Year Event

<General>			
ID	96	Hyperlinks	<Collection: 0 items>
Label	1993 As-Built Overflow - 1 Year Event	Start Node	POS-3
Notes		Stop Node	O-7

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,385.25	1,291,955.74
977,438.07	1,291,957.14

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Use Local Conduit Description?	False
Size (Display)	(N/A)	Conduit Description	Trapezoidal Channel - 30.0 ft
Section Type	Trapezoidal Channel	Set Invert to Start?	False
Material	PVC	Invert (Start)	726.90 ft
Rise	1.0 ft	Set Invert to Stop?	True
Bottom Width	30.0 ft	Invert (Stop)	726.20 ft
Side Slope (Left)	1.000 H:V	Has User Defined Length?	True
Side Slope (Right)	1.000 H:V	Length (User Defined)	10.0 ft
Number of Barrels	1	Length (Unified)	10.0 ft
Roughness Type	Single Roughness	Slope (Calculated)	0.070 ft/ft

1993 As-Built Overflow - 1 Year Event

Physical			
Manning's n	0.010		

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Tractive Stress			
Use Local Minimum Tractive Stress?	False		

Results (Engine Parsing)			
Branch	4		

Results (Flow)			
Flow	0.00 cfs		

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	1,173.04 cfs	Area (Full Flow)	175.0 ft²

Results (Maximum Values)			
Flow (Maximum)	0.00 cfs	Velocity (Maximum Calculated)	0.00 ft/s
Time (Maximum Flow)	0.000 hours	Depth (Maximum) / Rise	0.0 %
Time (Maximum Calculated Velocity)	0.000 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	726.55 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	726.20 ft
Depth (Out)	0.00 ft	Headloss	0.70 ft
Energy Grade Line (In)	726.90 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	726.55 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	726.20 ft	Cover (Average)	-1.05 ft
Hydraulic Grade Line (In)	726.90 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	False	Froude (Stop)	0.000

1993 As-Built Overflow - 1 Year Event

Results			
Time to Maximum Hydraulic Grade	0.000 hours	Flow-Area (Start)	0.3 ft²
Hydraulic Grade (Maximum)	726.90 ft	Flow-Area (Middle)	0.3 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.3 ft²
Rise (Unified)	1.00 ft	Flow-Width (Start)	30.0 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	30.0 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	30.0 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	726.90
5.00	0.00	0.00	726.55
10.00	0.00	0.00	726.20

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	30.0	0.3	False
0.00	30.0	0.3	False
0.00	30.0	0.3	False

Section Froude Number
0.000
0.000
0.000

1993 As-Built Basin- 2 YEAR EVENT

<General>			
ID	65	Notes	
Label	1993 As-Built Basin- 2 YEAR EVENT	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>	
Scaled Area	26,345.626 ft²

Geometry

X (ft)	Y (ft)
977,305.72	1,291,967.83
977,317.67	1,291,727.37
977,455.08	1,291,754.26
977,387.87	1,291,979.78

Active Topology	
Is Active?	True

Infiltration/Inflow & Seepage	
Pond Seepage Method	None

Inflow (Wet) Collection

Physical	
Volume Type	Elevation-Area

Elevation-Area

Elevation (ft)	Area (ft²)	Percent Void Space (%)
723.21	0.000	100.0
724.00	80.000	100.0
725.00	2,153.690	100.0
726.00	8,496.800	100.0
727.00	12,446.940	100.0

Simulation Initial Condition	
Initial Elevation Type	Invert

Results (Engine Parsing)	
Branch	1

1993 As-Built Basin- 2 YEAR EVENT

Results (Engine Parsing)

Results (Extended Node)

Volume	0.00 ac-ft	Freeboard Height	3.8 ft
Depth (Flooding)	-3.79 ft		

Results (Flow)

Flow (Total In)	0.04 cfs	Local Inflow?	False
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs

Results

Is Overflowing?	False	Time to Maximum Outflow	12.250 hours
Is Ever Overflowing?	False	Time to Maximum Inflow	12.100 hours
Depth (Node)	0.00 ft	Flow (Out to Links Maximum)	6.93 cfs
Hydraulic Grade	723.21 ft	Flow (Total In Maximum)	8.34 cfs
Time to Maximum Hydraulic Grade	12.200 hours	Flow (Overflow)	0.00 cfs
Hydraulic Grade (Maximum)	725.22 ft	Time to Maximum Storage	12.200 hours
Time to Maximum Overflow	0.000 hours	Storage (Maximum)	0.04 ac-ft
Flow (Overflow Maximum)	0.00 cfs	Flow (Seepage loss)	0.00 cfs

Calculation Messages

Time (hours)	Message

1993 As-Built Outlet Pipe - 2 YEAR

<General>			
ID	151	Hyperlinks	<Collection: 0 items>
Label	1993 As-Built Outlet Pipe - 2 YEAR	Start Node	POS-5
Notes		Stop Node	CS-5

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,422.54	1,291,756.13
977,392.32	1,291,578.65

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Conduit Description	Circle - 15.0 in
Size (Display)	(N/A)	Set Invert to Start?	False
Section Type	Circle	Invert (Start)	723.21 ft
Material	CMP	Set Invert to Stop?	True
Diameter	15.0 in	Invert (Stop)	722.82 ft
Wall Thickness	0.1 in	Has User Defined Length?	True
Number of Barrels	1	Length (User Defined)	20.0 ft
Roughness Type	Single Roughness	Length (Unified)	20.0 ft
Manning's n	0.024	Slope (Calculated)	0.019 ft/ft
Use Local Conduit Description?	False		

1993 As-Built Outlet Pipe - 2 YEAR

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Physical (Culvert)	
Is Culvert?	False

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	2

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	4.89 cfs	Area (Full Flow)	1.2 ft²

Results (Maximum Values)			
Flow (Maximum)	6.93 cfs	Velocity (Maximum Calculated)	6.28 ft/s
Time (Maximum Flow)	12.250 hours	Depth (Maximum) / Rise	84.3 %
Time (Maximum Calculated Velocity)	12.250 hours		

Results (Profile)			
Depth (In)	0.19 ft	Hydraulic Grade	723.40 ft
Depth (Middle)	0.39 ft	Hydraulic Grade Line (Out)	723.40 ft
Depth (Out)	0.58 ft	Headloss	0.00 ft
Energy Grade Line (In)	723.40 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	723.40 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	723.40 ft	Cover (Average)	-1.25 ft
Hydraulic Grade Line (In)	723.40 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	False	Froude (Stop)	0.000

1993 As-Built Outlet Pipe - 2 YEAR

Results			
Time to Maximum Hydraulic Grade	12.250 hours	Flow-Area (Start)	0.1 ft²
Hydraulic Grade (Maximum)	724.43 ft	Flow-Area (Middle)	0.3 ft²
Depth/Rise	30.8 %	Flow-Area (Stop)	0.6 ft²
Rise (Unified)	1.25 ft	Flow-Width (Start)	0.9 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	1.2 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	1.2 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	723.40
10.00	0.00	0.00	723.40
20.00	0.00	0.00	723.40

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.19	0.9	0.1	False
0.39	1.2	0.3	False
0.58	1.2	0.6	False

Section Froude Number
0.000
0.000
0.000

1993 As-Built Overflow - 2 Year Event

<General>			
ID	96	Hyperlinks	<Collection: 0 items>
Label	1993 As-Built Overflow - 2 Year Event	Start Node	POS-3
Notes		Stop Node	O-7

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,385.25	1,291,955.74
977,438.07	1,291,957.14

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Use Local Conduit Description?	False
Size (Display)	(N/A)	Conduit Description	Trapezoidal Channel - 30.0 ft
Section Type	Trapezoidal Channel	Set Invert to Start?	False
Material	PVC	Invert (Start)	726.90 ft
Rise	1.0 ft	Set Invert to Stop?	True
Bottom Width	30.0 ft	Invert (Stop)	726.20 ft
Side Slope (Left)	1.000 H:V	Has User Defined Length?	True
Side Slope (Right)	1.000 H:V	Length (User Defined)	10.0 ft
Number of Barrels	1	Length (Unified)	10.0 ft
Roughness Type	Single Roughness	Slope (Calculated)	0.070 ft/ft

1993 As-Built Overflow - 2 Year Event

Physical			
Manning's n	0.010		

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Tractive Stress			
Use Local Minimum Tractive Stress?	False		

Results (Engine Parsing)			
Branch	4		

Results (Flow)			
Flow	0.00 cfs		

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	1,173.04 cfs	Area (Full Flow)	175.0 ft²

Results (Maximum Values)			
Flow (Maximum)	0.00 cfs	Velocity (Maximum Calculated)	0.00 ft/s
Time (Maximum Flow)	0.000 hours	Depth (Maximum) / Rise	0.0 %
Time (Maximum Calculated Velocity)	0.000 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	726.55 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	726.20 ft
Depth (Out)	0.00 ft	Headloss	0.70 ft
Energy Grade Line (In)	726.90 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	726.55 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	726.20 ft	Cover (Average)	-1.05 ft
Hydraulic Grade Line (In)	726.90 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	False	Froude (Stop)	0.000

1993 As-Built Overflow - 2 Year Event

Results			
Time to Maximum Hydraulic Grade	0.000 hours	Flow-Area (Start)	0.3 ft²
Hydraulic Grade (Maximum)	726.90 ft	Flow-Area (Middle)	0.3 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.3 ft²
Rise (Unified)	1.00 ft	Flow-Width (Start)	30.0 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	30.0 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	30.0 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	726.90
5.00	0.00	0.00	726.55
10.00	0.00	0.00	726.20

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	30.0	0.3	False
0.00	30.0	0.3	False
0.00	30.0	0.3	False

Section Froude Number
0.000
0.000
0.000

1993 As-Built Basin- 5 YEAR EVENT

<General>

ID	65	Notes	
Label	1993 As-Built Basin- 5 YEAR EVENT	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>

Scaled Area	26,345.626 ft²

Geometry

X (ft)	Y (ft)
977,305.72	1,291,967.83
977,317.67	1,291,727.37
977,455.08	1,291,754.26
977,387.87	1,291,979.78

Active Topology

Is Active?	True

Infiltration/Inflow & Seepage

Pond Seepage Method	None

Inflow (Wet) Collection

Physical

Volume Type	Elevation-Area

Elevation-Area

Elevation (ft)	Area (ft²)	Percent Void Space (%)
723.21	0.000	100.0
724.00	80.000	100.0
725.00	2,153.690	100.0
726.00	8,496.800	100.0
727.00	12,446.940	100.0

Simulation Initial Condition

Initial Elevation Type	Invert

Results (Engine Parsing)

Branch	1

1993 As-Built Basin- 5 YEAR EVENT

Results (Engine Parsing)			

Results (Extended Node)			
Volume	0.00 ac-ft	Freeboard Height	3.8 ft
Depth (Flooding)	-3.79 ft		

Results (Flow)			
Flow (Total In)	0.04 cfs	Local Inflow?	False
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs

Results			
Is Overflowing?	False	Time to Maximum Outflow	12.300 hours
Is Ever Overflowing?	False	Time to Maximum Inflow	12.100 hours
Depth (Node)	0.00 ft	Flow (Out to Links Maximum)	7.86 cfs
Hydraulic Grade	723.21 ft	Flow (Total In Maximum)	11.71 cfs
Time to Maximum Hydraulic Grade	12.250 hours	Flow (Overflow)	0.00 cfs
Hydraulic Grade (Maximum)	725.74 ft	Time to Maximum Storage	12.250 hours
Time to Maximum Overflow	0.000 hours	Storage (Maximum)	0.10 ac-ft
Flow (Overflow Maximum)	0.00 cfs	Flow (Seepage loss)	0.00 cfs

Calculation Messages

Time (hours)	Message

1993 As-Built Outlet Pipe - 5 YEAR

<General>			
ID	151	Hyperlinks	<Collection: 0 items>
Label	1993 As-Built Outlet Pipe - 5 YEAR	Start Node	POS-5
Notes		Stop Node	CS-5

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,422.54	1,291,756.13
977,392.32	1,291,578.65

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Conduit Description	Circle - 15.0 in
Size (Display)	(N/A)	Set Invert to Start?	False
Section Type	Circle	Invert (Start)	723.21 ft
Material	CMP	Set Invert to Stop?	True
Diameter	15.0 in	Invert (Stop)	722.82 ft
Wall Thickness	0.1 in	Has User Defined Length?	True
Number of Barrels	1	Length (User Defined)	20.0 ft
Roughness Type	Single Roughness	Length (Unified)	20.0 ft
Manning's n	0.024	Slope (Calculated)	0.019 ft/ft
Use Local Conduit Description?	False		

Bentley Systems, Inc. Haestad Methods Solution Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

1993 As-Built Outlet Pipe - 5 YEAR

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Physical (Culvert)	
Is Culvert?	False

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	2

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	4.89 cfs	Area (Full Flow)	1.2 ft²

Results (Maximum Values)			
Flow (Maximum)	7.86 cfs	Velocity (Maximum Calculated)	6.68 ft/s
Time (Maximum Flow)	12.300 hours	Depth (Maximum) / Rise	91.5 %
Time (Maximum Calculated Velocity)	12.300 hours		

Results (Profile)			
Depth (In)	0.19 ft	Hydraulic Grade	723.40 ft
Depth (Middle)	0.39 ft	Hydraulic Grade Line (Out)	723.40 ft
Depth (Out)	0.58 ft	Headloss	0.00 ft
Energy Grade Line (In)	723.40 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	723.40 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	723.40 ft	Cover (Average)	-1.25 ft
Hydraulic Grade Line (In)	723.40 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	True	Froude (Stop)	0.000

1993 As-Built Outlet Pipe - 5 YEAR

Results

Time to Maximum Hydraulic Grade	12.300 hours	Flow-Area (Start)	0.1 ft²
Hydraulic Grade (Maximum)	724.65 ft	Flow-Area (Middle)	0.3 ft²
Depth/Rise	30.8 %	Flow-Area (Stop)	0.6 ft²
Rise (Unified)	1.25 ft	Flow-Width (Start)	0.9 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	1.2 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	1.2 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message
12.100	Conduit is operating under pressure.

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	723.40
10.00	0.00	0.00	723.40
20.00	0.00	0.00	723.40

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.19	0.9	0.1	False
0.39	1.2	0.3	False
0.58	1.2	0.6	False

Section Froude Number
0.000
0.000
0.000

1993 As-Built Overflow - 5 Year Event

<General>			
ID	96	Hyperlinks	<Collection: 0 items>
Label	1993 As-Built Overflow - 5 Year Event	Start Node	POS-3
Notes		Stop Node	O-7

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,385.25	1,291,955.74
977,438.07	1,291,957.14

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Use Local Conduit Description?	False
Size (Display)	(N/A)	Conduit Description	Trapezoidal Channel - 30.0 ft
Section Type	Trapezoidal Channel	Set Invert to Start?	False
Material	PVC	Invert (Start)	726.90 ft
Rise	1.0 ft	Set Invert to Stop?	True
Bottom Width	30.0 ft	Invert (Stop)	726.20 ft
Side Slope (Left)	1.000 H:V	Has User Defined Length?	True
Side Slope (Right)	1.000 H:V	Length (User Defined)	10.0 ft
Number of Barrels	1	Length (Unified)	10.0 ft
Roughness Type	Single Roughness	Slope (Calculated)	0.070 ft/ft

1993 As-Built Overflow - 5 Year Event

Physical			
Manning's n	0.010		

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Tractive Stress			
Use Local Minimum Tractive Stress?	False		

Results (Engine Parsing)			
Branch	4		

Results (Flow)			
Flow	0.00 cfs		

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	1,173.04 cfs	Area (Full Flow)	175.0 ft²

Results (Maximum Values)			
Flow (Maximum)	0.00 cfs	Velocity (Maximum Calculated)	0.00 ft/s
Time (Maximum Flow)	0.000 hours	Depth (Maximum) / Rise	0.0 %
Time (Maximum Calculated Velocity)	0.000 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	726.55 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	726.20 ft
Depth (Out)	0.00 ft	Headloss	0.70 ft
Energy Grade Line (In)	726.90 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	726.55 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	726.20 ft	Cover (Average)	-1.05 ft
Hydraulic Grade Line (In)	726.90 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	False	Froude (Stop)	0.000

1993 As-Built Overflow - 5 Year Event

Results			
Time to Maximum Hydraulic Grade	0.000 hours	Flow-Area (Start)	0.3 ft²
Hydraulic Grade (Maximum)	726.90 ft	Flow-Area (Middle)	0.3 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.3 ft²
Rise (Unified)	1.00 ft	Flow-Width (Start)	30.0 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	30.0 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	30.0 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	726.90
5.00	0.00	0.00	726.55
10.00	0.00	0.00	726.20

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	30.0	0.3	False
0.00	30.0	0.3	False
0.00	30.0	0.3	False

Section Froude Number
0.000
0.000
0.000

1993 As-Built Basin- 50 YEAR EVENT

<General>

ID	65	Notes	
Label	1993 As-Built Basin- 50 YEAR EVENT	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>

Scaled Area	26,345.626 ft²

Geometry

X (ft)	Y (ft)
977,305.72	1,291,967.83
977,317.67	1,291,727.37
977,455.08	1,291,754.26
977,387.87	1,291,979.78

Active Topology

Is Active?	True

Infiltration/Inflow & Seepage

Pond Seepage Method	None

Inflow (Wet) Collection

Physical

Volume Type	Elevation-Area

Elevation-Area

Elevation (ft)	Area (ft²)	Percent Void Space (%)
723.21	0.000	100.0
724.00	80.000	100.0
725.00	2,153.690	100.0
726.00	8,496.800	100.0
727.00	12,446.940	100.0

Simulation Initial Condition

Initial Elevation Type	Invert

Results (Engine Parsing)

Branch	1

1993 As-Built Basin- 50 YEAR EVENT

Results (Engine Parsing)			

Results (Extended Node)			
Volume	0.00 ac-ft	Freeboard Height	3.8 ft
Depth (Flooding)	-3.79 ft		

Results (Flow)			
Flow (Total In)	0.04 cfs	Local Inflow?	False
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs

Results			
Is Overflowing?	False	Time to Maximum Outflow	12.300 hours
Is Ever Overflowing?	False	Time to Maximum Inflow	12.100 hours
Depth (Node)	0.00 ft	Flow (Out to Links Maximum)	14.82 cfs
Hydraulic Grade	723.21 ft	Flow (Total In Maximum)	21.99 cfs
Time to Maximum Hydraulic Grade	12.250 hours	Flow (Overflow)	0.00 cfs
Hydraulic Grade (Maximum)	726.93 ft	Time to Maximum Storage	12.250 hours
Time to Maximum Overflow	0.000 hours	Storage (Maximum)	0.37 ac-ft
Flow (Overflow Maximum)	0.00 cfs	Flow (Seepage loss)	0.00 cfs

Calculation Messages

Time (hours)	Message

1993 As-Built Outlet Pipe - 50 YEAR

<General>			
ID	151	Hyperlinks	<Collection: 0 items>
Label	1993 As-Built Outlet Pipe - 50 YEAR	Start Node	POS-5
Notes		Stop Node	CS-5

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,422.54	1,291,756.13
977,392.32	1,291,578.65

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Conduit Description	Circle - 15.0 in
Size (Display)	(N/A)	Set Invert to Start?	False
Section Type	Circle	Invert (Start)	723.21 ft
Material	CMP	Set Invert to Stop?	True
Diameter	15.0 in	Invert (Stop)	722.82 ft
Wall Thickness	0.1 in	Has User Defined Length?	True
Number of Barrels	1	Length (User Defined)	20.0 ft
Roughness Type	Single Roughness	Length (Unified)	20.0 ft
Manning's n	0.024	Slope (Calculated)	0.019 ft/ft
Use Local Conduit Description?	False		

1993 As-Built Outlet Pipe - 50 YEAR

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Physical (Culvert)	
Is Culvert?	False

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	2

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	4.89 cfs	Area (Full Flow)	1.2 ft²

Results (Maximum Values)			
Flow (Maximum)	7.97 cfs	Velocity (Maximum Calculated)	6.68 ft/s
Time (Maximum Flow)	12.300 hours	Depth (Maximum) / Rise	93.5 %
Time (Maximum Calculated Velocity)	12.300 hours		

Results (Profile)			
Depth (In)	0.19 ft	Hydraulic Grade	723.40 ft
Depth (Middle)	0.39 ft	Hydraulic Grade Line (Out)	723.40 ft
Depth (Out)	0.58 ft	Headloss	0.00 ft
Energy Grade Line (In)	723.40 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	723.40 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	723.40 ft	Cover (Average)	-1.25 ft
Hydraulic Grade Line (In)	723.40 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	True	Froude (Stop)	0.000

1993 As-Built Outlet Pipe - 50 YEAR

Results			
Time to Maximum Hydraulic Grade	12.300 hours	Flow-Area (Start)	0.1 ft²
Hydraulic Grade (Maximum)	724.69 ft	Flow-Area (Middle)	0.3 ft²
Depth/Rise	30.8 %	Flow-Area (Stop)	0.6 ft²
Rise (Unified)	1.25 ft	Flow-Width (Start)	0.9 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	1.2 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	1.2 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	723.40
10.00	0.00	0.00	723.40
20.00	0.00	0.00	723.40

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.19	0.9	0.1	False
0.39	1.2	0.3	False
0.58	1.2	0.6	False

Section Froude Number
0.000
0.000
0.000

1993 As-Built Overflow - 50 Year Event

<General>			
ID	96	Hyperlinks	<Collection: 0 items>
Label	1993 As-Built Overflow - 50 Year Event	Start Node	POS-3
Notes		Stop Node	O-7

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,385.25	1,291,955.74
977,438.07	1,291,957.14

Active Topology	
Is Active?	True

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output	
Output Options	Summary Results

Physical			
Conduit Type	User Defined Conduit	Use Local Conduit Description?	False
Size (Display)	(N/A)	Conduit Description	Trapezoidal Channel - 30.0 ft
Section Type	Trapezoidal Channel	Set Invert to Start?	False
Material	PVC	Invert (Start)	726.90 ft
Rise	1.0 ft	Set Invert to Stop?	True
Bottom Width	30.0 ft	Invert (Stop)	726.20 ft
Side Slope (Left)	1.000 H:V	Has User Defined Length?	True
Side Slope (Right)	1.000 H:V	Length (User Defined)	10.0 ft
Number of Barrels	1	Length (Unified)	10.0 ft
Roughness Type	Single Roughness	Slope (Calculated)	0.070 ft/ft

1993 As-Built Overflow - 50 Year Event

Physical			
Manning's n	0.010		

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Tractive Stress			
Use Local Minimum Tractive Stress?	False		

Results (Engine Parsing)			
Branch	4		

Results (Flow)			
Flow	0.00 cfs		

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	1,173.04 cfs	Area (Full Flow)	175.0 ft²

Results (Maximum Values)			
Flow (Maximum)	6.85 cfs	Velocity (Maximum Calculated)	3.56 ft/s
Time (Maximum Flow)	12.300 hours	Depth (Maximum) / Rise	6.4 %
Time (Maximum Calculated Velocity)	12.300 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	726.55 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	726.20 ft
Depth (Out)	0.00 ft	Headloss	0.70 ft
Energy Grade Line (In)	726.90 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	726.55 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	726.20 ft	Cover (Average)	-1.05 ft
Hydraulic Grade Line (In)	726.90 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	False	Froude (Stop)	0.000

1993 As-Built Overflow - 50 Year Event

Results			
Time to Maximum Hydraulic Grade	12.300 hours	Flow-Area (Start)	0.3 ft²
Hydraulic Grade (Maximum)	726.92 ft	Flow-Area (Middle)	0.3 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.3 ft²
Rise (Unified)	1.00 ft	Flow-Width (Start)	30.0 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	30.0 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	30.0 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	726.90
5.00	0.00	0.00	726.55
10.00	0.00	0.00	726.20

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	30.0	0.3	False
0.00	30.0	0.3	False
0.00	30.0	0.3	False

Section Froude Number
0.000
0.000
0.000

1993 Pre-Develop Drainage Area- 1 YEAR

<General>			
ID	53	Notes	
Label	1993 Pre-Develop Drainage Area- 1 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>			
Scaled Area	317,410.659 ft²	Area (User Defined)	377,562.710 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
977,254.87	1,291,785.26
977,261.44	1,292,027.24
976,281.60	1,292,142.99
976,266.25	1,291,740.77

Active Topology	
Is Active?	True

Catchment	
Outflow Element	2008 Basin-100 year event

Inflow (Wet) Collection

Rainfall

Use Local Rainfall?	False

Runoff

Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.301 hours
SCS CN	82.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	82.000		

Tc Data Collection

TR-55 Sheet Flow

1993 Pre-Develop Drainage Area- 1 YEAR

TR-55 Sheet Flow			
Hydraulic Length	100.0 ft	Slope	0.013 ft/ft
Manning's n	0.170	2 Year 24 Hour Depth	3.0 in

TR-55 Shallow Concentrated Flow			
Hydraulic Length	665.0 ft	Slope	0.013 ft/ft
Is Paved?	True		

Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in

Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		

Results (Maximum Values)			
Flow (Maximum)	18.70 cfs	Time (Maximum Flow)	12.050 hours

Results			
Area (Unified)	377,562.710 ft²	Volume (Total Runoff)	1.41 ac-ft

Calculation Messages

Time (hours)	Message
(N/A)	The difference between calculated peak flow and interpolated peak flow 2.0 % is greater than 1.5 %. Computed peak flow= 19.09 cfs Interp. peak flow= 18.70 cfs. Output increment for this catchment may be too large.

1993 Pre-Develop Drainage Area- 2 YEAR

<General>			
ID	53	Notes	
Label	1993 Pre-Develop Drainage Area- 2 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>			
Scaled Area	317,410.659 ft²	Area (User Defined)	377,562.710 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
977,254.87	1,291,785.26
977,261.44	1,292,027.24
976,281.60	1,292,142.99
976,266.25	1,291,740.77

Active Topology	
Is Active?	True

Catchment	
Outflow Element	2008 Basin-100 year event

Inflow (Wet) Collection

Rainfall	
Use Local Rainfall?	False

Runoff			
Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.301 hours
SCS CN	82.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	82.000		

Tc Data Collection

TR-55 Sheet Flow

1993 Pre-Develop Drainage Area- 2 YEAR

TR-55 Sheet Flow			
Hydraulic Length	100.0 ft	Slope	0.013 ft/ft
Manning's n	0.170	2 Year 24 Hour Depth	3.0 in

TR-55 Shallow Concentrated Flow			
Hydraulic Length	665.0 ft	Slope	0.013 ft/ft
Is Paved?	True		

Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in

Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		

Results (Maximum Values)			
Flow (Maximum)	13.16 cfs	Time (Maximum Flow)	12.100 hours

Results			
Area (Unified)	377,562.710 ft²	Volume (Total Runoff)	1.00 ac-ft

Calculation Messages

Time (hours)	Message
(N/A)	The difference between calculated peak flow and interpolated peak flow 2.2 % is greater than 1.5 %. Computed peak flow= 13.46 cfs Interp. peak flow= 13.16 cfs. Output increment for this catchment may be too large.

1993 Pre-Develop Drainage Area- 5 YEAR

<General>			
ID	53	Notes	
Label	1993 Pre-Develop Drainage Area- 5 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>			
Scaled Area	317,410.659 ft²	Area (User Defined)	377,562.710 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
977,254.87	1,291,785.26
977,261.44	1,292,027.24
976,281.60	1,292,142.99
976,266.25	1,291,740.77

Active Topology	
Is Active?	True

Catchment	
Outflow Element	2008 Basin-100 year event

Inflow (Wet) Collection

Rainfall	
Use Local Rainfall?	False

Runoff			
Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.301 hours
SCS CN	82.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	82.000		

Tc Data Collection

TR-55 Sheet Flow

Bentley Systems, Inc. Haestad Methods Solution Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

1993 Pre-Develop Drainage Area- 5 YEAR

TR-55 Sheet Flow			
Hydraulic Length	100.0 ft	Slope	0.013 ft/ft
Manning's n	0.170	2 Year 24 Hour Depth	3.0 in

TR-55 Shallow Concentrated Flow			
Hydraulic Length	665.0 ft	Slope	0.013 ft/ft
Is Paved?	True		

Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in

Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		

Results (Maximum Values)			
Flow (Maximum)	18.70 cfs	Time (Maximum Flow)	12.050 hours

Results			
Area (Unified)	377,562.710 ft²	Volume (Total Runoff)	1.41 ac-ft

Calculation Messages

Time (hours)	Message
(N/A)	The difference between calculated peak flow and interpolated peak flow 2.0 % is greater than 1.5 %. Computed peak flow= 19.09 cfs Interp. peak flow= 18.70 cfs. Output increment for this catchment may be too large.

1993 Pre-Develop Drainage Area- 50 YEAR

<General>			
ID	53	Notes	
Label	1993 Pre-Develop Drainage Area- 50 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>			
Scaled Area	317,410.659 ft²	Area (User Defined)	377,562.710 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
977,254.87	1,291,785.26
977,261.44	1,292,027.24
976,281.60	1,292,142.99
976,266.25	1,291,740.77

Active Topology	
Is Active?	True

Catchment			
Outflow Element	2008 Basin-100 year event		

Inflow (Wet) Collection

Rainfall			
Use Local Rainfall?	False		

Runoff			
Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.301 hours
SCS CN	82.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	82.000		

Tc Data Collection

TR-55 Sheet Flow

1993 Pre-Develop Drainage Area- 50 YEAR

TR-55 Sheet Flow			
Hydraulic Length	100.0 ft	Slope	0.013 ft/ft
Manning's n	0.170	2 Year 24 Hour Depth	3.0 in

TR-55 Shallow Concentrated Flow			
Hydraulic Length	665.0 ft	Slope	0.013 ft/ft
Is Paved?	True		

Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in

Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		

Results (Maximum Values)			
Flow (Maximum)	36.52 cfs	Time (Maximum Flow)	12.050 hours

Results			
Area (Unified)	377,562.710 ft²	Volume (Total Runoff)	2.76 ac-ft

Calculation Messages

Time (hours)	Message

North Uncontrolled Drainage Area- 1 YEAR

<General>			
ID	159	Notes	
Label	North Uncontrolled Drainage Area- 1 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>			
Scaled Area	108,303.605 ft²	Area (User Defined)	59,763.250 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
976,491.09	1,291,982.24
976,394.79	1,291,987.83
976,396.19	1,292,364.66
977,310.35	1,292,254.40
977,296.39	1,292,152.52
977,215.44	1,292,176.24
976,486.91	1,292,266.96
976,493.89	1,292,139.95

Active Topology	
Is Active?	True

Catchment	
Outflow Element	O-7

Inflow (Wet) Collection

Rainfall	
Use Local Rainfall?	False

Runoff			
Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.306 hours
SCS CN	83.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	83.000		

Tc Data Collection

North Uncontrolled Drainage Area- 1 YEAR

TR-55 Sheet Flow			
Hydraulic Length	100.0 ft	Slope	0.013 ft/ft
Manning's n	0.170	2 Year 24 Hour Depth	3.0 in
TR-55 Shallow Concentrated Flow			
Hydraulic Length	560.0 ft	Slope	0.013 ft/ft
Is Paved?	False		
Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in
Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		
Results (Maximum Values)			
Flow (Maximum)	1.55 cfs	Time (Maximum Flow)	12.100 hours
Results			
Area (Unified)	59,763.250 ft²	Volume (Total Runoff)	0.12 ac-ft

Calculation Messages

Time (hours)	Message
(N/A)	The difference between calculated peak flow and interpolated peak flow 1.8 % is greater than 1.5 %. Computed peak flow= 1.58 cfs Interp. peak flow= 1.55 cfs. Output increment for this catchment may be too large.

South Uncontrolled Drainage Area- 1 YEAR

<General>			
ID	158	Notes	
Label	South Uncontrolled Drainage Area- 1 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>			
Scaled Area	109,685.620 ft²	Area (User Defined)	59,763.250 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
976,489.70	1,291,978.06
976,393.40	1,291,980.85
976,397.58	1,291,506.32
977,338.26	1,291,535.63
977,327.10	1,291,627.75
976,488.30	1,291,571.92

Active Topology	
Is Active?	True

Catchment	
Outflow Element	O-9

Inflow (Wet) Collection

Rainfall	
Use Local Rainfall?	False

Runoff			
Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.306 hours
SCS CN	83.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	83.000		

Tc Data Collection

TR-55 Sheet Flow

South Uncontrolled Drainage Area- 1 YEAR

TR-55 Sheet Flow			
Hydraulic Length	100.0 ft	Slope	0.013 ft/ft
Manning's n	0.170	2 Year 24 Hour Depth	3.0 in
TR-55 Shallow Concentrated Flow			
Hydraulic Length	560.0 ft	Slope	0.013 ft/ft
Is Paved?	False		
Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in
Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		
Results (Maximum Values)			
Flow (Maximum)	1.55 cfs	Time (Maximum Flow)	12.100 hours
Results			
Area (Unified)	59,763.250 ft²	Volume (Total Runoff)	0.12 ac-ft

Calculation Messages

Time (hours)	Message
(N/A)	The difference between calculated peak flow and interpolated peak flow 1.8 % is greater than 1.5 %. Computed peak flow= 1.58 cfs Interp. peak flow= 1.55 cfs. Output increment for this catchment may be too large.

North Uncontrolled Drainage Area- 2 YEAR

<General>			
ID	159	Notes	
Label	North Uncontrolled Drainage Area- 2 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>			
Scaled Area	108,303.605 ft²	Area (User Defined)	59,763.250 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
976,491.09	1,291,982.24
976,394.79	1,291,987.83
976,396.19	1,292,364.66
977,310.35	1,292,254.40
977,296.39	1,292,152.52
977,215.44	1,292,176.24
976,486.91	1,292,266.96
976,493.89	1,292,139.95

Active Topology	
Is Active?	True

Catchment	
Outflow Element	O-7

Inflow (Wet) Collection

Rainfall	
Use Local Rainfall?	False

Runoff			
Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.306 hours
SCS CN	83.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	83.000		

Tc Data Collection

North Uncontrolled Drainage Area- 2 YEAR

TR-55 Sheet Flow			
Hydraulic Length	100.0 ft	Slope	0.013 ft/ft
Manning's n	0.170	2 Year 24 Hour Depth	3.0 in

TR-55 Shallow Concentrated Flow			
Hydraulic Length	560.0 ft	Slope	0.013 ft/ft
Is Paved?	False		

Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in

Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		

Results (Maximum Values)			
Flow (Maximum)	2.18 cfs	Time (Maximum Flow)	12.100 hours

Results			
Area (Unified)	59,763.250 ft²	Volume (Total Runoff)	0.17 ac-ft

Calculation Messages

Time (hours)	Message
(N/A)	The difference between calculated peak flow and interpolated peak flow 2.2 % is greater than 1.5 %. Computed peak flow= 2.23 cfs Interp. peak flow= 2.18 cfs. Output increment for this catchment may be too large.

South Uncontrolled Drainage Area- 2 YEAR

<General>			
ID	158	Notes	
Label	South Uncontrolled Drainage Area- 2 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>			
Scaled Area	109,685.620 ft²	Area (User Defined)	59,763.250 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
976,489.70	1,291,978.06
976,393.40	1,291,980.85
976,397.58	1,291,506.32
977,338.26	1,291,535.63
977,327.10	1,291,627.75
976,488.30	1,291,571.92

Active Topology	
Is Active?	True

Catchment	
Outflow Element	O-9

Inflow (Wet) Collection

Rainfall

Use Local Rainfall?	False

Runoff

Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.306 hours
SCS CN	83.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	83.000		

Tc Data Collection

TR-55 Sheet Flow

South Uncontrolled Drainage Area- 2 YEAR

TR-55 Sheet Flow			
Hydraulic Length	100.0 ft	Slope	0.013 ft/ft
Manning's n	0.170	2 Year 24 Hour Depth	3.0 in

TR-55 Shallow Concentrated Flow			
Hydraulic Length	560.0 ft	Slope	0.013 ft/ft
Is Paved?	False		

Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in

Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		

Results (Maximum Values)			
Flow (Maximum)	2.18 cfs	Time (Maximum Flow)	12.100 hours

Results			
Area (Unified)	59,763.250 ft²	Volume (Total Runoff)	0.17 ac-ft

Calculation Messages

Time (hours)	Message
(N/A)	The difference between calculated peak flow and interpolated peak flow 2.2 % is greater than 1.5 %. Computed peak flow= 2.23 cfs Interp. peak flow= 2.18 cfs. Output increment for this catchment may be too large.

North Uncontrolled Drainage Area- 5 YEAR

<General>			
ID	159	Notes	
Label	North Uncontrolled Drainage Area- 5 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>			
Scaled Area	108,303.605 ft²	Area (User Defined)	59,763.250 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
976,491.09	1,291,982.24
976,394.79	1,291,987.83
976,396.19	1,292,364.66
977,310.35	1,292,254.40
977,296.39	1,292,152.52
977,215.44	1,292,176.24
976,486.91	1,292,266.96
976,493.89	1,292,139.95

Active Topology	
Is Active?	True

Catchment	
Outflow Element	O-7

Inflow (Wet) Collection

Rainfall	
Use Local Rainfall?	False

Runoff			
Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.306 hours
SCS CN	83.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	83.000		

Tc Data Collection

North Uncontrolled Drainage Area- 5 YEAR

TR-55 Sheet Flow			
Hydraulic Length	100.0 ft	Slope	0.013 ft/ft
Manning's n	0.170	2 Year 24 Hour Depth	3.0 in
TR-55 Shallow Concentrated Flow			
Hydraulic Length	560.0 ft	Slope	0.013 ft/ft
Is Paved?	False		
Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in
Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		
Results (Maximum Values)			
Flow (Maximum)	3.06 cfs	Time (Maximum Flow)	12.050 hours
Results			
Area (Unified)	59,763.250 ft²	Volume (Total Runoff)	0.23 ac-ft

Calculation Messages

Time (hours)	Message
(N/A)	The difference between calculated peak flow and interpolated peak flow 2.1 % is greater than 1.5 %. Computed peak flow= 3.13 cfs Interp. peak flow= 3.06 cfs. Output increment for this catchment may be too large.

South Uncontrolled Drainage Area- 5 YEAR

<General>			
ID	158	Notes	
Label	South Uncontrolled Drainage Area- 5 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>			
Scaled Area	109,685.620 ft²	Area (User Defined)	59,763.250 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
976,489.70	1,291,978.06
976,393.40	1,291,980.85
976,397.58	1,291,506.32
977,338.26	1,291,535.63
977,327.10	1,291,627.75
976,488.30	1,291,571.92

Active Topology	
Is Active?	True

Catchment	
Outflow Element	O-9

Inflow (Wet) Collection

Rainfall	
Use Local Rainfall?	False

Runoff			
Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.306 hours
SCS CN	83.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	83.000		

Tc Data Collection

TR-55 Sheet Flow

South Uncontrolled Drainage Area- 5 YEAR

TR-55 Sheet Flow			
Hydraulic Length	100.0 ft	Slope	0.013 ft/ft
Manning's n	0.170	2 Year 24 Hour Depth	3.0 in

TR-55 Shallow Concentrated Flow			
Hydraulic Length	560.0 ft	Slope	0.013 ft/ft
Is Paved?	False		

Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in

Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		

Results (Maximum Values)			
Flow (Maximum)	3.06 cfs	Time (Maximum Flow)	12.050 hours

Results			
Area (Unified)	59,763.250 ft²	Volume (Total Runoff)	0.23 ac-ft

Calculation Messages

Time (hours)	Message
(N/A)	The difference between calculated peak flow and interpolated peak flow 2.1 % is greater than 1.5 %. Computed peak flow= 3.13 cfs Interp. peak flow= 3.06 cfs. Output increment for this catchment may be too large.

North Uncontrolled Drainage Area- 50 YEAR

<General>			
ID	159	Notes	
Label	North Uncontrolled Drainage Area- 50 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>			
Scaled Area	108,303.605 ft²	Area (User Defined)	59,763.250 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
976,491.09	1,291,982.24
976,394.79	1,291,987.83
976,396.19	1,292,364.66
977,310.35	1,292,254.40
977,296.39	1,292,152.52
977,215.44	1,292,176.24
976,486.91	1,292,266.96
976,493.89	1,292,139.95

Active Topology	
Is Active?	True

Catchment	
Outflow Element	O-7

Inflow (Wet) Collection

Rainfall	
Use Local Rainfall?	False

Runoff			
Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.306 hours
SCS CN	83.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	83.000		

North Uncontrolled Drainage Area- 50 YEAR

Tc Data Collection

TR-55 Sheet Flow			
Hydraulic Length	100.0 ft	Slope	0.013 ft/ft
Manning's n	0.170	2 Year 24 Hour Depth	3.0 in
TR-55 Shallow Concentrated Flow			
Hydraulic Length	560.0 ft	Slope	0.013 ft/ft
Is Paved?	False		
Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in
Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		
Results (Maximum Values)			
Flow (Maximum)	5.88 cfs	Time (Maximum Flow)	12.050 hours
Results			
Area (Unified)	59,763.250 ft²	Volume (Total Runoff)	0.45 ac-ft

Calculation Messages

Time (hours)	Message

South Uncontrolled Drainage Area- 50 YEAR

<General>			
ID	158	Notes	
Label	South Uncontrolled Drainage Area- 50 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>			
Scaled Area	109,685.620 ft²	Area (User Defined)	59,763.250 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
976,489.70	1,291,978.06
976,393.40	1,291,980.85
976,397.58	1,291,506.32
977,338.26	1,291,535.63
977,327.10	1,291,627.75
976,488.30	1,291,571.92

Active Topology	
Is Active?	True

Catchment	
Outflow Element	O-9

Inflow (Wet) Collection

Rainfall	
Use Local Rainfall?	False

Runoff			
Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.306 hours
SCS CN	83.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	83.000		

Tc Data Collection

South Uncontrolled Drainage Area- 50 YEAR

TR-55 Sheet Flow			
Hydraulic Length	100.0 ft	Slope	0.013 ft/ft
Manning's n	0.170	2 Year 24 Hour Depth	3.0 in

TR-55 Shallow Concentrated Flow			
Hydraulic Length	560.0 ft	Slope	0.013 ft/ft
Is Paved?	False		

Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in

Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		

Results (Maximum Values)			
Flow (Maximum)	5.88 cfs	Time (Maximum Flow)	12.050 hours

Results			
Area (Unified)	59,763.250 ft²	Volume (Total Runoff)	0.45 ac-ft

Calculation Messages

Time (hours)	Message

CURRENT BACK YARD DA_50 YEAR EVENT

<General>

ID	64	Notes	
Label	CURRENT BACK YARD DA_50 YEAR EVENT	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>

Scaled Area	53,418.459 ft²	Area (User Defined)	25,351.920 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
977,222.08	1,292,136.60
977,231.04	1,292,005.17
977,157.86	1,291,945.43
977,160.85	1,291,900.62
977,202.67	1,291,900.62
977,204.16	1,291,622.82
977,322.15	1,291,640.75
977,296.76	1,292,142.58

Active Topology

Is Active?	True

Catchment

Outflow Element	PROPOSED BASIN - 50 YEAR

Inflow (Wet) Collection

Rainfall

Use Local Rainfall?	False

Runoff

Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.360 hours
SCS CN	83.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	83.000		

CURRENT BACK YARD DA_50 YEAR EVENT

Runoff			
Tc Data Collection			
TR-55 Sheet Flow			
Hydraulic Length	100.0 ft	Slope	0.009 ft/ft
Manning's n	0.240	2 Year 24 Hour Depth	3.0 in
TR-55 Shallow Concentrated Flow			
Hydraulic Length	123.0 ft	Slope	0.009 ft/ft
Is Paved?	False		
Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in
Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		
Results (Maximum Values)			
Flow (Maximum)	2.32 cfs	Time (Maximum Flow)	12.100 hours
Results			
Area (Unified)	25,351.920 ft²	Volume (Total Runoff)	0.2 ac-ft

Calculation Messages

Time (hours)	Message

CURRENT CENTRAL DRAINAGE AREA_ 50 YEAR EVENT

<General>

ID	62	Notes	
Label	CURRENT CENTRAL DRAINAGE AREA_ 50 YEAR EVENT	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>

Scaled Area	104,726.679 ft²	Area (User Defined)	62,682.840 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
977,151.89	1,291,942.44
976,499.20	1,292,129.14
976,496.22	1,291,863.28
977,153.38	1,291,888.67
977,153.38	1,291,893.16

Active Topology

Is Active?	True

Catchment

Outflow Element	MH-2

Inflow (Wet) Collection

Rainfall

Use Local Rainfall?	False

Runoff

Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.385 hours
SCS CN	83.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	83.000		

Tc Data Collection

TR-55 Sheet Flow

CURRENT CENTRAL DRAINAGE AREA_ 50 YEAR EVENT

TR-55 Sheet Flow			
Hydraulic Length	100.0 ft	Slope	0.012 ft/ft
Manning's n	0.240	2 Year 24 Hour Depth	3.0 in

TR-55 Shallow Concentrated Flow			
Hydraulic Length	555.0 ft	Slope	0.012 ft/ft
Is Paved?	False		

Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in

Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		

Results (Maximum Values)			
Flow (Maximum)	5.49 cfs	Time (Maximum Flow)	12.100 hours

Results			
Area (Unified)	62,682.840 ft²	Volume (Total Runoff)	0.5 ac-ft

Calculation Messages

Time (hours)	Message

CURRENT NORTH DRAINAGE AREA_50 YEAR EVENT

<General>

ID	61	Notes	
Label	CURRENT NORTH DRAINAGE AREA_50 YEAR EVENT	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>

Scaled Area	129,180.675 ft²	Area (User Defined)	83,591.640 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
977,135.46	1,291,948.42
977,226.56	1,292,020.11
977,219.10	1,292,169.46
976,491.74	1,292,262.06
976,505.18	1,292,135.11
976,535.05	1,292,129.14

Active Topology

Is Active?	True

Catchment

Outflow Element	PROPOSED BASIN - 50 YEAR

Inflow (Wet) Collection

Rainfall

Use Local Rainfall?	False

Runoff

Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.402 hours
SCS CN	83.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	83.000		

CURRENT NORTH DRAINAGE AREA_50 YEAR EVENT

Tc Data Collection

TR-55 Sheet Flow			
Hydraulic Length	100.0 ft	Slope	0.011 ft/ft
Manning's n	0.240	2 Year 24 Hour Depth	3.0 in

TR-55 Shallow Concentrated Flow			
Hydraulic Length	526.0 ft	Slope	0.011 ft/ft
Is Paved?	True		

TR-55 Shallow Concentrated Flow			
Hydraulic Length	115.0 ft	Slope	0.011 ft/ft
Is Paved?	False		

Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in

Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		

Results (Maximum Values)			
Flow (Maximum)	7.18 cfs	Time (Maximum Flow)	12.100 hours

Results			
Area (Unified)	83,591.640 ft²	Volume (Total Runoff)	0.6 ac-ft

Calculation Messages

Time (hours)	Message

CURRENT SOUTH DRAINAGE AREA - 50 YEAR EVENT

<General>

ID	63	Notes	
Label	CURRENT SOUTH DRAINAGE AREA - 50 YEAR EVENT	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>

Scaled Area	187,222.250 ft²	Area (User Defined)	86,423.040 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
976,494.72	1,291,851.34
976,493.23	1,291,579.51
977,193.71	1,291,624.32
977,190.72	1,291,888.67

Active Topology

Is Active?	True

Catchment

Outflow Element	H-1

Inflow (Wet) Collection

Rainfall

Use Local Rainfall?	False

Runoff

Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.374 hours
SCS CN	83.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	83.000		

Tc Data Collection

TR-55 Sheet Flow

Hydraulic Length	100.0 ft	Slope	0.011 ft/ft

CURRENT SOUTH DRAINAGE AREA - 50 YEAR EVENT

TR-55 Sheet Flow			
Manning's n	0.240	2 Year 24 Hour Depth	3.0 in
TR-55 Shallow Concentrated Flow			
Hydraulic Length	455.0 ft	Slope	0.011 ft/ft
Is Paved?	True		
Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in
Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		
Results (Maximum Values)			
Flow (Maximum)	7.81 cfs	Time (Maximum Flow)	12.100 hours
Results			
Area (Unified)	86,423.040 ft²	Volume (Total Runoff)	0.6 ac-ft

Calculation Messages

Time (hours)	Message

North Uncontrolled Drainage Area- 50 YEAR

<General>			
ID	159	Notes	
Label	North Uncontrolled Drainage Area- 50 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>			
Scaled Area	108,303.605 ft²	Area (User Defined)	59,763.250 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
976,491.09	1,291,982.24
976,394.79	1,291,987.83
976,396.19	1,292,364.66
977,310.35	1,292,254.40
977,296.39	1,292,152.52
977,215.44	1,292,176.24
976,486.91	1,292,266.96
976,493.89	1,292,139.95

Active Topology	
Is Active?	True

Catchment	
Outflow Element	O-7

Inflow (Wet) Collection

Rainfall	
Use Local Rainfall?	False

Runoff			
Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.306 hours
SCS CN	83.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	83.000		

North Uncontrolled Drainage Area- 50 YEAR

Tc Data Collection

TR-55 Sheet Flow			
Hydraulic Length	100.0 ft	Slope	0.013 ft/ft
Manning's n	0.170	2 Year 24 Hour Depth	3.0 in

TR-55 Shallow Concentrated Flow			
Hydraulic Length	560.0 ft	Slope	0.013 ft/ft
Is Paved?	False		

Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in

Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		

Results (Maximum Values)			
Flow (Maximum)	5.88 cfs	Time (Maximum Flow)	12.050 hours

Results			
Area (Unified)	59,763.250 ft²	Volume (Total Runoff)	0.45 ac-ft

Calculation Messages

Time (hours)	Message

South Uncontrolled Drainage Area- 50 YEAR

<General>			
ID	158	Notes	
Label	South Uncontrolled Drainage Area- 50 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>			
Scaled Area	109,685.620 ft²	Area (User Defined)	59,763.250 ft²
Use Scaled Area?	False		

Geometry

X (ft)	Y (ft)
976,489.70	1,291,978.06
976,393.40	1,291,980.85
976,397.58	1,291,506.32
977,338.26	1,291,535.63
977,327.10	1,291,627.75
976,488.30	1,291,571.92

Active Topology	
Is Active?	True

Catchment	
Outflow Element	O-9

Inflow (Wet) Collection

Rainfall	
Use Local Rainfall?	False

Runoff			
Runoff Method	Unit Hydrograph	Unit Hydrograph Method	SCS Unit Hydrograph
Area Defined By	Single Area	Tc Input Type	Composite Tc
Loss Method	SCS CN	Time of Concentration (Composite)	0.306 hours
SCS CN	83.000	SCS Unit Hydrograph Method	Default Curvilinear
SCS CN (Composite)	83.000		

Tc Data Collection

South Uncontrolled Drainage Area- 50 YEAR

TR-55 Sheet Flow			
Hydraulic Length	100.0 ft	Slope	0.013 ft/ft
Manning's n	0.170	2 Year 24 Hour Depth	3.0 in

TR-55 Shallow Concentrated Flow			
Hydraulic Length	560.0 ft	Slope	0.013 ft/ft
Is Paved?	False		

Results (Extended Catchment)			
Precipitation (Cumulative)	0.0 in	Precipitation (Incremental)	0.0 in

Results (Flow)			
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs
Local Inflow?	False		

Results (Maximum Values)			
Flow (Maximum)	5.88 cfs	Time (Maximum Flow)	12.050 hours

Results			
Area (Unified)	59,763.250 ft²	Volume (Total Runoff)	0.45 ac-ft

Calculation Messages

Time (hours)	Message

PROPOSED BASIN - 1 YEAR

<General>			
ID	65	Notes	
Label	PROPOSED BASIN - 1 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>	
Scaled Area	26,345.626 ft²

Geometry

X (ft)	Y (ft)
977,305.72	1,291,967.83
977,317.67	1,291,727.37
977,455.08	1,291,754.26
977,387.87	1,291,979.78

Active Topology	
Is Active?	True

Infiltration/Inflow & Seepage	
Pond Seepage Method	None

Inflow (Wet) Collection

Physical	
Volume Type	Elevation-Area

Elevation-Area

Elevation (ft)	Area (ft²)	Percent Void Space (%)
724.00	0.000	100.0
725.00	1,397.270	100.0
726.00	5,305.700	100.0
727.00	8,948.750	100.0
727.50	10,727.920	100.0

Simulation Initial Condition	
Initial Elevation Type	Invert

Results (Engine Parsing)	
Branch	1

PROPOSED BASIN - 1 YEAR

Results (Engine Parsing)			

Results (Extended Node)			
Volume	0.0 ac-ft	Freeboard Height	3.5 ft
Depth (Flooding)	-3.50 ft		

Results (Flow)			
Flow (Total In)	0.01 cfs	Local Inflow?	False
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs

Results			
Is Overflowing?	False	Time to Maximum Outflow	12.250 hours
Is Ever Overflowing?	False	Time to Maximum Inflow	12.100 hours
Depth (Node)	0.00 ft	Flow (Out to Links Maximum)	5.08 cfs
Hydraulic Grade	724.00 ft	Flow (Total In Maximum)	5.87 cfs
Time to Maximum Hydraulic Grade	12.200 hours	Flow (Overflow)	0.00 cfs
Hydraulic Grade (Maximum)	725.41 ft	Time to Maximum Storage	12.200 hours
Time to Maximum Overflow	0.000 hours	Storage (Maximum)	0.0 ac-ft
Flow (Overflow Maximum)	0.00 cfs	Flow (Seepage loss)	0.00 cfs

Calculation Messages

Time (hours)	Message

PROPOSED BASIN OUTLET PIPE - 1 YEAR

<General>			
ID	131	Hyperlinks	<Collection: 0 items>
Label	PROPOSED BASIN OUTLET PIPE - 1 YEAR	Start Node	POS-2
Notes		Stop Node	MH-6

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,384.87	1,291,750.09
977,405.56	1,291,654.34

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Conduit Description	Circle - 15.0 in
Size (Display)	(N/A)	Set Invert to Start?	False
Section Type	Circle	Invert (Start)	724.00 ft
Material	PVC	Set Invert to Stop?	False
Diameter	15.0 in	Invert (Stop)	723.30 ft
Wall Thickness	0.3 in	Has User Defined Length?	True
Number of Barrels	1	Length (User Defined)	32.0 ft
Roughness Type	Single Roughness	Length (Unified)	32.0 ft
Manning's n	0.010	Slope (Calculated)	0.022 ft/ft
Use Local Conduit Description?	False		

PROPOSED BASIN OUTLET PIPE - 1 YEAR

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Physical (Culvert)	
Is Culvert?	False

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	2

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	12.42 cfs	Area (Full Flow)	1.2 ft²

Results (Maximum Values)			
Flow (Maximum)	5.08 cfs	Velocity (Maximum Calculated)	9.57 ft/s
Time (Maximum Flow)	12.250 hours	Depth (Maximum) / Rise	44.7 %
Time (Maximum Calculated Velocity)	12.250 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	723.65 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	723.40 ft
Depth (Out)	0.10 ft	Headloss	0.60 ft
Energy Grade Line (In)	724.00 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	723.65 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	723.40 ft	Cover (Average)	-0.40 ft
Hydraulic Grade Line (In)	724.00 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	False	Froude (Stop)	0.000

PROPOSED BASIN OUTLET PIPE - 1 YEAR

Results			
Time to Maximum Hydraulic Grade	12.250 hours	Flow-Area (Start)	0.0 ft²
Hydraulic Grade (Maximum)	724.56 ft	Flow-Area (Middle)	0.0 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.0 ft²
Rise (Unified)	1.25 ft	Flow-Width (Start)	0.2 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	0.2 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	0.7 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message
0.000	Froude number is greater than 1 for sections in this element.

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	724.00
16.00	0.00	0.00	723.65
32.00	0.00	0.00	723.40

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	0.2	0.0	False
0.00	0.2	0.0	False
0.10	0.7	0.0	False

Section Froude Number
0.000
0.000
0.000

PROPOSED Basin Overflow - 1 YEAR

<General>			
ID	96	Hyperlinks	<Collection: 0 items>
Label	PROPOSED Basin Overflow - 1 YEAR	Start Node	POS-3
Notes		Stop Node	O-7

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,385.25	1,291,955.74
977,438.07	1,291,957.14

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Use Local Conduit Description?	False
Size (Display)	(N/A)	Conduit Description	Trapezoidal Channel - 10.0 ft
Section Type	Trapezoidal Channel	Set Invert to Start?	False
Material	PVC	Invert (Start)	726.30 ft
Rise	0.5 ft	Set Invert to Stop?	True
Bottom Width	10.0 ft	Invert (Stop)	726.20 ft
Side Slope (Left)	1.000 H:V	Has User Defined Length?	True
Side Slope (Right)	1.000 H:V	Length (User Defined)	10.0 ft
Number of Barrels	1	Length (Unified)	10.0 ft

PROPOSED Basin Overflow - 1 YEAR

Physical			
Roughness Type	Single Roughness	Slope (Calculated)	0.010 ft/ft
Manning's n	0.010		

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	4

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	46.48 cfs	Area (Full Flow)	75.0 ft²

Results (Maximum Values)			
Flow (Maximum)	0.00 cfs	Velocity (Maximum Calculated)	0.00 ft/s
Time (Maximum Flow)	0.000 hours	Depth (Maximum) / Rise	0.0 %
Time (Maximum Calculated Velocity)	0.000 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	726.25 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	726.20 ft
Depth (Out)	0.00 ft	Headloss	0.10 ft
Energy Grade Line (In)	726.30 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	726.25 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	726.20 ft	Cover (Average)	-0.38 ft
Hydraulic Grade Line (In)	726.30 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000

PROPOSED Basin Overflow - 1 YEAR

Results			
Is Ever Surcharged?	False	Froude (Stop)	0.000
Time to Maximum Hydraulic Grade	0.000 hours	Flow-Area (Start)	0.1 ft²
Hydraulic Grade (Maximum)	726.30 ft	Flow-Area (Middle)	0.1 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.1 ft²
Rise (Unified)	0.50 ft	Flow-Width (Start)	10.0 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	10.0 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	10.0 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	726.30
5.00	0.00	0.00	726.25
10.00	0.00	0.00	726.20

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	10.0	0.1	False
0.00	10.0	0.1	False
0.00	10.0	0.1	False

Section Froude Number
0.000
0.000
0.000

PROPOSED BASIN - 2 YEAR

<General>			
ID	65	Notes	
Label	PROPOSED BASIN - 2 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>	
Scaled Area	26,345.626 ft²

Geometry

X (ft)	Y (ft)
977,305.72	1,291,967.83
977,317.67	1,291,727.37
977,455.08	1,291,754.26
977,387.87	1,291,979.78

Active Topology	
Is Active?	True

Infiltration/Inflow & Seepage	
Pond Seepage Method	None

Inflow (Wet) Collection

Physical	
Volume Type	Elevation-Area

Elevation-Area

Elevation (ft)	Area (ft²)	Percent Void Space (%)
724.00	0.000	100.0
725.00	1,397.270	100.0
726.00	5,305.700	100.0
727.00	8,948.750	100.0
727.50	10,727.920	100.0

Simulation Initial Condition	
Initial Elevation Type	Invert

Results (Engine Parsing)	
Branch	1

PROPOSED BASIN - 2 YEAR

Results (Engine Parsing)			

Results (Extended Node)			
Volume	0.0 ac-ft	Freeboard Height	3.5 ft
Depth (Flooding)	-3.50 ft		

Results (Flow)			
Flow (Total In)	0.01 cfs	Local Inflow?	False
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs

Results			
Is Overflowing?	False	Time to Maximum Outflow	12.250 hours
Is Ever Overflowing?	False	Time to Maximum Inflow	12.100 hours
Depth (Node)	0.00 ft	Flow (Out to Links Maximum)	6.35 cfs
Hydraulic Grade	724.00 ft	Flow (Total In Maximum)	8.34 cfs
Time to Maximum Hydraulic Grade	12.250 hours	Flow (Overflow)	0.00 cfs
Hydraulic Grade (Maximum)	725.80 ft	Time to Maximum Storage	12.250 hours
Time to Maximum Overflow	0.000 hours	Storage (Maximum)	0.1 ac-ft
Flow (Overflow Maximum)	0.00 cfs	Flow (Seepage loss)	0.00 cfs

Calculation Messages

Time (hours)	Message

PROPOSED BASIN OUTLET PIPE - 2 YEAR

<General>			
ID	131	Hyperlinks	<Collection: 0 items>
Label	PROPOSED BASIN OUTLET PIPE - 2 YEAR	Start Node	POS-2
Notes		Stop Node	MH-6

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,384.87	1,291,750.09
977,405.56	1,291,654.34

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Conduit Description	Circle - 15.0 in
Size (Display)	(N/A)	Set Invert to Start?	False
Section Type	Circle	Invert (Start)	724.00 ft
Material	PVC	Set Invert to Stop?	False
Diameter	15.0 in	Invert (Stop)	723.30 ft
Wall Thickness	0.3 in	Has User Defined Length?	True
Number of Barrels	1	Length (User Defined)	32.0 ft
Roughness Type	Single Roughness	Length (Unified)	32.0 ft
Manning's n	0.010	Slope (Calculated)	0.022 ft/ft
Use Local Conduit Description?	False		

PROPOSED BASIN OUTLET PIPE - 2 YEAR

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Physical (Culvert)	
Is Culvert?	False

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	2

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	12.42 cfs	Area (Full Flow)	1.2 ft²

Results (Maximum Values)			
Flow (Maximum)	6.35 cfs	Velocity (Maximum Calculated)	10.15 ft/s
Time (Maximum Flow)	12.250 hours	Depth (Maximum) / Rise	50.8 %
Time (Maximum Calculated Velocity)	12.250 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	723.65 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	723.40 ft
Depth (Out)	0.10 ft	Headloss	0.60 ft
Energy Grade Line (In)	724.00 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	723.65 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	723.40 ft	Cover (Average)	-0.40 ft
Hydraulic Grade Line (In)	724.00 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	False	Froude (Stop)	0.000

PROPOSED BASIN OUTLET PIPE - 2 YEAR

Results			
Time to Maximum Hydraulic Grade	12.250 hours	Flow-Area (Start)	0.0 ft²
Hydraulic Grade (Maximum)	724.64 ft	Flow-Area (Middle)	0.0 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.0 ft²
Rise (Unified)	1.25 ft	Flow-Width (Start)	0.2 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	0.2 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	0.7 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message
0.000	Froude number is greater than 1 for sections in this element.

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	724.00
16.00	0.00	0.00	723.65
32.00	0.00	0.00	723.40

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	0.2	0.0	False
0.00	0.2	0.0	False
0.10	0.7	0.0	False

Section Froude Number
0.000
0.000
0.000

PROPOSED Basin Overflow - 2 YEAR

<General>			
ID	96	Hyperlinks	<Collection: 0 items>
Label	PROPOSED Basin Overflow - 2 YEAR	Start Node	POS-3
Notes		Stop Node	O-7

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,385.25	1,291,955.74
977,438.07	1,291,957.14

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Use Local Conduit Description?	False
Size (Display)	(N/A)	Conduit Description	Trapezoidal Channel - 10.0 ft
Section Type	Trapezoidal Channel	Set Invert to Start?	False
Material	PVC	Invert (Start)	726.30 ft
Rise	0.5 ft	Set Invert to Stop?	True
Bottom Width	10.0 ft	Invert (Stop)	726.20 ft
Side Slope (Left)	1.000 H:V	Has User Defined Length?	True
Side Slope (Right)	1.000 H:V	Length (User Defined)	10.0 ft
Number of Barrels	1	Length (Unified)	10.0 ft

PROPOSED Basin Overflow - 2 YEAR

Physical			
Roughness Type	Single Roughness	Slope (Calculated)	0.010 ft/ft
Manning's n	0.010		

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	4

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	46.48 cfs	Area (Full Flow)	75.0 ft²

Results (Maximum Values)			
Flow (Maximum)	0.00 cfs	Velocity (Maximum Calculated)	0.00 ft/s
Time (Maximum Flow)	0.000 hours	Depth (Maximum) / Rise	0.0 %
Time (Maximum Calculated Velocity)	0.000 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	726.25 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	726.20 ft
Depth (Out)	0.00 ft	Headloss	0.10 ft
Energy Grade Line (In)	726.30 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	726.25 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	726.20 ft	Cover (Average)	-0.38 ft
Hydraulic Grade Line (In)	726.30 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000

PROPOSED Basin Overflow - 2 YEAR

Results

Is Ever Surcharged?	False	Froude (Stop)	0.000
Time to Maximum Hydraulic Grade	0.000 hours	Flow-Area (Start)	0.1 ft²
Hydraulic Grade (Maximum)	726.30 ft	Flow-Area (Middle)	0.1 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.1 ft²
Rise (Unified)	0.50 ft	Flow-Width (Start)	10.0 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	10.0 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	10.0 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	726.30
5.00	0.00	0.00	726.25
10.00	0.00	0.00	726.20

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	10.0	0.1	False
0.00	10.0	0.1	False
0.00	10.0	0.1	False

Section Froude Number
0.000
0.000
0.000

PROPOSED BASIN - 5 YEAR

<General>			
ID	65	Notes	
Label	PROPOSED BASIN - 5 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>	
Scaled Area	26,345.626 ft²

Geometry

X (ft)	Y (ft)
977,305.72	1,291,967.83
977,317.67	1,291,727.37
977,455.08	1,291,754.26
977,387.87	1,291,979.78

Active Topology	
Is Active?	True

Infiltration/Inflow & Seepage	
Pond Seepage Method	None

Inflow (Wet) Collection

Physical	
Volume Type	Elevation-Area

Elevation-Area

Elevation (ft)	Area (ft²)	Percent Void Space (%)
724.00	0.000	100.0
725.00	1,397.270	100.0
726.00	5,305.700	100.0
727.00	8,948.750	100.0
727.50	10,727.920	100.0

Simulation Initial Condition	
Initial Elevation Type	Invert

Results (Engine Parsing)	
Branch	1

PROPOSED BASIN - 5 YEAR

Results (Engine Parsing)			

Results (Extended Node)			
Volume	0.0 ac-ft	Freeboard Height	3.5 ft
Depth (Flooding)	-3.50 ft		

Results (Flow)			
Flow (Total In)	0.01 cfs	Local Inflow?	False
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs

Results			
Is Overflowing?	False	Time to Maximum Outflow	12.300 hours
Is Ever Overflowing?	False	Time to Maximum Inflow	12.100 hours
Depth (Node)	0.00 ft	Flow (Out to Links Maximum)	7.64 cfs
Hydraulic Grade	724.00 ft	Flow (Total In Maximum)	11.76 cfs
Time to Maximum Hydraulic Grade	12.300 hours	Flow (Overflow)	0.00 cfs
Hydraulic Grade (Maximum)	726.31 ft	Time to Maximum Storage	12.300 hours
Time to Maximum Overflow	0.000 hours	Storage (Maximum)	0.1 ac-ft
Flow (Overflow Maximum)	0.00 cfs	Flow (Seepage loss)	0.00 cfs

Calculation Messages

Time (hours)	Message

PROPOSED BASIN OUTLET PIPE - 5 YEAR

<General>			
ID	131	Hyperlinks	<Collection: 0 items>
Label	PROPOSED BASIN OUTLET PIPE - 5 YEAR	Start Node	POS-2
Notes		Stop Node	MH-6

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,384.87	1,291,750.09
977,405.56	1,291,654.34

Active Topology	
Is Active?	True

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output	
Output Options	Summary Results

Physical			
Conduit Type	User Defined Conduit	Conduit Description	Circle - 15.0 in
Size (Display)	(N/A)	Set Invert to Start?	False
Section Type	Circle	Invert (Start)	724.00 ft
Material	PVC	Set Invert to Stop?	False
Diameter	15.0 in	Invert (Stop)	723.30 ft
Wall Thickness	0.3 in	Has User Defined Length?	True
Number of Barrels	1	Length (User Defined)	32.0 ft
Roughness Type	Single Roughness	Length (Unified)	32.0 ft
Manning's n	0.010	Slope (Calculated)	0.022 ft/ft
Use Local Conduit Description?	False		

PROPOSED BASIN OUTLET PIPE - 5 YEAR

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Physical (Culvert)	
Is Culvert?	False

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	2

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	12.42 cfs	Area (Full Flow)	1.2 ft²

Results (Maximum Values)			
Flow (Maximum)	7.64 cfs	Velocity (Maximum Calculated)	10.62 ft/s
Time (Maximum Flow)	12.300 hours	Depth (Maximum) / Rise	56.8 %
Time (Maximum Calculated Velocity)	12.300 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	723.65 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	723.40 ft
Depth (Out)	0.10 ft	Headloss	0.60 ft
Energy Grade Line (In)	724.00 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	723.65 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	723.40 ft	Cover (Average)	-0.40 ft
Hydraulic Grade Line (In)	724.00 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	False	Froude (Stop)	0.000

PROPOSED BASIN OUTLET PIPE - 5 YEAR

Results			
Time to Maximum Hydraulic Grade	12.300 hours	Flow-Area (Start)	0.0 ft²
Hydraulic Grade (Maximum)	724.71 ft	Flow-Area (Middle)	0.0 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.0 ft²
Rise (Unified)	1.25 ft	Flow-Width (Start)	0.2 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	0.2 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	0.7 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message
0.000	Froude number is greater than 1 for sections in this element.

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	724.00
16.00	0.00	0.00	723.65
32.00	0.00	0.00	723.40

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	0.2	0.0	False
0.00	0.2	0.0	False
0.10	0.7	0.0	False

Section Froude Number
0.000
0.000
0.000

PROPOSED Basin Overflow - 5 YEAR

<General>			
ID	96	Hyperlinks	<Collection: 0 items>
Label	PROPOSED Basin Overflow - 5 YEAR	Start Node	POS-3
Notes		Stop Node	O-7

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,385.25	1,291,955.74
977,438.07	1,291,957.14

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Use Local Conduit Description?	False
Size (Display)	(N/A)	Conduit Description	Trapezoidal Channel - 10.0 ft
Section Type	Trapezoidal Channel	Set Invert to Start?	False
Material	PVC	Invert (Start)	726.30 ft
Rise	0.5 ft	Set Invert to Stop?	True
Bottom Width	10.0 ft	Invert (Stop)	726.20 ft
Side Slope (Left)	1.000 H:V	Has User Defined Length?	True
Side Slope (Right)	1.000 H:V	Length (User Defined)	10.0 ft
Number of Barrels	1	Length (Unified)	10.0 ft

PROPOSED Basin Overflow - 5 YEAR

Physical			
Roughness Type	Single Roughness	Slope (Calculated)	0.010 ft/ft
Manning's n	0.010		

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Tractive Stress			
Use Local Minimum Tractive Stress?	False		

Results (Engine Parsing)			
Branch	4		

Results (Flow)			
Flow	0.00 cfs		

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	46.48 cfs	Area (Full Flow)	75.0 ft²

Results (Maximum Values)			
Flow (Maximum)	0.00 cfs	Velocity (Maximum Calculated)	0.00 ft/s
Time (Maximum Flow)	0.000 hours	Depth (Maximum) / Rise	0.0 %
Time (Maximum Calculated Velocity)	0.000 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	726.25 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	726.20 ft
Depth (Out)	0.00 ft	Headloss	0.10 ft
Energy Grade Line (In)	726.30 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	726.25 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	726.20 ft	Cover (Average)	-0.38 ft
Hydraulic Grade Line (In)	726.30 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000

PROPOSED Basin Overflow - 5 YEAR

Results			
Is Ever Surcharged?	False	Froude (Stop)	0.000
Time to Maximum Hydraulic Grade	0.000 hours	Flow-Area (Start)	0.1 ft²
Hydraulic Grade (Maximum)	726.30 ft	Flow-Area (Middle)	0.1 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.1 ft²
Rise (Unified)	0.50 ft	Flow-Width (Start)	10.0 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	10.0 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	10.0 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	726.30
5.00	0.00	0.00	726.25
10.00	0.00	0.00	726.20

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	10.0	0.1	False
0.00	10.0	0.1	False
0.00	10.0	0.1	False

Section Froude Number
0.000
0.000
0.000

PROPOSED BASIN - 50 YEAR

<General>			
ID	65	Notes	
Label	PROPOSED BASIN - 50 YEAR	Hyperlinks	<Collection: 0 items>

GIS-IDs

GIS-ID

<Geometry>	
Scaled Area	26,345.626 ft²

Geometry

X (ft)	Y (ft)
977,305.72	1,291,967.83
977,317.67	1,291,727.37
977,455.08	1,291,754.26
977,387.87	1,291,979.78

Active Topology	
Is Active?	True

Infiltration/Inflow & Seepage	
Pond Seepage Method	None

Inflow (Wet) Collection

Physical	
Volume Type	Elevation-Area

Elevation-Area

Elevation (ft)	Area (ft²)	Percent Void Space (%)
724.00	0.000	100.0
725.00	1,397.270	100.0
726.00	5,305.700	100.0
727.00	8,948.750	100.0
727.50	10,727.920	100.0

Simulation Initial Condition	
Initial Elevation Type	Invert

Results (Engine Parsing)	
Branch	1

PROPOSED BASIN - 50 YEAR

Results (Engine Parsing)			

Results (Extended Node)			
Volume	0.0 ac-ft	Freeboard Height	3.5 ft
Depth (Flooding)	-3.50 ft		

Results (Flow)			
Flow (Total In)	0.01 cfs	Local Inflow?	False
Flow (Total Out)	0.00 cfs	Flow (Local from Inflow Collection)	0.00 cfs

Results			
Is Overflowing?	False	Time to Maximum Outflow	12.300 hours
Is Ever Overflowing?	False	Time to Maximum Inflow	12.100 hours
Depth (Node)	0.00 ft	Flow (Out to Links Maximum)	14.62 cfs
Hydraulic Grade	724.00 ft	Flow (Total In Maximum)	21.99 cfs
Time to Maximum Hydraulic Grade	12.250 hours	Flow (Overflow)	0.00 cfs
Hydraulic Grade (Maximum)	727.46 ft	Time to Maximum Storage	12.250 hours
Time to Maximum Overflow	0.000 hours	Storage (Maximum)	0.4 ac-ft
Flow (Overflow Maximum)	0.00 cfs	Flow (Seepage loss)	0.00 cfs

Calculation Messages

Time (hours)	Message

PROPOSED BASIN OUTLET PIPE - 50 YEAR

<General>			
ID	131	Hyperlinks	<Collection: 0 items>
Label	PROPOSED BASIN OUTLET PIPE - 50 YEAR	Start Node	POS-2
Notes		Stop Node	MH-6

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,384.87	1,291,750.09
977,405.56	1,291,654.34

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Conduit Description	Circle - 15.0 in
Size (Display)	(N/A)	Set Invert to Start?	False
Section Type	Circle	Invert (Start)	724.00 ft
Material	PVC	Set Invert to Stop?	False
Diameter	15.0 in	Invert (Stop)	723.30 ft
Wall Thickness	0.3 in	Has User Defined Length?	True
Number of Barrels	1	Length (User Defined)	32.0 ft
Roughness Type	Single Roughness	Length (Unified)	32.0 ft
Manning's n	0.010	Slope (Calculated)	0.022 ft/ft
Use Local Conduit Description?	False		

PROPOSED BASIN OUTLET PIPE - 50 YEAR

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Physical (Culvert)	
Is Culvert?	False

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	2

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	12.42 cfs	Area (Full Flow)	1.2 ft²

Results (Maximum Values)			
Flow (Maximum)	9.94 cfs	Velocity (Maximum Calculated)	11.23 ft/s
Time (Maximum Flow)	12.300 hours	Depth (Maximum) / Rise	67.8 %
Time (Maximum Calculated Velocity)	12.300 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	723.65 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	723.40 ft
Depth (Out)	0.10 ft	Headloss	0.60 ft
Energy Grade Line (In)	724.00 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	723.65 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	723.40 ft	Cover (Average)	-0.40 ft
Hydraulic Grade Line (In)	724.00 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000
Is Ever Surcharged?	False	Froude (Stop)	0.000

PROPOSED BASIN OUTLET PIPE - 50 YEAR

Results

Time to Maximum Hydraulic Grade	12.300 hours	Flow-Area (Start)	0.0 ft²
Hydraulic Grade (Maximum)	724.85 ft	Flow-Area (Middle)	0.0 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.0 ft²
Rise (Unified)	1.25 ft	Flow-Width (Start)	0.2 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	0.2 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	0.7 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message
0.000	Froude number is greater than 1 for sections in this element.

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	724.00
16.00	0.00	0.00	723.65
32.00	0.00	0.00	723.40

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	0.2	0.0	False
0.00	0.2	0.0	False
0.10	0.7	0.0	False

Section Froude Number
0.000
0.000
0.000

PROPOSED Basin Overflow - 50 YEAR

<General>			
ID	96	Hyperlinks	<Collection: 0 items>
Label	PROPOSED Basin Overflow - 50 YEAR	Start Node	POS-3
Notes		Stop Node	O-7

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,385.25	1,291,955.74
977,438.07	1,291,957.14

Active Topology			
Is Active?	True		

Headlosses			
Entrance Loss Coefficient	0.000	Contraction Loss Coefficient	0.000
Exit Loss Coefficient	0.000	Average Loss Coefficient	0.000
Expansion Loss Coefficient	0.000		

Infiltration/Inflow & Seepage			
Infiltration Load Type	None	Flow (Additional Infiltration)	0.00 cfs

Output			
Output Options	Summary Results		

Physical			
Conduit Type	User Defined Conduit	Use Local Conduit Description?	False
Size (Display)	(N/A)	Conduit Description	Trapezoidal Channel - 10.0 ft
Section Type	Trapezoidal Channel	Set Invert to Start?	False
Material	PVC	Invert (Start)	726.30 ft
Rise	0.5 ft	Set Invert to Stop?	True
Bottom Width	10.0 ft	Invert (Stop)	726.20 ft
Side Slope (Left)	1.000 H:V	Has User Defined Length?	True
Side Slope (Right)	1.000 H:V	Length (User Defined)	10.0 ft
Number of Barrels	1	Length (Unified)	10.0 ft

PROPOSED Basin Overflow - 50 YEAR

Physical			
Roughness Type	Single Roughness	Slope (Calculated)	0.010 ft/ft
Manning's n	0.010		

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Tractive Stress	
Use Local Minimum Tractive Stress?	False

Results (Engine Parsing)	
Branch	4

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Froude Number (Middle)	0.000
Capacity (Full Flow)	46.48 cfs	Area (Full Flow)	75.0 ft²

Results (Maximum Values)			
Flow (Maximum)	4.76 cfs	Velocity (Maximum Calculated)	3.47 ft/s
Time (Maximum Flow)	12.300 hours	Depth (Maximum) / Rise	27.1 %
Time (Maximum Calculated Velocity)	12.300 hours		

Results (Profile)			
Depth (In)	0.00 ft	Hydraulic Grade	726.25 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (Out)	726.20 ft
Depth (Out)	0.00 ft	Headloss	0.10 ft
Energy Grade Line (In)	726.30 ft	Cover (Minimum)	(N/A) ft
Energy Grade Line (Middle)	726.25 ft	Minimum Cover Distance Along Pipe	(N/A) ft
Energy Grade Line (Out)	726.20 ft	Cover (Average)	-0.38 ft
Hydraulic Grade Line (In)	726.30 ft		

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Is Surcharged?	False	Froude Number	0.000

PROPOSED Basin Overflow - 50 YEAR

Results			
Is Ever Surcharged?	False	Froude (Stop)	0.000
Time to Maximum Hydraulic Grade	12.300 hours	Flow-Area (Start)	0.1 ft²
Hydraulic Grade (Maximum)	726.44 ft	Flow-Area (Middle)	0.1 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.1 ft²
Rise (Unified)	0.50 ft	Flow-Width (Start)	10.0 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	10.0 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	10.0 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Flow (Roadway Overtopping)	(N/A) cfs	Flow (Middle)	0.00 cfs
Froude (Start)	0.000	Flow (Stop)	0.00 cfs

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	726.30
5.00	0.00	0.00	726.25
10.00	0.00	0.00	726.20

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	10.0	0.1	False
0.00	10.0	0.1	False
0.00	10.0	0.1	False

Section Froude Number
0.000
0.000
0.000

1993 As-Built Outlet Channel - 50 year.

<General>			
ID	106	Hyperlinks	<Collection: 0 items>
Label	1993 As-Built Outlet Channel - 50 year.	Start Node	CS-7
Notes		Stop Node	CS-8

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,450.36	1,291,500.83
977,471.72	1,291,488.74

Active Topology			
Is Active?	True		

Output			
Output Options	Summary Results		

Physical			
Set Invert to Start?	True	Has User Defined Length?	True
Invert (Start)	722.60 ft	Length (User Defined)	35.0 ft
Set Invert to Stop?	True	Length (Unified)	35.0 ft
Invert (Stop)	721.00 ft	Slope (Calculated)	0.046 ft/ft

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Results (Engine Parsing)	
Branch	2

Results (Flow)	
Flow	0.00 cfs

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Area (Full Flow)	(N/A) ft²

Results (Maximum Values)

1993 As-Built Outlet Channel - 50 year.

Results (Maximum Values)			
Flow (Maximum)	7.97 cfs	Velocity (Maximum Calculated)	6.35 ft/s
Time (Maximum Flow)	12.300 hours	Depth (Maximum) / Rise	8.9 %
Time (Maximum Calculated Velocity)	12.300 hours		

Results (Profile)			
Depth (In)	0.00 ft	Energy Grade Line (Out)	721.00 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (In)	722.60 ft
Depth (Out)	0.00 ft	Hydraulic Grade	721.80 ft
Energy Grade Line (In)	722.60 ft	Hydraulic Grade Line (Out)	721.00 ft
Energy Grade Line (Middle)	721.80 ft	Headloss	1.60 ft

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Time to Maximum Hydraulic Grade	12.300 hours	Flow-Area (Start)	0.0 ft²
Hydraulic Grade (Maximum)	723.24 ft	Flow-Area (Middle)	0.0 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.0 ft²
Rise (Unified)	4.30 ft	Flow-Width (Start)	0.0 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	0.0 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	0.0 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Froude (Start)	0.000	Flow (Middle)	0.00 cfs
Froude Number	0.000	Flow (Stop)	0.00 cfs
Froude (Stop)	0.000		

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	722.60
17.50	0.00	0.00	721.80
35.00	0.00	0.00	721.00

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	0.0	0.0	False
0.00	0.0	0.0	False

1993 As-Built Outlet Channel - 50 year.

Sections Results

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	0.0	0.0	False

Section Froude Number
0.000
0.000
0.000

Subdivision Outlet Channel - Current Conditions - 50 Year Event

<General>			
ID	106	Hyperlinks	<Collection: 0 items>
Label	Subdivision Outlet Channel - Current Conditions - 50 Year Event	Start Node	CS-7
Notes		Stop Node	CS-8

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,450.36	1,291,500.83
977,471.72	1,291,488.74

Active Topology			
Is Active?	True		

Output			
Output Options	Summary Results		

Physical			
Set Invert to Start?	True	Has User Defined Length?	True
Invert (Start)	722.60 ft	Length (User Defined)	35.0 ft
Set Invert to Stop?	True	Length (Unified)	35.0 ft
Invert (Stop)	721.00 ft	Slope (Calculated)	0.046 ft/ft

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Results (Engine Parsing)			
Branch	2		

Results (Flow)			
Flow	0.00 cfs		

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Area (Full Flow)	(N/A) ft²

Subdivision Outlet Channel - Current Conditions - 50 Year Event

Results (Maximum Values)			
Flow (Maximum)	7.18 cfs	Velocity (Maximum Calculated)	6.10 ft/s
Time (Maximum Flow)	12.150 hours	Depth (Maximum) / Rise	8.7 %
Time (Maximum Calculated Velocity)	12.150 hours		

Results (Profile)			
Depth (In)	0.00 ft	Energy Grade Line (Out)	721.00 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (In)	722.60 ft
Depth (Out)	0.00 ft	Hydraulic Grade	721.80 ft
Energy Grade Line (In)	722.60 ft	Hydraulic Grade Line (Out)	721.00 ft
Energy Grade Line (Middle)	721.80 ft	Headloss	1.60 ft

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Time to Maximum Hydraulic Grade	12.150 hours	Flow-Area (Start)	0.0 ft²
Hydraulic Grade (Maximum)	723.22 ft	Flow-Area (Middle)	0.0 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.0 ft²
Rise (Unified)	4.30 ft	Flow-Width (Start)	0.0 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	0.0 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	0.0 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Froude (Start)	0.000	Flow (Middle)	0.00 cfs
Froude Number	0.000	Flow (Stop)	0.00 cfs
Froude (Stop)	0.000		

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	722.60
17.50	0.00	0.00	721.80
35.00	0.00	0.00	721.00

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	0.0	0.0	False
0.00	0.0	0.0	False

Subdivision Outlet Channel - Current Conditions - 50 Year Event

Sections Results

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft^2)	Section Is Overflowing?
0.00	0.0	0.0	False

Section Froude Number
0.000
0.000
0.000

Subdivision Outlet Channel - Proposed Conditions - 50 Year Event

<General>			
ID	106	Hyperlinks	<Collection: 0 items>
Label	Subdivision Outlet Channel - Proposed Conditions - 50 Year Event	Start Node	CS-7
Notes		Stop Node	CS-8

GIS-IDs

GIS-ID

Geometry

X (ft)	Y (ft)
977,450.36	1,291,500.83
977,471.72	1,291,488.74

Active Topology			
Is Active?	True		

Output			
Output Options	Summary Results		

Physical			
Set Invert to Start?	True	Has User Defined Length?	True
Invert (Start)	722.60 ft	Length (User Defined)	35.0 ft
Set Invert to Stop?	True	Length (Unified)	35.0 ft
Invert (Stop)	721.00 ft	Slope (Calculated)	0.046 ft/ft

Physical (Control Structure)			
Flap Gate?	False	Has Stop Control Structure?	False
Has Start Control Structure?	False		

Results (Engine Parsing)			
Branch	2		

Results (Flow)			
Flow	0.00 cfs		

Results (Hydraulic Summary)			
Velocity	0.00 ft/s	Area (Full Flow)	(N/A) ft²

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Results (Maximum Values)			
Flow (Maximum)	9.94 cfs	Velocity (Maximum Calculated)	6.94 ft/s
Time (Maximum Flow)	12.300 hours	Depth (Maximum) / Rise	9.6 %
Time (Maximum Calculated Velocity)	12.300 hours		

Results (Profile)			
Depth (In)	0.00 ft	Energy Grade Line (Out)	721.00 ft
Depth (Middle)	0.00 ft	Hydraulic Grade Line (In)	722.60 ft
Depth (Out)	0.00 ft	Hydraulic Grade	721.80 ft
Energy Grade Line (In)	722.60 ft	Hydraulic Grade Line (Out)	721.00 ft
Energy Grade Line (Middle)	721.80 ft	Headloss	1.60 ft

Results (Tractive Stress)			
Hydraulic Radius (Normal)	0.0 ft	Is Tractive Stress Target Exceeded?	False
Is Tractive Stress Target Ever Exceeded?	False	Tractive Stress (Calculated)	0.000 lbs/ft²

Results			
Time to Maximum Hydraulic Grade	12.300 hours	Flow-Area (Start)	0.0 ft²
Hydraulic Grade (Maximum)	723.29 ft	Flow-Area (Middle)	0.0 ft²
Depth/Rise	0.0 %	Flow-Area (Stop)	0.0 ft²
Rise (Unified)	4.30 ft	Flow-Width (Start)	0.0 ft
Velocity (In)	0.00 ft/s	Flow-Width (Middle)	0.0 ft
Velocity (Middle)	0.00 ft/s	Flow-Width (Stop)	0.0 ft
Velocity (Out)	0.00 ft/s	Flow (Start)	0.00 cfs
Froude (Start)	0.000	Flow (Middle)	0.00 cfs
Froude Number	0.000	Flow (Stop)	0.00 cfs
Froude (Stop)	0.000		

Calculation Messages

Time (hours)	Message

Sections Results

Section Distance (ft)	Section Velocity (ft/s)	Section Flow (cfs)	Section Hydraulic Grade (ft)
0.00	0.00	0.00	722.60
17.50	0.00	0.00	721.80
35.00	0.00	0.00	721.00

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	0.0	0.0	False
0.00	0.0	0.0	False

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Sections Results

Section Depth (ft)	Section Flow-Width (ft)	Section Flow-Area (ft²)	Section Is Overflowing?
0.00	0.0	0.0	False

Section Froude Number
0.000
0.000
0.000